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"THIRD QUARTER 2002 OPERATIONS AND MAINTENANCE STATUS REPORT FOR NUTRIENT INJECTION SYSTEM AT BUILDING 46 FORMER TANKS 46R, 46D, 46SUL AND 46UL NAS CECIL FIELD FL"

7/1/2003

CH2MHILL CONSTRUCTORS INC

# Third Quarter 2002
# Operations and Maintenance Status Report

# Nutrient Injection System
# Building 46, Former Tanks 46R, 46D, 46SUL, and 46UL

## Naval Air Station Cecil Field
## Jacksonville, Florida

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

Submitted to:

U.S. Naval Facilities
Engineering Command
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A Historical Data
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# Acronym List

| | |
|---|---|
| acfh | actual cubic feet per hour |
| acfm | actual cubic feet per minute |
| bls | below land surface |
| BTEX | benzene, toluene, ethylbenzene, and xylenes |
| CCI | CH2M HILL Constructors, Inc. |
| cfm | cubic feet per minute |
| CLEAN | Comprehensive Long-term Environmental Action Navy |
| 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 |
| HLA | Harding Lawson Associates |
| GCTLs | groundwater cleanup target levels |
| LNAPL | light non-aqueous phase liquid |
| µg/L | micrograms per liter |
| mg/L | milligrams per liter |
| MTBE | methyl-tert butyl ether |
| msl | mean sea level |
| MW | monitoring well |
| NADC | Natural Attenuation Default 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 |
| TEP | triethylphosphate |
| TRPH | total recoverable petroleum hydrocarbons |
| TtNUS | Tetra Tech NUS, Inc. |
| UST | underground storage tank |
| VOCs | volatile organic compounds |

# 1.0 Introduction

CH2M HILL Constructors, Inc. (CCI) has been contracted by the Department of the Navy, Southern Division Naval Facilities Engineering Command (NAVFAC), to provide operation and maintenance (O&M) services for groundwater remediation at Building 46, Former Naval Air Station (NAS) Cecil Field, Jacksonville, Florida, under Response Action Contract No. N62467-98-D-0995, Contract Task Order (CTO) Numbers 0002 and 0062.

A nutrient injection system to stimulate biological activity was installed at Building 46 to reduce petroleum hydrocarbon contaminants in groundwater and unsaturated soil. The remedial alternative, referred to as a PHOSter nutrient injection system, is discussed in Section 1.3 of this document. The purpose of this 3rd Quarter 2002 Operation and Maintenance and Status Report is to provide a summary of activities performed at the site during the period of July 1, 2002, to September 30, 2002.

## 1.1 Objective

The objective of the remedial action at Building 46 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), as specified in Tables I and II of Chapter 62-777, Florida Administrative Code (FAC). Nutrient injection using the PHOSter nutrient injection system is currently being utilized to achieve this objective.

## 1.2 Site History

Building 46 was the former base gas station that operated from 1946 to 1987. The station had a total of eight underground storage tanks (USTs), all of which were removed in June 1988. Four of the tanks (46R, 46D, 46SUL, and 46UL) were installed in 1970 and were used to store regular and unleaded gasoline and diesel fuel. These tanks were located adjacent to Building 46. The other four tanks were installed prior to 1970, and the contents of these tanks are unknown. These tanks were located just south of Building 46 (Tetra Tech NUS, Inc. [TtNUS], June 2000).

A Site Assessment Report (SAR) concluded that operation of the USTs had resulted in contamination of soil and groundwater with fuel-related compounds, including benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl-tert-butyl ether (MTBE), naphthalene, and total recoverable petroleum hydrocarbons (TRPH) (Harding Lawson Associates [HLA], 1998). Contaminated soil was identified at the location of the former USTs in an area of approximately 5,500 square feet to a depth of 7 feet below land surface (bls). This soil is a source of groundwater contamination. The groundwater contamination extends from within the shallow (7 to 25 feet bls), intermediate (25 to 50 feet bls) and deep (50 to 92 feet bls) portions of the surficial aquifer.

The PHOSter nutrient injection system, constructed at the site from November 2000 to January 2001, commenced operation on January 18, 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 air flow is mixed with nitrous oxide and vapor-phase triethylphosphate (TEP) to provide nitrogen and phosphorus, respectively. Toward the end of cleanup operations, when contaminant concentrations have been reduced to the point where insufficient food (petroleum contaminants) is available to sustain an effective microorganism population, propane will also be injected as a carbon source (TtNUS, June 2000).

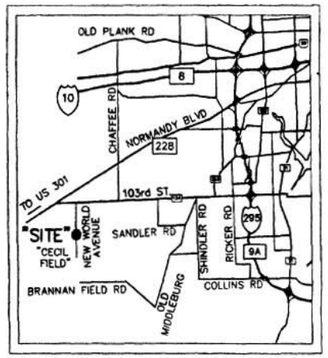
The Building 46 nutrient injection system consists of two separate systems (identified as the west system and the east system). Two separate systems allow for even gas distribution and more effective treatment of the relatively large extent of the groundwater contaminant plume. The west system consists of eight intermediate injection wells (CEF-46-I1 through -I8), three deep injection wells (CEF-46-D1 through -D3), and a temporary trailer containing an air compressors, injection gas storage containers, and associated piping and instrumentation. The west injection system is divided into two manifold legs; Leg #1 consisting of intermediate injection wells CEF-46-I1, -I2, -I3, -I4, -I5 and -I8; and Leg #2 consisting of intermediate injection wells CEF-46-I6 and -I7, and deep injection wells CEF-46-D1, -D2, and -D3.

The east system consists of 8 intermediate injection wells (CEF-46-BI1 through -BI8), 11 deep injection wells (CEF-46-BD1 through -BD11), and a temporary trailer containing an air compressors, injection gas storage containers, and associated piping and instrumentation. The east injection system is divided into two manifold legs; Leg #1 consisting of intermediate injection wells CEF-46-BI2, -BI3, -BI4, -BI5, -BI6, -BI7, and -BI8, and deep wells CEF-46-BD9, -BD10, and -BD11; and Leg #2 consisting of intermediate injection well CEF-46-BI1, and deep wells CEF-46-BD1, -BD2-BD3, -BD4, -BD5, -BD6-BD7 and -BD8.

The intermediate injection wells are approximately 40 feet deep with a screen interval from 35 to 40 feet bls, and the deep injection wells are approximately 90 feet deep with a screen interval from 85 to 90 feet bls. The shallow interval is treated by the upward migration of the injected air from the intermediate wells. The nutrient injection system is designed for each injection well to operate at a flow rate of 3 to 5 cubic feet per minute (cfm) at an injection pressure of 20 pounds per square inch gauge (psig) for the intermediate wells and 50 psig for the deep wells. 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.

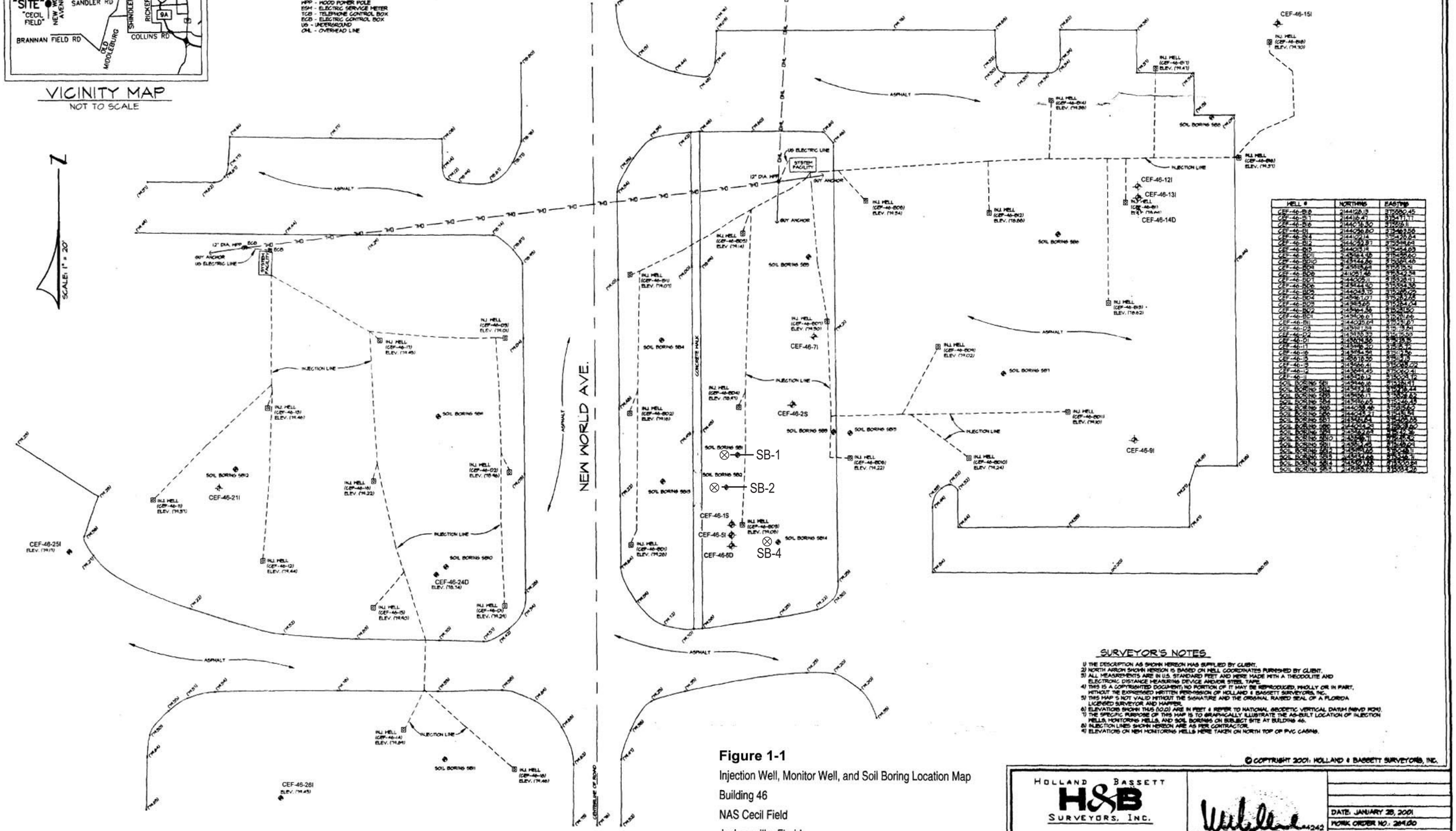



VICINITY MAP

NOT TO SCALE

LEGEND

BLDG - BUILDING
ELEV. - ELEVATION
INJ - INJECTION
CONC. - CONCRETE
DIA. - DIAMETER
HPP - WOOD POWER POLE
ESM - ELECTRIC SERVICE METER
TCB - TELEPHONE CONTROL BOX
ECB - ELECTRIC CONTROL BOX
UG - UNDERGROUND
OHL - OVERHEAD LINE




| WELL # | NORTHING | EASTING |
|---|---|---|
| CEF-46-8S | 2144126.13 | 3175054.45 |
| CEF-46-8I | 2144116.41 | 3175111.11 |
| CEF-46-8D | 2144116.30 | 3175112.11 |
| CEF-46-10 | 2144096.80 | 3175183.56 |
| CEF-46-8M | 2144096.14 | 3175183.84 |
| CEF-46-8L2 | 2144093.87 | 3175184.64 |
| CEF-46-8L5 | 2144093.14 | 3175184.83 |
| CEF-46-8C1 | 2143944.38 | 3175238.60 |
| CEF-46-8C10 | 2143944.26 | 3175238.46 |
| CEF-46-8D4 | 2143938.62 | 3175243.51 |
| CEF-46-8D6 | 2143921.46 | 3175247.38 |
| CEF-46-8D7 | 2143920.11 | 3175248.41 |
| CEF-46-8D8 | 2143944.40 | 3175233.38 |
| CEF-46-8D5 | 2143943.70 | 3175238.02 |
| CEF-46-8D2 | 2143921.07 | 3175247.78 |
| CEF-46-8D3 | 2143918.99 | 3175254.04 |
| CEF-46-8D12 | 2143944.38 | 3175238.50 |
| CEF-46-8D1 | 2143908.61 | 3175251.66 |
| CEF-46-8L1 | 2144095.64 | 3175183.01 |
| CEF-46-D3 | 2143918.26 | 3175278.41 |
| CEF-46-D2 | 2143918.32 | 3175279.53 |
| CEF-46-D1 | 2143920.36 | 3175279.15 |
| CEF-46-11 | 2143919.20 | 3175278.12 |
| CEF-46-15 | 2143916.55 | 3175276.96 |
| CEF-46-16 | 2143916.52 | 3175276.98 |
| CEF-46-13 | 2143916.20 | 3175278.12 |
| CEF-46-12 | 2143915.45 | 3175279.41 |
| CEF-46-14 | 2143915.19 | 3175279.02 |
| SOIL BORING 584 | 2143919.18 | 3175281.41 |
| SOIL BORING 585 | 2143919.18 | 3175281.44 |
| SOIL BORING 586 | 2143918.11 | 3175282.43 |
| SOIL BORING 587 | 2143918.11 | 3175282.43 |
| SOIL BORING 588 | 2143918.46 | 3175282.43 |
| SOIL BORING 589 | 2143918.46 | 3175282.43 |
| SOIL BORING 590 | 2143918.46 | 3175282.43 |
| SOIL BORING 591 | 2143918.46 | 3175282.43 |
| SOIL BORING 592 | 2143918.46 | 3175282.43 |
| SOIL BORING 593 | 2143918.46 | 3175282.43 |
| SOIL BORING 594 | 2143918.46 | 3175282.43 |
| SOIL BORING 595 | 2143918.46 | 3175282.43 |
| SOIL BORING 596 | 2143918.46 | 3175282.43 |
| SOIL BORING 597 | 2143918.46 | 3175282.43 |
| SOIL BORING 598 | 2143918.46 | 3175282.43 |
| SOIL BORING 599 | 2143918.46 | 3175282.43 |
| SOIL BORING 600 | 2143918.46 | 3175282.43 |
| SOIL BORING 601 | 2143918.46 | 3175282.43 |
| SOIL BORING 602 | 2143918.46 | 3175282.43 |
| SOIL BORING 603 | 2143918.46 | 3175282.43 |
| SOIL BORING 604 | 2143918.46 | 3175282.43 |
| SOIL BORING 605 | 2143918.46 | 3175282.43 |
| SOIL BORING 606 | 2143918.46 | 3175282.43 |
| SOIL BORING 607 | 2143918.46 | 3175282.43 |
| SOIL BORING 608 | 2143918.46 | 3175282.43 |
| SOIL BORING 609 | 2143918.46 | 3175282.43 |
| SOIL BORING 610 | 2143918.46 | 3175282.43 |
| SOIL BORING 611 | 2143918.46 | 3175282.43 |
| SOIL BORING 612 | 2143918.46 | 3175282.43 |
| SOIL BORING 613 | 2143918.46 | 3175282.43 |
| SOIL BORING 614 | 2143918.46 | 3175282.43 |
| SOIL BORING 615 | 2143918.46 | 3175282.43 |

## SURVEYOR'S NOTES

1) THE DESCRIPTION AS SHOWN HEREON HAS SUPPLIED BY CLIENT.
2) NORTH ARROW SHOWN HEREON IS BASED ON WELL COORDINATES FURNISHED BY CLIENT.
3) ALL MEASUREMENTS ARE IN U.S. STANDARD FEET AND WERE MADE WITH A THEODOLITE AND ELECTRONIC DISTANCE MEASURING DEVICE ANCHOR 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 (0.0) 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 46.
8) INJECTION LINES SHOWN HEREON ARE AS PER CONTRACTOR.
9) ELEVATIONS ON NEW MONITORING WELLS WERE TAKEN ON NORTH TOP OF PVC CASING.

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**Figure 1-1**

Injection Well, Monitor Well, and Soil Boring Location Map

Building 46

NAS Cecil Field

Jacksonville, Florida

HOLLAND BASSETT
H&B
SURVEYORS, INC.
7801 ALTON AVENUE TEL(904) 808-9646
JACKSONVILLE, FLORIDA 32211 FAX(904) 808-9647
FLORIDA CERTIFICATE OF AUTHORIZATION NO. LB 6789

ROBERT E. HOLLAND
FL REGISTRATION NO. 4242
CHARLES R. BASSETT, JR.
FL REGISTRATION NO. 4911

DATE: JANUARY 28, 2001
WORK ORDER NO.: 2841/60
PROJECT NUMBER: 17100
SHEET 1 OF 1
DRAWING NO.: D-17100

A062003002ATL\101.ai

# 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 readings are taken from all system meters and gauges.

During the OM activities, the injection pressures and individual well air flow rates were adjusted and rebalanced in attempt to achieve the design specifications.

## 2.1 Operational Efficiencies

### 2.1.1 Nutrient Injection System (West System)

| | Period | To Date |
|---|---|---|
| Hours of Possible Operation | 2,208 | 14,904 |
| Hours of Actual Operation | 1,961 | 13,048 |
| Percent Hours of Operation | 88.8 | 87.6 |

### 2.1.2 Nutrient Injection System (East System)

| | Period | To Date |
|---|---|---|
| Hours of Possible Operation | 2,208 | 14,904 |
| Hours of Actual Operation | 2,054 | 12,630 |
| Percent Hours of Operation | 93.0 | 84.7 |

## 2.2 Summary of Maintenance and System Downtime

### 2.2.1 Nutrient Injection System - West

During the 3rd Quarter 2002, the west nutrient injection system ran a total of 81.7 days out of a possible 92 days, experiencing 247 hours of downtime. The west system downtime is detailed as follows:

- Manually shut down for a total of 125 hours for CCI to perform the third quarter 2002 groundwater sampling event. The system was restarted after the sampling event was complete.
- Manually shut down for a total of 95 hours for TtNUS to measure water levels. The system was restarted after the water level measurements were complete.
- Manually shut down for a total of 27 hours due to the well cap on groundwater monitoring well # CEF-46-20I blowing off due to the aquifer injection pressure. The

system was shut down to allow the well pressure to dissipate before the well cap was reinstalled. The system was restarted after the well cap was reinstalled.

### 2.2.2 Nutrient Injection System - East

During the 3rd Quarter 2002, the east nutrient injection system ran a total of 85.6 days out of a possible 92 days, experiencing 154 hours of downtime. The east system downtime is detailed as follows:

- Manually shut down for a total of 118 hours for CCI to perform the third quarter 2002 groundwater sampling event. The system was restarted after the sampling event was complete.
- Down for a total of 36 hours due to a tripped circuit breaker caused by a problem with compressor #6. Repaired compressor #6 and restarted the system.

## 2.3 Pressure/Flow Rate Monitoring

### 2.3.1 Nutrient Injection System - West

During the 3rd Quarter 2002, the injection pressure at the compressors averaged 52.7 psig. Individual injection well pressures were not measured; adjustments were based upon flow rates, not pressure. The total gas injection flow rate averaged 8.3 actual cubic feet per minute (acfm) for Leg #1 and 6 acfm for Leg #2, compared to the combined design total gas injection flow rate of 18 to 30 acfm. The nitrous oxide injection rate averaged 0.5 actual cubic feet per hour (acfh), which is 0.06 percent by volume of airflow, compared to the design nitrous oxide injection rate of 0.07 to 0.10 percent by volume of airflow. The triethylphosphate (TEP) injection mass for the 3rd Quarter 2002 totaled 9.82 pounds, compared to the design injection mass of 24.75 pounds. The 3rd Quarter 2002 west injection wells and system data is in Table 2-1 and Table 2-2, respectively.

TABLE 2-1
Injection Well Measurements - West System
Building 46; 3rd Quarter 2002

| Injection Well | Date | Valve % Open | Wellhead Flow (acfm) |
|---|---|---|---|
| CEF-46-I1 | 07/16/2002 | 0 | 0 |
| (Leg #1) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-I2 | 07/16/2002 | 25 | 2 |
| (Leg #1) | 08/19/2002 | 25 | 2 |
| | 09/25/2002 | 25 | 2 |
| CEF-46-I3 | 07/16/2002 | 0 | 0 |
| (Leg #1) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-I4 | 07/16/2002 | 25 | 2 |
| (Leg #1) | 08/19/2002 | 25 | 2 |
| | 09/25/2002 | 25 | 0 |
| CEF-46-I5 | 07/16/2002 | 25 | 3 |
| (Leg #1) | 08/19/2002 | 25 | 3 |

TABLE 2-1
Injection Well Measurements - West System
Building 46; 3rd Quarter 2002

| Injection Well | Date | Valve % Open | Wellhead Flow (acfm) |
|---|---|---|---|
| | 09/25/2002 | 25 | 3 |
| CEF-46-I6 | 07/16/2002 | 25 | 2 |
| (Leg #2) | 08/19/2002 | 25 | 2 |
| | 09/25/2002 | 25 | 2 |
| CEF-46-I7 | 07/16/2002 | 0 | 0 |
| (Leg #2) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-I8 | 07/16/2002 | 25 | 2 |
| (Leg #1) | 08/19/2002 | 25 | 2 |
| | 09/25/2002 | 25 | 2 |
| CEF-46-D1 | 07/16/2002 | 100 | 2 |
| (Leg #2) | 08/19/2002 | 100 | 2 |
| | 09/25/2002 | 100 | 2 |
| CEF-46-D2 | 07/16/2002 | 100 | 2 |
| (Leg #2) | 08/19/2002 | 100 | 2 |
| | 09/25/2002 | 100 | 2 |
| CEF-46-D3 | 07/16/2002 | 0 | 0 |
| (Leg #2) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |

acfm = actual cubic feet per minute

TABLE 2-2
Injection System Data - West System
Building 46; 3rd Quarter 2002

| Date | Air Supply Pressure (psig) | Total Gas Flow (acfm) | NOX Flow (acfh) | TEP Injection (pounds) |
|---|---|---|---|---|
| 07/16/2002 | 51 | 13 | 0.5 | 0.36 |
| 08/19/2002 | 52 | 15 | 0.5 | 7.41 |
| 09/25/2002 | 55 | 13 | 0.5 | 2.05 |

psig = pounds per square inch gauge
acfm = actual cubic feet per minute
acfh = actual cubic feet per hour

### 2.3.2 Nutrient Injection System - East

During the 3rd Quarter 2002, the injection pressure at the compressors averaged 60 psig. Individual injection well pressures are not measured; adjustments are based upon flow rates, not pressure. The total gas injection flow rate averaged 20.0 acfm for Leg #1 and 17.0 acfm for Leg #2, compared to the combined design total gas injection flow rate of 30 to 50 acfm. The nitrous oxide injection rate averaged 0.67 acfh, which is 0.03 percent by volume of airflow, compared to the design nitrous oxide injection rate of 0.07 to 0.10 percent by volume of airflow. The TEP injection mass for the 3rd Quarter 2002 was 3.66 pounds, compared to the quarterly design injection mass of 42.75 pounds. The 3rd Quarter 2002 east injection wells and system data is in Table 2-3 and Table 2-4, respectively.

The difference between the actual and the design air flow rates is likely due to well inefficiencies caused during installation and / or the screen intervals of select wells are located in low permeability zones.

TABLE 2-3
Injection Well Measurements - East System
Building 46; 3rd Quarter 2002

| Injection Well | Date | Valve % Open | Wellhead Flow (acfm) |
|---|---|---|---|
| CEF-46-BI1 | 07/16/2002 | 0 | 0 |
| (Leg #2) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-BI2 | 07/16/2002 | 0 | 0 |
| (Leg #1) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-BI3 | 07/16/2002 | 100 | 4 |
| (Leg #1) | 08/19/2002 | 100 | 4 |
| | 09/25/2002 | 100 | 4 |
| CEF-46-BI4 | 07/16/2002 | 20 | 4 |
| (Leg #1) | 08/19/2002 | 20 | 4 |
| | 09/25/2002 | 20 | 4 |
| CEF-46-BI5 | 07/16/2002 | 100 | 4 |
| (Leg #1) | 08/19/2002 | 100 | 4 |
| | 09/25/2002 | 100 | 4 |
| CEF-46-BI6 | 07/16/2002 | 100 | 4 |
| (Leg #1) | 08/19/2002 | 100 | 4 |
| | 09/25/2002 | 100 | 4 |
| CEF-46-BI7 | 07/16/2002 | 100 | 4 |
| (Leg #1) | 08/19/2002 | 100 | 4 |
| | 09/25/2002 | 100 | 4 |
| CEF-46-BI8 | 07/16/2002 | 0 | 0 |
| (Leg #1) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-BD1 | 07/16/2002 | 100 | 3 |
| (Leg #2) | 08/19/2002 | 100 | 3 |
| | 09/25/2002 | 100 | 3 |
| CEF-46-BD2 | 07/16/2002 | 100 | 4 |
| (Leg #2) | 08/19/2002 | 100 | 4 |

TABLE 2-3
Injection Well Measurements - East System
Building 46; 3rd Quarter 2002

| Injection Well | Date | Valve % Open | Wellhead Flow (acfm) |
|---|---|---|---|
| | 09/25/2002 | 100 | 4 |
| CEF-46-BD3 | 07/16/2002 | 50 | 2 |
| (Leg #2) | 08/19/2002 | 50 | 2 |
| | 09/25/2002 | 50 | 2 |
| CEF-46-BD4 | 07/16/2002 | 100 | 4 |
| (Leg #2) | 08/19/2002 | 100 | 4 |
| | 09/25/2002 | 100 | 4 |
| CEF-46-BD5 | 07/16/2002 | 0 | 0 |
| (Leg #2) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-BD6 | 07/16/2002 | 40 | 2 |
| (Leg #2) | 08/19/2002 | 40 | 2 |
| | 09/25/2002 | 40 | 2 |
| CEF-46-BD7 | 07/16/2002 | 40 | 2 |
| (Leg #2) | 08/19/2002 | 40 | 2 |
| | 09/25/2002 | 40 | 2 |
| CEF-46-BD8 | 07/16/2002 | 0 | 0 |
| (Leg #2) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-BD9 | 07/16/2002 | 0 | 0 |
| (Leg #1) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-BD10 | 07/16/2002 | 0 | 0 |
| (Leg #1) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |
| CEF-46-BD11 | 07/16/2002 | 0 | 0 |
| (Leg #1) | 08/19/2002 | 0 | 0 |
| | 09/25/2002 | 0 | 0 |

acfm = actual cubic feet per minute

TABLE 2-4
Injection System Data - East System
Building 46; 3rd Quarter 2002

| Date | Air Supply Pressure (psig) | Total Gas Flow (acfm) | NOX Flow (acfh) | TEP Injection (pounds) |
|---|---|---|---|---|
| 07/16/2002 | 49 | 37 | 0.8 | 1.07 |
| 08/19/2002 | 60 | 37 | 0.7 | 1.87 |
| 09/25/2002 | 71 | 37 | 0.5 | 0.71 |

psig = pounds per square inch gauge
acfm = actual cubic feet per minute
acfh = actual cubic feet per hour

## 2.4 Water Level Measurements

Depth to groundwater measurements were recorded on September 18 and 19, 2002, from the 14 monitoring wells during the 3rd Quarter 2002. The results from the 3rd Quarter 2002 groundwater level measurement survey is provided in Table 2-5. LNAPL was not detected in monitoring wells during the 3rd Quarter 2002.

TABLE 2-5
Water Level Measurements
Building 46; 3rd Quarter 2002

| Well Identification | Date | Top of Casing Elevation (feet MSL) | Depth to Groundwater (feet bls) | Groundwater Elevation (feet msl) |
|---|---|---|---|---|
| CEF-46-1S | 09/18/2002 | 79.08 | 2.75 | 76.33 |
| CEF-46-2S | 09/17/2002 | 79.08 | 2.66 | 76.42 |
| CEF-46-5I | 09/18/2002 | 79.18 | 4.14 | 75.04 |
| CEF-46-6D | 09/18/2002 | 79.17 | 4.81 | 74.36 |
| CEF-46-7I | 09/17/2002 | 79.02 | 3.31 | 75.71 |
| CEF-46-9I | 09/17/2002 | 79.05 | 3.35 | 75.70 |
| CEF-46-12I | 09/17/2002 | 78.73 | 2.77 | 75.96 |
| CEF-46-13I | 09/17/2002 | 78.87 | 3.03 | 75.84 |
| CEF-46-14D | 09/17/2002 | 78.88 | 7.65 | 71.23 |
| CEF-46-15I | 09/17/2002 | 79.75 | 3.80 | 75.95 |
| CEF-46-21I | 09/18/2002 | 79.33 | 4.12 | 75.21 |
| CEF-46-24D | 09/18/2002 | 78.74 | 5.50 | 73.24 |
| CEF-46-25I | 09/18/2002 | 79.17 | 3.79 | 75.38 |
| CEF-46-26I | 09/18/2002 | 79.43 | 4.16 | 75.27 |

Notes:
Top of Casing Elevations is referenced to National Geodetic Vertical Datum 1929 (NGVD 1929).
All measurements reported in feet.
bls = below land surface
msl = elevations are respect to Mean Sea Level

# 3.0 Summary of Sampling and Laboratory Analytical Results

## 3.1 Soil Monitoring

During the 3rd Quarter 2002, quarterly soil screening and sampling were conducted on September 26, 2002. Three soil borings, labeled SB-1, SB-2, and SB-14, were advanced in the soil contamination area identified during the Site Assessment. The locations of the soil borings are shown on Figure 1-1. The soil samples were segregated in 2 -foot intervals to the observed water table and were screened using an organic vapor analyzer (OVA) meter equipped with a flame ionization detector (FID). A soil sample was collected from the 2-foot interval with the highest OVA reading from each boring for laboratory analyses; 2 feet bls at SB-1, 2 feet bls at SB-2, and 4 feet bls at SB-14. The corresponding OVA/FID results are presented in Table 3-1. The water table was encountered at approximately 4.5 feet bls.

TABLE 3-1
OVA/FID Results

| Date | Soil Boring No. | Depth (feet bls) | OVA/FID Unfiltered | OVA/FID Filtered | OVA/FID Net |
|---|---|---|---|---|---|
| 9/26/02 | SB-1 | 2 | 65,000 | 100 | 64,900 |
| 9/26/02 | SB-1 | 4 | 17,000 | 30 | 16,970 |
| 9/26/02 | SB-2 | 2 | 20,000 | 10 | 19,990 |
| 9/26/02 | SB-2 | 4 | 11,600 | 30 | 11,570 |
| 9/26/02 | SB-14 | 2 | 750 | 50 | 700 |
| 9/26/02 | SB-14 | 4 | 1,425 | 140 | 1,285 |

bls – below land surface
ppm – parts per million
OVA/FID – organic vapor analyzer equipped with a flame ionization detector

The laboratory soil samples were analyzed for BTEX and MTBE by U.S. Environmental Protection Agency (EPA) Method 8021B, naphthalene and polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8310, and TRPH by Florida Petroleum Residual Organic (FL PRO) Method. The 3rd Quarter 2002 soil laboratory analytical results are summarized in Table 3-1. Historic soil analytical results are provided in Table 1 of Appendix A. Copies of the analytical laboratory report from the soil sampling event are provided in Appendix B.

Contaminant concentrations were below the Direct Exposure Residential SCTLs with the exception of benzene and TRPH in boring SB-1 and TRPH in soil boring SB-2. BTEX, naphthalene,1-methylnapthalene, 2-methylnapthalene, and TRPH were detected at concentrations that exceeded the Leachability based Groundwater Criteria SCTLs at borings SB-1 and SB-2. In general, the concentrations of these parameters have decreased from baseline soil sampling event (January 2001) concentrations. Concentrations of benzene and ethylbenzene at SB-2, and MTBE and TRPH at SB-1 and SB-2 have decreased an order magnitude from the baseline sampling event.

## 3.2 Groundwater Monitoring

CCI conducted the 3rd Quarter 2002 groundwater sampling event on September 17 and18, 2002. Groundwater samples were collected from 14 onsite monitoring wells (CEF-46-1S, -2S, -5I, -6D, -7I, -9I, -12I, -13I, -14D, -15I, -21I, -24D, -25I, and -26I) and laboratory 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 EPA Method 300.0.. The 3rd Quarter 2002 groundwater laboratory analytical results are summarized in Table 3-2. Historic groundwater analytical results are provided in Table 2 of the Appendix A. A site map showing the locations of the monitoring wells are shown on Figure 1-1. Copies of the analytical laboratory reports from the groundwater sampling events are provided in Appendix B.

Analytical results indicated that five wells (CEF-1S, -2S, -7I, -13I, and -26I) detected the following contaminants at concentrations above either the GCTLs and/or Natural Attenuation Default Concentrations (NADC) during the 3rd Quarter 2002: benzene, ethylbenzene, toluene, xylenes (total), MTBE, naphthalene, 2-methylnaphthalene, and TRPH. In general, the BETX, naphthalene, and TRPH concentrations have decreased an order of magnitude or greater from the baseline groundwater sampling event (December 2000) concentrations. Historically, individual BETX parameters have been detected at concentrations above the GWTC in 10 wells at the site. During the 3rd Quarter 2002,only three wells detected BETX parameters above the GWTCs. A comparison of the baseline sampling event versus the 3rd Quarter 2002 concentrations in well CEF-46-1S indicates a drop from 13,000 µg/L to 262 µg/L for benzene, 2,900 µg/L to 541 for ethylbenzene, 40,000 µg/L to 1,170 for toluene, and 19,000 µg/L to 5760 for xylenes (totals). Based on an evaluation of historic groundwater data, it appears that the PHOSter nutrient injection system is having success in reducing contaminant concentrations in groundwater.

Concentrations in monitoring well CEF-46-26I have changed little when compared to the baseline sampling event concentrations. It is believed this is caused by the well location being outside the influence of the nutrient injection system.

Field parameters (i.e., pH, temperature, dissolved oxygen (DO), specific conductivity, carbon dioxide, alkalinity, ferrous iron, and hydrogen sulfide) were measured during purging of the monitoring wells The 3rd Quarter 2002 field parameters are summarized on Table 3-3.

The following conclusions were made based on the field parameter results:

- pH and temperature are acceptable for biological activity.
- The dissolved oxygen levels have decreased below 1 milligram per liter, which indicates favorable conditions for a decrease in aerobic activity.
- In general, carbon dioxide values have increased, indicating favorable conditions for aerobic activity.
- In general, ferrous iron has increased, indicating that anaerobic activity.

**TABLE 3-2**
Groundwater Analytical Results
Building 46; 3rd Quarter 2002

| Well ID | Sample Date | Benzene | Ethylbenzene | Toluene | Xylenes, Total | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | Acenaphthene | Acenaphthylene | Fluorene | Phenanthrene | Anthracene | Fluoranthene | Pyrene | Benzo(a)anthracene | Chrysene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Benzo(a)pyrene | Indeno(1,2,3-c,d)pyrene | Dibenz(a,h)anthracene | Benzo(g,h,i)perylene | Nitrogen, nitrate | Nitrogen, nitrite | Phosphate | TPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NADC[1] | 100 | 300 | 400 | 200 | 500 | 200 | 200 | 200 | 200 | 2100 | 2800 | 2100 | 21000 | 2800 | 2100 | 20 | 480 | 20 | 50 | 20 | 20 | 20 | 2100 | 100000 | 10000 | NE | 50000 |
| | GCTL[1] | 1 | 30 | 40 | 20 | 50 | 20 | 20 | 20 | 20 | 210 | 280 | 210 | 2100 | 280 | 210 | 0.2 | 4.8 | 0.2 | 0.5 | 0.2 | 0.2 | 0.2 | 210 | 10000 | 1000 | NE | 5000 |
| | micrograms per liter (ug/L) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CEF46-01S | 09/18/02 | **262 =** | **541 =** | **1170 =** | **5760 =** | **542 =** | **173 J** | 18.6 J | **52 J** | 0.41 UJ | 0.35 UJ | 0.55 UJ | 0.28 UJ | 0.28 UJ | 0.05 UJ | 0.06 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.07 UJ | 0.05 UJ | 60 U | 60 U | 160 U | 15300 = |
| CEF46-02S | 09/17/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | **100 =** | 0.37 U | 0.37 U | 0.35 U | 0.43 U | 0.36 U | 0.58 U | 0.29 U | 0.29 U | 0.05 U | 0.07 J | 0.03 U | 0.02 U | 0.03 U | 0.07 U | 0.05 U | 0.08 U | 0.08 U | 0.05 U | 60 U | 60 U | 290 J | 513 UJ |
| CEF46-05I | 09/18/02 | 0.5 U | 0.5 U | 0.5 U | 13.2 = | 0.5 U | 0.38 UJ | 0.38 UJ | 0.35 UJ | 0.44 UJ | 0.37 UJ | 0.59 UJ | 0.3 UJ | 0.3 UJ | 0.05 UJ | 0.07 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.08 UJ | 0.05 UJ | 1340 U | 1220 U | 3260 U | 776 U |
| CEF46-06D | 09/18/02 | 0.5 U | 0.9 J | 0.5 U | 9.05 = | 0.96 J | 0.38 UJ | 0.38 UJ | 0.36 UJ | 0.44 UJ | 0.37 UJ | 0.6 UJ | 0.3 UJ | 0.3 UJ | 0.05 UJ | 0.07 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.08 UJ | 0.05 UJ | 1340 U | 1220 U | 3260 U | 840 U |
| CEF46-07I | 09/17/02 | **432 =** | **86.6 =** | **90.2 =** | **484 =** | **3640 =** | 9.75 J | 0.37 UJ | 1.37 J | 0.42 UJ | 0.36 UJ | 0.57 UJ | 0.29 UJ | 0.29 UJ | 0.05 UJ | 0.07 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.07 UJ | 0.05 UJ | 60 U | 60 U | 160 U | 950 U |
| CEF46-09I | 09/17/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.35 U | 0.36 U | 0.33 U | 0.41 U | 0.35 U | 0.55 U | 0.28 U | 0.28 U | 0.05 U | 0.06 U | 0.03 U | 0.02 U | 0.03 U | 0.07 U | 0.05 U | 0.08 U | 0.07 U | 0.05 U | 60 U | 60 U | 160 U | 623 U |
| CEF46-12I | 09/17/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.37 U | 0.38 U | 0.35 U | 0.43 U | 0.36 U | 0.58 U | 0.3 U | 0.3 U | 0.05 U | 0.07 U | 0.03 U | 0.02 U | 0.03 U | 0.07 U | 0.05 U | 0.08 U | 0.08 U | 0.05 U | 100 U | 60 U | 160 U | 564 U |
| CEF46-13I | 09/17/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | **174 =** | 0.37 U | 0.37 U | 0.35 U | 0.43 U | 0.36 U | 0.58 U | 0.29 U | 0.29 U | 0.05 U | 0.07 J | 0.03 U | 0.02 U | 0.03 U | 0.07 U | 0.05 U | 0.08 U | 0.08 U | 0.05 U | 60 U | 60 U | 160 U | 745 U |
| CEF46-14D | 09/17/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.37 U | 0.37 U | 0.35 U | 0.43 U | 0.36 U | 0.58 U | 0.29 U | 0.29 U | 0.05 U | 0.07 U | 0.03 U | 0.02 U | 0.03 U | 0.07 U | 0.05 U | 0.08 U | 0.08 U | 0.05 U | 60 U | 60 U | 350 J | 554 U |
| CEF46-15I | 09/17/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.37 U | 0.38 U | 0.35 U | 0.43 U | 0.36 U | 0.58 U | 0.3 U | 0.3 U | 0.05 U | 0.07 U | 0.03 U | 0.02 U | 0.03 U | 0.07 U | 0.05 U | 0.08 U | 0.08 U | 0.05 U | 60 U | 60 U | 160 U | 668 U |
| CEF46-21I | 09/18/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.35 UJ | 0.36 UJ | 0.33 UJ | 0.41 UJ | 0.35 UJ | 0.55 UJ | 0.28 UJ | 0.28 UJ | 0.05 UJ | 0.06 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.07 UJ | 0.05 UJ | 130 U | 120 U | 320 U | 834 U |
| CEF46-24D | 09/18/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 2.19 = | 0.37 UJ | 0.37 UJ | 0.35 UJ | 0.43 UJ | 0.36 UJ | 0.58 UJ | 0.29 UJ | 0.29 UJ | 0.05 UJ | 0.07 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.08 UJ | 0.05 UJ | 60 U | 60 U | 160 U | 779 U |
| CEF46-25I | 09/18/02 | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.5 U | 0.35 UJ | 0.36 UJ | 0.33 UJ | 0.41 UJ | 0.35 UJ | 0.55 UJ | 0.28 UJ | 0.28 UJ | 0.05 UJ | 0.06 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.07 UJ | 0.05 UJ | 130 U | 120 U | 320 U | 810 U |
| CEF46-26I | 09/18/02 | **1390 =** | **37.3 =** | 6.32 J | **513 =** | 13.5 = | 0.38 UJ | 0.38 UJ | 0.35 UJ | 0.44 UJ | 0.37 UJ | 0.59 UJ | 0.3 UJ | 0.3 UJ | 0.05 UJ | 0.07 UJ | 0.03 UJ | 0.02 UJ | 0.03 UJ | 0.07 UJ | 0.05 UJ | 0.08 UJ | 0.08 UJ | 0.05 UJ | 670 U | 610 U | 1630 U | 1350 U |

Notes:
GTCL - Groundwater Target Cleanup Level
NADC - Natural Attenuation Default Concentration
1 = Ch 62-777 F.A.C Groundwater Cleanup Target Levels (GCTLs) reported in µg/L
U - The analyte was analyzed for , but not detected.
= - value equal to
J - estimated value
Bold indicates concentration exceeds GTCL
Shaded indicates concentration exceeds NADC
NE - Not Established

TABLE 3-3
Field Parameter Results
Building 46; 3rd Quarter 2002

| Well | Date | pH | Conductivity (mS/cm) | Dissolved Oxygen (mg/L) | Temperature ($^oC$) | Carbon Dioxide (mg/L) | Alkalinity as $CaCO_3$ (mg/L) | Ferrous Iron (mg/L) | Hydrogen Sulfide (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| CEF-46-1S | 09/18/2002 | 6.42 | 0.218 | 0.15 | 27.0 | 310 | 20 | 6.0 | 0.7 |
| CEF-46-2S | 09/17/2002 | 6.89 | 0.537 | 0.58 | 27.1 | 610 | 200 | 1.0 | 0.5 |
| CEF-46-5I | 09/18/2002 | 2.27 | 6.820 | 0.97 | 26.8 | 670 | 20 | 10+ | 0.0 |
| CEF-46-6D | 09/18/2002 | 2.88 | 7.760 | 0.80 | 25.7 | 1000+ | 20 | 10+ | 0.0 |
| CEF-46-7I | 09/17/2002 | 2.97 | 1.400 | 0.51 | 26.8 | >1000 | 20 | 10+ | 0.1 |
| CEF-46-9I | 09/17/2002 | 4.32 | 0.279 | 0.55 | 26.5 | 880 | 20 | 10+ | 0.3 |
| CEF-46-12I | 09/17/2002 | 4.61 | 0.130 | 0.83 | 28.1 | 330 | 20 | 0.8 | 0.1 |
| CEF-46-13I | 09/17/2002 | 4.72 | 0.112 | 0.23 | 27.6 | 730 | 40 | 1.6 | 2.0 |
| CEF-46-14D | 09/17/2002 | 5.27 | 0.101 | 0.33 | 27.7 | 540 | 40 | 2.4 | 0.7 |
| CEF-46-15I | 09/17/2002 | 4.44 | 0.164 | 0.22 | 24.6 | 880 | 20 | 3.0 | 0.1 |
| CEF-46-21I | 09/18/2002 | 3.10 | 1.490 | 0.77 | 26.4 | 1000+ | 20 | 10+ | 1.0 |
| CEF-46-24D | 09/18/2002 | 2.73 | 2.400 | 0.03 | 27.3 | 1990 | 20 | 10+ | 0.0 |
| CEF-46-25I | 09/18/2002 | 3.71 | 0.999 | 0.63 | 26.6 | 780 | 20 | 10+ | 5.0 |
| CEF-46-26I | 09/18/2002 | 3.29 | 2.39 | 0.25 | 25.6 | 1590 | 20 | 10+ | 5.0 |

mg/L - milligrams per liter
$^oC$ - degrees Celsius
NTU – nephelometric turbidity units
mS/cm – milliSiemens per centimeter

# 4.0 Conclusions and Recommendations

BTEX, naphthalene, 1-methylnapthalene, 2-methylnapthalene, and TRPH were detected in soil samples SB-1 and –2 at concentrations that exceeded the Leachability based on Groundwater Criteria SCTLs. In addition, concentrations of benzene and TRPH in boring SB-1 and TRPH in soil boring SB-2 exceeded the Direct Exposure Residential SCTLs. The concentrations of benzene and ethylbenzene at SB-2, and MTBE and TRPH at SB-1 and SB-2 have decreased an order magnitude when compared to the concentrations from the baseline soil sampling event (January 2001). This suggests that remediation of the soils by the PHOSter nutrient injection systems is occurring. Once the soil concentrations are below both the Leachability based on Groundwater Criteria SCTLs and the Direct Exposure Residential SCTLs, the soil remediation will be considered complete and soil monitoring will be discontinued.

Analytical results indicated that five wells (CEF-1S, -2S, -7I, -13I, and -26I) detected the following contaminants at concentrations above either the GCTLs and/or the NADC during the 3rd Quarter 2002: benzene, ethylbenzene, toluene, xylenes (total), MTBE, naphthalene, 2-methylnaphthalene, and TRPH. In general, the BETX, naphthalene, and TRPH concentrations have decreased an order of magnitude or greater from the baseline groundwater sampling event (December 2000) concentrations. Based on an evaluation of historic groundwater data, it appears that the PHOSter nutrient injection system is a successful technology for reducing contaminant concentrations in groundwater.

CCI recommends continuing to operate the nutrient injection system and the collection of groundwater samples from the 14 monitoring wells during the next monitoring period. Soil sampling will continue to be conducted quarterly during the next period to monitor the soil contamination concentrations.

Additional delineation of the groundwater contamination in the vicinity of monitoring well CEF-46-26I is being performed by the Navy Comprehensive Long-term Environmental Action Navy (CLEAN) contractor, but is not yet completed. The additional delineation is required to verify that the contaminant plume is not expanding in the southwesterly direction and to determine the viability of extending the nutrient injection system to include this area.

# 5.0 References

CH2M HILL Constructors, Inc. December 2001. Construction Completion Report, Installation of Nutrient Injection System at Building 46, Naval Air Station Cecil Field, Jacksonville, Florida.

Harding Lawson and Associates. October 1998. Site Assessment Report; Building 46, Former Tanks 46R, 46D, 46SUL and 46UL; Naval Air Station Cecil Field, Jacksonville, Florida.

Tetra Tech NUS, Inc. June 2000. Remedial Action Plan Addendum; Building 46, Former Tanks 46R, 46D, 46SUL and 46UL; Naval Air Station Cecil Field, Jacksonville, Florida.

# Appendix A

# Historical Data

**TABLE A1**
Soil Analytical Results

| Soil Boring Number | Sample Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | 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 | 01/04/2001 | <0.9 | 65 | 14 | 390 | 469 | 3.1 | 73 | <0.18 | <1.8 | 1.235 | 0.67 | <0.18 | 0.179 | 0.039 | <.018 | 0.48 | 0.02 | 0.024 | 0.01 | 0.006 | <0.018 | <0.018 | 9900 |
| | 06/27/2001 | 0.61 | 34 | 9.1 | 110 | 153.71 | <0.0012 | 1.4 | <0.18 | 0.16 | 0.15 | 0.15 | <0.18 | 0.051 | 0.012 | 0.022 | 0.19 | 0.012 | 0.013 | 0.006 | 0.007 | <0.018 | 0.0049 | 150 |
| | 09/20/2001 | 0.65 | 6.1 | 0.69 | 40 | 47.44 | <0.15 | 8.8 | <0.2 | <0.2 | <0.2 | 0.28 | <0.2 | 0.11 | 0.019 | <0.02 | 0.15 | 0.034 | 0.026 | 0.018 | 0.011 | 0.026 | 0.024 | 1500 |
| | 12/12/2001 | 0.069 | 0.13 | 0.013 | 0.55 | 0.762 | 0.0084 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | 19 |
| | 03/07/2002 | 3 | 67 | 7.1 | 200 | 277.1 | <1.2 | 23 | <0.19 | <0.19 | <0.19 | 0.27 | <0.19 | 0.057 | 0.0057 | 0.023 | 0.26 | <0.019 | <0.19 | 0.005 | <0.019 | <0.019 | <0.019 | 1600 |
| | 06/20/2002 | 0.15 | 7.9 | 0.82 | 27 | 35.87 | <.11 | 5.2 | <0.18 | <0.18 | 0.92 J | 0.086 J | <0.18 | 0.024 J | <0.018 | <0.018 | 0.04 | <0.018 | <0.018 | .0035 J | .0038 J | <0.018 | <0.018 | 180 |
| SB-2 | 01/04/2001 | 7.1 | 120 | 10 | 610 | 747.1 | 3.8 | 38.5 | <0.18 | <0.18 | 0.515 | 0.66 | <0.18 | 0.173 | 0.044 | 0.043 | <0.018 | 0.017 | 0.029 | 0.022 | <0.018 | <0.018 | 0.0255 | 3900 |
| | 06/27/2001 | 1.4 | 57 | 47 | 420 | 525.4 | <0.0011 | 0.84 | 0.17 | 1 | 0.46 | 0.59 | 0.086 | 0.21 | 0.046 | 0.077 | 0.071 | 0.026 | 0.037 | 0.019 | 0.007 | <0.019 | 0.0091 | 1300 |
| | 09/20/2001 | 0.51 | 32 | 6 | 290 | 328.51 | <0.12 | 7.4 | <0.2 | 2.1 | <0.20 | 0.58 | <0.2 | 0.2 | 0.049 | 0.076 | 0.16 | 0.026 | <0.020 | 0.02 | <0.020 | <0.020 | <0.020 | 430 |
| | 12/12/2001 | <11 | 99 | 110 | 620 | 829 | <11 | 34 | <0.2 | 0.12 | 0.38 | 0.23 | <0.2 | 0.043 | 0.018 | 0.017 | 0.15 | 0.01 | 0.007 | 0.007 | <0.020 | 0.008 | 0.015 | 1800 |
| | 03/07/2002 | 1.7 | 38 | 24 | 430 | 493.7 | <1 | 24 | <0.19 | <0.19 | <0.19 | 0.47 | <0.19 | 0.085 | 0.012 | 0.049 | <0.019 | 0.027 | 0.051 | 0.026 | 0.051 | <0.019 | 0.015 | 2000 |
| | 06/20/2002 | 0.14 | 2.8 | 6 | 72 | 80.94 | <.12 | 11 | <0.17 | <0.17 | <0.17 | 0.2 | 0.1 J | 0.065 J | 0.015 J | 0.028 J | 0.075 | 0.013 J | 0.018 J | 0.010 J | <0.017 | <0.017 | <0.017 | 550 |
| SB-3 | 01/04/2001 | 0.00038 | <0.0011 | <0.0011 | <0.0033 | 0.00038 | <0.0011 | <0.18 | <0.18 | <0.18 | <0.18 | <0.18 | <0.18 | <0.018 | <0.018 | <0.018 | 0.031 | 0.008 | 0.004 | 0.007 | <0.018 | <0.018 | <0.018 | 16 |
| | 06/27/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09/20/2001 | 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 |
| | 03/07/2002 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06/20/2002 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| SB-13 | 01/04/2001 | 0.0011 | <0.0012 | <0.0012 | <0.0036 | 0.0011 | <0.0012 | <0.18 | <0.18 | <0.18 | <0.18 | <0.18 | <0.18 | 0.075 | 0.0715 | 0.078 | 0.13 | 0.145 | 0.067 | 0.11 | 0.055 | 0.082 | 0.1025 | 25 |
| | 06/27/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 09/20/2001 | 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 |
| | 03/07/2002 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06/20/2002 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| SB-14 | 01/04/2001 | <0.001 | <0.001 | 0.011 | 0.0077 | 0.0187 | 0.0081 | 0.23 | <0.18 | <0.18 | <0.18 | <0.18 | <0.18 | <0.018 | <0.018 | <0.018 | 0.785 | 0.015 | 0.008 | 0.012 | 0.008 | 0.01 | 0.016 | 43 |
| | 06/27/2001 | 0.1 | 0.16 | <0.0011 | 0.15 | 0.41 | 0.015 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | 0.014 | <0.019 | <0.019 | 0.44 | 0.006 | 0.007 | 0.019 | <0.019 | 0.023 | <0.019 | 270 |
| | 09/20/2001 | 0.0025 | 0.0025 | 0.002 | 0.0024 | 0.0094 | <0.0012 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.020 | <0.020 | <0.020 | 0.32 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | 55 |
| | 12/12/2001 | 0.11 | 0.18 | 0.014 | 0.71 | 1.014 | 0.012 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | <0.019 | <0.019 | <0.019 | 0.058 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | 65 |
| | 03/07/2002 | 0.054 | 0.045 | <0.0011 | 0.032 | 0.131 | 0.0021 | 0.56 | <0.19 | <0.19 | <0.19 | <0.19 | <0.19 | 0.011 | <0.019 | <0.019 | 1.2 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | <0.019 | 120 |
| | 06/20/2002 | <0.11 | 0.11 J | <0.11 | 0.11 J | 0.22 | <0.11 | <0.18 | <0.18 | <0.18 | <0.18 | <0.18 | <0.18 | <0.018 | <0.018 | <0.018 | 1.4 J | <0.018 | <0.018 | <0.018 | <0.018 | <0.018 | <0.018 | 23 |
| 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] | | 0.007 | 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
BTEX = sum of benzene, toluene, ethylbenzene, and xylene
1 = Ch 62-777 F.A.C Soil cleanup Target Level (SCTLs) reported in mg/kg
TRPH = total recoverable petroleum hydrocarbons
Shaded values indicate the compounds that exceed the SCTLs

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CEF-46-1S | 12/21/2000 | 13000 | 2900 | 40000 | 19000 | 74900 | NA | 550 | N/A | N/A | 1.4 | <1.1 | 0.98 | <1.1 | <1.1 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | 0.085 J | 0.15 | <1 | 23000 |
| | 01/25/2001 | 0.28 | 0.44 | 1.4 | 3.2 | 5.32 | <1.0 | <1.0 | N/A | N/A | <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 | 0.20 | 0.25 | 290 |
| | 02/01/2001 | 9900 | 2300 | 33000 | 18000 | 63200 | 300 | 490 | N/A | N/A | <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 | 0.20 | <1.0 | 40000 |
| | 02/08/2001 | 10000 | 2900 | 42000 | 21000 | 75900 | <500 | 510 | N/A | N/A | <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 | 0.11 | <1.0 | 55000 |
| | 02/15/2001 | 9000 | 2400 | 34000 | 18000 | 63400 | <1000 | 430 | N/A | N/A | <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 | 0.11 | <1 | 74000 |
| | 02/22/2001 | 8900 | 2300 | 34000 | 17000 | 62200 | <1000 | 600 | N/A | N/A | <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 | 0.19 | <1.0 | 5000 |
| | 03/08/2001 | 11000 | 2900 | 41000 | 20000 | 74900 | <500 | 450 | N/A | N/A | <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 | 56000 |
| | 03/21/2001 | 11000 | 2600 | 40000 | 19000 | 72600 | <1000 | 440 | 120 | 150 | <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 | 37000 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/18/2001 | 9500 | 2500 | 39000 | 20000 | 71000 | <1000 | 470 | 41 | 130 | <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 | 53000 |
| | 05/02/2001 | 9900 | 2800 | 39000 | 21000 | 72700 | <1000 | 420 | 38 | 130 | <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 | 0.076 | <1.0 | 44000 |
| | 06/29/2001 | 2700 | 930 | 15000 | 12000 | 30630 | <10 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NS | NS | NS | 26000 |
| | 07/25/2001 | 210 | 150 | 1300 | 1600 | 3260 | <10 | 36 | 5.9 | 21 | <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 | 2900 |
| | 08/20/2001 | 1200 | 590 | 6900 | 6300 | 14990 | 520 | 340 | 43 | 120 | <1.0 | 62 | 17 | <1.0 | <1.0 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.17 | <0.40 | <1.0 | 32000 |
| | 09/18/2001 | 2100 | 1200 | 13000 | 11000 | 27300 | 230 | 400 | 61 | 130 | <1.1 | <1.1 | 1.3 | <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 | 55000 |
| | 10/24/2001 | 2000 | 1500 | 16000 | 15000 | 34500 | 190 | 510 | 68 | 110 | <1.0 | <1.1 | 1.5 | <1.1 | <1.1 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.60 | 0.41 | <1.0 | 63000 |
| | 11/15/2001 | 2000 | 1600 | 17000 | 17000 | 37600 | 160 | 490 | 60 | 100 | <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 | 48000 |
| | 12/17/2001 | 2000 | 1600 | 18000 | 13000 | 34600 | 190 | 490 | 48 | 170 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.22 | <0.22 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | 51000 |
| | 03/19/2002 | 1480 | 1460 | 14500 | 16400 | 33840 | 564 | 637 | 54.6 | 201 | <1.1 | 95.7 | 28.1 | <1.1 | <1.1 | <0.21 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | 47500 |
| | 06/06/2002 | 970 | 1300 | 10000 | 12000 | 24270 | 720 | 180 | 65 | 190 | <1.0 | 25 | 18 | 0.3 J | <1.0 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | 0.11 J | 0.12 J | <1.0 | 46000 |
| CEF-46-2S | 12/21/2000 | 300 | 72 | 51 | 200 | 623 | NA | 230 | N/A | N/A | <1.1 | 5.5 | 3.1 | 0.35 | <1.1 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.60 | <0.4 | 0.22 | 3100 |
| | 01/25/2001 | 7.3 | 0.96 | 1.5 | 3.3 | 13.06 | 7.1 | 11 | N/A | N/A | <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 | 0.083 | <0.40 | <1.0 | 540 |
| | 02/01/2001 | 93 | 28 | 150 | 71 | 342 | 9.9 | 18 | N/A | N/A | <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 | 860 |
| | 02/08/2001 | 230 | 67 | 390 | 180 | 867 | <5.0 | 13 | N/A | N/A | <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 |
| | 02/15/2001 | 360 | 88 | 630 | 270 | 1348 | 7.5 | 32 | N/A | N/A | <1.1 | 26 | 3.1 | 2.0 | 2.3 | 0.51 | 0.6 | 0.68 | 0.65 | 0.58 | 0.33 | 0.63 | 0.53 | 0.55 | 0.73 | <0.60 | <0.40 | <1.0 | 2100 |
| | 02/22/2001 | 340 | 88 | 610 | 260 | 1298 | 10 | 19 | N/A | N/A | <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 |
| | 03/08/2001 | 390 | 76 | 440 | 160 | 1066 | 10 | 37 | N/A | N/A | <1.0 | 29 | <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 | 1700 |
| | 03/21/2001 | 49 | 5.4 | 16 | 8.4 | 78.8 | <1.0 | <1.0 | <1.0 | <1.0 | 4.4 | <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 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/18/2001 | 90 | 12 | 19 | 9.5 | 130.5 | 12 | 72 | 2.9 | 4.7 | <1.0 | 34 | 3.7 | <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 |
| | 05/02/2001 | 760 | 180 | 730 | 520 | 2190 | 23 | 78 | 3.8 | 8.3 | <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 | <6.0 | <4.0 | <10 | 1900 |
| | 06/29/2001 | 1600 | 170 | 23 | 160 | 1953 | 39 | <1.0 | <1.0 | <1.0 | 4.4 | <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 | NS | NS | NS | 1100 |
| | 07/25/2001 | 1100 | 310 | 40 | 520 | 1970 | 54 | 27 | 2.3 | 5.7 | <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 | <0.61 | <0.40 | <1.0 | 980 |
| | 08/20/2001 | 730 | 160 | 12 | 220 | 1122 | 56 | 17 | 1 | 1.8 | <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 | <0.60 | <0.40 | <1.0 | 1300 |
| | 09/18/2001 | 21 | 7.6 | 2.4 | 2.7 | 33.7 | 32 | 0.94 | <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 | 360 |
| | 10/24/2001 | 120 | 110 | 4.4 | 40 | 274.4 | 50 | 3.4 | <1.1 | <1.1 | <1.0 | <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 | <0.60 | <0.40 | 1.2 | 1000 |
| | 11/15/2001 | 8.2 | 4.1 | <1.0 | 5.1 | 17.4 | 60 | 1.1 | <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 | 550 |

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/17/2001 | 39 | 82 | <1.0 | 21 | 142 | 51 | 1.5 | <1.1 | <1.1 | <1.1 | <1.1 | <1.0 | <1.1 | <1.1 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | 920 |
| | 03/19/2002 | 2.95 | 3.13 | <1.0 | 3.11 | 9.19 | 104 | 0.544 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | 404 |
| | 06/06/2002 | 7.1 | 9.1 | <1.0 | 12 | 28.2 | 200 | 4.8 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | 500 |
| CEF-46-5I | 12/21/2000 | 850 | 38 | 13 | 150 | 1051 | NA | 1.6 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | <550 |
| | 01/25/2001 | 180 | 7.4 | 3.1 | 31 | 221.5 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 02/01/2001 | 240 | 12 | 5.3 | 64 | 321.3 | 5.2 | 0.43 | N/A | N/A | <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 | <0.60 | <0.40 | <1.0 | <530 |
| | 02/08/2001 | 48 | 2.3 | 0.82 | 12 | 63.12 | <1.0 | <1.1 | N/A | N/A | <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 | 300 |
| | 02/15/2001 | 37 | <1.0 | 0.59 | 7.3 | 44.89 | <1.0 | 6.5 | N/A | N/A | <1.0 | 2.7 | 2.2 | 3.3 | 3.7 | 0.66 | 0.59 | 0.73 | 0.86 | 0.60 | 0.34 | 0.64 | 0.52 | 0.50 | 0.67 | <0.60 | <0.40 | <1.0 | 210 |
| | 02/22/2001 | 53 | 2.7 | 0.94 | 7.7 | 64.34 | 2.1 | 0.52 | N/A | N/A | <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 | <0.60 | <0.40 | <1.0 | 330 |
| | 03/08/2001 | 64 | 2.9 | 0.53 | 5.5 | 72.93 | <1.0 | 0.45 | N/A | N/A | <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 | 400 |
| | 03/21/2001 | 0.13 | <1.0 | <1.0 | <1.0 | 0.13 | <1.0 | 0.52 | <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 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/18/2001 | 32 | 1.2 | <1.0 | 4.8 | 38 | <1.0 | <1.0 | <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 |
| | 05/02/2001 | 14 | 0.66 | 0.64 | 2.2 | 17.5 | 1.4 | <1.1 | <1.1 | <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 | <0.60 | <0.40 | <1.0 | <530 |
| | 06/28/2001 | <1.0 | <1.0 | 1.5 | 9.5 | 11 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.21 | <0.21 | <0.21 | 0.8 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.16 | <0.40 | <1.0 | 310 |
| | 07/25/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 08/21/2001 | <1.0 | 1.6 | 3.9 | 20 | 25.5 | <1.0 | <1.0 | <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 | 0.74 | <540 |
| | 09/18/2001 | 1.2 | 2.3 | 5.7 | 30 | 39.2 | <1.0 | <1.0 | <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 | <530 |
| | 10/23/2001 | 0.91 | 2.2 | 4.3 | 22 | 29.41 | <1.0 | <1.2 | <1.2 | <1.2 | <1.0 | <1.2 | <1.2 | <1.2 | <1.2 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.89 | <0.40 | <1.0 | 750 |
| | 11/15/2001 | 3.4 | 7.8 | 19 | 66 | 96.2 | 1.6 | <1.0 | <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 | <6.0 | <4.0 | <10.0 | <510 |
| | 12/18/2001 | 2.9 | 8.5 | 19 | 74 | 104.4 | 1.1 | <1.0 | <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 | 3.4 | <1.0 | <520 |
| | 03/19/2002 | <1.0 | 2.37 | 2.06 | 51.3 | 55.73 | 1.71 | <1.1 | <1.0 | <1.1 | <1.1 | <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 | 0.661 | 7.71 | <1.0 | <540 |
| | 06/06/2002 | <1.0 | 2.1 | 2.4 | 43 | 47.5 | <1.0 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.21 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.661 | 7.71 | <1.0 | <500 |
| CEF-46-6D | 12/21/2000 | 2.8 | 9.9 | 6 | 18 | 36.7 | NA | 3.5 | N/A | N/A | <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 | <0.6 | <0.4 | 0.22 | <560 |
| | 02/08/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | N/A | N/A | <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 |
| | 02/15/2001 | <1.0 | 0.41 | 0.59 | 5.0 | 6 | <1.0 | 0.55 | N/A | N/A | <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 | <540 |
| | 02/22/2001 | <1.0 | <1.0 | <1.0 | 1.9 | 1.9 | <1.0 | 0.46 | N/A | N/A | <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 |
| | 03/07/2001 | <1.0 | 0.55 | 0.39 | 2.8 | 3.7 | <1.0 | <1.0 | N/A | N/A | <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 | <0.60 | <0.60 | <520 |
| | 03/21/2001 | 69 | 2.3 | 0.62 | 4.2 | 76.1 | <1.0 | 1.7 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.60 | <0.40 | <1.0 | <520 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/18/2001 | <1.0 | 0.26 | <1.0 | 0.85 | 1.1 | <1.0 | <1.1 | <1.1 | <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 | <520 |
| | 05/02/2001 | 0.27 | <1.0 | 0.43 | 1.3 | 2.0 | <1.0 | <1.1 | <1.1 | <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 | <0.60 | <0.40 | <1.0 | <520 |
| | 06/28/2001 | <1.0 | <1.0 | <1.0 | 3.1 | 3.1 | <1.0 | <1.1 | <1.1 | <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 |
| | 07/25/2001 | <1.0 | <1.0 | 2.1 | 7.8 | 9.9 | <1.0 | <1.1 | <1.1 | <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 | <0.61 | <0.40 | <1.0 | <520 |
| | 08/21/2001 | <1.0 | 1.2 | 1.6 | 11 | 13.8 | <1.0 | <1.0 | <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 | <540 |
| | 09/18/2001 | 0.82 | 1.4 | 2.3 | 12 | 16.5 | <1.0 | <1.1 | <1.1 | <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 | NA | NA | NA | <520 |
| | 10/23/2001 | 0.54 | 0.89 | 1.7 | 7.7 | 10.8 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <530 |

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11/15/2001 | 1.7 | 3.2 | 6.9 | 24 | 35.8 | <1.0 | <1.0 | <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 | <0.21 | <0.20 | <0.20 | <0.21 | <6.0 | <4.0 | <10.0 | <520 |
| | 12/18/2001 | <1.0 | <1.0 | 0.84 | 4.1 | 4.94 | <1.0 | <1.1 | <1.0 | <1.1 | <1.1 | <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 | <0.60 | <0.40 | <1.0 | <540 |
| | 03/19/2002 | 0.982 | 2.6 | 2.18 | 31.7 | 37.5 | <1.0 | 0.886 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 0.955 | <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 | <550 |
| | 06/06/2002 | <1.0 | <1.0 | <1.0 | 4.5 | 4.5 | <1.0 | 0.92 J | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | 0.955 | <1.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.21 | <0.60 | <0.40 | <1.0 | <500 |
| CEF-46-7I | 12/21/2000 | 9100 | 2800 | 17000 | 15000 | 43900 | NA | 260 | N/A | N/A | 0.86 | <1.1 | 0.7 | <1.1 | <1.1 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.22 | <0.6 | <0.4 | <1.0 | 13000 |
| | 02/22/2001 | 6500 | 1400 | 10000 | 7900 | 25800 | 6100 | 120 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | 17000 |
| | 03/07/2001 | 7500 | 1900 | 12000 | 10000 | 31400 | 5000 | 170 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | 16000 |
| | 03/21/2001 | 4400 | 1100 | 7300 | 6200 | 19000 | 3100 | 180 | 5.4 | 39 | <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 | <0.6 | <0.4 | <1.0 | 15000 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/18/2001 | 3400 | 730 | 3900 | 4400 | 12430 | 6100 | 200 | 6.1 | 22 | <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 | <0.6 | <0.4 | <1.0 | 6400 |
| | 05/02/2001 | 5900 | 1200 | 7300 | 6700 | 21100 | 17000 | 78 | 1.7 | 14 | <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 | <120 | <80 | <200 | 5500 |
| | 06/29/2001 | 1100 | 190 | 590 | 1200 | 3080 | 5000 | 24 | <1.0 | <1.0 | <1.0 | 2.4 | 0.6 | <1.0 | <1.0 | <0.20 | 0.74 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | NS | NS | NS | 3000 |
| | 07/25/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 08/20/2001 | 3900 | 780 | 6000 | 5300 | 15980 | 6700 | 68 | 1.5 | 20 | <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 | <0.6 | <0.4 | <1.0 | 5400 |
| | 09/18/2001 | 4600 | 1100 | 7700 | 4600 | 18000 | 4200 | 96 | 2.8 | 23 | <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 | NA | NA | NA | 10000 |
| | 10/24/2001 | 1100 | 240 | 1600 | 1600 | 4540 | 3700 | 14 | <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 | 3.7 | 3000 |
| | 11/15/2001 | 3900 | 860 | 2800 | 5000 | 12560 | 3100 | 160 | <1.0 | 11 | <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 | <0.6 | <0.4 | <1.0 | 5600 |
| | 12/18/2001 | 500 | 96 | 540 | 680 | 1816 | 2600 | 9.7 | <1.1 | 0.53 | <1.0 | <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 | <0.6 | <0.4 | <1.0 | 1900 |
| | 03/19/2002 | 592 | 116 | 535 | 841 | 2084 | 4700 | 9.67 | <1.0 | 3.36 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | 0.15 | <0.4 | <1.0 | 1060 |
| | 06/06/2002 | 95 | <50 | 53 | 140 | 288 | 4300 | 5.1 | <1.0 | 3.36 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | 0.15 | <0.4 | <1.0 | 650 |
| CEF-46-9I | 12/20/2000 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | NA | <1.1 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | <570 |
| | 01/25/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 1.3 | <1.0 | N/A | N/A | <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 |
| | 02/01/2001 | <1.0 | <1.0 | <1.0 | 0.15 | 0.15 | <1.0 | 0.45 | N/A | N/A | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.21 | <0.21 | 0.088 | <0.21 | 0.084 | 0.13 | 0.15 | 0.081 | 0.19 | 0.099 | <0.60 | <0.40 | <1.0 | <520 |
| | 02/07/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 0.87 | <1.0 | N/A | N/A | <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 |
| | 02/14/2001 | <1.0 | 0.17 | <1.0 | 0.57 | 0.74 | 1.1 | <1.0 | N/A | N/A | <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 |
| | 02/21/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 0.93 | <1.0 | N/A | N/A | <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 | <540 |
| | 03/08/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 0.87 | 0.75 | N/A | N/A | <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 | 210 |
| | 03/21/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 0.94 | <1.0 | <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 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/17/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | <510 |
| | 05/02/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 0.82 | <1.1 | <1.1 | <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 | <0.6 | <0.4 | <1.0 | <530 |
| | 06/28/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 1 | <1.1 | <1.1 | <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 | <0.6 | <0.4 | 0.37 | <500 |
| | 07/25/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.61 | <0.40 | <1.0 | <520 |
| | 08/20/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 1.4 | <1.0 | <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 | <0.6 | <0.4 | <1.0 | 330 |
| | 09/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.1 | <1.0 | <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 | NA | NA | NA | <520 |
| | 10/23/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 0.59 | <1.1 | <1.1 | <1.1 | <1.0 | <1.0 | <1.1 | <1.1 | <1.1 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.22 | <0.20 | <0.20 | <0.20 | <0.20 | 0.9 | <0.40 | <1.0 | <540 |
| | 11/15/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.6 | <0.4 | <1.0 | <520 |

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 03/19/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <1.1 | <1.0 | <1.0 | <1.1 | <1.1 | <1.1 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.21 | 0.155 | <0.40 | <1.0 | <530 |
| | 06/06/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| CEF-46-12I | 12/20/2000 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | NA | <1.1 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | <530 |
| | 01/24/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 14 | <1.0 | N/A | N/A | <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 |
| | 02/01/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 13 | <1.0 | N/A | N/A | <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 | <530 |
| | 02/07/2001 | <1.0 | 0.13 | <1.0 | 0.41 | 0.54 | 19 | <1.0 | N/A | N/A | <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 |
| | 02/14/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 14 | <1.0 | N/A | N/A | <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 |
| | 02/21/2001 | 0.15 | 0.14 | 0.3 | 0.55 | 1.14 | 15 | <1.1 | N/A | N/A | <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 |
| | 03/08/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 03/21/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 21 | <1.0 | <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 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/17/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 14 | <1.0 | <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 | <540 |
| | 05/01/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 15 | <1.0 | <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 | <540 |
| | 06/28/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 12 | <1.0 | <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 |
| | 07/25/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 11 | <1.0 | <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 | 2 | <0.40 | <1.0 | 320 |
| | 08/20/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 10 | <1.0 | <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 |
| | 09/17/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 7.9 | <1.0 | <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 |
| | 10/23/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 13 | <1.1 | <1.1 | <1.1 | <1.0 | <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 | 0.21 | <0.40 | <1.0 | <530 |
| | 11/15/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 17 | <1.0 | <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 |
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 12 | <1.1 | <1.1 | <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 | <560 |
| | 03/18/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 5.78 | <1.1 | <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 | <0.60 | <0.40 | <1.0 | <540 |
| | 06/06/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 2.8 | <1.1 | <1.0 | <1.1 | <1.0 | <1.1 | <1.1 | 0.59 J | <1.1 | 0.84 | 0.77 | 0.32 | 0.3 | 0.32 | 0.14 J | 0.3 | .15 J | .18 J | 0.1 J | <0.60 | <0.40 | <1.0 | <500 |
| CEF-46-13I | 12/20/2000 | <1.0 | <1.0 | <1.0 | 0.45 | 0.45 | NA | 0.89 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | <540 |
| | 01/24/2001 | <1.0 | <1.0 | 1.5 | 0.62 | 2.12 | 280 | 0.60 | N/A | N/A | <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 | 320 |
| | 02/01/2001 | 1.0 | 0.24 | <1.0 | 0.41 | 1.65 | 190 | 0.39 | N/A | N/A | <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 | <530 |
| | 02/07/2001 | 0.59 | <1.0 | <1.0 | 0.95 | 1.54 | 300 | <1.0 | N/A | N/A | <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 | 250 |
| | 02/14/2001 | <1.0 | 2 | <1.0 | 8.4 | 10.4 | 200 | <1.0 | N/A | N/A | <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 | 230 |
| | 02/21/2001 | <1.0 | <1.0 | <1.0 | 4 | 4 | 260 | <1.1 | N/A | N/A | <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 | 290 |
| | 03/08/2001 | 1.5 | 0.73 | <1.0 | <1.0 | 2.23 | 250 | <1.0 | N/A | N/A | <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 | 510 |
| | 03/21/2001 | <1.0 | <1.0 | <1.0 | 7.7 | 7.7 | 250 | 0.73 | <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 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/17/2001 | <1.0 | <1.0 | 0.92 | <1.0 | 0.92 | 210 | <1.0 | <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 | <530 |
| | 05/01/2001 | <5.0 | <5.0 | <5.0 | 2 | 2 | 260 | <1.1 | <1.1 | <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 | <600 |
| | 06/28/2001 | <1.0 | 0.2 | 0.99 | 1.4 | 2.59 | 210 | <1.0 | <1.0 | <1.0 | <1.0 | 0.83 | <1.0 | <1.0 | <1.0 | <0.20 | 0.35 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | 350 |
| | 07/25/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 180 | <1.0 | <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 | 410 |
| | 08/20/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 190 | <1.1 | <1.1 | <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 | <0.61 | <0.40 | 0.56 | 320 |

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 09/17/2001 | <1.0 | <1.0 | 0.68 | 0.53 | 1.21 | 160 | <1.0 | <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 | NA | NA | NA | 310 |
| | 10/23/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 130 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <530 |
| | 11/15/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 170 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <530 |
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 140 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <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 | <540 |
| | 03/19/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 136 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <530 |
| | 06/06/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 160 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <500 |
| CEF-46-14D | 12/20/2000 | <1.0 | <1.0 | 0.42 | 0.37 | 0.79 | NA | <1.1 | N/A | N/A | <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 | 0.088 | <0.4 | 0.26 | <550 |
| | 01/24/2001 | <1.0 | <1.0 | <1.0 | 0.23 | 0.23 | <1.0 | <1.0 | N/A | N/A | <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 | 0.17 | <530 |
| | 02/01/2001 | <1.0 | <1.0 | <1.0 | 0.33 | 0.33 | <1.0 | <1.0 | N/A | N/A | <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 | 0.24 | <520 |
| | 02/07/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | N/A | N/A | <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 | 470 |
| | 02/14/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | N/A | N/A | <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 | 400 |
| | 02/21/2001 | 0.11 | <1.0 | <1.0 | 0.35 | 0.46 | 0.41 | <1.1 | N/A | N/A | <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 | 0.28 | 230 |
| | 03/08/2001 | 0.21 | <1.0 | <1.0 | <1.0 | 0.21 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 03/21/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/17/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 0.75 | <1.0 | <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 | <510 |
| | 05/01/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | 0.24 | <530 |
| | 06/28/2001 | <1.0 | <1.0 | 0.63 | 0.5 | 1.13 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.21 | 0.33 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.16 | <0.40 | 0.44 | <500 |
| | 07/25/2001 | <5.0 | <5.0 | <5.0 | <5.0 | <20 | <5.0 | <1.0 | <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 | 0.18 | <0.40 | <1.0 | 300 |
| | 08/20/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | 0.65 | <520 |
| | 09/17/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <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 | <0.60 | <0.40 | <1.0 | <520 |
| | 10/23/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <0.20 | <0.23 | <0.20 | <0.20 | <0.23 | <0.20 | <0.20 | <0.20 | <0.20 | <0.23 | <0.60 | <0.40 | <1.0 | <520 |
| | 11/15/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <500 |
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.20 | <0.22 | <0.20 | <0.22 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <540 |
| | 03/19/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | 0.391 | <520 |
| | 06/06/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | 0.391 | <500 |
| CEF-46-15I | 12/20/2000 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | NA | <1.1 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | <550 |
| | 01/24/2001 | 0.17 | <1.0 | <1.0 | <1.0 | 0.17 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 02/01/2001 | 0.21 | <1.0 | <1.0 | <1.0 | 0.21 | 0.68 | <1.0 | N/A | N/A | <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 |
| | 02/07/2001 | 0.21 | <1.0 | <1.0 | <1.0 | 0.21 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 02/14/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 02/21/2001 | 0.11 | <1.0 | <1.0 | 0.25 | 0.36 | 0.27 | <1.1 | N/A | N/A | <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 |
| | 03/07/2001 | <1.0 | <1.0 | <1.0 | 0.38 | 0.38 | <1.0 | <1.0 | N/A | N/A | <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 | <530 |
| | 03/21/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/17/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | <530 |
| | 05/01/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 06/28/2001 | <1.0 | <1.0 | 1.1 | <1.0 | 1.1 | 4.1 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.21 | <0.21 | <0.21 | 0.58 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.38 | <0.40 | <1.0 | 270 |
| | 07/25/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.17 | <0.40 | <1.0 | <520 |
| | 08/20/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | <530 |
| | 09/17/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | 3.1 | <1.0 | <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 |
| | 10/23/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <1.1 | <1.0 | <1.1 | <1.1 | <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 | <0.20 | <530 |
| | 11/15/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <1.1 | <1.0 | <1.1 | <1.1 | <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 | <0.20 | <550 |
| | 03/18/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.169 | <0.40 | <1.0 | <530 |
| | 06/06/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <540 |
| CEF-46-21I | 12/20/2000 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | NA | <1.1 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | <550 |
| | 01/25/2001 | 0.25 | <1.0 | 0.70 | <1.0 | 0.95 | <1.0 | <1.0 | N/A | N/A | <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 | 300 |
| | 02/02/2001 | 0.45 | <1.0 | 0.99 | 0.27 | 1.71 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 02/08/2001 | 0.91 | <1.0 | <1.0 | <1.0 | 0.91 | <1.0 | <1.0 | N/A | N/A | <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 | 200 |
| | 02/16/2001 | 0.19 | 0.14 | 0.97 | 0.55 | 1.85 | <1.0 | <1.0 | N/A | N/A | <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 | 200 |
| | 02/22/2001 | <1.0 | 0.18 | 0.68 | <1.0 | 0.86 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 03/08/2001 | <1.0 | <1.0 | 0.32 | <1.0 | 0.32 | <1.0 | <1.1 | N/A | N/A | <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 | 230 |
| | 04/03/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 04/18/2001 | 0.26 | <1.0 | 0.42 | <1.0 | 0.68 | <1.0 | <1.0 | <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 |
| | 05/02/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 06/29/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | 0.064 | <0.21 | <0.21 | <0.21 | NS | NS | NS | <550 |
| | 07/25/2001 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 08/21/2001 | 1.3 | <1.0 | 0.73 | 3.1 | 5.13 | <1.0 | <1.0 | <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 | 0.59 | 0.7 | <520 |
| | 09/18/2001 | <1.0 | <1.0 | <1.0 | 1.6 | 1.6 | <1.0 | <1.0 | <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 | NA | NA | NA | <520 |
| | 10/24/2001 | <1.0 | <1.0 | <1.0 | 0.58 | 0.58 | <1.0 | <1.1 | <1.1 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <0.20 | <0.20 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.16 | <0.40 | <1.0 | <530 |
| | 11/16/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.21 | <0.20 | <0.60 | <0.40 | <1.0 | <530 |
| | 03/19/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.0 | <1.1 | <1.0 | <1.1 | <1.1 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.21 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <520 |
| | 06/07/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.0 | <1.1 | <1.0 | <1.1 | <1.1 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.21 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.60 | 0.15 J | <1.0 | <500 |
| CEF-46-24D | 12/20/2000 | <1.0 | <1.0 | 0.47 | 0.41 | 0.88 | NA | <1.1 | N/A | N/A | <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 | <0.6 | <0.4 | 0.18 | <500 |
| | 01/25/2001 | 8.3 | 0.81 | 1.0 | 2.0 | 12.11 | <1.0 | <1.0 | N/A | N/A | <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 | 0.19 | <510 |
| | 02/02/2001 | 0.25 | <1.0 | <1.0 | 0.40 | 0.65 | <1.0 | <1.0 | N/A | N/A | <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 | 0.30 | <500 |
| | 02/08/2001 | 0.28 | 0.13 | <1.0 | 0.45 | 0.86 | <1.0 | <1.0 | N/A | N/A | <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 | 0.18 | 340 |
| | 02/15/2001 | 0.16 | 0.11 | 0.60 | 0.54 | 1.41 | <1.0 | <1.0 | N/A | N/A | <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 | 460 |
| | 02/24/2001 | 0.18 | 0.11 | 0.40 | 0.54 | 1.23 | <1.0 | <1.1 | N/A | N/A | <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 | <0.60 | <0.40 | <1.0 | <500 |
| | 03/08/2001 | 0.24 | <1.0 | <1.0 | 0.4 | 0.64 | <1.0 | <1.0 | N/A | N/A | <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 | 430 |
| | 03/21/2001 | 0.47 | 0.34 | 0.38 | 0.97 | 2.16 | 0.82 | <1.0 | <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 |
| | 04/03/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <1.2 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.24 | <0.60 | <0.40 | 0.26 | <510 |

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 04/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 05/02/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | 0.24 | 650 |
| | 06/29/2001 | <1.0 | <1.0 | <1.0 | 0.7 | 0.7 | 19 | <1.0 | <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 | NS | NS | NS | <520 |
| | 07/25/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | 380 |
| | 08/21/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <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 | <0.60 | <0.40 | <1.0 | <540 |
| | 09/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <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 | NA | NA | NA | <550 |
| | 10/24/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <530 |
| | 11/16/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.1 | <1.1 | <1.0 | <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 | <500 |
| | 03/19/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <530 |
| | 06/07/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | <500 |
| CEF-46-25I | 12/20/2000 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | NA | <1.1 | N/A | N/A | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.23 | <0.23 | <0.23 | <0.23 | <0.23 | <0.23 | <0.23 | <0.23 | <0.23 | <0.23 | <0.6 | <0.4 | <1.0 | <560 |
| | 01/25/2001 | 0.25 | <1.0 | <1.0 | 0.42 | 0.67 | <1.0 | <1.0 | N/A | N/A | <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 | 320 |
| | 02/02/2001 | 0.27 | <1.0 | <1.0 | <1.0 | 0.27 | <1.0 | <1.0 | N/A | N/A | <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 |
| | 02/08/2001 | 0.21 | 0.15 | <1.0 | 0.43 | 0.79 | <1.0 | <1.1 | N/A | N/A | <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 | <0.60 | <0.40 | <1.0 | 390 |
| | 02/15/2001 | 0.22 | <1.0 | 0.58 | 0.46 | 1.26 | <1.0 | <1.0 | N/A | N/A | <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 | 1000 |
| | 02/22/2001 | 0.46 | <1.0 | <1.0 | <1.0 | 0.46 | <1.0 | <1.0 | N/A | N/A | <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 | 610 |
| | 03/21/2001 | 0.42 | <1.0 | <1.0 | <1.0 | 0.42 | <1.0 | <1.0 | <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 |
| | 04/03/2001 | 0.28 | <1.0 | <1.0 | <1.0 | 0.28 | <1.0 | <1.0 | <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 | <0.4 | <1.0 | 380 |
| | 04/18/2001 | 0.32 | <1.0 | 0.29 | <1.0 | 0.61 | <1.0 | <1.0 | <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 | <0.4 | <1.0 | <530 |
| | 05/02/2001 | 0.19 | <1.0 | <1.0 | <1.0 | 0.19 | <1.0 | <1.0 | <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 | <0.4 | <1.0 | 1000 |
| | 06/29/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.21 | 0.33 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | <0.21 | NS | NS | NS | <530 |
| | 07/25/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 |
| | 08/21/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.1 | <1.1 | <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 | <0.4 | <1.0 | <520 |
| | 09/18/2001 | <1.0 | <1.0 | 1.3 | 0.81 | 2.11 | <1.0 | <1.0 | <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 | NA | NA | NA | <510 |
| | 10/24/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <0.20 | <0.21 | <0.20 | <0.21 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | 0.16 | <0.40 | <1.0 | <530 |
| | 11/16/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <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 | <0.4 | <1.0 | <510 |
| | 12/18/2001 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.1 | <1.0 | <1.0 | <0.20 | <0.22 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.16 | <0.40 | <1.0 | <540 |
| | 03/19/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.4 | <1.0 | <520 |
| | 06/07/2002 | <1.0 | <1.0 | <1.0 | <1.0 | <4.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.4 | <1.0 | <520 |
| CEF-46-26I | 12/20/2000 | 1300 | 78 | 41 | 310 | 1729 | NA | <1.1 | N/A | N/A | <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 | <0.6 | <0.4 | <1.0 | <530 |
| | 01/25/2001 | 2400 | 270 | 100 | 820 | 3590 | <5.0 | <1.0 | N/A | N/A | <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 | 890 |
| | 02/02/2001 | 2000 | 150 | 77 | 600 | 2827 | <1.0 | <1.0 | N/A | N/A | <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 | 590 |
| | 02/08/2001 | 2100 | 120 | 83 | 460 | 2763 | 18 | <1.0 | N/A | N/A | <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 | 730 |
| | 02/16/2001 | 2300 | 150 | 94 | 600 | 3144 | 10 | <1.1 | N/A | N/A | <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 | <0.60 | <0.40 | <1.0 | 960 |
| | 02/22/2001 | 1800 | 140 | 240 | 620 | 2800 | <100 | <1.1 | N/A | N/A | <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 | <0.60 | <0.40 | <1.0 | 610 |
| | 03/08/2001 | 2100 | 160 | 85 | 620 | 2965 | <50 | <1.0 | N/A | N/A | <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 | 1000 |

**TABLE A2**
Groundwater Analytical Results

| | Date | Benzene | Ethyl Benzene | Toluene | Xylene | BTEX | Methyl tert-butyl ether | Naphthalene | 1-Methylnaphthalene | 2-Methylnaphthalene | 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 (mg/L) | Nitrite (mg/L) | Phosphate (mg/L) | TRPH (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 03/21/2001 | 2400 | 190 | 110 | 750 | 3450 | <10 | <1.0 | <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 | 630 |
| | 04/03/2001 | 2400 | 190 | 99 | 810 | 3499 | <1.0 | <1.0 | <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 | <0.6 | <0.4 | <1.0 | 1200 |
| | 04/18/2001 | 2300 | 190 | 110 | 750 | 3350 | <50 | <1.0 | <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 | <0.6 | <0.4 | <1.0 | 810 |
| | 05/02/2001 | 1100 | 100 | 46 | 390 | 1636 | <50 | <1.0 | <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 | <30 | <20 | <50 | 410 |
| | 06/29/2001 | 3400 | 260 | 180 | 1200 | 5040 | <50 | <1.0 | <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 | NS | NS | NS | 1200 |
| | 07/25/2001 | 2100 | 180 | 87 | 790 | 3157 | <25 | <1.0 | <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 | 850 |
| | 08/21/2001 | 2000 | 160 | 49 | 700 | 2909 | <1.0 | <1.0 | <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 | <0.6 | <0.4 | <1.0 | 930 |
| | 09/18/2001 | 2100 | 180 | 110 | 730 | 3120 | <20 | <1.1 | <1.1 | <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 | NA | NA | NA | 720 |
| | 10/24/2001 | 1300 | 97 | 22 | 390 | 1809 | <20 | <1.1 | <1.0 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <0.20 | <0.22 | <0.20 | <0.22 | <0.20 | <0.22 | <0.20 | <0.20 | <0.20 | <0.20 | 0.16 | <0.40 | <1.0 | 720 |
| | 11/16/2001 | 1700 | 120 | 10 | 430 | 2260 | 10 | <1.0 | <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 | 0.12 | 0.15 | <1.0 | 590 |
| | 12/18/2001 | 1300 | 68 | <10 | 370 | 1738 | 11 | <1.1 | <1.0 | <1.1 | <1.0 | <1.0 | <1.1 | <1.1 | <1.0 | <0.20 | <0.22 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.6 | <0.4 | <1.0 | 720 |
| | 03/19/2002 | 1510 | 63.4 | 14 | 424 | 2011.4 | 14.9 | <1.0 | <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 | 0.148 | <0.40 | <1.0 | 360 |
| | 06/06/2002 | 1500 | 46 | 5 | 430 | 1981 | 14 | <1.1 | <1.0 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.0 | <0.20 | <0.21 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.60 | <0.40 | <1.0 | 290 J |
| Groundwater Criteria [1] | | 1 | 30 | 40 | 20 | n/a | 50 | 20 | 20 | 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 | 200 | 200 | 2100 | 200 | 2800 | 2100 | 21000 | 2800 | 2100 | 20 | 480 | 20 | 50 | 20 | 20 | 20 | 2100 | 100000 | 10000 | n/a | 50000 |

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

NS = Not Sampled
NA = Not Analyzed

BTEX = sum of benzene, toulene, ethylbenzene, and xylene
TRPH = total recoverable petroleum hydrocarbons

# Appendix B

# Laboratory Analytical Reports

# (CD only)

# Validation Report

**e*data, inc.**
Environmental Data Management
& Chemistry Consulting Services

030121

February 21, 2003

NAVY BAC FILE
FEB 25 2003

Christelle Newsome
CH2M HILL Constructors, Inc.
115 Perimeter Center Place, N.E.
Suite 700
Atlanta, GA 30346-1278

Subject: Data Validation Services for CTO – 062 – NAS, Cecil Field, Project Number: 163151.

Dear Ms. Newsome,

Enclosed please find the data validation package for CTO-062. A copy of the validated database file in comma-delimited variable (csv) file format has been emailed to your attention at cnewsome@CH2M.com. Three additional fields were added for the validated results (Valid_Result), validated qualifiers (Valid_Qual) and qualifier codes (Qual_Code).

This report addresses thirteen sample delivery groups (SDGs) for the sampling effort. The SDGs are 2209102, 2209178, C207404, C207405, C208603, C208604, C209256, C209257, L0209285, L0209310, L0209337, L0209516, and L0209517. Mr. Richard Baldino, a senior data validator, conducted the data validation effort.

Please call me at (847) 494-2685 if you have any questions or need additional information.

Sincerely,

Richard Baldino
Senior Environmental Chemist

Enclosures
RAB/rab

edata:CTO-062 Cover.doc

Approved for Quality Assurance Release by:
Rev. 0 Date 2/27/03
C Christelle Newsome

300 N. Carlyle Place
Arlington Heights, IL 60004

Tel: (847) 494-2685
Fax: (847) 628-0964
richardbaldino@attbi.com

# DATA VALIDATION REPORT
## (NAVAL AIR STATION)

**NAS, Cecil Field**

**CTO-062**

**PROJECT NO 163151**

**February 21, 2003**

**Prepared For CCI**

**Prepared by E-Data, Inc.**
**300 N. Carlyle, Suite 100**
**Arlington Heights, IL 60004**

# Data Validation Reference Package

## Acronyms and Abbreviations

| | |
|---|---|
| CLP | Contract Laboratory Program |
| COC | Chain-of-Custody |
| %D | Percent Difference |
| DUP | Duplicate |
| GC | Gas Chromatography |
| GS/MS | Gas Chromatography/Mass Spectroscopy |
| IS | Internal Standard |
| LCS | Laboratory Control Sample |
| MDL | Method Detection Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| NFG | Nation Functional Guidelines |
| %REC | Percent Recovery |
| QA | Quality Assurance |
| QC | Quality Control |
| RL | Reporting Limits |
| RPD | Relative Percent Difference |
| RSD | Relative Standard Deviation |
| SVOCs | Semi Volatile Organic Compounds |
| VOC | Volatile Organic Compound |

# Data Qualifier Reference Table

Final validated data were assigned qualifiers per USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (NFG). Table 1 presents all data qualifiers used in the data validation effort - CTO-062.

**TABLE 1**
EXAMPLE DATA QUALIFIER REFERENCE
*(CTO-062)*

| Qualifier | Organic | Inorganic |
|---|---|---|
| [=] | The parameter was detected at the reported concentration. | The parameter was detected at the reported concentration. |
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit of the sample detection limit. |
| J | The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample. | The associated value is an estimated quantity. |
| N | The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet the quality control criteria. The presence or absence of the analyte cannot be verified OR a more appropriate analyses is present. | The data are unusable. (Note: Analyte may or not be present). |

# Qualification Code Reference Table

Qualification codes explain why data qualifiers have been applied and identify possible limitations of data use. Table 2 presents all data qualifier codes used in the data validation effort - CTO-062.

**TABLE 2**
EXAMPLE DATA QUALIFIER CODE REFERENCE
*(CTO-062)*

| Qualifier | Organics | Inorganics |
|---|---|---|
| H | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect. |
| C | Calibration %RSD or %D were noncompliant. | Correlation coefficient is <0.995. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| B | Presumed contamination from preparation (method) blank. | Presumed contamination from preparation (method) blank or calibration blank. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| Q | MS/MSD recovery was poor or RPD high. | MS recovery was poor. |
| E | Duplicates showed poor agreement. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | Not applicable. |
| T | Presumed contamination from trip blank. | Not applicable. |
| + | False positive—reported compound was not present. | Not applicable. |
| - | False negative—compound was present but not reported. | Not applicable. |
| F | Presumed contamination from FB or ER. | Presumed contamination from FB or ER |
| $ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Poor Digestion Spike recovery was not within control limits. |
| *# | Unusual problems found with the data that have been described in Section 2, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found. | Unusual problems found with the data that have been described in Section 2, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found. |

# Data Validation Report

## Introduction

This report describes the data validation services provided by E-Data Inc., in support of CCI project numbers 2209102, 2209178, C207404, C207405, C208603, C208604, C209256, C209257, L0209285, L0209310, L0209337, L0209516, and L0209517 as part of CCI contact number CTO-062.

CCI collected water samples and associated field QC samples between December 3rd and July 15th, 2002 and October 3rd, 2002. Samples were taken from 6 air sampling locations, 4 soil sampling locations, and 40 water sampling locations. Field quality control samples include 4 field duplicate samples, 6 equipment rinsate blank samples, and 7trip blank samples. The laboratory prepared project-specific samples for MS/MSD pair analyses where applicable for all organic, inorganic, and wet chemistry analyses.

A summary of the samples and required analyses is shown in Table 3. Samples contained in SDGs L0209285, L0209310, L0209337, L0209516, and L0209517 were submitted to Kemron Environmental Services, located in Marietta, Ohio. Samples contained in SDGs 2209102 and 2209178 were submitted to PEL Laboratories, located in Tampa, Florida. Samples contained in SDGs C207404, C207405, C208603, C208604, C209256, and C209257 were submitted to Severn Trent Services, located in Pensacola, Florida.

Laboratory data were validated using CCI-approved checklists based on the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. A copy of the laboratory reports with data qualifiers applied during the data validation and chain-of-custody forms are provided in Appendix A. Appendix B contains copies of the completed data validation checklists.

At least 50 percent of the sample results from the final validated-laboratory reports were compared to the electronic data. Table C-1 (Appendix C) summarizes the 1390 sample results that were verified. The database contains 2605 results from regular, field duplicate, equipment blank, and trip blank samples.

This report addresses thirteen sample delivery groups (SDGs) for the sampling effort. The SDGs are 2209102, 2209178, C207404, C207405, C208603, C208604, C209256, C209257, L0209285, L0209310, L0209337, L0209516, and L0209517. Mr. Richard Baldino, a senior data validator, conducted the data validation effort.

**Table 3**
SUMMARY OF REQUESTED ANALYSES
*(CTO-062)*

| Lab Sample ID | Field ID | Matrix | QA/QC TYPE | Sample Date | Receive Date | Metals | Nitrite | Nitrate | PAHs | Phosphorus | TPH | VOCs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 220910201 | 01Q30228 | Water | N | 12-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910202 | 02Q30228 | Water | N | 12-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910203 | 03Q30228 | Water | N | 12-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910204 | 04Q30228 | Water | N | 12-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910205 | 05Q30228 | Water | N | 12-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910206 | 06Q30228 | Water | N | 13-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910207 | 07Q30228 | Water | N | 13-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910208 | 10Q30228 | Water | N | 13-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910209 | 11Q30228 | Water | N | 12-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910212 | DUPQ30228 | Water | FD | 12-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910213 | EQBQ30228 | Water | EB | 13-Sep-02 | 14-Sep-02 | X | | | X | | X | X |
| 220910214 | TBQ30228 | Water | TB | 13-Sep-02 | 14-Sep-02 | | | | | | | X |
| 220917801 | 062MW4Q302 | Water | N | 24-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917802 | 062MW9Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917803 | 062MW13Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917804 | 062MW20Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917807 | 062MW22Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917808 | 062VEW2Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917809 | 062VEW3Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917810 | 062VEW4Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917811 | 062VEW5Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917812 | 062VEW6Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917813 | 062VEW7Q302 | Water | N | 24-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917814 | 062VEW8Q302 | Water | N | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917815 | 062DUPQ302 | Water | FD | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917816 | 062EQBQ302 | Water | EB | 23-Sep-02 | 25-Sep-02 | | | | X | | | X |
| 220917817 | 062TBQ302 | Water | TB | 25-Sep-02 | 25-Sep-02 | | | | | | | X |
| C207404*1 | 062-SVE-E-A-0715-02-26 | Air | N | 15-Jul-02 | 18-Jul-02 | | | | | | | X |
| C207405*1 | 062-SVE-E-A-0715-02-30 | Air | N | 15-Jul-02 | 18-Jul-02 | | | | | | | X |
| C208603*1 | 062-SVE-E-A-0821-02-31 | Air | N | 21-Aug-02 | 27-Aug-02 | | | | | | | X |
| C208604*1 | 062-SVE-E-A-0821-02-27 | Air | N | 21-Aug-02 | 27-Aug-02 | | | | | | | X |
| C209256*1 | 062-SVE-E-A-0909-02-32 | Air | N | 09-Sep-02 | 12-Sep-02 | | | | | | | X |
| C209257*1 | 062-SVE-E-A-0909-02-28 | Air | N | 09-Sep-02 | 12-Sep-02 | | | | | | | X |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | Water | N | 16-Sep-02 | 17-Sep-02 | | X | X | X | X | X | X |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | Water | N | 16-Sep-02 | 17-Sep-02 | | X | X | X | X | X | X |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | Water | N | 16-Sep-02 | 17-Sep-02 | | X | X | X | X | X | X |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | Water | N | 16-Sep-02 | 17-Sep-02 | | X | X | X | X | X | X |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | Water | N | 16-Sep-02 | 17-Sep-02 | | X | X | X | X | X | X |
| L0209285-08 | 062-9DUP-Q3-02-21 | Water | FD | 16-Sep-02 | 17-Sep-02 | | X | X | X | X | X | X |
| L0209285-09 | 062-9EQB-Q3-02-21 | Water | EB | 16-Sep-02 | 17-Sep-02 | | X | X | X | X | X | X |
| L0209285-10 | 062-9TB-Q3-02-21 | Water | TB | 16-Sep-02 | 17-Sep-02 | | | | | | | X |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | Water | N | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | Water | N | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | Water | N | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-06 | 062-CEF46-12I-Q3-02-20 | Water | N | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-07 | 062-CEF46-13I-Q3-02-20 | Water | N | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-08 | 062-CEF46-14D-Q3-02-20 | Water | N | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-09 | 062-CEF46-15I-Q3-02-20 | Water | N | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-10 | 062-46DUP-Q3-02-20 | Water | FD | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-11 | 062-46EQB-Q3-02-20 | Water | EB | 17-Sep-02 | 18-Sep-02 | | X | X | X | X | X | X |
| L0209310-12 | 062-46TB1-Q3-02-20 | Water | TB | 17-Sep-02 | 18-Sep-02 | | | | | | | X |

**Table 3**
SUMMARY OF REQUESTED ANALYSES
*(CTO-062)*

| Lab Sample ID | Field ID | Matrix | QA/QC TYPE | Sample Date | Receive Date | Metals | Nitrite | Nitrate | PAHs | Phosphorus | TPH | VOCs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | Water | N | 18-Sep-02 | 19-Sep-02 | | X | X | X | X | X | X |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | Water | N | 18-Sep-02 | 19-Sep-02 | | | | X | | X | X |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | Water | N | 18-Sep-02 | 19-Sep-02 | | | | X | | X | X |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | Water | N | 18-Sep-02 | 19-Sep-02 | | | | X | | X | X |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | Water | N | 18-Sep-02 | 19-Sep-02 | | X | X | X | X | X | X |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | Water | N | 18-Sep-02 | 19-Sep-02 | | | | X | | X | X |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | Water | N | 18-Sep-02 | 19-Sep-02 | | | | X | | X | X |
| L0209337-08 | 062-46TB-Q3-02-20 | Water | TB | 18-Sep-02 | 19-Sep-02 | | | | | | | X |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | Soil | N | 26-Sep-02 | 27-Sep-02 | | | | X | | X | X |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | Soil | N | 26-Sep-02 | 27-Sep-02 | | | | X | | X | X |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | Soil | N | 26-Sep-02 | 27-Sep-02 | | | | X | | X | X |
| L0209516-04 | 062-CEF46-EQB-W-Q3-02 | Water | EB | 26-Sep-02 | 27-Sep-02 | | | | X | | X | X |
| L0209516-05 | 062-CEF46-TB-W-Q3-02 | Water | TB | 26-Sep-02 | 27-Sep-02 | | | | | | | X |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | Soil | N | 26-Sep-02 | 27-Sep-02 | | | | X | | X | X |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | Water | EB | 26-Sep-02 | 27-Sep-02 | | | | X | | X | X |
| L0209517-03 | 062-CEF9-TB-W-Q3-02 | Water | TB | 26-Sep-02 | 27-Sep-02 | | | | | | | X |

# Data Validation Findings Summary

This section presents a summary of the data validation findings of the data reviewer.

## General Comments

Laboratory results reported for metals at concentration levels less than the contracted reporting limits were qualified as trace concentrations by the laboratory and flagged "B" on the laboratory reports. The "B" flagged results were revised to a "J" flag, meaning the concentration value is an estimate.

## Volatile Organic Analyses

Toluene was measured in some of the DI field blanks. Action levels were determined using the 5X Rule for toluene. Sample results less than the action levels are qualified as non-detected and flagged "U."

Surrogate recoveries in some samples were outside the laboratory established control limits. Samples that exhibited high surrogate recoveries were considered estimated and flagged "J" for detected VOC compounds only.

MS/MSD analyses were performed on project specific samples in various SDGs. Some of the accuracy and precision objectives were not met. However, the deficiencies do not suggest that the laboratory was unable to detect these constituents if they are present in the field samples. Some SDGs did not have MS/MSD analyses performed as part of the analytical batch. No LCS recovery deficiencies were noted. No action was taken to qualify the sample results based on the MS/MSD deficiencies or lack of MS/MSD samples alone.

## Polynuclear Aromatic Hydrocarbon Analyses

Anthracene, benzo(a)anthracene, benzo(b)fluoranthene, fluoranthene, benzo(g,h,i)perylene, and phenanthrene were measured in some of the laboratory method blanks and DI field blanks. Action levels were determined using the 5X Rule for PAH compounds. Sample results less than the action levels are qualified as non-detected and flagged "U."

Surrogate recoveries in some samples were outside the laboratory established control limits. Samples that exhibited high surrogate recoveries were considered estimated and flagged "J" for detected PAH compounds only. Samples that exhibited low surrogate recoveries were considered estimated and flagged "J" for detected PAH compounds and "UJ" for non-detected PAH compounds.

Laboratory Control Samples (LCS) were performed as part of each analytical batch as a check of analytical accuracy. Some of the accuracy objectives were not met. When LCS recovery objectives were not met, field samples were considered estimated and flagged "J" for detects and "UJ" for non-detects.

MS/MSD analyses were performed on project specific samples in various SDGs. Some of the accuracy and precision objectives were not met. However, the deficiencies do not suggest that the laboratory was unable to detect these constituents if they are present in the field samples. Some SDGs did not have MS/MSD analyses performed as part of the

analytical batch. Where no LCS recovery deficiencies were noted, no action was taken to qualify the sample results based on the MS/MSD deficiencies or lack of MS/MSD samples alone.

### Metals Analyses

Low-level check standards were not analyzed in the analytical batches associated with this project. Low-level check standards are used to check instrument accuracy near the laboratory established reporting limit. Initial Calibration Verification (ICV) standards were run and recoveries were acceptable. No other analytical problems were indicated by QA/QC criteria for this project. No action was taken.

### Total Petroleum Hydrocarbon Analyses

TPH was measured in some of the DI field blanks. Action levels were determined using the 5X Rule for TPH. Sample results less than the action levels are qualified as non-detected and flagged "U."

MS/MSD analyses were performed on project specific samples in various SDGs. Some of the accuracy and precision objectives were not met. However, the deficiencies do not suggest that the laboratory was unable to detect these constituents if they are present in the field samples. Some SDGs did not have MS/MSD analyses performed as part of the analytical batch. Where no LCS recovery deficiencies were noted, no action was taken to qualify the sample results based on the MS/MSD deficiencies or lack of MS/MSD samples alone.

The surrogate recoveries of o-terphenyl in some of the samples tested were outside the laboratory established control limits. Surrogate standards are used to test the accuracy of the sample extraction and sample analysis. Low surrogate recoveries indicate a possible negative bias in either the sample extraction or analysis. High surrogate recoveries indicate a possible positive bias in either the sample extraction or analysis. Where surrogate recoveries were low, TPH results for the affected samples were considered estimated and flagged "J" for detects and "UJ" for non-detects. Where surrogate recoveries were high, TPH results for the affected samples were considered estimated and flagged "J" for detects only.

### General Chemistry Analyses

Nitrate was measured in the DI field blank. Action levels were determined using the 5X Rule for nitrate. Sample results less than the action level are qualified as non-detected and flagged "U."

## Technical Validity and Usability

The analytical performance of this data set is very strong. The analytical results meet the data quality objectives defined by the applicable method and NFG, except as noted in the data validation findings.

# Summary of Qualified Data

A summary of the data qualified during the data validation exercise is summarized in Table 4.

**Table 4**
Summary of Qualified Data
*(CTO-062)*

| Lab Sample ID | Field Sample ID | Analysis | Method | Parameter Name | Result | Lab Qual | DV Qual | DV Qual Code |
|---|---|---|---|---|---|---|---|---|
| 220910202 | 02Q30228 | TPH | FL-PRO | Petroleum Hydrocarbons | 1.6 | = | J | S |
| 220910203 | 03Q30228 | TPH | FL-PRO | Petroleum Hydrocarbons | 0.24 | = | J | S |
| 220910206 | 06Q30228 | TPH | FL-PRO | Petroleum Hydrocarbons | 0.21 | U | UJ | S |
| 220910207 | 07Q30228 | TPH | FL-PRO | Petroleum Hydrocarbons | 0.2 | U | UJ | S |
| 220910209 | 11Q30228 | TPH | FL-PRO | Petroleum Hydrocarbons | 1.7 | = | J | S |
| 220910213 | EQBQ30228 | VOCs | SW8260B | Toluene | 0.66 | F | U | F |
| 220917804 | 062MW20Q302 | VOCs | SW8021 | Toluene | 0.24 | F | U | F |
| 220917816 | 062EQBQ302 | VOCs | SW8021 | Toluene | 0.21 | F | U | F |
| 220917817 | 062TBQ302 | VOCs | SW8021 | Toluene | 0.31 | F | U | F |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | TO14 | Toluene | 0.059 | JB | J | < |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | NO3 | SW9056 | Nitrate | 0.109 | J | U | F |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0837 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Fluoranthene | 0.0543 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Acenaphthylene | 0.382 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Phenanthrene | 0.312 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Fluorene | 0.608 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Anthracene | 0.31 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Pyrene | 0.075 | J | J | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.146 | J | J | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0783 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Naphthalene | 1.1 | = | J | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Chrysene | 0.0261 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Benzo(a)anthracene | 0.0326 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.126 | J | UJ | LF |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.087 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | 2-Methylnaphthalene | 0.608 | J | J | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Benzo(a)pyrene | 0.0576 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | 1-Methylnaphthalene | 0.393 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | SW8310 | Acenaphthene | 0.451 | U | UJ | L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | TPH | SW8015 | FLPRO | 851 | = | U | F |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | NO3 | SW9056 | Nitrate | 0.223 | J | U | F |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Chrysene | 0.0255 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Benzo(a)anthracene | 0.0319 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0532 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Anthracene | 0.303 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Naphthalene | 0.382 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Acenaphthylene | 0.373 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Phenanthrene | 0.305 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | 2-Methylnaphthalene | 0.382 | J | J | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.179 | J | UJ | LF |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Pyrene | 0.0753 | J | J | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0851 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Fluorene | 0.595 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Benzo(a)pyrene | 0.0564 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0819 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0766 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Acenaphthene | 0.441 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | 1-Methylnaphthalene | 0.385 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | SW8310 | Fluoranthene | 0.0532 | U | UJ | L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | TPH | SW8015 | FLPRO | 674 | = | U | F |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | NO3 | SW9056 | Nitrate | 0.127 | J | U | F |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Benzo(a)anthracene | 0.0328 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Chrysene | 0.0262 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0372 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0874 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Benzo(a)pyrene | 0.0579 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Acenaphthene | 0.454 | U | UJ | L |

**Table 4**
Summary of Qualified Data
*(CTO-062)*

| Lab Sample ID | Field Sample ID | Analysis | Method | Parameter Name | Result | Lab Qual | DV Qual | DV Qual Code |
|---|---|---|---|---|---|---|---|---|
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | 1-Methylnaphthalene | 0.396 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Naphthalene | 0.392 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Pyrene | 0.0743 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | 2-Methylnaphthalene | 0.367 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Anthracene | 0.311 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Phenanthrene | 0.314 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0787 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Fluoranthene | 0.0546 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0546 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Acenaphthylene | 0.384 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Fluorene | 0.611 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0842 | U | UJ | L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | TPH | SW8015 | FLPRO | 423 | J | U | F |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Chrysene | 0.024 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Naphthalene | 0.359 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Benzo(a)anthracene | 0.03 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Fluorene | 0.559 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Phenanthrene | 0.287 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Acenaphthylene | 0.351 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Acenaphthene | 0.415 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.072 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | 2-Methylnaphthalene | 0.336 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.08 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Anthracene | 0.285 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Fluoranthene | 0.05 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.077 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | 1-Methylnaphthalene | 0.362 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0968 | J | UJ | LF |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Benzo(a)pyrene | 0.053 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.05 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | PAHs | SW8310 | Pyrene | 0.068 | U | UJ | L |
| L0209285-04 | 062-CEF9-7D-Q3-02-21 | TPH | SW8015 | FLPRO | 420 | J | U | F |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.075 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0802 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.126 | J | UJ | LF |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0683 | J | J | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0833 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Chrysene | 0.025 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Fluorene | 0.582 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Fluoranthene | 0.0521 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Benzo(a)pyrene | 0.0552 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Anthracene | 0.297 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | 2-Methylnaphthalene | 3.44 | = | J | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Pyrene | 0.0844 | J | J | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Benzo(a)anthracene | 0.101 | J | UJ | LF |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Phenanthrene | 0.299 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Acenaphthylene | 0.366 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | 1-Methylnaphthalene | 1.34 | = | J | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Naphthalene | 12.9 | = | J | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | PAHs | SW8310 | Acenaphthene | 0.432 | U | UJ | L |
| L0209285-07 | 062-CEF9-9S-Q3-02-21 | TPH | SW8015 | FLPRO | 697 | = | U | F |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Fluorene | 0.588 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Acenaphthene | 0.437 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Naphthalene | 13.4 | = | J | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0816 | J | J | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0684 | J | UJ | LF |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Pyrene | 0.0754 | J | J | L |

**Table 4**
Summary of Qualified Data
*(CTO-062)*

| Lab Sample ID | Field Sample ID | Analysis | Method | Parameter Name | Result | Lab Qual | DV Qual | DV Qual Code |
|---|---|---|---|---|---|---|---|---|
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0842 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0758 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | 2-Methylnaphthalene | 3.53 | = | J | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Benzo(a)anthracene | 0.0794 | J | UJ | LF |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Phenanthrene | 0.302 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Benzo(a)pyrene | 0.0558 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Chrysene | 0.0253 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Acenaphthylene | 0.369 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0811 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Fluoranthene | 0.0526 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | 1-Methylnaphthalene | 1.43 | = | J | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | PAHs | SW8310 | Anthracene | 0.3 | U | UJ | L |
| L0209285-08 | 062-9DUP-Q3-02-21 | TPH | SW8015 | FLPRO | 633 | = | U | F |
| L0209285-09 | 062-9EQB-Q3-02-21 | TPH | SW8015 | FLPRO | 417 | J | U | F |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | TPH | SW8015 | FLPRO | 488 | J | UJ | SF |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0351 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0742 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.362 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.0247 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.576 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.296 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0515 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.428 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Naphthalene | 9.75 | = | J | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.0515 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.294 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0794 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.0546 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 0.373 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.0701 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 1.37 | = | J | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0825 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.0309 | U | UJ | S |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | TPH | SW8015 | FLPRO | 950 | = | U | F |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | TPH | SW8015 | FLPRO | 623 | = | U | F |
| L0209310-06 | 062-CEF46-12I-Q3-02-20 | NO3 | SW9056 | Nitrate | 0.107 | J | U | F |
| L0209310-06 | 062-CEF46-12I-Q3-02-20 | TPH | SW8015 | FLPRO | 564 | = | U | F |
| L0209310-07 | 062-CEF46-13I-Q3-02-20 | TPH | SW8015 | FLPRO | 745 | = | U | F |
| L0209310-08 | 062-CEF46-14D-Q3-02-20 | TPH | SW8015 | FLPRO | 554 | = | U | F |
| L0209310-09 | 062-CEF46-15I-Q3-02-20 | TPH | SW8015 | FLPRO | 668 | = | U | F |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.559 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.024 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Chrysene | 0.24 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.415 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Acenaphthene | 4.15 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Pyrene | 0.68 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.077 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Acenaphthylene | 3.51 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Fluorene | 5.59 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.77 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.287 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.72 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Phenanthrene | 2.87 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.072 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.351 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.068 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.05 | U | UJ | S |

**Table 4**
Summary of Qualified Data
*(CTO-062)*

| Lab Sample ID | Field Sample ID | Analysis | Method | Parameter Name | Result | Lab Qual | DV Qual | DV Qual Code |
|---|---|---|---|---|---|---|---|---|
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.285 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.034 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.053 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.34 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Benzo(a)pyrene | 0.53 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.8 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | 2-Methylnaphthalene | 3.36 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Anthracene | 2.85 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Fluoranthene | 0.5 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.03 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Naphthalene | 157 | I | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Benzo(a)anthracene | 0.3 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Naphthalene | 173 | = | J | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 52 | = | J | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | 1-Methylnaphthalene | 3.62 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.05 | U | UJ | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.5 | U | R | D |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 18.6 | = | J | S |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.08 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.0255 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.0564 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 0.385 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0819 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.0319 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.0723 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.441 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0362 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.595 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Naphthalene | 0.382 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0851 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.0532 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.305 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.303 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0766 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0532 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 0.357 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.373 | U | UJ | S |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | TPH | SW8015 | FLPRO | 776 | = | U | F |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.446 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.057 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0774 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.306 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0366 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.0323 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.377 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0538 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.0538 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 0.389 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Naphthalene | 0.386 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.601 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.0258 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.0731 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.086 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0828 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 0.361 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.309 | U | UJ | S |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | TPH | SW8015 | FLPRO | 840 | = | U | F |

**Table 4**
Summary of Qualified Data
*(CTO-062)*

| Lab Sample ID | Field Sample ID | Analysis | Method | Parameter Name | Result | Lab Qual | DV Qual | DV Qual Code |
|---|---|---|---|---|---|---|---|---|
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.068 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Naphthalene | 0.359 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.034 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.285 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.559 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.287 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.05 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.351 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.415 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.072 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 0.336 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.053 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.077 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.08 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.05 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.03 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.024 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 0.362 | U | UJ | S |
| L0209337-04 | 062-CEF46-21I-Q3-02-20 | TPH | SW8015 | FLPRO | 834 | = | U | F |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.366 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 0.35 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.0521 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.297 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0354 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Naphthalene | 0.374 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.0552 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 0.377 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0833 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.0708 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.025 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.0313 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0521 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.075 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0802 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.432 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.299 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.582 | U | UJ | S |
| L0209337-05 | 062-CEF46-24D-Q3-02-20 | TPH | SW8015 | FLPRO | 779 | = | U | F |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.285 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.08 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.03 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.077 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Naphthalene | 0.359 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.415 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.053 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.05 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 0.362 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.351 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.559 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.024 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.05 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 0.336 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.072 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.034 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.287 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.068 | U | UJ | S |
| L0209337-06 | 062-CEF46-25I-Q3-02-20 | TPH | SW8015 | FLPRO | 810 | = | U | F |

**Table 4**
Summary of Qualified Data
*(CTO-062)*

| Lab Sample ID | Field Sample ID | Analysis | Method | Parameter Name | Result | Lab Qual | DV Qual | DV Qual Code |
|---|---|---|---|---|---|---|---|---|
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Dibenz(a,h)anthracene | 0.0819 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 0.0851 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Pyrene | 0.0723 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Chrysene | 0.0255 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | 2-Methylnaphthalene | 0.357 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Benzo(k)fluoranthene | 0.0766 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Benzo(a)pyrene | 0.0564 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Anthracene | 0.303 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Acenaphthene | 0.441 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Fluorene | 0.595 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Phenanthrene | 0.305 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Naphthalene | 0.382 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Benzo(b)fluoranthene | 0.0362 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Fluoranthene | 0.0532 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Benzo(a)anthracene | 0.0319 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Benzo(g,h,i)perylene | 0.0532 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | 1-Methylnaphthalene | 0.385 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | PAHs | SW8310 | Acenaphthylene | 0.373 | U | UJ | S |
| L0209337-07 | 062-CEF46-26I-Q3-02-20 | TPH | SW8015 | FLPRO | 1350 | = | U | F |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Anthracene | 500 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | SW8310 | 2-Methylnaphthalene | 14900 | I | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Acenaphthylene | 548 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Phenanthrene | 573 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Acenaphthene | 682 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Pyrene | 45.1 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | SW8310 | Naphthalene | 10300 | I | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Fluorene | 695 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Benzo(b)fluoranthene | 58.5 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Benzo(k)fluoranthene | 24.4 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Benzo(a)pyrene | 35.3 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Benzo(a)anthracene | 46.3 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 39 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Fluoranthene | 45.1 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Chrysene | 46.3 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Benzo(g,h,i)perylene | 43.9 | U | R | D |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | SW8310 | Dibenz(a,h)anthracene | 54.8 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Benzo(g,h,i)perylene | 16 | J | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Benzo(g,h,i)perylene | 42 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Acenaphthene | 653 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 7.95 | J | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Phenanthrene | 986 | = | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Phenanthrene | 548 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Benzo(b)fluoranthene | 56 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Acenaphthylene | 525 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Dibenz(a,h)anthracene | 32.1 | J | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Naphthalene | 11300 | I | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Benzo(b)fluoranthene | 30.2 | J | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Dibenz(a,h)anthracene | 52.5 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Fluorene | 664 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Anthracene | 478 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Benzo(a)anthracene | 116 | J | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | 1-Methylnaphthalene | 6680 | I | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Benzo(a)anthracene | 44.3 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Pyrene | 43.1 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 37.3 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Fluoranthene | 173 | J | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Pyrene | 60 | J | J | S |

**Table 4**
Summary of Qualified Data
*(CTO-062)*

| Lab Sample ID | Field Sample ID | Analysis | Method | Parameter Name | Result | Lab Qual | DV Qual | DV Qual Code |
|---|---|---|---|---|---|---|---|---|
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Fluoranthene | 43.1 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Chrysene | 44.3 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Benzo(a)pyrene | 29.4 | = | J | S |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Benzo(a)pyrene | 33.8 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | 2-Methylnaphthalene | 14600 | I | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | SW8310 | Benzo(k)fluoranthene | 23.3 | U | R | D |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | SW8310 | Benzo(k)fluoranthene | 41.9 | J | J | S |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | SW8021B | Xylene (total) | 23.4 | = | J | S |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | SW8021B | Ethylbenzene | 24.9 | = | J | S |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | SW8021B | tert-Butyl methyl ether | 3.68 | = | J | S |
| L0209516-04 | 062-CEF46-EQB-W-Q3-02 | PAHs | SW8310 | Anthracene | 0.337 | J | U | F |
| L0209516-04 | 062-CEF46-EQB-W-Q3-02 | TPH | SW8015 | FLPRO | 1320 | = | U | F |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Chrysene | 105 | = | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Benzo(k)fluoranthene | 91.1 | = | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Pyrene | 188 | = | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Naphthalene | 67.6 | U | UJ | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Fluoranthene | 105 | J | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | 1-Methylnaphthalene | 5.63 | U | UJ | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Benzo(a)anthracene | 49.4 | = | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Indeno(1,2,3-cd)pyrene | 104 | J | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Anthracene | 44 | U | UJ | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Fluorene | 61.2 | U | UJ | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | 2-Methylnaphthalene | 11.5 | J | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Acenaphthene | 60.1 | U | UJ | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Acenaphthylene | 48.3 | U | UJ | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Benzo(b)fluoranthene | 227 | = | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Benzo(g,h,i)perylene | 257 | = | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Dibenz(a,h)anthracene | 143 | = | J | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Phenanthrene | 50.4 | U | UJ | S |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | SW8310 | Benzo(a)pyrene | 201 | = | J | S |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | SW8310 | Anthracene | 0.369 | J | U | F |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | SW8310 | Phenanthrene | 0.386 | J | U | F |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | TPH | SW8015 | FLPRO | 1250 | = | U | F |

2209-10235

CH2M Hill Constructors, Inc.
(3) Perimeter Center Plaza, Suite 700
Atlanta, GA 30346-4227
Tel No (770) 604-9095 : Fax No (770) 604-9202

# CHAIN-OF-CUSTODY RECORD

COC NUMBER: 163151-060 Page 1 of 2

| | | | | |
|---|---|---|---|---|
| PROJECT NAME: S.C.S. Coal Field Project Group | PROJECT NUMBER: 163151 | LAB NAME AND CONTACT: PHL / Dave Wagner | LAB ADDRESS AND TELEPHONE NO: Bill Cassler / J.A. Jones Env. Services | RECEIVING LABORATORY (Address, Tel No., and Fax No.): 6339 Authority Ave. Jacksonville, FL 32221 (904) 777-6312 FAX: 904-777-6325 |
| PROJECT MANAGER/TEL NO: 103rd Street Quarry CERCLA Sampling Event | CHARGE NUMBER: 0002 | CARRIER NAME: 2712 | SAMPLING COMPANY AND TEL NO: Chelsania Nurseme / CH2M Hill Constructors, Inc. | SHIPPING LABORATORY (Address, Tel No., and Fax No.): 135 Perimeter Center Plaza, N.E. Suite 700 Atlanta, GA 30346 (770) 604-9095 Fax 604-9202 |
| PROJECT CONTACT: Bill Cassler | PROJECT TELEPHONE NO: FC (904) 777-6312 Fax (904) 777-5301 | CARRIER TELEPHONE AND FAX NO: Phn (813) 247-3800 Fax: (813) 248-1537 | AIR BILL NO: | RECEIVING LABORATORY (Address, Tel No., and Fax No.): |

ANALYSES REQUIRED (Include Method Number)

| ITEM | SAMPLE IDENTIFIER | SAMPLE DESCRIPTION/LOCATION | MATRIX (See codes on back) | DATE COLLECTED | TIME COLLECTED | WATER VOLATILE (See codes on back) | VAT (See codes on back) | Volatile by 8260B | Semi-Vol by 8270 | Metals by 6010B | PCB/Pest by 8082 | | | | | | | SAMPLE TYPE (See codes on back) | COMMENT (Screening Results) | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 003-SMW01-Q3-02-28 | CEF-103-SMW-01 | W | 09/12/02 | 14:01 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 01 |
| 2 | 003-SMW02-Q3-02-28 | CEF-103-SMW-02 | W | 09/12/02 | 10:40 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 02 |
| 3 | 003-SMW03-Q3-02-28 | CEF-103-SMW-03 | W | 09/12/02 | 15:25 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 03 |
| 4 | 003-SMW04-Q3-02-28 | CEF-103-SMW-04 | W | 09/12/02 | 13:15 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 04 |
| 5 | 003-SMW05-Q3-02-28 | CEF-103-SMW-05 | W | 09/12/02 | 14:30 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 05 |
| 6 | 003-SMW06-Q3-02-28 | CEF-103-SMW-06 | W | 09/13/02 | 9:50 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 06 |
| 7 | 003-SMW07-Q3-02-28 | CEF-103-SMW-07 | W | 09/13/02 | 8:30 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 07 |
| 8 | 003-SMW10-Q3-02-28 | CEF-103-SMW-10 | W | 09/12/02 | 16:50 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 08 |
| 9 | 003-SMW11-Q3-02-28 | CEF-103-SMW-11 | W | 09/12/02 | 11:30 | HDC | 14 | 9 | 3 | 3 | 3 | | | | | | | Grab | MS/MSD | 09,10,11 |
| 10 | 003-DUP-Q3-02-28 | Duplicate | W | 09/12/02 | NA | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | | Grab | | 12 |

| | | |
|---|---|---|
| COURIER AND COURIER NO. (Name, phone): Randy Dunlap J.A. Jones Environmental Services | COURIER NO. AND SHIPPING NO. (Name): Federal Express TRK # 7919369943[illegible], 7919369[illegible], 7919369[illegible], 7919369[illegible], 7919369[illegible] (3 Coolers) | SPECIAL INSTRUCTIONS AND COMMENTS (Preservation, etc.): Temp upon receipt pH<2 (8260, 6010, Pro) |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| Printed Name and Signature: | 09/13/02 | 13:00 | Printed Name and Signature: | | |
| Printed Name and Signature: | | | Printed Name and Signature: Steven Rodino | | |
| | | | Steven Rodino | 9-14-02 | 10:45 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |

2209-10C SB

CH2M Hill Constructors, Inc.
[illegible]

# CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-060 Page 2 of 2

| PROJECT NAME | PROJECT NUMBER | LAB NAME AND CONTACT | [illegible] | [illegible] |
|---|---|---|---|---|
| N.A.S. Cecil Field | 163151 | PEL / Dave Wagner | Bill Cumbie / J.A. Jones Env. Services | 6320 Authority Ave. Jacksonville, FL 32221 (904) [illegible] |
| 182nd Street | [illegible] | 2772 | Christopher Nussbaum / CH2M Hill Constructors, Inc. | 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 [illegible] |
| Bill Cumbie | Ph: (904) 777-4013 Fax: (904) 777-4192 | Ph: (813) 247-3405 Fax: (813) 248-1837 | | |

| ITEM | SAMPLE IDENTIFIER | SAMPLE DESCRIPTION/LOCATION | MATRIX | DATE COLLECTED | TIME COLLECTED | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | SAMPLE TYPE | [illegible] | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 002-EQB-Q3-02-30 | Equipment Blank | W | 09/13/02 | 0:00 | HDC | 14 | 3 | 1 | 1 | 1 | | | | | | Grab | | 13 |
| 2 | 002-TB-Q3-02-30 | Trip Blank | W | NA | NA | HDC | 14 | 1 | | | | | | | | | Grab | | 14 |
| 3 | Temp Blank | Temp Blank | W | NA | NA | HDC | 14 | | | | | 4 | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |

[illegible]: Kevin Dossey, J.A. Jones Environmental Services

[illegible]: Federal Express TRK # [illegible], (3 Coolers)

[illegible]: Temp upon rec'd 4C pH <2 Blue, yellow, Pro

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: [illegible] | | | Printed Name and Signature: | | |
| Printed Name and Signature: | | | Printed Name and Signature: [illegible] | 9-14-02 | 10:45 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |

**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

2209-178 M.A.

COC NUMBER: 163151-064 Page 1 of 2

| PROJECT NAME | PROJECT NUMBER | LAB NAME AND CONTACT | FAX AND MAIL REPORT/RESULTS TO: RECIPIENT 1 (Phone and Company) | RECIPIENT 1 (Address, Tel No., and Fax No.) |
|---|---|---|---|---|
| N.A.S. Cecil Field Day Tank 1 | 163151 | PEL / Darcy Wiseman | Bill Cassios / J.A Jones Env. Services | 6219 Authority Ave. Building 1 Jacksonville, FL 32222 (904) 7774812 FAX: (904) 7774262 |
| PROJECT PERSONNEL/CASE: | CTO OR DO NUMBER: | LAB PO NUMBER: | FAX AND MAIL REPORT/RESULTS TO: RECIPIENT 2 (Phone and Company) | RECIPIENT 2 (Address, Tel No., and Fax No.): |
| Day Tank 1 3rd Quarter GW Sampling | 0062 | 2712 | Christelle Newsome / CH2M Hill Constructors, 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 REPORT/RESULTS TO: RECIPIENT 3 (Phone and Company) | RECIPIENT 3 (Address, Tel No., and Fax No.): |
| Bill Cassios | Ph:(904)777-4812 Fax:(904) 777-4262 | Ph: (813)247-2885 Fax: (813)248-1537 | | |

ANALYSES REQUIRED (include Method Number)

| ITEM | SAMPLE IDENTIFIER | SAMPLE DESCRIPTION/LOCATION | MATRIX | DATE COLLECTED | TIME COLLECTED | DATA PKG LEVEL | TAT (calendar days) | VOC/SVOC by 8260 | PAH/SVOC Naphthalene-8.1 - Naphthalene by 8310 | | | | | SAMPLE TYPE (see codes on back) | CONTENT/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-MW4-Q3-02-32 | CEF-293-4 | W | 09/24/02 | 10:40 | III/C | 14 | 3 | 2 | | | | 01 | Grab | | |
| 2 | 062-MW9-Q3-02-32 | CEF-293-9 | W | 09/23/02 | 17:00 | III/C | 14 | 3 | 2 | | | | 02 | Grab | | |
| 3 | 062-MW13-Q3-02-32 | CEF-293-13 | W | 09/23/02 | 13:40 | III/C | 14 | 3 | 2 | | | | 03 | Grab | | |
| 4 | 062-MW20-Q3-02-32 | CEF-293-20 | W | 09/23/02 | 10:45 | III/C | 14 | 9 | 6 | | | | 04 05 06 | Grab | MS / MSD | |
| 5 | 062-MW22-Q3-02-32 | CEF-293-22 | W | 09/23/02 | 11:35 | III/C | 14 | 3 | 2 | | | | 07 | Grab | | |
| 6 | 062-VEW2-Q3-02-32 | VEW-2 | W | 09/23/02 | 16:00 | III/C | 14 | 3 | 2 | | | | 08 | Grab | | |
| 7 | 062-VEW3-Q3-02-32 | VEW-3 | W | 09/23/02 | 16:45 | III/C | 14 | 3 | 2 | | | | 09 | Grab | | |
| 8 | 062-VEW4-Q3-02-32 | VEW-4 | W | 09/23/02 | 12:25 | III/C | 14 | 3 | 2 | | | | 10 | Grab | | |
| 9 | 062-VEW5-Q3-02-32 | VEW-5 | W | 09/23/02 | 15:15 | III/C | 14 | 3 | 2 | | | | 11 | Grab | | |
| 10 | 062-VEW6-Q3-02-32 | VEW-6 | W | 09/23/02 | 14:30 | III/C | 14 | 3 | 2 | | | | 12 | Grab | | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: | SAMPLER TEMPERATURE AND CONDITION UPON RECEIPT: |
|---|---|---|
| Randy Dunsmap / Roger Deister J.A. Jones Environmental Services | Federal Express TRK #790877916377, 790877916447, 790877916469, 790877916539 . (4 Coolers) | Temp upon rec'd 4°C pH<2 (8021) Kleen container for 8310 |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| [signature] | 9/24/02 | 14:00 | Federal Express | 9/24/02 | 14:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | Stan Floyd | 9-25-02 | 11:20 |
| 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 CCHM, Rev 02/00

90

**CH2M Hill Constructors, Inc.**
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# CHAIN-OF-CUSTODY RECORD

2209-178

COC NUMBER
163151-864 Page 2 of 2

| PROJECT NAME: | PROJECT NUMBER: | LAB NAME AND CONTACT: | FAX AND MAIL REPORTS TO: RECIPIENT 1 (Name and Company) | RECIPIENT 1 (Address, Tel No., and Fax No.): |
|---|---|---|---|---|
| N.A.S. Cecil Field Day Tank 1 | 163151 | PEL / Darcy Wiseman | Bill Canelos / J.A. Jones Env. Services | 6219 Authority Ave. Building 1 Jacksonville, FL 32222 (904) 7774812 FAX: (904) 7774262 |
| PROJECT NUMBER/TASK: | CTO DELIVERY NUMBER: | LAB PO NUMBER: | FAX AND MAIL REPORTS TO: RECIPIENT 2 (Name and Company) | RECIPIENT 2 (Address, Tel No., and Fax No.): |
| Day Tank 1 3rd Quarter GW Sampling | 0062 | 2712 | Christelle Newsome / CH2M Hill Constructors, Inc. | 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 (770)604-9182 Ext.561 FAX:604-9202 |
| PROJECT CONTACT: | PROJECT TEL NO AND FAX NO: | LAB TEL NO AND FAX NO: | FAX AND MAIL REPORTS TO: RECIPIENT 3 (Name and Company) | RECIPIENT 3 (Address, Tel No., and Fax No.): |
| Bill Canelos | Ph:(904)777-4812 Fax:(904) 777-4262 | Ph: (813)247-3886 Fax: (813)248-1537 | | |

ANALYSES REQUIRED (Include Method Numbers)

| ITEM | SAMPLE IDENTIFIER | SAMPLE DESCRIPTION/LOCATION | MATRIX | DATE COLLECTED | TIME COLLECTED | DATA PKG LEVEL | TAT (calendar days) | VOC8260 by 8021 | PAH8310 Naphthalene/1,2-Methylnaphthalene by 8260 | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-VEW7-Q3-02-32 | VEW-7 | W | 09/24/02 | 11:25 | III/C | 14 | 3 | 2 | | | | 13 | Grab | | |
| 2 | 062-VEW8-Q3-02-32 | VEW-8 | W | 09/23/02 | 10:15 | III/C | 14 | 3 | 2 | | | | 14 | Grab | | |
| 3 | 062-DUP-Q3-02-32 | Duplicate | W | 09/23/02 | NA | III/C | 14 | 3 | 2 | | | | 15 | Grab | | |
| 4 | 062-EQB-Q3-02-32 | Equipment Blank | W | 09/23/02 | 12:55 | III/C | 14 | 3 | 2 | | | | 16 | Grab | | |
| 5 | 062-TB-Q3-02-32 | Trip Blank | W | NA | NA | III/C | 14 | 1 | | | | | 17 | Grab | prepared by Lab | |
| 6 | NA | Temperature Blank | W | NA | NA | III/C | 14 | | | 4 | | | | Grab | prepared by Lab | |
| 7 | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | |

| SAMPLED BY AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: | SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT: |
|---|---|---|
| Randy Dunnap / Roger Deister J.A. Jones Environmental Services | Federal Express TRK #790077916377, 790077916447, 790077916469, 790077916539 . (4 Coolers) | |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: R.Dunnap | 9/24/02 | 1400 | Printed Name and Signature: Federal Express | 9/24/02 | 1400 |
| Printed Name and Signature: | | | Printed Name and Signature: Stani Floyd | 9-25-02 | 11:20 |
| 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 CC001, Rev 03/00

01

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

C207 404

# CHAIN-OF-CUSTODY RECORD

COC NUMBER
163151-055

| 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 103rd Street | 163151 | STL - Pensacola Rick Hayes | 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.): |
| 103rd Street Monthly Air | 0062 | 2916 | 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 | Ph:(904)777-4812 Fax:(904) 777-4262 | Ph: (850) 474-1001 Fax: (850) 4782671 | | |

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) | Volatiles by TO-14 | | | | | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-SVE-E-A-0715-02-26 | SVE Effluent | AIR | 07/15/02 | 14:30 | III/C | 14 Day | 1 | | | | | | | | | | Grab | Summa Canister | 1 |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY (please print) | COURIER AND SHIPPING NUMBER: | SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT: |
|---|---|---|
| Randy Dumaop / Sean Smith J.A. Jones Environmental Services | Federal Express TRK # 792069644215. | |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| Randy Dumaop | 7/16/02 | 11:00 | Federal Express | 7/16/02 | 11:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | R. ELSPERMAN / Rob Edgar | 7/18/02 | 0940 |
| 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 CC001, 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

C207405

# CHAIN-OF-CUSTODY RECORD

COC NUMBER
**163151-054**

| 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 Day Tank 1 | 163151 | STL - Pensacola Rick Hayes | 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.): |
| Day Tank 1 Monthly Air | 0062 | 2916 | Christelle Newsome / CH2M Hill Constructors, 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 | Ph:(904)777-4812 Fax:(904) 777-4262 | Ph: (850) 474-1001 Fax: (850) 4782671 | | |

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) | Volatiles by TO-14 | | | | | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-SVE-E-A-0715-02-30 | SVE Effluent | AIR | 07/15/02 | 14:10 | III/C | 14 Day | 1 | | | | | | | | | | Grab | Summa Canister | / |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY (please print) | COURIER AND SHIPPING NUMBER: | SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT: |
|---|---|---|
| Randy Dunnop / Sean Smith J.A. Jones Environmental Services | Federal Express TRK # 792069644215. | |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: Randy Dunnop | 7/16/02 | 11:00 | Printed Name and Signature: Federal Express | 7/16/02 | 11:00 |
| Printed Name and Signature: | | | Printed Name and Signature: R. FISPERMAN / Robt E. | 7/18/02 | 0940 |
| 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 CCR001, Rev 02/00

NAS Cecil Field, CTO-0062

STL Pensacola

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

C208603

# CHAIN-OF-CUSTODY RECORD

COC NUMBER
**163151-057**

| 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 Day Tank 1 | 163151 | STL - Pensacola Rick Hayes | 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.): |
| Day Tank 1 Monthly Air | 0062 | 2916 | Christelle Newsome / CH2M Hill Constructors, 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 | Ph:(904)777-4812 Fax:(904) 777-4262 | Ph: (850) 474-1801 Fax: (850) 4782671 | | |

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) | Volatiles by TO-14 | | | | | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-SVE-E-A-0821-02-31 | SVE Effluent | AIR | 08/21/02 | 15:30 | III/C | 14 Day | 1 | | | | | | | 28 | 2 | | Grab | Summa Canister | 1 |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: | SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT: |
|---|---|---|
| Sean Smith J.A. Jones Environmental Services | Federal Express TRK # 8347 0807 3543 | |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: Bill Canelos Bill Canelos | 8/21/02 | 16:00 | Printed Name and Signature: Federal Express | 8/21/02 | 16:00 |
| Printed Name and Signature: | | | Printed Name and Signature: Mark Swafford Mark Swafford | 8/27/02 | 9:19 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |

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Form CT 7001 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

C208 604

# CHAIN-OF-CUSTODY RECORD

COC NUMBER
**163151-056**

| 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 103rd Street | 163151 | STL - Pensacola Rick Hayes | 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.) |
| 103rd Street Monthly Air | 0062 | 2916 | 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 | Ph:(904)777-4812 Fax:(904) 777-4262 | Ph: (850) 474-1001 Fax: (850) 4782671 | | |

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) | Volatiles by TO-14 | | | | | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-SVE-E-A-0821-02-27 | SVE Effluent | AIR | 08/21/02 | 15:45 | III/C | 14 Day | 1 | | | | | | | 285 | | | Grab | Summa Canister | 1 |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
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| 10 | | | | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: | SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT: |
|---|---|---|
| Jean Smith J.A. Jones Environmental Services | Federal Express TRK # 8347 0807 3543 | |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| Bill Canelos Bill Canelos | 8/26/02 | 16:00 | Federal Express | 8/26/02 | 16:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | Mark Swafford / Mark Swafford | 8/27 02 | 914 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | | | |

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

C209256

# CHAIN-OF-CUSTODY RECORD

COC NUMBER
**163151-058**

| 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 Day Tank 1 | 163151 | STL - Pensacola Rick Hayes | 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.): |
| Day Tank 1 Monthly Air | 0062 | 2916 | Christelle Newsome / CH2M Hill Constructors, 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 | Ph:(904)777-4812 Fax:(904) 777-4262 | Ph: (850) 474-1001 Fax: (850) 4782671 | | |

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) | Volatiles by TO-14 | | | | | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-SVE-E-A-0909-02-32 | SVE Effluent | AIR | 09/09/02 | 14:50 | III/C | 14 Day | 1 | | | | | | | | | 025 | Grab | Summa Canister | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
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SAMPLER(S) AND COMPANY: (please print)
Randy Dumaop
J.A. Jones Environmental Services

COURIER AND SHIPPING NUMBER:
Federal Express TRK # 7900 5559 9676

SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT:

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: R. Dumaop | 9/9/02 | 11:00 | Printed Name and Signature: Federal Express | 9/9/02 | 11:00 |
| Printed Name and Signature: | | | Printed Name and Signature: Mark Swafford Mark Swafford | 9/12/02 | 950 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |

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Form CC1001, 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

C209257

# CHAIN-OF-CUSTODY RECORD

COC NUMBER: 163151-059

| 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 103rd Street | 163151 | STL - Pensacola Rick Hayes | Bill Canelos J.A Jones Env. Services | 6219 Authority Road, Jacksonville, FL 32221 PH: (904) 7774812 FAX: (904) 7774262 |
| PROJECT PHASE/SITE/TASK: 103rd Street Monthly Air | CTO OR DO NUMBER: 0062 | LAB PO NUMBER: 2916 | FAX AND MAIL REPORTS/EDD TO: RECIPIENT 2 (Name and Company) Christelle Newsome / CH2M Hill Constuctors, Inc. | RECIPIENT 2 (Address, Tel No., and Fax No.): 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 (770)684-9182 Ext.561 FAX:604-9282 |
| PROJECT CONTACT: Bill Canelos | PROJECT TEL NO AND FAX NO: Ph:(904)777-4812 Fax:(904) 777-4262 | LAB TEL NO AND FAX NO: Ph: (850) 474-1001 Fax: (850) 4782671 | FAX AND MAIL REPORTS/EDD TO: RECIPIENT 3 (Name and Company) | RECIPIENT 3 (Address, Tel No., and Fax No.): |

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) | Volatiles by TO-14 | | | | | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-SVE-E-A-0909-02-28 | SVE Effluent | AIR | 09/09/02 | 13:10 | III/C | 14 Day | 1 | | | | | | | | | #24 | Grab | Summa Canister | |
| 2 | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
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| 10 | | | | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: | SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT: |
|---|---|---|
| Randy Dumaop J.A. Jones Environmental Services | Federal Express TRK # 7900 5559 9676 | |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: R. Dumaop | 9/9/02 | 11:00 | Printed Name and Signature: Federal Express | 9/9/02 | 11:00 |
| Printed Name and Signature: | | | Printed Name and Signature: Mark Swafford Mark Swafford | 9/12/02 | 950 |
| 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 CT1001, Rev 02/00

CTO-0062, NAS Cecil Field

**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: **163151-063**

| 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. Ceil Field Building 46 | 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 46 Quarterly GW Sampling Event | 0062 | 3868 | Christelle Newsome CH2M Hill Constructors, Inc. | 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 PH:(770)684-9182 Ext.561 FAX:684-9282 |
| 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 | DATE COLLECTED | TIME COLLECTED | DATA LEVEL | TAT (calendar days) | BTEX by 8021B | Naphthalene & 15 Alkyl Listed PAHs by 8310 | TRPH by XL-PRO | NO3/NO2 FDA by EPA Method 300.0 | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-CEF46-1S-Q3-02-20 | CEF-46-1S | W | 09/18/02 | 9:05 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 2 | 062-CEF46-5I-Q3-02-20 | CEF-46-5I | W | 09/18/02 | 8:30 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 3 | 062-CEF46-6D-Q3-02-20 | CEF-46-6D | W | 09/18/02 | 8:55 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 4 | 062-CEF46-21I-Q3-02-20 | CEF-46-21I | W | 09/18/02 | 10:35 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 5 | 062-CEF46-24D-Q3-02-20 | CEF-46-24D | W | 09/18/02 | 10:00 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 6 | 062-CEF46-25I-Q3-02-20 | CEF-46-25I | W | 09/18/02 | 11:50 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 7 | 062-CEF46-26I-Q3-02-20 | CEF-46-26I | W | 09/18/02 | 13:20 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 8 | 062-46TB2-Q3-02-20 | Trip Blank #2 | W | NA | NA | III/C | 14 | 2 | | | | | | | Grab | Prepared by Lab | |
| 9 | NA | Temperature Blank | W | NA | NA | III/C | 14 | | | | | 4 | | | Grab | Prepared by Lab | |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: |
|---|---|
| Randy Dumaop / Mark Yarbrough J.A. Jones Environmental Services | Federal Express Track # 791934523402, 791934523413, 791934523424, 791934523446. (4 Coolers) |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: R. Dumaop | 9/18/02 | 18:00 | Printed Name and Signature: Federal Express Track # 791934523402, 791934523413, 791934523424, 791934523446. (4 Coolers) | 9/18/02 | 18:00 |
| Printed Name and Signature: | | | Printed Name and Signature: SHANNA HYDE | 9/19/02 | 0957 |

air instrument room #3

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PM/D

Form CC001, 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: **163151-061**

| 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 Constructors, 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 & 18 Alpha Listed PAHs by 8310 | TRPH by FL-PRO | NO3 NO2 PO4 by EPA Method 300.0 | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-CEF9-2S-Q3-02-21 | CEF-9-2S | W | 09/16/02 | 9:05 | III/C | 14 | 2 | 2 | 2 | 1 | | | | | Grab | | |
| 2 | 062-CEF9-3S-Q3-02-21 | CEF-9-3S | W | 09/16/02 | 11:20 | III/C | 14 | 2 | 2 | 2 | 1 | | | | | Grab | | |
| 3 | 062-CEF9-5S-Q3-02-21 | CEF-9-5S | W | 09/16/02 | 14:15 | III/C | 14 | 2 | 2 | 2 | 1 | | | | | Grab | | |
| 4 | 062-CEF9-7D-Q3-02-21 | CEF-9-7D | W | 09/16/02 | 11:55 | III/C | 14 | 6 | 6 | 6 | 3 | | | | | Grab | (MS/MSD) | |
| 5 | 062-CEF9-9S-Q3-02-21 | CEF-9-9S | W | 09/16/02 | 13:50 | III/C | 14 | 2 | 2 | 2 | 1 | | | | | Grab | | |
| 6 | 062-9DUP-Q3-02-21 | Duplicate | W | 09/16/02 | NA | III/C | 14 | 2 | 2 | 2 | 1 | | | | | Grab | | |
| 7 | 062-9EQB-Q3-02-21 | Equipment Blank | W | 09/16/02 | 12:20 | III/C | 14 | 2 | 2 | 2 | 1 | | | | | Grab | | |
| 8 | 062-9TB-Q3-02-21 | 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 Dunaop / Mark Yarborough J.A. Jones Environmental Services | Federal Express Track No's.790065277115, 790065277001, 790065277192, 790065276932, 790065276818. (5 Coolers) |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: R. Dunaop | 6/5/02 | 18:00 | Printed Name and Signature: Federal Express | 6/5/02 | 18:00 |
| Printed Name and Signature: | | | Printed Name and Signature: SHANNA HYDE | 9/17/02 | 1257 |

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CC1001, Rev 02/00

ajo intact @ 1, 2°C

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: 163151-062 page _1_ of _1_

| 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 46 | 163151 | Teressa Davis 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 46 Quarterly GW Sampling Event | 0062 | 3868 | Christelle Newsome CH2M Hill Constactors, 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 | DATE COLLECTED | TIME COLLECTED | DATA LEVEL | TAT (calendar days) | BTEX by 8021B | Naphthalene & 15 Method Listed PAHs by 8310 | TRPH by FL-PRO | NO2/NO3 POA by EPA Method 300.0 | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-CEF46-2S-Q3-02-20 | CEF-46-2S | W | 09/17/02 | 15:05 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 2 | 062-CEF46-7I-Q3-02-20 | CEF-46-7I | W | 09/17/02 | 14:05 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 3 | 062-CEF46-9I-Q3-02-20 | CEF-46-9I | W | 09/17/02 | 13:20 | III/C | 14 | 6 | 6 | 6 | 3 | | | | Grab | MS/MSD | |
| 4 | 062-CEF46-12I-Q3-02-20 | CEF-46-12I | W | 09/17/02 | 10:45 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 5 | 062-CEF46-13I-Q3-02-20 | CEF-46-13I | W | 09/17/02 | 11:15 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 6 | 062-CEF46-14D-Q3-02-20 | CEF-46-14D | W | 09/17/02 | 11:55 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 7 | 062-CEF46-15I-Q3-02-20 | CEF-46-15I | W | 09/17/02 | 10:15 | III/C | 14 | 6 | 2 | 2 | 1 | | | | Grab | | |
| 8 | 062-46DUP-Q3-02-20 | Duplicate | W | 09/17/02 | NA | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 9 | 062-46EQB-Q3-02-20 | Equipment Blank | W | 09/17/02 | 12:50 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 10 | 062-46TB1-Q3-02-20 | Trip Blank No. 1 | W | NA | NA | III/C | 14 | 2 | | | | | | | Grab | Prepared by Lab | |
| 11 | NA | Temperature Blank | W | NA | NA | III/C | 14 | | | | | 6 | | | Grab | Prepared by Lab | |

SAMPLER(S) AND COMPANY: (please print)
Randy Dunsop / Mark Yarbrough
J.A. Jones Environmental Services

COURIER AND SHIPPING NUMBER:
Federal Express Track #791934090038, 792749784168, 791934090174, 791934090280, 792105721377, 792105721399.(6 Coolers)

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: R. Dunsop | | | Printed Name and Signature: Federal Express | | |
| Printed Name and Signature: | 9/17/02 | 18:00 | Printed Name and Signature: SHANNA HYDE | 9-18-02 | 0957 |

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

L0209516

**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: **163151-066**

| 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 46 | 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 46 / Quarterly Soil Boring Sampling Event | 0062 | 3868 | Christelle Newsome CH2M Hill Constructors, 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 Lipod PAHs by 8310 | TRPH by FL-PRO | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-CEF46-SB1-S-Q3-02 | Soil Boring 1 @ 2' bls. | S | 09/26/02 | 13:35 | III/C | 14 | 3 | 1 | 1 | | | | | | Grab | OVA : 34,999 ppm | |
| 2 | 062-CEF46-SB2-S-Q3-02 | Soil Boring 2 @ 2' bls. | S | 09/26/02 | 13:55 | III/C | 14 | 3 | 1 | 1 | | | | | | Grab | OVA : 19,990 ppm | |
| 3 | 062-CEF46-SB14-S-Q3-02 | Soil Boring 14 @ 4' bls. | S | 09/26/02 | 14:15 | III/C | 14 | 3 | 1 | 1 | | | | | | Grab | OVA : 1,385 ppm | |
| 4 | 062-CEF46-EQB-W-Q3-02 | Equipment Blank | W | 09/26/02 | 14:25 | III/C | 14 | 2 | 2 | 2 | | | | | | Grab | | |
| 5 | 062-CEF46-TB-W-Q3-02 | Trip Blank | W | – | – | III/C | 14 | 2 | | | | | | | | | Prepared by Lab | |
| 6 | | Temperature Blank | W | – | – | | | | | | 1 | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

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

COURIER AND SHIPPING NUMBER:
Federal Express Track #792752780893, 792752780859 .

| RELINQUISHED BY Printed Name and Signature: | DATE | TIME | RECEIVED BY Printed Name and Signature: | DATE | TIME |
|---|---|---|---|---|---|
| Randy Dumaop | 9/26/02 | 17:00 | Federal Express | 9/26/02 | 17:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | SHAVINA HYDE Shavina Hyde | 9-27-02 | 0956 |

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Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

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CH2M Hill Constructors, Inc.
15 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9281

# CHAIN-OF-CUSTODY RECORD

COC NUMBER: 163151-065

| 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.): |
|---|---|---|---|---|
| J.A.S. Cecil Field Building 9 | 163151 | Stephanie Tepe<br>Kemron Environmental Services | Bill Canelos<br>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<br>CH2M Hill Constructors, 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<br>Fax:904-777-4262 | Phone: 740-373-4071<br>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(En Core) | Naphthalene & 15 Methd Listed PAHs by 8310 | TRPH by FL-PRO | | | | | | SAMPLE TYPE (see codes on back) | COMMENTS/ SCREENING READINGS | LAB ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 062-CEF9-SB1-S-Q3-02 | Soil Boring 1 @ 2' bls. | S | 09/26/02 | 10:25 | III/C | 14 | 3 | 1 | 1 | | | | | | Grab | OVA : 1 ppm | |
| 2 | 062-CEF9-EQB-W-Q3-02 | Equipment Blank | W | 09/26/02 | 11:05 | III/C | 14 | 2 | 2 | 2 | | | | | | Grab | | |
| 3 | 062-CEF9-TB-W-Q3-02 | 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 / Roger Belsler
J.A. Jones Environmental Services

COURIER AND SHIPPING NUMBER:
Federal Express Track #792752780893, 792752780850 .

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| Randy Dumaop | 9/26/02 | 17:00 | Federal Express | 9/26/02 | 17:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | SHANNA HYDE | 9-27-02 | 0956 |

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

Form CC0001, Rev 02/00

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

01Q30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No: SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910201 Lab File ID: 10201.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level(low/med) LOW

Date Analyzed: 09/25/02 Time: 1512

Percent Solids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: CEF-103-SMW-0 Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

Form I

MM 2/19/03

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910201
Lab File ID: 10201.D
Sample wt/vol: 5
Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 5
Date Extracted:
Level:(low/med): LOW
Date Analyzed: 09/25/02
Time: 1512
Percent Solids: 0
decanted:
Dilution Factor: 1
Extraction: PURGETRAP
Station ID: CEF-103-BMW-0
Method: 8260
GPC Cleanup: ( Y/N )
pH:
Column(1): DB-624
ID: 0.18 (mm)
CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.66 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |



MAB 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910201 |
| Lab File ID: | 10201.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1512 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 (mm) | CONCENTRATION UNITS: | UG/L |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |

Form I

2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

02Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910202 Lab File ID: 10202.D

Sample wt/vol: 5 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 09/25/02 Time: 1223

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: CEF-103-SMW-0 Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

Form I

2/9/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 02Q30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910202 |
| Lab File ID: | 10202.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1223 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 | (mm) | |

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

9/19/02

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910202 |
| Lab File ID: | 10302.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1223 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 (mm) | | |

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |

Form I

7/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10 03Q30228

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910203 Lab File ID: 10203.D

Sample wt/vol: 5 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 09/25/02 Time: 1247

Percent Solids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: CEF-103-GMW-0 Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

Form I

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910203 |
| Lab File ID: | 10203.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1247 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 (mm) | | |

03Q30228

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

03Q30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No:

SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910203

Lab File ID: 10203.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level:(low/med) LOW

Date Analyzed: 09/25/02 Time: 1247

PercentSolids: 0 decanted :

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: CEF-103-SMW-0 Method: 8260

GPC Cleanup : ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |



MAH 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 04Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.
SAS No:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910204
Lab File ID: 10204.D
Sample wt/vol: 5 Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 5
Date Extracted:
Level:(low/med) LOW
Date Analyzed: 09/25/02 Time: 1311
PercentSolids: 0 decanted:
Dilution Factor: 1
Extraction: PURGETRAP
Station ID: CEF-103-SMW-0 Method: 8260
GPC Cleanup: ( Y/N )
pH:
Column(1): DB-624 ID: 0.18 (mm)
CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

FORM 1-00

Form I

MAS 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 04G30228 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2299102 |
| Matrix: | WATER | Lab Sample ID: | 220910204 Lab File ID: 10204.D |
| Sample wt/vol: | 5 Units: ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level(low/med) | LOW | Date Analyzed: | 09/25/02 Time: 1311 |
| Percent Solids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 Method: 8260 |
| GPC Cleanup : ( Y/N ) | pH: | | |
| Column(1): | DB-624 ID: 0.18 (mm) | | |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.88 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 04Q30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910204 |
| Lab File ID: | 10204.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1311 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 (mm) | | |

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |



MAS 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910205 Lab File ID: 10205.D |
| Sample wt/vol: | 5 Units: ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level(low/med) | LOW | Date Analyzed: | 09/25/02 Time: 1335 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 Method: 8260 |
| GPC Cleanup : ( Y/N ) | pH: | | |
| Column(1): | DB-624 ID: 0.18 (mm) | | |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |



MH 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910205 |
| Lab File ID: | 10205.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1335 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 (mm) | | |

05Q30228

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

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Form I

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1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

05Q30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL

Case No.

SAS No:

SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910205

Lab File ID: 10205.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level(low/med) LOW

Date Analyzed: 09/25/02 Time: 1335

PercentSolids: 0 decanted :

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: CEF-103-SMW-0 Method: 8260

GPC Cleanup : ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |



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1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| Matrix: | WATER | SAS No: | |
| Sample wt/vol: | 5 Units: ML | Lab Sample ID: | 220910206 |
| Concentrated Extract Volume: | 5 | Date Received: | 09/14/02 |
| Level:(low/med) | LOW | Date Extracted: | |
| PercentSolids: | 0 decanted : | Date Analyzed: | 09/25/02 Time: 1400 |
| Extraction: | PURGETRAP | Dilution Factor: | 1 |
| GPC Cleanup : ( Y/N ) | pH: | Station ID: | CEF-103-SMW-0 Method: 8260 |
| Column(1): | DB-624 ID: 0.18 (mm) | | |

EPA Sample No.: 08Q30228

SDG No.: 2209102

Lab File ID: 10206.D

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910206 |
| Lab File ID: | 10206.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1400 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 (mm) | CONCENTRATION UNITS: | UG/L |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

2/14/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 06Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910206
Lab File ID: 10206.D
Sample wt/vol: 5 Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 5
Date Extracted:
Level(low/med): LOW
Date Analyzed: 09/26/02
Time: 1400
Percent Solids: 0 decanted:
Dilution Factor: 1
Extraction: PURGETRAP
Station ID: CEF-103-SMW-0
Method: 8260
GPC Cleanup: (Y/N)
pH:
Column(1): DB-624 ID: 0.18 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 07Q30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910207 |
| Lab File ID: | 10207.D | | |
| Sample wt/vol: | 5 | Units: | ML |
| Date Received: | 09/14/02 | | |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1424 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | DB-624 | ID: 0.18 | (mm) |
| *CONCENTRATION UNITS:* | UG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

Form I

2/19/03

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

07Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910207 Lab File ID: 10207.D

Sample wt/vol: 5 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 5 Date Extracted:

Level(low/med) LOW Date Analyzed: 09/25/02 Time: 1424

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: CEF-103-SMW-0 Method: 8260

GPC Cleanup: (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 07Q30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910207 |
| Lab File ID: | 10207.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1424 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-0 |
| Method: | 8260 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | DB-624 |
| ID: | 0.18 (mm) | *CONCENTRATION UNITS:* | UG/L |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |



MAS 2/14/03

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 10Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL Case No.
SAS No: SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910208 Lab File ID: 10208.D
Sample wt/vol: 5 Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 5
Date Extracted:
Level:(low/med) LOW
Date Analyzed: 09/25/02 Time: 1446
PercentSolids: 0 decanted :
Dilution Factor: 1
Extraction: PURGETRAP
Station ID: CEF-103-SMW-1 Method: 8260
GPC Cleanup : ( Y/N ) pH:
Column(1): DB-624 ID: 0.18 (mm)
CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 10Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910208
Lab File ID: 10208.D
Sample wt/vol: 5
Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 5
Date Extracted:
Level:(low/med): LOW
Date Analyzed: 09/25/02
Time: 1448
PercentSolids: 0
decanted:
Dilution Factor: 1
Extraction: PURGETRAP
Station ID: CEF-103-SMW-1
Method: 8260
GPC Cleanup: ( Y/N )
pH:
Column(1): DB-624
ID: 0.18 (mm)
CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.48 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 10Q30228 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910206 Lab File ID: 10206.D |
| Sample wt/vol: | 5 Units: ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/25/02 Time: 1448 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-103-SMW-1 Method: 8260 |
| GPC Cleanup : ( Y/N ) | pH: | | |
| Column(1): | DB-624 ID: 0.18 (mm) | | |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |



2/4/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

11Q30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No:

SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910209

Lab File ID: 10209.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level(low/med) LOW

Date Analyzed: 09/25/02 Time: 1159

Percent Solids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: CEF-103-SMW-1 Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

Form I

MAS 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

11Q30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No:

SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910209

Lab File ID: 10209.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level(low/med) LOW

Date Analyzed: 09/25/02 Time: 1159

Percent Solids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: CEF-103-SMW-1 Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

9/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

11Q30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No: SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910209 Lab File ID: 10209.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level:(low/med) LOW

Date Analyzed: 09/25/02 Time: 1159

Percent Solids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: CEF-103-SMW-1 Method: 8260

GPC Cleanup: (Y/N) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |

Form I

MAK 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

DUPQ30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 19

Lab Code: PEL Case No.

SAS No:

SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910212

Lab File ID: 10212.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level:(low/med) LOW

Date Analyzed: 09/25/02 Time: 1536

Percent Solids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: Duplicate Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

Form I

2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| Matrix: | WATER | SAS No: | |
| Sample wt/vol: | 5 | Units: | ML |
| Concentrated Extract Volume: | 5 | | |
| Level:(low/med) | LOW | | |
| PercentSolids: | 0 | decanted : | |
| Extraction: | PURGETRAP | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | DB-624 | ID: 0.18 | (mm) |

DUPQ30228

SDG No.: 2209102

Lab Sample ID: 220910212 Lab File ID: 10212.D

Date Received: 09/14/02

Date Extracted:

Date Analyzed: 09/25/02 Time: 1538

Dilution Factor: 1

Station ID: Duplicate Method: 8260

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

DUPQ30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No: SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220918212 Lab File ID: 10212.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level:(low/med) LOW

Date Analyzed: 09/25/02 Time: 1536

PercentSolids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: Duplicate Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |

Form I

MAS 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10 EQBQ30228

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910213 Lab File ID: 10213.D

Sample wt/vol: 5 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 09/25/02 Time: 1600

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: Equipment Blank Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q | Qual | Code |
|---|---|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U | | |
| 74-87-3 | Chloromethane | 1 | U | | |
| 75-01-4 | Vinyl chloride | 1 | U | | |
| 74-83-9 | Bromomethane | 1 | U | | |
| 75-00-3 | Chloroethane | 1 | U | | |
| 75-69-4 | Trichlorofluoromethane | 1 | U | | |
| 75-35-4 | 1,1-Dichloroethene | 1 | U | | |
| 75-09-2 | Methylene chloride | 1 | U | | |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U | | |
| 75-34-3 | 1,1-Dichloroethane | 1 | U | | |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U | | |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U | | |
| 74-97-5 | Bromochloromethane | 1 | U | | |
| 67-66-3 | Chloroform | 1 | U | | |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U | | |
| 56-23-5 | Carbon tetrachloride | 1 | U | | |
| 71-43-2 | Benzene | 1 | U | | |
| 107-06-2 | 1,2-Dichloroethane | 1 | U | | |
| 79-01-6 | Trichloroethene | 1 | U | | |
| 78-87-5 | 1,2-Dichloropropane | 1 | U | | |
| 74-95-3 | Dibromomethane | 1 | U | | |
| 75-27-4 | Bromodichloromethane | 0.6 | U | | |
| 108-88-3 | Toluene | ~~0.68~~ 1 | J | U | F |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U | | |
| 127-18-4 | Tetrachloroethene | 1 | U | | |
| 142-28-9 | 1,3-Dichloropropane | 1 | U | | |
| 124-48-1 | Dibromochloromethane | 0.4 | U | | |



MAB 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| Matrix: | WATER | SAS No: | |
| Sample wt/vol: | 5 | Units: | ML |
| Concentrated Extract Volume: | 5 | | |
| Level:(low/med) | LOW | | |
| PercentSolids: | 0 | decanted : | |
| Extraction: | PURGETRAP | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | DB-624 | ID: 0.18 | (mm) |

EPA Sample No.: EQBQ30228

SDG No.: 2209102

Lab Sample ID: 220910213 Lab File ID: 10213.D

Date Received: 09/14/02

Date Extracted:

Date Analyzed: 09/25/02 Time: 1600

Dilution Factor: 1

Station ID: Equipment Blank Method: 8260

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.25 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.38 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.58 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |



MAB 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

EQBQ30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No: SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910213 Lab File ID: 10213.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level(low/med) LOW

Date Analyzed: 09/25/02 Time: 1600

PercentSolids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: Equipment Blank Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |

Form I

MAS 2/14/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

TBQ30228

Lab Name: PEL Laboratories, Inc.

Contract: NAS Cecil Field 10

Lab Code: PEL Case No.

SAS No: SDG No.: 2209102

Matrix: WATER

Lab Sample ID: 220910214 Lab File ID: 10214.D

Sample wt/vol: 5 Units: ML

Date Received: 09/14/02

Concentrated Extract Volume: 5

Date Extracted:

Level:(low/med) LOW

Date Analyzed: 09/25/02 Time: 1624

Percent/Solids: 0 decanted:

Dilution Factor: 1

Extraction: PURGETRAP

Station ID: Trip Blank Method: 8260

GPC Cleanup: ( Y/N ) pH:

Column(1): DB-624 ID: 0.18 (mm)

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 75-71-8 | Dichlorodifluoromethane | 1 | U |
| 74-87-3 | Chloromethane | 1 | U |
| 75-01-4 | Vinyl chloride | 1 | U |
| 74-83-9 | Bromomethane | 1 | U |
| 75-00-3 | Chloroethane | 1 | U |
| 75-69-4 | Trichlorofluoromethane | 1 | U |
| 75-35-4 | 1,1-Dichloroethene | 1 | U |
| 75-09-2 | Methylene chloride | 1 | U |
| 156-60-5 | trans-1,2-Dichloroethene | 1 | U |
| 75-34-3 | 1,1-Dichloroethane | 1 | U |
| 594-20-7 | 2,2-Dichloropropane | 0.43 | U |
| 156-59-2 | cis-1,2-Dichloroethene | 1 | U |
| 74-97-5 | Bromochloromethane | 1 | U |
| 67-66-3 | Chloroform | 1 | U |
| 71-55-6 | 1,1,1-Trichloroethane | 1 | U |
| 56-23-5 | Carbon tetrachloride | 1 | U |
| 71-43-2 | Benzene | 1 | U |
| 107-06-2 | 1,2-Dichloroethane | 1 | U |
| 79-01-6 | Trichloroethene | 1 | U |
| 78-87-5 | 1,2-Dichloropropane | 1 | U |
| 74-95-3 | Dibromomethane | 1 | U |
| 75-27-4 | Bromodichloromethane | 0.6 | U |
| 108-88-3 | Toluene | 1 | U |
| 79-00-5 | 1,1,2-Trichloroethane | 1 | U |
| 127-18-4 | Tetrachloroethene | 1 | U |
| 142-28-9 | 1,3-Dichloropropane | 1 | U |
| 124-48-1 | Dibromochloromethane | 0.4 | U |

Form I

2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code: | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910214 |
| Lab File ID: | 10214.D | Sample wt/vol: | 5 Units: ML |
| Date Received: | 09/14/02 | Concentrated Extract Volume: | 5 |
| Date Extracted: | | Level(low/med) | LOW |
| Date Analyzed: | 09/25/02 | Time: | 1624 |
| PercentSolids: | 0 decanted: | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | Trip Blank |
| Method: | 8260 | GPC Cleanup: ( Y/N ) | pH: |
| Column(1): | DB-624 ID: 0.18 (mm) | | |
| CONCENTRATION UNITS: | UG/L | | |

TBQ30228

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 106-93-4 | 1,2-Dibromoethane(EDB) | 0.26 | U |
| 108-90-7 | Chlorobenzene | 1 | U |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1 | U |
| 100-41-4 | Ethylbenzene | 1 | U |
| 511-39-00 | p,m-Xylene | 2 | U |
| 95-47-6 | o-Xylene | 1 | U |
| 100-42-5 | Styrene | 1 | U |
| 75-25-2 | Bromoform | 1 | U |
| 98-82-8 | Isopropylbenzene (Cumene) | 0.2 | U |
| 108-86-1 | Bromobenzene | 0.15 | U |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.2 | U |
| 96-18-4 | 1,2,3-Trichloropropane | 0.46 | U |
| 103-65-1 | n-Propylbenzene | 0.19 | U |
| 95-49-8 | 2-Chlorotoluene | 1 | U |
| 106-43-4 | 4-Chlorotoluene | 1 | U |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1 | U |
| 98-06-6 | tert-Butylbenzene | 0.35 | U |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1 | U |
| 135-98-8 | sec-Butylbenzene | 0.21 | U |
| 541-73-1 | 1,3-Dichlorobenzene | 1 | U |
| 106-46-7 | 1,4-Dichlorobenzene | 1 | U |
| 99-87-6 | 4-Isopropyltoluene | 0.19 | U |
| 104-51-8 | n-Butylbenzene | 0.35 | U |
| 95-50-1 | 1,2-Dichlorobenzene | 1 | U |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.56 | U |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1 | U |
| 87-68-3 | Hexachlorobutadiene | 0.46 | U |

Form I

MAH 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | TBQ30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910214 |
| Lab File ID: | 10214.D | | |
| Sample wt/vol: | 5 | Units: | ML |
| Date Received: | 09/14/02 | | |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level(low/med) | LOW | Date Analyzed: | 09/25/02 |
| Time: | 1624 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | PURGETRAP | Station ID: | Trip Blank |
| Method: | 8260 | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | DB-624 | ID: | 0.18 (mm) |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 1 | U |
| 87-61-6 | 1,2,3-Trichlorobenzene | 1 | U |
| 1330-20-7 | Xylene (total) | 2 | U |

Form I

2/18/03

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910201
Lab File ID: 102-1.D
Sample wt/vol: 950 Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 1
Date Extracted: 09/16/02
Level(low/med): LOW
Date Analyzed: 09/19/02 Time: 2221
Percent Solids: 0 decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: CEF-103-SMW-0 Method: 8310
GPC Cleanup: (Y/N) N pH:
Column(1): Vydac 201TP54 ID: 4.6 (mm)
CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MKS 2/17/07

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

02Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910202 Lab File ID: 102-2.D

Sample wt/vol: 950 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 1 Date Extracted: 09/16/02

Level:(low/med) LOW Date Analyzed: 09/19/02 Time: 2255

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-0 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.25 | |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.44 | |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.41 | |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.34 | |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MAH 2/19/03

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 03Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910203 Lab File ID: 102-3.D

Sample wt/vol: 930 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 1 Date Extracted: 09/16/02

Level(low/med) LOW Date Analyzed: 09/18/02 Time: 2330

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-0 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.22 | U |
| 208-96-8 | Acenaphthylene | 0.22 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.22 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.39 | |
| 83-32-9 | Acenaphthene | 0.22 | U |
| 86-73-7 | Fluorene | 0.22 | U |
| 85-01-8 | Phenanthrene | 0.22 | U |
| 120-12-7 | Anthracene | 0.22 | U |
| 206-44-0 | Fluoranthene | 0.22 | U |
| 129-00-0 | Pyrene | 0.22 | U |
| 56-55-3 | Benzo(a)anthracene | 0.22 | U |
| 218-01-9 | Chrysene | 0.22 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.22 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.22 | U |
| 50-32-8 | Benzo(a)pyrene | 0.22 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.22 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.22 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.22 | U |

MAG 7/15/03

Form I

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# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 04Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.
SAS No:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910204
Lab File ID: 102-4.D
Sample wt/vol: 920 Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 1
Date Extracted: 09/16/02
Level:(low/med) LOW
Date Analyzed: 09/20/02 Time: 0004
PercentSolids: 0 decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: CEF-103-SMW-0 Method: 8310
GPC Cleanup: ( Y/N ) N pH:
Column(1): Vydac 201TP54 ID: 4.6 (mm)
*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.22 | U |
| 208-96-8 | Acenaphthylene | 0.22 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.22 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.22 | U |
| 83-32-9 | Acenaphthene | 0.22 | U |
| 86-73-7 | Fluorene | 0.22 | U |
| 85-01-8 | Phenanthrene | 0.22 | U |
| 120-12-7 | Anthracene | 0.22 | U |
| 206-44-0 | Fluoranthene | 0.22 | U |
| 129-00-0 | Pyrene | 0.22 | U |
| 56-55-3 | Benzo(a)anthracene | 0.22 | U |
| 218-01-9 | Chrysene | 0.22 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.22 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.22 | U |
| 50-32-8 | Benzo(a)pyrene | 0.22 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.22 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.22 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.22 | U |

MHS 2/19/03

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 05Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910205 Lab File ID: 102-5.D

Sample wt/vol: 930 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 1 Date Extracted: 09/16/02

Level:(low/med) LOW Date Analyzed: 09/20/02 Time: 0039

Percent/Solids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-0 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.22 | U |
| 208-96-8 | Acenaphthylene | 0.22 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.22 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.22 | U |
| 83-32-9 | Acenaphthene | 0.22 | U |
| 86-73-7 | Fluorene | 0.22 | U |
| 85-01-8 | Phenanthrene | 0.22 | U |
| 120-12-7 | Anthracene | 0.22 | U |
| 206-44-0 | Fluoranthene | 0.22 | U |
| 129-00-0 | Pyrene | 0.22 | U |
| 56-55-3 | Benzo(a)anthracene | 0.22 | U |
| 218-01-9 | Chrysene | 0.22 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.22 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.22 | U |
| 50-32-8 | Benzo(a)pyrene | 0.22 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.22 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.22 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.22 | U |

MHS 2/19/03

Form I

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# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 06G30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910206
Lab File ID: 102-6.D
Sample wt/vol: 900
Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 1
Date Extracted: 09/16/02
Level:(low/med): LOW
Date Analyzed: 09/20/02
Time: 0114
PercentSolids: 0
decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: CEF-103-SMW-0
Method: 8310
GPC Cleanup: ( Y/N ) N
pH:
Column(1): Vydac 201TP54
ID: 4.6 (mm)
CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.22 | U |
| 208-96-8 | Acenaphthylene | 0.22 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.22 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.22 | U |
| 83-32-9 | Acenaphthene | 0.22 | U |
| 86-73-7 | Fluorene | 0.22 | U |
| 85-01-8 | Phenanthrene | 0.43 | |
| 120-12-7 | Anthracene | 0.22 | U |
| 206-44-0 | Fluoranthene | 0.21 | J |
| 129-00-0 | Pyrene | 0.22 | U |
| 56-55-3 | Benzo(a)anthracene | 0.22 | U |
| 218-01-9 | Chrysene | 0.22 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.22 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.22 | U |
| 50-32-8 | Benzo(a)pyrene | 0.22 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.22 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.22 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.22 | U |

MAW 2/19/03

Form I

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# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 07Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.
SAS No:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910207
Lab File ID: 102-7.D
Sample wt/vol: 960 Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 1
Date Extracted: 09/16/02
Level:(low/med) LOW
Date Analyzed: 09/20/02 Time: 0223
Percent/Solids: 0 decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: CEF-103-SMW-0 Method: 8310
GPC Cleanup: (Y/N) N pH:
Column(1): Vydac 201TP54 ID: 4.6 (mm)
*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

2/19/03

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 10030228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910208 Lab File ID: 102-8.D

Sample wt/vol: 950 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 1 Date Extracted: 09/16/02

Level:(low/med) LOW Date Analyzed: 09/20/02 Time: 0257

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-1 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.23 | |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MAH 2/19/03

Form I

1

## PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 11G30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910209 Lab File ID: 102-9.D

Sample wt/vol: 945 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 1 Date Extracted: 09/16/02

Level:(low/med) LOW Date Analyzed: 09/20/02 Time: 0332

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-1 Method: 8310

GPC Cleanup: (Y/N) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.34 | |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MAS 2/5/03

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | DUPQ30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910212 |
| Lab File ID: | 102-12.D | | |
| Sample wt/vol: | 935 | Units: | ML |
| Date Received: | 09/14/02 | | |
| Concentrated Extract Volume: | 1 | Date Extracted: | 09/16/02 |
| Level(low/med) | LOW | Date Analyzed: | 09/20/02 |
| Time: | 0407 | | |
| Percent Solids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | SEPF | Station ID: | Duplicate |
| Method: | 8310 | | |
| GPC Cleanup : ( Y/N ) | N | pH: | |
| Column(1): | Vydac 201TP54 | ID: 4.6 | (mm) |
| *CONCENTRATION UNITS:* | UG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MAH 2/19/03

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EQBQ30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910213
Lab File ID: 102-13.D
Sample wt/vol: 940
Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 1
Date Extracted: 09/16/02
Level(low/med): LOW
Date Analyzed: 09/20/02
Time: 0441
PercentSolids: 0
decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: Equipment Blank
Method: 8310
GPC Cleanup: (Y/N) N
pH:
Column(1): Vydac 201TP54
ID: 4.6
(mm)
CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

2/19/03

1

## FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 01Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910201
Lab File ID: 102-1.D
Sample wt/vol: 950 Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 2
Date Extracted: 09/17/02
Level:(low/med) LOW
Date Analyzed: 09/18/02 Time: 0033
PercentSolids: 0 decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: CEF-103-SMW-0 Method: FL-PRO
GPC Cleanup: (Y/N) N pH:
Column(1): RTX-5 ID: 0.53 (mm)
CONCENTRATION UNITS: MG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 5289290-40-0 | TPH | 0.22 | |

MAS 11/18/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 02Q30228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910202
Lab File ID: 102-2.D
Sample wt/vol: 960
Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 2
Date Extracted: 09/17/02
Level:(low/med): LOW
Date Analyzed: 09/18/02
Time: 0101
Percent Solids: 0
decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: CEF-103-SMW-0
Method: FL-PRO
GPC Cleanup: (Y/N) N
pH:
Column(1): RTX-5
ID: 0.53 (mm)

*CONCENTRATION UNITS:* MG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* | Qual | Code |
|---|---|---|---|---|---|
| 5269290-40-0 | TPH | 1.6 | | J | S |

MAH 2/4/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 03Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910203 Lab File ID: 102-3.D

Sample wt/vol: 910 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 2 Date Extracted: 09/17/02

Level:(low/med) LOW Date Analyzed: 09/18/02 Time: 0130

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-0 Method: FL-PRO

GPC Cleanup: ( Y/N ) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

*CONCENTRATION UNITS:* MG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* | Qual | Calc |
|---|---|---|---|---|---|
| 5289290-40-0 | TPH | 0.24 | | J | J |

MAH 2/19/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 04Q30228 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910204 Lab File ID: 102-4.D |
| Sample wt/vol: | 910 Units: ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 2 | Date Extracted: | 09/17/02 |
| Level:(low/med) | LOW | Date Analyzed: | 09/18/02 Time: 0159 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | SEPF | Station ID: | CEF-103-SMW-0 Method: FL-PRO |
| GPC Cleanup : ( Y/N ) | N pH: | | |
| Column(1): | RTX-5 ID: 0.53 (mm) | | |
| *CONCENTRATION UNITS:* | MG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 5289290-40-0 | TPH | 0.64 | |

MAH 2/19/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 05Q30228 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910205 Lab File ID: 102-5.D |
| Sample wt/vol: | 950 Units: ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 2 | Date Extracted: | 09/17/02 |
| Level:(low/med) | LOW | Date Analyzed: | 09/18/02 Time: 0227 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | SEPF | Station ID: | CEF-103-SMW-0 Method: FL-PRO |
| GPC Cleanup : ( Y/N ) | N pH: | | |
| Column(1): | RTX-5 ID: 0.53 (mm) | | |
| CONCENTRATION UNITS: | MG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 5289290-40-0 | TPH | 0.37 | |

pth 2/19/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 06Q90228 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910206 Lab File ID: 102-6.D |
| Sample wt/vol: | 940 Units: ML | Date Received: | 09/14/02 |
| Concentrated Extract Volume: | 2 | Date Extracted: | 09/17/02 |
| Level:(low/med) | LOW | Date Analyzed: | 09/18/02 Time: 0257 |
| Percent Solids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | SEPF | Station ID: | CEF-103-GMW-0 Method: FL-PRO |
| GPC Cleanup : ( Y/N ) | N pH: | | |
| Column(1): | RTX-5 ID: 0.53 (mm) | | |
| CONCENTRATION UNITS: | MG/L | | |

| CAS NO. | ANALYTE | RESULT | Q | Qual | Qual |
|---|---|---|---|---|---|
| 5269290-40-0 | TPH | 0.21 | U | UJ | S |

MHH 2/19/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 07Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910207 Lab File ID: 102-7R.D

Sample wt/vol: 1000 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 2 Date Extracted: 09/17/02

Level:(low/med) LOW Date Analyzed: 09/20/02 Time: 1833

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-0 Method: FL-PRO

GPC Cleanup: ( Y/N ) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: MG/L

| CAS NO. | ANALYTE | RESULT | Q | Qual | Code |
|---|---|---|---|---|---|
| 5289290-40-0 | TPH | 0.2 | U | UJ | 3 |

MHS 2/19/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

10Q30226

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910208 Lab File ID: 102-8R.D

Sample wt/vol: 930 Units: ML Date Received: 09/14/02

Concentrated Extract Volume: 2 Date Extracted: 09/17/02

Level:(low/med) LOW Date Analyzed: 09/18/02 Time: 1118

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-103-SMW-1 Method: FL-PRO

GPC Cleanup: (Y/N) N pH:

Column(1): RTX-5 ID: 0.53 (mm)

*CONCENTRATION UNITS:* MG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 5289290-40-0 | TPH | 0.22 | U |

MAH 2/19/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | 11Q30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910209 |
| Lab File ID: | 102-9.D | | |
| Sample wt/vol: | 950 | Units: | ML |
| Date Received: | 09/14/02 | | |
| Concentrated Extract Volume: | 2 | Date Extracted: | 09/17/02 |
| Level(low/med) | LOW | Date Analyzed: | 09/18/02 |
| Time: | 0852 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | SEPF | Station ID: | CEF-103-SMW-1 |
| Method: | FL-PRO | | |
| GPC Cleanup : ( Y/N ) | N | pH: | |
| Column(1): | RTX-5 | ID: | 0.53 (mm) |
| CONCENTRATION UNITS: | MG/L | | |

| CAS NO. | ANALYTE | RESULT | Q | Qual | Code |
|---|---|---|---|---|---|
| 5268290-40-0 | TPH | 1.7 | | J | S |

[illegible] 2/19/03

Form I

1

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| | | | DUPQ30228 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910212 |
| Lab File ID: | 102-12.D | | |
| Sample wt/vol: | 920 | Units: | ML |
| Date Received: | 09/14/02 | | |
| Concentrated Extract Volume: | 2 | Date Extracted: | 09/17/02 |
| Level:(low/med) | LOW | Date Analyzed: | 09/18/02 |
| Time: | 1019 | | |
| Percent/Solids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | SEPF | Station ID: | Duplicate |
| Method: | FL-PRO | | |
| GPC Cleanup : ( Y/N ) | N | pH: | |
| Column(1): | RTX-5 | ID: | 0.53 (mm) |
| CONCENTRATION UNITS: | MG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 5289290-40-0 | TPH | 0.22 | U |

pMh 1/19/03

# FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: EQB030228

Lab Name: PEL Laboratories, Inc.
Contract: NAS Cecil Field 10
Lab Code: PEL
Case No.
SAS No:
SDG No.: 2209102
Matrix: WATER
Lab Sample ID: 220910213
Lab File ID: 102-13.D
Sample wt/vol: 910
Units: ML
Date Received: 09/14/02
Concentrated Extract Volume: 2
Date Extracted: 09/17/02
Level(low/med): LOW
Date Analyzed: 09/18/02
Time: 1048
PercentSolids: 0
decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: Equipment Blank
Method: FL-PRO
GPC Cleanup: (Y/N) N
pH:
Column(1): RTX-5
ID: 0.53 (mm)
CONCENTRATION UNITS: MG/L

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 5269290-40-0 | TPH | 0.22 | U |

MHS 2/19/03

U.S. EPA - CLP

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INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910201 |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 |
| PercentSolids: | 0 | Station ID: | CEF-103-SMW-01 |

01Q30226

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

MHS 2/2/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910202 |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 |
| PercentSolids: | 0 | Station ID: | CEF-103-SMW-02 |

02Q30228

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

MAH 2/18/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

Form 1A

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

| | | | | | |
|---|---|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 | EPA Sample No. | 03Q30228 |
| Lab Code : | PEL | Case No. | | SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910203 | | |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 | | |
| PercentSolids: | 0 | Station ID: | CEF-103-SMW-03 | | |

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 31.3 | | | P |

MAA 2/19/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

| | | | | | |
|---|---|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 | EPA Sample No. | 04Q30228 |
| Lab Code : | PEL | Case No. | | SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910204 |
| Level(low/med) | LOW | Date Received: | 9/14/2002 |
| PercentSolids: | 0 | Station ID: | CEF-103-SMW-04 |

*CONCENTRATION UNITS:* *UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

MAS 2/19/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

05Q30228

Lab Name: PEL Laboratories, Inc. Contract: NAS Cecil Field 10

Lab Code: PEL Case No. SAS No: SDG No.: 2209102

Matrix: WATER Lab Sample ID: 220910205

Level:(low/med) LOW Date Received: 9/14/2002

PercentSolids: 0 Station ID: CEF-103-SMW-05

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

MHG 2/19/03

Color Before: _____ Clarity Before: _____ Texture: _____

Color After: _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

| | | | | | |
|---|---|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 | EPA Sample No. | 08Q30228 |
| Lab Code : | PEL | Case No. | | SAS No: | | SDG No.: | 2208102 |
| Matrix: | WATER | Lab Sample ID: | 220910206 | | |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 | | |
| PercentSolids: | 0 | Station ID: | CEF-103-SMW-06 | | |

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

MAS 2/19/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910207 |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 |
| Percent Solids: | 0 | Station ID: | CEF-103-SMW-07 |

07Q30228

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 2.4 | B | | P |

2/4/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

| | | | | | |
|---|---|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 | EPA Sample No. | 10G30228 |
| Lab Code : | PEL | Case No. | | SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910208 |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 |
| PercentSolids: | 0 | Station ID: | CEF-103-SMW-10 |

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910209 |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 |
| PercentSolids: | 0 | Station ID: | CEF-103-SMW-11 |

11Q30228

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 35.1 | | | P |

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910212 |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 |
| Percent Solids: | 0 | Station ID: | Duplicate |

DUPQ30228

*CONCENTRATION UNITS: UG/L*

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

pl 2/19/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | NAS Cecil Field 10 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209102 |
| Matrix: | WATER | Lab Sample ID: | 220910213 |
| Level:(low/med) | LOW | Date Received: | 9/14/2002 |
| PercentSolids: | 0 | Station ID: | Equipment Blank |

EQBQ30228

CONCENTRATION UNITS: UG/L

| CAS NO. | ANALYTE | Concentration | C | Q | M |
|---|---|---|---|---|---|
| 7439-92-1 | Lead | 5 | U | | P |

NAS 2/19/03

Color Before: _____ Clarity Before: _____ Texture : _____

Color After : _____ Clarity After: _____ Artifacts: _____

Comments:

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

062MW4Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917801 Lab File ID: 178-1.D

Sample wt/vol: 5 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1309

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: CEF-293-4 Method: 8021

GPC Cleanup: ( Y/N ) pH:

Column(1): RTX-502.2 ID: 0.53 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

2/19/03

Form I

1

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

062MW9Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917802 Lab File ID: 178-2.D

Sample wt/vol: 5 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1353

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: CEF-293-9 Method: 8021

GPC Cleanup: ( Y/N ) pH:

Column(1): RTX-502.2 ID: 0.53 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

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1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062MW13Q302 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917803 |
| Lab File ID: | 178-3.D | Sample wt/vol: | 5 |
| Units: | ML | Date Received: | 09/25/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 |
| Time: | 1438 | PercentSolids: | 0 |
| decanted : | | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-293-13 |
| Method: | 8021 | GPC Cleanup : ( Y/N ) | |
| pH: | | Column(1): | RTX-502.2 |
| ID: | 0.53 (mm) | CONCENTRATION UNITS: | UG/L |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.4 | J |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.17 | J |

MAH 2/19/03

Form I

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062MW20Q302 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209176 |
| Matrix: | WATER | Lab Sample ID: | 220917804 Lab File ID: 178-4R.D |
| Sample wt/vol: | 5 Units: ML | Date Received: | 09/25/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/28/02 Time: 1508 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | CEF-293-20 Method: 8021 |
| GPC Cleanup : ( Y/N ) | pH: | | |
| Column(1): | RTX-502.2 ID: 0.53 (mm) | | |
| *CONCENTRATION UNITS:* | UG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* | Qual | Code |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | 0.55 | | | |
| 1634-04-4 | MTBE | 0.57 | U | | |
| 108-88-3 | Toluene | ~~0.24~~ 0.5 | J | u | F |
| 100-41-4 | Ethylbenzene | 0.3 | J | | |
| 511-39-00 | p,m-Xylene | 1 | U | | |
| 95-47-6 | o-Xylene | 0.34 | J | | |

MAH 2/19/03

Form I

1

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

062MW22Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917807 Lab File ID: 178-7.D

Sample wt/vol: 5 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1735

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: CEF-293-22 Method: 8021

GPC Cleanup: ( Y/N ) pH:

Column(1): RTX-502.2 ID: 0.53 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.35 | J |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

MKH 2/19/03

Form I

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062VEW2Q302 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917808 Lab File ID: 178-8.D |
| Sample wt/vol: | 5 Units: ML | Date Received: | 09/25/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 Time: 1943 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | VEW-2 Method: 8021 |
| GPC Cleanup : ( Y/N ) | pH: | | |
| Column(1): | RTX-502.2 ID: 0.53 (mm) | | |
| *CONCENTRATION UNITS:* | UG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.21 | J |

2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

062VEW3Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917809 Lab File ID: 178-9.D

Sample wt/vol: 5 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 5 Date Extracted:

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 2026

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: PURGETRAP Station ID: VEW-3 Method: 8021

GPC Cleanup: ( Y/N ) pH:

Column(1): RTX-502.2 ID: 0.53 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

MH 7/19/03

1

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 092VEW4Q302 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917810 |
| Lab File ID: | 178-10.D | | |
| Sample wt/vol: | 5 | Units: | ML |
| Date Received: | 09/25/02 | | |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 |
| Time: | 2108 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | PURGETRAP | Station ID: | VEW-4 |
| Method: | 8021 | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | RTX-502.2 | ID: 0.53 | (mm) |

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

MH 2/4/04

1

## VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| EPA Sample No. | 062VEW5Q302 | | |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917811 |
| Lab File ID: | 178-11.D | | |
| Sample wt/vol: | 5 | Units: | ML |
| Date Received: | 09/25/02 | | |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 |
| Time: | 2152 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | PURGETRAP | Station ID: | VEW-5 |
| Method: | 8021 | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | RTX-502.2 | ID: 0.53 | (mm) |
| *CONCENTRATION UNITS:* | UG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 092VEW8Q302 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917812 |
| Lab File ID: | 178-12.D | | |
| Sample wt/vol: | 5 | Units: | ML |
| Date Received: | 09/25/02 | | |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 |
| Time: | 2234 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | PURGETRAP | Station ID: | VEW-6 |
| Method: | 8021 | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | RTX-502.2 | ID: | 0.53 (mm) |
| *CONCENTRATION UNITS:* | UG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

KMH 2/14/03

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062VEW7Q302 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917813 |
| Lab File ID: | 178-13R.D | | |
| Sample wt/vol: | 5 | Units: | ML |
| Date Received: | 09/25/02 | | |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/28/02 |
| Time: | 1847 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | PURGETRAP | Station ID: | VEW-7 |
| Method: | 8021 | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | RTX-502.2 | ID: 0.53 | (mm) |

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

2/9/03

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062VEW8Q302

Lab Name: PEL Laboratories, Inc.
Contract: Cecil Field 163151
Lab Code: PEL
Case No.
SAS No:
SDG No.: 2209178
Matrix: WATER
Lab Sample ID: 220917814
Lab File ID: 176-14.D
Sample wt/vol: 5 Units: ML
Date Received: 09/25/02
Concentrated Extract Volume: 5
Date Extracted:
Level:(low/med) LOW
Date Analyzed: 09/26/02 Time: 0000
PercentSolids: 0 decanted :
Dilution Factor: 1
Extraction: PURGETRAP
Station ID: VEW-8 Method: 8021
GPC Cleanup : ( Y/N ) pH:
Column(1): RTX-502.2 ID: 0.53 (mm)
*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

2/19/03

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062DUPQ302 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917815 Lab File ID: 178-15.D |
| Sample wt/vol: | 5 Units: ML | Date Received: | 09/25/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/26/02 Time: 1637 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | Duplicate Method: 8021 |
| GPC Cleanup : ( Y/N ) | pH: | | |
| Column(1): | RTX-502.2 ID: 0.53 (mm) | | |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U |
| 1634-04-4 | MTBE | 0.57 | U |
| 108-88-3 | Toluene | 0.5 | U |
| 100-41-4 | Ethylbenzene | 0.5 | U |
| 511-39-00 | p,m-Xylene | 1 | U |
| 95-47-6 | o-Xylene | 0.5 | U |

DMH 2/19/03

1

# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062EQBQ302 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917816 Lab File ID: 178-16.D |
| Sample wt/vol: | 5 Units: ML | Date Received: | 09/25/02 |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level:(low/med) | LOW | Date Analyzed: | 09/28/02 Time: 1804 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | PURGETRAP | Station ID: | Equipment Blank Method: 8021 |
| GPC Cleanup : ( Y/N ) | pH: | | |
| Column(1): | RTX-502.2 ID: 0.53 (mm) | | |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q | Qual | Code |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U | | |
| 1634-04-4 | MTBE | 0.57 | U | | |
| 108-88-3 | Toluene | ~~0.24~~ 0.5 | J | U | F |
| 100-41-4 | Ethylbenzene | 0.5 | U | | |
| 511-39-00 | p,m-Xylene | 1 | U | | |
| 95-47-6 | o-Xylene | 0.5 | U | | |

RHH 2/19/03

Form I

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# VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| EPA Sample No. | 062TBQ302 | | |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917817 |
| Lab File ID: | 178-17.D | | |
| Sample wt/vol: | 5 | Units: | ML |
| Date Received: | 09/25/02 | | |
| Concentrated Extract Volume: | 5 | Date Extracted: | |
| Level(low/med) | LOW | Date Analyzed: | 09/27/02 |
| Time: | 1807 | | |
| Percent Solids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | PURGETRAP | Station ID: | Trip Blank |
| Method: | 8021 | | |
| GPC Cleanup : ( Y/N ) | | pH: | |
| Column(1): | RTX-502.2 | ID: 0.53 | (mm) |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q | Qual | Code |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | 0.5 | U | | |
| 1634-04-4 | MTBE | 0.57 | U | | |
| 108-88-3 | Toluene | ~~0.31~~ 0.5 | J | u | F |
| 100-41-4 | Ethylbenzene | 0.5 | U | | |
| 511-39-00 | p,m-Xylene | 1 | U | | |
| 95-47-6 | o-Xylene | 0.5 | U | | |

MHM 2/19/03

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062MW4Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917801 Lab File ID: 178-1.D

Sample wt/vol: 990 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1513

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-293-4 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.2 | U |
| 208-96-8 | Acenaphthylene | 0.2 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.2 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.2 | U |
| 83-32-9 | Acenaphthene | 0.2 | U |
| 86-73-7 | Fluorene | 0.2 | U |
| 85-01-8 | Phenanthrene | 0.2 | U |
| 120-12-7 | Anthracene | 0.2 | U |
| 206-44-0 | Fluoranthene | 0.2 | U |
| 129-00-0 | Pyrene | 0.2 | U |
| 56-55-3 | Benzo(a)anthracene | 0.2 | U |
| 218-01-9 | Chrysene | 0.2 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.2 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.2 | U |
| 50-32-8 | Benzo(a)pyrene | 0.2 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.2 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.2 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.2 | U |

MAS 2/19/03

1

## PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062MW9Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917802 Lab File ID: 178-2.D

Sample wt/vol: 950 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1547

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-293-9 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MAB 2/4/03

1

## PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062MW13Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917803 Lab File ID: 178-3.D

Sample wt/vol: 950 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1622

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-293-13 Method: 8310

GPC Cleanup: (Y/N) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.34 | |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.26 | |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MAK 2/19/03

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062MW20Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917804 Lab File ID: 178-4.D

Sample wt/vol: 980 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1656

Percent Solids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: CEF-293-20 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.61 | |
| 208-96-8 | Acenaphthylene | 0.2 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.2 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.2 | U |
| 83-32-9 | Acenaphthene | 0.2 | U |
| 86-73-7 | Fluorene | 0.2 | U |
| 85-01-8 | Phenanthrene | 0.2 | U |
| 120-12-7 | Anthracene | 0.2 | U |
| 206-44-0 | Fluoranthene | 0.2 | U |
| 129-00-0 | Pyrene | 0.2 | U |
| 56-55-3 | Benzo(a)anthracene | 0.2 | U |
| 218-01-9 | Chrysene | 0.2 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.2 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.2 | U |
| 50-32-8 | Benzo(a)pyrene | 0.2 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.2 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.2 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.2 | U |

DMH 2/19/03

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062MW22Q302 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917807 Lab File ID: 178-7.D |
| Sample wt/vol: | 950 Units: ML | Date Received: | 09/25/02 |
| Concentrated Extract Volume: | 1 | Date Extracted: | 09/26/02 |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 Time: 1731 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | SEPF | Station ID: | CEF-293-22 Method: 8310 |
| GPC Cleanup : ( Y/N ) | N pH: | | |
| Column(1): | Vydac 201TP54 ID: 4.6 (mm) | | |

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 2.7 | |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 5.9 | |
| 91-57-6 | 2-Methylnaphthalene | 8.5 | |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.23 | |
| 85-01-8 | Phenanthrene | 0.52 | |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

2/19/03

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 082VEW2Q302 |
| Lab Code : | PEL Case No. | SAS No: | SDG No.: 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917808 Lab File ID: 179-8.D |
| Sample wt/vol: | 950 Units: ML | Date Received: | 09/25/02 |
| Concentrated Extract Volume: | 1 | Date Extracted: | 09/26/02 |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 Time: 1840 |
| PercentSolids: | 0 decanted : | Dilution Factor: | 1 |
| Extraction: | SEPF | Station ID: | VEW-2 Method: 8310 |
| GPC Cleanup : ( Y/N ) | N pH: | | |
| Column(1): | Vydac 201TP54 ID: 4.6 (mm) | | |
| *CONCENTRATION UNITS:* | UG/L | | |

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.59 | |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.24 | |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.3 | |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

2/19/03

1

## PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062VEW3Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917809 Lab File ID: 178-9.D

Sample wt/vol: 960 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1915

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: VEW-3 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

2/19/03

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062VEW4Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917810 Lab File ID: 178-10.D

Sample wt/vol: 940 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 1950

Percent Solids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: VEW-4 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062VEW5Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917811 Lab File ID: 178-11.D

Sample wt/vol: 950 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 2024

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: VEW-5 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

7/19/03

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

062VEW6Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917812 Lab File ID: 178-12.D

Sample wt/vol: 940 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 2059

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: VEW-6 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 052VEW7Q302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917813 Lab File ID: 176-13.D

Sample wt/vol: 940 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 2133

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: VEW-7 Method: 8310

GPC Cleanup: ( Y/N ) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

MW 2/19/04

Form I

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

| | | | |
|---|---|---|---|
| Lab Name: | PEL Laboratories, Inc. | Contract: | Cecil Field 163151 |
| | | | 062VEW8Q302 |
| Lab Code : | PEL | Case No. | |
| SAS No: | | SDG No.: | 2209178 |
| Matrix: | WATER | Lab Sample ID: | 220917814 |
| Lab File ID: | 179-14.D | | |
| Sample wt/vol: | 940 | Units: | ML |
| Date Received: | 09/25/02 | | |
| Concentrated Extract Volume: | 1 | Date Extracted: | 09/26/02 |
| Level:(low/med) | LOW | Date Analyzed: | 09/27/02 |
| Time: | 2208 | | |
| PercentSolids: | 0 | decanted : | |
| Dilution Factor: | 1 | | |
| Extraction: | SEPF | Station ID: | VEW-8 |
| Method: | 8310 | | |
| GPC Cleanup : ( Y/N ) | N | pH: | |
| Column(1): | Vydac 201TP54 | ID: 4.6 | (mm) |
| CONCENTRATION UNITS: | UG/L | | |

| CAS NO. | ANALYTE | RESULT | Q |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

1

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062DUPQ302

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field 163151

Lab Code: PEL Case No. SAS No: SDG No.: 2209178

Matrix: WATER Lab Sample ID: 220917815 Lab File ID: 178-15.D

Sample wt/vol: 960 Units: ML Date Received: 09/25/02

Concentrated Extract Volume: 1 Date Extracted: 09/26/02

Level:(low/med) LOW Date Analyzed: 09/27/02 Time: 2243

PercentSolids: 0 decanted: Dilution Factor: 1

Extraction: SEPF Station ID: Duplicate Method: 8310

GPC Cleanup: (Y/N) N pH:

Column(1): Vydac 201TP54 ID: 4.6 (mm)

*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

Form I

2/19/02

RR

# PAH ORGANIC ANALYSIS DATA SHEET

EPA Sample No.: 062EQBQ302

Lab Name: PEL Laboratories, Inc.
Contract: Cecil Field 163151
Lab Code: PEL
Case No.:
SAS No.:
SDG No.: 2209178
Matrix: WATER
Lab Sample ID: 220917816
Lab File ID: 176-16.D
Sample wt/vol: 940
Units: ML
Date Received: 09/25/02
Concentrated Extract Volume: 1
Date Extracted: 09/26/02
Level:(low/med) LOW
Date Analyzed: 09/27/02
Time: 2317
PercentSolids: 0
decanted:
Dilution Factor: 1
Extraction: SEPF
Station ID: Equipment Blank
Method: 8310
GPC Cleanup: ( Y/N ) N
pH:
Column(1): Vydac 201TP54
ID: 4.6 (mm)
*CONCENTRATION UNITS:* UG/L

| *CAS NO.* | *ANALYTE* | *RESULT* | *Q* |
|---|---|---|---|
| 91-20-3 | Naphthalene | 0.21 | U |
| 208-96-8 | Acenaphthylene | 0.21 | U |
| 90-12-0 | 1-Methylnaphthalene | 0.21 | U |
| 91-57-6 | 2-Methylnaphthalene | 0.21 | U |
| 83-32-9 | Acenaphthene | 0.21 | U |
| 86-73-7 | Fluorene | 0.21 | U |
| 85-01-8 | Phenanthrene | 0.21 | U |
| 120-12-7 | Anthracene | 0.21 | U |
| 206-44-0 | Fluoranthene | 0.21 | U |
| 129-00-0 | Pyrene | 0.21 | U |
| 56-55-3 | Benzo(a)anthracene | 0.21 | U |
| 218-01-9 | Chrysene | 0.21 | U |
| 205-99-2 | Benzo(b)fluoranthene | 0.21 | U |
| 207-08-9 | Benzo(k)fluoranthene | 0.21 | U |
| 50-32-8 | Benzo(a)pyrene | 0.21 | U |
| 53-70-3 | Dibenz(a,h)anthracene | 0.21 | U |
| 191-24-2 | Benzo(g,h,i)perylene | 0.21 | U |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 0.21 | U |

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-07404
Received: 18 JUL 02
Reported: 30 JUL 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CT0-0062
Project: CTO-0062, 103RD STREET MONTHLY AIR
Sampled By: Client
Code: 110120730

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 07404-1 | 062-SVE-E-A-0715-02-26 | 07-15-02/14:30 |

| PARAMETER | 07404-1 |
|---|---|
| Volatile Organic Compounds in Air (MOD-TO14) | |
| Benzene, mg/m3 | 0.060U |
| Bromodichloromethane, mg/m3 | 0.060U |
| Bromoform, mg/m3 | 0.060U |
| Bromomethane (Methyl bromide), mg/m3 | 0.060U |
| Carbon disulfide, mg/m3 | 0.060U |
| Carbon tetrachloride, mg/m3 | 0.060U |
| Chlorobenzene, mg/m3 | 0.060U |
| Chloroethane, mg/m3 | 0.060U |
| Chloroform, mg/m3 | 0.060U |
| Chloromethane (Methyl chloride), mg/m3 | 0.060U |
| 2-Chlorotoluene, mg/m3 | 0.060U |
| Dibromochloromethane, mg/m3 | 0.060U |
| 1,2-Dibromoethane (EDB), mg/m3 | 0.060U |
| 1,2-Dichlorobenzene, mg/m3 | 0.060U |
| 1,3-Dichlorobenzene, mg/m3 | 0.060U |
| 1,4-Dichlorobenzene, mg/m3 | 0.060U |
| trans-1,4-Dichloro-2-butene, mg/m3 | 0.060U |
| Dichlorodifluoromethane, mg/m3 | 0.060U |
| 1,1-Dichloroethane, mg/m3 | 0.060U |
| 1,2-Dichloroethane, mg/m3 | 0.060U |
| 1,1-Dichloroethene, mg/m3 | 0.060U |
| cis-1,2-Dichloroethene, mg/m3 | 0.060U |
| trans-1,2-Dichloroethene, mg/m3 | 0.060U |
| 1,2-Dichloropropane, mg/m3 | 0.060U |
| cis-1,3-Dichloropropene, mg/m3 | 0.060U |

MAS 2/19/03

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-07404
Received: 18 JUL 02
Reported: 30 JUL 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, 103RD STREET MONTHLY AIR
Sampled By: Client
Code: 110120730

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 07404-1 | 062-SVE-E-A-0715-02-26 | 07-15-02/14:30 |

| PARAMETER | 07404-1 |
|---|---|
| trans-1,3-Dichloropropene, mg/m3 | 0.060U |
| Dichlorotetrafluoroethane, mg/m3 | 0.060U |
| Ethylbenzene, mg/m3 | 0.060U |
| Hexane, mg/m3 | 0.060U |
| 4-Ethyltoluene, mg/m3 | 0.060U |
| Methylene chloride (Dichloromethane), mg/m3 | 0.060U |
| Methyl t-butyl ether (MTBE), mg/m3 | 0.060U |
| Styrene, mg/m3 | 0.060U |
| 1,1,2,2-Tetrachloroethane, mg/m3 | 0.060U |
| Tetrachloroethene, mg/m3 | 0.060U |
| Toluene, mg/m3 | 0.060U |
| 1,2,4-Trichlorobenzene, mg/m3 | 0.060U |
| 1,1,1-Trichloroethane, mg/m3 | 0.060U |
| 1,1,2-Trichloroethane, mg/m3 | 0.060U |
| Trichloroethene, mg/m3 | 0.060U |
| Trichlorofluoromethane, mg/m3 | 0.060U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane, mg/m3 | 0.060U |
| 1,2,4-Trimethylbenzene, mg/m3 | 0.060U |
| 1,3,5-Trimethylbenzene, mg/m3 | 0.060U |
| Vinyl chloride, mg/m3 | 0.060U |
| o-Xylene, mg/m3 | 0.060U |
| m&p-Xylene, mg/m3 | 0.12U |
| Surrogate - 1,2-Dichloroethane-d4 | 99 % |
| Surrogate - Toluene-d8 | 98 % |
| Surrogate - 4-Bromofluorobenzene | 96 % |
| Dilution Factor | 1 |

MAS 7/19/03

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-07405
Received: 18 JUL 02
Reported: 29 JUL 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, CECIL FIELD DAY TANK 1
Sampled By: Client
Code: 155320730

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED | SDG# |
|---|---|---|---|
| 07405-1 | 062-SVE-E-A-0715-02-30 | 07-15-02/14:10 | 207405 |

| PARAMETER | 07405-1 |
|---|---|
| Volatile Organic Compounds in Air (MOD-TO14) | |
| Benzene, mg/m3 | 0.060U |
| Bromodichloromethane, mg/m3 | 0.060U |
| Bromoform, mg/m3 | 0.060U |
| Bromomethane (Methyl bromide), mg/m3 | 0.060U |
| Carbon disulfide, mg/m3 | 0.060U |
| Carbon tetrachloride, mg/m3 | 0.060U |
| Chlorobenzene, mg/m3 | 0.060U |
| Chloroethane, mg/m3 | 0.060U |
| Chloroform, mg/m3 | 0.060U |
| Chloromethane (Methyl chloride), mg/m3 | 0.060U |
| 2-Chlorotoluene, mg/m3 | 0.060U |
| Dibromochloromethane, mg/m3 | 0.060U |
| 1,2-Dibromoethane (EDB), mg/m3 | 0.060U |
| 1,2-Dichlorobenzene, mg/m3 | 0.060U |
| 1,3-Dichlorobenzene, mg/m3 | 0.060U |
| 1,4-Dichlorobenzene, mg/m3 | 0.060U |
| trans-1,4-Dichloro-2-butene, mg/m3 | 0.060U |
| Dichlorodifluoromethane, mg/m3 | 0.060U |
| 1,1-Dichloroethane, mg/m3 | 0.060U |
| 1,2-Dichloroethane, mg/m3 | 0.060U |
| 1,1-Dichloroethene, mg/m3 | 0.060U |
| cis-1,2-Dichloroethene, mg/m3 | 0.060U |
| trans-1,2-Dichloroethene, mg/m3 | 0.060U |
| 1,2-Dichloropropane, mg/m3 | 0.060U |
| cis-1,3-Dichloropropene, mg/m3 | 0.060U |

NOK 2/19/03

SEVERN TRENT SERVICES

STL Pensacola
LOG NO: C2-07405
Received: 18 JUL 02
Reported: 29 JUL 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, CECIL FIELD DAY TANK 1
Sampled By: Client
Code: 155320730

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED | SDG# |
|---|---|---|---|
| 07405-1 | 062-SVE-E-A-0715-02-30 | 07-15-02/14:10 | 207405 |

| PARAMETER | 07405-1 |
|---|---|
| trans-1,3-Dichloropropene, mg/m3 | 0.060U |
| Dichlorotetrafluoroethane, mg/m3 | 0.060U |
| Ethylbenzene, mg/m3 | 0.060U |
| Hexane, mg/m3 | 0.060U |
| 4-Ethyltoluene, mg/m3 | 0.060U |
| Methylene chloride (Dichloromethane), mg/m3 | 0.060U |
| Methyl t-butyl ether (MTBE), mg/m3 | 0.060U |
| Styrene, mg/m3 | 0.060U |
| 1,1,2,2-Tetrachloroethane, mg/m3 | 0.060U |
| Tetrachloroethene, mg/m3 | 0.060U |
| Toluene, mg/m3 | 0.060U |
| 1,2,4-Trichlorobenzene, mg/m3 | 0.060U |
| 1,1,1-Trichloroethane, mg/m3 | 0.060U |
| 1,1,2-Trichloroethane, mg/m3 | 0.060U |
| Trichloroethene, mg/m3 | 0.060U |
| Trichlorofluoromethane, mg/m3 | 0.060U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane, mg/m3 | 0.060U |
| 1,2,4-Trimethylbenzene, mg/m3 | 0.060U |
| 1,3,5-Trimethylbenzene, mg/m3 | 0.060U |
| Vinyl chloride, mg/m3 | 0.060U |
| o-Xylene, mg/m3 | 0.060U |
| m&p-Xylene, mg/m3 | 0.12U |
| Surrogate - 1,2-Dichloroethane-d4 | 100 % |
| Surrogate - Toluene-d8 | 99 % |
| Surrogate - 4-Bromofluorobenzene | 96 % |
| Dilution Factor | 1 |

MAS 2/19/03

SEVERN TRENT SERVICES

STL Pensacola

LOG NO: C2-08603
Received: 27 AUG 02
Reported: 06 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, CECIL FIELD DAY TANK 1
Sampled By: Client
Code: 08592096
Page 1

REPORT OF RESULTS

| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 08603-1 | 062-SVE-E-A-0821-02-31 | 08-21-02/15:30 |

| PARAMETER | 08603-1 |
|---|---|
| Volatile Organic Compounds in Air (MOD-TO14) | |
| Benzene, mg/m3 | 0.070U |
| Bromodichloromethane, mg/m3 | 0.070U |
| Bromoform, mg/m3 | 0.070U |
| Bromomethane (Methyl bromide), mg/m3 | 0.070U |
| Carbon disulfide, mg/m3 | 0.070U |
| Carbon tetrachloride, mg/m3 | 0.070U |
| Chlorobenzene, mg/m3 | 0.070U |
| Chloroethane, mg/m3 | 0.070U |
| Chloroform, mg/m3 | 0.070U |
| Chloromethane (Methyl chloride), mg/m3 | 0.070U |
| 2-Chlorotoluene, mg/m3 | 0.070U |
| Dibromochloromethane, mg/m3 | 0.070U |
| 1,2-Dibromoethane (EDB), mg/m3 | 0.070U |
| 1,2-Dichlorobenzene, mg/m3 | 0.070U |
| 1,3-Dichlorobenzene, mg/m3 | 0.070U |
| 1,4-Dichlorobenzene, mg/m3 | 0.070U |
| trans-1,4-Dichloro-2-butene, mg/m3 | 0.070U |
| Dichlorodifluoromethane, mg/m3 | 0.070U |
| 1,1-Dichloroethane, mg/m3 | 0.070U |
| 1,2-Dichloroethane, mg/m3 | 0.070U |
| 1,1-Dichloroethene, mg/m3 | 0.070U |
| cis-1,2-Dichloroethene, mg/m3 | 0.070U |
| trans-1,2-Dichloroethene, mg/m3 | 0.070U |
| 1,2-Dichloropropane, mg/m3 | 0.070U |
| cis-1,3-Dichloropropene, mg/m3 | 0.070U |

MHS 2/19/03

SEVERN TRENT SERVICES

STL Pensacola

LOG NO: C2-08603
Received: 27 AUG 02
Reported: 06 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, CECIL FIELD DAY TANK 1
Sampled By: Client
Code: 08592096

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 08603-1 | 062-SVE-E-A-0821-02-31 | 08-21-02/15:30 |

| PARAMETER | 08603-1 |
|---|---|
| trans-1,3-Dichloropropene, mg/m3 | 0.070U |
| Dichlorotetrafluoroethane, mg/m3 | 0.070U |
| Ethylbenzene, mg/m3 | 0.070U |
| Hexane, mg/m3 | 0.070U |
| 4-Ethyltoluene, mg/m3 | 0.07J |
| Hexachlorobutadiene, mg/m3 | 0.070U |
| Methylene chloride (Dichloromethane), mg/m3 | 0.070U |
| Methyl t-butyl ether (MTBE), mg/m3 | 0.070U |
| Styrene, mg/m3 | 0.070U |
| 1,1,2,2-Tetrachloroethane, mg/m3 | 0.070U |
| Tetrachloroethene, mg/m3 | 0.070U |
| Toluene, mg/m3 | 0.070U |
| 1,2,4-Trichlorobenzene, mg/m3 | 0.070U |
| 1,1,1-Trichloroethane, mg/m3 | 0.070U |
| 1,1,2-Trichloroethane, mg/m3 | 0.070U |
| Trichloroethene, mg/m3 | 0.070U |
| Trichlorofluoromethane, mg/m3 | 0.070U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane, mg/m3 | 0.070U |
| 1,2,4-Trimethylbenzene, mg/m3 | 0.06J |
| 1,3,5-Trimethylbenzene, mg/m3 | 0.27 |
| Vinyl chloride, mg/m3 | 0.070U |
| o-Xylene, mg/m3 | 0.08 |
| m&p-Xylene, mg/m3 | 0.09J |
| Surrogate - 1,2-Dichloroethane-d4 | 107 % |
| Surrogate - Toluene-d8 | 105 % |
| Surrogate - 4-Bromofluorobenzene | 105 % |

MAS 9/19/02

SEVERN TRENT SERVICES

STL Pensacola

LOG NO: C2-08604
Received: 27 AUG 02
Reported: 06 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, 103RD STREET MONTHLY AIR
Sampled By: Client
Code: 10062096

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 08604-1 | 062-SVE-E-A-0821-02-27 | 08-21-02/15:45 |

| PARAMETER | 08604-1 |
|---|---|
| Volatile Organic Compounds in Air (MOD-TO14) | |
| Benzene, mg/m3 | 0.068U |
| Bromodichloromethane, mg/m3 | 0.068U |
| Bromoform, mg/m3 | 0.068U |
| Bromomethane (Methyl bromide), mg/m3 | 0.068U |
| Carbon disulfide, mg/m3 | 0.068U |
| Carbon tetrachloride, mg/m3 | 0.068U |
| Chlorobenzene, mg/m3 | 0.068U |
| Chloroethane, mg/m3 | 0.068U |
| Chloroform, mg/m3 | 0.068U |
| Chloromethane (Methyl chloride), mg/m3 | 0.068U |
| 2-Chlorotoluene, mg/m3 | 0.068U |
| Dibromochloromethane, mg/m3 | 0.068U |
| 1,2-Dibromoethane (EDB), mg/m3 | 0.068U |
| 1,2-Dichlorobenzene, mg/m3 | 0.068U |
| 1,3-Dichlorobenzene, mg/m3 | 0.068U |
| 1,4-Dichlorobenzene, mg/m3 | 0.068U |
| trans-1,4-Dichloro-2-butene, mg/m3 | 0.068U |
| Dichlorodifluoromethane, mg/m3 | 0.068U |
| 1,1-Dichloroethane, mg/m3 | 0.068U |
| 1,2-Dichloroethane, mg/m3 | 0.068U |
| 1,1-Dichloroethene, mg/m3 | 0.068U |
| cis-1,2-Dichloroethene, mg/m3 | 0.068U |
| trans-1,2-Dichloroethene, mg/m3 | 0.068U |
| 1,2-Dichloropropane, mg/m3 | 0.068U |
| cis-1,3-Dichloropropene, mg/m3 | 0.068U |

2/28/03

SEVERN TRENT SERVICES

STL Pensacola

LOG NO: C2-08604
Received: 27 AUG 02
Reported: 06 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CT0-0062
Project: CTO-0062, 103RD STREET MONTHLY AIR
Sampled By: Client
Code: 10062096



REPORT OF RESULTS

| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 08604-1 | 062-SVE-E-A-0821-02-27 | 08-21-02/15:45 |

| PARAMETER | 08604-1 |
|---|---|
| trans-1,3-Dichloropropene, mg/m3 | 0.068U |
| Dichlorotetrafluoroethane, mg/m3 | 0.068U |
| Ethylbenzene, mg/m3 | 0.068U |
| Hexane, mg/m3 | 0.068U |
| 4-Ethyltoluene, mg/m3 | 0.068U |
| Hexachlorobutadiene, mg/m3 | 0.068U |
| Methylene chloride (Dichloromethane), mg/m3 | 0.068U |
| Methyl t-butyl ether (MTBE), mg/m3 | 0.068U |
| Styrene, mg/m3 | 0.068U |
| 1,1,2,2-Tetrachloroethane, mg/m3 | 0.068U |
| Tetrachloroethene, mg/m3 | 0.068U |
| Toluene, mg/m3 | 0.068U |
| 1,2,4-Trichlorobenzene, mg/m3 | 0.068U |
| 1,1,1-Trichloroethane, mg/m3 | 0.068U |
| 1,1,2-Trichloroethane, mg/m3 | 0.068U |
| Trichloroethene, mg/m3 | 0.068U |
| Trichlorofluoromethane, mg/m3 | 0.068U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane, mg/m3 | 0.068U |
| 1,2,4-Trimethylbenzene, mg/m3 | 0.068U |
| 1,3,5-Trimethylbenzene, mg/m3 | 0.068U |
| Vinyl chloride, mg/m3 | 0.068U |
| o-Xylene, mg/m3 | 0.068U |
| m&p-Xylene, mg/m3 | 0.14U |
| Surrogate - 1,2-Dichloroethane-d4 | 106 % |
| Surrogate - Toluene-d8 | 102 % |
| Surrogate - 4-Bromofluorobenzene | 103 % |

SEVERN TRENT STL

LOG NO: C2-09256
Received: 12 SEP 02
Reported: 25 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CT0-0062
Project: CTO-0062, CECIL FIELD DAY TANK 1
Sampled By: Client
Code: 15282104

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 09256-1 | 062-SVE-E-A-0909-02-32 | 09-09-02/14:50 |

| PARAMETER | 09256-1 |
|---|---|
| Volatile Organic Compounds in Air (MOD-TO14) | |
| Benzene, mg/m3 | 0.069U |
| Bromodichloromethane, mg/m3 | 0.069U |
| Bromoform, mg/m3 | 0.069U |
| Bromomethane (Methyl bromide), mg/m3 | 0.069U |
| Carbon disulfide, mg/m3 | 0.069U |
| Carbon tetrachloride, mg/m3 | 0.069U |
| Chlorobenzene, mg/m3 | 0.069U |
| Chloroethane, mg/m3 | 0.069U |
| Chloroform, mg/m3 | 0.069U |
| Chloromethane (Methyl chloride), mg/m3 | 0.069U |
| 2-Chlorotoluene, mg/m3 | 0.069U |
| Dibromochloromethane, mg/m3 | 0.069U |
| 1,2-Dibromoethane (EDB), mg/m3 | 0.069U |
| 1,2-Dichlorobenzene, mg/m3 | 0.069U |
| 1,3-Dichlorobenzene, mg/m3 | 0.069U |
| 1,4-Dichlorobenzene, mg/m3 | 0.069U |
| trans-1,4-Dichloro-2-butene, mg/m3 | 0.069U |
| Dichlorodifluoromethane, mg/m3 | 0.069U |
| 1,1-Dichloroethane, mg/m3 | 0.069U |
| 1,2-Dichloroethane, mg/m3 | 0.069U |
| 1,1-Dichloroethene, mg/m3 | 0.069U |
| cis-1,2-Dichloroethene, mg/m3 | 0.069U |
| trans-1,2-Dichloroethene, mg/m3 | 0.069U |
| 1,2-Dichloropropane, mg/m3 | 0.069U |
| cis-1,3-Dichloropropene, mg/m3 | 0.069U |

Severn Trent Laboratories Inc.
STL Pensacola • 3355 McLemore Dr, Pensacola, FL 32514
Tel 850 474 1001 Fax 850 478 2671 • www.stl-inc.com

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SEVERN TRENT STL

LOG NO: C2-09256
Received: 12 SEP 02
Reported: 25 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CT0-0062
Project: CTO-0062, CECIL FIELD DAY TANK 1
Sampled By: Client
Code: 15282104



REPORT OF RESULTS

| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 09256-1 | 062-SVE-E-A-0909-02-32 | 09-09-02/14:50 |

| PARAMETER | 09256-1 |
|---|---|
| trans-1,3-Dichloropropene, mg/m3 | 0.069U |
| Dichlorotetrafluoroethane, mg/m3 | 0.069U |
| Ethylbenzene, mg/m3 | 0.069U |
| Hexane, mg/m3 | 0.099 |
| 4-Ethyltoluene, mg/m3 | 0.069U |
| Hexachlorobutadiene, mg/m3 | 0.069U |
| Methylene chloride (Dichloromethane), mg/m3 | 0.069U |
| Methyl t-butyl ether (MTBE), mg/m3 | 0.069U |
| Styrene, mg/m3 | 0.069U |
| 1,1,2,2-Tetrachloroethane, mg/m3 | 0.069U |
| Tetrachloroethene, mg/m3 | 0.069U |
| Toluene, mg/m3 | 0.069U |
| 1,2,4-Trichlorobenzene, mg/m3 | 0.069U |
| 1,1,1-Trichloroethane, mg/m3 | 0.069U |
| 1,1,2-Trichloroethane, mg/m3 | 0.069U |
| Trichloroethene, mg/m3 | 0.069U |
| Trichlorofluoromethane, mg/m3 | 0.069U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane, mg/m3 | 0.069U |
| 1,2,4-Trimethylbenzene, mg/m3 | 0.069U |
| 1,3,5-Trimethylbenzene, mg/m3 | 0.18 |
| Vinyl chloride, mg/m3 | 0.069U |
| o-Xylene, mg/m3 | 0.069U |
| m&p-Xylene, mg/m3 | 0.14U |
| Surrogate - 1,2-Dichloroethane-d4 | 113 % |
| Surrogate - Toluene-d8 | 101 % |
| Surrogate - 4-Bromofluorobenzene | 97 % |

2/10/03

Severn Trent Laboratories Inc.
STL Pensacola • 3355 McLemore Dr. Pensacola, FL 32514
Tel 850 474 1001 Fax 850 478 2671 • www.stl-inc.com

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SEVERN TRENT STL

LOG NO: C2-09257
Received: 12 SEP 02
Reported: 24 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, 103RD STREET MONTHLY AIR
Sampled By: Client
Code: 17552101

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 09257-1 | 062-SVE-E-A-0909-02-28 | 09-09-02/13:10 |

| PARAMETER | 09257-1 |
|---|---|
| Volatile Organic Compounds in Air (MOD-TO14) | |
| Benzene, mg/m3 | 0.070U |
| Bromodichloromethane, mg/m3 | 0.070U |
| Bromoform, mg/m3 | 0.070U |
| Bromomethane (Methyl bromide), mg/m3 | 0.070U |
| Carbon disulfide, mg/m3 | 0.070U |
| Carbon tetrachloride, mg/m3 | 0.070U |
| Chlorobenzene, mg/m3 | 0.070U |
| Chloroethane, mg/m3 | 0.070U |
| Chloroform, mg/m3 | 0.070U |
| Chloromethane (Methyl chloride), mg/m3 | 0.070U |
| 2-Chlorotoluene, mg/m3 | 0.070U |
| Dibromochloromethane, mg/m3 | 0.070U |
| 1,2-Dibromoethane (EDB), mg/m3 | 0.070U |
| 1,2-Dichlorobenzene, mg/m3 | 0.070U |
| 1,3-Dichlorobenzene, mg/m3 | 0.070U |
| 1,4-Dichlorobenzene, mg/m3 | 0.070U |
| trans-1,4-Dichloro-2-butene, mg/m3 | 0.070U |
| Dichlorodifluoromethane, mg/m3 | 0.070U |
| 1,1-Dichloroethane, mg/m3 | 0.070U |
| 1,2-Dichloroethane, mg/m3 | 0.070U |
| 1,1-Dichloroethene, mg/m3 | 0.070U |
| cis-1,2-Dichloroethene, mg/m3 | 0.070U |
| trans-1,2-Dichloroethene, mg/m3 | 0.070U |
| 1,2-Dichloropropane, mg/m3 | 0.070U |
| cis-1,3-Dichloropropene, mg/m3 | 0.070U |

2/19/05

Severn Trent Laboratories Inc.
STL Pensacola • 3355 McLemore Dr, Pensacola, FL 32514
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SEVERN TRENT STL

LOG NO: C2-09257
Received: 12 SEP 02
Reported: 24 SEP 02

Ms. Tatiana Romanova
CH2M Hill Constructors, Inc. (CCI)
115 Perimeter Center Place, NE Suite 700
Atlanta, GA 30346

Client PO. No.: 2916

Contract No.: CTO-0062
Project: CTO-0062, 103RD STREET MONTHLY AIR
Sampled

7552101
REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , AIR SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 09257-1 | 062-SVE-E-A-0909-02-28 | 09-09-02/13:10 |

| PARAMETER | 09257-1 | Qual | Code |
|---|---|---|---|
| trans-1,3-Dichloropropene, mg/m3 | 0.070U | | |
| Dichlorotetrafluoroethane, mg/m3 | 0.070U | | |
| Ethylbenzene, mg/m3 | 0.070U | | |
| Hexane, mg/m3 | 0.070U | | |
| 4-Ethyltoluene, mg/m3 | 0.070U | | |
| Hexachlorobutadiene, mg/m3 | 0.070U | | |
| Methylene chloride (Dichloromethane), mg/m3 | 0.070U | | |
| Methyl t-butyl ether (MTBE), mg/m3 | 0.070U | | |
| Styrene, mg/m3 | 0.070U | | |
| 1,1,2,2-Tetrachloroethane, mg/m3 | 0.070U | | |
| Tetrachloroethene, mg/m3 | 0.070U | | |
| Toluene, mg/m3 | 0.059JB | J | < |
| 1,2,4-Trichlorobenzene, mg/m3 | 0.070U | | |
| 1,1,1-Trichloroethane, mg/m3 | 0.070U | | |
| 1,1,2-Trichloroethane, mg/m3 | 0.070U | | |
| Trichloroethene, mg/m3 | 0.070U | | |
| Trichlorofluoromethane, mg/m3 | 0.070U | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane, mg/m3 | 0.070U | | |
| 1,2,4-Trimethylbenzene, mg/m3 | 0.070U | | |
| 1,3,5-Trimethylbenzene, mg/m3 | 0.070U | | |
| Vinyl chloride, mg/m3 | 0.070U | | |
| o-Xylene, mg/m3 | 0.070U | | |
| m&p-Xylene, mg/m3 | 0.14U | | |
| Surrogate - 1,2-Dichloroethane-d4 | 106 % | | |
| Surrogate - Toluene-d8 | 101 % | | |
| Surrogate - 4-Bromofluorobenzene | 97 % | | |

2/19/05

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125494

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CEF9-28-03-02-21 Lab Sample ID: L0209285-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 22:42

Concentration Units: ug/L File ID: SQ14743

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.756 | 1 | J |
| Ethylbenzene | 0.500 | 1.00 | 19.0 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 11.7 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 116 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



NAB 2/8/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : NQ125494

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-3S-03-02-21 Lab Sample ID: L0209285-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 16:56

Concentration Units: ug/L File ID: SG14733

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 3.31 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 1.74 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 3.00 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 109 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



AAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WQ125434

Lab Name : Kemron Environmental Services Contract#: Bill Canalos

Field Sample ID: 062-CEF9-58-03-02-21 Lab Sample ID: L0209285-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 17:30

Concentration Units: ug/L File ID: 5Q14734

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAH 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : M2125494

Lab Name : Kemron Environmental Services Contract#: Bill Canalos

Field Sample ID: 062-CMP9-7D-03-02-21 Lab Sample ID: L0209285-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 18:05

Concentration Units: ug/L File ID: 5G14735

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



10/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125494

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMF9-7D-03-02-21 Lab Sample ID: L0209285-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 18:39

Concentration Units: ug/L File ID: 5G14736

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 19.1 | 1 | |
| Ethylbenzene | 0.500 | 1.00 | 19.8 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 17.5 | 1 | |
| Toluene | 0.500 | 1.00 | 19.4 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 57.5 | 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.



MAS 1/A/05

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125494

Lab Name : Kemron Environmental Services Contract#: Bill Capelos

Field Sample ID: 062-CRF9-7D-03-02-21 Lab Sample ID: L0209285-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 19:14

Concentration Units: ug/L File ID: 5G14737

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 18.7 | 1 | |
| Ethylbenzene | 0.500 | 1.00 | 19.3 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 18.4 | 1 | |
| Toluene | 0.500 | 1.00 | 19.1 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 56.2 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 9/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : NG125494

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-SS-03-02-21 Lab Sample ID: L0209285-07 Matrix: Water

% Solids: 0 Initial Calibration ID: NP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 19:49

Concentration Units: ug/L File ID: 5G14738

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 9.79 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 9.29 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 109 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MHS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : NG125494

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9DUP-03-03-21 Lab Sample ID: L0209285-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 20:23

Concentration Units: ug/L File ID: 5G14739

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.614 | 1 | J |
| Ethylbenzene | 0.500 | 1.00 | 8.54 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 7.78 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 112 | 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 # : WG125494

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9EOB-03-02-21 Lab Sample ID: L0209285-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 21:32

Concentration Units: ug/L File ID: SG14741

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 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.



MAS 7/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG125494

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9TB-03-02-21 Lab Sample ID: L0209285-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 22:07

Concentration Units: ug/L File ID: 5G14742

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 101 | 70 — 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



AAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-28-03-02-21 Lab Sample ID: L0209285-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 18:45

Concentration Units: ug/L File ID:4L003582.F

Qual / Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.393 | 1.1 | 0.393 | 1 | U | UJ | L |
| 2-Methylnaphthalene | 0.365 | 1.1 | 0.730 | 1 | J | J | |
| Acenaphthene | 0.451 | 1.1 | 0.451 | 1 | U | UJ | |
| Acenaphthylene | 0.382 | 1.1 | 0.382 | 1 | U | | |
| Anthracene | 0.310 | 1.1 | 0.310 | 1 | U | | |
| Benzo(a)anthracene | 0.0326 | 0.22 | 0.0326 | 1 | U | | |
| Benzo(a)pyrene | 0.0576 | 0.22 | 0.0576 | 1 | U | | |
| Benzo(b)fluoranthene | 0.0370 | 0.22 | 0.0510 | 1 | J | UJ | F |
| Benzo(g,h,i)perylene | 0.0543 | 0.22 | 0.0980 | 1 | J | J | |
| Benzo(k)fluoranthene | 0.0783 | 0.22 | 0.0783 | 1 | U | UJ | |
| Chrysene | 0.0261 | 0.22 | 0.0261 | 1 | U | | |
| Dibenzo(a,h)anthracene | 0.0837 | 0.22 | 0.0837 | 1 | U | | |
| Fluoranthene | 0.0543 | 0.22 | 0.0543 | 1 | U | | |
| Fluorene | 0.608 | 1.1 | 0.608 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.0870 | 0.22 | 0.0870 | 1 | U | | |
| Naphthalene | 0.390 | 1.1 | 1.50 | 1 | | J | |
| Phenanthrene | 0.312 | 1.1 | 0.312 | 1 | U | UJ | |
| Pyrene | 0.0739 | 0.22 | 0.0850 | 1 | J | J | |

Comments:

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



AAH 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CBF9-28-03-02-21 Lab Sample ID: L0209285-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 18:45

Concentration Units: % Recovery File ID: 4L003582.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 37.3 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MH 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBP9-38-03-02-21 Lab Sample ID: L0209285-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 19:42

Concentration Units: ug/L File ID: 4L003583.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.385 | 1.1 | 0.385 | 1 | U | UJ | L |
| 2-Methylnaphthalene | 0.357 | 1.1 | 0.380 | 1 | J | J | |
| Acenaphthene | 0.441 | 1.1 | 0.441 | 1 | U | UJ | |
| Acenaphthylene | 0.373 | 1.1 | 0.373 | 1 | U | | |
| Anthracene | 0.303 | 1.1 | 0.303 | 1 | U | | |
| Benzo(a)anthracene | 0.0319 | 0.21 | 0.0319 | 1 | U | | |
| Benzo(a)pyrene | 0.0564 | 0.21 | 0.0564 | 1 | U | | |
| Benzo(b)fluoranthene | 0.0362 | 0.21 | 0.180 | 1 | J | UJ | F |
| Benzo(g,h,i)perylene | 0.0532 | 0.21 | 0.0532 | 1 | U | UJ | |
| Benzo(k)fluoranthene | 0.0766 | 0.21 | 0.0766 | 1 | U | | |
| Chrysene | 0.0255 | 0.21 | 0.0255 | 1 | U | | |
| Dibenzo(a,h)anthracene | 0.0819 | 0.21 | 0.0819 | 1 | U | | |
| Fluoranthene | 0.0532 | 0.21 | 0.0532 | 1 | U | | |
| Fluorene | 0.595 | 1.1 | 0.595 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.0851 | 0.21 | 0.0851 | 1 | U | | |
| Naphthalene | 0.382 | 1.1 | 0.382 | 1 | U | | |
| Phenanthrene | 0.305 | 1.1 | 0.305 | 1 | U | | |
| Pyrene | 0.0723 | 0.21 | 0.0750 | 1 | J | J | |

Comments:

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



MH 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MQ125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-18-03-02-21 Lab Sample ID: L0209285-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 19:42

Concentration Units: % Recovery File ID:4L002583.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 33.1 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF9-SS-03-02-21 Lab Sample ID: L0209285-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 20:38

Concentration Units: ug/L File ID: 4L003584.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.396 | 1.1 | 0.396 | 1 | U | UJ | L |
| 2-Methylnaphthalene | 0.367 | 1.1 | 0.367 | 1 | U | | |
| Acenaphthene | 0.454 | 1.1 | 0.454 | 1 | U | | |
| Acenaphthylene | 0.384 | 1.1 | 0.384 | 1 | U | | |
| Anthracene | 0.311 | 1.1 | 0.311 | 1 | U | | |
| Benzo(a)anthracene | 0.0328 | 0.22 | 0.0328 | 1 | U | | |
| Benzo(a)pyrene | 0.0579 | 0.22 | 0.0579 | 1 | U | | |
| Benzo(b)fluoranthene | 0.0372 | 0.22 | 0.0372 | 1 | U | | |
| Benzo(g,h,i)perylene | 0.0546 | 0.22 | 0.0546 | 1 | U | | |
| Benzo(k)fluoranthene | 0.0787 | 0.22 | 0.0787 | 1 | U | | |
| Chrysene | 0.0262 | 0.22 | 0.0262 | 1 | U | | |
| Dibenzo(a,h)anthracene | 0.0842 | 0.22 | 0.0842 | 1 | U | | |
| Fluoranthene | 0.0546 | 0.22 | 0.0546 | 1 | U | | |
| Fluorene | 0.611 | 1.1 | 0.611 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.0874 | 0.22 | 0.0874 | 1 | U | | |
| Naphthalene | 0.392 | 1.1 | 0.392 | 1 | U | | |
| Phenanthrene | 0.314 | 1.1 | 0.314 | 1 | U | | |
| Pyrene | 0.0743 | 0.22 | 0.0743 | 1 | U | | |

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-SS-03-02-21 Lab Sample ID: L0209285-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 20:38

Concentration Units: % Recovery File ID: 4L003584.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 33.7 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CKF9-7D-03-02-21 Lab Sample ID: L0209285-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 21:35

Concentration Units: ug/L File ID: 4L003585.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U | UJ | L |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U | | |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U | | |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U | | |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U | | |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U | | |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U | | |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0970 | 1 | J | UJ | LF |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U | UJ | L |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U | | |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U | | |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U | | |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U | | |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U | | |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U | | |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U | | |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U | | |

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : M0125709

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CMF9-7D-03-02-21 Lab Sample ID: L0209285-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 21-SEP-02 21:35

Concentration Units: % Recovery File ID: 4L003585.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 41.1 | 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 # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CRP9-98-03-02-21 Lab Sample ID: L0209285-07 Matrix: Water

% Solids: 0 Initial Calibration ID: NPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 22-SEP-02 00:25

Concentration Units: ug/L File ID: 4L003588.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.377 | 1.0 | 1.30 | 1 | J | L |
| 2-Methylnaphthalene | 0.350 | 1.0 | 3.40 | 1 | J | L |
| Acenaphthene | 0.432 | 1.0 | 0.432 | 1 | U UJ | L |
| Acenaphthylene | 0.366 | 1.0 | 0.366 | 1 | U | |
| Anthracene | 0.297 | 1.0 | 0.297 | 1 | U | |
| Benzo(a)anthracene | 0.0313 | 0.21 | 0.100 | 1 | J UJ | L F |
| Benzo(a)pyrene | 0.0552 | 0.21 | 0.0552 | 1 | U UJ | L |
| Benzo(b)fluoranthene | 0.0354 | 0.21 | 0.130 | 1 | J UJ | L F |
| Benzo(g,h,i)perylene | 0.0521 | 0.21 | 0.0680 | 1 | J J | L |
| Benzo(k)fluoranthene | 0.0750 | 0.21 | 0.0750 | 1 | U UJ | L |
| 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 | 13.0 | 1 | J | L |
| Phenanthrene | 0.299 | 1.0 | 0.299 | 1 | U UJ | L |
| Pyrene | 0.0708 | 0.21 | 0.0840 | 1 | J J | L |

Comments:

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



MKH 2/26/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-98-03-02-21 Lab Sample ID: L0209285-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 22-SEP-02 00:25

Concentration Units: % Recovery File ID: 4L003588.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 38.5 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAH 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9DUP-03-02-21 Lab Sample ID: L0209285-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 22-SEP-02 01:21

Concentration Units: ug/L File ID: 4L003589.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.381 | 1.1 | 1.40 | 1 | | J L |
| 2-Methylnaphthalene | 0.354 | 1.1 | 3.50 | 1 | | J L |
| Acenaphthene | 0.437 | 1.1 | 0.437 | 1 | U | UJ L |
| Acenaphthylene | 0.369 | 1.1 | 0.369 | 1 | U | |
| Anthracene | 0.300 | 1.1 | 0.300 | 1 | U | |
| Benzo(a)anthracene | 0.0316 | 0.21 | 0.0790 | 1 | J | UJ LF |
| Benzo(a)pyrene | 0.0558 | 0.21 | 0.0558 | 1 | U | UJ L |
| Benzo(b)fluoranthene | 0.0358 | 0.21 | 0.0680 | 1 | J | UJ LF |
| Benzo(g,h,i)perylene | 0.0526 | 0.21 | 0.0820 | 1 | J | J L |
| Benzo(k)fluoranthene | 0.0758 | 0.21 | 0.0758 | 1 | U | UJ L |
| Chrysene | 0.0253 | 0.21 | 0.0253 | 1 | U | |
| Dibenzo(a,h)anthracene | 0.0811 | 0.21 | 0.0811 | 1 | U | |
| Fluoranthene | 0.0526 | 0.21 | 0.0526 | 1 | U | |
| Fluorene | 0.588 | 1.1 | 0.588 | 1 | U | |
| Indeno(1,2,3-cd)pyrene | 0.0842 | 0.21 | 0.0842 | 1 | U | |
| Naphthalene | 0.378 | 1.1 | 13.0 | 1 | | J L |
| Phenanthrene | 0.302 | 1.1 | 0.302 | 1 | U | UJ L |
| Pyrene | 0.0716 | 0.21 | 0.0750 | 1 | J | J L |

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-9DUP-03-02-21 Lab Sample ID: L0209285-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 22-SEP-02 01:21

Concentration Units: % Recovery File ID:4L003589.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 41.0 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9MOB-03-02-21 Lab Sample ID: L0209285-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 22-SEP-02 03:15

Concentration Units: ug/L File ID: 4L003591.R

Qual/ Qual

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.385 | 1.1 | 0.385 | 1 | U |
| 2-Methylnaphthalene | 0.357 | 1.1 | 0.357 | 1 | U |
| Acenaphthene | 0.441 | 1.1 | 0.441 | 1 | U |
| Acenaphthylene | 0.373 | 1.1 | 0.373 | 1 | U |
| Anthracene | 0.303 | 1.1 | 0.303 | 1 | U |
| Benzo(a)anthracene | 0.0319 | 0.21 | 0.0780 | 1 | J M F |
| Benzo(a)pyrene | 0.0564 | 0.21 | 0.0564 | 1 | U |
| Benzo(b)fluoranthene | 0.0362 | 0.21 | 0.110 | 1 | J M F |
| Benzo(g,h,i)perylene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Benzo(k)fluoranthene | 0.0766 | 0.21 | 0.0766 | 1 | U |
| Chrysene | 0.0255 | 0.21 | 0.0255 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0819 | 0.21 | 0.0819 | 1 | U |
| Fluoranthene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Fluorene | 0.595 | 1.1 | 0.595 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0851 | 0.21 | 0.0851 | 1 | U |
| Naphthalene | 0.382 | 1.1 | 0.382 | 1 | U |
| Phenanthrene | 0.305 | 1.1 | 0.305 | 1 | U |
| Pyrene | 0.0723 | 0.21 | 0.0723 | 1 | U |

Comments:

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



DAH 2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125709

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9MOB-03-02-21 Lab Sample ID: L0203285-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 18-SEP-02 Date Analyzed: 22-SEP-02 03:15

Concentration Units: % Recovery File ID: 4L003591.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 43.6 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG126401

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CERP9-2S-03-02-21 Lab Sample ID: L0209285-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 23-SEP-02 Date Analyzed: 01-OCT-02 11:57

Concentration Units: ug/L File ID: 2G22282

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 266 | 532 | 851 | 1 | 4 F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 75.0 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : MG126401

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-38-03-02-21 Lab Sample ID: L0209285-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 23-SEP-02 Date Analyzed: 01-OCT-02 12:12

Concentration Units: ug/L File ID: 2G22283

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 259 | 518 | 674 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 72.1 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 2/19/03

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : NG126401

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-SB-03-02-21 Lab Sample ID: L0209285-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 23-SEP-02 Date Analyzed: 01-OCT-02 12:27

Concentration Units: ug/L File ID: 2G22284

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 255 | 510 | ~~443~~ 510 | 1 | J U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 66.1 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS
2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : NG126401

Lab Name : Kemron Environmental Services Contract#: 8111 Canalos

Field Sample ID: 062-CEF9-7D-03-02-21 Lab Sample ID: L0209285-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 17-SEP-02 Date Extracted: 23-SEP-02 Date Analyzed: 01-OCT-02 13:13

Concentration Units: ug/L File ID: 2022287

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 263 | 526 | ~~320~~ 526 | 1 | J U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 72.5 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



KAS
2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG126401

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CMP9-98-03-02-21  Lab Sample ID: L0209285-07  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 17-SEP-02  Date Extracted: 23-SEP-02  Date Analyzed: 01-OCT-02 13:59

Concentration Units: ug/L  File ID: 2G22290

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 266 | 532 | 697 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 76.9 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MHS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG126401

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-9DUP-03-02-21  Lab Sample ID: L0209285-08  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 17-SEP-02  Date Extracted: 23-SEP-02  Date Analyzed: 01-OCT-02 14:15

Concentration Units: ug/L  File ID: 2022291

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 255 | 510 | 633 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 67.3 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



BAB 2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : MG126401

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-9EOB-03-02-21  Lab Sample ID: L0209285-09  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 17-SEP-02  Date Extracted: 23-SEP-02  Date Analyzed: 01-OCT-02 14:30

Concentration Units: ug/L  File ID: 2G22292

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 272 | 543 | ~~417~~ 543 | 1 | J U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 73.7 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125511

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEP9-28-03-02-21 Lab Sample ID: L0209285-01 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 17-SEP-02

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 16:44

Concentration Units: mg/L File ID: 091702.13

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.50 | ~~0.110~~ SEE LAB | 1 | J U F |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



DAS 7/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125511

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-38-03-02-21 Lab Sample ID: L0209285-02 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 17-SEP-02

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 16:56

Concentration Units: mg/L File ID: 091702.14

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.220 | 1 | J u F |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125511

Lab Name : Kemron Environmental Services Contract#: Bill Caneles

Field Sample ID: 062-CBF9-58-03-02-21 Lab Sample ID: L0209285-03 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 17-SEP-02

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 17:07

Concentration Units: mg/L File ID: 091702.15

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.130 | 1 | J U F |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



NAS 1/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125511

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF9-7D-03-02-21 Lab Sample ID: L0209285-04 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 17-SEP-02

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 17:19

Concentration Units: mg/L File ID: 091702.16

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAS 7/10/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : NG125511

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF2-98-03-02-21 Lab Sample ID: L0209285-07 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 17-SEP-02

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 17:53

Concentration Units: mg/L File ID: 091702.19

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : MQ125511

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9DUP-03-02-21 Lab Sample ID: L0209285-08 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 17-SEP-02

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 18:05

Concentration Units: mg/L File ID: 091702.20

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



NAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125511

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-9EOR-03-02-21 Lab Sample ID: L0209285-09 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 17-SEP-02

Date Received: 17-SEP-02 Date Extracted: Date Analyzed: 17-SEP-02 18:28

Concentration Units: mg/L File ID: 091702.22

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.110 | 1 | J U F |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



DAH 7/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-28-03-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 20:14

Concentration Units: ug/L File ID: 5G14762

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 100 | 1 | |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 112 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEP46-7I-03-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 20:49

Concentration Units: ug/L File ID: 5G14763

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 10.0 | 20.0 | 432 | 20 | |
| Ethylbenzene | 10.0 | 20.0 | 86.6 | 20 | |
| Methyl tert-butyl ether | 10.0 | 20.0 | 3640 | 20 | |
| Toluene | 10.0 | 20.0 | 90.2 | 20 | |
| Xylenes, Total | 10.0 | 20.0 | 484 | 20 | |

| 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.



MHS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG125876

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-03-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 21:23

Concentration Units: ug/L File ID: 5G14764

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| α,α,α-Trifluorotoluene | 104 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



KAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : KG125876

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-03-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPS 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 21:58

Concentration Units: ug/L File ID: 5G14765

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 18.4 | 1 | |
| Ethylbenzene | 0.500 | 1.00 | 18.7 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 19.1 | 1 | |
| Toluene | 0.500 | 1.00 | 18.3 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 55.4 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MS 1/9/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MQ125576

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CBF46-9I-03-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 22:32

Concentration Units: ug/L File ID: 5Q14766

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 19.2 | 1 | |
| Ethylbenzene | 0.500 | 1.00 | 19.7 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 18.1 | 1 | |
| Toluene | 0.500 | 1.00 | 19.2 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 58.0 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEP46-12I-03-02-20 Lab Sample ID: L8209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 23:07

Concentration Units: ug/L File ID: 5G14767

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 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.



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMP46-11I-03-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 23:42

Concentration Units: ug/L File ID: 5G14768

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 174 | 1 | |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CRW46-14D-03-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analysed: 19-SEP-02 00:16

Concentration Units: ug/L File ID: 5G14769

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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.



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15I-03-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 00:51

Concentration Units: ug/L File ID: SG14770

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 102 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-46DMP-03-02-20 Lab Sample ID: L0209110-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 01:25

Concentration Units: ug/L File ID: SG14771

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 406 | 1 | I |
| Ethylbenzene | 0.500 | 1.00 | 75.7 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 3160 | 1 | I |
| Toluene | 0.500 | 1.00 | 78.4 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 442 | 1 | I |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 124 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-03-02-20 Lab Sample ID: L0209316-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 14:12

Concentration Units: ug/L File ID: SG14784

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 10.0 | 20.0 | 430 | 20 | |
| Ethylbenzene | 10.0 | 20.0 | 70.2 | 20 | |
| Methyl tert-butyl ether | 10.0 | 20.0 | 4120 | 20 | |
| Toluene | 10.0 | 20.0 | 75.6 | 20 | |
| Xylenes, Total | 10.0 | 20.0 | 449 | 20 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 107 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46BOB-03-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 02:34

Concentration Units: ug/L File ID: 5G14773

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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.



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46TB1-03-02-20 Lab Sample ID: L0209310-12 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 03:09

Concentration Units: UG/L File ID: 5G14774

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 102 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-28-03-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 06:05

Concentration Units: ug/L File ID: 4L003594.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 | 0.366 | 1.0 | 0.366 | 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 | 0.0740 | 1 | J |

Comments:

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



NM 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-2S-03-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 06:05

Concentration Units: % Recovery File ID: 4L003594.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 40.1 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CWF46-72-03-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:01

Concentration Units: ug/L File ID:4L003595.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.373 | 1.0 | 0.373 | 1 | U | UJ | S |
| 2-Methylnaphthalene | 0.346 | 1.0 | 1.40 | 1 | | J | S |
| Acenaphthene | 0.428 | 1.0 | 0.428 | 1 | U | UJ | S |
| Acenaphthylene | 0.362 | 1.0 | 0.362 | 1 | U | | |
| Anthracene | 0.294 | 1.0 | 0.294 | 1 | U | | |
| Benzo(a)anthracene | 0.0309 | 0.21 | 0.0309 | 1 | U | | |
| Benzo(a)pyrene | 0.0546 | 0.21 | 0.0546 | 1 | U | | |
| Benzo(b)fluoranthene | 0.0351 | 0.21 | 0.0351 | 1 | U | | |
| Benzo(g,h,i)perylene | 0.0515 | 0.21 | 0.0515 | 1 | U | | |
| Benzo(k)fluoranthene | 0.0742 | 0.21 | 0.0742 | 1 | U | | |
| Chrysene | 0.0247 | 0.21 | 0.0247 | 1 | U | | |
| Dibenzo(a,h)anthracene | 0.0794 | 0.21 | 0.0794 | 1 | U | | |
| Fluoranthene | 0.0515 | 0.21 | 0.0515 | 1 | U | | |
| Fluorene | 0.576 | 1.0 | 0.576 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.0825 | 0.21 | 0.0825 | 1 | U | | |
| Naphthalene | 0.370 | 1.0 | 9.80 | 1 | | J | S |
| Phenanthrene | 0.296 | 1.0 | 0.296 | 1 | U | UJ | S |
| Pyrene | 0.0701 | 0.21 | 0.0701 | 1 | U | UJ | S |

Comments:

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



MAS 2/8/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WQ125710

Lab Name : Kemron Environmental Services Contract#: Bill Capelos

Field Sample ID: 062-CEF46-7I-03-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:01

Concentration Units: % Recovery File ID: 4L003595.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 28.5 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/18/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-9I-03-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:58

Concentration Units: ug/L File ID: 4L003596.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |

Comments:

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



2/8/07

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CWF46-9I-03-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: MPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:58

Concentration Units: % Recovery File ID: 4L003596.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 52.2 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



NAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMP46-12I-03-02-20 Lab Sample ID: L0209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 10:48

Concentration Units: ug/L File ID: 4L003399.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.381 | 1.1 | 0.381 | 1 | U |
| 2-Methylnaphthalene | 0.354 | 1.1 | 0.354 | 1 | U |
| Acenaphthene | 0.437 | 1.1 | 0.437 | 1 | U |
| Acenaphthylene | 0.369 | 1.1 | 0.369 | 1 | U |
| Anthracene | 0.300 | 1.1 | 0.300 | 1 | U |
| Benzo(a)anthracene | 0.0316 | 0.21 | 0.0316 | 1 | U |
| Benzo(a)pyrene | 0.0558 | 0.21 | 0.0558 | 1 | U |
| Benzo(b)fluoranthene | 0.0358 | 0.21 | 0.0358 | 1 | U |
| Benzo(g,h,i)perylene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Benzo(k)fluoranthene | 0.0758 | 0.21 | 0.0758 | 1 | U |
| Chrysene | 0.0253 | 0.21 | 0.0253 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0811 | 0.21 | 0.0811 | 1 | U |
| Fluoranthene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Fluorene | 0.588 | 1.1 | 0.588 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0842 | 0.21 | 0.0842 | 1 | U |
| Naphthalene | 0.378 | 1.1 | 0.378 | 1 | U |
| Phenanthrene | 0.302 | 1.1 | 0.302 | 1 | U |
| Pyrene | 0.0716 | 0.21 | 0.0716 | 1 | U |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMF46-12I-03-02-20 Lab Sample ID: L0209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 10:48

Concentration Units: % Recovery File ID: 4L003599.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 59.1 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



NOH 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMF46-13I-03-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 11:44

Concentration Units: UG/L File ID: 4L003600.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 | 0.366 | 1.0 | 0.366 | 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 | 0.0770 | 1 | J |

Comments:

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



MAS 2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-131-03-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 11:44

Concentration Units: % Recovery File ID:4L003600.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 79.1 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



KAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canalos

Field Sample ID: 062-CMFA6-14D-03-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 13:38

Concentration Units: UG/L File ID: 4L003602.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 | 0.366 | 1.0 | 0.366 | 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.



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHP46-14D-03-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 13:18

Concentration Units: % Recovery File ID:4L003602.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 67.8 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CHP46-151-03-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 14:34

Concentration Units: ug/L File ID: 4L003603.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.381 | 1.1 | 0.381 | 1 | U |
| 2-Methylnaphthalene | 0.354 | 1.1 | 0.354 | 1 | U |
| Acenaphthene | 0.437 | 1.1 | 0.437 | 1 | U |
| Acenaphthylene | 0.369 | 1.1 | 0.369 | 1 | U |
| Anthracene | 0.300 | 1.1 | 0.300 | 1 | U |
| Benzo(a)anthracene | 0.0316 | 0.21 | 0.0316 | 1 | U |
| Benzo(a)pyrene | 0.0558 | 0.21 | 0.0558 | 1 | U |
| Benzo(b)fluoranthene | 0.0358 | 0.21 | 0.0358 | 1 | U |
| Benzo(g,h,i)perylene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Benzo(k)fluoranthene | 0.0758 | 0.21 | 0.0758 | 1 | U |
| Chrysene | 0.0253 | 0.21 | 0.0253 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0811 | 0.21 | 0.0811 | 1 | U |
| Fluoranthene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Fluorene | 0.588 | 1.1 | 0.588 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0842 | 0.21 | 0.0842 | 1 | U |
| Naphthalene | 0.378 | 1.1 | 0.378 | 1 | U |
| Phenanthrene | 0.302 | 1.1 | 0.302 | 1 | U |
| Pyrene | 0.0716 | 0.21 | 0.0716 | 1 | U |

Comments:

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



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15I-03-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 14:34

Concentration Units: % Recovery File ID: 4L003603.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 77.7 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAA 2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-03-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 15:31

Concentration Units: ug/L File ID: 4L003604.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 1.20 | 1 | |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 9.80 | 1 | |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |

Comments:

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



MAK 2/11/04

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-03-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 15:31

Concentration Units: % Recovery File ID:4L003604.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 64.5 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MA 4 of 4 ok

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46BOB-03-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 16:28

Concentration Units: ug/L File ID: 4L003605.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.393 | 1.1 | 0.393 | 1 | U |
| 2-Methylnaphthalene | 0.365 | 1.1 | 0.365 | 1 | U |
| Acenaphthene | 0.451 | 1.1 | 0.451 | 1 | U |
| Acenaphthylene | 0.382 | 1.1 | 0.382 | 1 | U |
| Anthracene | 0.310 | 1.1 | 0.310 | 1 | U |
| Benzo(a)anthracene | 0.0326 | 0.22 | 0.0326 | 1 | U |
| Benzo(a)pyrene | 0.0576 | 0.22 | 0.0576 | 1 | U |
| Benzo(b)fluoranthene | 0.0370 | 0.22 | 0.0370 | 1 | U |
| Benzo(g,h,i)perylene | 0.0543 | 0.22 | 0.210 | 1 | J |
| Benzo(k)fluoranthene | 0.0783 | 0.22 | 0.0783 | 1 | U |
| Chrysene | 0.0261 | 0.22 | 0.0261 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0837 | 0.22 | 0.0837 | 1 | U |
| Fluoranthene | 0.0543 | 0.22 | 0.0543 | 1 | U |
| Fluorene | 0.608 | 1.1 | 0.608 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0870 | 0.22 | 0.0870 | 1 | U |
| Naphthalene | 0.390 | 1.1 | 0.390 | 1 | U |
| Phenanthrene | 0.312 | 1.1 | 0.312 | 1 | U |
| Pyrene | 0.0739 | 0.22 | 0.0739 | 1 | U |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46MOB-03-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 16:28

Concentration Units: % Recovery File ID:4L003605.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 74.8 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/10/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CEF46-28-03-02-20  Lab Sample ID: L0209310-01  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 18-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 30-SEP-02 20:12

Concentration Units: ug/L  File ID: 2G22235

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 256 | 513 | ~~496~~ 573 | 1 | J UJ FS |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 41.4 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



MAK 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-03-82-20  Lab Sample ID: L0209310-02  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 18-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 30-SEP-02 20:27

Concentration Units: ug/L  File ID: 2G22236

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 260 | 521 | 950 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.2 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS
2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-03-02-20  Lab Sample ID: L0209310-03  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 18-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 20-SEP-02 20:42

Concentration Units: ug/L  File ID: 2G22237

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 256 | 513 | 623 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.5 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CBP46-12I-03-02-20  Lab Sample ID: L0209310-06  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 18-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 30-SEP-02 21:28

Concentration Units: ug/L  File ID: 2G22240

Qual Cont

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 564 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 53.4 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB
2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAS # : MG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CEF46-13I-03-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 21:43

Concentration Units: ug/L File ID: 2G22241

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 258 | 515 | 745 | 1 | U E |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 79.4 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS
2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : NG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CMF46-14D-03-02-20  Lab Sample ID: L0209310-08  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 18-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 30-SEP-02 22:29

Concentration Units: ug/L  File ID: 2022244

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 554 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.0 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAK
2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : MG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CEF46-151-03-02-20  Lab Sample ID: L0209310-09  Matrix: Water

% Solids: 0  Initial Calibration ID: MP2  30-SEP-2002

Date Received: 18-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 30-SEP-02 22:44

Concentration Units: ug/L  File ID: 2G22245

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 668 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.2 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



NAS
2/19/03

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : MG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canalos

Field Sample ID: 062-46DUP-02-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 22:59

Concentration Units: ug/L File ID: 2022246

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 646 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 56.0 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD. Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-46MOB-03-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 23:15

Concentration Units: ug/L File ID: 2022247

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 263 | 526 | 964 | 1 | U L |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 55.7 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS
2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : MG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canalos

Field Sample ID: 062-CEF46-28-03-02-20 Lab Sample ID: L0209110-01 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 15:18

Concentration Units: mg/L File ID: 091802.13

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.290 | 1 | J |

Comments:

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



NAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-03-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 18:40

Concentration Units: mg/L File ID: 091802.29

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAB 2/19/05

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : MG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-9I-02-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 15:41

Concentration Units: mg/L File ID: 091802.15

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAH 10/19/02

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBP46-12I-03-02-20 Lab Sample ID: L0209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 16:16

Concentration Units: mg/L File ID: 091802.18

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.110 | 1 | J U F |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : NG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMP46-13I-03-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 18:28

Concentration Units: mg/L File ID: 091802.28

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : MG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-14D-03-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 16:27

Concentration Units: mg/L File ID:091802.19

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.360 | 1 | J |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15X-03-02-20 Lab Sample ID: LG209110-09 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 16:39

Concentration Units: mg/L File ID: 091802.20

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : MG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-03-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 17:19

Concentration Units: mg/L File ID: 091802.22

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.162 | 1.0 | 0.460 | 1 | J |

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : MG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46BOB-03-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 17:31

Concentration Units: mg/L File ID: 091802.23

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAH 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MQ125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-18-03-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: MF5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 17:15

Concentration Units: ug/L File ID: 5G14789

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 50.0 | 100 | 262 | 100 | |
| Ethylbenzene | 50.0 | 100 | 541 | 100 | |
| Methyl tert-butyl ether | 50.0 | 100 | 542 | 100 | |
| Toluene | 50.0 | 100 | 1170 | 100 | |
| Xylenes, Total | 50.0 | 100 | 5760 | 100 | |

| 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.



MKB 9/18/04

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEW46-SI-03-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 17:50

Concentration Units: ug/L File ID:5G14790

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 13.2 | 1 | |

| 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.



2/18/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WQ125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMF46-6D-03-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:25

Concentration Units: ug/L File ID: 5G14791

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.907 | 1 | J |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.961 | 1 | J |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 9.05 | 1 | |

| 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.



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : NG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CRF46-21I-03-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:59

Concentration Units: ug/L File ID: 5014792

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylanes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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.



NAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CWF46-24D-03-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HF5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 19:34

Concentration Units: ug/L File ID: 5G14793

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 2.19 | 1 | |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/14/05

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : NG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-25T-03-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 20:08

Concentration Units: ug/L File ID: 5G14794

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 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.



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-26I-03-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: RF5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 20:43

Concentration Units: ug/L File ID: 5G14795

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 5.00 | 10.0 | 1390 | 10 | |
| Ethylbenzene | 5.00 | 10.0 | 37.3 | 10 | |
| Methyl tert-butyl ether | 5.00 | 10.0 | 13.5 | 10 | |
| Toluene | 5.00 | 10.0 | 6.32 | 10 | J |
| Xylenes, Total | 5.00 | 10.0 | 513 | 10 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46TB-03-02-20 Lab Sample ID: L0209337-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 21:18

Concentration Units: ug/L File ID: SG14796

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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.



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-18-03-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 17:24

Concentration Units: ug/L File ID: 4L003606.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 19.0 | 1 | | J | S |
| 2-Methylnaphthalene | 0.336 | 1.0 | 52.0 | 1 | | J | S |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U | UJ | S |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U | | |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U | | |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U | | |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U | | |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U | | |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U | | |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U | | |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U | | |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U | | |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U | | |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U | | |
| Naphthalene | 0.359 | 1.0 | 160 | 1 | I | E | D |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U | UJ | S |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U | UJ | S |

Comments:

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



MAB 2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: 8111 Canelos

Field Sample ID: 062-CHF46-18-03-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 17:24

Concentration Units: % Recovery File ID:4L003606.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 33.0 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAH 2/14/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-18-03-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 25-SEP-02 17:41

Concentration Units: ug/L File ID: 4L003617.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 3.62 | 10 | 3.62 | 10 | U | L | D |
| 2-Methylnaphthalene | 3.36 | 10 | 3.36 | 10 | U | | |
| Acenaphthene | 4.15 | 10 | 4.15 | 10 | U | | |
| Acenaphthylene | 3.51 | 10 | 3.51 | 10 | U | | |
| Anthracene | 2.85 | 10 | 2.85 | 10 | U | | |
| Benzo(a)anthracene | 0.300 | 2.0 | 0.300 | 10 | U | | |
| Benzo(a)pyrene | 0.530 | 2.0 | 0.530 | 10 | U | | |
| Benzo(b)fluoranthene | 0.340 | 2.0 | 0.340 | 10 | U | | |
| Benzo(g,h,i)perylene | 0.500 | 2.0 | 0.500 | 10 | U | | |
| Benzo(k)fluoranthene | 0.720 | 2.0 | 0.720 | 10 | U | | |
| Chrysene | 0.240 | 2.0 | 0.240 | 10 | U | | |
| Dibenzo(a,h)anthracene | 0.770 | 2.0 | 0.770 | 10 | U | | |
| Fluoranthene | 0.500 | 2.0 | 0.500 | 10 | U | | |
| Fluorene | 5.59 | 10 | 5.59 | 10 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.800 | 2.0 | 0.800 | 10 | U | | |
| Naphthalene | 3.59 | 10 | 170 | 10 | | J | S |
| Phenanthrene | 2.87 | 10 | 2.87 | 10 | U | L | D |
| Pyrene | 0.680 | 2.0 | 0.680 | 10 | U | L | D |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG128710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-18-03-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 25-SEP-02 17:41

Concentration Units: % Recovery File ID:4L003617.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

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

| Internal Std | Qualifier |
|---|---|

Comments:

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



MT 11/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SI-03-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 18:21

Concentration Units: ug/L File ID: 4L003607.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.385 | 1.1 | 0.385 | 1 | U | US | S |
| 2-Methylnaphthalene | 0.357 | 1.1 | 0.357 | 1 | U | | |
| Acenaphthene | 0.441 | 1.1 | 0.441 | 1 | U | | |
| Acenaphthylene | 0.373 | 1.1 | 0.373 | 1 | U | | |
| Anthracene | 0.303 | 1.1 | 0.303 | 1 | U | | |
| Benzo(a)anthracene | 0.0319 | 0.21 | 0.0319 | 1 | U | | |
| Benzo(a)pyrene | 0.0564 | 0.21 | 0.0564 | 1 | U | | |
| Benzo(b)fluoranthene | 0.0362 | 0.21 | 0.0362 | 1 | U | | |
| Benzo(g,h,i)perylene | 0.0532 | 0.21 | 0.0532 | 1 | U | | |
| Benzo(k)fluoranthene | 0.0766 | 0.21 | 0.0766 | 1 | U | | |
| Chrysene | 0.0255 | 0.21 | 0.0255 | 1 | U | | |
| Dibenzo(a,h)anthracene | 0.0819 | 0.21 | 0.0819 | 1 | U | | |
| Fluoranthene | 0.0532 | 0.21 | 0.0532 | 1 | U | | |
| Fluorene | 0.595 | 1.1 | 0.595 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 0.0851 | 0.21 | 0.0851 | 1 | U | | |
| Naphthalene | 0.382 | 1.1 | 0.382 | 1 | U | | |
| Phenanthrene | 0.305 | 1.1 | 0.305 | 1 | U | | |
| Pyrene | 0.0723 | 0.21 | 0.0723 | 1 | U | | |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-5I-03-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 18:21

Concentration Units: % Recovery File ID: 4L003607.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 19.0 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/9/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Camelos

Field Sample ID: 062-CEF46-6D-03-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 19:18

Concentration Units: ug/L File ID: 4L003608.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.389 | 1.1 | 0.389 | 1 | U WJ 3 |
| 2-Methylnaphthalene | 0.361 | 1.1 | 0.361 | 1 | U |
| Acenaphthene | 0.446 | 1.1 | 0.446 | 1 | U |
| Acenaphthylene | 0.377 | 1.1 | 0.377 | 1 | U |
| Anthracene | 0.306 | 1.1 | 0.306 | 1 | U |
| Benzo(a)anthracene | 0.0323 | 0.22 | 0.0323 | 1 | U |
| Benzo(a)pyrene | 0.0570 | 0.22 | 0.0570 | 1 | U |
| Benzo(b)fluoranthene | 0.0366 | 0.22 | 0.0366 | 1 | U |
| Benzo(g,h,i)perylene | 0.0538 | 0.22 | 0.0538 | 1 | U |
| Benzo(k)fluoranthene | 0.0774 | 0.22 | 0.0774 | 1 | U |
| Chrysene | 0.0258 | 0.22 | 0.0258 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0828 | 0.22 | 0.0828 | 1 | U |
| Fluoranthene | 0.0538 | 0.22 | 0.0538 | 1 | U |
| Fluorene | 0.601 | 1.1 | 0.601 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0860 | 0.22 | 0.0860 | 1 | U |
| Naphthalene | 0.386 | 1.1 | 0.386 | 1 | U |
| Phenanthrene | 0.309 | 1.1 | 0.309 | 1 | U |
| Pyrene | 0.0731 | 0.22 | 0.0731 | 1 | U |

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WQ125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CRP46-6D-03-02-20 Lab Sample ID: L0209137-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 19:18

Concentration Units: % Recovery File ID: 4L003608.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 24.3 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-211-03-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 20:14

Concentration Units: ug/L File ID: 4L003609.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U UJ S |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |

Comments:

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



MAS 2/9/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBP46-21T-01-02-20 Lab Sample ID: L0209137-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 20:14

Concentration Units: % Recovery File ID: 4L003609.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 20.8 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 2/9/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-03-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 21:11

Concentration Units: ug/L File ID: 4L003610.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.377 | 1.0 | 0.377 | 1 | U U5 3 |
| 2-Methylnaphthalene | 0.350 | 1.0 | 0.350 | 1 | U |
| Acenaphthene | 0.432 | 1.0 | 0.432 | 1 | U |
| Acenaphthylene | 0.366 | 1.0 | 0.366 | 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.



AAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-03-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 21:11

Concentration Units: % Recovery File ID: 4L003610.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 21.8 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canalos

Field Sample ID: 062-CHF48-25I-03-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 22:07

Concentration Units: ug/L File ID: 4L003611.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U UJ 5 |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-25I-03-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: NPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 22:07

Concentration Units: % Recovery File ID: 4L003611.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 14.9 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CEF46-26I-03-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 23-SEP-02 00:01

Concentration Units: ug/L File ID: 4L003613.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | |
|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.385 | 1.1 | 0.385 | 1 | U | UJ 3 |
| 2-Methylnaphthalene | 0.357 | 1.1 | 0.357 | 1 | U | |
| Acenaphthene | 0.441 | 1.1 | 0.441 | 1 | U | |
| Acenaphthylene | 0.373 | 1.1 | 0.373 | 1 | U | |
| Anthracene | 0.303 | 1.1 | 0.303 | 1 | U | |
| Benzo(a)anthracene | 0.0319 | 0.21 | 0.0319 | 1 | U | |
| Benzo(a)pyrene | 0.0564 | 0.21 | 0.0564 | 1 | U | |
| Benzo(b)fluoranthene | 0.0362 | 0.21 | 0.0362 | 1 | U | |
| Benzo(g,h,i)perylene | 0.0532 | 0.21 | 0.0532 | 1 | U | |
| Benzo(k)fluoranthene | 0.0766 | 0.21 | 0.0766 | 1 | U | |
| Chrysene | 0.0255 | 0.21 | 0.0255 | 1 | U | |
| Dibenzo(a,h)anthracene | 0.0819 | 0.21 | 0.0819 | 1 | U | |
| Fluoranthene | 0.0532 | 0.21 | 0.0532 | 1 | U | |
| Fluorene | 0.595 | 1.1 | 0.595 | 1 | U | |
| Indeno(1,2,3-cd)pyrene | 0.0851 | 0.21 | 0.0851 | 1 | U | |
| Naphthalene | 0.382 | 1.1 | 0.382 | 1 | U | |
| Phenanthrene | 0.305 | 1.1 | 0.305 | 1 | U | |
| Pyrene | 0.0723 | 0.21 | 0.0723 | 1 | U | |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CRF46-26I-03-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 23-SEP-02 00:01

Concentration Units: % Recovery File ID: 4L003613.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 20.3 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



AAB 2/19/05

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-18-03-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 14:46

Concentration Units: ug/L File ID: 2022293

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 2630 | 5260 | 15300 | 10 | |

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

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SL-03-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 23:45

Concentration Units: ug/L File ID: 2G22249

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 275 | 549 | 776 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.1 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : NG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEW46-6D-03-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 00:01

Concentration Units: ug/L File ID: 2G22250

Qual Cole

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 275 | 549 | 840 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 58.9 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



DAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : MG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 052-CBF46-21I-03-02-20  Lab Sample ID: L0209337-04  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 19-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 01-OCT-02 00:16

Concentration Units: ug/L  File ID: 2G22251

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 260 | 521 | 834 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 63.6 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|
| | |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHP46-24D-03-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: MP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 00:32

Concentration Units: ug/L File ID: 2G22252

Qual Cak

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 255 | 510 | 779 | 1 | u F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 63.1 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canales

Field Sample ID: 062-CEF46-25I-03-02-20  Lab Sample ID: L0209337-06  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2  30-SEP-2002

Date Received: 19-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 01-OCT-02 01:17

Concentration Units: ug/L  File ID: 2G22255

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 810 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 64.9 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAG 7/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : WG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canales

Field Sample ID: 062-CBF46-26I-03-02-20  Lab Sample ID: L0209337-07  Matrix: Water

% Solids: 0  Initial Calibration ID: MP2  30-SEP-2002

Date Received: 19-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 01-OCT-02 01:33

Concentration Units: ug/L  File ID: 2G22256

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 269 | 538 | 1350 | 1 | u F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 96.8 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : NG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 063-CEF46-18-01-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:57

Concentration Units: mg/L File ID: 091902.39

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



MAS 2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-5I-03-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:00

Concentration Units: mg/L File ID: 091902.34

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 1.34 | 12 | 1.34 | 20 | U |
| Nitrite | 1.22 | 8.0 | 1.22 | 20 | U |
| Phosphate | 3.26 | 20 | 3.26 | 20 | U |

Comments:

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



RLA 2/4/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SD-03-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 17:48

Concentration Units: mg/L File ID: 091902.33

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 1.34 | 12 | 1.34 | 20 | U |
| Nitrite | 1.22 | 8.0 | 1.22 | 20 | U |
| Phosphate | 3.26 | 20 | 3.26 | 20 | U |

Comments:

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

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MAH 1/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CHF46-21I-03-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:34

Concentration Units: mg/L File ID: 091902.37

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.134 | 1.2 | 0.134 | 2 | U |
| Nitrite | 0.122 | 0.80 | 0.122 | 2 | U |
| Phosphate | 0.326 | 2.0 | 0.326 | 2 | U |

Comments:

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



MAH 2/19/02

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-03-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:46

Concentration Units: mg/L File ID: 091902.38

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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



9/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-25I-03-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:23

Concentration Units: mg/L File ID: 091902.36

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.134 | 1.2 | 0.134 | 2 | U |
| Nitrite | 0.122 | 0.80 | 0.122 | 2 | U |
| Phosphate | 0.326 | 2.0 | 0.326 | 2 | U |

Comments:

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



AMT 2/19/02

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEP46-26I-03-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:11

Concentration Units: mg/L File ID: 091902.35

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.670 | 6.0 | 0.670 | 10 | U |
| Nitrite | 0.610 | 4.0 | 0.610 | 10 | U |
| Phosphate | 1.63 | 10 | 1.63 | 10 | U |

Comments:

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



2/19/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG126238

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBW46-SB1-S-03-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 30-SEP-02 16:56

Concentration Units: ug/kg File ID: SG14936

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 594 | 1190 | 2170 | 1000 | |
| Ethylbenzene | 594 | 1190 | 97700 | 1000 | |
| Methyl tert-butyl ether | 594 | 1190 | 594 | 1000 | U |
| Toluene | 594 | 1190 | 10700 | 1000 | |
| Xylenes, Total | 594 | 3560 | 532000 | 1000 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 118 | 47 - 121 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAK 7/20/05

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : MG126238

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-SB2-S-03-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: _____ Date Analyzed: 30-SEP-02 18:20

Concentration Units: ug/kg File ID: SG14938

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 602 | 1200 | 746 | 1000 | J |
| Ethylbenzene | 602 | 1200 | 9150 | 1000 | |
| Methyl tert-butyl ether | 602 | 1200 | 602 | 1000 | U |
| Toluene | 602 | 1200 | 22000 | 1000 | |
| Xylenes, Total | 602 | 3610 | 274000 | 1000 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 92.3 | 47 - 121 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 7-10-03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126148

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-SB14-S-03-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HP11 16-AUG-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 13:44

Concentration Units: ug/kg File ID: 11G14587

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.545 | 1.09 | 0.545 | 1 | U |
| Ethylbenzene | 0.545 | 1.09 | 24.9 | 1 | J S |
| Methyl tert-butyl ether | 0.545 | 1.09 | 3.68 | 1 | J S |
| Toluene | 0.545 | 1.09 | 0.545 | 1 | U |
| Xylenes, Total | 0.545 | 3.27 | 23.4 | 1 | J S |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 408 | 47 - 121 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAB 11/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126114

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-EOB-W-03-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HF5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 17:45

Concentration Units: ug/L File ID: 5G14921

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 93.4 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



10/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126114

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-TB-N-03-02 Lab Sample ID: L0209516-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 18:20

Concentration Units: ug/L File ID: SQ14922

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 92.3 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 10/02

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-SB1-S-03-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: NPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:02

Concentration Units: ug/kg File ID: 4L003680.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 6.39 | 200 | 3700 | 1 | J | R | D |
| 2-Methylnaphthalene | 5.56 | 200 | 15000 | 1 | I | R | D |
| Acenaphthene | 68.2 | 200 | 68.2 | 1 | U | | |
| Acenaphthylene | 54.8 | 200 | 54.8 | 1 | U | | |
| Anthracene | 50.0 | 200 | 50.0 | 1 | U | | |
| Benzo(a)anthracene | 4.63 | 20 | 32.0 | 1 | J | | |
| Benzo(a)pyrene | 3.53 | 20 | 11.0 | 1 | J | | |
| Benzo(b)fluoranthene | 5.85 | 20 | 15.0 | 1 | J | | |
| Benzo(g,h,i)perylene | 4.39 | 20 | 12.0 | 1 | J | | |
| Benzo(k)fluoranthene | 2.44 | 20 | 22.0 | 1 | J | | |
| Chrysene | 4.63 | 20 | 4.63 | 1 | U | | |
| Dibenzo(a,h)anthracene | 5.48 | 20 | 17.0 | 1 | J | | |
| Fluoranthene | 4.51 | 20 | 54.0 | 1 | J | | |
| Fluorene | 69.5 | 200 | 69.5 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 3.90 | 20 | 3.90 | 1 | U | | |
| Naphthalene | 76.8 | 200 | 10000 | 1 | I | R | D |
| Phenanthrene | 57.3 | 200 | 270 | 1 | J | | |
| Pyrene | 4.51 | 20 | 17.0 | 1 | J | | |

Comments:

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



MAS 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126621

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-SB1-8-03-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:02

Concentration Units: % Recovery File ID:4L003680.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 121 | 50 - 150 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF45-SB1-S-03-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 14-OCT-02 20:11

Concentration Units: ug/kg File ID: 4L003718.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 63.9 | 2010 | 4410 | 10 | |
| 2-Methylnaphthalene | 55.6 | 2010 | 25400 | 10 | |
| Acenaphthene | 682 | 2010 | 682 | 10 | U R D |
| Acenaphthylene | 548 | 2010 | 548 | 10 | U |
| Anthracene | 500 | 2010 | 500 | 10 | U |
| Benzo(a)anthracene | 46.3 | 201 | 46.3 | 10 | U |
| Benzo(a)pyrene | 35.3 | 201 | 35.3 | 10 | U |
| Benzo(b)fluoranthene | 58.5 | 201 | 58.5 | 10 | U |
| Benzo(g,h,i)perylene | 43.9 | 201 | 43.9 | 10 | U |
| Benzo(k)fluoranthene | 24.4 | 201 | 24.4 | 10 | U |
| Chrysene | 46.3 | 201 | 46.3 | 10 | U |
| Dibenzo(a,h)anthracene | 54.8 | 201 | 54.8 | 10 | U |
| Fluoranthene | 45.1 | 201 | 45.1 | 10 | U |
| Fluorene | 695 | 2010 | 695 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 39.0 | 201 | 39.0 | 10 | U |
| Naphthalene | 768 | 2010 | 20700 | 10 | |
| Phenanthrene | 573 | 2010 | 573 | 10 | U R D |
| Pyrene | 45.1 | 201 | 45.1 | 10 | U |

Comments:

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



MAS 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBP46-SB1-S-03-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 83.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 14-OCT-02 20:11

Concentration Units: % Recovery File ID: 4L003718.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 138 | 50 - 150 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MHH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : MG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canalos

Field Sample ID: 062-CEF46-SB2-S-03-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:59

Concentration Units: ug/kg File ID: 4L003681.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 6.11 | 190 | 6700 | 1 | I | R | D |
| 2-Methylnaphthalene | 5.32 | 190 | 15000 | 1 | I | R | D |
| Acenaphthene | 65.3 | 190 | 65.3 | 1 | U | | |
| Acenaphthylene | 52.5 | 190 | 52.5 | 1 | U | | |
| Anthracene | 47.8 | 190 | 47.8 | 1 | U | | |
| Benzo(a)anthracene | 4.43 | 19 | 120 | 1 | J | J | S |
| Benzo(a)pyrene | 3.38 | 19 | 29.0 | 1 | | | |
| Benzo(b)fluoranthene | 5.60 | 19 | 30.0 | 1 | J | | |
| Benzo(g,h,i)perylene | 4.20 | 19 | 16.0 | 1 | J | | |
| Benzo(k)fluoranthene | 2.33 | 19 | 42.0 | 1 | J | | |
| Chrysene | 4.43 | 19 | 4.43 | 1 | U | | |
| Dibenzo(a,h)anthracene | 5.25 | 19 | 32.0 | 1 | J | J | S |
| Fluoranthene | 4.31 | 19 | 170 | 1 | J | J | S |
| Fluorene | 66.4 | 190 | 66.4 | 1 | U | | |
| Indeno(1,2,3-cd)pyrene | 3.73 | 19 | 7.90 | 1 | J | J | S |
| Naphthalene | 73.4 | 190 | 11000 | 1 | I | R | D |
| Phenanthrene | 54.8 | 190 | 990 | 1 | | J | S |
| Pyrene | 4.31 | 19 | 60.0 | 1 | J | J | S |

Comments:

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



MAB 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : NG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-03-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:52

Concentration Units: % Recovery File ID: 4L003681.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 184 | 50 - 150 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/20/05

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-03-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 16-OCT-02 23:32

Concentration Units: ug/kg File ID: 4L003727.R

Qual ok

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 61.1 | 1920 | 7980 | 10 | |
| 2-Methylnaphthalene | 53.2 | 1920 | 23900 | 10 | |
| Acenaphthene | 653 | 1920 | 653 | 10 | U R D |
| Acenaphthylene | 525 | 1920 | 525 | 10 | U |
| Anthracene | 478 | 1920 | 478 | 10 | U |
| Benzo(a)anthracene | 44.3 | 192 | 44.3 | 10 | U |
| Benzo(a)pyrene | 33.8 | 192 | 33.8 | 10 | U |
| Benzo(b)fluoranthene | 56.0 | 192 | 56.0 | 10 | U |
| Benzo(g,h,i)perylene | 42.0 | 192 | 42.0 | 10 | U |
| Benzo(k)fluoranthene | 23.3 | 192 | 23.3 | 10 | U |
| Chrysene | 44.3 | 192 | 44.3 | 10 | U |
| Dibenzo(a,h)anthracene | 52.5 | 192 | 52.5 | 10 | U |
| Fluoranthene | 43.1 | 192 | 43.1 | 10 | U |
| Fluorene | 664 | 1920 | 664 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 37.3 | 192 | 37.3 | 10 | U |
| Naphthalene | 734 | 1920 | 21100 | 10 | |
| Phenanthrene | 548 | 1920 | 548 | 10 | U R D |
| Pyrene | 43.1 | 192 | 43.1 | 10 | U |

Comments:

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



MHS 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBP46-SB2-S-03-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 16-OCT-02 23:32

Concentration Units: % Recovery File ID: 4L003727.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 192 | 50 - 150 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : MG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-SB14-S-03-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 16:55

Concentration Units: ug/kg File ID: 4L002682.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 5.95 | 190 | 19.0 | 1 | J |
| 2-Methylnaphthalene | 5.18 | 190 | 66.0 | 1 | J |
| Acenaphthene | 63.5 | 190 | 63.5 | 1 | U |
| Acenaphthylene | 51.1 | 190 | 51.1 | 1 | U |
| Anthracene | 46.5 | 190 | 46.5 | 1 | U |
| Benzo(a)anthracene | 4.31 | 19 | 4.31 | 1 | U |
| Benzo(a)pyrene | 3.29 | 19 | 62.0 | 1 | J |
| Benzo(b)fluoranthene | 5.45 | 19 | 30.0 | 1 | |
| Benzo(g,h,i)perylene | 4.08 | 19 | 4.08 | 1 | U |
| Benzo(k)fluoranthene | 2.27 | 19 | 18.0 | 1 | J |
| Chrysene | 4.31 | 19 | 380 | 1 | J |
| Dibenzo(a,h)anthracene | 5.11 | 19 | 59.0 | 1 | J |
| Fluoranthene | 4.20 | 19 | 11.0 | 1 | J |
| Fluorene | 64.7 | 190 | 64.7 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.63 | 19 | 3.63 | 1 | U |
| Naphthalene | 71.5 | 190 | 71.5 | 1 | U |
| Phenanthrene | 53.3 | 190 | 53.3 | 1 | U |
| Pyrene | 4.20 | 19 | 9.90 | 1 | J |

Comments:

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



MH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : MG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-SB14-S-03-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 16:55

Concentration Units: % Recovery File ID:4L003682.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 90.5 | 50 - 150 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MHS 2/20/05

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG126624

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-NOM-W-03-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 06-OCT-02 13:09

Concentration Units: ug/L File ID: 4L003678.R

Qual Cat

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.398 | 1.1 | 0.398 | 1 | U |
| 2-Methylnaphthalene | 0.369 | 1.1 | 0.369 | 1 | U |
| Acenaphthene | 0.456 | 1.1 | 0.456 | 1 | U |
| Acenaphthylene | 0.386 | 1.1 | 0.386 | 1 | U |
| Anthracene | 0.313 | 1.1 | 0.340 | 1 | J U F |
| Benzo(a)anthracene | 0.0330 | 0.22 | 0.0330 | 1 | U |
| Benzo(a)pyrene | 0.0582 | 0.22 | 0.0582 | 1 | U |
| Benzo(b)fluoranthene | 0.0374 | 0.22 | 0.0374 | 1 | U |
| Benzo(g,h,i)perylene | 0.0549 | 0.22 | 0.0549 | 1 | U |
| Benzo(k)fluoranthene | 0.0791 | 0.22 | 0.0791 | 1 | U |
| Chrysene | 0.0264 | 0.22 | 0.0264 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0846 | 0.22 | 0.0846 | 1 | U |
| Fluoranthene | 0.0549 | 0.22 | 0.0549 | 1 | U |
| Fluorene | 0.614 | 1.1 | 0.614 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0879 | 0.22 | 0.0879 | 1 | U |
| Naphthalene | 0.395 | 1.1 | 0.395 | 1 | U |
| Phenanthrene | 0.315 | 1.1 | 0.315 | 1 | U |
| Pyrene | 0.0747 | 0.22 | 0.0747 | 1 | U |

Comments:

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



2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WQ126624

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CRF46-BOB-W-03-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 06-OCT-02 13:09

Concentration Units: % Recovery File ID: 4L003678.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 37.9 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAK 1/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3550B AAB # : MG127556

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF46-SB1-S-03-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HP8 18-OCT-2002 21:52

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 20-OCT-02 02:59

Concentration Units: ug/kg File ID: 8G03814

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 12200 | 24400 | 800000 | 2 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 73.0 | 43 - 136 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3550B  AAB # : WQ127556

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CBF46-SB2-S-03-02  Lab Sample ID: L0209516-02  Matrix: Soil

% Solids: 85.7  Initial Calibration ID: HP8  18-OCT-2002 21:52

Date Received: 27-SEP-02  Date Extracted: 02-OCT-02  Date Analyzed: 21-OCT-02 00:10

Concentration Units: ug/kg  File ID: 8G03837

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 29100 | 58300 | 970000 | 5 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 70.0 | 43 - 136 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3550B AAB # : MG127556

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CEF46-SB14-S-03-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HP8 18-OCT-2002 21:52

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 20-OCT-02 04:44

Concentration Units: ug/kg File ID: 8G03816

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 11300 | 22700 | 117000 | 2 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.6 | 43 - 136 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAS 2/20/03

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : MG127555

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-EOR-M-03-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP8 18-OCT-2002 21:52

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 19-OCT-02 18:13

Concentration Units: ug/L File ID: 8G03804

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 291 | 581 | 1320 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.4 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : D2216-90 Preparatory Method: D2216-90 AAB # : WG126335

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CHF46-SBL-S-03-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: OVEN 01-OCT-02

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 01-OCT-02 10:40

Concentration Units: weight % File ID:

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Percent Solids | 1.00 | 1.0 | 82.0 | 1 | |

Comments:

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



AAB 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : D2216-90 Preparatory Method: D2216-90 AAB # : WG126335

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-03-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: OVEN 01-OCT-02

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 01-OCT-02 10:40

Concentration Units: weight % File ID:

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Percent Solids | 1.00 | 1.0 | 86.0 | 1 | |

Comments:

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



MAH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : D2216-90 Preparatory Method: D2216-90 AAB # : MG126335

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CRF46-SB14-S-03-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: OVEN 01-OCT-02

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 01-OCT-02 10:40

Concentration Units: weight % File ID:

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Percent Solids | 1.00 | 1.0 | 88.0 | 1 | |

Comments:

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



MAK 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126148

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-SB1-8-03-02 Lab Sample ID: L0209517-01 Matrix: Soil

% Solids: 93.1 Initial Calibration ID: HP11 16-AUG-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 14:18

Concentration Units: ug/kg File ID: 11G14588

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.559 | 1.12 | 0.559 | 1 | U |
| Ethylbenzene | 0.559 | 1.12 | 0.559 | 1 | U |
| Methyl tert-butyl ether | 0.559 | 1.12 | 0.559 | 1 | U |
| Toluene | 0.559 | 1.12 | 0.559 | 1 | U |
| Xylenes, Total | 0.559 | 3.35 | 0.559 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 96.6 | 47 - 121 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAK 7/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B RAS # : WG126114

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CMP9-EOR-W-03-02 Lab Sample ID: L0209517-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: _____ Date Analyzed: 27-SEP-02 18:54

Concentration Units: ug/L File ID: SQ14923

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 92.8 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



RMB 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WQ126114

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEP2-TB-W-03-02 Lab Sample ID: L0209517-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 19:29

Concentration Units: ug/L File ID: SG14924

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 93.8 | 70 - 130 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



RMH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\35503 AAB # : MG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF2-SB1-8-03-02 Lab Sample ID: L0209517-01 Matrix: Soil

% Solids: 93.1 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 17:52

Concentration Units: ug/kg File ID: 4L003683.R

Qual Bk

| Analyte | MDL | RL | Concentration | Dilution | Qualifier | | |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 5.63 | 177 | 5.63 | 1 | U | UJ | S |
| 2-Methylnaphthalene | 4.90 | 177 | 11.5 | 1 | J | J | S |
| Acenaphthene | 60.1 | 177 | 60.1 | 1 | U | UJ | S |
| Acenaphthylene | 48.3 | 177 | 48.3 | 1 | U | | |
| Anthracene | 44.0 | 177 | 44.0 | 1 | U | | |
| Benzo(a)anthracene | 4.08 | 17.7 | 49.4 | 1 | | J | S |
| Benzo(a)pyrene | 3.11 | 17.7 | 201 | 1 | | | |
| Benzo(b)fluoranthene | 5.15 | 17.7 | 227 | 1 | | | |
| Benzo(g,h,i)perylene | 3.86 | 17.7 | 257 | 1 | | | |
| Benzo(k)fluoranthene | 2.15 | 17.7 | 91.1 | 1 | | | |
| Chrysene | 4.08 | 17.7 | 105 | 1 | | | |
| Dibenzo(a,h)anthracene | 4.83 | 17.7 | 143 | 1 | | | |
| Fluoranthene | 3.97 | 17.7 | 105 | 1 | J | | |
| Fluorene | 61.2 | 177 | 61.2 | 1 | U | UJ | S |
| Indeno(1,2,3-cd)pyrene | 3.43 | 17.7 | 104 | 1 | J | J | S |
| Naphthalene | 67.6 | 177 | 67.6 | 1 | U | UJ | S |
| Phenanthrene | 50.4 | 177 | 50.4 | 1 | U | UJ | S |
| Pyrene | 3.97 | 17.7 | 188 | 1 | | J | S |

Comments:

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



2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-SB1-S-03-02 Lab Sample ID: L0209517-01 Matrix: Soil

% Solids: 93.1 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 17:52

Concentration Units: % Recovery File ID:4L003683.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 24.1 | 50 - 150 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



SMB 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : MG126624

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CBF9-EQB-W-03-02 Lab Sample ID: L0209517-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 06-OCT-02 14:06

Concentration Units: ug/L File ID: 4L003679.R

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.385 | 1.1 | 0.385 | 1 | U |
| 2-Methylnaphthalene | 0.357 | 1.1 | 0.357 | 1 | U |
| Acenaphthene | 0.441 | 1.1 | 0.441 | 1 | U |
| Acenaphthylene | 0.373 | 1.1 | 0.373 | 1 | U |
| Anthracene | 0.303 | 1.1 | 0.370 | 1 | J U F |
| Benzo(a)anthracene | 0.0319 | 0.21 | 0.0319 | 1 | U |
| Benzo(a)pyrene | 0.0564 | 0.21 | 0.0564 | 1 | U |
| Benzo(b)fluoranthene | 0.0362 | 0.21 | 0.0362 | 1 | U |
| Benzo(g,h,i)perylene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Benzo(k)fluoranthene | 0.0766 | 0.21 | 0.0766 | 1 | U |
| Chrysene | 0.0255 | 0.21 | 0.0255 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0819 | 0.21 | 0.0819 | 1 | U |
| Fluoranthene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Fluorene | 0.595 | 1.1 | 0.595 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0851 | 0.21 | 0.0851 | 1 | U |
| Naphthalene | 0.382 | 1.1 | 0.382 | 1 | U |
| Phenanthrene | 0.305 | 1.1 | 0.390 | 1 | J U F |
| Pyrene | 0.0723 | 0.21 | 0.0723 | 1 | U |

Comments:

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



MAG 2/10/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : NG126624

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF9-BOB-W-03-02 Lab Sample ID: L0209517-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 06-OCT-02 14:06

Concentration Units: % Recovery File ID: 4L003679.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 34.2 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MHS 10/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3550B  AAB # : MG127556

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CEF9-SB1-S-03-02  Lab Sample ID: L0208817-01  Matrix: Soil

% Solids: 93.1  Initial Calibration ID: HP8  18-OCT-2002 21:52

Date Received: 27-SEP-02  Date Extracted: 02-OCT-02  Date Analyzed: 20-OCT-02 07:22

Concentration Units: ug/kg  File ID: 8G03819

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 53600 | 107000 | 477000 | 10 | |

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

| Internal Std | Qualifier |
|---|---|

Comments:

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



MH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD  Preparatory Method: 8015 MOD\3510C  AAB # : MG127555

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CWF9-BOB-W-03-02  Lab Sample ID: L0209517-02  Matrix: Water

% Solids: 0  Initial Calibration ID: MF8  18-OCT-2002 21:52

Date Received: 27-SEP-02  Date Extracted: 03-OCT-02  Date Analyzed: 19-OCT-02 19:05

Concentration Units: ug/L  File ID: #G03805

Qual Code

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 266 | 532 | 1250 | 1 | U F |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.4 | 49 - 174 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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



MAH 2/20/03

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSIS DATA SHEET 2**

**RESULTS**

Analytical Method : D2216-90 Preparatory Method: D2216-90 AAB # : MU126335

Lab Name : Kemron Environmental Services Contract#: Bill Canales

Field Sample ID: 062-CEF9-SB1-S-03-02 Lab Sample ID: L0209517-01 Matrix: Soil

% Solids: 93.1 Initial Calibration ID: QVHM 01-OCT-02

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 01-OCT-02 10:40

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.



MAK 2/20/03

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Volatile Organic Analytes by GC/MS**

Project File: CTO-062 Sampling Date: 9/12 – 9/13/02

Laboratory: PEL Receipt Date: 9/14/02

SDG Number: 2209102 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | |
|---|---|---|
| 01Q30228 (N) | 06Q30228 (N) | EQBQ30228 (EB) |
| 02Q30228 (N) | 07Q30228 (N) | TBQ30228 (TB) |
| 03Q30228 (N) | 10Q30228 (N) | |
| 04Q30228 (N) | 11Q30228 (N) | |
| 05Q30228 (N) | DUPQ30228 (FD) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Methods (8260)
- ☐ USEPA Drinking Water (DW) Methods (524.2, 624, 1624)
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: U.S. Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

The MS recovery for 1,3,5-trimethylbenzene in sample 11Q30228 was high at 115.5.

LCS recoveries were acceptable. No action was taken based on MS/MSD recoveries alone.

Toluene was detected in field blank sample EQBQ30228 at 0.66 ug/L.

No water sample detections were noted for toluene. No action was taken.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIME AND SAMPLE PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
VOC samples were analyzed up to 13 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

| Sample ID | Surrogate 1 | Surrogate 2 | Surrogate 3 | Surrogate 4 | Surrogate 5 | Surrogate 6 | Surrogate 7 |
|---|---|---|---|---|---|---|---|
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 =** Dibromofluoromethane | 86 - 118 | _____ |
| **Surrogate 2 =** Toluene-d8 | 88 - 110 | _____ |
| **Surrogate 3 =** 4-Bromofluorobenzene | 86 - 115 | _____ |
| **Surrogate 4 =** 1,2-Dichloroethane-d4 | 80 - 120 | _____ |
| **Surrogate 5 =** _____ | _____ | _____ |
| **Surrogate 6 =** _____ | _____ | _____ |
| **Surrogate 7 =** _____ | _____ | _____ |

Remarks:
Surrogate recoveries ranged from 95% to 106%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☒ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
| Water | 1,3,5-Trimethylbenzene | **115.5** | | 94 - 109 | | |
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 11Q30228 | 2209102 | Water | 0 of 57 outside limits | 1 of 114 outside limits |

Remarks:
No action was taken based on MS/MSD recoveries alone.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
|---|---|---|---|---|---|
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 092502LCSA31 | 2209102 | Water | 0 of 57 outside limits |

Remarks:
LCS recoveries ranged from 84.5% to 117.5%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 092502BLKA32 | Water | No VOC detects noted | | | All water samples |
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Remarks:
No laboratory method blank detects were noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| TBQ30228 | EQBQ30228 |
| | |
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| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| EQBQ30228 | Water | Toluene | 0.66 | 3.3 | All water samples |
| TBQ30228 | Water | No VOC detects noted | | | All water samples |
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Remarks:
Water sample detections less than the blank action level are qualified as "U".

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 10Q30228 | DUPQ30228 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 20% for liquid (25% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples ( _____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDA or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
| | | | | | | |
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Remarks:
No discrepancies were noted.

## VII. GC/MS TUNING - INSTRUMENT PERFORMANCE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All tunes were compliant. |

The bromofluorobenzene (BFB) standard performance results were reviewed and the following abundances were found to fall outside the specified criteria:

| m/z | Required Abundance | Actual Abundance |
|---|---|---|
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Remarks:
GC/MS tuning was compliant. ICAL was performed on 8/27/02 on instrument VMS03.

## VIII. INITIAL AND CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The average relative response factors ($RRF_{avg}$) met validation criteria for all initial calibrations. |
| ☒ | ☐ | The percent relative standard deviation (%RSD) of the calibration or response factors (or correlation coefficients for regression analysis of calibration curves) met validation criteria for all initial calibrations. |
| ☒ | ☐ | Continuing calibrations were performed at the frequency specified by the analytical method. |
| ☒ | ☐ | The RRFs met validation criteria for all continuing calibrations. |
| ☒ | ☐ | The percentage difference (%D) from the initial calibration met validation criteria for all continuing calibrations. |

The following deficiencies were found:

| Instr ID | Date/ Time | Analyte | I / C | Calibration Deficiency | Affected Samples | Action |
|---|---|---|---|---|---|---|
| VMS03 | 8/27/02 at 06:54 | All parameters are within control limits. | I | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | All water samples | None |
| VMS03 | 9/25/02 at 06:02 | All parameters are within control limits. | C | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | All water samples | None |
| | | | | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | | |
| | | | | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | | |
| | | | | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | | |

Remarks:
No discrepancies were noted.

## IX. INTERNAL STANDARDS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All internal standard areas were within control limits. |
| ☒ | ☐ | All retention times for the internal standards were within control limits. |

The following deficiencies were found:

| Sample ID | Internal Standard | Sample IS Area | IS Area Limits Upper | IS Area Limits Lower | Sample IS RT | IS RT Limit Upper | IS RT Limit Lower |
|---|---|---|---|---|---|---|---|
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Internal Standard 1 = Chlorobenzene-d5

Internal Standard 2 = 1,4-Dichlorobenzene-d4

Internal Standard 3 = Fluorobenzene

Remarks:
All internal standard area counts and retention times were compliant.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
| | | | |
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Polynuclear Aromatic Hydrocarbons (PAH) by HPLC**

Project File: CTO-062 Sampling Date: 9/12 – 9/13/02

Laboratory: PEL Receipt Date: 9/14/02

SDG Number: 2209102 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | |
|---|---|---|
| 01Q30228 (N) | 06Q30228 (N) | EQBQ30228 (EB) |
| 02Q30228 (N) | 07Q30228 (N) | |
| 03Q30228 (N) | 10Q30228 (N) | |
| 04Q30228 (N) | 11Q30228 (N) | |
| 05Q30228 (N) | DUPQ30228 (FD) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☐ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Methods (8310)
- ☐ USEPA Drinking Water (DW) Methods (524.2, 624, 1624)
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

Validation Summary

The MS/MSD recoveries for 9 of 36 analyses in sample 11Q30228 were low.

LCS recoveries were acceptable. No action was taken based on MS/MSD recoveries alone.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIME AND SAMPLE PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
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Remarks:
Samples were extracted up to 13 days after collection and analyzed up to 13 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

The following deficiencies were found:

| Sample ID | Surrogate 1 | % Recovery | Surrogate 2 | % Recovery |
|---|---|---|---|---|
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 =** p-Terphenyl | 39 - 107 | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |

Remarks:
Surrogate recoveries ranged from 46.8% to 92%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☒ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
| Water | Naphthalene | **42.2** | | 45 - 78 | | |
| Water | Acenaphthylene | **44.6** | **49.6** | 50 – 91 | | |
| Water | 1-Methylnaphthylene | **32.1** | **37.7** | 48 – 92 | | |
| Water | 2-Methylnaphthylene | **43.1** | **50** | 52 – 88 | | |
| Water | Acenaphthene | **37.6** | **43.4** | 52 - 86 | | |
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 11Q30228 | 2209102 | Water | 0 of 18 outside limits | 9 of 36 outside limits |

Remarks:
No action was taken based on MS/MSD recoveries alone.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
|---|---|---|---|---|---|
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 91602LCS01 | 2209102 | Water | 0 of 18 outside limits |

Remarks:
LCS recoveries ranged from 57% to 94%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 91602BLK01 | Water | No detects noted | | | All water samples |
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Remarks:
No laboratory method blank detects were noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | EQBQ30228 |
| | |
| | |
| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| EQBQ30228 | Water | No blank detects noted | | | All water samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 10Q30228 | DUPQ30228 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 25% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No discrepancies were noted.

## VII. INITIAL AND CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of a minimum of 5 standards with concentrations over the calibration range. |
| ☒ | ☐ | Percent relative standard deviation (%RSD) for all compounds was ≤20% **OR** the coefficient of the determination (COD) was ≥0.995 for all calibration factors in the initial calibration. |
| ☒ | ☐ | The calibration verification standard (midpoint concentration) was analyzed at the beginning of every 12-hour analytical shift and at the end of the analytical sequence to bracket the sample analyses. |
| ☒ | ☐ | Calibration verification standards (midpoint concentration) were analyzed every 10 samples. |
| ☒ | ☐ | For the calibration verification(s), the percent difference (%D) was within ±15% of the response obtained during the initial calibration for all compounds. |
| ☒ | ☐ | Standard retention times were within control windows. |
| ☒ | ☐ | The analytical sequence was followed. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| SLC02 | 09/08/02 at 15:13 | All parameters are within control limits. | I | | | All samples | None |
| SLC02 | 09/19/02 at 19:28 | All parameters are within control limits. | C | | | All samples | None |
| SLC02 | 09/20/02 at 01:48 | All parameters are within control limits. | C | | | All samples | None |
| SLC02 | 09/20/02 at 05:16 | All parameters are within control limits. | C | | | All samples | None |
| | | | | | | | |
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Remarks:
No discrepancies were noted.

## VIII. INTERNAL STANDARDS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | An internal standard calibration was performed. |
| ☐ | ☐ | All retention times for the internal standards were within control limits. |
| ☐ | ☐ | All internal standard areas were within control limits. |
| ☐ | ☐ | No deficiencies were found. |

The following deficiencies were found:

| Sample ID | Internal Standard | Sample IS Area | IS Area Limits Upper | IS Area Limits Lower | Sample IS RT | IS RT Limit Upper | IS RT Limit Lower |
|---|---|---|---|---|---|---|---|
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Internal Standard 1 = _____

Internal Standard 2 = _____

Remarks:
No discrepancies were noted.

## IX. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## X. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
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Remarks:
No deficiencies were noted.

## XI. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
|---|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Inorganic (Metals and Cyanide) Data**

Project File: CTO-062 Sampling Date: 9/12 – 9/13/02

Laboratory: PEL Receipt Date: 9/14/02

SDG Number: 2209102 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | |
|---|---|---|
| 01Q30228 (N) | 06Q30228 (N) | EQBQ30228 (EB) |
| 02Q30228 (N) | 07Q30228 (N) | |
| 03Q30228 (N) | 10Q30228 (N) | |
| 04Q30228 (N) | 11Q30228 (N) | |
| 05Q30228 (N) | DUPQ30228 (FD) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Inorganic Data Review (EPA-540/R-94/013, February 1994)
- ☒ USEPA SW846 (SW-846) Methods (6010, 6020, 7000 series, 9010, 9012, 9013)
- ☐ USEPA Drinking Water (DW) Methods (200.7, 200.9, 200.15, 202.1, 202.2, 1620)
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: U.S. Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

Low level check standards were not run with this SDG (CRDL standard or CRI/CRA). ICV sample recoveries were acceptable. No action was taken

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. SAMPLE PRESERVATION AND HOLDING TIME

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
Metals samples were extracted up to 7 days after collection. Metals samples were analyzed up to 11 days after collection.

## II. INITIAL and CONTINUING CALIBRATION

**E. Inductively Coupled Plasma (ICP) Analysis:** ☒ Yes ☐ No

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The instrument was standardized with at least a blank and one traceable standard. |
| ☒ | ☐ | The initial calibration verification (ICV) solutions were immediately analyzed after each instrument was calibrated. |

**F. Cold Vapor (CV) Mercury Analysis:** ☐ Yes ☒ No

| Yes | No | |
|---|---|---|
| ☐ | ☐ | The instrument was standardized with at least a blank and 5 traceable standards. |
| ☐ | ☐ | The concentration for one of the calibration standards was at the CRDL. |
| ☐ | ☐ | The ICV solutions were immediately analyzed after each instrument was calibrated. |
| ☐ | ☐ | The calibration curves have a correlation coefficient of ≥ 0.995. |

**G. Continuing Verifications**

The continuing calibration verification (CCV) standard was traceable and analyzed at the beginning of the run and after the last analytical sample.

| Yes | No | | Yes | No | |
|---|---|---|---|---|---|
| ☒ | ☐ | **ICP Analysis** | ☐ | ☐ | **CV Mercury Analysis** |

The CCV standard was analyzed at a frequency of 10% or every _____ hours during the analytical run, whichever is more frequent.

| Yes | No | | Yes | No | |
|---|---|---|---|---|---|
| ☒ | ☐ | **ICP Analysis** | ☐ | ☐ | **CV Mercury Analysis** |

Recoveries for initial and/or continuing calibrations were within the control limits.
Control Limits: Mercury 80 – 120 %; Other Metals 90 – 110 %

| Yes | No | | Yes | No | |
|---|---|---|---|---|---|
| ☒ | ☐ | **ICP Analysis** | ☐ | ☐ | **CV Mercury Analysis** |

The following calibration deficiencies were found:

| Calibration Date | Instr ID | ICV/ CCV | Analyte | %R | Affected Samples | Action |
|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## III. LOW-LEVEL CHECK STANDARD ANALYSIS

### A. Low-level Check Standard Analysis

| Yes | No | |
|---|---|---|
| ☐ | ☒ | The low-level standard was analyzed at the beginning and end of each sample analysis run, or at a minimum of once per 8 hour working shift, but not before the ICV. |
| ☐ | ☐ | The low-level standard was analyzed at a concentration less than 2 times RL. |
| ☐ | ☐ | Recoveries for the low-level standard were within acceptance limits (ICP: **60 – 140 %**; Mercury **60 – 140 %**). |

The following deficiencies were found for the CRI/CRA analysis:

| Calibration Date | Instr ID | CRI/ CRA | Analyte | %R | Affected Samples |
|---|---|---|---|---|---|
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Remarks:
Low level check standards were not run with this SDG (CRDL standard or CRI/CRA). ICV sample recoveries were acceptable. No action was taken

☒ **No Action was taken to qualify data based on CRI/CRA recoveries.**

## IV. BLANKS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calibration and/or preparation blanks were analyzed for each matrix. |
| ☒ | ☐ | Blanks were reported at the MDL/IDL for all non-detects. |
| ☒ | ☐ | The initial calibration blank (ICB) was analyzed after the analytical standards, but not before the ICV analysis. |
| ☒ | ☐ | A continuing calibration blank (CCB) was analyzed for every 10 samples or every ____ hours, whichever occurred more frequently. |
| ☒ | ☐ | The CCB was analyzed at the beginning of the analytical run, and after the last CCV that was analyzed after the last analytical sample of the run. |
| ☒ | ☐ | Field QC samples were associated with this SDG. |

**Note:** Negative blanks whose absolute values are > IDL must be carefully evaluated to determine their effect on the sample data. When the observed blank exceeds a negative CRDL, all non-detects should be considered unusable.

Field QC associated with this SDG were:

| Field Blanks | Associated Samples | Field Blanks | Associated Samples |
|---|---|---|---|
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| Equipt Blanks | Associated Samples | Equipt Blanks | Associated Samples |
|---|---|---|---|
| EQBQ30228 | All water samples | | |
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Remarks:
No deficiencies were noted.

**Action Level Summary**

| Analyte | Field Blank | Equipt Blank | Prep Blank | ICB | Highest CCB | Action Level | Affected Samples | Action Taken |
|---|---|---|---|---|---|---|---|---|
| Al | | | | | | | | |
| Sb | | | | | | | | |
| As | | | | | | | | |
| Ba | | | | | | | | |
| Be | | | | | | | | |
| Cd | | | | | | | | |
| Ca | | | | | | | | |
| Cr | | | | | | | | |
| Co | | | | | | | | |
| Cu | | | | | | | | |
| Fe | | | | | | | | |
| Pb | | | | | | | | |
| Mg | | | | | | | | |
| Mn | | | | | | | | |
| Hg | | | | | | | | |
| Ni | | | | | | | | |
| K | | | | | | | | |
| Se | | | | | | | | |
| Ag | | | | | | | | |
| Na | | | | | | | | |
| Tl | | | | | | | | |
| V | | | | | | | | |
| Zn | | | | | | | | |
| Sn | | | | | | | | |

Remarks:
No laboratory or field blank detects were noted (samples analyzed for lead only).

## V. ICP INTERFERENCE CHECK SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The ICS was between the QC limits of **80 – 120%**. |
| ☒ | ☐ | For **ICP analysis**, the interference QC samples were run at the beginning and end of each sample analysis run or at a minimum of once per 8 hour working shift, whichever occurred more frequently. |
| ☒ | ☐ | No deficiencies were found. |

The following deficiencies were found:

| Analyte | True Conc | Found Conc | %R | Affected Samples | Action |
|---|---|---|---|---|---|
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Report the concentration of any elements detected in the ICS A solution >2 x IDL that should be present.

| Element | Concentration detected in the ICS | Interferent concentration in the ICS | | | |
|---|---|---|---|---|---|
| | | Al | Ca | Fe | Mg |
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Estimate the concentration produced by the interfering element in all affected samples. List the samples affected by the interferences below:

| Affected Sample | Affected Element | Sample Conc. | Interferent Concentration in the ICS | | | | Estimated Interference |
|---|---|---|---|---|---|---|---|
| | | | Al | Ca | Fe | Mg | |
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Remarks:
ICS recovery was 104.1%

## VI. LABORATORY CONTROL SAMPLE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | An LCS was analyzed for each matrix. |
| ☒ | ☐ | The percent recoveries were within the control limits of 80 - 120% (except for Sb and Ag) for aqueous LCS results. (Note: An aqueous LCS is not required for Hg. For cyanide, a distilled ICV is used as the LCS.) |
| ☐ | ☐ | All non-aqueous LCS recovery results fell within the control limits of 70 - 130%. |
| ☒ | ☐ | No deficiencies were found. |

The following deficiencies were found:

| LCS ID | Element | % R | Action | Samples Affected |
|---|---|---|---|---|
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 81042LCS | 2209102 | Water | 0 of 1 outside limits |

Remarks:
LCS recovery was 99.8%

## VII. DUPLICATE SAMPLE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | A laboratory sample/duplicate analysis was performed for every matrix in a batch, at a frequency of one matrix duplicate for every **20** samples. |

| Field Sample ID | Lab Duplicate Sample ID | Matrix |
|---|---|---|
| 11Q30228 | 11Q30228D | Water |

☒ ☐ Reported relative percent differences (RPDs) for laboratory sample/duplicate analysis were **<25%** when the original and duplicate values were ±5 x RL

☒ ☐ The control limit of ± the RL was used for water (±2 x the RL for soil) when either the sample or duplicate value was <5 x RL. (In the case where only one result was above the 5 x RL level and the other was below, the ± the RL criteria was applied.)

☒ ☐ If both sample and duplicate values were < the 5XRL, the RPD was not calculated.

☒ ☐ Field duplicate data were included in this data package.

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 10Q30228 | DUPQ30228 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

**Field/Laboratory Precision Evaluation Deficiency Worksheet:**

| Element | CRDL | 5 x CRDL | Sample | Duplicate | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## VIII. MATRIX SPIKE ANALYSIS

### A. Matrix Spike/Matrix Spike Duplicate Analysis

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were not used for MS analyses. |
| ☒ | ☐ | % Recoveries were within QC limits. |
| ☒ | ☐ | No deficiencies were found. |

The following deficiencies were found:

| Element | Sample Result (SR) | Spike Added (SA) | Spiked Sample Result (SSR) | %R | Action | Comments |
|---|---|---|---|---|---|---|
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 11Q30228 | 2209102 | Water | 0 of 1 outside limits |

### B. Post-digestion Spike Recovery

Listed below are those samples with post-digestion spike recoveries not within **75-125%**.

| Sample ID | Element | %R | Action |
|---|---|---|---|
| | | | |
| | | | |
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Remarks:
MS/MSD recoveries were 99.2% and 100.4%.

## IX. ICP SERIAL DILUTION ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one ICP serial dilution was performed on a sample of each matrix type, or for each SDG, whichever is more frequent, unless no samples had sufficiently high concentrations (concentration in the original sample was minimally a factor of 50 above the IDL) of any analytes for serial dilution analysis. |

| Field Sample ID | SDG | Matrix |
|---|---|---|
| 11Q30228 | 2209102 | Water |

| | | |
|---|---|---|
| ☒ | ☐ | When the concentration of an analyte in the original sample was sufficiently high, the serial dilution analysis (a 5-fold dilution) agreed within a 10% Difference of the original determination after the correction for dilution. |
| ☒ | ☐ | No deficiencies were found. |

**Serial Dilution Deficiency Worksheet:** **Serial Dilution Sample ID:**

| Element | IDL | 50 x IDL | Sample | Serial Dilution | %D | Action |
|---|---|---|---|---|---|---|
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Remarks
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Total Petroleum Hydrocarbons (TPH) by GC**

Project File: CTO-062 Sampling Date: 9/12 – 9/13/02

Laboratory: PEL Receipt Date: 9/14/02

SDG Number: 2209102 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | |
|---|---|---|
| 01Q30228 (N) | 06Q30228 (N) | EQBQ30228 (EB) |
| 02Q30228 (N) | 07Q30228 (N) | |
| 03Q30228 (N) | 10Q30228 (N) | |
| 04Q30228 (N) | 11Q30228 (N) | |
| 05Q30228 (N) | DUPQ30228 (FD) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☐ USEPA SW846 (SW-846) Methods
- ☐ USEPA Drinking Water (DW) Methods
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: sample preservation and holding time, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and equipment rinsate blank results, field duplicate, calibrations, and detection limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

The surrogate recovery of o-terphenyl was high in sample 02Q30228 at 170%.

The TPH result for sample 02Q30228 is considered estimated and flagged "J".

The surrogate recovery of o-terphenyl was low in sample 03Q30228 at 74.5%.

The TPH result for sample 03Q30228 is considered estimated and flagged "J".

The surrogate recovery of o-terphenyl was low in sample 06Q30228 at 78.2%.

The TPH result for sample 06Q30228 is considered estimated and flagged "UJ".

The surrogate recovery of o-terphenyl was low in sample 07Q30228 at 76%.

The TPH result for sample 07Q30228 is considered estimated and flagged "UJ".

The surrogate recovery of o-terphenyl was low in sample 11Q30228 at 47.3%.

The TPH result for sample 11Q30228 is considered estimated and flagged "J".

The MS/MSD recoveries in sample 11Q30228 were low at 21.1% and 37.1%.

LCS recoveries were acceptable. No action was taken.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIMES AND PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
TPH Samples were extracted up to 5 days after collection and analyzed up to 7 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☐ | ☒ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

The following deficiencies were found:

| Sample ID | Surrogate 1 | % Recovery | Surrogate 2 | % Recovery |
|---|---|---|---|---|
| 02Q30228 | | **170** | | |
| 03Q30228 | | **74.5** | | |
| 06Q30228 | | **78.2** | | |
| 07Q30228 | | **76** | | |
| 11Q30228 | | **72** | | |
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| | QC Limits: Water | Soil |
|---|---|---|
| **Gasoline:** | | |
| **Surrogate 1 =** _____ | _____ | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |
| **Diesel:** | | |
| **Surrogate 1 =** o-Terphenyl | 82 - 142 | _____ |
| **Surrogate 2 =** C39 Surrogate | 42 - 193 | _____ |

Remarks:
Qualify results as estimated.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☒ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
| Water | TPH | 21.1 | 37.1 | 41 - 101 | | |
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 11Q30228 | 2209102 | Water | 0 of 1 outside limits | 2 of 2 outside limits |

Remarks:
No action was taken based on MS/MSD recoveries alone.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 91702LCS01 | 2209102 | Water | 0 of 1 outside limits |

Remarks:
LCS recovery was 97.1%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 91702BLK01 | Water | No detects noted | | | All water samples |
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Remarks:
No laboratory method blank detects were noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | EQBQ30228 |
| | |
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The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| EQBQ30228 | Water | No detects noted | | | All samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 10Q30228 | DUPQ30228 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 25% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No discrepancies were noted.

## VII. INITIAL/CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of 6-point curve bracketing the expected sample concentrations, plus a blank. |
| ☒ | ☐ | The correlation coefficient of the initial calibration curve was ≥ _____; or the %RSD of the calibration response factors was ≤ 25%. |
| ☒ | ☐ | Continuing calibration verification (CCV) was performed at the frequency specified by the method and all analyte retention times were within the retention time windows defined during the initial calibration. |
| ☒ | ☐ | The %Difference was within ±25% (±____% for azeotropic distillation) for all CCVs. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| SFID02 | 09/16/02 at 20:46 | All parameters are within control limits. | I | | | All samples | None |
| SFID02 | 09/17/02 at 20:41 | All parameters are within control limits. | C | | | All samples | None |
| SFID02 | 09/17/02 at 22:08 | All parameters are within control limits. | C | | | All samples | None |
| SFID02 | 09/18/02 at 03:26 | All parameters are within control limits. | C | | | All samples | None |
| SFID02 | 09/18/02 at 11:18 | All parameters are within control limits. | C | | | All samples | None |
| SFID02 | 09/20/02 at 17:33 | All parameters are within control limits. | C | | | All samples | None |
| SFID02 | 09/20/02 at 19:32 | All parameters are within control limits. | C | | | All samples | None |

Remarks:
No calibration deficiencies were noted.

## VIII. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
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Remarks:
No deficiencies were noted.

## IX. SYSTEM PERFORMANCE

Evaluate the system performance based on the following parameters:

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Abrupt baseline shift. |
| ☐ | ☒ | High background or retention time shifts. |
| ☐ | ☒ | Baseline rise at high temperature. |
| ☐ | ☒ | Extraneous peaks. |
| ☐ | ☒ | Loss of peak resolution. |
| ☐ | ☒ | Peak tailing or splitting. |

Remarks:
No deficiencies were noted.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
| | | | | |
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
| | | | |
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Volatile Organic Compounds by GC**

Project File: CTO-062 Sampling Date: 9/23 – 9/24/02

Laboratory: PEL Receipt Date: 9/25/02

SDG Number: 2209178 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | |
|---|---|---|
| 062MW4O302 (N) | 062VEW2O302 (N) | 062VEW7O302 (N) |
| 062MW9O302 (N) | 062VEW3O302 (N) | 062VEW8O302 (N) |
| 062MW13O302 (N) | 062VEW4O302 (N) | 062DUPO302 (FD) |
| 062MW20O302 (N) | 062VEW5O302 (N) | 062EQBO302 (EB) |
| 062MW22O302 (N) | 062VEW6O302 (N) | 062TBO302 (TB) |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Method 8021
- ☐ USEPA Drinking Water (DW) Methods
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: sample preservation and holding time, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and equipment rinsate blank results, field duplicate, calibrations, and detection limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

Toluene was detected in both field blank samples up to 0.31 ug/L. Water sample detections less than the blank action level of 1.55 ug/L are qualified as "U" due to possible sample contamination.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIMES AND PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
VOC samples were analyzed up to 5 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

| Sample ID | Surrogate 1 | Surrogate 2 | Surrogate 3 | Surrogate 4 | Surrogate 5 | Surrogate 6 | Surrogate 7 |
|---|---|---|---|---|---|---|---|
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 = 4-Bromofluorobenzene** | 71 - 124 | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |
| **Surrogate 3 =** _____ | _____ | _____ |
| **Surrogate 4 =** _____ | _____ | _____ |
| **Surrogate 5 =** _____ | _____ | _____ |
| **Surrogate 6 =** _____ | _____ | _____ |
| **Surrogate 7 =** _____ | _____ | _____ |

Remarks:
Surrogate recoveries ranged from 89.3% to 103.7%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☒ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 062MW20Q302 | 2209178 | Water | 0 of 6 outside limits | 0 of 12 outside limits |

Remarks:
MS/MSD recoveries ranged from 99.5% to 115%.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 092802LCSA51 | 2209178 | Water | 0 of 6 outside limits |

Remarks:
LCS recoveries ranged from 103% to 117%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 092702BLKA51 | Water | No blank detects noted | | | All Water samples |
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Remarks:
No laboratory method blank detects noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| 062TBQ302 | 062EQBQ302 |
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The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062EQBQ302 | Water | Toluene | 0.21 | 1.05 | All water samples |
| 062TBQ302 | Water | Toluene | 0.31 | 1.55 | All water samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 062MW9Q302 | 062DUPQ302 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 20% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No discrepancies were noted.

## VII. INITIAL/CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of 6-point curve bracketing the expected sample concentrations, plus a blank. |
| ☒ | ☐ | The correlation coefficient of the initial calibration curve was ≥ _____; or the %RSD of the calibration response factors was ≤ 25%. |
| ☒ | ☐ | Continuing calibration verification (CCV) was performed at the frequency specified by the method and all analyte retention times were within the retention time windows defined during the initial calibration. |
| ☒ | ☐ | The %Difference was within ±25% (±____% for azeotropic distillation) for all CCVs. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| VGC5 | 09/07/02 at 10:30 | All parameters are within control limits. | I | | | All samples | None |
| VGC5 | 09/27/02 at 08:06 | All parameters are within control limits. | C | | | All samples | None |
| VGC5 | 09/27/02 at 19:01 | All parameters are within control limits. | C | | | All samples | None |
| VGC5 | 09/28/02 at 02:08 | All parameters are within control limits. | C | | | All samples | None |
| VGC5 | 09/28/02 at 11:26 | All parameters are within control limits. | C | | | All samples | None |
| VGC5 | 09/28/02 at 20:12 | All parameters are within control limits. | C | | | All samples | None |
| | | | | | | | |

Remarks:
No calibration deficiencies were noted.

## VIII. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☐ | ☒ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
|---|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## IX. SYSTEM PERFORMANCE

Evaluate the system performance based on the following parameters:

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Abrupt baseline shift. |
| ☐ | ☒ | High background or retention time shifts. |
| ☐ | ☒ | Baseline rise at high temperature. |
| ☐ | ☒ | Extraneous peaks. |
| ☐ | ☒ | Loss of peak resolution. |
| ☐ | ☒ | Peak tailing or splitting. |

Remarks:
No deficiencies were noted.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Polynuclear Aromatic Hydrocarbons (PAH) by HPLC**

Project File: CTO-062 Sampling Date: 9/23 – 9/24/02

Laboratory: PEL Receipt Date: 9/25/02

SDG Number: 2209178 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | |
|---|---|---|
| 062MW4O302 (N) | 062VEW2O302 (N) | 062VEW7O302 (N) |
| 062MW9O302 (N) | 062VEW3O302 (N) | 062VEW8O302 (N) |
| 062MW13O302 (N) | 062VEW4O302 (N) | 062DUPO302 (FD) |
| 062MW20O302 (N) | 062VEW5O302 (N) | 062EQBO302 (EB) |
| 062MW22O302 (N) | 062VEW6O302 (N) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☐ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Methods (8310)
- ☐ USEPA Drinking Water (DW) Methods (524.2, 624, 1624)
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

Validation Summary

The MS/MSD recoveries for 2 of 36 analyses in sample 062MW20Q302 were low.

LCS recoveries were acceptable. No action was taken based on MS/MSD recoveries alone.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIME AND SAMPLE PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
Samples were extracted up to 3 days after collection and analyzed up to 4 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

The following deficiencies were found:

| Sample ID | Surrogate 1 | % Recovery | Surrogate 2 | % Recovery |
|---|---|---|---|---|
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 =** p-Terphenyl | 39 - 107 | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |

Remarks:
Surrogate recoveries ranged from 62% to 95%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☒ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
| Water | 1-Methylnaphthylene | 42.7 | | 48 – 92 | | |
| Water | Acenaphthene | 43.7 | | 52 - 86 | | |
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 062MW20Q302 | 2209178 | Water | 0 of 18 outside limits | 2 of 36 outside limits |

Remarks:
No action was taken based on MS/MSD recoveries alone.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 92602LCS01 | 2209178 | Water | 0 of 18 outside limits |

Remarks:
LCS recoveries ranged from 55% to 81%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 92602BLK01 | Water | No detects noted | | | All water samples |
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Remarks:
No laboratory method blank detects were noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | 062EQBQ302 |
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The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062EQBQ302 | Water | No blank detects noted | | | All water samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 062MW9Q302 | 062DUPQ302 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 25% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No discrepancies were noted.

## VII. INITIAL AND CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of a minimum of 5 standards with concentrations over the calibration range. |
| ☒ | ☐ | Percent relative standard deviation (%RSD) for all compounds was ≤20% **OR** the coefficient of the determination (COD) was ≥0.995 for all calibration factors in the initial calibration. |
| ☒ | ☐ | The calibration verification standard (midpoint concentration) was analyzed at the beginning of every 12-hour analytical shift and at the end of the analytical sequence to bracket the sample analyses. |
| ☒ | ☐ | Calibration verification standards (midpoint concentration) were analyzed every 10 samples. |
| ☒ | ☐ | For the calibration verification(s), the percent difference (%D) was within ±15% of the response obtained during the initial calibration for all compounds. |
| ☒ | ☐ | Standard retention times were within control windows. |
| ☒ | ☐ | The analytical sequence was followed. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| SLC01 | 09/19/02 at 18:54 | All parameters are within control limits. | I | | | All samples | None |
| SLC01 | 09/27/02 at 11:45 | All parameters are within control limits. | C | | | All samples | None |
| SLC01 | 09/27/02 at 18:06 | All parameters are within control limits. | C | | | All samples | None |
| SLC01 | 09/27/02 at 23:52 | All parameters are within control limits. | C | | | All samples | None |
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Remarks:
No discrepancies were noted.

## VIII. INTERNAL STANDARDS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | An internal standard calibration was performed. |
| ☐ | ☐ | All retention times for the internal standards were within control limits. |
| ☐ | ☐ | All internal standard areas were within control limits. |
| ☐ | ☐ | No deficiencies were found. |

The following deficiencies were found:

| Sample ID | Internal Standard | Sample IS Area | IS Area Limits Upper | IS Area Limits Lower | Sample IS RT | IS RT Limit Upper | IS RT Limit Lower |
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Internal Standard 1 = _____

Internal Standard 2 = _____

Remarks:
No discrepancies were noted.

## IX. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## X. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
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Remarks:
No deficiencies were noted.

## XI. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Volatile Organic Analytes by GC/MS**

Project File: CTO-062 Sampling Date: 7/15 – 9/9/02

Laboratory: STL Receipt Date: 7/18 - 9/12/02

SDG Number: Matrix: ☐ Water ☐ Soil/Sediment ☒ Air
C207404, C207405, C207603, C207604, C209256, C209257

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

062-SVE-E-A-0715-02-26 (N) 062-SVE-E-A-0909-02-28 (N)
062-SVE-E-A-0715-02-30 (N)
062-SVE-E-A-0821-02-31 (N)
062-SVE-E-A-0821-02-27 (N)
062-SVE-E-A-0909-02-32 (N)

The general criteria used to determine the data performance and quality assurance were based on:

☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
☐ USEPA SW846 (SW-846) Methods (8260)
☐ USEPA Drinking Water (DW) Methods (524.2, 624, 1624)
☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
☒ Other: USEPA Method TO-14, Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: _____ Date: 1/15/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIME AND SAMPLE PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
VOC samples were analyzed up to 13 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

| Sample ID | Surrogate 1 | Surrogate 2 | Surrogate 3 | Surrogate 4 | Surrogate 5 | Surrogate 6 | Surrogate 7 |
|---|---|---|---|---|---|---|---|
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 =** 1,2-Dichloroethane-d4 | 61 - 140 | _____ |
| **Surrogate 2 =** Toluene-d8 | 90 - 109 | _____ |
| **Surrogate 3 =** 4-Bromofluorobenzene | 87 - 112 | _____ |
| **Surrogate 4 =** _____ | _____ | _____ |
| **Surrogate 5 =** _____ | _____ | _____ |
| **Surrogate 6 =** _____ | _____ | _____ |
| **Surrogate 7 =** _____ | _____ | _____ |

Remarks:
Surrogate recoveries ranged from 96% to 113%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| | | | _ of _ outside limits | _ of __ outside limits |

Remarks:
MS/MSD not required for air samples.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| 074044BS | C207404 | Water | 0 of 8 outside limits |
| 074054BS | C207405 | Water | 0 of 8 outside limits |
| 086034BS | C208603 | Water | 0 of 8 outside limits |
| 086044BS | C208604 | Water | 0 of 8 outside limits |
| 092564BS | C207404 | Water | 0 of 8 outside limits |
| 092574BS | C207405 | Water | 0 of 8 outside limits |

Remarks:
LCS recoveries ranged from 97% to 112%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 074042LB | Air | No VOC detects noted | | | All air samples |
| 074052LB | Air | No VOC detects noted | | | All air samples |
| 086032LB | Air | No VOC detects noted | | | All air samples |
| 086042LB | Air | No VOC detects noted | | | All air samples |
| 092562LB | Air | No VOC detects noted | | | All air samples |
| 092572LB | Air | No VOC detects noted | | | All air samples |
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Remarks:
No laboratory method blank detects were noted.

**B. Field QC** (Blanks):

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
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The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
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Remarks:
No field blank samples included.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| | | |

☐ ☐ Qualification of field duplicate data was attempted.

☐ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 20% for liquid (25% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples ( _____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDA or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
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Remarks:
No discrepancies were noted.

## VII. GC/MS TUNING - INSTRUMENT PERFORMANCE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All tunes were compliant. |

The bromofluorobenzene (BFB) standard performance results were reviewed and the following abundances were found to fall outside the specified criteria:

| m/z | Required Abundance | Actual Abundance |
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Remarks:
GC/MS tuning was compliant. ICAL was performed on 7/9/02 on instrument MARYLIN. ICAL was performed on 8/5/02 on instrument MARYLIN.

## VIII. INITIAL AND CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The average relative response factors ($RRF_{avg}$) met validation criteria for all initial calibrations. |
| ☒ | ☐ | The percent relative standard deviation (%RSD) of the calibration or response factors (or correlation coefficients for regression analysis of calibration curves) met validation criteria for all initial calibrations. |
| ☒ | ☐ | Continuing calibrations were performed at the frequency specified by the analytical method. |
| ☒ | ☐ | The RRFs met validation criteria for all continuing calibrations. |
| ☒ | ☐ | The percentage difference (%D) from the initial calibration met validation criteria for all continuing calibrations. |

The following deficiencies were found:

| Instr ID | Date/ Time | Analyte | I / C | Calibration Deficiency | Affected Samples | Action |
|---|---|---|---|---|---|---|
| MARYLIN | 07/09/02 at 12:19 | All parameters are within control limits. | I | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | C207404*1, C207405*1 | None |
| MARYLIN | 08/05/02 at 14:33 | All parameters are within control limits. | I | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | C208603*1, C208604*1, C209256*1, C209257*1 | None |
| MARYLIN | 07/22/02 at 09:57 | All parameters are within control limits. | C | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | C207404*1, C207405*1 | None |
| MARYLIN | 09/03/02 at 08:47 | All parameters are within control limits. | C | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | C208603*1, C208604*1 | None |
| MARYLIN | 09/16/02 at 10:44 | All parameters are within control limits. | C | ☐RRF_____<br>☐%RSD _____%<br>☐%D _____%<br>☐Frequency<br>☐r_____ | C209256*1, C209257*1 | None |

Remarks:
No discrepancies were noted.

## IX. INTERNAL STANDARDS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All internal standard areas were within control limits. |
| ☒ | ☐ | All retention times for the internal standards were within control limits. |

The following deficiencies were found:

| Sample ID | Internal Standard | Sample IS Area | IS Area Limits Upper | IS Area Limits Lower | Sample IS RT | IS RT Limit Upper | IS RT Limit Lower |
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Internal Standard 1 = Bromochloromethane

Internal Standard 2 = 1,4-Difluorobenzene

Internal Standard 3 = Chlorobenzene-d5

Remarks:
All internal standard area counts and retention times were compliant.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Volatile Organic Compounds by GC**

Project File: CTO-062 Sampling Date: 9/16 – 9/18/02

Laboratory: Kemron Receipt Date: 9/17 – 9/19/02

SDG Number: L0209285, L0209310, L0209337 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | | | |
|---|---|---|---|---|
| 062-CEF9-2S-O3-02-21 (N) | 062-CEF46-7I-O3-02-20 (N) | 062-CEF46-1S-O3-02-20 (N) | 062-CEF46-26I-O3-02-20 (N) | 062-46TB1-O3-02-20 (TB) |
| 062-CEF9-3S-O3-02-21 (N) | 062-CEF46-9I-O3-02-20 (N) | 062-CEF46-5I-O3-02-20 (N) | 062-9DUP-O3-02-21 (FD) | 062-46TB-O3-02-20 (TB) |
| 062-CEF9-5S-O3-02-21 (N) | 062-CEF46-12I-O3-02-20 (N) | 062-CEF46-6D-O3-02-20 (N) | 062-46DUP-O3-02-20 (FD) | |
| 062-CEF9-7D-O3-02-21 (N) | 062-CEF46-13I-O3-02-20 (N) | 062-CEF46-21I-O3-02-20 (N) | 062-9EQB-O3-02-21 (EB) | |
| 062-CEF9-9S-O3-02-21 (N) | 062-CEF46-14D-O3-02-20 (N) | 062-CEF46-24D-O3-02-20 (N) | 062-46EQB-O3-02-20 (EB) | |
| 062-CEF46-2S-O3-02-20 (N) | 062-CEF46-15I-O3-02-20 (N) | 062-CEF46-25I-O3-02-20 (N) | 062-9TB-O3-02-21 (TB) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Method 8021
- ☐ USEPA Drinking Water (DW) Methods
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: sample preservation and holding time, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and equipment rinsate blank results, field duplicate, calibrations, and detection limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

Toluene was detected in both field blank samples up to 0.31 ug/L. Water sample detections less than the blank action level of 1.55 ug/L are qualified as "U" due to possible sample contamination.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIMES AND PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
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Remarks:
VOC samples were analyzed up to 2 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

| Sample ID | Surrogate 1 | Surrogate 2 | Surrogate 3 | Surrogate 4 | Surrogate 5 | Surrogate 6 | Surrogate 7 |
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 = 4-a,a,a-Trifluorotoluene** | 70 - 130 | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |
| **Surrogate 3 =** _____ | _____ | _____ |
| **Surrogate 4 =** _____ | _____ | _____ |
| **Surrogate 5 =** _____ | _____ | _____ |
| **Surrogate 6 =** _____ | _____ | _____ |
| **Surrogate 7 =** _____ | _____ | _____ |

Remarks:
Surrogate recoveries ranged from 101% to 124%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☒ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 062-CEF9-7D-Q3-02-21 | L0209285 | Water | 0 of 5 outside limits | 0 of 10 outside limits |
| 062-CEF46-9I-Q3-02-20 | L0209310 | Water | 0 of 5 outside limits | 0 of 10 outside limits |

Remarks:
MS/MSD recoveries ranged from 87.5% to 99.2%.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| WG125494-02 | L0209285 | Water | 0 of 5 outside limits |
| WG125576-02 | L0209310 | Water | 0 of 5 outside limits |
| WG125606-02 | L0209337 | Water | 0 of 5 outside limits |

Remarks:
LCS recoveries ranged from 90.3% to 96.9%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| WG125494-01 | Water | No blank detects noted | | | All Water samples |
| WG125576-01 | Water | No blank detects noted | | | All Water samples |
| WG125606-01 | Water | No blank detects noted | | | All Water samples |
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Remarks:
No laboratory method blank detects noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| 062-9TB-Q3-02-21 | 062-9EQB-Q3-02-21 |
| 062-46TB1-Q3-02-20 | 062-46EQB-Q3-02-20 |
| 062-46TB-Q3-02-20 | |
| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062-9EQB-Q3-02-21 | Water | No blank detects noted | | | All water samples |
| 062-46EQB-Q3-02-20 | Water | No blank detects noted | | | All water samples |
| 062-9TB-Q3-02-21 | Water | No blank detects noted | | | All water samples |
| 062-46TB1-Q3-02-20 | Water | No blank detects noted | | | All water samples |
| 062-46TB-Q3-02-20 | Water | No blank detects noted | | | All water samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 062-CEF9-9S-Q3-02-21 | 062-9DUP-Q3-02-21CF1 | Water |
| 062-CEF46-7I-Q3-02-20 | 062-46DUP-Q3-02-20 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 20% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No discrepancies were noted.

## VII. INITIAL/CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of 6-point curve bracketing the expected sample concentrations, plus a blank. |
| ☒ | ☐ | The correlation coefficient of the initial calibration curve was ≥ _____; or the %RSD of the calibration response factors was ≤ 25%. |
| ☒ | ☐ | Continuing calibration verification (CCV) was performed at the frequency specified by the method and all analyte retention times were within the retention time windows defined during the initial calibration. |
| ☒ | ☐ | The %Difference was within ±25% (±____% for azeotropic distillation) for all CCVs. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| HP5 | 02/20/02 at 13:38 | All parameters are within control limits. | I | | | All samples | None |
| HP5 | 09/17/02 at 14:16 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/17/02 at 20:58 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/17/02 at 23:16 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/18/02 at 09:49 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/18/02 at 19:39 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/19/02 at 02:00 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/19/02 at 03:44 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/19/02 at 08:54 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/19/02 at 15:56 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/19/02 at 21:52 | All parameters are within control limits. | C | | | All samples | None |

Remarks:
No calibration deficiencies were noted.

## VIII. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
|---|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## IX. SYSTEM PERFORMANCE

Evaluate the system performance based on the following parameters:

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Abrupt baseline shift. |
| ☐ | ☒ | High background or retention time shifts. |
| ☐ | ☒ | Baseline rise at high temperature. |
| ☐ | ☒ | Extraneous peaks. |
| ☐ | ☒ | Loss of peak resolution. |
| ☐ | ☒ | Peak tailing or splitting. |

Remarks:
No deficiencies were noted.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Polynuclear Aromatic Hydrocarbons (PAH) by HPLC**

Project File: CTO-062 Sampling Date: 9/16 – 9/18/02

Laboratory: Kemron Receipt Date: 9/17 – 9/19/02

SDG Number: L0209285, L0209310, L0209337 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | | |
|---|---|---|---|
| 062-CEF9-2S-O3-02-21 (N) | 062-CEF46-7I-O3-02-20 (N) | 062-CEF46-1S-O3-02-20 (N) | 062-CEF46-26I-O3-02-20 (N) |
| 062-CEF9-3S-O3-02-21 (N) | 062-CEF46-9I-O3-02-20 (N) | 062-CEF46-5I-O3-02-20 (N) | 062-9DUP-O3-02-21 (FD) |
| 062-CEF9-5S-O3-02-21 (N) | 062-CEF46-12I-O3-02-20 (N) | 062-CEF46-6D-O3-02-20 (N) | 062-46DUP-O3-02-20 (FD) |
| 062-CEF9-7D-O3-02-21 (N) | 062-CEF46-13I-O3-02-20 (N) | 062-CEF46-21I-O3-02-20 (N) | 062-9EQB-O3-02-21 (EB) |
| 062-CEF9-9S-O3-02-21 (N) | 062-CEF46-14D-O3-02-20 (N) | 062-CEF46-24D-O3-02-20 (N) | 062-46EQB-O3-02-20 (EB) |
| 062-CEF46-2S-O3-02-20 (N) | 062-CEF46-15I-O3-02-20 (N) | 062-CEF46-25I-O3-02-20 (N) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☐ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Methods (8310)
- ☐ USEPA Drinking Water (DW) Methods (524.2, 624, 1624)
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

Validation Summary

The p-terphenyl surrogate recoveries for 12 of 21 samples were low.

PAH results for the affected samples are considered estimated and flagged "J" for detects and "UJ" for non-detects (see below).

The MS/MSD recoveries for 17 of 72 analyses in samples 062-CEF9-7D-Q3-02-21 and 062-CEF46-9I-Q3-02-20 were low. No action was taken based on MS/MSD recoveries alone (see below).

The LCS recoveries for 12 of 18 analyses in sample WG125546-03 were low.

PAH results for samples run in SDG L0209285 are considered estimated and flagged "J" for detects and "UJ" for non-detects.

Benzo(a)anthracene was detected in field blank sample 062-9EQB-Q3-02-21 at 0.078 ug/L.

Water sample detects less than the blank action level of 0.39 ug/L are qualified as "U" due to possible sample contamination.

Benzo(b)fluoranthene was detected in field blank sample 062-9EQB-Q3-02-21 at 0.11 ug/L.

Water sample detects less than the blank action level of 0.55 ug/L are qualified as "U" due to possible sample contamination.

Fluoranthene was detected in laboratory method blank sample WG125616-02 at 0.067 ug/L.

No associated water sample detects were noted for fluoranthene. No action was taken.

Benzo(g,h,i)perylene was detected in field blank sample 062-46EQB-Q3-02-20 at 0.21 ug/L.

No associated water sample detects were noted for benzo(g,h,i)perylene. No action was taken.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIME AND SAMPLE PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
Samples were extracted up to 2 days after collection and analyzed up to 7 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☐ | ☒ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

The following deficiencies were found:

| Sample ID | Surrogate 1 | % Recovery | Surrogate 2 | % Recovery |
|---|---|---|---|---|
| 062-CEF9-2S-Q3-02-21 | Terphenyl-D14 | **35.9** | | |
| 062-CEF9-3S-Q3-02-21 | Terphenyl-D14 | **33.1** | | |
| 062-CEF9-5S-Q3-02-21 | Terphenyl-D14 | **33.7** | | |
| 062-CEF9-9S-Q3-02-21 | Terphenyl-D14 | **38.5** | | |
| 062-CEF46-7I-Q3-02-20 | Terphenyl-D14 | **28.5** | | |
| 062-CEF46-1S-Q3-02-20 | Terphenyl-D14 | **33** | | |
| 062-CEF46-5I-Q3-02-20 | Terphenyl-D14 | **19** | | |
| 062-CEF46-6D-Q3-02-20 | Terphenyl-D14 | **24.3** | | |
| 062-CEF46-21I-Q3-02-20 | Terphenyl-D14 | **20.8** | | |
| 062-CEF46-24D-Q3-02-20 | Terphenyl-D14 | **21.8** | | |
| 062-CEF46-25I-Q3-02-20 | Terphenyl-D14 | **14.9** | | |
| 062-CEF46-26I-Q3-02-20 | Terphenyl-D14 | **20.3** | | |
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| | QC Limits: Water | QC Limits: Soil |
|---|---|---|
| **Surrogate 1 =** Terphenyl-D14 | 40 - 132 | |
| **Surrogate 2 =** | | |

Remarks:
Surrogate recoveries ranged from 46.8% to 92%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☒ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| SDG | Matrix | Analyte | MS Recover | MSD Recover | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|
| L0209285 | Water | 1-Methylnaphthalene | | **24.9** | 26 – 71 | | |
| L0209285 | Water | 2-Methylnaphthalene | | **25.3** | 26 – 72 | | |
| L0209285 | Water | Anthracene | **46** | **41.7** | 47 – 101 | | |
| L0209285 | Water | Benzo(a)anthracene | **49.8** | **45.3** | 50 – 115 | | |
| L0209285 | Water | Benzo(b)fluoranthene | | **40.9** | 41 – 110 | | |
| L0209285 | Water | Chrysene | **38** | **35.2** | 39 – 120 | | |
| L0209285 | Water | Fluoranthene | **52.1** | **47.1** | 55 – 104 | | |
| L0209285 | Water | Naphthalene | | **24.1** | 25 – 68 | | |
| L0209285 | Water | Phenanthrene | | **38.1** | 39 – 95 | | |
| L0209285 | Water | Pyrene | **50.9** | **45.9** | 56 – 104 | | |
| L0209310 | Water | Anthracene | **45.2** | | 47 – 101 | | |
| L0209310 | Water | Pyrene | **55.2** | | 56 – 104 | | |

**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 062-CEF9-7D-Q3-02-21 | L0209285 | Water | 0 of 18 outside limits | 15 of 36 outside limits |
| 062-CEF46-9I-Q3-02-20 | L0209310 | Water | 0 of 18 outside limits | 2 of 36 outside limits |

Remarks:
No action was taken based on MS/MSD recoveries alone (see below).

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☐ | ☒ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
|---|---|---|---|---|---|
| WG125546-03 | Water | 1-Methylnaphthalene | **22.3** | 26 - 71 | J or UJ |
| WG125546-03 | Water | 2-Methylnaphthalene | **22.6** | 26 - 72 | J or UJ |
| WG125546-03 | Water | Acenaphthene | **23.6** | 25 - 78 | J or UJ |
| WG125546-03 | Water | Acenaphthylene | **23.4** | 25 - 77 | J or UJ |
| WG125546-03 | Water | Anthracene | **40** | 47 - 101 | J or UJ |
| WG125546-03 | Water | Benzo(a)anthracene | **49.8** | 50 - 115 | J or UJ |
| WG125546-03 | Water | Chrysene | **38.9** | 39 - 120 | J or UJ |
| WG125546-03 | Water | Fluoranthene | **45.7** | 55 - 104 | J or UJ |
| WG125546-03 | Water | Fluorene | **27.9** | 29 - 84 | J or UJ |
| WG125546-03 | Water | Naphthalene | **21.5** | 25 - 68 | J or UJ |
| WG125546-03 | Water | Phenanthrene | **34** | 39 - 95 | J or UJ |
| WG125546-03 | Water | Pyrene | **45.6** | 56 - 104 | J or UJ |
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| WG125546-03 | L0209285 | Water | 12 of 18 outside limits |
| WG125616-03 | L0209310 | Water | 0 of 18 outside limits |

Remarks:
Qualify associated samples as estimated.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| WG125546-02 | Water | No detects noted | | | All water samples |
| WG125616-02 | Water | Fluoranthene | 0.067 | 0.335 | All water samples |
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Remarks:
Sample results less than the blank action level are qualified as "U".

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | 062-9EQB-Q3-02-21 |
| | 062-46EQB-Q3-02-20 |
| | |
| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062-9EQB-Q3-02-21 | Water | Benzo(a)anthracene | 0.078 | 0.39 | All water samples |
| 062-9EQB-Q3-02-21 | Water | Benzo(b)fluoranthene | 0.11 | 0.55 | All water samples |
| 062-46EQB-Q3-02-20 | Water | Benzo(g,h,i)perylene | 0.21 | 1.05 | |
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Remarks:
Sample results less than the blank action level are qualified as "U".

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 062-CEF9-9S-Q3-02-21 | 062-9DUP-Q3-02-21CF1 | Water |
| 062-CEF46-7I-Q3-02-20 | 062-46DUP-Q3-02-20 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 25% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No discrepancies were noted.

## VII. INITIAL AND CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of a minimum of 5 standards with concentrations over the calibration range. |
| ☒ | ☐ | Percent relative standard deviation (%RSD) for all compounds was ≤20% **OR** the coefficient of the determination (COD) was ≥0.995 for all calibration factors in the initial calibration. |
| ☒ | ☐ | The calibration verification standard (midpoint concentration) was analyzed at the beginning of every 12-hour analytical shift and at the end of the analytical sequence to bracket the sample analyses. |
| ☒ | ☐ | Calibration verification standards (midpoint concentration) were analyzed every 10 samples. |
| ☒ | ☐ | For the calibration verification(s), the percent difference (%D) was within ±15% of the response obtained during the initial calibration for all compounds. |
| ☒ | ☐ | Standard retention times were within control windows. |
| ☒ | ☐ | The analytical sequence was followed. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| HPLC4 | 09/20/02 at 16:34 | All parameters are within control limits. | I | | | All samples | None |
| HPLC4 | 09/21/02 at 15:52 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/22/02 at 02:18 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/22/02 at 12:41 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/22/02 at 23:04 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/23/02 at 00:57 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/25/02 at 16:44 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/25/02 at 18:37 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/27/02 at 17:26 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/28/02 at 03:50 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 09/28/02 at 14:13 | All parameters are within control limits. | C | | | All samples | None |

Remarks:
No discrepancies were noted.

## VIII. INTERNAL STANDARDS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | An internal standard calibration was performed. |
| ☐ | ☐ | All retention times for the internal standards were within control limits. |
| ☐ | ☐ | All internal standard areas were within control limits. |
| ☐ | ☐ | No deficiencies were found. |

The following deficiencies were found:

| Sample ID | Internal Standard | Sample IS Area | IS Area Limits Upper | IS Area Limits Lower | Sample IS RT | IS RT Limit Upper | IS RT Limit Lower |
|---|---|---|---|---|---|---|---|
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Internal Standard 1 = _____

Internal Standard 2 = _____

Remarks:
No discrepancies were noted.

## IX. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## X. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
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Remarks:
No deficiencies were noted.

## XI. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Total Petroleum Hydrocarbons (TPH) by GC**

Project File: CTO-062 Sampling Date: 9/16 – 9/18/02

Laboratory: Kemron Receipt Date: 9/17 – 9/19/02

SDG Number: L0209285, L0209310, L0209337 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | | |
|---|---|---|---|
| 062-CEF9-2S-O3-02-21 (N) | 062-CEF46-7I-O3-02-20 (N) | 062-CEF46-1S-O3-02-20 (N) | 062-CEF46-26I-O3-02-20 (N) |
| 062-CEF9-3S-O3-02-21 (N) | 062-CEF46-9I-O3-02-20 (N) | 062-CEF46-5I-O3-02-20 (N) | 062-9DUP-O3-02-21 (FD) |
| 062-CEF9-5S-O3-02-21 (N) | 062-CEF46-12I-O3-02-20 (N) | 062-CEF46-6D-O3-02-20 (N) | 062-46DUP-O3-02-20 (FD) |
| 062-CEF9-7D-O3-02-21 (N) | 062-CEF46-13I-O3-02-20 (N) | 062-CEF46-21I-O3-02-20 (N) | 062-9EQB-O3-02-21 (EB) |
| 062-CEF9-9S-O3-02-21 (N) | 062-CEF46-14D-O3-02-20 (N) | 062-CEF46-24D-O3-02-20 (N) | 062-46EQB-O3-02-20 (EB) |
| 062-CEF46-2S-O3-02-20 (N) | 062-CEF46-15I-O3-02-20 (N) | 062-CEF46-25I-O3-02-20 (N) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☐ USEPA SW846 (SW-846) Methods
- ☐ USEPA Drinking Water (DW) Methods
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: sample preservation and holding time, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and equipment rinsate blank results, field duplicate, calibrations, and detection limits.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

The surrogate recovery of o-terphenyl was low in sample 062-CEF46-2S-Q3-02-20 at 41.4%.

The TPH result for sample 062-CEF46-2S-Q3-02-20 is considered estimated and flagged "UJ".

TPH was detected in laboratory method blank samples and field blank samples up to 964 ug/L.

Water sample detection less than the blank action level of 4820 ug/L are qualified as "U"

due to possible sample contamination.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIMES AND PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
TPH Samples were extracted up to 7 days after collection and analyzed up to 15 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☐ | ☒ | No deficiencies were found. |
| ☒ | ☐ | At least one of the deficient recoveries was outside control limits due to dilutions. |

The following deficiencies were found:

| Sample ID | Surrogate 1 | % Recovery | Surrogate 2 | % Recovery |
|---|---|---|---|---|
| 062-CEF46-2S-Q3-02-20 | | 41.4 | | |
| 062-CEF46-1S-Q3-02-20 | | DL | | |
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| | QC Limits: Water | Soil |
|---|---|---|
| **Gasoline:** | | |
| **Surrogate 1 =** _____ | _____ | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |
| **Diesel:** | | |
| **Surrogate 1 =** o-Terphenyl | 49 - 174 | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |

Remarks:
Qualify sample results as estimated.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☒ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
| Water | TPH | 21.1 | 37.1 | 41 - 101 | | |
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 062-CEF9-7D-Q3-02-21 | L0209285 | Water | 0 of 1 outside limits | 0 of 2 outside limits |
| 062-CEF46-9I-Q3-02-20 | L0209310 | Water | 0 of 1 outside limits | 0 of 2 outside limits |

Remarks:
MS/MSD recoveries ranged from 75.3% to 84.5%.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| WG125776-03 | L0209285 | Water | 0 of 1 outside limits |
| WG125593-03 | L0209310 | Water | 0 of 1 outside limits |
| WG125593-03 | L0209337 | Water | 0 of 1 outside limits |

Remarks:
LCS recoveries ranged from 80.9% to 88%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| WG125776-02 | Water | TPH | 308 | 1540 | All water samples |
| WG125593-02 | Water | TPH | 279 | 1395 | All water samples |
| WG125593-02 | Water | TPH | 279 | 1395 | All water samples |
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Remarks:
Qualify sample results less than the blank action level as "U".

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | 062-9EQB-Q3-02-21 |
| | 062-46EQB-Q3-02-20 |
| | |
| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062-9EQB-Q3-02-21 | Water | TPH | 417 | 2085 | All samples |
| 062-46EQB-Q3-02-20 | Water | TPH | 964 | 4820 | All samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 062-CEF9-9S-Q3-02-21 | 062-9DUP-Q3-02-21CF1 | Water |
| 062-CEF46-7I-Q3-02-20 | 062-46DUP-Q3-02-20 | Water |

☒ ☐ Qualification of field duplicate data was attempted.

☒ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 25% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No discrepancies were noted.

## VII. INITIAL/CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of 6-point curve bracketing the expected sample concentrations, plus a blank. |
| ☒ | ☐ | The correlation coefficient of the initial calibration curve was ≥ _____; or the %RSD of the calibration response factors was ≤ 25%. |
| ☒ | ☐ | Continuing calibration verification (CCV) was performed at the frequency specified by the method and all analyte retention times were within the retention time windows defined during the initial calibration. |
| ☒ | ☐ | The %Difference was within ±25% (±____% for azeotropic distillation) for all CCVs. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| HP2 | 09/30/02 at 15:02 | All parameters are within control limits. | I | | | All samples | None |
| HP2 | 09/30/02 at 19:20 | All parameters are within control limits. | C | | | All samples | None |
| HP2 | 09/30/02 at 22:13 | All parameters are within control limits. | C | | | All samples | None |
| HP2 | 10/01/02 at 01:02 | All parameters are within control limits. | C | | | All samples | None |
| HP2 | 10/01/02 at 03:51 | All parameters are within control limits. | C | | | All samples | None |
| HP2 | 10/01/02 at 09:52 | All parameters are within control limits. | C | | | All samples | None |
| HP2 | 10/01/02 at 12:58 | All parameters are within control limits. | C | | | All samples | None |
| HP2 | 10/01/02 at 15:16 | All parameters are within control limits. | C | | | All samples | None |
| HP2 | 10/01/02 at 01:02 | All parameters are within control limits. | C | | | All samples | None |

Remarks:
No calibration deficiencies were noted.

## VIII. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
|---|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## IX. SYSTEM PERFORMANCE

Evaluate the system performance based on the following parameters:

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Abrupt baseline shift. |
| ☐ | ☒ | High background or retention time shifts. |
| ☐ | ☒ | Baseline rise at high temperature. |
| ☐ | ☒ | Extraneous peaks. |
| ☐ | ☒ | Loss of peak resolution. |
| ☐ | ☒ | Peak tailing or splitting. |

Remarks:
No deficiencies were noted.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Wet Chemistry Data**

Project File: CTO-062 Sampling Date: 9/16 – 9/18/02

Laboratory: Kemron Receipt Date: 9/17 – 9/19/02

SDG Number: L0209285, L0209310, L0209337 Matrix: ☒ Water ☐ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | | | |
|---|---|---|---|
| 062-CEF9-2S-O3-02-21 (N) | 062-CEF46-7I-O3-02-20 (N) | 062-CEF46-1S-O3-02-20 (N) | 062-CEF46-26I-O3-02-20 (N) |
| 062-CEF9-3S-O3-02-21 (N) | 062-CEF46-9I-O3-02-20 (N) | 062-CEF46-5I-O3-02-20 (N) | 062-9DUP-O3-02-21 (FD) |
| 062-CEF9-5S-O3-02-21 (N) | 062-CEF46-12I-O3-02-20 (N) | 062-CEF46-6D-O3-02-20 (N) | 062-46DUP-O3-02-20 (FD) |
| 062-CEF9-7D-O3-02-21 (N) | 062-CEF46-13I-O3-02-20 (N) | 062-CEF46-21I-O3-02-20 (N) | 062-9EQB-O3-02-21 (EB) |
| 062-CEF9-9S-O3-02-21 (N) | 062-CEF46-14D-O3-02-20 (N) | 062-CEF46-24D-O3-02-20 (N) | 062-46EQB-O3-02-20 (EB) |
| 062-CEF46-2S-O3-02-20 (N) | 062-CEF46-15I-O3-02-20 (N) | 062-CEF46-25I-O3-02-20 (N) | |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA SW846 (SW-846) Methods
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: USEPA Methods, Laboratory established accuracy and precision control limits.

| Parameter | Method | Parameter | Method | Parameter | Method |
|---|---|---|---|---|---|
| $NO_3$ | SW9056 | | | | |
| $NO_2$ | SW9056 | | | | |
| Phosphate | SW9056 | | | | |
| | | | | | |

The following parameters were examined: sample preservation and holding time, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and/or rinsate blank results, field and laboratory duplicate results, initial and continuing calibrations, reporting limits and sample result verification.

Reviewed by: _____ Date: 2/19/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

Nitrate was detected in field blank sample 062-9EQB-Q3-02-21 at 0.11 mg/L.

Water sample detects less than the blank action level of 0.55 mg/L are qualified as "U" due to possible sample contamination.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIME

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample I.D. | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
Samples were analyzed 1 day after collection.

## II. CALIBRATIONS (Instrumental Methods)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of multi-point external calibration curve. |

| Parameter | ICAL | Parameter | ICAL | Parameter | ICAL |
|---|---|---|---|---|---|
| $NO_3$ | 6 pts + blank | | | | |
| $NO_2$ | 6 pts + blank | | | | |
| Phosphate | 6 pts + blank | | | | |
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|---|---|---|
| ☒ | ☐ | For linear curve fits the response factor %RSD **≤15%**. For first-order curve fits the correlation coefficient was **≥ 0.995**. |
| ☒ | ☐ | Continuing calibration verifications (CCVs) were performed at the method-specified frequency. |
| ☒ | ☐ | The % Recovery for each of the CCVs (bracketing samples) was within control limits (**90 - 110%**). |
| ☒ | ☐ | No deficiencies were noted. |

The following deficiencies were found:

| Date/ Time | Analyte | I / C | Corr Coeff | %R | Affected Samples | Action |
|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted..

## III. BLANKS (Method blanks, calibration blanks, field blanks, etc.)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one preparation blank was prepared with each batch of samples. |
| ☒ | ☐ | Blanks were reported at the RL for all non-detects. |
| ☒ | ☐ | Field QC samples were associated with this SDG. |
| ☒ | ☐ | No deficiencies were noted. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | 062-9EQB-Q3-02-21 |
| | 062-46EQB-Q3-02-20 |
| | |

The following contaminants were detected in blanks associated with samples in this SDG:

| Blank ID | Matrix | Compound | Conc mg/L | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062-9EQB-Q3-02-21 | Water | Nitrate | 0.11 | 0.55 | All water samples |
| 062-46EQB-Q3-02-20 | Water | No detects noted | | | All water samples |
| WG125511-01 | Water | No detects noted | | | All water samples |
| WG125591-01 | Water | No detects noted | | | All water samples |
| WG125720-01 | Water | No detects noted | | | All water samples |
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Remarks:
Qualify nitrate detects less than blank action level as "U".

## LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria (**90 - 110%** for water, or **80 – 120%** for soil). |
| ☒ | ☐ | No deficiencies were noted. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
|---|---|---|---|---|---|
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**LCS Summary:** Recoveries for each LCS analysis in the SDG.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| WG125511-02 | L0209285 | Water | 0 of 3 outside limits |
| WG125591-02 | L0209310 | Water | 0 of 3 outside limits |
| WG125720-02 | L0209337 | Water | 0 of 3 outside limits |

Remarks:
LCS recoveries ranged from 98.2% to 107%.

## IV. MATRIX SPIKE (MS) ANALYSIS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Matrix Spike (MS) analysis was requested for this SDG. |
| ☒ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Type Analysis | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| 062-CEF9-7D-Q3-02-21 | L0209285 | Water | 0 of 3 outside limits | 0 of 6 outside limits |
| 062-CEF46-9I-Q3-02-20 | L0209310 | Water | 0 of 3 outside limits | 0 of 6 outside limits |

Remarks:
MS/MSD recoveries ranged from 83% to 116%.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## V. DUPLICATE ANALYSES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Laboratory duplicate analyses were performed with each sample batch. |

| Field Sample ID | Lab Duplicate Sample ID | Matrix |
|---|---|---|
| 062-CEF9-2S-Q3-02-21 | 062-CEF9-2S-Q3-02-21D | Water |
| 062-CEF46-2S-Q3-02-20 | 062-CEF46-2S-Q3-02-20D | Water |

☒ ☐ RPDs for the laboratory duplicate analyses were within criteria guidelines (±25% for water, or ±30% for soil).

☒ ☐ Field duplicates were associated with this QC batch.

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| 062-CEF9-9S-Q3-02-21 | 062-9DUP-Q3-02-21CF1 | Water |
| 062-CEF46-7I-Q3-02-20 | 062-46DUP-Q3-02-20 | Water |

☒ ☐ Qualification for field duplicates was attempted.

The following deficiencies were found:

| Type Duplicate Analysis | | Compound | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
| Field | Lab | | | | | |
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Remarks:
No deficiencies were noted.

## VI. REPORTING LIMITS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Reporting limits (RLs) met client criteria for all analytes. |

List any analytes for which the RL was not lower than the client or QAPP-specified RL (CRRL).

| Analyte | Reported RL | CRRL | Action |
|---|---|---|---|
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Remarks:
No deficiencies were noted..

## VII. SAMPLE RESULT VERIFICATION (Level D Only)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
| | | | |
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Volatile Organic Compounds by GC**

Project File: CTO-062 Sampling Date: 9/26/02

Laboratory: Kemron Receipt Date: 9/27/02

SDG Number: L0209516, L0209517 Matrix: ☐ Water ☒ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

| | |
|---|---|
| 062-CEF46-SB1-S-O3-02 (N) | 062-CEF46-EQB-W-O3-02 (EB) |
| 062-CEF46-SB2-S-O3-02 (N) | 062-CEF46-TB-W-O3-02 (TB) |
| 062-CEF46-SB14-S-O3-02 (N) | 062-CEF9-EQB-W-O3-02 (EB) |
| 062-CEF9-SB1-S-O3-02 (N) | 062-CEF9-TB-W-O3-02 (TB) |

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Method 8021
- ☐ USEPA Drinking Water (DW) Methods
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: sample preservation and holding time, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and equipment rinsate blank results, field duplicate, calibrations, and detection limits.

Reviewed by: _____ Date: 2/20/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

MS/MSD samples were not run with this SDG. LCS recoveries were acceptable. No action was taken.

The a,a,a-Trifluorotoluene surrogate recovery in sample 062-CEF46-SB14-S-Q3-02 was high at 303%. Positive detects in sample 062-CEF46-SB14-S-Q3-02 are considered estimated and flagged "J".

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIMES AND PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
VOC samples were analyzed up to 4 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

| Sample ID | Surrogate 1 | Surrogate 2 | Surrogate 3 | Surrogate 4 | Surrogate 5 | Surrogate 6 | Surrogate 7 |
|---|---|---|---|---|---|---|---|
| 062-CEF46-SB14-S-Q3-02 | 303 | | | | | | |
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 = 4-a,a,a-Trifluorotoluene** | 70 - 130 | 70 - 130 |
| **Surrogate 2 =** _____ | _____ | _____ |
| **Surrogate 3 =** _____ | _____ | _____ |
| **Surrogate 4 =** _____ | _____ | _____ |
| **Surrogate 5 =** _____ | _____ | _____ |
| **Surrogate 6 =** _____ | _____ | _____ |
| **Surrogate 7 =** _____ | _____ | _____ |

Remarks:
Positive detects in sample 062-CEF46-SB14-S-Q3-02 are estimated.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| | | | _ of _ outside limits | _ of __ outside limits |

Remarks:
MS/MSD samples were not run with this SDG. LCS recoveries were acceptable. No action was taken.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
|---|---|---|---|---|---|
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| WG126114-02 | L0209516 | Water | 0 of 5 outside limits |
| WG126148-02 | L0209516 | Soil | 0 of 5 outside limits |
| WG126384-02 | L0209516 | Soil | 0 of 5 outside limits |

Remarks:
LCS recoveries ranged from 89.2% to 113%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| WG126114-01 | Water | No blank detects noted | | | All Soil samples |
| WG126148-01 | Soil | No blank detects noted | | | All Soil samples |
| WG126384-01 | Soil | No blank detects noted | | | All Soil samples |
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Remarks:
No laboratory method blank detects noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| 062-CEF46-TB-W-Q3-02 | 062-CEF46-EQB-W-Q3-02 |
| 062-CEF9-TB-W-Q3-02 | 062-CEF9-EQB-W-Q3-02 |
| | |
| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062-CEF46-EQB-W-Q3-02 | Water | No blank detects noted | | | All soil samples |
| 062-CEF9-EQB-W-Q3-02 | Water | No blank detects noted | | | All soil samples |
| 062-CEF46-TB-W-Q3-02 | Water | No blank detects noted | | | All soil samples |
| 062-CEF9-TB-W-Q3-02 | Water | No blank detects noted | | | All soil samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| | | |

| | | |
|---|---|---|
| ☐ | ☐ | Qualification of field duplicate data was attempted. |
| ☐ | ☐ | Relative percent differences (RPDs) between duplicate sample results was less than 20% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL. |
| ☐ | ☐ | When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples). |

**Note: In the absence of project specified criteria the following guidelines are recommended:**

| | | |
|---|---|---|
| ☐ | ☐ | For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples). |
| ☐ | ☐ | For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples). |

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No field duplicate samples were included with this SDG.

## VII. INITIAL/CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of 6-point curve bracketing the expected sample concentrations, plus a blank. |
| ☒ | ☐ | The correlation coefficient of the initial calibration curve was ≥ _____; or the %RSD of the calibration response factors was ≤ 25%. |
| ☒ | ☐ | Continuing calibration verification (CCV) was performed at the frequency specified by the method and all analyte retention times were within the retention time windows defined during the initial calibration. |
| ☒ | ☐ | The %Difference was within ±25% (±____% for azeotropic distillation) for all CCVs. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| HP5 | 09/25/02 at 09:41 | All parameters are within control limits. | I | | | All samples | None |
| HP11 | 08/16/02 at 09:41 | All parameters are within control limits. | I | | | All samples | None |
| HP5 | 09/30/02 at 08:57 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/30/02 at 17:31 | All parameters are within control limits. | C | | | All samples | None |
| HP5 | 09/30/02 at 18:54 | All parameters are within control limits. | C | | | All samples | None |
| HP11 | 09/27/02 at 11:27 | All parameters are within control limits. | C | | | All samples | None |
| HP11 | 09/27/02 at 16:03 | All parameters are within control limits. | C | | | All samples | None |

Remarks:
No calibration deficiencies were noted.

## VIII. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
|---|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## IX. SYSTEM PERFORMANCE

Evaluate the system performance based on the following parameters:

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Abrupt baseline shift. |
| ☐ | ☒ | High background or retention time shifts. |
| ☐ | ☒ | Baseline rise at high temperature. |
| ☐ | ☒ | Extraneous peaks. |
| ☐ | ☒ | Loss of peak resolution. |
| ☐ | ☒ | Peak tailing or splitting. |

Remarks:
No deficiencies were noted.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
| | | | | |
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
| | | | |
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Polynuclear Aromatic Hydrocarbons (PAH) by HPLC**

Project File: CTO-062 Sampling Date: 9/26/02

Laboratory: Kemron Receipt Date: 9/27/02

SDG Number: L0209516, L0209517 Matrix: ☐ Water ☒ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

062-CEF46-SB1-S-O3-02 (N)
062-CEF46-SB2-S-O3-02 (N)
062-CEF46-SB14-S-O3-02 (N)
062-CEF9-SB1-S-O3-02 (N)
062-CEF46-EQB-W-O3-02 (EB)
062-CEF9-EQB-W-O3-02 (EB)

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☐ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☒ USEPA SW846 (SW-846) Methods (8310)
- ☐ USEPA Drinking Water (DW) Methods (524.2, 624, 1624)
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: holding time and sample preservation, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field, trip, and/or rinsate blank results, field duplicate results, instrument tuning and performance, initial and continuing calibrations, internal standard performance, and quantitation limits.

Reviewed by: _____ Date: 2/20/03

QA Concurrence by: _____ Date: _____

Validation Summary

The p-terphenyl surrogate recovery for sample 062-CEF46-SB2-S-Q3-02 was high at 184%.

PAH results for sample 062-CEF46-SB2-S-Q3-02 are considered estimated and flagged "J" for detects

The p-terphenyl surrogate recovery for sample 062-CEF9-SB1-S-Q3-02 was low at 24.1%.

PAH results for sample 062-CEF9-SB1-S-Q3-02 are considered estimated and flagged "J" for detects and "UJ" for non-detects.

MS/MSD samples were not run with this SDG. LCS recoveries were acceptable. No action was taken.

Anthracene was detected in field blank sample 062-CEF9-EQB-W-Q3-02 at 0.37 ug/L.

No soil sample detects were noted for anthracene. No action was taken.

Phenanthrene was detected in field blank sample 062-CEF9-EQB-W-Q3-02 at 0.39 ug/L.

No soil sample detects were noted for phenanthrene below the blank action level. No action was taken.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIME AND SAMPLE PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
Samples were extracted up to 7 days after collection and analyzed up to 20 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☐ | ☒ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

The following deficiencies were found:

| Sample ID | Surrogate 1 | % Recovery | Surrogate 2 | % Recovery |
|---|---|---|---|---|
| 062-CEF46-SB2-S-Q3-02 | Terphenyl-D14 | 184 | | |
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| | QC Limits: Water | Soil |
|---|---|---|
| **Surrogate 1 =** Terphenyl-D14 | 40 - 132 | 50 - 150 |
| **Surrogate 2 =** _____ | _____ | _____ |

Remarks:
Qualify sample results as estimated.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| | | | _ of _ outside limits | _ of __ outside limits |

Remarks:
MS/MSD samples were not run with this SDG. LCS recoveries were acceptable. No action was taken.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
|---|---|---|---|---|---|
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| WG126384-02 | L0209516 | Solid | 0 of 18 outside limits |

Remarks:
LCS recoveries ranged from 43.3% to 85.6%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| WG126384-01 | Water | No detects noted | | | All soil samples |
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Remarks:
No laboratory method blank detects were noted.

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | 062-CEF46-EQB-W-Q3-02 |
| | 062-CEF9-EQB-W-Q3-02 |
| | |
| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062-CEF46-EQB-W-Q3-02 | Water | Anthracene | 0.34 | 1.7 | All soil samples |
| 062-CEF9-EQB-W-Q3-02 | Water | Anthracene | 0.37 | 1.85 | All soil samples |
| 062-CEF9-EQB-W-Q3-02 | Water | Phenanthrene | 0.39 | 1.95 | All soil samples |
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Remarks:
Sample results less than the blank action level are qualified as "U".

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| | | |

☐ ☐ Qualification of field duplicate data was attempted.

☐ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 20% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No field duplicate samples were included with this SDG.

## VII. INITIAL AND CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of a minimum of 5 standards with concentrations over the calibration range. |
| ☒ | ☐ | Percent relative standard deviation (%RSD) for all compounds was ≤20% **OR** the coefficient of the determination (COD) was ≥0.995 for all calibration factors in the initial calibration. |
| ☒ | ☐ | The calibration verification standard (midpoint concentration) was analyzed at the beginning of every 12-hour analytical shift and at the end of the analytical sequence to bracket the sample analyses. |
| ☒ | ☐ | Calibration verification standards (midpoint concentration) were analyzed every 10 samples. |
| ☒ | ☐ | For the calibration verification(s), the percent difference (%D) was within ±15% of the response obtained during the initial calibration for all compounds. |
| ☒ | ☐ | Standard retention times were within control windows. |
| ☒ | ☐ | The analytical sequence was followed. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| HPLC4 | 10/04/02 at 17:06 | All parameters are within control limits. | I | | | All samples | None |
| HPLC4 | 10/05/02 at 15:07 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 10/06/02 at 01:50 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 10/06/02 at 12:12 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 10/06/02 at 19:45 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 10/14/02 at 18:18 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 10/14/02 at 21:07 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 10/16/02 at 17:32 | All parameters are within control limits. | C | | | All samples | None |
| HPLC4 | 10/17/02 at 00:29 | All parameters are within control limits. | C | | | All samples | None |
| | | | | | | | |
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Remarks:
No discrepancies were noted.

## VIII. INTERNAL STANDARDS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | An internal standard calibration was performed. |
| ☐ | ☐ | All retention times for the internal standards were within control limits. |
| ☐ | ☐ | All internal standard areas were within control limits. |
| ☐ | ☐ | No deficiencies were found. |

The following deficiencies were found:

| Sample ID | Internal Standard | Sample IS Area | IS Area Limits Upper | IS Area Limits Lower | Sample IS RT | IS RT Limit Upper | IS RT Limit Lower |
|---|---|---|---|---|---|---|---|
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Internal Standard 1 = _____

Internal Standard 2 = _____

Remarks:
No discrepancies were noted.

## IX. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## X. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
| | | | |
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Remarks:
No deficiencies were noted.

## XI. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
|---|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

**QUALITY ASSURANCE REVIEW**
**DATA VALIDATION CHECKLIST**
**Total Petroleum Hydrocarbons (TPH) by GC**

Project File: CTO-062 Sampling Date: 9/26/02

Laboratory: Kemron Receipt Date: 9/27/02

SDG Number: L0209516, L0209517 Matrix: ☐ Water ☒ Soil/Sediment ☐ Air

Sample Identification numbers:
N = Normal; FB = Field Blank; EB = Rinsate Blank; FD = Field Duplicate; TB = Trip Blank

062-CEF46-SB1-S-Q3-02 (N)
062-CEF46-SB2-S-Q3-02 (N)
062-CEF46-SB14-S-Q3-02 (N)
062-CEF9-SB1-S-Q3-02 (N)
062-CEF46-EQB-W-Q3-02 (EB)
062-CEF9-EQB-W-Q3-02 (EB)

The general criteria used to determine the data performance and quality assurance were based on:

- ☐ Hazardous Waste Remedial Actions Program (HAZWRAP) Requirements for Quality Control of Analytical Data (HAZWRAP DOE/HWP-65/R2)
- ☒ USEPA Contract Laboratory Program (CLP) National Laboratory Functional Guidelines for Organic Data Review (EPA-540/R-94/012, February 1993)
- ☐ USEPA SW846 (SW-846) Methods
- ☐ USEPA Drinking Water (DW) Methods
- ☐ Air Force Center for Environmental Excellence (AFCEE) QAPP Version 3.0
- ☒ Other: Project and Laboratory established accuracy and precision control limits.

The following parameters were examined: sample preservation and holding time, surrogate spike results, matrix spike / matrix spike duplicate (MS/MSD) results, laboratory control sample (LCS) results, method blank results, field and equipment rinsate blank results, field duplicate, calibrations, and detection limits.

Reviewed by: _____ Date: 2/20/03

QA Concurrence by: _____ Date: _____

**Validation Summary**

MS/MSD samples were not run with this SDG. LCS recoveries were acceptable. No action was taken.

TPH was detected in laboratory method blank samples and field blank samples up to 6230 ug/Kg.

Soil sample detections were all well above the blank action level of 31150 ug/Kg. No action was taken.

**Qualifiers:**

U - Not detected.
R - Unusable.
J - Approximate data due to other quality control criteria.
UJ - Not detected, limit of detection approximate.

## I. HOLDING TIMES AND PRESERVATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All samples were handled and preserved according to requirements. |
| ☒ | ☐ | All samples were extracted and analyzed within holding time criteria. |

The following deficiencies were found:

| Sample ID | Matrix | Preservation | Collection Date | Extraction Date | Analysis Date | Qualifier Flag |
|---|---|---|---|---|---|---|
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Remarks:
TPH Samples were extracted up to 7 days after collection and analyzed up to 25 days after collection.

## II. SURROGATE SPIKE RECOVERIES

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | At least one of the deficient recoveries was outside control limits due to dilutions. |

The following deficiencies were found:

| Sample ID | Surrogate 1 | % Recovery | Surrogate 2 | % Recovery |
|---|---|---|---|---|
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| | QC Limits: Water | Soil |
|---|---|---|
| **Gasoline:** | | |
| **Surrogate 1 =** _____ | _____ | _____ |
| **Surrogate 2 =** _____ | _____ | _____ |
| **Diesel:** | | |
| **Surrogate 1 =** o-Terphenyl | 49 - 174 | 43 - 136 |
| **Surrogate 2 =** _____ | _____ | _____ |

Remarks:
Surrogate recoveries ranged from 70% to 79.8%.

## III. MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSIS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Matrix Spike/Matrix Spike Duplicate (MS/MSD) analysis was requested for this SDG. |
| ☐ | ☐ | All recoveries and relative percent differences (RPDs) were within control limits. |

The following deficiencies were found:

| Matrix | Analyte | MS Recovery | MSD Recovery | MS/MSD QC Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|
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**MS/MSD Summary:** Recoveries per the total number of matrix spike recoveries in the fraction. See Form III in data package.

| Sample ID | SDG | Matrix | RPD | Recovery |
|---|---|---|---|---|
| | | | _ of _ outside limits | _ of __ outside limits |

Remarks:
MS/MSD samples were not run with this SDG. LCS recoveries were acceptable. No action was taken.

**Note: No action will be taken based on MS/MSD data alone. Sample results may be affected by either a positive or negative bias due to deficient recoveries.**

## IV. LABORATORY CONTROL SAMPLE

| Yes | No | |
|---|---|---|
| ☒ | ☐ | At least one LCS analysis was performed per batch of samples. |
| ☒ | ☐ | LCS recoveries were within criteria. |

The following compounds fell outside the specified QC limits:

| LCS ID | Matrix | Compound | %R | Control Limits | Qualifier Flags |
|---|---|---|---|---|---|
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**LCS Summary:** Recoveries per the total number of matrix spike recoveries in the fraction.

| Sample ID | SDG | Matrix | Recovery |
|---|---|---|---|
| WG126437-02 | L0209516 | Solid | 0 of 1 outside limits |
| WG126437-03 | L0209516 | Solid | 0 of 1 outside limits |
| WG126468-02 | L0209516 | Water | 0 of 1 outside limits |
| WG126468-03 | L0209516 | Water | 0 of 1 outside limits |
| WG126437-02 | L0209516 | Solid | 0 of 1 outside limits |
| WG126468-02 | L0209516 | Water | 0 of 1 outside limits |

Remarks:
LCS recoveries ranged from 83.3% to 99.7%.

## V. BLANK ANALYSIS RESULTS

### A. Laboratory Blanks (Deficiencies for method blanks, instrument blanks, etc.):

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| WG126468-01 | Water | No detects noted | | | All soil samples |
| WG126437-01 | Solid | TPH | 6230 | 31150 | All soil samples |
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Remarks:
Qualify sample results less than the blank action level as "U".

**B. Field QC (Blanks):**

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Field QC samples were associated with this SDG. |

Field QC associated with this SDG were:

| Field Blanks | Equipment Rinsate Blanks |
|---|---|
| | 062-CEF46-EQB-W-Q3-02 |
| | 062-CEF9-EQB-W-Q3-02 |
| | |
| | |

The following contaminants were detected in the field QC:

| Blank ID | Matrix | Compound | Conc | Action Level | Associated Samples |
|---|---|---|---|---|---|
| 062-CEF46-EQB-W-Q3-02 | Water | TPH | 1320 | 6600 | All samples |
| 062-CEF9-EQB-W-Q3-02 | Water | TPH | 1250 | 6250 | All samples |
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Remarks:
No field blank detects were noted.

## VI. FIELD PRECISION RESULTS

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Field duplicate data were included in this data package. |

| Field Sample ID | Duplicate Sample ID | Matrix |
|---|---|---|
| | | |

☐ ☐ Qualification of field duplicate data was attempted.

☐ ☐ Relative percent differences (RPDs) between duplicate sample results was less than 20% for liquid (30% for solid samples) when both sample values were ≥5 x MDL or the RL.

☐ ☐ When one or both results were <5 x MDL or the RL, RPDs between duplicate sample results were less than _____ for water samples (_____ for soil samples).

**Note: In the absence of project specified criteria the following guidelines are recommended:**

☐ ☐ For sample results >5 x MDL or the RL, the RPD between field duplicate samples was <40% for water samples (70% for soil samples).

☐ ☐ For sample results <5 x MDL or the RL, the RPD between field duplicate samples was less than the MDL or the RL for water samples (less than 2x the MDL or the RL for soil samples).

The relative percent difference (RPD) is calculated for each positive result identified in either the sample or field duplicate.

RPD is calculated using the following equation:

$$RPD: \frac{|A-B|}{(A+B)/2} \times 100$$

A = Sample Result
B = Duplicate Sample Result

**Field Precision Evaluation Deficiency Worksheet:**

| Analyte | MDA/ RL | 5 x MDA/ 5 x RL | Sample Result | Duplicate Result | RPD | Action |
|---|---|---|---|---|---|---|
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Remarks:
No field duplicate samples were included with this SDG.

## VII. INITIAL/CONTINUING CALIBRATIONS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | The initial calibration consisted of 6-point curve bracketing the expected sample concentrations, plus a blank. |
| ☒ | ☐ | The correlation coefficient of the initial calibration curve was ≥ _____; or the %RSD of the calibration response factors was ≤ 25%. |
| ☒ | ☐ | Continuing calibration verification (CCV) was performed at the frequency specified by the method and all analyte retention times were within the retention time windows defined during the initial calibration. |
| ☒ | ☐ | The %Difference was within ±25% (±____% for azeotropic distillation) for all CCVs. |

The following deficiencies were found:

| Inst ID | Date/ Time | Analyte | I / C | % RSD | %D | Affected Samples | Action |
|---|---|---|---|---|---|---|---|
| HP8 | 10/19/02 at 10:38 | All parameters are within control limits. | I | | | All samples | None |
| HP8 | 10/19/02 at 11:58 | All parameters are within control limits. | C | | | All samples | None |
| HP8 | 10/19/02 at 11:58 | All parameters are within control limits. | C | | | All samples | None |
| HP8 | 10/19/02 at 20:51 | All parameters are within control limits. | C | | | All samples | None |
| HP8 | 10/20/02 at 06:29 | All parameters are within control limits. | C | | | All samples | None |
| HP8 | 10/20/02 at 19:48 | All parameters are within control limits. | C | | | All samples | None |
| HP8 | 10/21/02 at 01:55 | All parameters are within control limits. | C | | | All samples | None |
| | | | | | | | |
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Remarks:
No calibration deficiencies were noted.

## VIII. COMPOUND IDENTIFICATION

| Yes | No | |
|---|---|---|
| ☒ | ☐ | All positive detects were verified using a confirmation column. |
| ☒ | ☐ | Retention times of reported compounds were within the calculated window for both the primary and confirmatory chromatographic columns. |
| ☒ | ☐ | Confirmation analysis was not performed. All positive detects were considered estimated (J). |
| ☒ | ☐ | The % Difference (%D) between the first and second column results for all compounds was within guidelines. |
| ☒ | ☐ | Raw data were included with the analytical report. Chromatograms were evaluated. |

The following deficiencies were found:

| Sample ID | Compound | RT 1st Column | Result 1st Column | RT 2nd Column | Result 2nd Column | % D | Action |
|---|---|---|---|---|---|---|---|
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Remarks:
No deficiencies were noted.

## IX. SYSTEM PERFORMANCE

Evaluate the system performance based on the following parameters:

| Yes | No | |
|---|---|---|
| ☐ | ☒ | Abrupt baseline shift. |
| ☐ | ☒ | High background or retention time shifts. |
| ☐ | ☒ | Baseline rise at high temperature. |
| ☐ | ☒ | Extraneous peaks. |
| ☐ | ☒ | Loss of peak resolution. |
| ☐ | ☒ | Peak tailing or splitting. |

Remarks:
No deficiencies were noted.

## X. QUANTITATION LIMIT RESULTS

| Yes | No | |
|---|---|---|
| ☒ | ☐ | No deficiencies were found. |
| ☐ | ☒ | Reported quantitation limits (RQLs) were provided, but contract required quantitation limits (CRQLs) were not met. |

The following deficiencies were found:

| Sample ID | Compound(s) | RQL | CRQL | Action |
|---|---|---|---|---|
| | | | | |
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Remarks:
No deficiencies were noted.

## XI. SAMPLE RESULT VERIFICATION (LEVEL D ONLY)

| Yes | No | |
|---|---|---|
| ☒ | ☐ | Calculations for all positive hits were verified ☐ or spot-checked ☒. |

The following discrepancies were found:

| Analyte | Reported Value | Recalculated Value | Samples |
|---|---|---|---|
| | | | |
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Remarks:
No deficiencies were noted.

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220910201 | 01Q30228 | Metals | Lead | 5 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Naphthalene | 1 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Anthracene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Chrysene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Fluorene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Naphthalene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Phenanthrene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | TERPHENYL-D14 | 82.9 = | PERCENT |
| 220910201 | 01Q30228 | PAHs | Pyrene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | TPH | o-Terphenyl | 82 = | PERCENT |
| 220910201 | 01Q30228 | TPH | Petroleum Hydrocarbons | 0.22 = | MG/L |
| 220910201 | 01Q30228 | TPH | Nonatriacontane | 66.7 = | PERCENT |
| 220910201 | 01Q30228 | VOCs | 1,1,2-Trichloroethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,1,2,2-Tetrachloroethane | 0.2 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Tetrachloroethene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,3,5-Trimethylbenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Styrene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Bromoform | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,1,1,2-Tetrachloroethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,1,1-Trichloroethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | n-Propylbenzene | 0.19 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2,3-Trichlorobenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2,4-Trichlorobenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Trichloroethene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Chloroform | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2,4-Trimethylbenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Vinyl chloride | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Xylene (total) | 2 U | UG/L |
| 220910201 | 01Q30228 | VOCs | m,p-Xylene | 2 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Methylene chloride | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2,3-Trichloropropane | 0.46 U | UG/L |
| 220910201 | 01Q30228 | VOCs | sec-Butylbenzene | 0.21 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Dibromochloromethane | 0.4 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 4-Isopropyltoluene | 0.19 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Carbon tetrachloride | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Chloromethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Chloroethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 4-Chlorotoluene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 2-Chlorotoluene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | TOLUENE-D8 | 97.8 = | PERCENT |
| 220910201 | 01Q30228 | VOCs | 1,2-Dibromo-3-chloropropane | 0.56 U | UG/L |
| 220910201 | 01Q30228 | VOCs | tert-Butylbenzene | 0.38 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Chlorobenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | n-Butylbenzene | 0.35 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Bromomethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Bromochloromethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Bromobenzene | 0.15 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 4-Bromofluorobenzene | 98 = | PERCENT |
| 220910201 | 01Q30228 | VOCs | Isopropylbenzene (Cumene) | 0.2 U | UG/L |
| 220910201 | 01Q30228 | VOCs | o-Xylene | 1 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220910201 | 01Q30228 | VOCs | Bromodichloromethane | 0.6 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Benzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Trichlorofluoromethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Hexachlorobutadiene | 0.46 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Toluene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Dichlorodifluoromethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2-Dibromoethane | 0.25 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Ethylbenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 2,2-Dichloropropane | 0.43 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,3-Dichloropropane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2-Dichloropropane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | trans-1,2-Dichloroethene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | cis-1,2-Dichloroethene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | Dibromomethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | DIBROMOFLUOROMETHANE | 97.2 = | PERCENT |
| 220910201 | 01Q30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2-Dichloroethane | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,2-DICHLOROETHANE-D4 | 103.8 = | PERCENT |
| 220910201 | 01Q30228 | VOCs | 1,2-Dichlorobenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,3-Dichlorobenzene | 1 U | UG/L |
| 220910201 | 01Q30228 | VOCs | 1,4-Dichlorobenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | Metals | Lead | 5 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | TERPHENYL-D14 | 87.1 = | PERCENT |
| 220910202 | 02Q30228 | PAHs | Fluoranthene | 0.34 = | UG/L |
| 220910202 | 02Q30228 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Chrysene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Fluorene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | 2-Methylnaphthalene | 0.44 = | UG/L |
| 220910202 | 02Q30228 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Phenanthrene | 0.41 = | UG/L |
| 220910202 | 02Q30228 | PAHs | Anthracene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Pyrene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Naphthalene | 1 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | PAHs | Naphthalene | 0.25 = | UG/L |
| 220910202 | 02Q30228 | TPH | Nonatriacontane | 119.4 = | PERCENT |
| 220910202 | 02Q30228 | TPH | o-Terphenyl | 170 = | PERCENT |
| 220910202 | 02Q30228 | TPH | Petroleum Hydrocarbons | 1.6 J | MG/L |
| 220910202 | 02Q30228 | VOCs | Trichloroethene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | n-Propylbenzene | 0.19 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,1,2,2-Tetrachloroethane | 0.2 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Tetrachloroethene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Styrene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Bromoform | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,1,1,2-Tetrachloroethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,1,1-Trichloroethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,1,2-Trichloroethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2,4-Trichlorobenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Chloroform | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2,3-Trichloropropane | 0.46 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2,4-Trimethylbenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,3,5-Trimethylbenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Vinyl chloride | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Xylene (total) | 2 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220910202 | 02Q30228 | VOCs | m,p-Xylene | 2 U | UG/L |
| 220910202 | 02Q30228 | VOCs | o-Xylene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 4-Isopropyltoluene | 0.19 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2,3-Trichlorobenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | sec-Butylbenzene | 0.21 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Dibromochloromethane | 0.4 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Carbon tetrachloride | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Chloromethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Chloroethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 4-Chlorotoluene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 2-Chlorotoluene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | TOLUENE-D8 | 100 = | PERCENT |
| 220910202 | 02Q30228 | VOCs | DIBROMOFLUOROMETHANE | 101.4 = | PERCENT |
| 220910202 | 02Q30228 | VOCs | tert-Butylbenzene | 0.38 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Chlorobenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | n-Butylbenzene | 0.35 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Bromomethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Bromochloromethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Bromobenzene | 0.15 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 4-Bromofluorobenzene | 103.4 = | PERCENT |
| 220910202 | 02Q30228 | VOCs | Methylene chloride | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2-Dibromo-3-chloropropane | 0.56 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Bromodichloromethane | 0.6 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Benzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Trichlorofluoromethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Isopropylbenzene (Cumene) | 0.2 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Hexachlorobutadiene | 0.46 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Toluene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Dichlorodifluoromethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Dibromomethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2-Dibromoethane | 0.25 U | UG/L |
| 220910202 | 02Q30228 | VOCs | Ethylbenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 2,2-Dichloropropane | 0.43 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,3-Dichloropropane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2-Dichloropropane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | trans-1,2-Dichloroethene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2-Dichloroethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,4-Dichlorobenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,3-Dichlorobenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2-Dichlorobenzene | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | 1,2-DICHLOROETHANE-D4 | 104.4 = | PERCENT |
| 220910202 | 02Q30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910202 | 02Q30228 | VOCs | cis-1,2-Dichloroethene | 1 U | UG/L |
| 220910203 | 03Q30228 | Metals | Lead | 31.3 = | UG/L |
| 220910203 | 03Q30228 | PAHs | Fluoranthene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Fluorene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Dibenz(a,h)anthracene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Chrysene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Benzo(k)fluoranthene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Indeno(1,2,3-cd)pyrene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Benzo(b)fluoranthene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Pyrene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Benzo(a)pyrene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Benzo(g,h,i)perylene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | 1-Methylnaphthalene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | 2-Methylnaphthalene | 0.39 = | UG/L |
| 220910203 | 03Q30228 | PAHs | Naphthalene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Acenaphthylene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | TERPHENYL-D14 | 80.5 = | PERCENT |
| 220910203 | 03Q30228 | PAHs | Naphthalene | 1 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Anthracene | 0.22 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220910203 | 03Q30228 | PAHs | Acenaphthene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Benzo(a)anthracene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | PAHs | Phenanthrene | 0.22 U | UG/L |
| 220910203 | 03Q30228 | TPH | Nonatriacontane | 75.8 = | PERCENT |
| 220910203 | 03Q30228 | TPH | Petroleum Hydrocarbons | 0.24 J | MG/L |
| 220910203 | 03Q30228 | TPH | o-Terphenyl | 74.5 = | PERCENT |
| 220910203 | 03Q30228 | VOCs | Chloroform | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | n-Propylbenzene | 0.19 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,1,2,2-Tetrachloroethane | 0.2 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Tetrachloroethene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Styrene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Bromoform | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,1,1,2-Tetrachloroethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,1,1-Trichloroethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,1,2-Trichloroethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2,3-Trichlorobenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Trichloroethene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2,3-Trichloropropane | 0.46 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2,4-Trimethylbenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,3,5-Trimethylbenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Vinyl chloride | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Xylene (total) | 2 U | UG/L |
| 220910203 | 03Q30228 | VOCs | m,p-Xylene | 2 U | UG/L |
| 220910203 | 03Q30228 | VOCs | o-Xylene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 4-Isopropyltoluene | 0.19 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2,4-Trichlorobenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | tert-Butylbenzene | 0.38 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Bromodichloromethane | 0.6 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Dibromochloromethane | 0.4 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Carbon tetrachloride | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Chloromethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Chloroethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 4-Chlorotoluene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 2-Chlorotoluene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | DIBROMOFLUOROMETHANE | 98.2 = | PERCENT |
| 220910203 | 03Q30228 | VOCs | Benzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Chlorobenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | sec-Butylbenzene | 0.21 U | UG/L |
| 220910203 | 03Q30228 | VOCs | n-Butylbenzene | 0.35 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Bromomethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Bromochloromethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Bromobenzene | 0.15 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 4-Bromofluorobenzene | 101 = | PERCENT |
| 220910203 | 03Q30228 | VOCs | 1,2-Dibromo-3-chloropropane | 0.56 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Methylene chloride | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | TOLUENE-D8 | 98.4 = | PERCENT |
| 220910203 | 03Q30228 | VOCs | Dichlorodifluoromethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Isopropylbenzene (Cumene) | 0.2 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Toluene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Hexachlorobutadiene | 0.46 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Dibromomethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Trichlorofluoromethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2-Dibromoethane | 0.25 U | UG/L |
| 220910203 | 03Q30228 | VOCs | Ethylbenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 2,2-Dichloropropane | 0.43 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,3-Dichloropropane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2-Dichloropropane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | trans-1,2-Dichloroethene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2-Dichloroethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | cis-1,2-Dichloroethene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,4-Dichlorobenzene | 1 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220910203 | 03Q30228 | VOCs | 1,3-Dichlorobenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2-Dichlorobenzene | 1 U | UG/L |
| 220910203 | 03Q30228 | VOCs | 1,2-DICHLOROETHANE-D4 | 104.4 = | PERCENT |
| 220910203 | 03Q30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | Metals | Lead | 5 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Chrysene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Fluorene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Anthracene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Phenanthrene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Naphthalene | 1 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Naphthalene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | TERPHENYL-D14 | 83.6 = | PERCENT |
| 220910212 | DUPQ30228 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | Pyrene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | TPH | Nonatriacontane | 72.3 = | PERCENT |
| 220910212 | DUPQ30228 | TPH | Petroleum Hydrocarbons | 0.22 U | MG/L |
| 220910212 | DUPQ30228 | TPH | o-Terphenyl | 100 = | PERCENT |
| 220910212 | DUPQ30228 | VOCs | 1,2,4-Trichlorobenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Isopropylbenzene (Cumene) | 0.2 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | n-Propylbenzene | 0.19 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,1,2,2-Tetrachloroethane | 0.2 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Tetrachloroethene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Styrene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Bromoform | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,1,1,2-Tetrachloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,1,1-Trichloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,2,3-Trichlorobenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Trichloroethene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Chloroform | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,2,3-Trichloropropane | 0.46 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,2,4-Trimethylbenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,3,5-Trimethylbenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Vinyl chloride | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Xylene (total) | 2 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | m,p-Xylene | 2 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | o-Xylene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,1,2-Trichloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | sec-Butylbenzene | 0.21 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 4-Isopropyltoluene | 0.19 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Carbon tetrachloride | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Chloromethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Chloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 4-Chlorotoluene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 2-Chlorotoluene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Chlorobenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Dibromochloromethane | 0.4 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Benzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Toluene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | n-Butylbenzene | 0.35 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Bromomethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Bromochloromethane | 1 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220910212 | DUPQ30228 | VOCs | Bromobenzene | 0.15 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 4-Bromofluorobenzene | 101.2 = | PERCENT |
| 220910212 | DUPQ30228 | VOCs | Bromodichloromethane | 0.6 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Hexachlorobutadiene | 0.46 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Methylene chloride | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | TOLUENE-D8 | 98.4 = | PERCENT |
| 220910212 | DUPQ30228 | VOCs | 1,2-Dichloropropane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Dichlorodifluoromethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | tert-Butylbenzene | 0.38 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,2-Dibromo-3-chloropropane | 0.56 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,2-Dibromoethane | 0.25 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Ethylbenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,3-Dichloropropane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Trichlorofluoromethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | trans-1,2-Dichloroethene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | cis-1,2-Dichloroethene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | DIBROMOFLUOROMETHANE | 98 = | PERCENT |
| 220910212 | DUPQ30228 | VOCs | 2,2-Dichloropropane | 0.43 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | Dibromomethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,2-Dichloroethane | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,2-DICHLOROETHANE-D4 | 109.6 = | PERCENT |
| 220910212 | DUPQ30228 | VOCs | 1,2-Dichlorobenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,3-Dichlorobenzene | 1 U | UG/L |
| 220910212 | DUPQ30228 | VOCs | 1,4-Dichlorobenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | Metals | Lead | 5 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Chrysene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Fluorene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Naphthalene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Phenanthrene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | TERPHENYL-D14 | 62.4 = | PERCENT |
| 220910213 | EQBQ30228 | PAHs | Pyrene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Naphthalene | 1 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Anthracene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | TPH | Nonatriacontane | 78.8 = | PERCENT |
| 220910213 | EQBQ30228 | TPH | Petroleum Hydrocarbons | 0.22 U | MG/L |
| 220910213 | EQBQ30228 | TPH | o-Terphenyl | 90 = | PERCENT |
| 220910213 | EQBQ30228 | VOCs | Chloroform | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | n-Propylbenzene | 0.19 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,1,2,2-Tetrachloroethane | 0.2 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Tetrachloroethene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Styrene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Bromoform | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,1,1,2-Tetrachloroethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,1,1-Trichloroethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,1,2-Trichloroethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2,3-Trichlorobenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Trichloroethene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2,3-Trichloropropane | 0.46 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220910213 | EQBQ30228 | VOCs | 1,2,4-Trimethylbenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,3,5-Trimethylbenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Vinyl chloride | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Xylene (total) | 2 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | m,p-Xylene | 2 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | o-Xylene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | sec-Butylbenzene | 0.21 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2,4-Trichlorobenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Bromodichloromethane | 0.6 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2-Dibromo-3-chloropropane | 0.56 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Dibromochloromethane | 0.4 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 4-Isopropyltoluene | 0.19 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Carbon tetrachloride | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Chloromethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Chloroethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 4-Chlorotoluene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | DIBROMOFLUOROMETHANE | 101.2 = | PERCENT |
| 220910213 | EQBQ30228 | VOCs | Toluene | 0.66 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 2-Chlorotoluene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | tert-Butylbenzene | 0.38 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Benzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | n-Butylbenzene | 0.35 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Bromomethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Bromochloromethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Bromobenzene | 0.15 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 4-Bromofluorobenzene | 100.4 = | PERCENT |
| 220910213 | EQBQ30228 | VOCs | Methylene chloride | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Chlorobenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Dichlorodifluoromethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Isopropylbenzene (Cumene) | 0.2 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | TOLUENE-D8 | 99 = | PERCENT |
| 220910213 | EQBQ30228 | VOCs | Hexachlorobutadiene | 0.46 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Dibromomethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Trichlorofluoromethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2-Dibromoethane | 0.25 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | Ethylbenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 2,2-Dichloropropane | 0.43 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,3-Dichloropropane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2-Dichloropropane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2-Dichlorobenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | trans-1,2-Dichloroethene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2-DICHLOROETHANE-D4 | 102.6 = | PERCENT |
| 220910213 | EQBQ30228 | VOCs | 1,3-Dichlorobenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,4-Dichlorobenzene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,1-Dichloroethane | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | cis-1,2-Dichloroethene | 1 U | UG/L |
| 220910213 | EQBQ30228 | VOCs | 1,2-Dichloroethane | 1 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Naphthalene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Anthracene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Dibenz(a,h)anthracene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Benzo(a)anthracene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Benzo(b)fluoranthene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Acenaphthylene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Benzo(k)fluoranthene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Chrysene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Fluorene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Fluoranthene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Indeno(1,2,3-cd)pyrene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Pyrene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | 2-Methylnaphthalene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Phenanthrene | 0.2 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220917801 | 062MW4Q302 | PAHs | TERPHENYL-D14 | 76.7 = | PERCENT |
| 220917801 | 062MW4Q302 | PAHs | Benzo(a)pyrene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Acenaphthene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | 1-Methylnaphthalene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | PAHs | Benzo(g,h,i)perylene | 0.2 U | UG/L |
| 220917801 | 062MW4Q302 | VOCs | tert-Butyl methyl ether (MTBE) | 0.57 U | UG/L |
| 220917801 | 062MW4Q302 | VOCs | m,p-Xylene | 1 U | UG/L |
| 220917801 | 062MW4Q302 | VOCs | Ethylbenzene | 0.5 U | UG/L |
| 220917801 | 062MW4Q302 | VOCs | Toluene | 0.5 U | UG/L |
| 220917801 | 062MW4Q302 | VOCs | Benzene | 0.5 U | UG/L |
| 220917801 | 062MW4Q302 | VOCs | 4-Bromofluorobenzene | 97 = | PERCENT |
| 220917801 | 062MW4Q302 | VOCs | o-Xylene | 0.5 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Anthracene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Chrysene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Fluorene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | TERPHENYL-D14 | 86.2 = | PERCENT |
| 220917802 | 062MW9Q302 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Phenanthrene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Naphthalene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Pyrene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220917802 | 062MW9Q302 | VOCs | Benzene | 0.5 U | UG/L |
| 220917802 | 062MW9Q302 | VOCs | o-Xylene | 0.5 U | UG/L |
| 220917802 | 062MW9Q302 | VOCs | m,p-Xylene | 1 U | UG/L |
| 220917802 | 062MW9Q302 | VOCs | tert-Butyl methyl ether (MTBE) | 0.57 U | UG/L |
| 220917802 | 062MW9Q302 | VOCs | Toluene | 0.5 U | UG/L |
| 220917802 | 062MW9Q302 | VOCs | 4-Bromofluorobenzene | 89.3 = | PERCENT |
| 220917802 | 062MW9Q302 | VOCs | Ethylbenzene | 0.5 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Phenanthrene | 0.26 = | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Naphthalene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Fluorene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | 1-Methylnaphthalene | 0.34 = | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Pyrene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Chrysene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | TERPHENYL-D14 | 80 = | PERCENT |
| 220917803 | 062MW13Q302 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Anthracene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220917803 | 062MW13Q302 | VOCs | Benzene | 0.5 U | UG/L |
| 220917803 | 062MW13Q302 | VOCs | m,p-Xylene | 1 U | UG/L |
| 220917803 | 062MW13Q302 | VOCs | tert-Butyl methyl ether (MTBE) | 0.57 U | UG/L |
| 220917803 | 062MW13Q302 | VOCs | Toluene | 0.5 U | UG/L |
| 220917803 | 062MW13Q302 | VOCs | o-Xylene | 0.17 F | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220917803 | 062MW13Q302 | VOCs | 4-Bromofluorobenzene | 94.3 = | PERCENT |
| 220917803 | 062MW13Q302 | VOCs | Ethylbenzene | 0.4 F | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Chrysene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Fluorene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Anthracene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Phenanthrene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | TERPHENYL-D14 | 86.7 = | PERCENT |
| 220917811 | 062VEW5Q302 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Pyrene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | PAHs | Naphthalene | 0.21 U | UG/L |
| 220917811 | 062VEW5Q302 | VOCs | Benzene | 0.5 U | UG/L |
| 220917811 | 062VEW5Q302 | VOCs | m,p-Xylene | 1 U | UG/L |
| 220917811 | 062VEW5Q302 | VOCs | tert-Butyl methyl ether (MTBE) | 0.57 U | UG/L |
| 220917811 | 062VEW5Q302 | VOCs | Toluene | 0.5 U | UG/L |
| 220917811 | 062VEW5Q302 | VOCs | 4-Bromofluorobenzene | 92.3 = | PERCENT |
| 220917811 | 062VEW5Q302 | VOCs | o-Xylene | 0.5 U | UG/L |
| 220917811 | 062VEW5Q302 | VOCs | Ethylbenzene | 0.5 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Naphthalene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Pyrene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Chrysene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Fluorene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Phenanthrene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | TERPHENYL-D14 | 82.6 = | PERCENT |
| 220917812 | 062VEW6Q302 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Anthracene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220917812 | 062VEW6Q302 | VOCs | 4-Bromofluorobenzene | 93.3 = | PERCENT |
| 220917812 | 062VEW6Q302 | VOCs | Benzene | 0.5 U | UG/L |
| 220917812 | 062VEW6Q302 | VOCs | Toluene | 0.5 U | UG/L |
| 220917812 | 062VEW6Q302 | VOCs | Ethylbenzene | 0.5 U | UG/L |
| 220917812 | 062VEW6Q302 | VOCs | tert-Butyl methyl ether (MTBE) | 0.57 U | UG/L |
| 220917812 | 062VEW6Q302 | VOCs | m,p-Xylene | 1 U | UG/L |
| 220917812 | 062VEW6Q302 | VOCs | o-Xylene | 0.5 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Benzo(g,h,i)perylene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | 1-Methylnaphthalene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Chrysene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Dibenz(a,h)anthracene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Fluoranthene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Benzo(k)fluoranthene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | 2-Methylnaphthalene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Naphthalene | 0.21 U | UG/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| 220917813 | 062VEW7Q302 | PAHs | Phenanthrene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Pyrene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Fluorene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | TERPHENYL-D14 | 73.7 = | PERCENT |
| 220917813 | 062VEW7Q302 | PAHs | Benzo(a)pyrene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Benzo(a)anthracene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Anthracene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Acenaphthylene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Acenaphthene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Indeno(1,2,3-cd)pyrene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | PAHs | Benzo(b)fluoranthene | 0.21 U | UG/L |
| 220917813 | 062VEW7Q302 | VOCs | Toluene | 0.5 U | UG/L |
| 220917813 | 062VEW7Q302 | VOCs | 4-Bromofluorobenzene | 95 = | PERCENT |
| 220917813 | 062VEW7Q302 | VOCs | Benzene | 0.5 U | UG/L |
| 220917813 | 062VEW7Q302 | VOCs | Ethylbenzene | 0.5 U | UG/L |
| 220917813 | 062VEW7Q302 | VOCs | tert-Butyl methyl ether (MTBE) | 0.57 U | UG/L |
| 220917813 | 062VEW7Q302 | VOCs | m,p-Xylene | 1 U | UG/L |
| 220917813 | 062VEW7Q302 | VOCs | o-Xylene | 0.5 U | UG/L |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Chloroform | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,1,2,2-Tetrachloroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Trichlorofluoromethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Dichlorodifluoromethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Dichlorotetrafluoroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,2-Dibromoethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Ethylbenzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Hexane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Methyl t-butyl ether (MTBE) | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Methylene chloride | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 4-Ethyltoluene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Tetrachloroethene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Styrene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | o-Xylene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,1,1-Trichloroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Trichloroethene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,2,4-Trimethylbenzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,3,5-Trimethylbenzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Vinyl chloride | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | m&p-Xylene | 0.12 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,2-Dichloropropane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Bromoform | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,2,4-Trichlorobenzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Chlorobenzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | trans-1,3-Dichloropropene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,1,2-Trichloroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 4-Bromofluorobenzene | 96 = | PERCENT |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Bromomethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Benzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Toluene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Carbon Disulfide | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Bromodichloromethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 2-Chlorotoluene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Chloroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Chloromethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Carbon tetrachloride | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,4-Dichlorobenzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | cis-1,3-Dichloropropene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | TOLUENE-D8 | 98 = | PERCENT |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | Dibromochloromethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,1-Dichloroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | trans-1,2-Dichloroethene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,3-Dichlorobenzene | 0.06 U | mg/m3 |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,2-Dichlorobenzene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | trans-1,4-Dichloro-2-butene | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,2-DICHLOROETHANE-D4 | 99 = | PERCENT |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,2-Dichloroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | 1,1-Dichloroethane | 0.06 U | mg/m3 |
| C207404*1 | 062-SVE-E-A-0715-02-26 | VOCs | cis-1,2-Dichloroethene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,1,2,2-Tetrachloroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Dichlorotetrafluoroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Methylene chloride | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Methyl t-butyl ether (MTBE) | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Hexane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Dichlorodifluoromethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Trichlorofluoromethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,2-Dibromoethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Tetrachloroethene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 4-Ethyltoluene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Styrene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Bromoform | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,1,1-Trichloroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,1,2-Trichloroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,2,4-Trichlorobenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Trichloroethene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Chloroform | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,2,4-Trimethylbenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,3,5-Trimethylbenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Vinyl chloride | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Ethylbenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | o-Xylene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,1-Dichloroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | m&p-Xylene | 0.12 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Bromomethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | trans-1,2-Dichloroethene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 4-Bromofluorobenzene | 96 = | PERCENT |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,2-Dichloropropane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Benzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Toluene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | TOLUENE-D8 | 99 = | PERCENT |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Carbon Disulfide | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Chlorobenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 2-Chlorotoluene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Chloroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Chloromethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | cis-1,3-Dichloropropene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Bromodichloromethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Carbon tetrachloride | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | trans-1,3-Dichloropropene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | cis-1,2-Dichloroethene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,4-Dichlorobenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,3-Dichlorobenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,2-Dichlorobenzene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | trans-1,4-Dichloro-2-butene | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,2-DICHLOROETHANE-D4 | 100 = | PERCENT |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,2-Dichloroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | 1,1-Dichloroethane | 0.06 U | mg/m3 |
| C207405*1 | 062-SVE-E-A-0715-02-30 | VOCs | Dibromochloromethane | 0.06 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Bromomethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Chloromethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | trans-1,4-Dichloro-2-butene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,2-DICHLOROETHANE-D4 | 107 = | PERCENT |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,2-Dichloroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,1-Dichloroethane | 0.07 U | mg/m3 |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Dibromochloromethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Carbon tetrachloride | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,3-Dichlorobenzene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Chloroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 2-Chlorotoluene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Chlorobenzene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Carbon Disulfide | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | TOLUENE-D8 | 105 = | PERCENT |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Benzene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 4-Bromofluorobenzene | 105 = | PERCENT |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Bromodichloromethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,4-Dichlorobenzene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Toluene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,2,4-Trichlorobenzene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Methylene chloride | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,1,2,2-Tetrachloroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Tetrachloroethene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Styrene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Bromoform | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Methyl t-butyl ether (MTBE) | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,1,2-Trichloroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,2,4-Trimethylbenzene | 0.06 J | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Trichloroethene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Chloroform | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,3,5-Trimethylbenzene | 0.27 = | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | m&p-Xylene | 0.09 J | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | o-Xylene | 0.08 = | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,2-Dichlorobenzene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,1,1-Trichloroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | trans-1,2-Dichloroethene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Vinyl chloride | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Hexane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,1-Dichloroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | cis-1,2-Dichloroethene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | cis-1,3-Dichloropropene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | trans-1,3-Dichloropropene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,2-Dichloropropane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Dichlorotetrafluoroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,2-Dibromoethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 4-Ethyltoluene | 0.07 J | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Trichlorofluoromethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Dichlorodifluoromethane | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Ethylbenzene | 0.07 U | mg/m3 |
| C208603*1 | 062-SVE-E-A-0821-02-31 | VOCs | Hexachlorobutadiene | 0.07 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Methyl t-butyl ether (MTBE) | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Hexane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Hexachlorobutadiene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Dichlorotetrafluoroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Dichlorodifluoromethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,2-Dibromoethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 4-Ethyltoluene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Methylene chloride | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,3,5-Trimethylbenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Ethylbenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Trichlorofluoromethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,1,2,2-Tetrachloroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Tetrachloroethene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Styrene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Bromoform | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,1,1-Trichloroethane | 0.068 U | mg/m3 |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,1,2-Trichloroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,2,4-Trichlorobenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Chloroform | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | m&p-Xylene | 0.14 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | o-Xylene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,2-Dichloropropane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,2,4-Trimethylbenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Trichloroethene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Bromomethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Vinyl chloride | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | trans-1,3-Dichloropropene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 4-Bromofluorobenzene | 103 = | PERCENT |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Benzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Bromodichloromethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Toluene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | TOLUENE-D8 | 102 = | PERCENT |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Carbon Disulfide | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Chlorobenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 2-Chlorotoluene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Chloroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Chloromethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | cis-1,2-Dichloroethene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Carbon tetrachloride | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | trans-1,2-Dichloroethene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | cis-1,3-Dichloropropene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,1-Dichloroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,4-Dichlorobenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,3-Dichlorobenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | trans-1,4-Dichloro-2-butene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,2-DICHLOROETHANE-D4 | 106 = | PERCENT |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,2-Dichloroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,1-Dichloroethane | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | 1,2-Dichlorobenzene | 0.068 U | mg/m3 |
| C208604*1 | 062-SVE-E-A-0821-02-27 | VOCs | Dibromochloromethane | 0.068 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Trichlorofluoromethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Methylene chloride | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Methyl t-butyl ether (MTBE) | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Hexane | 0.099 = | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Hexachlorobutadiene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Dichlorotetrafluoroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,2-Dibromoethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 4-Ethyltoluene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,1,2,2-Tetrachloroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Trichloroethene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Dichlorodifluoromethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Tetrachloroethene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Styrene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Bromoform | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,1,1-Trichloroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | m&p-Xylene | 0.14 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,2,4-Trichlorobenzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Chloroform | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,2,4-Trimethylbenzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,3,5-Trimethylbenzene | 0.18 = | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Vinyl chloride | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | trans-1,3-Dichloropropene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | o-Xylene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,1,2-Trichloroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Carbon Disulfide | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Ethylbenzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,2-Dichloropropane | 0.069 U | mg/m3 |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 4-Bromofluorobenzene | 97 = | PERCENT |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Bromomethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Benzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | TOLUENE-D8 | 101 = | PERCENT |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Bromodichloromethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Chlorobenzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 2-Chlorotoluene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Chloroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Chloromethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Carbon tetrachloride | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | trans-1,2-Dichloroethene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Toluene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | cis-1,3-Dichloropropene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | Dibromochloromethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | cis-1,2-Dichloroethene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,1-Dichloroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,4-Dichlorobenzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,3-Dichlorobenzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,2-Dichlorobenzene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | trans-1,4-Dichloro-2-butene | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,2-DICHLOROETHANE-D4 | 113 = | PERCENT |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,2-Dichloroethane | 0.069 U | mg/m3 |
| C209256*1 | 062-SVE-E-A-0909-02-32 | VOCs | 1,1-Dichloroethane | 0.069 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 4-Ethyltoluene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Tetrachloroethene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,1,2,2-Tetrachloroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Methylene chloride | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Methyl t-butyl ether (MTBE) | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Hexachlorobutadiene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Dichlorodifluoromethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Ethylbenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Trichlorofluoromethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Styrene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,2-Dibromoethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Bromoform | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,1,1-Trichloroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,1,2-Trichloroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,2,4-Trichlorobenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Trichloroethene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Chloroform | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,2,4-Trimethylbenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,3,5-Trimethylbenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Vinyl chloride | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | m&p-Xylene | 0.14 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | o-Xylene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,2-Dichloropropane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Dichlorotetrafluoroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,1-Dichloroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | trans-1,3-Dichloropropene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 4-Bromofluorobenzene | 97 = | PERCENT |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Bromomethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Benzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Toluene | 0.059 J | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | TOLUENE-D8 | 101 = | PERCENT |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Carbon Disulfide | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Chlorobenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 2-Chlorotoluene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Chloroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Chloromethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Dibromochloromethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,2-Dichloroethane | 0.07 U | mg/m3 |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,2-DICHLOROETHANE-D4 | 106 = | PERCENT |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | trans-1,4-Dichloro-2-butene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Hexane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,2-Dichlorobenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Bromodichloromethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,3-Dichlorobenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,4-Dichlorobenzene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | 1,1-Dichloroethane | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | cis-1,2-Dichloroethene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | trans-1,2-Dichloroethene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | cis-1,3-Dichloropropene | 0.07 U | mg/m3 |
| C209257*1 | 062-SVE-E-A-0909-02-28 | VOCs | Carbon tetrachloride | 0.07 U | mg/m3 |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | NO3 | NITROGEN, NITRATE (AS N) | 0.109 U | mg/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | 2-Methylnaphthalene | 0.608 J | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Pyrene | 0.075 J | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | TERPHENYL-D14 | 35.9 = | PERCENT |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Naphthalene | 1.1 J | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | 1-Methylnaphthalene | 0.393 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Indeno(1,2,3-cd)pyrene | 0.087 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Fluoranthene | 0.0543 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Fluorene | 0.608 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Dibenz(a,h)anthracene | 0.0837 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Chrysene | 0.0261 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Benzo(k)fluoranthene | 0.0783 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Benzo(g,h,i)perylene | 0.146 J | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Benzo(a)pyrene | 0.0576 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Benzo(a)anthracene | 0.0326 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Anthracene | 0.31 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Acenaphthylene | 0.382 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Acenaphthene | 0.451 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Benzo(b)fluoranthene | 0.126 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PAHs | Phenanthrene | 0.312 UJ | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | PO4 | Phosphate | 0.163 U | mg/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | TPH | o-Terphenyl | 75 = | PERCENT |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | TPH | FLPRO | 851 U | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | VOCs | Toluene | 0.5 U | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | VOCs | Ethylbenzene | 19 = | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | VOCs | Benzene | 0.756 J | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 116 = | PERCENT |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | VOCs | Xylene (total) | 11.7 = | ug/L |
| L0209285-01 | 062-CEF9-2S-Q3-02-21 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | NO3 | NITROGEN, NITRATE (AS N) | 0.223 U | mg/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Pyrene | 0.0753 J | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | TERPHENYL-D14 | 33.1 = | PERCENT |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Phenanthrene | 0.305 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Naphthalene | 0.382 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | 2-Methylnaphthalene | 0.382 J | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | 1-Methylnaphthalene | 0.385 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Indeno(1,2,3-cd)pyrene | 0.0851 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Fluoranthene | 0.0532 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Fluorene | 0.595 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Dibenz(a,h)anthracene | 0.0819 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Benzo(k)fluoranthene | 0.0766 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Chrysene | 0.0255 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Benzo(a)anthracene | 0.0319 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Benzo(a)pyrene | 0.0564 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Anthracene | 0.303 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Acenaphthylene | 0.373 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Acenaphthene | 0.441 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Benzo(b)fluoranthene | 0.179 UJ | ug/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PAHs | Benzo(g,h,i)perylene | 0.0532 UJ | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | PO4 | Phosphate | 0.163 U | mg/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | TPH | FLPRO | 674 U | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | TPH | o-Terphenyl | 72.1 = | PERCENT |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 109 = | PERCENT |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | VOCs | Benzene | 0.5 U | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | VOCs | Ethylbenzene | 3.31 = | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | VOCs | Toluene | 1.74 = | ug/L |
| L0209285-02 | 062-CEF9-3S-Q3-02-21 | VOCs | Xylene (total) | 3 = | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | NO3 | NITROGEN, NITRATE (AS N) | 0.127 U | mg/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Benzo(b)fluoranthene | 0.0372 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Benzo(g,h,i)perylene | 0.0546 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Benzo(k)fluoranthene | 0.0787 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Chrysene | 0.0262 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Dibenz(a,h)anthracene | 0.0842 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | 1-Methylnaphthalene | 0.396 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Fluoranthene | 0.0546 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Indeno(1,2,3-cd)pyrene | 0.0874 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Benzo(a)pyrene | 0.0579 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Fluorene | 0.611 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Benzo(a)anthracene | 0.0328 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Anthracene | 0.311 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Acenaphthylene | 0.384 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Acenaphthene | 0.454 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Naphthalene | 0.392 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Phenanthrene | 0.314 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | Pyrene | 0.0743 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | 2-Methylnaphthalene | 0.367 UJ | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PAHs | TERPHENYL-D14 | 33.7 = | PERCENT |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | PO4 | Phosphate | 0.163 U | mg/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | TPH | FLPRO | 423 U | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | TPH | o-Terphenyl | 66.1 = | PERCENT |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 105 = | PERCENT |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | VOCs | Toluene | 0.5 U | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | VOCs | Xylene (total) | 0.5 U | ug/L |
| L0209285-03 | 062-CEF9-5S-Q3-02-21 | VOCs | Benzene | 0.5 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | NO3 | NITROGEN, NITRATE (AS N) | 0.067 U | mg/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Anthracene | 0.297 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Dibenz(a,h)anthracene | 0.0802 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Fluorene | 0.582 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Pyrene | 0.0736 J | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | TERPHENYL-D14 | 40.1 = | PERCENT |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Phenanthrene | 0.299 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Naphthalene | 0.374 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Indeno(1,2,3-cd)pyrene | 0.0833 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Acenaphthylene | 0.366 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | 1-Methylnaphthalene | 0.377 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Benzo(a)anthracene | 0.0313 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Benzo(a)pyrene | 0.0552 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Benzo(b)fluoranthene | 0.0354 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Benzo(g,h,i)perylene | 0.0521 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Benzo(k)fluoranthene | 0.075 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Chrysene | 0.025 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Acenaphthene | 0.432 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | 2-Methylnaphthalene | 0.35 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PAHs | Fluoranthene | 0.0521 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | PO4 | Phosphate | 0.292 J | mg/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | TPH | FLPRO | 488 UJ | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | TPH | o-Terphenyl | 41.4 = | PERCENT |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | VOCs | Benzene | 0.5 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | VOCs | Xylene (total) | 0.5 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 112 = | PERCENT |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 100 = | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | VOCs | Toluene | 0.5 U | ug/L |
| L0209310-01 | 062-CEF46-2S-Q3-02-20 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | NO3 | NITROGEN, NITRATE (AS N) | 0.067 U | mg/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | 1-Methylnaphthalene | 0.373 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Acenaphthylene | 0.362 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Pyrene | 0.0701 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | TERPHENYL-D14 | 28.5 = | PERCENT |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Phenanthrene | 0.296 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Naphthalene | 9.75 J | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | 2-Methylnaphthalene | 1.37 J | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Benzo(b)fluoranthene | 0.0351 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Benzo(k)fluoranthene | 0.0742 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Benzo(a)anthracene | 0.0309 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Benzo(a)pyrene | 0.0546 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Acenaphthene | 0.428 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Anthracene | 0.294 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Indeno(1,2,3-cd)pyrene | 0.0825 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Fluoranthene | 0.0515 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Fluorene | 0.576 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Dibenz(a,h)anthracene | 0.0794 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Chrysene | 0.0247 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PAHs | Benzo(g,h,i)perylene | 0.0515 UJ | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | PO4 | Phosphate | 0.163 U | mg/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | TPH | FLPRO | 950 U | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | TPH | o-Terphenyl | 54.2 = | PERCENT |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | VOCs | Toluene | 90.2 = | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | VOCs | Ethylbenzene | 86.6 = | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 106 = | PERCENT |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 3640 = | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | VOCs | Benzene | 432 = | ug/L |
| L0209310-02 | 062-CEF46-7I-Q3-02-20 | VOCs | Xylene (total) | 484 = | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | NO3 | NITROGEN, NITRATE (AS N) | 0.067 U | mg/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Indeno(1,2,3-cd)pyrene | 0.08 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Acenaphthylene | 0.351 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Anthracene | 0.285 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Benzo(a)anthracene | 0.03 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Benzo(a)pyrene | 0.053 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Benzo(b)fluoranthene | 0.034 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Benzo(g,h,i)perylene | 0.05 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Benzo(k)fluoranthene | 0.072 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Acenaphthene | 0.415 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Fluorene | 0.559 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Dibenz(a,h)anthracene | 0.077 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | 1-Methylnaphthalene | 0.362 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | 2-Methylnaphthalene | 0.336 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Naphthalene | 0.359 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Phenanthrene | 0.287 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | TERPHENYL-D14 | 50.6 = | PERCENT |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Pyrene | 0.068 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Chrysene | 0.024 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PAHs | Fluoranthene | 0.05 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | PO4 | Phosphate | 0.163 U | mg/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | TPH | o-Terphenyl | 54.5 = | PERCENT |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | TPH | FLPRO | 623 U | ug/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | VOCs | Xylene (total) | 0.5 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | VOCs | Toluene | 0.5 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | VOCs | Benzene | 0.5 U | ug/L |
| L0209310-03 | 062-CEF46-9I-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 104 = | PERCENT |
| L0209310-11 | 062-46EQB-Q3-02-20 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | NO3 | NITROGEN, NITRATE (AS N) | 0.067 U | mg/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Chrysene | 0.0261 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Pyrene | 0.0739 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Benzo(g,h,i)perylene | 0.209 J | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | TERPHENYL-D14 | 74.8 = | PERCENT |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Phenanthrene | 0.312 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Naphthalene | 0.39 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | 2-Methylnaphthalene | 0.365 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | 1-Methylnaphthalene | 0.393 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Indeno(1,2,3-cd)pyrene | 0.087 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Fluoranthene | 0.0543 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Dibenz(a,h)anthracene | 0.0837 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Benzo(k)fluoranthene | 0.0783 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Benzo(a)pyrene | 0.0576 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Benzo(a)anthracene | 0.0326 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Anthracene | 0.31 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Acenaphthylene | 0.382 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Acenaphthene | 0.451 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Benzo(b)fluoranthene | 0.037 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PAHs | Fluorene | 0.608 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | PO4 | Phosphate | 0.163 U | mg/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | TPH | FLPRO | 964 = | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | TPH | o-Terphenyl | 55.7 = | PERCENT |
| L0209310-11 | 062-46EQB-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | VOCs | Toluene | 0.5 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | VOCs | Benzene | 0.5 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | VOCs | Xylene (total) | 0.5 U | ug/L |
| L0209310-11 | 062-46EQB-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 103 = | PERCENT |
| L0209310-12 | 062-46TB1-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209310-12 | 062-46TB1-Q3-02-20 | VOCs | Xylene (total) | 0.5 U | ug/L |
| L0209310-12 | 062-46TB1-Q3-02-20 | VOCs | Toluene | 0.5 U | ug/L |
| L0209310-12 | 062-46TB1-Q3-02-20 | VOCs | Benzene | 0.5 U | ug/L |
| L0209310-12 | 062-46TB1-Q3-02-20 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209310-12 | 062-46TB1-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 102 = | PERCENT |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | NO2 | NITROGEN, NITRITE | 0.061 U | mg/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | NO3 | NITROGEN, NITRATE (AS N) | 0.067 U | mg/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Benzo(a)anthracene | 0.3 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | 1-Methylnaphthalene | 18.6 J | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | 2-Methylnaphthalene | 52 J | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Naphthalene | 157 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Phenanthrene | 0.287 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | TERPHENYL-D14 | 33 = | PERCENT |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Pyrene | 0.068 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Acenaphthene | 4.15 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Anthracene | 2.85 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Fluorene | 0.559 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Benzo(a)pyrene | 0.53 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Benzo(b)fluoranthene | 0.34 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Benzo(g,h,i)perylene | 0.5 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Benzo(k)fluoranthene | 0.72 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Chrysene | 0.24 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Dibenz(a,h)anthracene | 0.77 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Fluorene | 5.59 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Fluoranthene | 0.5 R | ug/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Acenaphthylene | 3.51 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Acenaphthylene | 0.351 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Indeno(1,2,3-cd)pyrene | 0.8 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Pyrene | 0.68 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | TERPHENYL-D14 | 0 = | PERCENT |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Phenanthrene | 2.87 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | Naphthalene | 173 J | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | 2-Methylnaphthalene | 3.36 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Indeno(1,2,3-cd)pyrene | 0.08 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Acenaphthene | 0.415 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Fluoranthene | 0.05 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Anthracene | 0.285 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Benzo(a)anthracene | 0.03 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Benzo(a)pyrene | 0.053 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Benzo(b)fluoranthene | 0.034 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Benzo(g,h,i)perylene | 0.05 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Benzo(k)fluoranthene | 0.072 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Chrysene | 0.024 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PAHs | Dibenz(a,h)anthracene | 0.077 UJ | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20DL1 | PAHs | 1-Methylnaphthalene | 3.62 R | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | PO4 | Phosphate | 0.163 U | mg/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | TPH | o-Terphenyl | 0 = | PERCENT |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | TPH | FLPRO | 15300 = | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 106 = | PERCENT |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 542 = | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | VOCs | Ethylbenzene | 541 = | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | VOCs | Benzene | 262 = | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | VOCs | Toluene | 1170 = | ug/L |
| L0209337-01 | 062-CEF46-1S-Q3-02-20 | VOCs | Xylene (total) | 5760 = | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20DL1 | NO2 | NITROGEN, NITRITE | 1.22 U | mg/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20DL1 | NO3 | NITROGEN, NITRATE (AS N) | 1.34 U | mg/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Benzo(b)fluoranthene | 0.0362 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Benzo(g,h,i)perylene | 0.0532 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Benzo(k)fluoranthene | 0.0766 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Chrysene | 0.0255 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Benzo(a)pyrene | 0.0564 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Fluorene | 0.595 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | 2-Methylnaphthalene | 0.357 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Fluoranthene | 0.0532 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Indeno(1,2,3-cd)pyrene | 0.0851 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Dibenz(a,h)anthracene | 0.0819 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Benzo(a)anthracene | 0.0319 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Anthracene | 0.303 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Acenaphthene | 0.441 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Naphthalene | 0.382 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Phenanthrene | 0.305 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | TERPHENYL-D14 | 19 = | PERCENT |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Pyrene | 0.0723 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | 1-Methylnaphthalene | 0.385 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | PAHs | Acenaphthylene | 0.373 UJ | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20DL1 | PO4 | Phosphate | 3.26 U | mg/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | TPH | FLPRO | 776 U | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | TPH | o-Terphenyl | 54.1 = | PERCENT |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 106 = | PERCENT |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | VOCs | Toluene | 0.5 U | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | VOCs | Benzene | 0.5 U | ug/L |
| L0209337-02 | 062-CEF46-5I-Q3-02-20 | VOCs | Xylene (total) | 13.2 = | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20DL1 | NO2 | NITROGEN, NITRITE | 1.22 U | mg/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20DL1 | NO3 | NITROGEN, NITRATE (AS N) | 1.34 U | mg/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Benzo(k)fluoranthene | 0.0774 UJ | ug/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Chrysene | 0.0258 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Dibenz(a,h)anthracene | 0.0828 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Fluorene | 0.601 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Indeno(1,2,3-cd)pyrene | 0.086 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | 2-Methylnaphthalene | 0.361 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Naphthalene | 0.386 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Phenanthrene | 0.309 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Benzo(g,h,i)perylene | 0.0538 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Pyrene | 0.0731 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Fluoranthene | 0.0538 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | TERPHENYL-D14 | 24.3 = | PERCENT |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Benzo(a)pyrene | 0.057 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Benzo(a)anthracene | 0.0323 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Anthracene | 0.306 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Acenaphthylene | 0.377 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Acenaphthene | 0.446 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | 1-Methylnaphthalene | 0.389 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | PAHs | Benzo(b)fluoranthene | 0.0366 UJ | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20DL1 | PO4 | Phosphate | 3.26 U | mg/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | TPH | FLPRO | 840 U | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | TPH | o-Terphenyl | 58.9 = | PERCENT |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | VOCs | Ethylbenzene | 0.907 J | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | VOCs | Toluene | 0.5 U | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | VOCs | tert-Butyl methyl ether (MTBE) | 0.961 J | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 106 = | PERCENT |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | VOCs | Xylene (total) | 9.05 = | ug/L |
| L0209337-03 | 062-CEF46-6D-Q3-02-20 | VOCs | Benzene | 0.5 U | ug/L |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Acenaphthylene | 54.8 U | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Dibenz(a,h)anthracene | 17.5 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | 2-Methylnaphthalene | 14900 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Naphthalene | 10300 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Phenanthrene | 275 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | 1-Methylnaphthalene | 3690 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Indeno(1,2,3-cd)pyrene | 3.9 U | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Fluoranthene | 53.9 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Fluorene | 69.5 U | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Chrysene | 4.63 U | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Benzo(k)fluoranthene | 22.4 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Benzo(g,h,i)perylene | 12.1 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Benzo(b)fluoranthene | 15 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Benzo(a)pyrene | 10.6 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Anthracene | 50 U | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | TERPHENYL-D14 | 121 = | PERCENT |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Phenanthrene | 573 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Benzo(a)anthracene | 32.4 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Dibenz(a,h)anthracene | 54.8 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Pyrene | 45.1 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | TERPHENYL-D14 | 138 = | PERCENT |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Naphthalene | 20700 D | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Acenaphthene | 68.2 U | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | 1-Methylnaphthalene | 4410 D | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Indeno(1,2,3-cd)pyrene | 39 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | 2-Methylnaphthalene | 25400 D | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Fluorene | 695 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | PAHs | Pyrene | 17.2 J | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Chrysene | 46.3 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Benzo(k)fluoranthene | 24.4 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Benzo(g,h,i)perylene | 43.9 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Benzo(b)fluoranthene | 58.5 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Benzo(a)pyrene | 35.3 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Benzo(a)anthracene | 46.3 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Anthracene | 500 R | ug/kg |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Acenaphthylene | 548 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Acenaphthene | 682 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02DL1 | PAHs | Fluoranthene | 45.1 R | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | TPH | FLPRO | 800000 = | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | TPH | o-Terphenyl | 73 = | PERCENT |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | VOCs | Ethylbenzene | 97700 = | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | VOCs | tert-Butyl methyl ether (MTBE) | 594 U | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | VOCs | Toluene | 10700 = | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | VOCs | Benzene | 2170 = | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | VOCs | Xylene (total) | 532000 = | ug/kg |
| L0209516-01 | 062-CEF46-SB1-S-Q3-02 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 118 = | PERCENT |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Acenaphthene | 65.3 U | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Benzo(k)fluoranthene | 41.9 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Benzo(g,h,i)perylene | 16 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Benzo(b)fluoranthene | 30.2 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Benzo(a)pyrene | 29.4 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Benzo(a)anthracene | 116 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Chrysene | 4.43 U | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Acenaphthylene | 52.5 U | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Fluoranthene | 173 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Benzo(a)pyrene | 33.8 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Benzo(g,h,i)perylene | 42 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Benzo(k)fluoranthene | 23.3 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Anthracene | 47.8 U | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | TERPHENYL-D14 | 192 = | PERCENT |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Fluorene | 66.4 U | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Indeno(1,2,3-cd)pyrene | 7.95 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | 1-Methylnaphthalene | 6680 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | 2-Methylnaphthalene | 14600 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Naphthalene | 11300 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Phenanthrene | 986 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | TERPHENYL-D14 | 184 = | PERCENT |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Pyrene | 60 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Acenaphthene | 653 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Acenaphthylene | 525 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Anthracene | 478 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Benzo(a)anthracene | 44.3 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | PAHs | Dibenz(a,h)anthracene | 32.1 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Pyrene | 43.1 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Naphthalene | 21100 D | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | 2-Methylnaphthalene | 23900 D | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Chrysene | 44.3 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Dibenz(a,h)anthracene | 52.5 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Benzo(b)fluoranthene | 56 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Phenanthrene | 548 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | 1-Methylnaphthalene | 7980 D | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Indeno(1,2,3-cd)pyrene | 37.3 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Fluoranthene | 43.1 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02DL1 | PAHs | Fluorene | 664 R | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | TPH | FLPRO | 970000 = | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | TPH | o-Terphenyl | 70 = | PERCENT |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | VOCs | tert-Butyl methyl ether (MTBE) | 602 U | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 92.3 = | PERCENT |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | VOCs | Ethylbenzene | 9150 = | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | VOCs | Toluene | 22000 = | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | VOCs | Benzene | 746 J | ug/kg |
| L0209516-02 | 062-CEF46-SB2-S-Q3-02 | VOCs | Xylene (total) | 274000 = | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | 2-Methylnaphthalene | 65.9 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Benzo(g,h,i)perylene | 4.08 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Pyrene | 9.86 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | TERPHENYL-D14 | 90.5 = | PERCENT |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Phenanthrene | 53.3 U | ug/kg |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Naphthalene | 71.5 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | 1-Methylnaphthalene | 19.1 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Indeno(1,2,3-cd)pyrene | 3.63 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Fluoranthene | 11.3 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Fluorene | 64.7 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Dibenz(a,h)anthracene | 59.3 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Benzo(k)fluoranthene | 18.3 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Benzo(b)fluoranthene | 30.3 = | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Benzo(a)pyrene | 61.6 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Benzo(a)anthracene | 4.31 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Anthracene | 46.5 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Acenaphthylene | 51.1 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Acenaphthene | 63.5 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | PAHs | Chrysene | 377 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | TPH | FLPRO | 117000 = | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | TPH | o-Terphenyl | 74.6 = | PERCENT |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | Toluene | 0.545 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | Benzene | 0.545 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | tert-Butyl methyl ether (MTBE) | 3.68 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | Ethylbenzene | 24.9 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 408 = | PERCENT |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02 | VOCs | Xylene (total) | 23.4 J | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02RE1 | VOCs | Benzene | 0.545 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02RE1 | VOCs | Toluene | 0.545 U | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02RE1 | VOCs | Ethylbenzene | 28.8 = | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02RE1 | VOCs | tert-Butyl methyl ether (MTBE) | 2.68 = | ug/kg |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02RE1 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 303 = | PERCENT |
| L0209516-03 | 062-CEF46-SB14-S-Q3-02RE1 | VOCs | Xylene (total) | 32.1 = | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Fluorene | 61.2 UJ | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Benzo(k)fluoranthene | 91.1 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Acenaphthene | 60.1 UJ | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Acenaphthylene | 48.3 UJ | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Anthracene | 44 UJ | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Benzo(a)anthracene | 49.4 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Benzo(a)pyrene | 201 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Benzo(b)fluoranthene | 227 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Benzo(g,h,i)perylene | 257 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Phenanthrene | 50.4 UJ | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Dibenz(a,h)anthracene | 143 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Fluoranthene | 105 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Indeno(1,2,3-cd)pyrene | 104 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | 1-Methylnaphthalene | 5.63 UJ | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | 2-Methylnaphthalene | 11.5 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Naphthalene | 67.6 UJ | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Pyrene | 188 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | Chrysene | 105 J | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | PAHs | TERPHENYL-D14 | 24.1 = | PERCENT |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | TPH | o-Terphenyl | 0 = | PERCENT |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | TPH | FLPRO | 477000 = | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | VOCs | Benzene | 0.559 U | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | VOCs | Toluene | 0.559 U | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | VOCs | Ethylbenzene | 0.559 U | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | VOCs | tert-Butyl methyl ether (MTBE) | 0.559 U | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | VOCs | Xylene (total) | 0.559 U | ug/kg |
| L0209517-01 | 062-CEF9-SB1-S-Q3-02 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 96.6 = | PERCENT |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Naphthalene | 0.382 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Acenaphthylene | 0.373 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | TERPHENYL-D14 | 34.2 = | PERCENT |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Acenaphthene | 0.441 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Pyrene | 0.0723 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Anthracene | 0.369 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Benzo(a)anthracene | 0.0319 U | ug/L |

**Table C-1**
Summary of Verified EDD Data (40 Percent Check)
*(CTO-062)*

| Lab Sample ID | Sample ID | Analysis Group | Chem Name | Result | Units |
|---|---|---|---|---|---|
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Benzo(a)pyrene | 0.0564 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Benzo(b)fluoranthene | 0.0362 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Benzo(g,h,i)perylene | 0.0532 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Chrysene | 0.0255 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Dibenz(a,h)anthracene | 0.0819 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Fluorene | 0.595 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Fluoranthene | 0.0532 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Indeno(1,2,3-cd)pyrene | 0.0851 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | 1-Methylnaphthalene | 0.385 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | 2-Methylnaphthalene | 0.357 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Phenanthrene | 0.386 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | PAHs | Benzo(k)fluoranthene | 0.0766 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | TPH | FLPRO | 1250 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | TPH | o-Terphenyl | 74.4 = | PERCENT |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | VOCs | Benzene | 0.5 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | VOCs | Xylene (total) | 0.5 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 92.8 = | PERCENT |
| L0209517-02 | 062-CEF9-EQB-W-Q3-02 | VOCs | Toluene | 0.5 U | ug/L |
| L0209517-03 | 062-CEF9-TB-W-Q3-02 | VOCs | Xylene (total) | 0.5 U | ug/L |
| L0209517-03 | 062-CEF9-TB-W-Q3-02 | VOCs | Benzene | 0.5 U | ug/L |
| L0209517-03 | 062-CEF9-TB-W-Q3-02 | VOCs | Toluene | 0.5 U | ug/L |
| L0209517-03 | 062-CEF9-TB-W-Q3-02 | VOCs | Ethylbenzene | 0.5 U | ug/L |
| L0209517-03 | 062-CEF9-TB-W-Q3-02 | VOCs | tert-Butyl methyl ether (MTBE) | 0.5 U | ug/L |
| L0209517-03 | 062-CEF9-TB-W-Q3-02 | VOCs | 1,1,1-TRIFLUOROTOLUENE | 93.8 = | PERCENT |

# Soil Analytical Report

**KEMRON REPORT L0209516**

**PREPARED FOR CCI**

**WORK ID: CECIL FIELD BDG 46**


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# 1.0 Summary Report

# 1.1 Laboratory Report

**Cover Page**
**Laboratory Narrative**
**Laboratory Results**

KEMRON
ENVIRONMENTAL SERVICES

109 Starlite Park ■ Marietta, OH 45750 ■ Telephone (740) 373-4071 ■ FAX (740) 373-4835

Please find enclosed the analytical results for the samples you submitted to Kemron Environmental Services.

Review and compilation of your report was completed by Kemron's Sales and Service Team 1. If you have questions, comments or require further assistance please contact one of our team members at 800-373-4071. We can also be reached at the e-mail addresses listed below.

Stephanie Tepe – Team Chemist/Data Specialist
stepe@kemron-lab.com

Debbie Tornes – Customer Service/Invoicing Specialist
dtornes@kemron-lab.com

Cindy Arnold – Team Leader
carnold@kemron-lab.com

This report was reviewed by: Stephanie Tepe Date: 12/24/02

**KEMRON ENVIRONMENTAL SERVICES**
**REPORT NARRATIVE**

**L0209516**

**CHAIN OF CUSTODY:**

The chain of custody number was 163151-066.

**SHIPMENT CONDITIONS:**

The chain of custody forms were received sealed in a cooler. The cooler temperatures were 3 and 4 ° 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 Stepe DATE: 9/27/02

**REPORT NARRATIVE**
**GC VOLATILE ORGANICS - BETX**

**KEMRON Login No: L0209516**

**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/Duplicates**: The MS/MSD and duplicate results were not associated with this sample delivery group (SDG).

**SAMPLES**

**Surrogates**: Sample 03 yielded a surrogate recovery for TFT above the upper control limit. The outlier was confirmed by reanalysis. All other acceptance criteria were met.
**Samples:** Samples 01 and 02 required dilution analysis in order to obtain results within the linear range. All other 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: Janice L Sakimmel DATE: 10/7/02

Rev. 6/00

**REPORT NARRATIVE**
**GC PETROLEUM RANGE ORGANICS**

**KEMRON Report No.: L0209516**

**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 were not associated with this sample delivery group.

**SAMPLES**

**Samples:** Samples 01 and 03 were analyzed at a 2X dilution and sample 02 at a 5X dilution in order to maintain analysis within range of calibration. 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: [signature] DATE: 12/22/00

Rev. 7/14/00

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**REPORT NARRATIVE**
**PAH HPLC**

**KEMRON Login No.: L0209516**

**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 LCS associated with the initial extraction of water fraction 04 yielded percent recoveries for thirteen analytes that were below advisory limits. This sample was re-extracted out of holding time with an LCS that yielded percent recoveries for fourteen analytes that were below advisory limits. All other acceptance criteria were met.
**Matrix Spikes**: The MS/MSD results were not associated with this sample delivery group.

**SAMPLES**

**Surrogates**: Sample fraction 04 yielded a percent recovery for the surrogate that was below the advisory limit. This sample fraction was re-extracted outside of holding time with similar results for the surrogate. Sample fraction 01 yielded a percent recovery for the surrogate by the fluorescence detector that was above the advisory limit. The surrogate for this fraction as determined by the UV detector met all acceptance criteria. Sample fraction 02 yielded a percent recovery for the surrogate by both detectors that was above the advisory limit. For sample fractions 01 and 02 there is chromatographic evidence of sample matrix effects for the recovery of the surrogate.
**Samples:** Sample fractions 01 and 02 were re-analyzed at a dilution in order to maintain the analysis within the range of calibration. 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: [signature] DATE: 10/23/02

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 # : WG126238

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 24-OCT-02

Title: Laboratory Director

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126238

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 30-SEP-02 16:56

Concentration Units: ug/kg File ID: 5G14936

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 594 | 1190 | 2170 | 1000 | |
| Ethylbenzene | 594 | 1190 | 97700 | 1000 | |
| Methyl tert-butyl ether | 594 | 1190 | 594 | 1000 | U |
| Toluene | 594 | 1190 | 10700 | 1000 | |
| Xylenes, Total | 594 | 3560 | 532000 | 1000 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 118 | 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 SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126238

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 30-SEP-02 18:20

Concentration Units: ug/kg File ID: 5G14938

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 602 | 1200 | 746 | 1000 | J |
| Ethylbenzene | 602 | 1200 | 9150 | 1000 | |
| Methyl tert-butyl ether | 602 | 1200 | 602 | 1000 | U |
| Toluene | 602 | 1200 | 22000 | 1000 | |
| Xylenes, Total | 602 | 3610 | 274000 | 1000 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 92.3 | 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**

Lab Name : **Kemron Environmental Services**

Base/Command : **NAS Cecil Field Jacksonville (**

AAB # : **WG126148**

Contract # : **Bill Canelos**

Prime Contractor : **CCI**

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 |

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 E. Vandenberg

Name: **David E. Vandenberg**

Date: **24-OCT-02**

Title: **Laboratory Director**

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126148

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HP11 16-AUG-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 13:44

Concentration Units: ug/kg File ID: 11G14587

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.545 | 1.09 | 0.545 | 1 | U |
| Ethylbenzene | 0.545 | 1.09 | 24.9 | 1 | |
| Methyl tert-butyl ether | 0.545 | 1.09 | 3.68 | 1 | |
| Toluene | 0.545 | 1.09 | 0.545 | 1 | U |
| Xylenes, Total | 0.545 | 3.27 | 23.4 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 408 | 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 SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126148

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HP11 16-AUG-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 14:53

Concentration Units: ug/kg File ID: 11G14589

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.545 | 1.09 | 0.545 | 1 | U |
| Ethylbenzene | 0.545 | 1.09 | 28.8 | 1 | |
| Methyl tert-butyl ether | 0.545 | 1.09 | 2.68 | 1 | |
| Toluene | 0.545 | 1.09 | 0.545 | 1 | U |
| Xylenes, Total | 0.545 | 3.27 | 32.1 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 303 | 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**

Lab Name : **Kemron Environmental Services**

Base/Command : **NAS Cecil Field Jacksonville (**

AAB # : **WG126114**

Contract # : **Bill Canelos**

Prime Contractor : **CCI**

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-EQB-W-Q3-02 | L0209516-04 |
| 062-CEF46-TB-W-Q3-02 | L0209516-05 |

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 E. Vandenberg

Name: **David E. Vandenberg**

Date: **24-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG126114

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-EQB-W-Q3-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 17:45

Concentration Units: ug/L File ID: 5G14921

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 93.4 | 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 # : WG126114

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-TB-W-Q3-02 Lab Sample ID: L0209516-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 25-SEP-2002

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 27-SEP-02 18:20

Concentration Units: ug/L File ID: 5G14922

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 92.3 | 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

AAB # : WG127556

Lab Name : Kemron Environmental Services

Contract # : Bill Canelos

Base/Command : NAS Cecil Field Jacksonville (

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 24-OCT-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3550B AAB # : WG127556

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HP8 18-OCT-2002 21:52

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 20-OCT-02 02:59

Concentration Units: ug/kg File ID: 8G03814

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 12200 | 24400 | 800000 | 2 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 73.0 | 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 SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3550B AAB # : WG127556

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-03-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HP8 18-OCT-2002 21:52

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 21-OCT-02 00:10

Concentration Units: ug/kg File ID: 8G03837

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 29100 | 58300 | 970000 | 5 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 70.0 | 43 - 136 | |

| 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\3550B AAB # : WG127556

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HP8 18-OCT-2002 21:52

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 20-OCT-02 04:44

Concentration Units: ug/kg File ID: 8G03816

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 11300 | 22700 | 117000 | 2 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.6 | 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 : NAS Cecil Field Jacksonville (

AAB # : WG127555

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-EQB-W-Q3-02 | L0209516-04 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 24-OCT-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG127555

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-EQB-W-Q3-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP8 18-OCT-2002 21:52

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 19-OCT-02 18:13

Concentration Units: ug/L File ID: 8G03804

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 291 | 581 | 1320 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.4 | 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 # : WG126623

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 24-OCT-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:02

Concentration Units: ug/kg File ID: 4L003680.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 6.39 | 200 | 6100 | 1 | I |
| 2-Methylnaphthalene | 5.56 | 200 | 14000 | 1 | I |
| Acenaphthene | 68.2 | 200 | 68.2 | 1 | U |
| Acenaphthylene | 54.8 | 200 | 54.8 | 1 | U |
| Anthracene | 50.0 | 200 | 50.0 | 1 | U |
| Benzo(a)anthracene | 4.63 | 20 | 12.0 | 1 | J |
| Benzo(a)pyrene | 3.53 | 20 | 11.0 | 1 | J |
| Benzo(b)fluoranthene | 5.85 | 20 | 7.20 | 1 | J |
| Benzo(g,h,i)perylene | 4.39 | 20 | 12.0 | 1 | J |
| Benzo(k)fluoranthene | 2.44 | 20 | 4.00 | 1 | J |
| Chrysene | 4.63 | 20 | 4.63 | 1 | U |
| Dibenzo(a,h)anthracene | 5.48 | 20 | 6.40 | 1 | J |
| Fluoranthene | 4.51 | 20 | 33.0 | 1 | J |
| Fluorene | 69.5 | 200 | 69.5 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.90 | 20 | 3.90 | 1 | U |
| Naphthalene | 76.8 | 200 | 19000 | 1 | I |
| Phenanthrene | 57.3 | 200 | 160 | 1 | J |
| Pyrene | 4.51 | 20 | 24.0 | 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 : 8310 Preparatory Method: 8310\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:02

Concentration Units: % Recovery File ID: 4L003680.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 564 | 50 - 150 | |

| 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:02

Concentration Units: ug/kg File ID: 4L003680.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 6.39 | 200 | 3700 | 1 | J |
| 2-Methylnaphthalene | 5.56 | 200 | 15000 | 1 | I |
| Acenaphthene | 68.2 | 200 | 68.2 | 1 | U |
| Acenaphthylene | 54.8 | 200 | 54.8 | 1 | U |
| Anthracene | 50.0 | 200 | 50.0 | 1 | U |
| Benzo(a)anthracene | 4.63 | 20 | 32.0 | 1 | J |
| Benzo(a)pyrene | 3.53 | 20 | 11.0 | 1 | J |
| Benzo(b)fluoranthene | 5.85 | 20 | 15.0 | 1 | J |
| Benzo(g,h,i)perylene | 4.39 | 20 | 12.0 | 1 | J |
| Benzo(k)fluoranthene | 2.44 | 20 | 22.0 | 1 | J |
| Chrysene | 4.63 | 20 | 4.63 | 1 | U |
| Dibenzo(a,h)anthracene | 5.48 | 20 | 17.0 | 1 | J |
| Fluoranthene | 4.51 | 20 | 54.0 | 1 | J |
| Fluorene | 69.5 | 200 | 69.5 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.90 | 20 | 3.90 | 1 | U |
| Naphthalene | 76.8 | 200 | 10000 | 1 | I |
| Phenanthrene | 57.3 | 200 | 270 | 1 | J |
| Pyrene | 4.51 | 20 | 17.0 | 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 # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:02

Concentration Units: % Recovery File ID:4L003680.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 121 | 50 - 150 | |

| 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 14-OCT-02 20:11

Concentration Units: ug/kg File ID: 4L003718.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 63.9 | 2010 | 6500 | 10 | |
| 2-Methylnaphthalene | 55.6 | 2010 | 18800 | 10 | |
| Acenaphthene | 682 | 2010 | 682 | 10 | U |
| Acenaphthylene | 548 | 2010 | 548 | 10 | U |
| Anthracene | 500 | 2010 | 500 | 10 | U |
| Benzo(a)anthracene | 46.3 | 201 | 46.3 | 10 | U |
| Benzo(a)pyrene | 35.3 | 201 | 35.3 | 10 | U |
| Benzo(b)fluoranthene | 58.5 | 201 | 58.5 | 10 | U |
| Benzo(g,h,i)perylene | 43.9 | 201 | 43.9 | 10 | U |
| Benzo(k)fluoranthene | 24.4 | 201 | 24.4 | 10 | U |
| Chrysene | 46.3 | 201 | 46.3 | 10 | U |
| Dibenzo(a,h)anthracene | 54.8 | 201 | 54.8 | 10 | U |
| Fluoranthene | 45.1 | 201 | 45.1 | 10 | U |
| Fluorene | 695 | 2010 | 695 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 39.0 | 201 | 39.0 | 10 | U |
| Naphthalene | 768 | 2010 | 21100 | 10 | |
| Phenanthrene | 573 | 2010 | 573 | 10 | U |
| Pyrene | 45.1 | 201 | 45.1 | 10 | 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 14-OCT-02 20:11

Concentration Units: % Recovery File ID: 4L003718.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 595 | 50 - 150 | |

| 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 14-OCT-02 20:11

Concentration Units: ug/kg File ID: 4L003718.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 63.9 | 2010 | 4410 | 10 | |
| 2-Methylnaphthalene | 55.6 | 2010 | 25400 | 10 | |
| Acenaphthene | 682 | 2010 | 682 | 10 | U |
| Acenaphthylene | 548 | 2010 | 548 | 10 | U |
| Anthracene | 500 | 2010 | 500 | 10 | U |
| Benzo(a)anthracene | 46.3 | 201 | 46.3 | 10 | U |
| Benzo(a)pyrene | 35.3 | 201 | 35.3 | 10 | U |
| Benzo(b)fluoranthene | 58.5 | 201 | 58.5 | 10 | U |
| Benzo(g,h,i)perylene | 43.9 | 201 | 43.9 | 10 | U |
| Benzo(k)fluoranthene | 24.4 | 201 | 24.4 | 10 | U |
| Chrysene | 46.3 | 201 | 46.3 | 10 | U |
| Dibenzo(a,h)anthracene | 54.8 | 201 | 54.8 | 10 | U |
| Fluoranthene | 45.1 | 201 | 45.1 | 10 | U |
| Fluorene | 695 | 2010 | 695 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 39.0 | 201 | 39.0 | 10 | U |
| Naphthalene | 768 | 2010 | 20700 | 10 | |
| Phenanthrene | 573 | 2010 | 573 | 10 | U |
| Pyrene | 45.1 | 201 | 45.1 | 10 | 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 14-OCT-02 20:11

Concentration Units: % Recovery File ID: 4L003718.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 138 | 50 - 150 | |

| 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:59

Concentration Units: ug/kg File ID: 4L003681.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 6.11 | 190 | 13000 | 1 | I |
| 2-Methylnaphthalene | 5.32 | 190 | 15000 | 1 | I |
| Acenaphthene | 65.3 | 190 | 65.3 | 1 | U |
| Acenaphthylene | 52.5 | 190 | 52.5 | 1 | U |
| Anthracene | 47.8 | 190 | 47.8 | 1 | U |
| Benzo(a)anthracene | 4.43 | 19 | 19.0 | 1 | J |
| Benzo(a)pyrene | 3.38 | 19 | 28.0 | 1 | |
| Benzo(b)fluoranthene | 5.60 | 19 | 14.0 | 1 | J |
| Benzo(g,h,i)perylene | 4.20 | 19 | 26.0 | 1 | J |
| Benzo(k)fluoranthene | 2.33 | 19 | 8.00 | 1 | J |
| Chrysene | 4.43 | 19 | 4.43 | 1 | U |
| Dibenzo(a,h)anthracene | 5.25 | 19 | 8.60 | 1 | J |
| Fluoranthene | 4.31 | 19 | 110 | 1 | J |
| Fluorene | 66.4 | 190 | 66.4 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.73 | 19 | 4.70 | 1 | J |
| Naphthalene | 73.4 | 190 | 19000 | 1 | I |
| Phenanthrene | 54.8 | 190 | 700 | 1 | |
| Pyrene | 4.31 | 19 | 38.0 | 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 # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:59

Concentration Units: % Recovery File ID:4L003681.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 1160 | 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 # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:59

Concentration Units: ug/kg File ID: 4L003681.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 6.11 | 190 | 6700 | 1 | I |
| 2-Methylnaphthalene | 5.32 | 190 | 15000 | 1 | I |
| Acenaphthene | 65.3 | 190 | 65.3 | 1 | U |
| Acenaphthylene | 52.5 | 190 | 52.5 | 1 | U |
| Anthracene | 47.8 | 190 | 47.8 | 1 | U |
| Benzo(a)anthracene | 4.43 | 19 | 120 | 1 | J |
| Benzo(a)pyrene | 3.38 | 19 | 29.0 | 1 | |
| Benzo(b)fluoranthene | 5.60 | 19 | 30.0 | 1 | J |
| Benzo(g,h,i)perylene | 4.20 | 19 | 16.0 | 1 | J |
| Benzo(k)fluoranthene | 2.33 | 19 | 42.0 | 1 | J |
| Chrysene | 4.43 | 19 | 4.43 | 1 | U |
| Dibenzo(a,h)anthracene | 5.25 | 19 | 32.0 | 1 | J |
| Fluoranthene | 4.31 | 19 | 170 | 1 | J |
| Fluorene | 66.4 | 190 | 66.4 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.73 | 19 | 7.90 | 1 | J |
| Naphthalene | 73.4 | 190 | 11000 | 1 | I |
| Phenanthrene | 54.8 | 190 | 990 | 1 | |
| Pyrene | 4.31 | 19 | 60.0 | 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 # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 15:59

Concentration Units: % Recovery File ID:4L003681.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 184 | 50 - 150 | |

| 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 16-OCT-02 23:32

Concentration Units: ug/kg File ID: 4L003727.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 61.1 | 1920 | 12300 | 10 | |
| 2-Methylnaphthalene | 53.2 | 1920 | 20900 | 10 | |
| Acenaphthene | 653 | 1920 | 653 | 10 | U |
| Acenaphthylene | 525 | 1920 | 525 | 10 | U |
| Anthracene | 478 | 1920 | 478 | 10 | U |
| Benzo(a)anthracene | 44.3 | 192 | 44.3 | 10 | U |
| Benzo(a)pyrene | 33.8 | 192 | 33.8 | 10 | U |
| Benzo(b)fluoranthene | 56.0 | 192 | 56.0 | 10 | U |
| Benzo(g,h,i)perylene | 42.0 | 192 | 42.0 | 10 | U |
| Benzo(k)fluoranthene | 23.3 | 192 | 23.3 | 10 | U |
| Chrysene | 44.3 | 192 | 44.3 | 10 | U |
| Dibenzo(a,h)anthracene | 52.5 | 192 | 52.5 | 10 | U |
| Fluoranthene | 43.1 | 192 | 43.1 | 10 | U |
| Fluorene | 664 | 1920 | 664 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 37.3 | 192 | 37.3 | 10 | U |
| Naphthalene | 734 | 1920 | 20500 | 10 | |
| Phenanthrene | 548 | 1920 | 548 | 10 | U |
| Pyrene | 43.1 | 192 | 43.1 | 10 | 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 16-OCT-02 23:32

Concentration Units: % Recovery File ID: 4L003727.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 1070 | 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 # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 16-OCT-02 23:32

Concentration Units: ug/kg File ID: 4L003727.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 61.1 | 1920 | 7980 | 10 | |
| 2-Methylnaphthalene | 53.2 | 1920 | 23900 | 10 | |
| Acenaphthene | 653 | 1920 | 653 | 10 | U |
| Acenaphthylene | 525 | 1920 | 525 | 10 | U |
| Anthracene | 478 | 1920 | 478 | 10 | U |
| Benzo(a)anthracene | 44.3 | 192 | 44.3 | 10 | U |
| Benzo(a)pyrene | 33.8 | 192 | 33.8 | 10 | U |
| Benzo(b)fluoranthene | 56.0 | 192 | 56.0 | 10 | U |
| Benzo(g,h,i)perylene | 42.0 | 192 | 42.0 | 10 | U |
| Benzo(k)fluoranthene | 23.3 | 192 | 23.3 | 10 | U |
| Chrysene | 44.3 | 192 | 44.3 | 10 | U |
| Dibenzo(a,h)anthracene | 52.5 | 192 | 52.5 | 10 | U |
| Fluoranthene | 43.1 | 192 | 43.1 | 10 | U |
| Fluorene | 664 | 1920 | 664 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 37.3 | 192 | 37.3 | 10 | U |
| Naphthalene | 734 | 1920 | 21100 | 10 | |
| Phenanthrene | 548 | 1920 | 548 | 10 | U |
| Pyrene | 43.1 | 192 | 43.1 | 10 | 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 16-OCT-02 23:32

Concentration Units: % Recovery File ID: 4L003727.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 192 | 50 - 150 | |

| 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 16:55

Concentration Units: ug/kg File ID: 4L003682.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 5.95 | 190 | 36.0 | 1 | J |
| 2-Methylnaphthalene | 5.18 | 190 | 44.0 | 1 | J |
| Acenaphthene | 63.5 | 190 | 63.5 | 1 | U |
| Acenaphthylene | 51.1 | 190 | 51.1 | 1 | U |
| Anthracene | 46.5 | 190 | 46.5 | 1 | U |
| Benzo(a)anthracene | 4.31 | 19 | 4.31 | 1 | U |
| Benzo(a)pyrene | 3.29 | 19 | 29.0 | 1 | J |
| Benzo(b)fluoranthene | 5.45 | 19 | 24.0 | 1 | |
| Benzo(g,h,i)perylene | 4.08 | 19 | 4.08 | 1 | U |
| Benzo(k)fluoranthene | 2.27 | 19 | 10.0 | 1 | J |
| Chrysene | 4.31 | 19 | 160 | 1 | J |
| Dibenzo(a,h)anthracene | 5.11 | 19 | 27.0 | 1 | J |
| Fluoranthene | 4.20 | 19 | 8.20 | 1 | J |
| Fluorene | 64.7 | 190 | 64.7 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.63 | 19 | 3.63 | 1 | U |
| Naphthalene | 71.5 | 190 | 71.5 | 1 | U |
| Phenanthrene | 53.3 | 190 | 53.3 | 1 | U |
| Pyrene | 4.20 | 19 | 34.0 | 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 # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 16:55

Concentration Units: % Recovery File ID: 4L003682.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 130 | 50 - 150 | |

| 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\3550B AAB # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 16:55

Concentration Units: ug/kg File ID: 4L003682.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 5.95 | 190 | 19.0 | 1 | J |
| 2-Methylnaphthalene | 5.18 | 190 | 66.0 | 1 | J |
| Acenaphthene | 63.5 | 190 | 63.5 | 1 | U |
| Acenaphthylene | 51.1 | 190 | 51.1 | 1 | U |
| Anthracene | 46.5 | 190 | 46.5 | 1 | U |
| Benzo(a)anthracene | 4.31 | 19 | 4.31 | 1 | U |
| Benzo(a)pyrene | 3.29 | 19 | 62.0 | 1 | J |
| Benzo(b)fluoranthene | 5.45 | 19 | 30.0 | 1 | |
| Benzo(g,h,i)perylene | 4.08 | 19 | 4.08 | 1 | U |
| Benzo(k)fluoranthene | 2.27 | 19 | 18.0 | 1 | J |
| Chrysene | 4.31 | 19 | 380 | 1 | J |
| Dibenzo(a,h)anthracene | 5.11 | 19 | 59.0 | 1 | J |
| Fluoranthene | 4.20 | 19 | 11.0 | 1 | J |
| Fluorene | 64.7 | 190 | 64.7 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.63 | 19 | 3.63 | 1 | U |
| Naphthalene | 71.5 | 190 | 71.5 | 1 | U |
| Phenanthrene | 53.3 | 190 | 53.3 | 1 | U |
| Pyrene | 4.20 | 19 | 9.90 | 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 # : WG126623

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 02-OCT-02 Date Analyzed: 06-OCT-02 16:55

Concentration Units: % Recovery File ID: 4L003682.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 90.5 | 50 - 150 | |

| 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 : **8310**

AAB # : **WG126624**

Lab Name : **Kemron Environmental Services**

Contract # : **Bill Canelos**

Base/Command : **NAS Cecil Field Jacksonville (**

Prime Contractor : **CCI**

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-EQB-W-Q3-02 | L0209516-04 |

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 E. Vandenberg

Name: **David E. Vandenberg**

Date: **24-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG126624

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-EQB-W-03-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 06-OCT-02 13:09

Concentration Units: ug/L File ID: 4L003678.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.398 | 1.1 | 0.398 | 1 | U |
| 2-Methylnaphthalene | 0.369 | 1.1 | 0.369 | 1 | U |
| Acenaphthene | 0.456 | 1.1 | 0.456 | 1 | U |
| Acenaphthylene | 0.386 | 1.1 | 0.386 | 1 | U |
| Anthracene | 0.313 | 1.1 | 0.340 | 1 | J |
| Benzo(a)anthracene | 0.0330 | 0.22 | 0.0330 | 1 | U |
| Benzo(a)pyrene | 0.0582 | 0.22 | 0.0582 | 1 | U |
| Benzo(b)fluoranthene | 0.0374 | 0.22 | 0.0374 | 1 | U |
| Benzo(g,h,i)perylene | 0.0549 | 0.22 | 0.0549 | 1 | U |
| Benzo(k)fluoranthene | 0.0791 | 0.22 | 0.0791 | 1 | U |
| Chrysene | 0.0264 | 0.22 | 0.0264 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0846 | 0.22 | 0.0846 | 1 | U |
| Fluoranthene | 0.0549 | 0.22 | 0.0549 | 1 | U |
| Fluorene | 0.614 | 1.1 | 0.614 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0879 | 0.22 | 0.0879 | 1 | U |
| Naphthalene | 0.395 | 1.1 | 0.395 | 1 | U |
| Phenanthrene | 0.315 | 1.1 | 0.315 | 1 | U |
| Pyrene | 0.0747 | 0.22 | 0.0747 | 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 # : WG126624

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-EQB-W-Q3-02 Lab Sample ID: L0209516-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 04-OCT-2002

Date Received: 27-SEP-02 Date Extracted: 03-OCT-02 Date Analyzed: 06-OCT-02 13:09

Concentration Units: % Recovery File ID: 4L003678.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 37.9 | 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 : **D2216-90**

AAB # : **WG126335**

Lab Name : **Kemron Environmental Services**

Contract # : **Bill Canelos**

Base/Command : **NAS Cecil Field Jacksonville (**

Prime Contractor : **CCI**

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 |

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 E. Vandenberg

Name: **David E. Vandenberg**

Date: **24-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : D2216-90 Preparatory Method: D2216-90 AAB # : WG126335

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB1-S-Q3-02 Lab Sample ID: L0209516-01 Matrix: Soil

% Solids: 81.9 Initial Calibration ID: OVEN 01-OCT-02

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 01-OCT-02 10:40

Concentration Units: weight % File ID:

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Percent Solids | 1.00 | 1.0 | 82.0 | 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 : D2216-90 Preparatory Method: D2216-90 AAB # : WG126335

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB2-S-Q3-02 Lab Sample ID: L0209516-02 Matrix: Soil

% Solids: 85.7 Initial Calibration ID: OVEN 01-OCT-02

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 01-OCT-02 10:40

Concentration Units: weight % File ID:

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Percent Solids | 1.00 | 1.0 | 86.0 | 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 : D2216-90 Preparatory Method: D2216-90 AAB # : WG126335

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-SB14-S-Q3-02 Lab Sample ID: L0209516-03 Matrix: Soil

% Solids: 88 Initial Calibration ID: OVEN 01-OCT-02

Date Received: 27-SEP-02 Date Extracted: Date Analyzed: 01-OCT-02 10:40

Concentration Units: weight % File ID:

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Percent Solids | 1.00 | 1.0 | 88.0 | 1 | |

Comments:

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

Page 1 of 1

# 1.2 Attachments

**Kemron Environmental Services**
**Analyst Listing**
Wednesday, October 16 2002

AJF - AMANDA J. FICKIESEN
ALT - ANN L. THAYER
ARS - ANGELINA R. SCOTT
BRF - BRENT F. FOOS
BRG - BRENDA R. GREGORY
CAF - CHERYL A. FLOWERS
CAK - CHERYL A. KOELSCH
CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD
CLK - CARL L. KING
CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEVENS
CSH - CHRIS S. HILL
DAD - DAVE A. DAULEY
DAH - DON A. HUNTER
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
DOV - DENISE O. VANDENBERG
DP - DEANNA L. PIERSON
DRB - DOUG R. BARNETT
DSM - DAVID S. MOSSOR
DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON
HV - HEMA VILASAGAR
JAL - JOHN A. LENT
JJG - JAKE J. GREUEY
JKW - JANE K. WARDEN
JLM - JOY L. MULLINS
JLS - JANICE L. SCHIMMEL
JMM - JARROD M. MARTIN
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
RPM - RYAN P. MCALLISTER
RWC - ROD W. CAMPBELL
SH - SHAUNA M. HYDE
SJK - SINDY J. KINNEY
SLP - SHERI L. PFALZGRAF
SLT - STEPHANIE L. TEPE
TJH - TIM J. HOEFLICH
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
VKL - VICKY K. LAUER

KEMRON FORMS: JUL-25-02
Printed: OCT-16-02 12:16:49

# KEMRON Environmental Services, Inc
# List of Valid Qualifiers
# August 5, 2002

## *Standard Qualifiers*

These are KEMRON's Standard Report Qualifiers

| | |
|---|---|
| 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 | Semi-quantitative result, out of instrument calibration range |
| J | Present below nominal reporting limit |
| L | Sample reporting limits elevated due to matrix interference |
| 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 |
| NS | Not spiked |
| P | Concentration >40% difference between The two GC columns |
| QNS | Quantity not sufficient to perform analysis |
| 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 o f control limits |
| X | Exceeds regulatory limit |
| 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 semi-quantitative 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) |

H:\DATA\COMMON\Qualifier List 08-05-02.doc

**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
**163151-066**

| 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 46 | 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 46 / 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-CEF46-SB1-S-Q3-02 | Soil Boring 1 @ 2' bls. | S | 09/26/02 | 13:35 | III/C | 14 | 3 | 1 | 1 | | | | | | Grab | OVA : 34,999 ppm | |
| 2 | 062-CEF46-SB2-S-Q3-02 | Soil Boring 2 @ 2' bls. | S | 09/26/02 | 13:55 | III/C | 14 | 3 | 1 | 1 | | | | | | Grab | OVA : 19,990 ppm | |
| 3 | 062-CEF46-SB14-S-Q3-02 | Soil Boring 14 @ 4' bls. | S | 09/26/02 | 14:15 | III/C | 14 | 3 | 1 | 1 | | | | | | Grab | OVA : 1,385 ppm | |
| 4 | 062-CEF46-EQB-W-Q3-02 | Equipment Blank | W | 09/26/02 | 14:25 | III/C | 14 | 2 | 2 | 2 | | | | | | Grab | | |
| 5 | 062-CEF46-TB-W-Q3-02 | Trip Blank | W | – | – | III/C | 14 | 2 | | | | | | | | | Prepared by Lab | |
| 6 | | Temperature Blank | W | -- | – | | | | | | 1 | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: |
|---|---|
| Randy Dumaop / Roger Deisler J.A. Jones Environmental Services | Federal Express Track #792752780893, 792752780850 . |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| Randy Dumaop | 9/26/02 | 17:00 | Federal Express | 9/26/02 | 17:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | SHAUNA HYDE | 9-27-02 | 0956 |

# KEMRON Internal Laboratory Chain of Custody

Work Order: 9-516 Client: CCI # of Samples: 5 Due Date: 10-08-02 Page:

| Sample # | Analysis | Reason | Removed By ADT | Removed From | Moved To | Reliq. by | Ret'd By ADT | Ret'd To | Rec'd By | Reason |
|---|---|---|---|---|---|---|---|---|---|---|
| 04,05 1-3 | BTEX ⊥ | ANAL ⊥ | CS 9/27/02 @ 1100 ⊥ | LOGIN ⊥ | ORG 3 ⊥ | SMH SMH | 9/27/02 1345 9/27/02 1345 | archive 2 archive 2 | BLG BLG | archive archive |
| 1-3 | PCTS | test | Tmm 10/1/02 1100 | walk in | wet | SMH | Tmm 10/1/02 1120 | walk in | SMH | Storage |
| 1-3A | 8310/ARO | EXT | CB 10/2/02 @ 0705 | WALKIN | ELAB | DCL | CB 10/2/02 @ 1636 | WALKIN | BLG | HOLD |
| 04A | FLA ARO | EXT | 10/3/02 @ 0705 | walkin | SLAB | CB | 10-3-02 DCL @ 1130 | Crusher | | disposal |
| 04A | 8310 | EXT | 10/3/02 @ 0705 | walkin | SLAB | CB | ⊥ ⊥ | ⊥ ⊥ | | ⊥ ⊥ |
| 1-3 | — | archive 2 | BLG 10/15/02 @ 0900 | Walkin | archive | BLG | | | | |
| 04B | 8310 | Re-ext | 10/14/02 @ 0900 | walkin | SLAB | SMH | 10-16-02 DCL @ 0000 | Crusher | | disposal |

CRF #3

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

| | | |
|---|---|---|
| **CLIENT:** CCI<br>**BRG** **Other** SMIT | **DATE:** 956<br>9-2702 | **SHIPPED BY:**<br>(X) FED-EX ( ) AIRBORNE<br>( ) UPS ( ) EMERY<br>( ) RPS ( ) US MAIL<br>( ) KEMRON ( ) CLIENT |

| | | |
|---|---|---|
| **COOLER ID:** KL 1037 | **COOLER ID:** KL 1016 | **COOLER ID:** |
| **INDEX # :** 7927 5278, 0893 | **INDEX # :** 7927 5278 0850 | **INDEX # :** |
| **SEALED** (✓) YES ( ) NO | **SEALED** (✓) YES ( ) NO | **SEALED** ( ) YES ( ) NO |
| **CUSTODY** ( ) YES (✓) NO | **CUSTODY** ( ) YES (✓) NO | **CUSTODY** ( ) YES ( ) NO |
| **TEMP :** (D) (E) 3 °C | **TEMP :** (D) (E) 4 °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<br>**SALVAGEBLE** ( ) YES ( ) NO | **SAMPLE INTACT** (✓) YES ( ) NO<br>**SALVAGEBLE** ( ) YES ( ) NO | **SAMPLE INTACT** ( ) YES ( ) NO<br>**SALVAGEBLE** ( ) YES ( ) NO |
| **SAMPLE TYPE:**<br>**WATER** (✓) **SOIL** (✓) **OTHER** ( ) | **SAMPLE TYPE:**<br>**WATER** (✓) **SOIL** (✓) **OTHER** ( ) | **SAMPLE TYPE:**<br>**WATER** ( ) **SOIL** ( ) **OTHER** ( ) |
| **LABELS:** **INTACT** (✓) YES ( ) NO<br>**LEGIBLE** (✓) YES ( ) NO<br>**MATCH COC** (✓) YES ( ) NO | **LABELS:** **INTACT** (✓) YES ( ) NO<br>**LEGIBLE** (✓) YES ( ) NO<br>**MATCH COC** (✓) YES ( ) NO | **LABELS:** **INTACT** ( ) YES ( ) NO<br>**LEGIBLE** ( ) YES ( ) NO<br>**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** | **LOG-IN COMMENTS** | **LOG-IN COMMENTS** |

**TSR COMMENTS**

| | | |
|---|---|---|
| **CONTACT:** | **DATE:** | **TIME:** |

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

# 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: L0209516**

**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/Duplicates**: The MS/MSD and duplicate results were not associated with this sample delivery group (SDG).

**SAMPLES**

**Surrogates**: Sample 03 yielded a surrogate recovery for TFT above the upper control limit. The outlier was confirmed by reanalysis. All other acceptance criteria were met.
**Samples:** Samples 01 and 02 required dilution analysis in order to obtain results within the linear range. All other 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: Janice L. Schimmel DATE: 10/7/02

Rev. 6/00

# BETX-GC DATA (8021)

**Login Number:** L0209516

**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)

✓ 5035 logs (if applicable) (chronological)

**Checked By:** Janice L Schimmel **Date:** 10/1/02

# 2.1.3.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

# METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 5G14907
Date Analyzed: 09/27/02
Time Analyzed: 09:18
Analyst: CSH

Work Group: WG126114
Blank Sample ID: WG126114-01
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 | WG126114-02 | 5G14908 | 09/27/02 09:52 | |
| 062-CEF46-EQB-W-Q3-02 | L0209516-04 | 5G14921 | 09/27/02 17:45 | |
| 062-CEF46-TB-W-Q3-02 | L0209516-05 | 5G14922 | 09/27/02 18:20 | |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516
Run Date: 09/27/2002
Sample ID: WG126114-01
Instrument ID: HP5
Run Time: 09:18
Method: 8021B
File ID: 5G14907
Analyst: CSH
Matrix: Water
Workgroup (AAB#): WG126114
Units: ug/L
Contract #:
Cal ID: HP5-25-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | ND |
| Benzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Xylenes | 0.500 | 1.00 | 0.500 | 1 | ND |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 89.2 | 70 - 130 | PASS |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 10/02/2002
Version 1.2
Report generated

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Instrument ID: HP5
File ID: 5G14908
Workgroup (AAB#): WG126114
Contract #:

Run Date: 09/27/2002
Run Time: 09:52
Analyst: CSH

Sample ID: WG126114-02
Method: 8021B
Matrix: Water
Units: ug/L
Cal ID: HP5-25-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Methyl tert-butyl ether | 20.0 | 19.4 | 97.1 | 41 - 161 | |
| Benzene | 20.0 | 18.0 | 90.0 | 80 - 122 | |
| Toluene | 20.0 | 17.8 | 89.2 | 80 - 124 | |
| Ethylbenzene | 20.0 | 18.5 | 92.5 | 80 - 125 | |
| Xylenes | 60.0 | 54.6 | 91.0 | 80 - 121 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 90.9 | 70 - 130 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/02/2002
Version 1.3
Report generated

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG126114

Login Number: L0209516

| 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-CEF46-EQB-W-Q3-02 | 09/26/02 | 09/27/02 | 09/27/02 | 14 | 1.14 | 09/27/02 | 14 | 1.14 | |
| 062-CEF46-TB-W-Q3-02 | 09/26/02 | 09/27/02 | 09/27/02 | 14 | 1.16 | 09/27/02 | 14 | 1.16 | |

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

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209516
Instrument Id: HP5
Workgroup (AAB#): WG126114

Method: 8021
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209516-04 | 1.00 | | 93.4 |
| L0209516-05 | 1.00 | | 92.3 |
| WG126114-01 | 1.00 | | 89.2 |
| WG126114-02 | 1.00 | | 90.9 |

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

Underline = Result out of surrogate limits

DL = surrogate diluted out

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP5

Analyst: JLS
Initial Calibration Date: 25-SEP-02

| Analyte | | Summary | | | |
|---|---|---|---|---|---|
| | | AVG RF | % RSD | $R^2$ | Q |
| BROMOCHLOROBENZENE | | 41300 | 4.63 | | |
| 1,2-DICHLOROBENZENE | | 38600 | 12.10 | | |
| 1,4-DICHLOROBENZENE | | 49200 | 12.00 | | |
| 1,3-DICHLOROBENZENE | | 44600 | 3.99 | | |
| P-BROMOFLUOROBENZENE | | 46400 | 4.25 | | |
| O-XYLENE | | 47400 | 6.64 | | |
| M-,P-XYLENE | | 54300 | 7.52 | | |
| ETHYLBENZENE | | 45200 | 3.61 | | |
| CHLOROBENZENE | | 55400 | 5.90 | | |
| TOLUENE | | 53700 | 9.03 | | |
| A,A,A-TRIFLUOROTOLUENE | | 17700 | 3.25 | | |
| BENZENE | | 58400 | 8.85 | | |
| METHYLTERT-BUTYL ETHER | | 9740 | 13.50 | | |

# = CC

* = SPCC

KEMRON FORMS - Modified 04/03/2002
Version 1.0
Report generated 10/07/2002 12:57

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP5

Analyst: JLS
Initial Calibration Date: 25-SEP-02

| | Sample # | File # | Level |
|---|---|---|---|
| | WG125957-01 | 5G14868 | 1 |
| Analyte | Conc | Response | RF |
| BROMOCHLOROBENZENE | 3.0 | 130776 | 43590 |
| 1,2-DICHLOROBENZENE | 1.0 | 48073 | 48070 |
| 1,4-DICHLOROBENZENE | 1.0 | 61242 | 61240 |
| 1,3-DICHLOROBENZENE | 1.0 | 48127 | 48130 |
| P-BROMOFLUOROBENZENE | 3.0 | 145368 | 48460 |
| O-XYLENE | 1.0 | 53773 | 53770 |
| M-,P-XYLENE | 2.0 | 125408 | 62700 |
| ETHYLBENZENE | 1.0 | 48427 | 48430 |
| CHLOROBENZENE | 1.0 | 62259 | 62260 |
| TOLUENE | 1.0 | 64428 | 64430 |
| A,A,A-TRIFLUOROTOLUENE | 3.0 | 53787 | 17930 |
| BENZENE | 1.0 | 69697 | 69700 |
| METHYLTERT-BUTYL ETHER | 1.0 | 11914 | 11910 |

INITIAL CALIBRATION

Login Number: L0209516

Analyst: JLS

Analytical Method: 8021

Initial Calibration Date: 25-SEP-02

Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-02 | 5G14869 | 2 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 15.0 | 649809 | 43320 |
| 1,2-DICHLOROBENZENE | | 10.0 | 407685 | 40770 |
| 1,4-DICHLOROBENZENE | | 10.0 | 520027 | 52000 |
| 1,3-DICHLOROBENZENE | | 10.0 | 455552 | 45560 |
| P-BROMOFLUOROBENZENE | | 15.0 | 711697 | 47450 |
| O-XYLENE | | 10.0 | 490311 | 49030 |
| M-,P-XYLENE | | 20.0 | 1120478 | 56020 |
| ETHYLBENZENE | | 10.0 | 462819 | 46280 |
| CHLOROBENZENE | | 10.0 | 566170 | 56620 |
| TOLUENE | | 10.0 | 535934 | 53590 |
| A,A,A-TRIFLUOROTOLUENE | | 15.0 | 264328 | 17620 |
| BENZENE | | 10.0 | 591530 | 59150 |
| METHYLTERT-BUTYL ETHER | | 10.0 | 108153 | 10820 |

Login Number: L0209516
Analyst: JLS
Analytical Method: 8021
Initial Calibration Date: 25-SEP-02
Instrument ID: HP5

| Analyte | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-03 | 5G14870 | 3 |
| | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 30.0 | 1260400 | 42010 |
| 1,2-DICHLOROBENZENE | | 20.0 | 776325 | 38820 |
| 1,4-DICHLOROBENZENE | | 20.0 | 986503 | 49330 |
| 1,3-DICHLOROBENZENE | | 20.0 | 895215 | 44760 |
| P-BROMOFLUOROBENZENE | | 30.0 | 1395591 | 46520 |
| O-XYLENE | | 20.0 | 942781 | 47140 |
| M-,P-XYLENE | | 40.0 | 2170819 | 54270 |
| ETHYLBENZENE | | 20.0 | 907299 | 45360 |
| CHLOROBENZENE | | 20.0 | 1110942 | 55550 |
| TOLUENE | | 20.0 | 1058576 | 52930 |
| A,A,A-TRIFLUOROTOLUENE | | 30.0 | 534115 | 17800 |
| BENZENE | | 20.0 | 1155658 | 57780 |
| METHYLTERT-BUTYL ETHER | | 20.0 | 202842 | 10140 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: JLS
Analytical Method: 8021
Initial Calibration Date: 25-SEP-02
Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-04 | 5G14871 | 4 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 45.0 | 1801399 | 40030 |
| 1,2-DICHLOROBENZENE | | 50.0 | 1761153 | 35220 |
| 1,4-DICHLOROBENZENE | | 50.0 | 2295282 | 45910 |
| 1,3-DICHLOROBENZENE | | 50.0 | 2142919 | 42860 |
| P-BROMOFLUOROBENZENE | | 45.0 | 2095267 | 46560 |
| O-XYLENE | | 50.0 | 2292191 | 45840 |
| M-,P-XYLENE | | 100.0 | 5234212 | 52340 |
| ETHYLBENZENE | | 50.0 | 2203646 | 44070 |
| CHLOROBENZENE | | 50.0 | 2670218 | 53400 |
| TOLUENE | | 50.0 | 2549312 | 50990 |
| A,A,A-TRIFLUOROTOLUENE | | 45.0 | 803849 | 17860 |
| BENZENE | | 50.0 | 2789679 | 55790 |
| METHYLTERT-BUTYL ETHER | | 50.0 | 425812 | 8516 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: JLS
Analytical Method: 8021
Initial Calibration Date: 25-SEP-02
Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-05 | 5G14872 | 5 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 60.0 | 2496185 | 41600 |
| 1,2-DICHLOROBENZENE | | 100.0 | 3597917 | 35980 |
| 1,4-DICHLOROBENZENE | | 100.0 | 4585803 | 45860 |
| 1,3-DICHLOROBENZENE | | 100.0 | 4383256 | 43830 |
| P-BROMOFLUOROBENZENE | | 60.0 | 2807280 | 46790 |
| O-XYLENE | | 100.0 | 4562541 | 45630 |
| M-,P-XYLENE | | 200.0 | 10459707 | 52300 |
| ETHYLBENZENE | | 100.0 | 4439526 | 44400 |
| CHLOROBENZENE | | 100.0 | 5338197 | 53380 |
| TOLUENE | | 100.0 | 5149087 | 51490 |
| A,A,A-TRIFLUOROTOLUENE | | 60.0 | 1078015 | 17970 |
| BENZENE | | 100.0 | 5587946 | 55880 |
| METHYLTERT-BUTYL ETHER | | 100.0 | 863182 | 8632 |

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP5

Analyst: JLS
Initial Calibration Date: 25-SEP-02

| | Sample # | File # | Level |
|---|---|---|---|
| | WG125957-06 | 5G14873 | 6 |
| Analyte | Conc | Response | RF |
| BROMOCHLOROBENZENE | 75.0 | 3051960 | 40690 |
| 1,2-DICHLOROBENZENE | 200.0 | 7042582 | 35210 |
| 1,4-DICHLOROBENZENE | 200.0 | 9016218 | 45080 |
| 1,3-DICHLOROBENZENE | 200.0 | 8738138 | 43690 |
| P-BROMOFLUOROBENZENE | 75.0 | 3512350 | 46830 |
| O-XYLENE | 200.0 | 9014816 | 45070 |
| M-,P-XYLENE | 400.0 | 20514947 | 51290 |
| ETHYLBENZENE | 200.0 | 8809101 | 44050 |
| CHLOROBENZENE | 200.0 | 10714572 | 53570 |
| TOLUENE | 200.0 | 10237313 | 51190 |
| A,A,A-TRIFLUOROTOLUENE | 75.0 | 1356969 | 18090 |
| BENZENE | 200.0 | 11102812 | 55510 |
| METHYLTERT-BUTYL ETHER | 200.0 | 1687701 | 8439 |

INITIAL CALIBRATION

Login Number: L0209516

Analyst: JLS

Analytical Method: 8021

Initial Calibration Date: 25-SEP-02

Instrument ID: HP5

| | Sample # | File # | Level |
|---|---|---|---|
| | WG125957-07 | 5G14874 | 7 |
| Analyte | Conc | Response | RF |
| BROMOCHLOROBENZENE | 100.0 | 3811771 | 38120 |
| 1,2-DICHLOROBENZENE | 300.0 | 10862890 | 36210 |
| 1,4-DICHLOROBENZENE | 300.0 | 13495842 | 44990 |
| 1,3-DICHLOROBENZENE | 300.0 | 13062918 | 43540 |
| P-BROMOFLUOROBENZENE | 100.0 | 4219705 | 42200 |
| O-XYLENE | 300.0 | 13542221 | 45140 |
| M-,P-XYLENE | 600.0 | 30716770 | 51190 |
| ETHYLBENZENE | 300.0 | 13238350 | 44130 |
| CHLOROBENZENE | 300.0 | 15997539 | 53330 |
| TOLUENE | 300.0 | 15334854 | 51120 |
| A,A,A-TRIFLUOROTOLUENE | 100.0 | 1641351 | 16410 |
| BENZENE | 300.0 | 16553679 | 55180 |
| METHYLTERT-BUTYL ETHER | 300.0 | 2919857 | 9733 |

Login Number: L0209516
File ID: 5G14877
ALT ID: WG125957-08
Units: ug/L

Instrument ID: HP5
Run Date: 09/25/2002
Run Time: 17:46
Analyst: JLS
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 20.7 | 37600 | 3.5 | |
| 1,4-Dichlorobenzene | | 20 | 19.9 | 47900 | 0.5 | |
| 1,3-Dichlorobenzene | | 20 | 19.6 | 43800 | 2.0 | |
| o-Xylene | | 20 | 19.4 | 46100 | 3.0 | |
| m-,p-Xylene | | 40 | 39.8 | 54100 | 0.5 | |
| Ethylbenzene | | 20 | 20.3 | 46000 | 1.5 | |
| Chlorobenzene | | 20 | 19.6 | 54500 | 2.0 | |
| Toluene | | 20 | 19.7 | 52800 | 1.5 | |
| Benzene | | 20 | 19.7 | 57400 | 1.5 | |
| MTBE | | 20 | 18.3 | 8910 | 8.5 | |

Login Number: L0209516
File ID: 5G14906
CCV ID: WG126113-01
Units: ug/L

Instrument ID: HP5
Run Date: 09/27/2002
Run Time: 08:34
Analyst: CSH
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 19.9 | 36300 | 0.5 | |
| 1,4-Dichlorobenzene | | 20 | 18.6 | 44900 | 7.0 | |
| 1,3-Dichlorobenzene | | 20 | 18.2 | 40600 | 9.0 | |
| o-Xylene | | 20 | 17.9 | 42300 | 10.5 | |
| m-,p-Xylene | | 40 | 36.8 | 50000 | 8.0 | |
| Ethylbenzene | | 20 | 18.5 | 41900 | 7.5 | |
| Chlorobenzene | | 20 | 18.1 | 50100 | 9.5 | |
| Toluene | | 20 | 17.5 | 47000 | 12.5 | |
| Benzene | | 20 | 17.8 | 52000 | 11.0 | |
| MTBE | | 20 | 19.8 | 9630 | 1.0 | |

* Exceeds %D Limit

Login Number: L0209516
File ID: 5G14917
CCV ID: WG126113-02
Units: ug/L

Instrument ID: HP5
Run Date: 09/27/2002
Run Time: 15:14
Analyst: CSH
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 20.9 | 38100 | 4.5 | |
| 1,4-Dichlorobenzene | | 20 | 19.8 | 47600 | 1.0 | |
| 1,3-Dichlorobenzene | | 20 | 19.5 | 43600 | 2.5 | |
| o-Xylene | | 20 | 19.1 | 45100 | 4.5 | |
| m-,p-Xylene | | 40 | 39.0 | 53000 | 2.5 | |
| Ethylbenzene | | 20 | 19.9 | 45100 | 0.5 | |
| Chlorobenzene | | 20 | 19.3 | 53500 | 3.5 | |
| Toluene | | 20 | 19.3 | 51700 | 3.5 | |
| Benzene | | 20 | 19.3 | 56300 | 3.5 | |
| MTBE | | 20 | 19.5 | 9520 | 2.5 | |

* Exceeds %D Limit

Login Number: L0209516
File ID: 5G14925
CCV ID: WG126113-03
Units: ug/L

Instrument ID: HP5
Run Date: 09/27/2002
Run Time: 20:04
Analyst: CSH
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 19.8 | 36100 | 1.0 | |
| 1,4-Dichlorobenzene | | 20 | 18.5 | 44700 | 7.5 | |
| 1,3-Dichlorobenzene | | 20 | 18.1 | 40500 | 9.5 | |
| o-Xylene | | 20 | 18.0 | 42600 | 10.0 | |
| m-,p-Xylene | | 40 | 36.5 | 49500 | 8.8 | |
| Ethylbenzene | | 20 | 18.6 | 42100 | 7.0 | |
| Chlorobenzene | | 20 | 18.4 | 51000 | 8.0 | |
| Toluene | | 20 | 18.1 | 48500 | 9.5 | |
| Benzene | | 20 | 18.1 | 52800 | 9.5 | |
| MTBE | | 20 | 18.8 | 9140 | 6.0 | |

* Exceeds %D Limit

# Injection Log

Directory: c:\hpchem\2\data\092502

Analyst: GLS

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14868.d | 1. | WG125957-01 8021 STD 1 1PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 13::3 |
| 2 | 2 | 5g14869.d | 1. | WG125957-02 8021 STD 2 10PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::0 |
| 3 | 3 | 5g14870.d | 1. | WG125957-03 8021 STD 3 20PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::4 |
| 4 | 4 | 5g14871.d | 1. | WG125957-04 8021 STD 4 50PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::1 |
| 5 | 5 | 5g14872.d | 1. | WG125957-05 8021 STD 5 100PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::5 |
| 6 | 6 | 5g14873.d | 1. | WG125957-06 8021 STD 6 200PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::2 |
| 7 | 7 | 5g14874.d | 1. | WG125957-07 8021 STD 7 300PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::0 |
| 8 | 8 | 5g14875.d | 1. | RINSE 5ML clo | 1,1 S-99-16 | 25 Sep 102 12::3 |
| 9 | 9 | 5g14876.d | 1. | RINSE 5ML ✓ | 1,1 S-99-16 | 25 Sep 102 12::1 |
| 10 | 10 | 5g14877.d | 1. | WG125957-08 8021 STD 20PPB 5ML ✓ | 1,1 S-(99-49,99-16 ALT SOURCE | 25 Sep 102 12::4 |

# Injection Log

Directory: c:\hpchem\2\data\092702

WG126114

ANALYST: CSH

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14906.d | 1. | WG126113-01 8021 STD 20PPB 5ML | 1,1 S-(99-49,99-16) | 27 Sep 102 12::3 |
| 2 | 2 | 5g14907.d | 1. | WG126114-01 WATER BLANK 5ML | 1,1 S-99-16 | 27 Sep 102 12::1 |
| 3 | 3 | 5g14908.d | 1. | WG126114-02 WATER LCS 20PPB 5ML | 1,1 S-(99-49,99-16) | 27 Sep 102 12::5 |
| 4 | 1 | 5g14909.d | 1. | L0209495-02 B 5ML 10X | 1,10 S-99-16 | 27 Sep 102 13::3 |
| 5 | 2 | 5g14910.d | 1. | L0209495-03 B 5ML | 1,1 S-99-16 | 27 Sep 102 13::1 |
| 6 | 3 | 5g14911.d | 1. | WG126114-03 L0209495-15 B 5ML 10X | 1,10 S-99-16 | 27 Sep 102 13::4 |
| 7 | 4 | 5g14912.d | 1. | WG126114-04 L0209495-15 MS B 5ML 10X | 1,10 S-(99-49,99-16) | 27 Sep 102 13::2 |
| 8 | 5 | 5g14913.d | 1. | WG126114-05 L0209495-15 MSD B 5ML 10X | 1,10 S-(99-49,99-16) | 27 Sep 102 13::5 |
| 9 | 6 | 5g14914.d | 1. | L0209495-17 B 5ML 50X | 1,50 S-99-16 | 27 Sep 102 12::3 |
| 10 | 7 | 5g14915.d | 1. | L0209495-18 B 5ML | 1,1 S-99-16 | 27 Sep 102 12::0 |
| 11 | 8 | 5g14916.d | 1. | L0209495-19 B 5ML 10X | 1,10 S-99-16 | 27 Sep 102 12::4 |
| 12 | 9 | 5g14917.d | 1. | WG126113-02 8021 STD 20PPB 5ML | 1,1 S-(99-49,99-16) | 27 Sep 102 12::1 |
| 13 | 10 | 5g14918.d | 1. | L0209495-20 B 5ML | 1,1 S-99-16 | 27 Sep 102 12::0 |
| 14 | 11 | 5g14919.d | 1. | L0209513-11 A 100X 5ML pH=7 RRSTRT | 1,100 S-99-16 | 27 Sep 102 12::3 |
| 15 | 12 | 5g14920.d | 1. | L0209513-13 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::1 |
| 16 | 13 | 5g14921.d | 1. | L0209516-04 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::4 |
| 17 | 14 | 5g14922.d | 1. | L0209516-05 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::2 |
| 18 | 15 | 5g14923.d | 1. | L0209517-02 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::5 |
| 19 | 16 | 5g14924.d | 1. | L0209517-03 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::2 |
| 20 | 17 | 5g14925.d | 1. | WG1260113-03 8021 STD 20PPB 5ML | 1,1 S-99-16 | 27 Sep 102 12::0 |

pH<2

pH<2

KEMRON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 11G14585
Date Analyzed: 09/27/02
Time Analyzed: 12:22
Analyst: CSH

Work Group: WG126148
Blank Sample ID: WG126148-01
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 | WG126148-02 | 11G14586 | 09/27/02 12:57 | |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 | 11G14587 | 09/27/02 13:44 | |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 | 11G14589 | 09/27/02 14:53 | A1 |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516
Run Date: 09/27/2002
Sample ID: WG126148-01
Instrument ID: HP11
Run Time: 12:22
Method: 8021B
File ID: 11G14585
Analyst: CSH
Matrix: Solid
Workgroup (AAB#): WG126148
Units: ug/kg
Contract #:
Cal ID: HP11-16-AUG-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | ND |
| Benzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Xylenes | 0.500 | 3.00 | 0.500 | 1 | ND |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 94.8 | 47 - 121 | PASS |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Instrument ID: HP11
File ID: 11G14586
Workgroup (AAB#): WG126148
Contract #:

Run Date: 09/27/2002
Run Time: 12:57
Analyst: CSH

Sample ID: WG126148-02
Method: 8021B
Matrix: Solid
Units: ug/kg
Cal ID: HP11-16-AUG-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Methyl tert-butyl ether | 20.0 | 21.5 | 108 | 12 - 159 | |
| Benzene | 20.0 | 22.5 | 113 | 80 - 120 | |
| Toluene | 20.0 | 21.1 | 106 | 80 - 121 | |
| Ethylbenzene | 20.0 | 19.7 | 98.6 | 80 - 124 | |
| Xylenes | 60.0 | 61.7 | 103 | 80 - 120 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 47 - 121 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG126148

Login Number: L0209516

| 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-CEF46-SB14-S-Q3-02 | 09/26/02 | 09/27/02 | 09/27/02 | 14 | 0.978 | 09/27/02 | 14 | 0.978 | |

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

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209516
Instrument Id: HP11
Workgroup (AAB#): WG126148

Method: 8021
Matrix: SOLID

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209516-03 | 1.00 | A1 | 303 |
| L0209516-03 | 1.00 | | 408 |
| WG126148-01 | 1.00 | | 94.8 |
| WG126148-02 | 1.00 | | 105 |

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

Underline = Result out of surrogate limits

DL = surrogate diluted out

Login Number: L0209516
Analyst: CBN
Analytical Method: 8021
Initial Calibration Date: 16-AUG-02
Instrument ID: HP11

| Analyte | | Summary AVG RF | % RSD | $R^2$ | Q |
|---|---|---|---|---|---|
| BROMOCHLOROBENZENE | | 123000 | 7.57 | | |
| 1,2-DICHLOROBENZENE | | 118000 | 5.32 | | |
| 1,4-DICHLOROBENZENE | | 133000 | 4.28 | | |
| 1,3-DICHLOROBENZENE | | 129000 | 5.55 | | |
| P-BROMOFLUOROBENZENE | | 131000 | 6.34 | | |
| O-XYLENE | | 138000 | 7.32 | | |
| M-,P-XYLENE | | 160000 | 1.71 | | |
| ETHYLBENZENE | | 130000 | 2.75 | | |
| CHLOROBENZENE | | 143000 | 5.21 | | |
| TOLUENE | | 142000 | 4.60 | | |
| A,A,A-TRIFLUOROTOLUENE | | 48200 | 7.82 | | |
| BENZENE | | 150000 | 2.76 | | |
| METHYLTERT-BUTYL ETHER | | 68800 | 5.60 | | |

# = CC

* = SPCC

KEMRON FORMS - Modified 04/03/2002
Version 1.0
Report generated 10/07/2002 12:57

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP11

Analyst: CBN
Initial Calibration Date: 16-AUG-02

| Analyte | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG123524-01 | 11G14244 | 1 |
| | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 3.0 | 354812 | 118300 |
| 1,2-DICHLOROBENZENE | | 1.0 | 127891 | 127900 |
| 1,4-DICHLOROBENZENE | | 1.0 | 132509 | 132500 |
| 1,3-DICHLOROBENZENE | | 1.0 | 137511 | 137500 |
| P-BROMOFLUOROBENZENE | | 3.0 | 355392 | 118500 |
| O-XYLENE | | 1.0 | 118427 | 118400 |
| M-,P-XYLENE | | 2.0 | 317933 | 159000 |
| ETHYLBENZENE | | 1.0 | 126233 | 126200 |
| CHLOROBENZENE | | 1.0 | 136222 | 136200 |
| TOLUENE | | 1.0 | 128218 | 128200 |
| A,A,A-TRIFLUOROTOLUENE | | 3.0 | 119731 | 39910 |
| BENZENE | | 1.0 | 155845 | 155800 |
| METHYLTERT-BUTYL ETHER | | 1.0 | 76929 | 76930 |

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP11

Analyst: CBN
Initial Calibration Date: 16-AUG-02

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG123524-02 | 11G14245 | 2 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 15.0 | 1744083 | 116300 |
| 1,2-DICHLOROBENZENE | | 10.0 | 1189883 | 119000 |
| 1,4-DICHLOROBENZENE | | 10.0 | 1297973 | 129800 |
| 1,3-DICHLOROBENZENE | | 10.0 | 1231377 | 123100 |
| P-BROMOFLUOROBENZENE | | 15.0 | 1863661 | 124200 |
| O-XYLENE | | 10.0 | 1516908 | 151700 |
| M-,P-XYLENE | | 20.0 | 3292931 | 164600 |
| ETHYLBENZENE | | 10.0 | 1273307 | 127300 |
| CHLOROBENZENE | | 10.0 | 1349375 | 134900 |
| TOLUENE | | 10.0 | 1483669 | 148400 |
| A,A,A-TRIFLUOROTOLUENE | | 15.0 | 722298 | 48150 |
| BENZENE | | 10.0 | 1551968 | 155200 |
| METHYLTERT-BUTYL ETHER | | 10.0 | 681035 | 68100 |

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP11

Analyst: CBN
Initial Calibration Date: 16-AUG-02

| | Sample # | File # | Level |
|---|---|---|---|
| | WG123524-03 | 11G14246 | 3 |
| Analyte | Conc | Response | RF |
| BROMOCHLOROBENZENE | 30.0 | 3189221 | 106300 |
| 1,2-DICHLOROBENZENE | 20.0 | 2180889 | 109000 |
| 1,4-DICHLOROBENZENE | 20.0 | 2436675 | 121800 |
| 1,3-DICHLOROBENZENE | 20.0 | 2331440 | 116600 |
| P-BROMOFLUOROBENZENE | 30.0 | 3753225 | 125100 |
| O-XYLENE | 20.0 | 2868495 | 143400 |
| M-,P-XYLENE | 40.0 | 6396575 | 159900 |
| ETHYLBENZENE | 20.0 | 2532824 | 126600 |
| CHLOROBENZENE | 20.0 | 2730519 | 136500 |
| TOLUENE | 20.0 | 2864523 | 143200 |
| A,A,A-TRIFLUOROTOLUENE | 30.0 | 1464634 | 48820 |
| BENZENE | 20.0 | 2942887 | 147100 |
| METHYLTERT-BUTYL ETHER | 20.0 | 1324596 | 66230 |

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP11

Analyst: CBN
Initial Calibration Date: 16-AUG-02

| | Sample # | File # | Level |
|---|---|---|---|
| | WG123524-04 | 11G14247 | 4 |
| Analyte | Conc | Response | RF |
| BROMOCHLOROBENZENE | 45.0 | 5740973 | 127600 |
| 1,2-DICHLOROBENZENE | 50.0 | 6123141 | 122500 |
| 1,4-DICHLOROBENZENE | 50.0 | 6771904 | 135400 |
| 1,3-DICHLOROBENZENE | 50.0 | 6382046 | 127600 |
| P-BROMOFLUOROBENZENE | 45.0 | 5946727 | 132100 |
| O-XYLENE | 50.0 | 6967621 | 139400 |
| M-,P-XYLENE | 100.0 | 16145687 | 161500 |
| ETHYLBENZENE | 50.0 | 6590585 | 131800 |
| CHLOROBENZENE | 50.0 | 7216021 | 144300 |
| TOLUENE | 50.0 | 7209410 | 144200 |
| A,A,A-TRIFLUOROTOLUENE | 45.0 | 2217164 | 49270 |
| BENZENE | 50.0 | 7564772 | 151300 |
| METHYLTERT-BUTYL ETHER | 50.0 | 3453252 | 69070 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: CBN
Analytical Method: 8021
Initial Calibration Date: 16-AUG-02
Instrument ID: HP11

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG123524-05 | 11G14248 | 5 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 60.0 | 7814545 | 130200 |
| 1,2-DICHLOROBENZENE | | 100.0 | 12168416 | 121700 |
| 1,4-DICHLOROBENZENE | | 100.0 | 13915869 | 139200 |
| 1,3-DICHLOROBENZENE | | 100.0 | 13329818 | 133300 |
| P-BROMOFLUOROBENZENE | | 60.0 | 8260775 | 137700 |
| O-XYLENE | | 100.0 | 14172518 | 141700 |
| M-,P-XYLENE | | 200.0 | 32631036 | 163200 |
| ETHYLBENZENE | | 100.0 | 13529828 | 135300 |
| CHLOROBENZENE | | 100.0 | 15088227 | 150900 |
| TOLUENE | | 100.0 | 14582488 | 145800 |
| A,A,A-TRIFLUOROTOLUENE | | 60.0 | 3017790 | 50300 |
| BENZENE | | 100.0 | 14723348 | 147200 |
| METHYLTERT-BUTYL ETHER | | 100.0 | 6786024 | 67860 |

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP11

Analyst: CBN
Initial Calibration Date: 16-AUG-02

| | Sample # | File # | Level |
|---|---|---|---|
| | WG123524-06 | 11G14249 | 6 |
| Analyte | Conc | Response | RF |
| BROMOCHLOROBENZENE | 75.0 | 9739288 | 129900 |
| 1,2-DICHLOROBENZENE | 200.0 | 22862017 | 114300 |
| 1,4-DICHLOROBENZENE | 200.0 | 26728235 | 133600 |
| 1,3-DICHLOROBENZENE | 200.0 | 26285223 | 131400 |
| P-BROMOFLUOROBENZENE | 75.0 | 10419205 | 138900 |
| O-XYLENE | 200.0 | 27361992 | 136800 |
| M-,P-XYLENE | 400.0 | 62794482 | 157000 |
| ETHYLBENZENE | 200.0 | 26376295 | 131900 |
| CHLOROBENZENE | 200.0 | 29874374 | 149400 |
| TOLUENE | 200.0 | 28571859 | 142900 |
| A,A,A-TRIFLUOROTOLUENE | 75.0 | 3789540 | 50530 |
| BENZENE | 200.0 | 29025370 | 145100 |
| METHYLTERT-BUTYL ETHER | 200.0 | 12989397 | 64950 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: CBN
Analytical Method: 8021
Initial Calibration Date: 16-AUG-02
Instrument ID: HP11

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG123524-07 | 11G14250 | 7 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 90.0 | 11717605 | 130200 |
| 1,2-DICHLOROBENZENE | | 300.0 | 34368448 | 114600 |
| 1,4-DICHLOROBENZENE | | 300.0 | 41002881 | 136700 |
| 1,3-DICHLOROBENZENE | | 300.0 | 40062914 | 133500 |
| P-BROMOFLUOROBENZENE | | 90.0 | 12523578 | 139200 |
| O-XYLENE | | 300.0 | 41345695 | 137800 |
| M-,P-XYLENE | | 600.0 | 94893261 | 158200 |
| ETHYLBENZENE | | 300.0 | 39922572 | 133100 |
| CHLOROBENZENE | | 300.0 | 45552315 | 151800 |
| TOLUENE | | 300.0 | 43360268 | 144500 |
| A,A,A-TRIFLUOROTOLUENE | | 90.0 | 4544212 | 50490 |
| BENZENE | | 300.0 | 44791209 | 149300 |
| METHYLTERT-BUTYL ETHER | | 300.0 | 20517380 | 68390 |

Login Number: L0209516
File ID: 11G14253
ALT ID: WG123524-08
Units: ug/kg

Instrument ID: HP11
Run Date: 08/16/2002
Run Time: 15:21
Analyst: CBN
Cal ID: HP11 - 16-AUG-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 20.1 | 119000 | 0.5 | |
| 1,4-Dichlorobenzene | | 20 | 20.3 | 134000 | 1.5 | |
| 1,3-Dichlorobenzene | | 20 | 19.6 | 126000 | 2.0 | |
| o-Xylene | | 20 | 22.0 | 152000 | 10.0 | |
| m-,p-Xylene | | 40 | 42.9 | 172000 | 7.3 | |
| Ethylbenzene | | 20 | 21.3 | 139000 | 6.5 | |
| Chlorobenzene | | 20 | 20.2 | 145000 | 1.0 | |
| Toluene | | 20 | 21.3 | 152000 | 6.5 | |
| Benzene | | 20 | 20.5 | 154000 | 2.5 | |
| MTBE | | 20 | 19.8 | 68200 | 1.0 | |

Login Number: L0209516
File ID: 11G14584
CCV ID: WG126147-01
Units: ug/kg

Instrument ID: HP11
Run Date: 09/27/2002
Run Time: 11:27
Analyst: CSH
Cal ID: HP11 - 16-AUG-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 21.5 | 128000 | 7.5 | |
| 1,4-Dichlorobenzene | | 20 | 20.3 | 135000 | 1.5 | |
| 1,3-Dichlorobenzene | | 20 | 19.0 | 123000 | 5.0 | |
| o-Xylene | | 20 | 21.0 | 145000 | 5.0 | |
| m-,p-Xylene | | 40 | 42.9 | 172000 | 7.3 | |
| Ethylbenzene | | 20 | 20.5 | 133000 | 2.5 | |
| Chlorobenzene | | 20 | 19.8 | 142000 | 1.0 | |
| Toluene | | 20 | 22.1 | 158000 | 10.5 | |
| Benzene | | 20 | 23.0 | 173000 | 15.0 | |
| MTBE | | 20 | 21.4 | 73700 | 7.0 | |

* Exceeds %D Limit

Login Number: L0209516
File ID: 11G14591
CCV ID: WG126147-02
Units: ug/kg

Instrument ID: HP11
Run Date: 09/27/2002
Run Time: 16:03
Analyst: CSH
Cal ID: HP11 - 16-AUG-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 20.7 | 123000 | 3.5 | |
| 1,4-Dichlorobenzene | | 20 | 20.0 | 133000 | 0.0 | |
| 1,3-Dichlorobenzene | | 20 | 19.5 | 126000 | 2.5 | |
| o-Xylene | | 20 | 20.6 | 143000 | 3.0 | |
| m-,p-Xylene | | 40 | 42.2 | 169000 | 5.5 | |
| Ethylbenzene | | 20 | 20.1 | 131000 | 0.5 | |
| Chlorobenzene | | 20 | 19.2 | 137000 | 4.0 | |
| Toluene | | 20 | 20.6 | 147000 | 3.0 | |
| Benzene | | 20 | 22.3 | 167000 | 11.5 | |
| MTBE | | 20 | 22.4 | 77000 | 12.0 | |

* Exceeds %D Limit

1 502

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 11g14242.d | 1. | WG123501-01 8021 STD 20PPB 5G HIGH | 7,1 S-97-(10,12) | 16 Aug 2002 08:( |
| 2 | 1 | 11g14243.d | 1. | WG123501-01 8021 STD 20PPB 5G | 7,1 S-97-(10,12) | 16 Aug 2002 08:4 |
| 3 | 2 | 11g14244.d | 1. | WG123524-01 STD 1 1PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 09:4 |
| 4 | 3 | 11g14245.d | 1. | WG123524-02 STD 2 10PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 10:1 |
| 5 | 4 | 11g14246.d | 1. | WG123524-03 STD 3 20PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 10:5 |
| 6 | 5 | 11g14247.d | 1. | WG123524-04 STD 4 50PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 11:2 |
| 7 | 6 | 11g14248.d | 1. | WG123524-05 STD 5 100PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 11:5 |
| 8 | 7 | 11g14249.d | 1. | WG123524-06 STD 6 200PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 12:3 |
| 9 | 8 | 11g14250.d | 1. | WG123524-07 STD 3 300PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 13:0 |
| 10 | 9 | 11g14251.d | 1. | RINSE c/o | 7,1 S-97-12 | 16 Aug 2002 13:4 |
| 11 | 10 | 11g14252.d | 1. | RINSE ✓ | 7,1 S-97-12 | 16 Aug 2002 14:1 |
| 12 | 1 | 11g14253.d | 1. | WG123524-08 ALT SOURCE 20PP... ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 15:2 |
| 13 | 2 | 11g14254.d | 1. | WG123502-01 SOIL BLANK 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 15:5 |
| 14 | 3 | 11g14255.d | 1. | WG123502-02 SOIL LCS 20PPB 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 16:3( |
| 15 | 4 | 11g14256.d | 1. | WG123502-03 L0208335-02 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 17:0 |
| 16 | 5 | 11g14257.d | 1. | WG123502-04 L0208335-02 MS 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 17:39 |
| 17 | 6 | 11g14258.d | 1. | WG123502-05 L0208335-02 MSD 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 18:14 |
| 18 | 7 | 11g14259.d | 1. | L0208371-06 00 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 18:48 |
| 19 | 8 | 11g14260.d | 1. | L0208331-02 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 19:23 |
| 20 | 9 | 11g14261.d | 1. | L0208331-03 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 19:58 |
| 21 | 10 | 11g14262.d | 1. | L0208331-04 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 20:32 |
| 22 | 11 | 11g14263.d | 1. | L0208331-06 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 21:07 |
| 23 | 12 | 11g14264.d | 1. | WG123501-01 8021 STD 20PPB 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 21:42 |
| 24 | 13 | 11g14265.d | 1. | L0208308-01 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 22:16 |
| 25 | 14 | 11g14266.d | 1. | L0208331-01 1G 5X ✓ | 7,5 S-97-12 | 16 Aug 2002 22:51 |
| 26 | 15 | 11g14267.d | 1. | L0208331-07 1G 5X RR @ 100x | 7,5 S-97-12 | 16 Aug 2002 23:26 |
| 27 | 16 | 11g14268.d | 1. | RINSE 5G c/o | 7,1 S-97-12 | 17 Aug 2002 00:01 |
| 28 | 17 | 11g14269.d | 1. | RINSE 5G ✓ | 7,1 S-97-12 | 17 Aug 2002 00:36 |
| 29 | 18 | 11g14270.d | 1. | WG123501-02 8021 STD 20PPB 5G ✓ | 7,1 S-97-(10,12) | 17 Aug 2002 01:11 |

REANALYSIS FILE #

L0208331-07

Directory: C:\HPCHEM\1\DATA\092702

# Injection Log

ANALYST: CSH

WG126148

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 11g14584.d | 1. | WG126147-01 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 11:27 |
| 2 | 2 | 11g14585.d | 1. | WG126148-01 SOIL BLANK 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 12:22 |
| 3 | 3 | 11g14586.d | 1. | WG126148-02 SOIL LCS 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 12:57 |
| 4 | 4 | 11g14587.d | 1. | L0209516-03 A 5.21G RR HIGH SS | 7,1 S-99-50 | 27 Sep 2002 13:44 |
| 5 | 5 | 11g14588.d | 1. | L0209517-01 A 4.81G ✓ | 7,1 S-99-50 | 27 Sep 2002 14:18 |
| 6 | 6 | 11g14589.d | 1. | L0209516-03 ~~A~~ B 5.15G conf SS | 7,1 S-99-50 | 27 Sep 2002 14:53 |
| 7 | 7 | 11g14590.d | 1. | BATCH BLANK 09/27/02 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 15:28 |
| 8 | 5 | 11g14591.d | 1. | WG126147-02 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 16:03 |
| 9 | 6 | 11g14592.d | 1. | L0209513-01 1G 5X RR STRT ~~SS~~ conf. | 7,5 S-99-50 | 27 Sep 2002 16:50 |
| 10 | 7 | 11g14593.d | 1. | L0209513-02 1G 5X RR 100X, SS | 7,5 S-99-50 | 27 Sep 2002 17:2[illegible] |
| 11 | 8 | 11g14594.d | 1. | L0209513-03 1G 5X RR 100X, SS | 7,5 S-99-50 | 27 Sep 2002 18:00 |
| 12 | 9 | 11g14595.d | 1. | L0209513-04 1G 5X RR 100X, SS DNR | 7,5 S-99-50 | 27 Sep 2002 18:35 |
| 13 | 10 | 11g14596.d | 1. | L0209513-05 1G 5X RR c/o | 7,5 S-99-50 | 27 Sep 2002 19:10 |
| 14 | 11 | 11g14597.d | 1. | WG126148-03 L0209513-06 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 19:45 |
| 15 | 12 | 11g14598.d | 1. | WG126148-04 L0209513-06 MS 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 20:20 |
| 16 | 13 | 11g14599.d | 1. | WG126148-05 L0209513-06 MSD 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 20:55 |
| 17 | 14 | 11g14600.d | 1. | L0209513-07 5G RR HIGH SS | 7,1 S-99-50 | 27 Sep 2002 21:29 |
| 18 | 15 | 11g14601.d | 1. | L0209513-08 1G 5X RR STRT | 7,5 S-99-50 | 27 Sep 2002 22:04 |
| 19 | 16 | 11g14602.d | 1. | WG126147-03 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 22:39 |
| 20 | 17 | 11g14603.d | 1. | L0209513-09 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 23:15 |
| 21 | 18 | 11g14604.d | 1. | L0209513-10 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 23:50 |
| 22 | 19 | 11g14605.d | 1. | WG126147-04 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 28 Sep 2002 00:25 |

Reanalyses

File number

L0209513-02 100X

-03 |

-04 |

-05 5X

-07

-08

KEMRON ENVIRONMENTAL SERVICES
METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 5G14929
Date Analyzed: 09/30/02
Time Analyzed: 11:55
Analyst: CSH

Work Group: WG126238
Blank Sample ID: WG126238-01
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 | WG126238-02 | 5G14930 | 09/30/02 13:01 | |
| DUP | WG126238-04 | 5G14932 | 09/30/02 14:38 | |
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 | 5G14936 | 09/30/02 16:56 | |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 | 5G14938 | 09/30/02 18:20 | |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516
Run Date: 09/30/2002
Sample ID: WG126238-01
Instrument ID: HP5
Run Time: 11:55
Method: 8021B
File ID: 5G14929
Analyst: CSH
Matrix: Solid
Workgroup (AAB#): WG126238
Units: ug/kg
Contract #:
Cal ID: HP5-25-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Methyl tert-butyl ether | 50.0 | 100 | 50.0 | 100 | ND |
| Benzene | 50.0 | 100 | 50.0 | 100 | ND |
| Toluene | 50.0 | 100 | 50.0 | 100 | ND |
| Ethylbenzene | 50.0 | 100 | 50.0 | 100 | ND |
| Xylenes | 50.0 | 300 | 50.0 | 100 | ND |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 121 | 47 - 121 | PASS |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Run Date: 09/30/2002
Sample ID: WG126238-02
Instrument ID: HP5
Run Time: 13:01
Method: 8021B
File ID: 5G14930
Analyst: CSH
Matrix: Solid
Workgroup (AAB#): WG126238
Units: ug/kg
Contract #:
Cal ID: HP5-25-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Methyl tert-butyl ether | 2000 | 2010 | 101 | 12 - 159 | |
| Benzene | 2000 | 1820 | 91.0 | 80 - 120 | |
| Toluene | 2000 | 1850 | 92.3 | 80 - 121 | |
| Ethylbenzene | 2000 | 1900 | 95.0 | 80 - 124 | |
| Xylenes | 6000 | 5570 | 92.8 | 80 - 120 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 93.6 | 47 - 121 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/02/2002
Version 1.3
Report generated

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG126238

Login Number: L0209516

| 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-CEF46-SB1-S-Q3-02 | 09/26/02 | 09/27/02 | 09/30/02 | 14 | 4.14 | 09/30/02 | 14 | 4.14 | |
| 062-CEF46-SB2-S-Q3-02 | 09/26/02 | 09/27/02 | 09/30/02 | 14 | 4.18 | 09/30/02 | 14 | 4.18 | |

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

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209516
Instrument Id: HP5
Workgroup (AAB#): WG126238

Method: 8021
Matrix: SOLID

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209516-01 | 1000 | | 118 |
| L0209516-02 | 1000 | | 92.3 |
| WG126238-01 | 100 | | 121 |
| WG126238-02 | 100 | | 93.6 |

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

Underline = Result out of surrogate limits

DL = surrogate diluted out

INITIAL CALIBRATION

Login Number: L0209516

Analyst: JLS

Analytical Method: 8021

Initial Calibration Date: 25-SEP-02

Instrument ID: HP5

| Analyte | | Summary | | | |
|---|---|---|---|---|---|
| | | AVG RF | % RSD | $R^2$ | Q |
| BROMOCHLOROBENZENE | | 41300 | 4.63 | | |
| 1,2-DICHLOROBENZENE | | 38600 | 12.10 | | |
| 1,4-DICHLOROBENZENE | | 49200 | 12.00 | | |
| 1,3-DICHLOROBENZENE | | 44600 | 3.99 | | |
| P-BROMOFLUOROBENZENE | | 46400 | 4.25 | | |
| O-XYLENE | | 47400 | 6.64 | | |
| M-,P-XYLENE | | 54300 | 7.52 | | |
| ETHYLBENZENE | | 45200 | 3.61 | | |
| CHLOROBENZENE | | 55400 | 5.90 | | |
| TOLUENE | | 53700 | 9.03 | | |
| A,A,A-TRIFLUOROTOLUENE | | 17700 | 3.25 | | |
| BENZENE | | 58400 | 8.85 | | |
| METHYLTERT-BUTYL ETHER | | 9740 | 13.50 | | |

# = CC

* = SPCC

INITIAL CALIBRATION

Login Number: L0209516

Analyst: JLS

Analytical Method: 8021

Initial Calibration Date: 25-SEP-02

Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-01 | 5G14868 | 1 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 3.0 | 130776 | 43590 |
| 1,2-DICHLOROBENZENE | | 1.0 | 48073 | 48070 |
| 1,4-DICHLOROBENZENE | | 1.0 | 61242 | 61240 |
| 1,3-DICHLOROBENZENE | | 1.0 | 48127 | 48130 |
| P-BROMOFLUOROBENZENE | | 3.0 | 145368 | 48460 |
| O-XYLENE | | 1.0 | 53773 | 53770 |
| M-,P-XYLENE | | 2.0 | 125408 | 62700 |
| ETHYLBENZENE | | 1.0 | 48427 | 48430 |
| CHLOROBENZENE | | 1.0 | 62259 | 62260 |
| TOLUENE | | 1.0 | 64428 | 64430 |
| A,A,A-TRIFLUOROTOLUENE | | 3.0 | 53787 | 17930 |
| BENZENE | | 1.0 | 69697 | 69700 |
| METHYLTERT-BUTYL ETHER | | 1.0 | 11914 | 11910 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: JLS
Analytical Method: 8021
Initial Calibration Date: 25-SEP-02
Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-02 | 5G14869 | 2 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 15.0 | 649809 | 43320 |
| 1,2-DICHLOROBENZENE | | 10.0 | 407685 | 40770 |
| 1,4-DICHLOROBENZENE | | 10.0 | 520027 | 52000 |
| 1,3-DICHLOROBENZENE | | 10.0 | 455552 | 45560 |
| P-BROMOFLUOROBENZENE | | 15.0 | 711697 | 47450 |
| O-XYLENE | | 10.0 | 490311 | 49030 |
| M-,P-XYLENE | | 20.0 | 1120478 | 56020 |
| ETHYLBENZENE | | 10.0 | 462819 | 46280 |
| CHLOROBENZENE | | 10.0 | 566170 | 56620 |
| TOLUENE | | 10.0 | 535934 | 53590 |
| A,A,A-TRIFLUOROTOLUENE | | 15.0 | 264328 | 17620 |
| BENZENE | | 10.0 | 591530 | 59150 |
| METHYLTERT-BUTYL ETHER | | 10.0 | 108153 | 10820 |

INITIAL CALIBRATION

Login Number: L0209516

Analyst: JLS

Analytical Method: 8021

Initial Calibration Date: 25-SEP-02

Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-03 | 5G14870 | 3 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 30.0 | 1260400 | 42010 |
| 1,2-DICHLOROBENZENE | | 20.0 | 776325 | 38820 |
| 1,4-DICHLOROBENZENE | | 20.0 | 986503 | 49330 |
| 1,3-DICHLOROBENZENE | | 20.0 | 895215 | 44760 |
| P-BROMOFLUOROBENZENE | | 30.0 | 1395591 | 46520 |
| O-XYLENE | | 20.0 | 942781 | 47140 |
| M-,P-XYLENE | | 40.0 | 2170819 | 54270 |
| ETHYLBENZENE | | 20.0 | 907299 | 45360 |
| CHLOROBENZENE | | 20.0 | 1110942 | 55550 |
| TOLUENE | | 20.0 | 1058576 | 52930 |
| A,A,A-TRIFLUOROTOLUENE | | 30.0 | 534115 | 17800 |
| BENZENE | | 20.0 | 1155658 | 57780 |
| METHYLTERT-BUTYL ETHER | | 20.0 | 202842 | 10140 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: JLS
Analytical Method: 8021
Initial Calibration Date: 25-SEP-02
Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-04 | 5G14871 | 4 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 45.0 | 1801399 | 40030 |
| 1,2-DICHLOROBENZENE | | 50.0 | 1761153 | 35220 |
| 1,4-DICHLOROBENZENE | | 50.0 | 2295282 | 45910 |
| 1,3-DICHLOROBENZENE | | 50.0 | 2142919 | 42860 |
| P-BROMOFLUOROBENZENE | | 45.0 | 2095267 | 46560 |
| O-XYLENE | | 50.0 | 2292191 | 45840 |
| M-,P-XYLENE | | 100.0 | 5234212 | 52340 |
| ETHYLBENZENE | | 50.0 | 2203646 | 44070 |
| CHLOROBENZENE | | 50.0 | 2670218 | 53400 |
| TOLUENE | | 50.0 | 2549312 | 50990 |
| A,A,A-TRIFLUOROTOLUENE | | 45.0 | 803849 | 17860 |
| BENZENE | | 50.0 | 2789679 | 55790 |
| METHYLTERT-BUTYL ETHER | | 50.0 | 425812 | 8516 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: JLS
Analytical Method: 8021
Initial Calibration Date: 25-SEP-02
Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-05 | 5G14872 | 5 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 60.0 | 2496185 | 41600 |
| 1,2-DICHLOROBENZENE | | 100.0 | 3597917 | 35980 |
| 1,4-DICHLOROBENZENE | | 100.0 | 4585803 | 45860 |
| 1,3-DICHLOROBENZENE | | 100.0 | 4383256 | 43830 |
| P-BROMOFLUOROBENZENE | | 60.0 | 2807280 | 46790 |
| O-XYLENE | | 100.0 | 4562541 | 45630 |
| M-,P-XYLENE | | 200.0 | 10459707 | 52300 |
| ETHYLBENZENE | | 100.0 | 4439526 | 44400 |
| CHLOROBENZENE | | 100.0 | 5338197 | 53380 |
| TOLUENE | | 100.0 | 5149087 | 51490 |
| A,A,A-TRIFLUOROTOLUENE | | 60.0 | 1078015 | 17970 |
| BENZENE | | 100.0 | 5587946 | 55880 |
| METHYLTERT-BUTYL ETHER | | 100.0 | 863182 | 8632 |

INITIAL CALIBRATION

Login Number: L0209516
Analyst: JLS
Analytical Method: 8021
Initial Calibration Date: 25-SEP-02
Instrument ID: HP5

| | | Sample # | File # | Level |
|---|---|---|---|---|
| | | WG125957-06 | 5G14873 | 6 |
| Analyte | | Conc | Response | RF |
| BROMOCHLOROBENZENE | | 75.0 | 3051960 | 40690 |
| 1,2-DICHLOROBENZENE | | 200.0 | 7042582 | 35210 |
| 1,4-DICHLOROBENZENE | | 200.0 | 9016218 | 45080 |
| 1,3-DICHLOROBENZENE | | 200.0 | 8738138 | 43690 |
| P-BROMOFLUOROBENZENE | | 75.0 | 3512350 | 46830 |
| O-XYLENE | | 200.0 | 9014816 | 45070 |
| M-,P-XYLENE | | 400.0 | 20514947 | 51290 |
| ETHYLBENZENE | | 200.0 | 8809101 | 44050 |
| CHLOROBENZENE | | 200.0 | 10714572 | 53570 |
| TOLUENE | | 200.0 | 10237313 | 51190 |
| A,A,A-TRIFLUOROTOLUENE | | 75.0 | 1356969 | 18090 |
| BENZENE | | 200.0 | 11102812 | 55510 |
| METHYLTERT-BUTYL ETHER | | 200.0 | 1687701 | 8439 |

INITIAL CALIBRATION

Login Number: L0209516
Analytical Method: 8021
Instrument ID: HP5

Analyst: JLS
Initial Calibration Date: 25-SEP-02

| | Sample # | File # | Level |
|---|---|---|---|
| | WG125957-07 | 5G14874 | 7 |
| Analyte | Conc | Response | RF |
| BROMOCHLOROBENZENE | 100.0 | 3811771 | 38120 |
| 1,2-DICHLOROBENZENE | 300.0 | 10862890 | 36210 |
| 1,4-DICHLOROBENZENE | 300.0 | 13495842 | 44990 |
| 1,3-DICHLOROBENZENE | 300.0 | 13062918 | 43540 |
| P-BROMOFLUOROBENZENE | 100.0 | 4219705 | 42200 |
| O-XYLENE | 300.0 | 13542221 | 45140 |
| M-,P-XYLENE | 600.0 | 30716770 | 51190 |
| ETHYLBENZENE | 300.0 | 13238350 | 44130 |
| CHLOROBENZENE | 300.0 | 15997539 | 53330 |
| TOLUENE | 300.0 | 15334854 | 51120 |
| A,A,A-TRIFLUOROTOLUENE | 100.0 | 1641351 | 16410 |
| BENZENE | 300.0 | 16553679 | 55180 |
| METHYLTERT-BUTYL ETHER | 300.0 | 2919857 | 9733 |

KEMRON FORMS - Modified 04/03/2002
Version 1.0

Login Number: L0209516
File ID: 5G14877
ALT ID: WG125957-08
Units: ug/L

Instrument ID: HP5
Run Date: 09/25/2002
Run Time: 17:46
Analyst: JLS
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 20.7 | 37600 | 3.5 | |
| 1,4-Dichlorobenzene | | 20 | 19.9 | 47900 | 0.5 | |
| 1,3-Dichlorobenzene | | 20 | 19.6 | 43800 | 2.0 | |
| o-Xylene | | 20 | 19.4 | 46100 | 3.0 | |
| m-,p-Xylene | | 40 | 39.8 | 54100 | 0.5 | |
| Ethylbenzene | | 20 | 20.3 | 46000 | 1.5 | |
| Chlorobenzene | | 20 | 19.6 | 54500 | 2.0 | |
| Toluene | | 20 | 19.7 | 52800 | 1.5 | |
| Benzene | | 20 | 19.7 | 57400 | 1.5 | |
| MTBE | | 20 | 18.3 | 8910 | 8.5 | |

Login Number: L0209516
File ID: 5G14926
CCV ID: WG126237-01
Units: ug/L

Instrument ID: HP5
Run Date: 09/30/2002
Run Time: 08:57
Analyst: CSH
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 19.7 | 35800 | 1.5 | |
| 1,4-Dichlorobenzene | | 20 | 18.4 | 44500 | 8.0 | |
| 1,3-Dichlorobenzene | | 20 | 19.2 | 42800 | 4.0 | |
| o-Xylene | | 20 | 18.8 | 44600 | 6.0 | |
| m-,p-Xylene | | 40 | 38.7 | 52600 | 3.3 | |
| Ethylbenzene | | 20 | 19.8 | 44700 | 1.0 | |
| Chlorobenzene | | 20 | 19.1 | 52900 | 4.5 | |
| Toluene | | 20 | 18.8 | 50300 | 6.0 | |
| Benzene | | 20 | 18.6 | 54400 | 7.0 | |
| MTBE | | 20 | 17.2 | 8400 | 14.0 | |

* Exceeds %D Limit

Login Number: L0209516
File ID: 5G14937
CCV ID: WG126237-02
Units: ug/L

Instrument ID: HP5
Run Date: 09/30/2002
Run Time: 17:31
Analyst: CSH
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 22.2 | 40300 | 11.0 | |
| 1,4-Dichlorobenzene | | 20 | 20.2 | 48400 | 1.0 | |
| 1,3-Dichlorobenzene | | 20 | 20.6 | 45900 | 3.0 | |
| o-Xylene | | 20 | 19.8 | 46800 | 1.0 | |
| m-,p-Xylene | | 40 | 40.4 | 54900 | 1.0 | |
| Ethylbenzene | | 20 | 20.5 | 46300 | 2.5 | |
| Chlorobenzene | | 20 | 19.9 | 55100 | 0.5 | |
| Toluene | | 20 | 19.7 | 52800 | 1.5 | |
| Benzene | | 20 | 19.5 | 57100 | 2.5 | |
| MTBE | | 20 | 20.2 | 9840 | 1.0 | |

* Exceeds %D Limit

Login Number: L0209516
File ID: 5G14939
CCV ID: WG126237-03
Units: ug/L

Instrument ID: HP5
Run Date: 09/30/2002
Run Time: 18:54
Analyst: CSH
Cal ID: HP5 - 25-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | | 20 | 21.3 | 38800 | 6.5 | |
| 1,4-Dichlorobenzene | | 20 | 19.8 | 47700 | 1.0 | |
| 1,3-Dichlorobenzene | | 20 | 20.1 | 44800 | 0.5 | |
| o-Xylene | | 20 | 19.4 | 46000 | 3.0 | |
| m-,p-Xylene | | 40 | 39.6 | 53700 | 1.0 | |
| Ethylbenzene | | 20 | 20.0 | 45400 | 0.0 | |
| Chlorobenzene | | 20 | 19.3 | 53600 | 3.5 | |
| Toluene | | 20 | 19.3 | 51900 | 3.5 | |
| Benzene | | 20 | 19.4 | 56800 | 3.0 | |
| MTBE | | 20 | 19.9 | 9710 | 0.5 | |

* Exceeds %D Limit

# Injection Log

Directory: c:\hpchem\2\data\092502

Analyst: gls

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14868.d | 1. | WG125957-01 8021 STD 1 1PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 13::3 |
| 2 | 2 | 5g14869.d | 1. | WG125957-02 8021 STD 2 10PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::0 |
| 3 | 3 | 5g14870.d | 1. | WG125957-03 8021 STD 3 20PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::4 |
| 4 | 4 | 5g14871.d | 1. | WG125957-04 8021 STD 4 50PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::1 |
| 5 | 5 | 5g14872.d | 1. | WG125957-05 8021 STD 5 100PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::5 |
| 6 | 6 | 5g14873.d | 1. | WG125957-06 8021 STD 6 200PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::2 |
| 7 | 7 | 5g14874.d | 1. | WG125957-07 8021 STD 7 300PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::0 |
| 8 | 8 | 5g14875.d | 1. | RINSE 5ML do | 1,1 S-99-16 | 25 Sep 102 12::3 |
| 9 | 9 | 5g14876.d | 1. | RINSE 5ML ✓ | 1,1 S-99-16 | 25 Sep 102 12::1 |
| 10 | 10 | 5g14877.d | 1. | WG125957-08 8021 STD 20PPB 5ML ✓ | 1,1 S-(99-49,99-16 ALT SOURCE | 25 Sep 102 12::4 |

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# Injection Log

Directory: c:\hpchem\2\data\093002

WG126238

ANALYST: CSH

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14926.d | 1. | WG126237-01 8021 STD 20PPB 5ML | 1,1 S-(99-49,99-16) | 30 Sep 102 12::5 |
| 2 | 2 | 5g14927.d | 1. | WG126238-01 EXT BLANK 5G/10ML 100X DMR | 7,100 S-99-16 | 30 Sep 102 13::0 |
| 3 | 3 | 5g14928.d | 1. | WG126238-02 EXT LCS 5G/10ML 100X | 7,100 S-(99-49,99-16) DMR | 30 Sep 102 13::4 |
| 4 | 4 | 5g14929.d | 1. | WG126238-01 EXT BLANK 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 13::5 |
| 5 | 5 | 5g14930.d | 1. | WG126238-02 EXT LCS 5G/10ML 100X | 7,100 S-(99-49,99-16) | 30 Sep 102 12::0 |
| 6 | 1 | 5g14931.d | 1. | WG126238-03 L0209513-02 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 12::0 |
| 7 | 2 | 5g14932.d | 1. | WG126238-04 L0209513-02 DUP 5G/10ML 100 | 7,100 S-99-16 | 30 Sep 102 12::3 |
| 8 | 3 | 5g14933.d | 1. | L0209513-03 5G/10ML 100X NMH SS | 7,100 S-99-16 | 30 Sep 102 12::1 |
| 9 | 4 | 5g14934.d | 1. | L0209513-04 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 12::4 |
| 10 | 5 | 5g14935.d | 1. | L0209513-05 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 12::2 |
| 11 | 6 | 5g14936.d | 1. | L0209516-01 C 5.14G/10ML 1000X | 7,1000 S-99-16 | 30 Sep 102 12::5 |
| 12 | 7 | 5g14937.d | 1. | WG126237-02 8021 STD 20PPB 5ML | 7,1 S-(99-49,99-16) | 30 Sep 102 12::3 |
| 13 | 8 | 5g14938.d | 1. | L0209516-02 C 4.85G/10ML 1000X | 7,1000 S-99-16 | 30 Sep 102 12::2 |
| 14 | 9 | 5g14939.d | 1. | WG126237-03 8021 STD 20PPB 5ML | 7,1 S-(99-49,99-16) | 30 Sep 102 12::5 |

# VOA - GC

**Date:** 9/27/02 **Analyst:** CSH **Method:** (8021) 8015 602

**Instrument:** HP5 **Work Group:** WG 126114

| | 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 9/30/02

Secondary Reviewers Initials & Date Checked: GAS 10/1/02

- _____ • 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: 9/27/02 Analyst: CSH Method: (8021) 8015 602

Instrument: HP 11 Work Group: WG 126148

| | 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 | NA |
| | |
| Excel Spreadsheets / Forms | ✓ |
| Case Narrative | ✓ |
| Narrative Summary | ✓ |
| Results Reporting / Data Qualifiers | ✓ |
| Client Data Package Assembly | ✓ |
| Check for Completeness | ✓ |

Primary Reviewers Initials & Date Checked: CSH 10/01/02

Secondary Reviewers Initials & Date Checked: GJS 10/1/02

_____ • 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:** 9/30/02 **Analyst:** CSH **Method:** 8021 8015 602

**Instrument:** HP5 **Work Group:** WG 126238

| | 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 | ✓ |
| Case Narrative | ✓ |
| Narrative Summary | ✓ |
| Results Reporting / Data Qualifiers | ✓ |
| Client Data Package Assembly | ✓ |
| Check for Completeness | ✓ |

Primary Reviewers Initials & Date Checked: CSH 10/01/02

Secondary Reviewers Initials & Date Checked: QAS 10/1/02

_____ • 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: _____

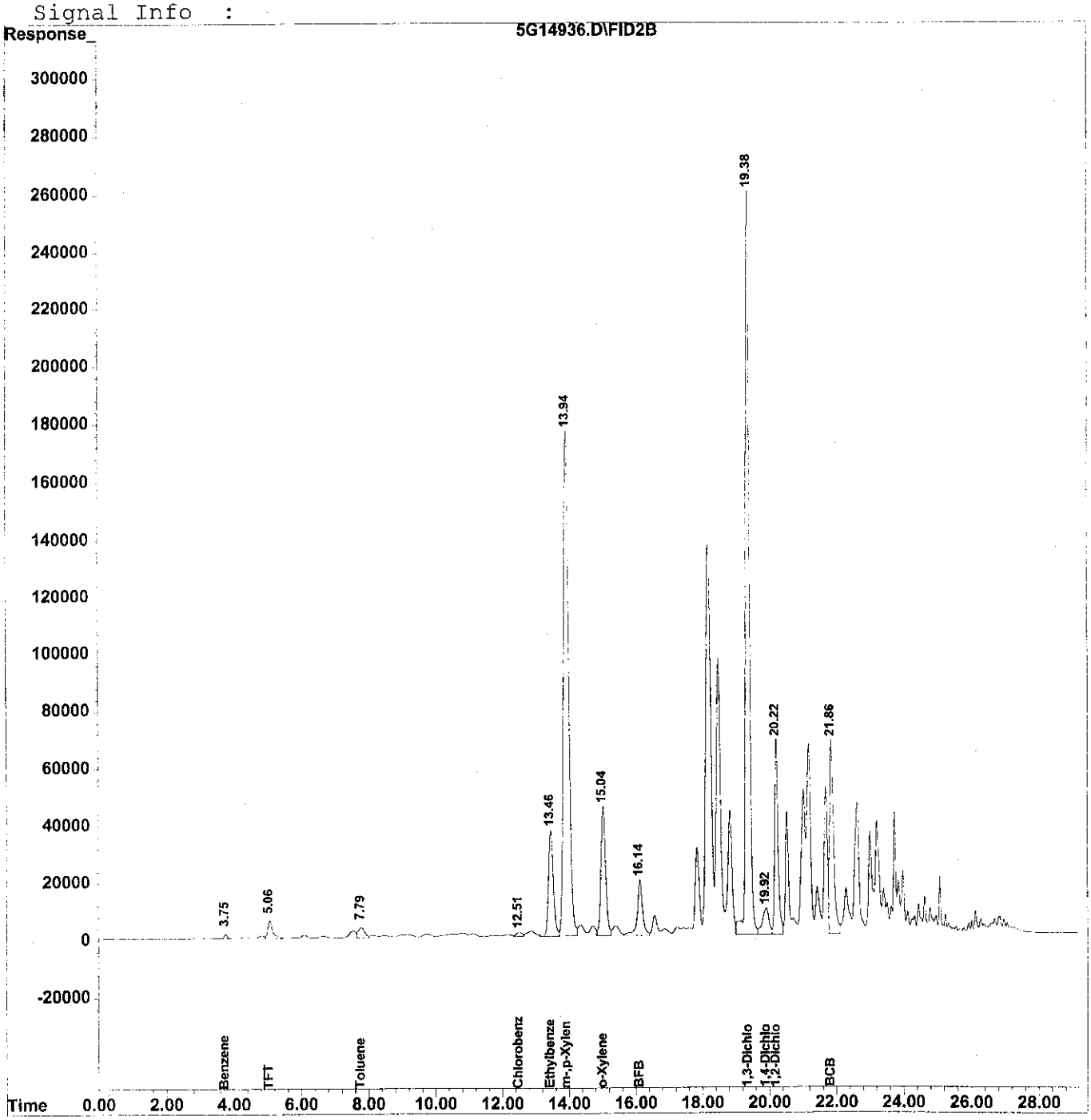
✓ = Checked & OK
NA = Not Applicable

# 2.1.3.2 Sample Data

Data File : C:\HPCHEM\2\DATA\093002\5G14936.D  Vial: 6
Acq On : 30 Sep 2002 16:56  Operator: CSH
Sample : L0209516-01 C 5.14G/10ML 1000X  Inst : HP5
Misc : 7,1000 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 30 17:26 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\093002\5G14936.D Vial: 6
Acq On : 30 Sep 2002 16:56 Operator: CSH
Sample : L0209516-01 C 5.14G/10ML 1000X Inst : HP5
Misc : 7,1000 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 30 17:26 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

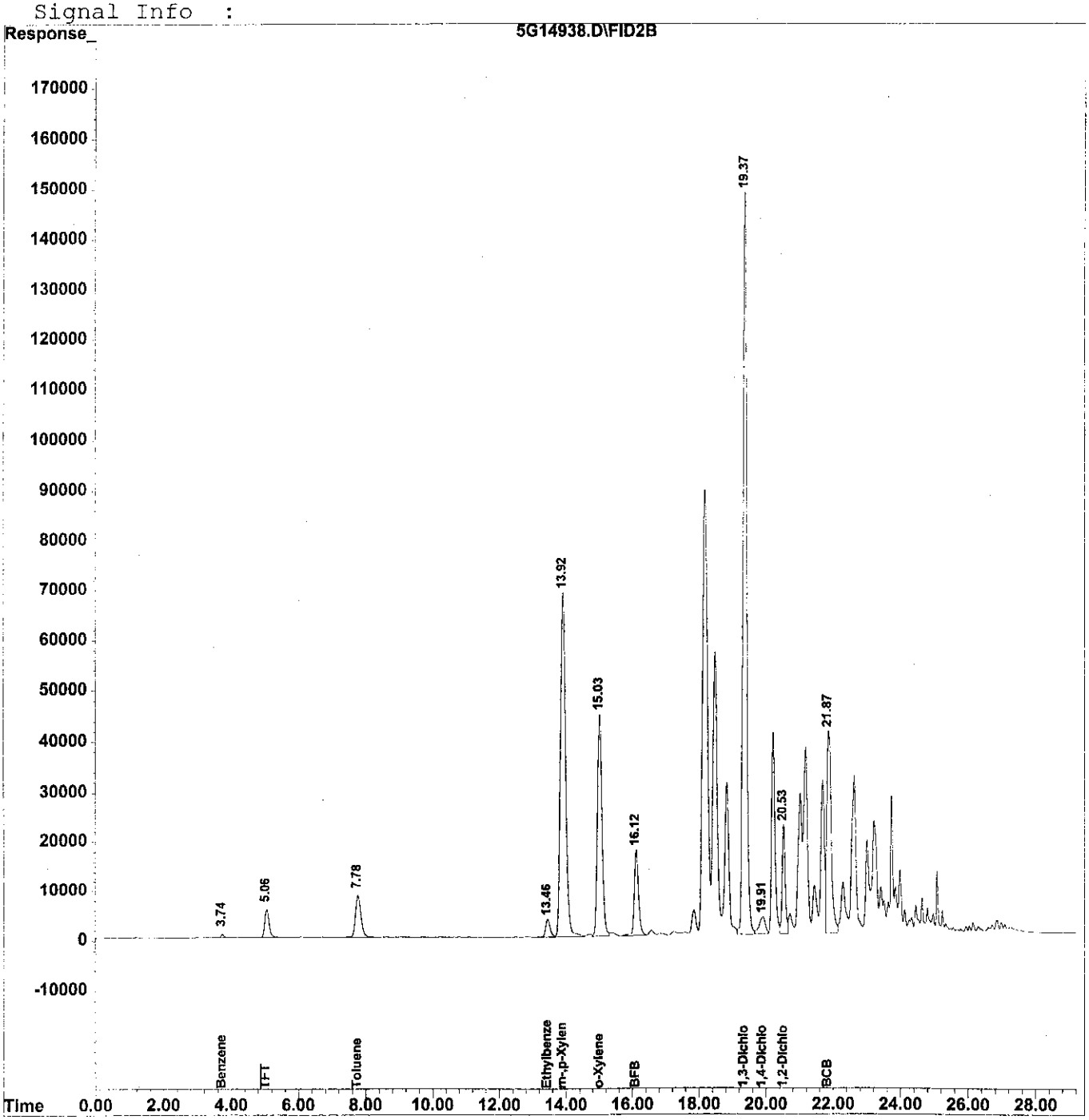
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 627645 | 35.5200 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 118.40% ✓ |
| 9) S BFB | 16.14 | 2109722 | 45.4681 ug/L |
| Spiked Amount 30.000 | | Recovery = | 151.56% |
| 13) S BCB | 21.86 | 5691913 | 137.6899 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 458.97%# |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 3912 | <MDL ug/L |
| 2) TM Benzene | 3.75✓ | 106913 | 1.8298 ug/L |
| 4) TM Toluene | 7.79✓ | 484662 | 9.0294 ug/L |
| 5) TM Chlorobenzene | 12.51 | 171685 | 3.0966 ug/L |
| 6) TM Ethylbenzene | 13.47✓ | 3721641 | 82.2552 ug/L |
| 7) TM m-,p-Xylene | 13.94✓ | 19230698 | 354.1370 ug/L |
| 8) TM o-Xylene | 15.04✓ | 4433898 | 93.5907 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.38 | 20310807 | 455.1556 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.92 | 1204048 | 25.4323 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.22 | 4855383 | 135.1028 ug/L |

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

Data File : C:\HPCHEM\2\DATA\093002\5G14938.D Vial: 8
Acq On : 30 Sep 2002 18:20 Operator: CSH
Sample : L0209516-02 C 4.85G/10ML 1000X Inst : HP5
Misc : 7,1000 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 30 18:49 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\093002\5G14938.D  Vial: 8
Acq On : 30 Sep 2002 18:20  Operator: CSH
Sample : L0209516-02 C 4.85G/10ML 1000X  Inst : HP5
Misc : 7,1000 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 30 18:49 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.06 | 489095 | 27.6791 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 92.26% ✓ |
| 9) S BFB | 16.13 | 1529369 | 32.9605 ug/L |
| Spiked Amount 30.000 | | Recovery = | 109.87% |
| 13) S BCB | 21.87 | 3910360 | 94.5933 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 315.31%# |
| **Target Compounds** | | | |
| 1) TM MTBE | 2.24 | 2273 | <MDL ug/L |
| 2) TM Benzene | 3.75✓ | 36235 | 0.6202 ug/L F |
| 4) TM Toluene | 7.78✓ | 983343 | 18.3201 ug/L |
| 5) TM Chlorobenzene | 12.50 | 9646 | <MDL ug/L |
| 6) TM Ethylbenzene | 13.46✓ | 343970 | 7.6024 ug/L |
| 7) TM m-,p-Xylene | 13.92✓ | 7501138 | 138.1349 ug/L |
| 8) TM o-Xylene | 15.03✓ | 4239829 | 89.4943 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.37 | 11439985 | 256.3647 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.91 | 431086 | 8.1782 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.54 | 1384713 | 38.3006 ug/L |

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

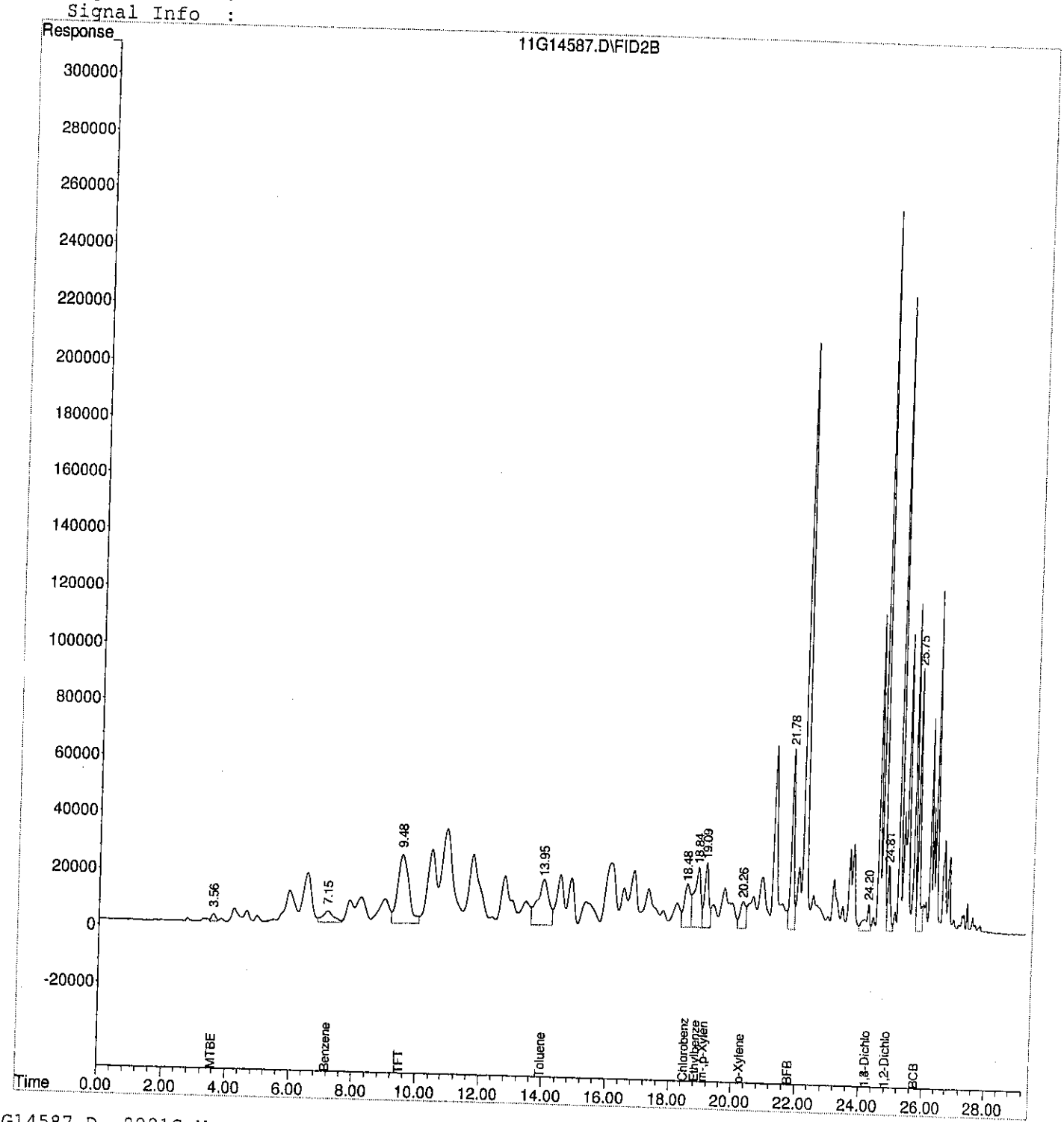
C:\HPCHEM\1\DATA\092702\11G14587.D

| | | | |
|---|---|---|---|
| Acq On | : 27 Sep 2002 1:44 pm | Vial: | 4 |
| Sample | : L0209516-03 A 5.21G | Operator: | CSH |
| Misc | : 7,1 S-99-50 | Inst : | HP11 |
| IntFile | : AUTOINT1.E | Multiplr: | 1.00 |

Quant Time: Sep 27 14:13 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14587.D 8021S.M Fri Sep 27 14:13:36 2002

Page 2

Data File : C:\HPCHEM\1\DATA\092702\11G14587.D
Acq On : 27 Sep 2002 1:44 pm
Sample : L0209516-03 A 5.21G
Misc : 7,1 S-99-50
IntFile : AUTOINT1.E
Quant Time: Sep 27 14:13 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

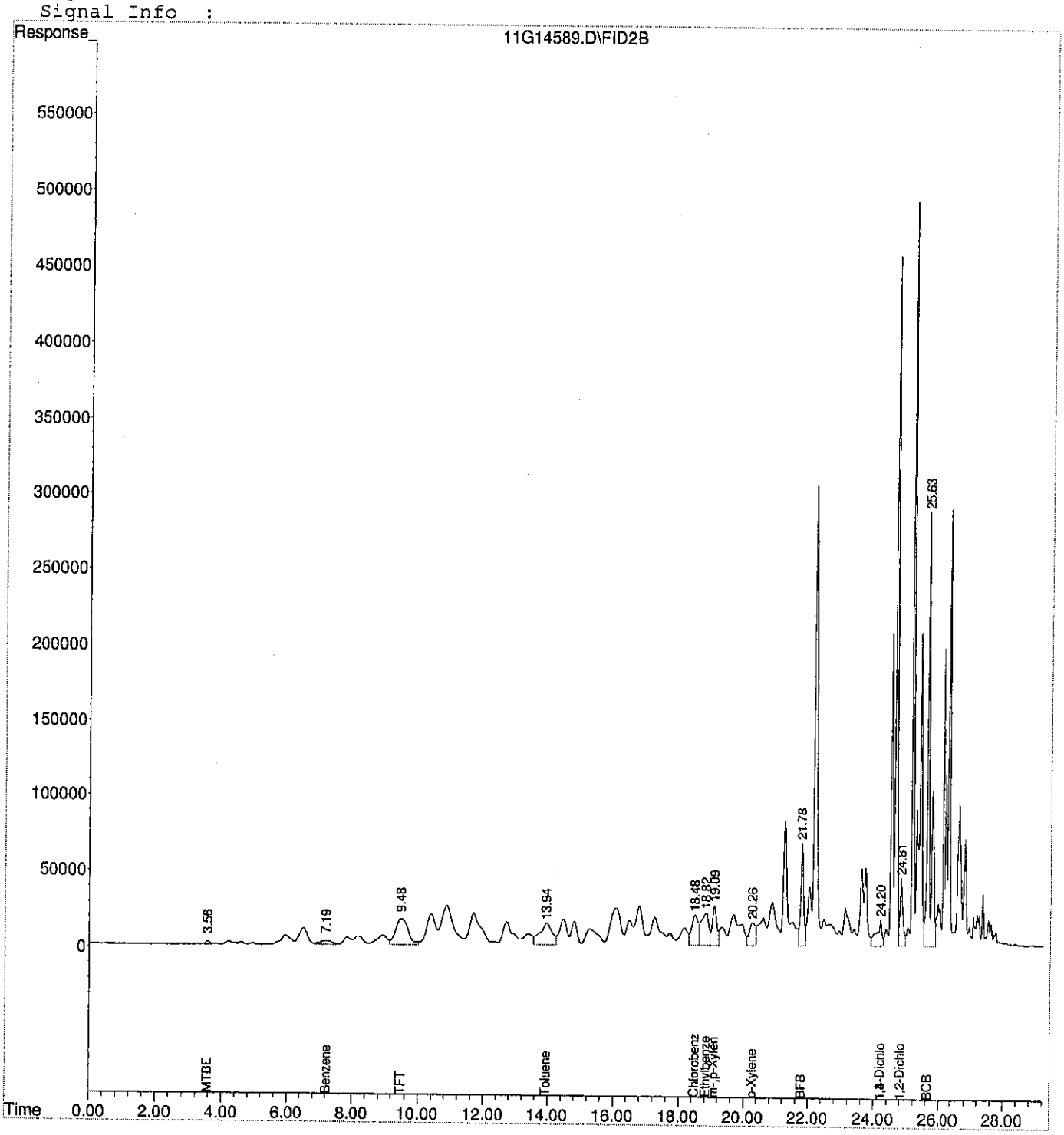
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 9.48 * | 5899846 | 122.3781 UG/KG |
| Spiked Amount 30.0000 | Range 47 - 121 | Recovery | = 407.93%# |
| 9) S BFB | 21.79 | 3870927 | 29.5904 UG/KG |
| Spiked Amount 30.0000 | Range 70 - 130 | Recovery | = 98.63% |
| 13) S BCB | 25.76 | 3797107 | 30.9527 UG/KG |
| Spiked Amount 30.0000 | Range 37 - 137 | Recovery | = 103.18% |
| Target Compounds | | | |
| 1) TM MTBE | 3.56 | 232268 | 3.3765 UG/KG |
| 2) TM Benzene | 7.15 OK | 943052 | 6.2802 UG/KG |
| 4) TM Toluene | 13.95f | 4003196 | ~~28.1005~~ UG/KG |
| 5) TM Chlorobenzene | 18.49 | 2083925 | 14.5279 UG/KG |
| 6) TM Ethylbenzene | 18.84 | 2975286 | 22.8298 UG/KG |
| 7) TM m-,p-Xylene | 19.10 OK | 2148863 | 13.3912 UG/KG |
| 8) TM o-Xylene | 20.26 | 1113366 | 8.0408 UG/KG |
| 10) TM 1,3-Dichlorobenzene | 24.20 | 906235 | 7.0241 UG/KG |
| 11) TM 1,4-Dichlorobenzene | 24.20 | 906235 | 6.8281 UG/KG |
| 12) TM 1,2-Dichlorobenzene | 24.81 | 1272693 | 10.7472 UG/KG |

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

Data File : C:\HPCHEM\1\DATA\092702\11G14589.D  Vial: 6
Acq On : 27 Sep 2002 2:53 pm  Operator: CSH
Sample : L0209516-03 A 5.15G  Inst : HP11
Misc : 7,1 S-99-50  Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Sep 27 15:23 2002  Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\092702\11G14589.D  Vial: 6
Acq On : 27 Sep 2002 2:53 pm  Operator: CSH
Sample : L0209516-03 A 5.15G  Inst : HP11
Misc : 7,1 S-99-50  Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Sep 27 15:23 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Initial Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :

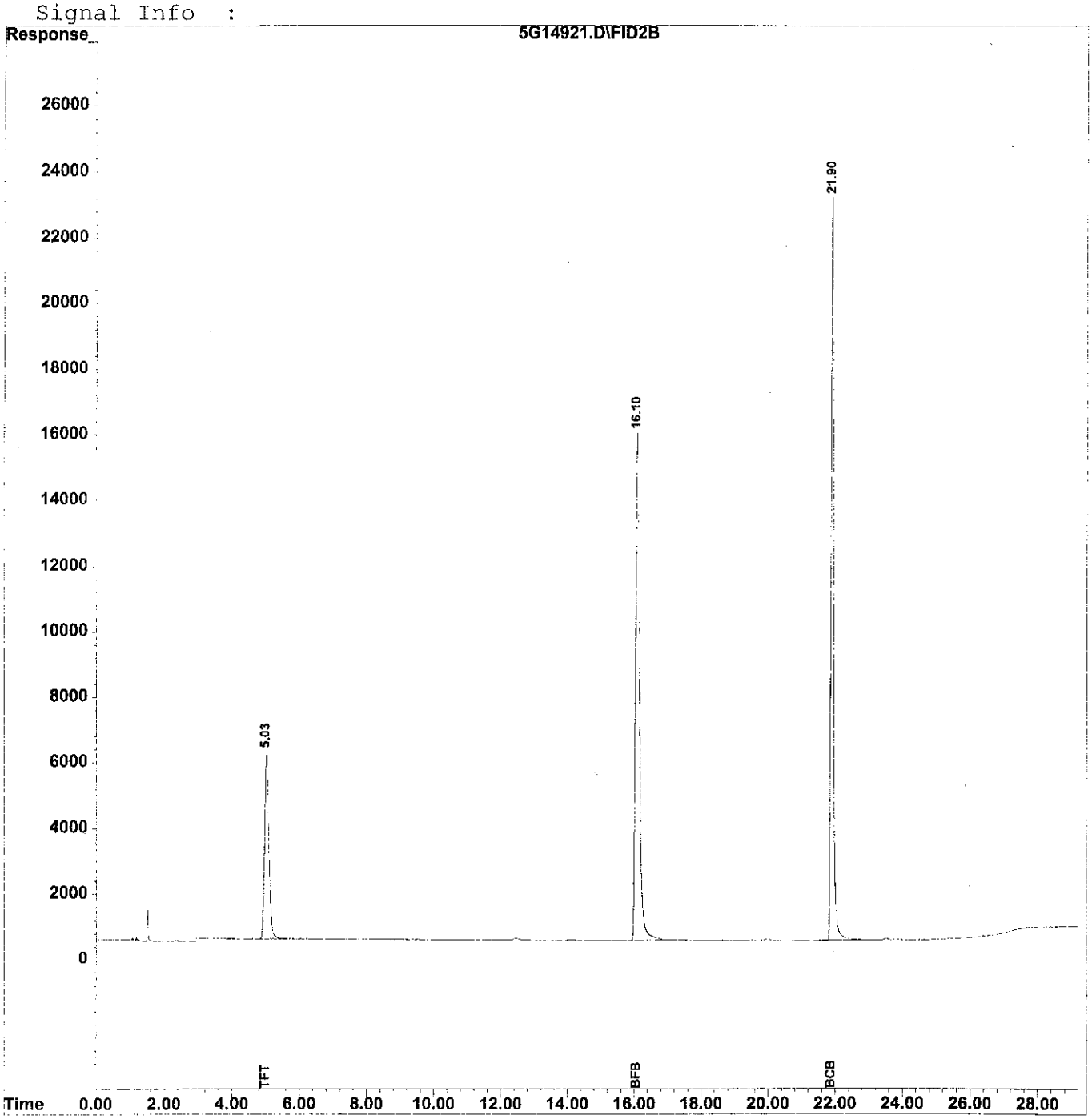
| Compound | | | R.T. | Response | Conc Units |
|---|---|---|---|---|---|
| System Monitoring Compounds | | | | | |
| 3) S TFT | | | 9.48 * | 4381254 | 90.8786 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 302.93%# * , RE |
| 9) S BFB | | | 21.79 ✓ | 4335890 | 33.1447 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 110.48% |
| 13) S BCB | | | 25.63f | 15682542 | 127.8385 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 426.13%# |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.56 ✓ | 169048 | 2.4575 UG/KG |
| 2) TM Benzene | | | 7.20 ✓ OK per review | 637113 | ~~4.2428 UG/KG~~ Report |
| 4) TM Toluene | | | 13.95f | 3708404 | ~~26.0312 UG/KG~~ |
| 5) TM Chlorobenzene | | | 18.48 | 2749176 | ~~19.1656 UG/KG~~ |
| 6) TM Ethylbenzene | | | 18.82 ✓ | 3437916 | 26.3797 UG/KG |
| 7) TM m-,p-Xylene | | | 19.09 ✓ | 2535312 | ~~15.7994 UG/KG~~ |
| 8) TM o-Xylene | | | 20.26 ✓ | 1889415 | 13.6455 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.20 | 2022129 | ~~15.6732 UG/KG~~ |
| 11) TM 1,4-Dichlorobenzene | | | 24.20 | 2022129 | ~~15.2358 UG/KG~~ |
| 12) TM 1,2-Dichlorobenzene | | | 24.81 | 2613098 | ~~22.0663 UG/KG~~ |

(f)=RT Delta > 1/2 Window  (m)=manual int.
11G14589.D 8021S.M Fri Sep 27 15:23:05 2002

```
Data File : C:\HPCHEM\2\DATA\092702\5G14921.D          Vial: 13
Acq On    : 27 Sep 2002  17:45                      Operator: CSH
Sample    : L0209516-04 A 5ML                       Inst    : HP5
Misc      : 1,1 S-99-16                             Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 27 18:14 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 09/25/02
Last Update  : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

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



Data File : C:\HPCHEM\2\DATA\092702\5G14921.D  Vial: 13
Acq On : 27 Sep 2002 17:45  Operator: CSH
Sample : L0209516-04 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 27 18:14 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

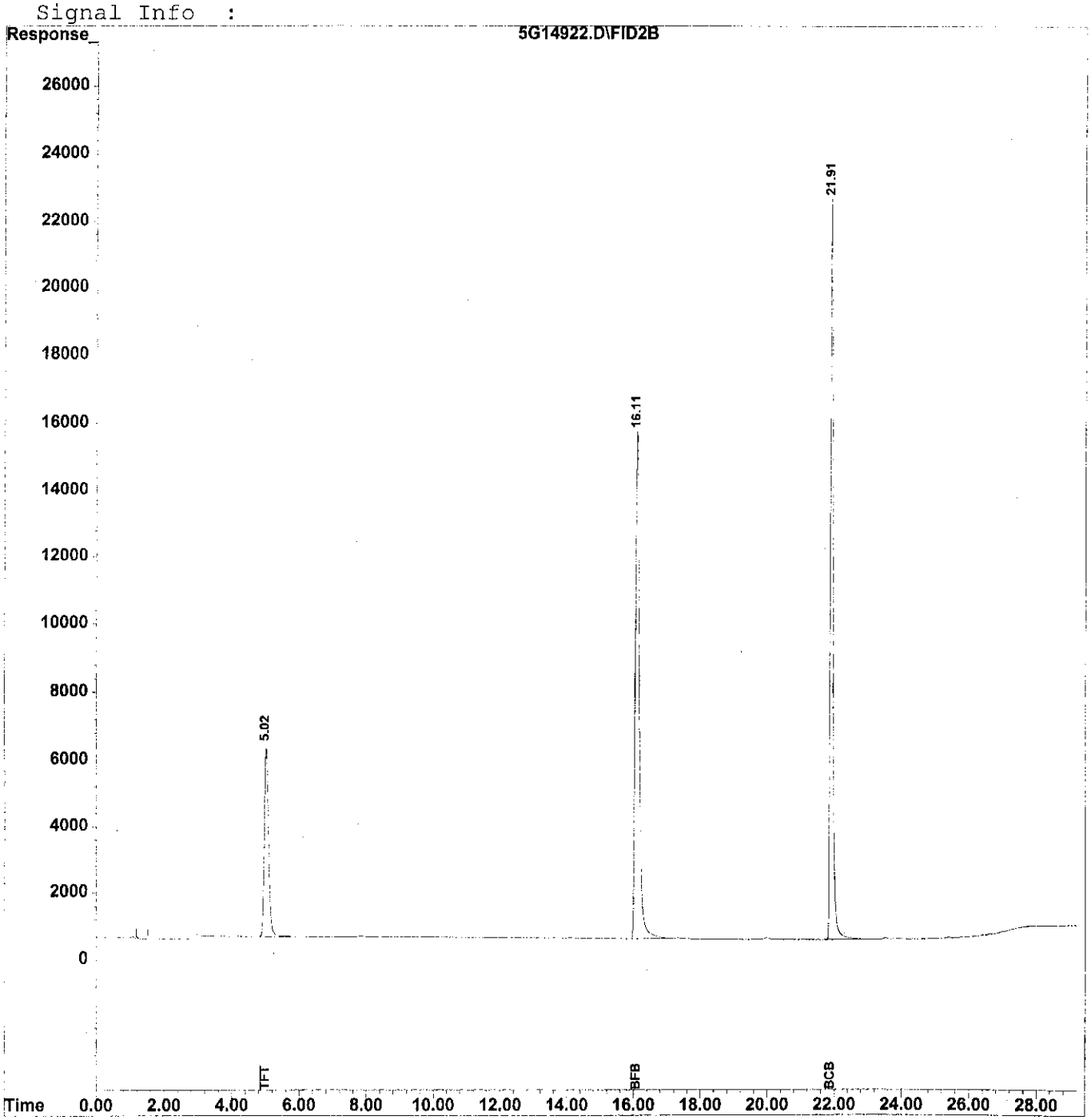
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 494865 | 28.0056 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 93.35% |
| 9) S BFB | 16.10 | 1335609 | 28.7847 ug/L |
| Spiked Amount 30.000 | | Recovery = | 95.95% |
| 13) S BCB | 21.90 | 1254264 | 30.3412 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 101.14% |
| 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 | 12.46 | 6878 | <MDL 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.98f | 5296 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.98f | 5296 | N.D. ug/L |
| 12) TM 1,2-Dichlorobenzene | 19.98f | 5296 | N.D. ug/L |

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

Data File : C:\HPCHEM\2\DATA\092702\5G14922.D  Vial: 14
Acq On : 27 Sep 2002 18:20  Operator: CSH
Sample : L0209516-05 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 27 18:49 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\092702\5G14922.D  Vial: 14
Acq On : 27 Sep 2002 18:20  Operator: CSH
Sample : L0209516-05 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 27 18:49 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.02 | 489509 | 27.7025 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 92.34% ✓ |
| 9) S BFB | 16.11 | 1321263 | 28.4755 ug/L |
| Spiked Amount 30.000 | | Recovery = | 94.92% |
| 13) S BCB | 21.91 | 1242910 | 30.0665 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 100.22% |
| 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 20.00f | 4535 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 20.00f | 4535 | N.D. ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.00f | 4535 | N.D. ug/L |

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

# 2.1.3.3 Standards Data

Method: 8021S.M
Title: Method 8021B- Soil 8/16/02
Last Calibration: Fri Aug 16 13:38:51 2002

Calibration Files

| Compound | 1<br>11G14244.D | 10<br>11G14245.D | 20<br>11G14246.D | 50<br>11G14247.D | 100<br>11G14248.D | 200<br>11G14249.D | 300<br>11G14250.D | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|
| MTBE | 76929.4 | 68103.5 | 66229.8 | 69065.0 | 67860.2 | 64947.0 | 68391.3 | 68789.5 | 5.603 |
| Benzene | 155845.1 | 155196.8 | 147144.3 | 151295.4 | 147233.5 | 145126.9 | 149304.0 | 150164.0 | 2.755 |
| TFT | 39910.2 | 48153.2 | 48821.1 | 49270.3 | 50296.5 | 50527.2 | 50491.2 | 48210.0 | 7.822 |
| Toluene | 128218.5 | 148366.9 | 143226.2 | 144188.2 | 145824.9 | 142859.3 | 144534.2 | 142460.0 | 4.595 |
| Chlorobenzene | 136221.6 | 134937.5 | 136525.9 | 144320.4 | 150882.3 | 149371.9 | 151841.1 | 143443.0 | 5.202 |
| Ethylbenzene | 126232.7 | 127330.7 | 126641.2 | 131811.7 | 135298.3 | 131881.5 | 133075.2 | 130324.0 | 2.735 |
| m-,p-Xylene | 158966.7 | 164646.5 | 159914.4 | 161456.9 | 163155.2 | 156986.2 | 158155.4 | 160469.0 | 1.720 |
| o-Xylene | 118426.6 | 151690.8 | 143424.7 | 139352.4 | 141725.2 | 136810.0 | 137819.0 | 138464.0 | 7.316 |
| BFB | 118464.1 | 124244.1 | 125107.5 | 132149.5 | 137679.6 | 138922.7 | 139150.9 | 130817.0 | 6.338 |
| 1,3-Dichlorobenzene | 137510.7 | 123137.7 | 116572.0 | 127640.9 | 133298.2 | 131426.1 | 133543.0 | 129018.0 | 5.554 |
| 1,4-Dichlorobenzene | 132508.6 | 129797.3 | 121833.8 | 135438.1 | 139158.7 | 133641.2 | 136676.3 | 132722.0 | 4.267 |
| 1,2-Dichlorobenzene | 127891.0 | 118988.3 | 109044.5 | 122462.8 | 121684.2 | 114310.1 | 114561.5 | 118420.0 | 5.304 |
| BCB | 118270.8 | 116272.2 | 106307.4 | 127577.2 | 130242.4 | 129857.2 | 130195.6 | 122675.0 | 7.572 |

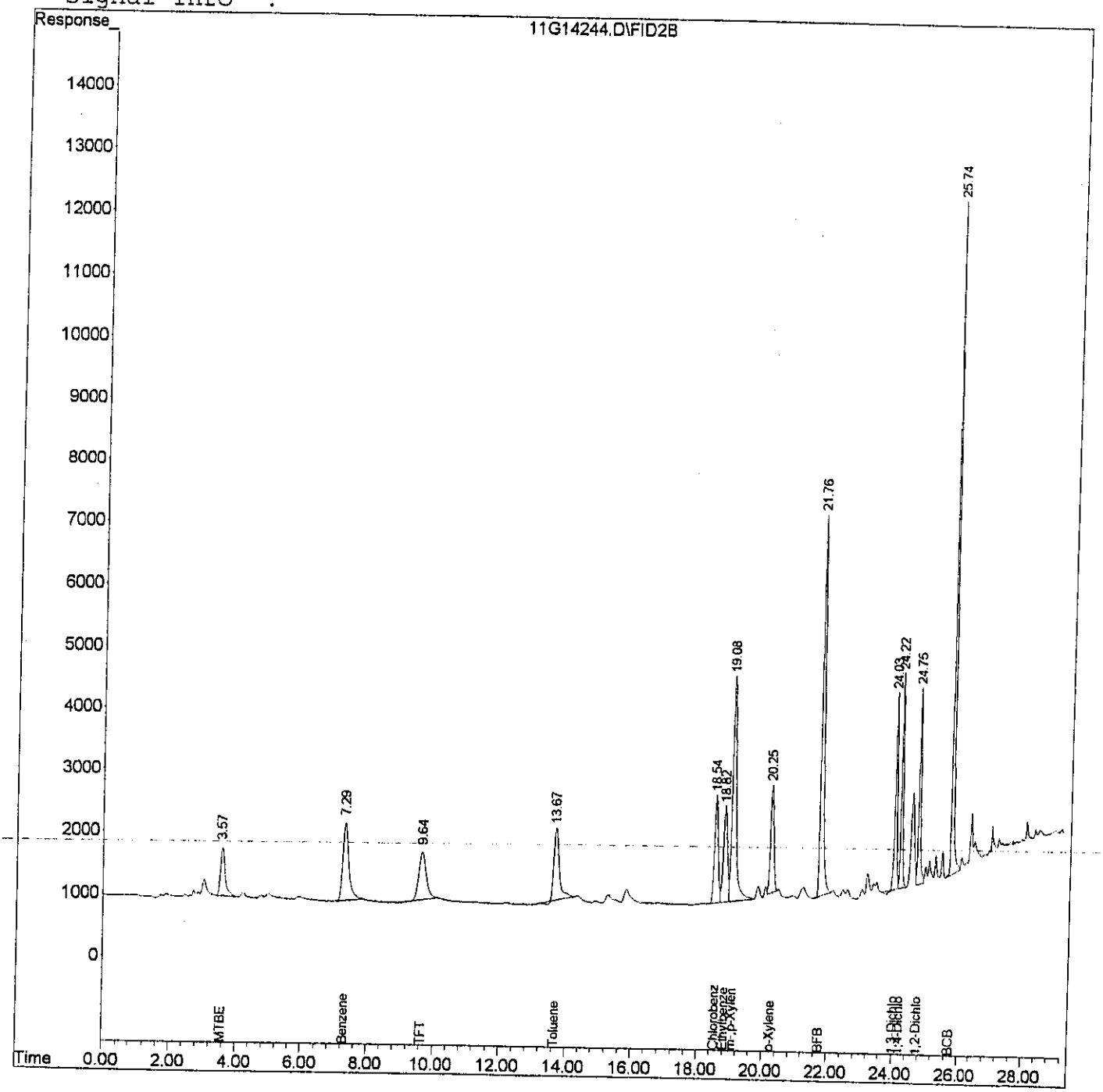
Fri Aug 16 13:39:23 2002

Acq On : 16 Aug 2002 9:41 am
Sample : WG123524-01 STD 1 1PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 10:10 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 7/15/02
Last Update : Tue Jul 16 06:56:56 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14244.D 8021S.M Fri Aug 16 10:10:43 2002

Acq On : 16 Aug 2002 9:41 am
Sample : WG123524-01 STD 1 1PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 10:10 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 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 | | | 9.64 | 119731 | 2.8473 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery = | 9.49%# |
| 9) S BFB | | | 21.76 | 355392 | 2.8824 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery = | 9.61%# |
| 13) S BCB | | | 25.74 | 354812 | 3.0735 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery = | 10.24%# |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.57 | 76929 | 1.2389 UG/KG |
| 2) TM Benzene | | | 7.29 | 155845 | 1.1080 UG/KG |
| 4) TM Toluene | | | 13.68 | 128218 | 1.0289 UG/KG |
| 5) TM Chlorobenzene | | | 18.54 | 136222 | 1.0846 UG/KG |
| 6) TM Ethylbenzene | | | 18.82 | 126233 | 1.0997 UG/KG |
| 7) TM m-,p-Xylene | | | 19.08 | 317933 | 2.1814 UG/KG |
| 8) TM o-Xylene | | | 20.25 | 118427 | 0.9273 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.03 | 137511 | 1.1956 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.22 | 132509 | 1.0786 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.76 | 127891 | 1.1723 UG/KG |

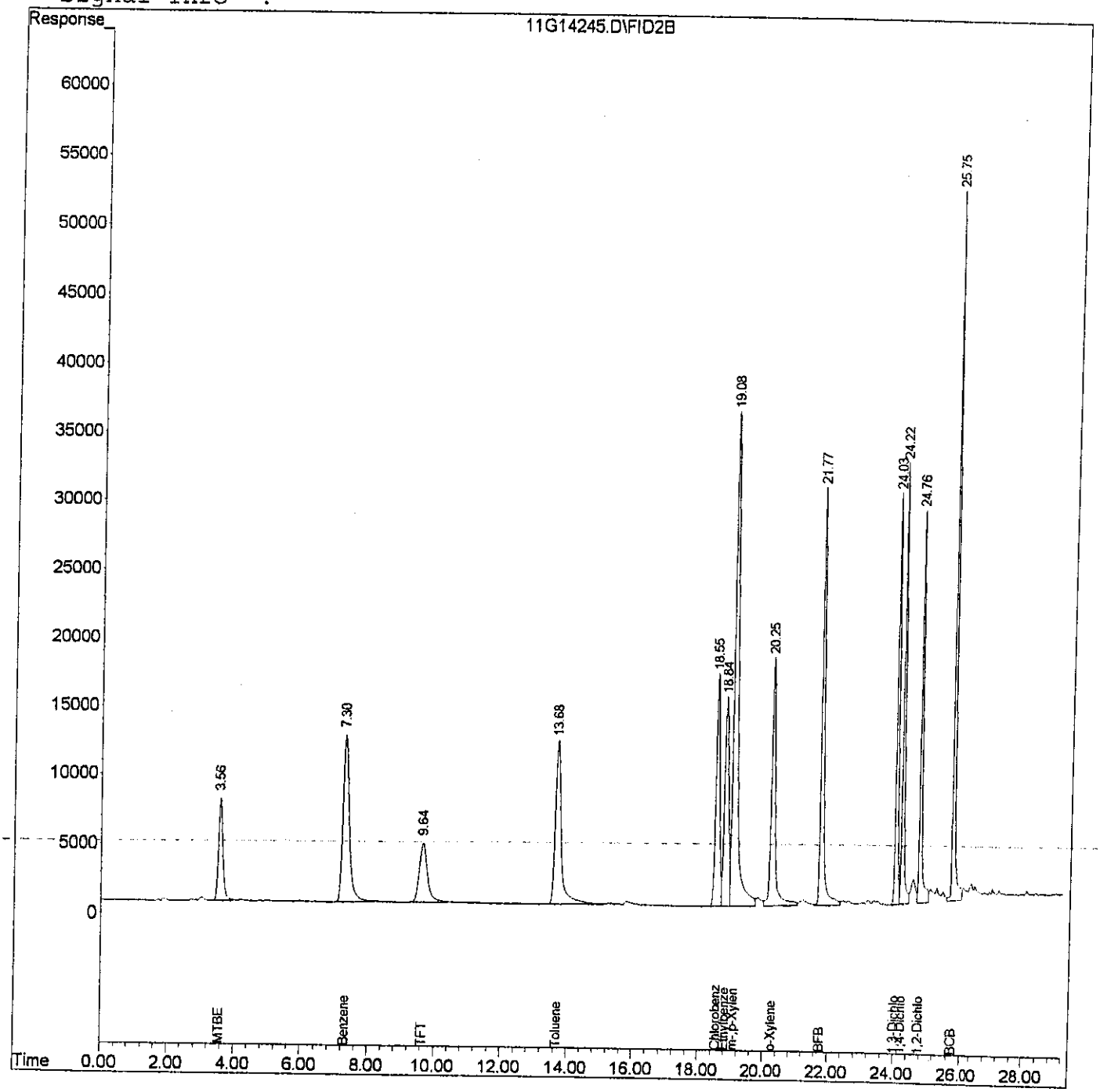
(f)=RT Delta > 1/2 Window
(m)=manual int.

Acq On : 16 Aug 2002 10:16 am
Sample : WG123524-02 STD 2 10PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 10:45 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 16 Aug 2002 10:16 am
Sample : WG123524-02 STD 2 10PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 10:45 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 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 | | | 9.64 | 722298 | 17.1769 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 57.26% |
| 9) S BFB | | | 21.77 | 1863661 | 15.1152 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 50.38%# |
| 13) S BCB | | | 25.75 | 1744083 | 15.1077 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 50.36% |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.57 | 681035 | 10.9678 UG/KG |
| 2) TM Benzene | | | 7.30 | 1551968 | 11.0334 UG/KG |
| 4) TM Toluene | | | 13.68 | 1483669 | 11.9053 UG/KG |
| 5) TM Chlorobenzene | | | 18.55 | 1349375 | 10.7436 UG/KG |
| 6) TM Ethylbenzene | | | 18.83 | 1273307 | 11.0926 UG/KG |
| 7) TM m-,p-Xylene | | | 19.08 | 3292931 | 22.5936 UG/KG |
| 8) TM o-Xylene | | | 20.25 | 1516908 | 11.8782 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.04 | 1231377 | 10.7062 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.22 | 1297973 | 10.5649 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.76 | 1189883 | 10.9069 UG/KG |

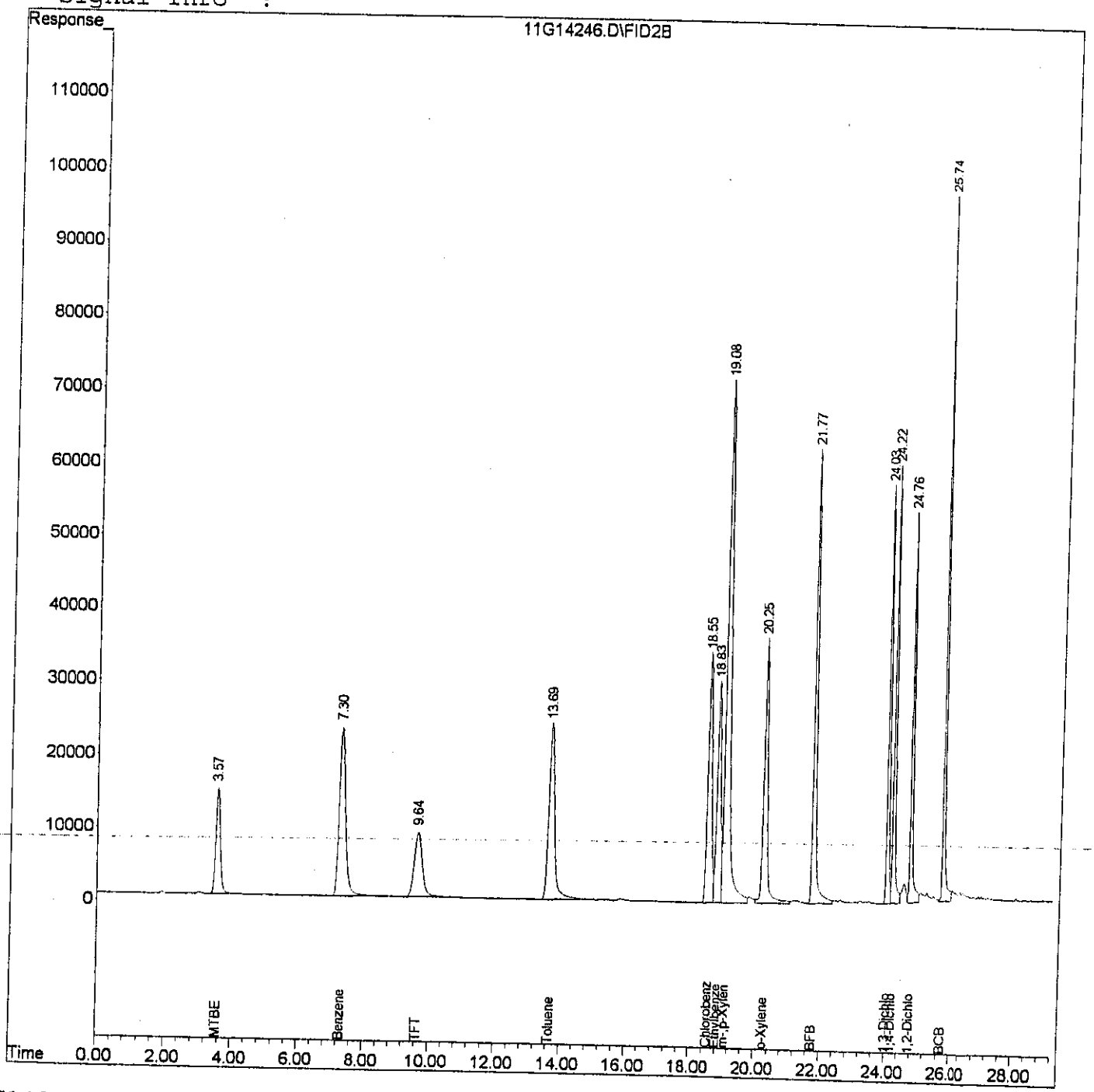
(f)=RT Delta > 1/2 Window
(m)=manual int.

Acq On : 16 Aug 2002 10:50 am
Sample : WG123524-03 STD 3 20PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 11:19 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 16 Aug 2002 10:50 am
Sample : WG123524-03 STD 3 20PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 11:19 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 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 | | | 9.65 | 1464634 | 34.8302 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 116.10% |
| 9) S BFB | | | 21.77 | 3753225 | 30.4404 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 101.47% |
| 13) S BCB | | | 25.74 | 3189221 | 27.6259 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 92.09% |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.57 | 1324596 | 21.3320 UG/KG |
| 2) TM Benzene | | | 7.30 | 2942887 | 20.9219 UG/KG |
| 4) TM Toluene | | | 13.69 | 2864523 | 22.9856 UG/KG |
| 5) TM Chlorobenzene | | | 18.55 | 2730519 | 21.7402 UG/KG |
| 6) TM Ethylbenzene | | | 18.84 | 2532824 | 22.0651 UG/KG |
| 7) TM m-,p-Xylene | | | 19.09 | 6396575 | 43.8884 UG/KG |
| 8) TM o-Xylene | | | 20.26 | 2868495 | 22.4619 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.03 | 2331440 | 20.2706 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.22 | 2436675 | 19.8334 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.76 | 2180889 | 19.9908 UG/KG |

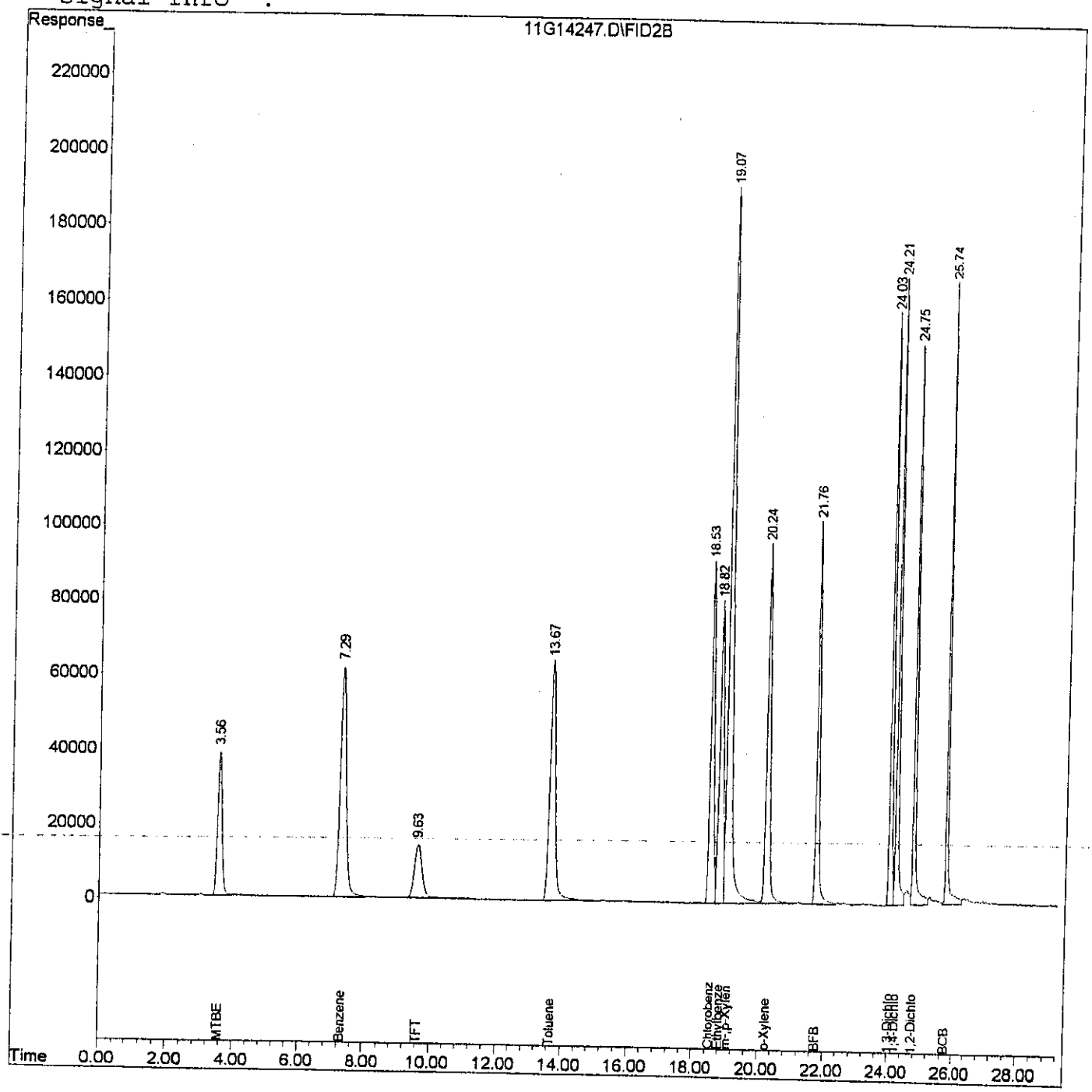
(f)=RT Delta > 1/2 Window (m)=manual int.

Acq On : 16 Aug 2002 11:25 am
Sample : WG123524-04 STD 4 50PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 11:54 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 16 Aug 2002 11:25 am
Sample : WG123524-04 STD 4 50PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 11:54 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 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 | | | 9.63 | 2217164 | 52.7260 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 175.75%# |
| 9) S BFB | | | 21.76 | 5946727 | 48.2307 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 160.77%# |
| 13) S BCB | | | 25.74 | 5740973 | 49.7298 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 165.77%# |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.56 | 3453252 | 55.6131 UG/KG |
| 2) TM Benzene | | | 7.29 | 7564772 | 53.7804 UG/KG |
| 4) TM Toluene | | | 13.67 | 7209410 | 57.8500 UG/KG |
| 5) TM Chlorobenzene | | | 18.53 | 7216021 | 57.4535 UG/KG |
| 6) TM Ethylbenzene | | | 18.82 | 6590585 | 57.4149 UG/KG |
| 7) TM m-,p-Xylene | | | 19.07 | 16145687 | 110.7793 UG/KG |
| 8) TM o-Xylene | | | 20.24 | 6967621 | 54.5604 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.03 | 6382046 | 55.4885 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.21 | 6771904 | 55.1202 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.75 | 6123141 | 56.1268 UG/KG |

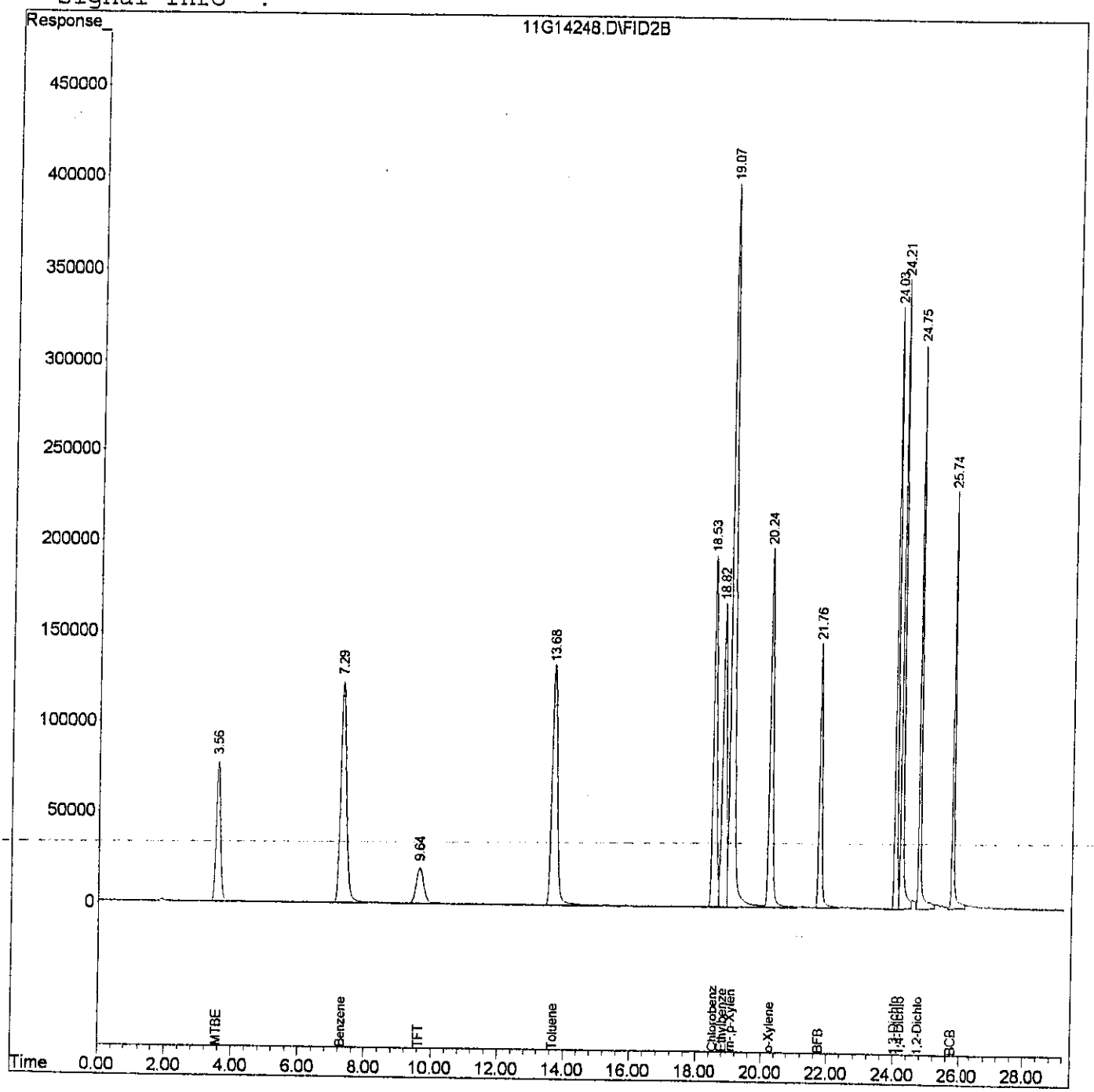
(f)=RT Delta > 1/2 Window
(m)=manual int.

Acq On : 16 Aug 2002 11:59 am
Sample : WG123524-05 STD 5 100PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 12:29 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 16 Aug 2002 11:59 am
Sample : WG123524-05 STD 5 100PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 12:29 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 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 | | | 9.63 | 3017790 | 71.7656 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 239.22%# |
| 9) S BFB | | | 21.76 | 8260775 | 66.9987 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 223.33%# |
| 13) S BCB | | | 25.74 | 7814545 | 67.6916 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 225.64%# |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.56 | 6786024 | 109.2860 UG/KG |
| 2) TM Benzene | | | 7.29 | 14723348 | 104.6731 UG/KG |
| 4) TM Toluene | | | 13.67 | 14582488 | 117.0133 UG/KG |
| 5) TM Chlorobenzene | | | 18.54 | 15088227 | 120.1315 UG/KG |
| 6) TM Ethylbenzene | | | 18.82 | 13529828 | 117.8671 UG/KG |
| 7) TM m-,p-Xylene | | | 19.07 | 32631036 | 223.8891 UG/KG |
| 8) TM o-Xylene | | | 20.24 | 14172518 | 110.9788 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.03 | 13329818 | 115.8958 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.21 | 13915869 | 113.2688 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.75 | 12168416 | 111.5398 UG/KG |

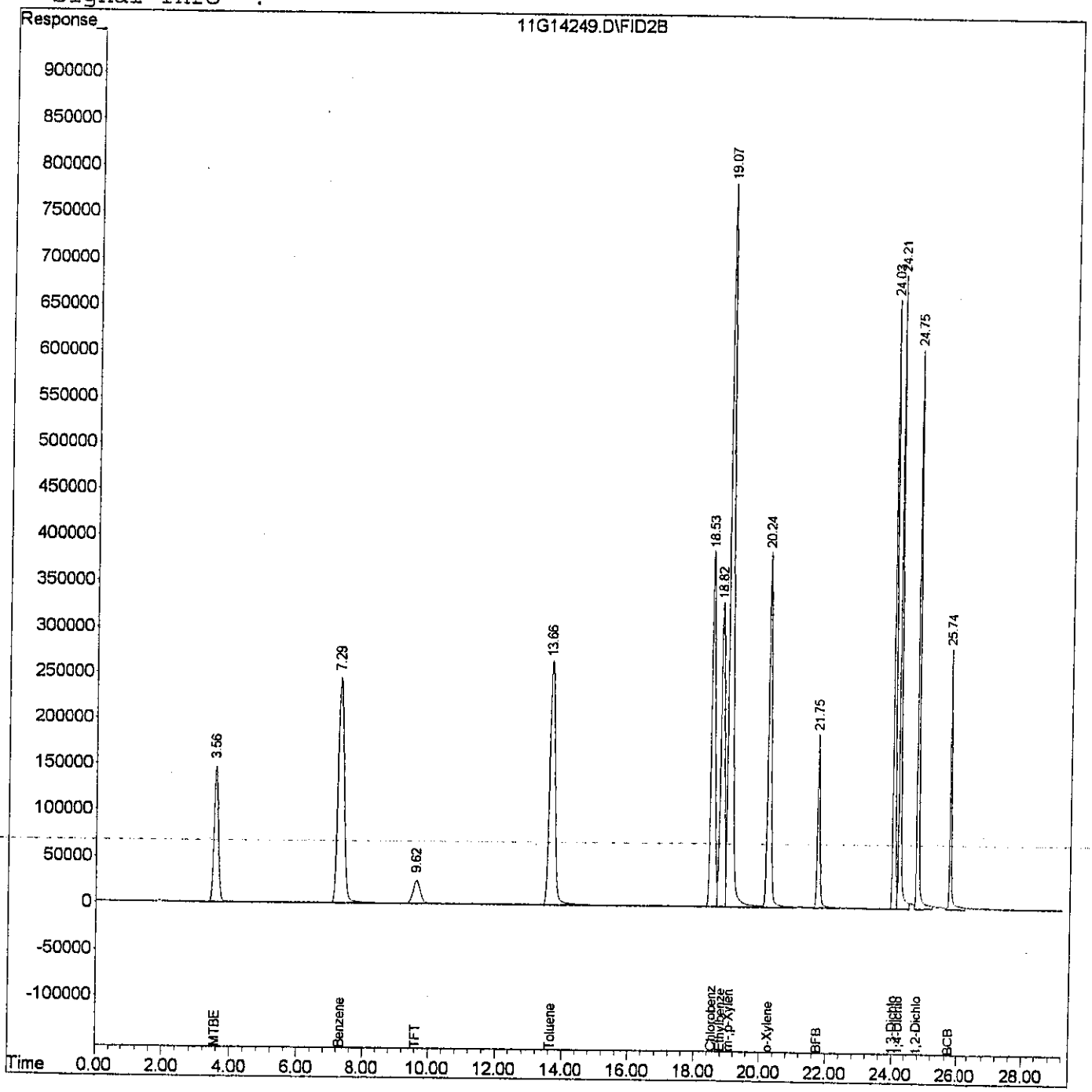
(f)=RT Delta > 1/2 Window (m)=manual int.

Acq On : 16 Aug 2002 12:34 pm
Sample : WG123524-06 STD 6 200PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 13:03 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14249.D 8021S.M Fri Aug 16 13:03:36 2002

Page 2

Acq On : 16 Aug 2002 12:34 pm
Sample : WG123524-06 STD 6 200PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 13:03 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 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 | 9.62 | 3789540 | 90.1185 UG/KG |
| Spiked Amount 30.0000 | Range 47 - 121 | Recovery | = 300.40%# |
| 9) S BFB | 21.76 | 10419205 | 84.5046 UG/KG |
| Spiked Amount 30.0000 | Range 70 - 130 | Recovery | = 281.68%# |
| 13) S BCB | 25.74 | 9739288 | 84.3643 UG/KG |
| Spiked Amount 30.0000 | Range 37 - 137 | Recovery | = 281.21%# |
| **Target Compounds** | | | |
| 1) TM MTBE | 3.56 | 12989397 | 209.1887 UG/KG |
| 2) TM Benzene | 7.29 | 29025370 | 206.3508 UG/KG |
| 4) TM Toluene | 13.67 | 28571859 | 229.2674 UG/KG |
| 5) TM Chlorobenzene | 18.53 | 29874374 | 237.8579 UG/KG |
| 6) TM Ethylbenzene | 18.82 | 26376295 | 229.7810 UG/KG |
| 7) TM m-,p-Xylene | 19.07 | 62794482 | 430.8475 UG/KG |
| 8) TM o-Xylene | 20.24 | 27361992 | 214.2597 UG/KG |
| 10) TM 1,3-Dichlorobenzene | 24.03 | 26285223 | 228.5362 UG/KG |
| 11) TM 1,4-Dichlorobenzene | 24.21 | 26728235 | 217.5555 UG/KG |
| 12) TM 1,2-Dichlorobenzene | 24.75 | 22862017 | 209.5610 UG/KG |

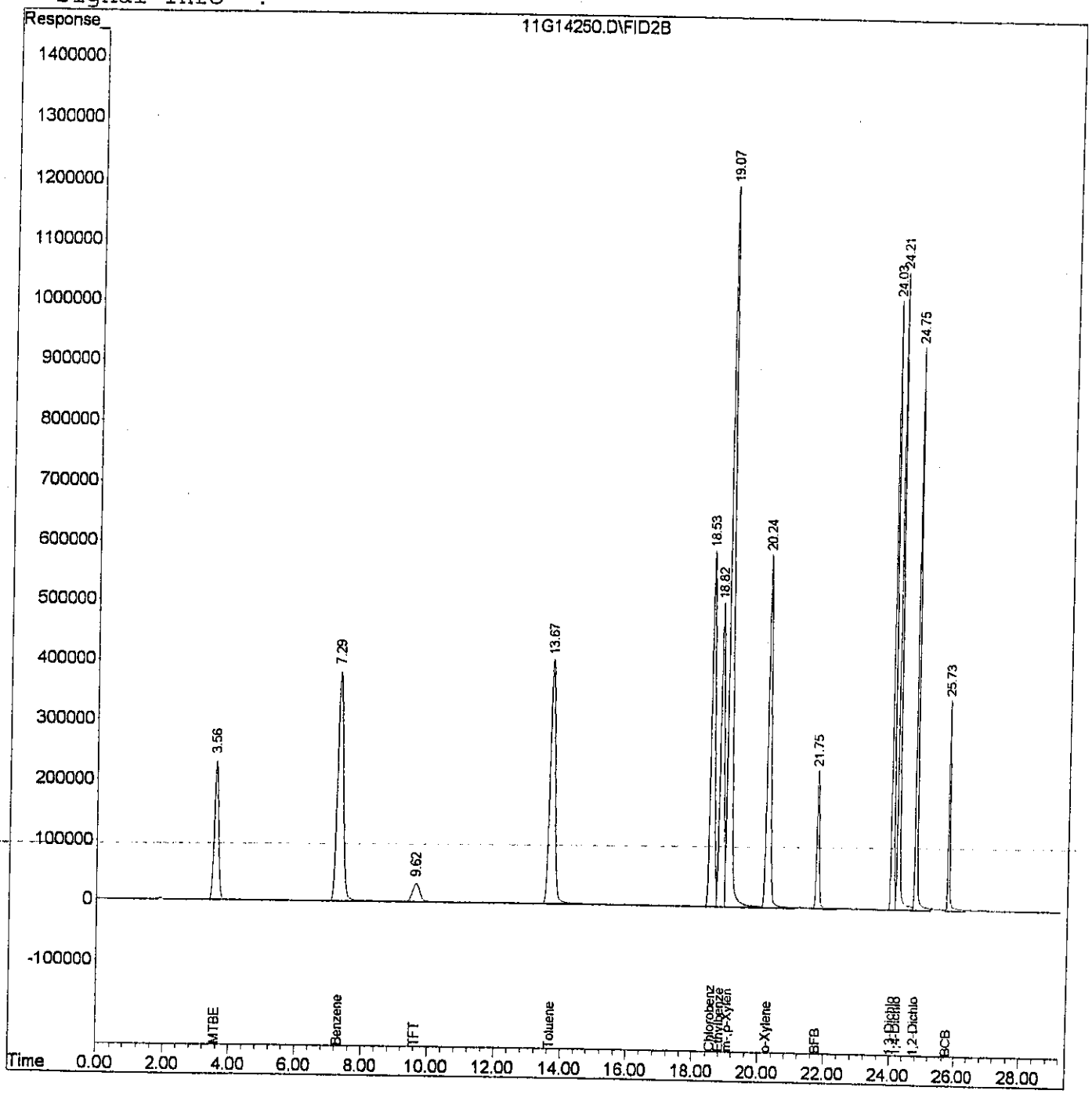
(f)=RT Delta > 1/2 Window
(m)=manual int.

Acq On : 16 Aug 2002 1:08 pm
Sample : WG123524-07 STD 3 300PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 13:38 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 16 Aug 2002 1:08 pm
Sample : WG123524-07 STD 3 300PPB 5G
Misc : 7,1 S-(98-13,97-30)
IntFile : AUTOINT1.E
Quant Time: Aug 16 13:38 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 7/15/02
Last Update : Tue Jul 16 06:56:56 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 | | | 9.62 | 4544212 | 108.0652 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 360.22%# |
| 9) S BFB | | | 21.76 | 12523578 | 101.5720 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 338.57%# |
| 13) S BCB | | | 25.74 | 11717605 | 101.5010 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 338.34%# |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.56 | 20517380 | 330.4236 UG/KG |
| 2) TM Benzene | | | 7.29 | 44791209 | 318.4353 UG/KG |
| 4) TM Toluene | | | 13.67 | 43360268 | 347.9331 UG/KG |
| 5) TM Chlorobenzene | | | 18.53 | 45552315 | 362.6847 UG/KG |
| 6) TM Ethylbenzene | | | 18.82 | 39922572 | 347.7914 UG/KG |
| 7) TM m-,p-Xylene | | | 19.07 | 94893261 | 651.0846 UG/KG |
| 8) TM o-Xylene | | | 20.24 | 41345695 | 323.7600 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.03 | 40062914 | 348.3259 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.21 | 41002881 | 333.7446 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.75 | 34368448 | 315.0328 UG/KG |

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

Acq On : 16 Aug 2002 15:21
Sample : WG123524-08 ALT SOURCE 20PPB 5G
Misc : 7,1 S-97-(10,12)
IntFile : AUTOINT1.E

Operator: CBN
Inst : HP11
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | 68.789 | 68.177 | E3 | 0.9 | 103 | 0.00 |
| 2 | TM | Benzene | 150.164 | 154.096 | E3 | -2.6 | 105 | -0.01 |
| 3 | S | TFT | 48.210 | 41.844 | E3 | 13.2 | 86 | -0.02 |
| 4 | TM | Toluene | 142.460 | 151.852 | E3 | -6.6 | 106 | -0.02 |
| 5 | TM | Chlorobenzene | 143.443 | 144.682 | E3 | -0.9 | 106 | -0.01 |
| 6 | TM | Ethylbenzene | 130.324 | 138.763 | E3 | -6.5 | 110 | -0.01 |
| 7 | TM | m-,p-Xylene | 160.469 | 172.272 | E3 | -7.4 | 108 | -0.01 |
| 8 | TM | o-Xylene | 138.464 | 152.141 | E3 | -9.9 | 106 | 0.00 |
| 9 | S | BFB | 130.817 | 113.471 | E3 | 13.3 | 91 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 129.018 | 126.405 | E3 | 2.0 | 108 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 132.722 | 134.409 | E3 | -1.3 | 110 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 118.420 | 119.093 | E3 | -0.6 | 109 | 0.00 |
| 13 | S | BCB | 122.675 | 98.449 | E3 | 19.7# | 93 | 0.00 |

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

Acq On : 16 Aug 2002 15:21
Sample : WG123524-08 ALT SOURCE 20PPB 5G
Misc : 7,1 S-97-(10,12)
IntFile : AUTOINT1.E

Operator: CBN
Inst : HP11
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | 19.822 | 0.9 | 103 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.524 | -2.6 | 105 | -0.01 |
| 3 | S | TFT | 30.000 | 26.038 | 13.2 | 86 | -0.02 |
| 4 | TM | Toluene | 20.000 | 21.319 | -6.6 | 106 | -0.02 |
| 5 | TM | Chlorobenzene | 20.000 | 20.173 | -0.9 | 106 | -0.01 |
| 6 | TM | Ethylbenzene | 20.000 | 21.295 | -6.5 | 110 | -0.01 |
| 7 | TM | m-,p-Xylene | 40.000 | 42.942 | -7.4 | 108 | -0.01 |
| 8 | TM | o-Xylene | 20.000 | 21.976 | -9.9 | 106 | 0.00 |
| 9 | S | BFB | 30.000 | 26.022 | 13.3 | 91 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.595 | 2.0 | 108 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.254 | -1.3 | 110 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 20.114 | -0.6 | 109 | 0.00 |
| 13 | S | BCB | 30.000 | 24.076 | 19.7# | 93 | 0.00 |

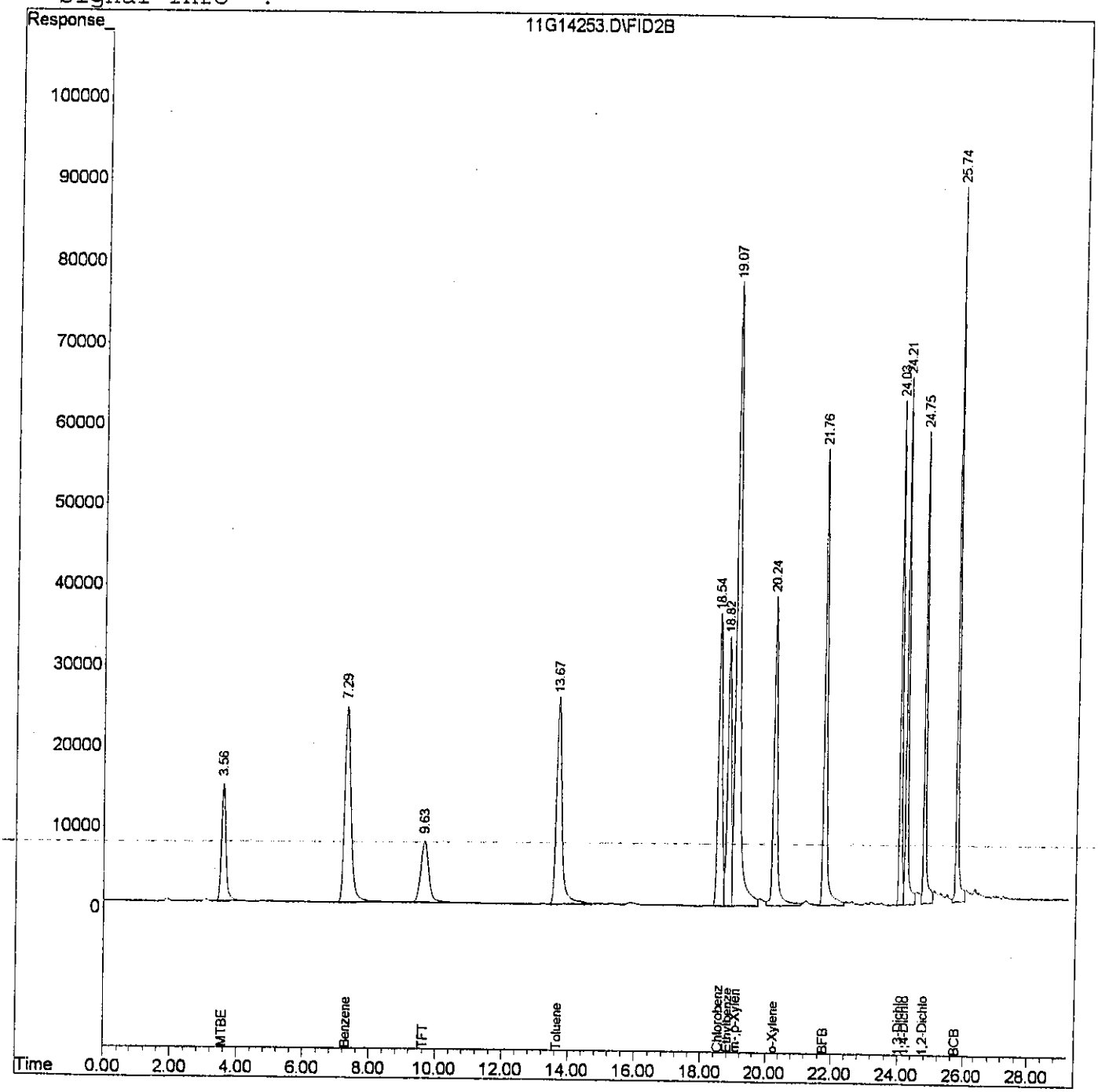
(#) = Out of Range SPCC's out = 0 CCC's out = 0
11G14253.D 8021S.M Fri Aug 16 16:22:00 2002

Acq On : 16 Aug 2002 3:21 pm
Sample : WG123524-08 ALT SOURCE 20PPB 5G
Misc : 7,1 S-97-(10,12)
IntFile : AUTOINT1.E
Quant Time: Aug 16 15:50 2002 Quant Results File: 8021S.RES

Operator: CBN
Inst : HP11
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14253.D 8021S.M Fri Aug 16 15:50:36 2002

Page 2

Acq On : 16 Aug 2002 3:21 pm Operator: CBN
Sample : WG123524-08 ALT SOURCE 20PPB 5G Inst : HP11
Misc : 7,1 S-97-(10,12) Multiplr: 1.00
IntFile : AUTOINT1.E
Quant Time: Aug 16 15:50 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | 9.63 | 1255314 | 26.0385 UG/KG |
| Spiked Amount 30.0000 | Range 47 - 121 | Recovery | = 86.80% |
| 9) S BFB | 21.76 | 3404145 | 26.0222 UG/KG |
| Spiked Amount 30.0000 | Range 70 - 130 | Recovery | = 86.74% |
| 13) S BCB | 25.74 | 2953468 | 24.0756 UG/KG |
| Spiked Amount 30.0000 | Range 37 - 137 | Recovery | = 80.25% |
| Target Compounds | | | |
| 1) TM MTBE | 3.56 | 1363544 | 19.8220 UG/KG |
| 2) TM Benzene | 7.29 | 3081923 | 20.5238 UG/KG |
| 4) TM Toluene | 13.67 | 3037046 | 21.3186 UG/KG |
| 5) TM Chlorobenzene | 18.54 | 2893634 | 20.1727 UG/KG |
| 6) TM Ethylbenzene | 18.82 | 2775254 | 21.2950 UG/KG |
| 7) TM m-,p-Xylene | 19.07 | 6890877 | 42.9422 UG/KG |
| 8) TM o-Xylene | 20.25 | 3042824 | 21.9755 UG/KG |
| 10) TM 1,3-Dichlorobenzene | 24.03 | 2528109 | 19.5950 UG/KG |
| 11) TM 1,4-Dichlorobenzene | 24.22 | 2688170 | 20.2541 UG/KG |
| 12) TM 1,2-Dichlorobenzene | 24.75 | 2381851 | 20.1135 UG/KG |

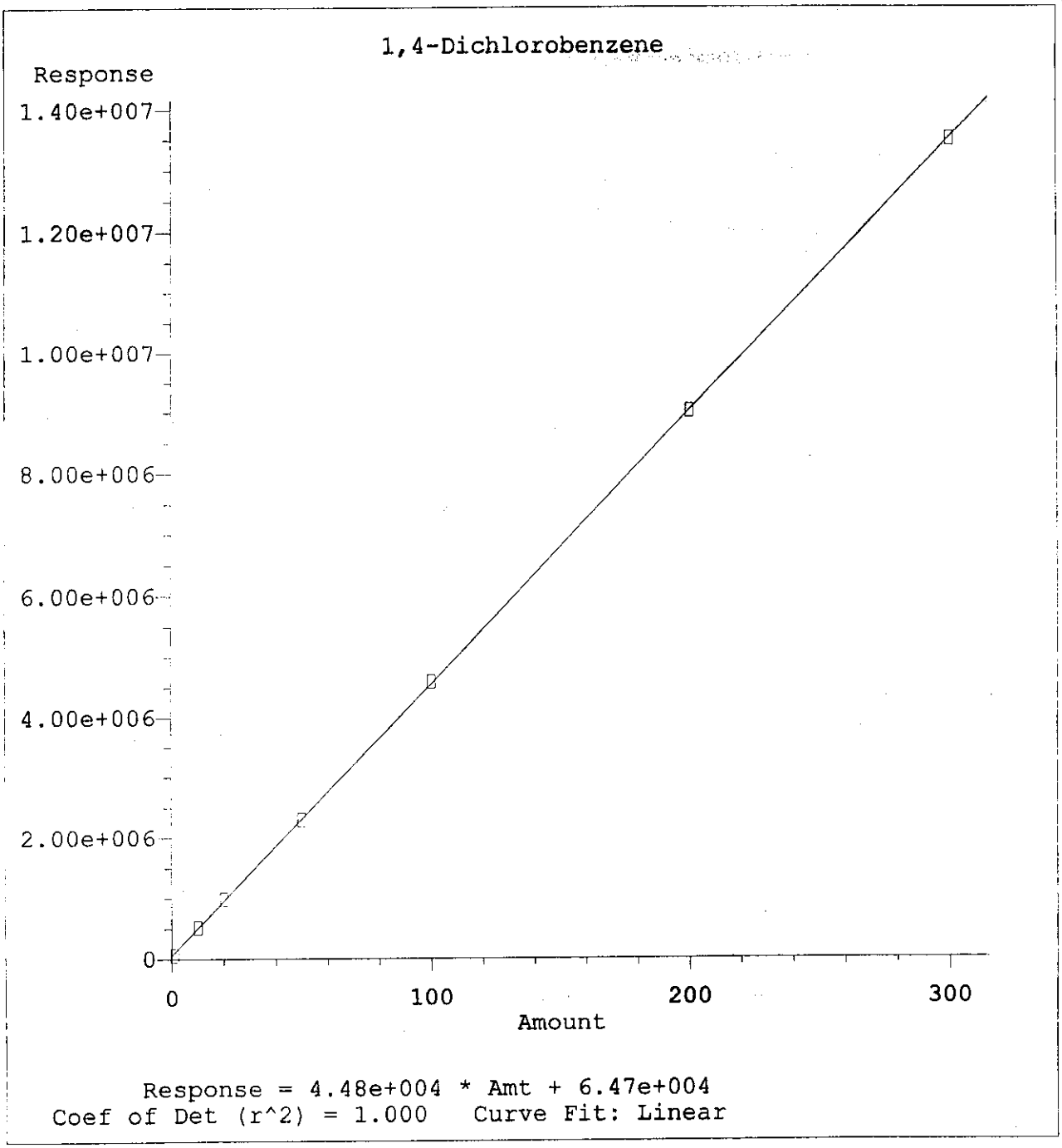
(f)=RT Delta > 1/2 Window (m)=manual int.
11G14253.D 8021S.M Fri Aug 16 15:50:36 2002 Page 1

Calibration Table Report
Method: 8021W.M
Title: METHOD 8021B - Water - 09/25/02
Last Calibration: Wed Sep 25 16:37:04 2002

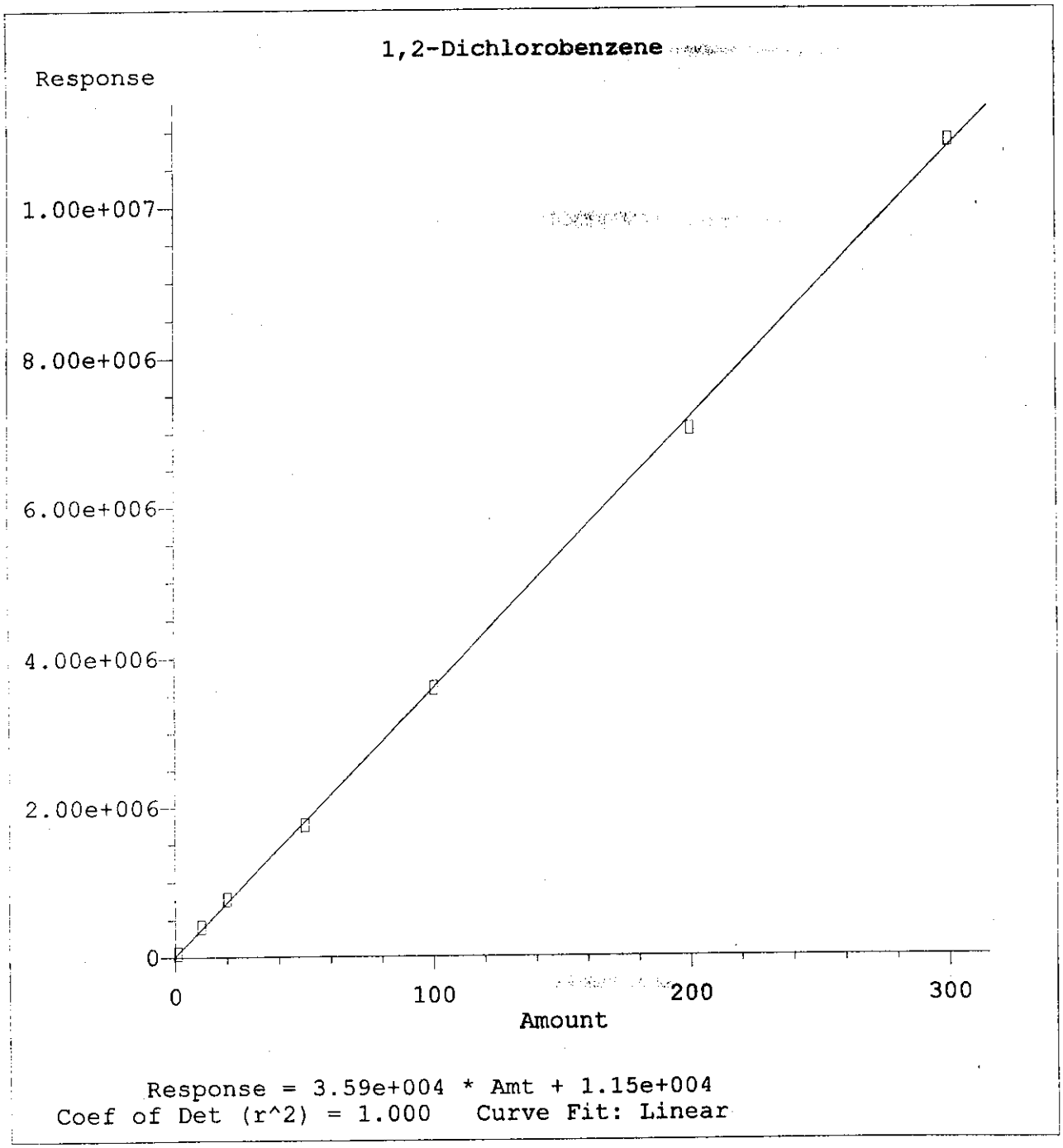
Calibration Files

| Compound | 1<br>5G14868.D | 10<br>5G14869.D | 20<br>5G14870.D | 50<br>5G14871.D | 100<br>5G14872.D | 200<br>5G14873.D | 300<br>5G14874.D | Avg | %RSD | R^2 |
|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | 11914 | 10815 | 10142 | 8516 | 8632 | 8439 | 9733 | 9742 | 13.56 | |
| Benzene | 69697 | 59153 | 57783 | 55794 | 55879 | 55514 | 55179 | 58429 | 8.85 | |
| TFT | 17929 | 17622 | 17804 | 17863 | 17967 | 18093 | 16414 | 17670 | 3.24 | |
| Toluene | 64428 | 53593 | 52929 | 50986 | 51491 | 51187 | 51116 | 53676 | 9.03 | |
| Chlorobenzene | 62259 | 56617 | 55547 | 53404 | 53382 | 53573 | 53325 | 55444 | 5.90 | |
| Ethylbenzene | 48427 | 46282 | 45365 | 44073 | 44395 | 44046 | 44128 | 45245 | 3.61 | |
| m-,p-Xylene | 62704 | 56024 | 54270 | 52342 | 52299 | 51287 | 51195 | 54303 | 7.52 | |
| o-Xylene | 53773 | 49031 | 47139 | 45844 | 45625 | 45074 | 45141 | 47375 | 6.64 | |
| BFB | 48456 | 47446 | 46520 | 46561 | 46788 | 46831 | 42197 | 46400 | 4.25 | |
| 1,3-Dichlorobenzene | 48127 | 45555 | 44761 | 42858 | 43833 | 43691 | 43543 | 44624 | 3.98 | |
| 1,4-Dichlorobenzene | 61242 | 52003 | 49325 | 45906 | 45858 | 45081 | 44986 | 49200 | 12.01 | 1.000, LR |
| 1,2-Dichlorobenzene | 48073 | 40769 | 38816 | 35223 | 35979 | 35213 | 36210 | 38612 | 12.05 | 1.000, LR |
| BCB | 43592 | 43321 | 42013 | 40031 | 41603 | 40693 | 38118 | 41339 | 4.64 | |

Wed Sep 25 16:38:05 2002




Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Wed Sep 18 11:06:53 2002



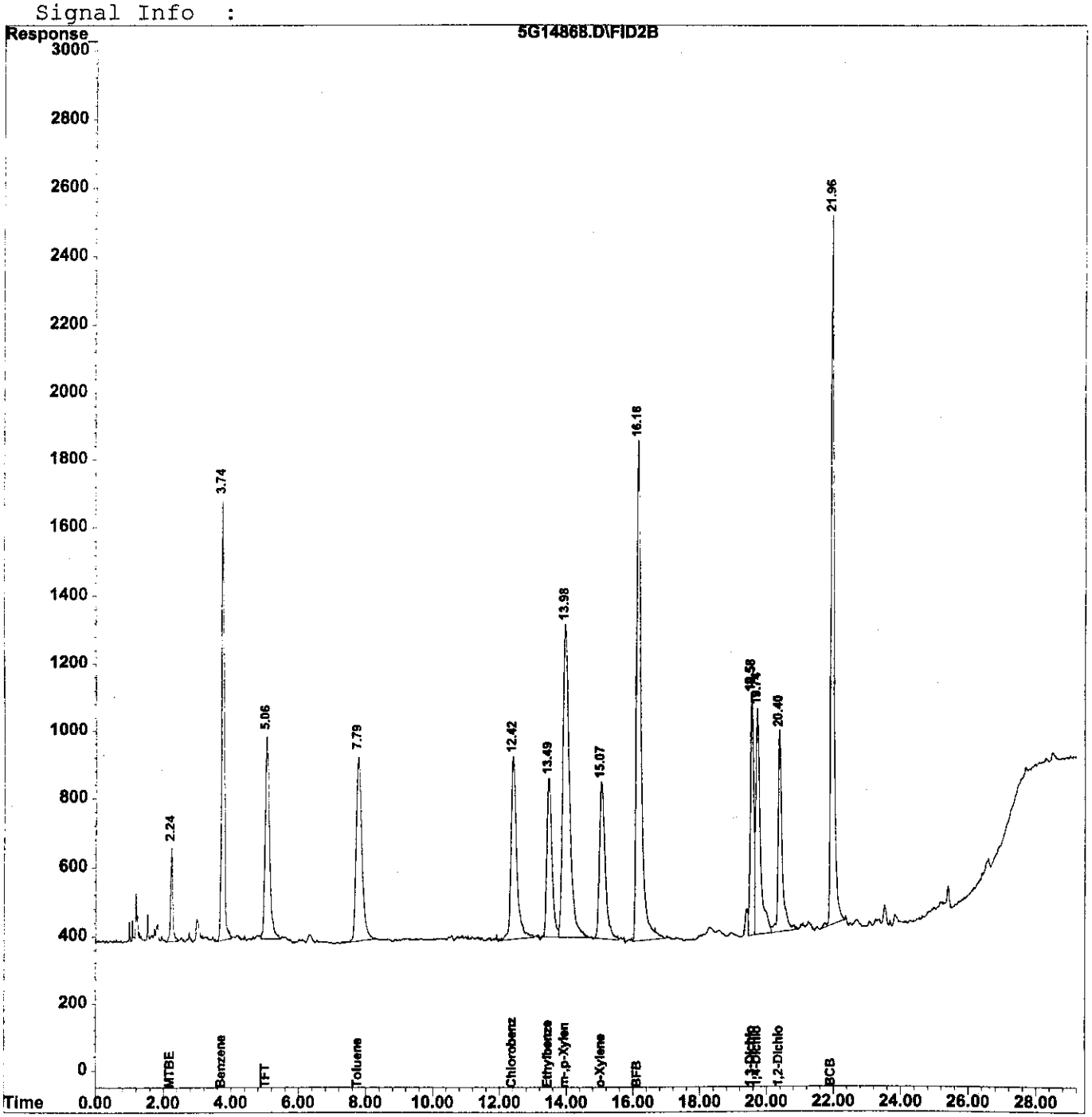

Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Wed Sep 25 16:41:08 2002

Quantitation Report

Data File : C:\HPCHEM\2\DATA\092502\5G14868.D  Vial: 1
Acq On : 25 Sep 2002 12:34  Operator: JLS
Sample : WG125957-01 8021 STD 1 1PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-43,100-01)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 13:03 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\092502\5G14868.D Vial: 1
Acq On : 25 Sep 2002 12:34 Operator: JLS
Sample : WG125957-01 8021 STD 1 1PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 13:03 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

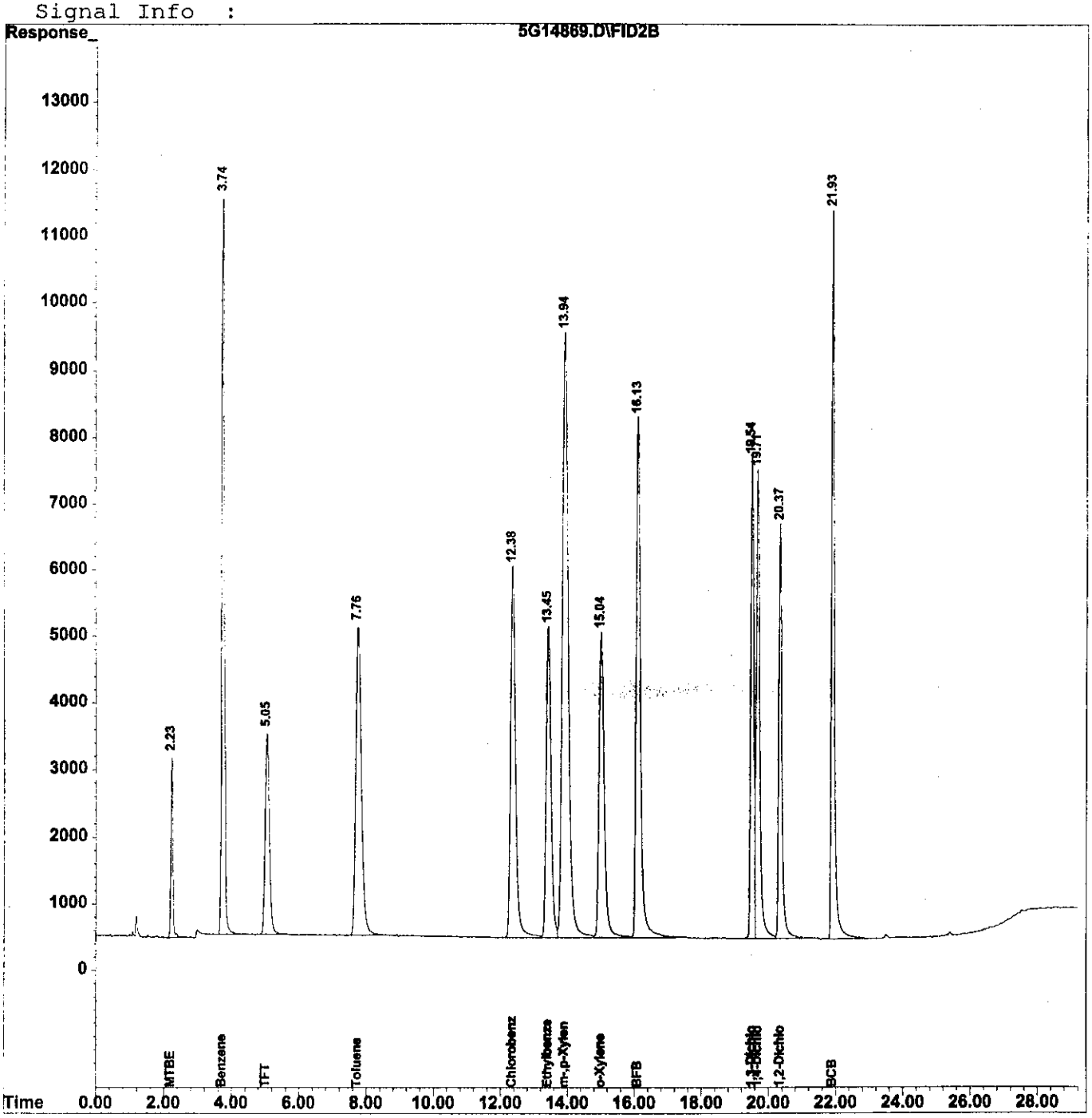
Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 53787 | 3.1854 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 10.62%# |
| 9) S BFB | 16.17 | 145368 | 3.0123 ug/L |
| Spiked Amount 30.000 | | Recovery = | 10.04% |
| 13) S BCB | 21.96 | 130776 | 2.7915 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 9.31%# |
| Target Compounds | | | |
| 1) TM MTBE | 2.24 | 11914 | 1.0751 ug/L |
| 2) TM Benzene | 3.75 | 69697 | 1.1921 ug/L |
| 4) TM Toluene | 7.79 | 64428 | 1.2039 ug/L |
| 5) TM Chlorobenzene | 12.42 | 62259 | 1.1223 ug/L |
| 6) TM Ethylbenzene | 13.50 | 48427 | 1.0730 ug/L |
| 7) TM m-,p-Xylene | 13.99 | 125408 | 2.3363 ug/L |
| 8) TM o-Xylene | 15.08 | 53773 | 1.1465 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.58 | 48127 | 1.0606 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.74 | 61242 | 1.2546 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.40 | 48073 | 1.2175 ug/L |

Data File : C:\HPCHEM\2\DATA\092502\5G14869.D  Vial: 2
Acq On : 25 Sep 2002 13:08  Operator: JLS
Sample : WG125957-02 8021 STD 2 10PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-43,100-01)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 13:38 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\092502\5G14869.D Vial: 2
Acq On : 25 Sep 2002 13:08 Operator: JLS
Sample : WG125957-02 8021 STD 2 10PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 13:38 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

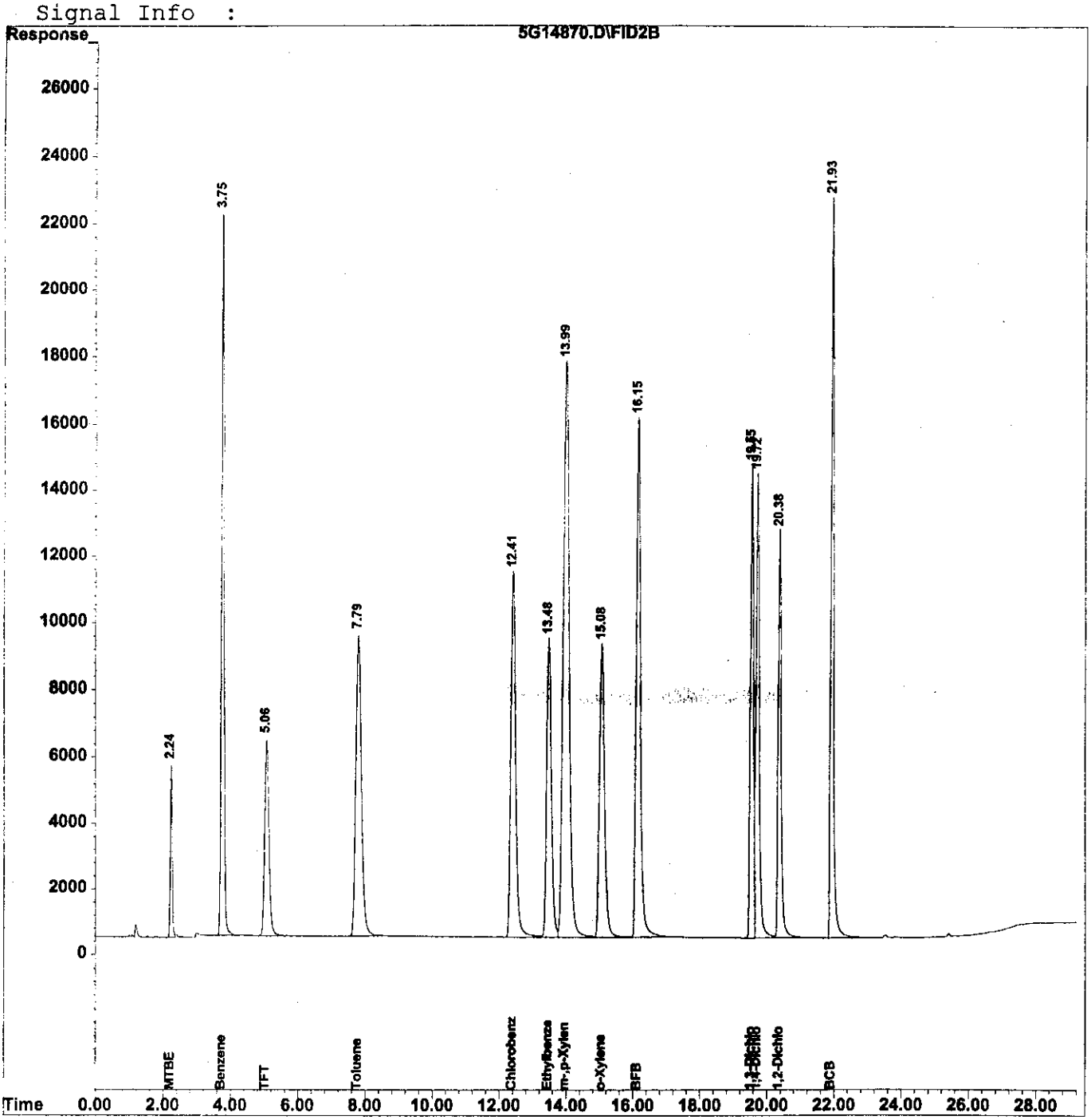
Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 264328 | 15.6539 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 52.18%# | | | |
| 9) S BFB | 16.13 | 711697 | 14.7478 ug/L |
| Spiked Amount 30.000 Recovery = 49.16% | | | |
| 13) S BCB | 21.93 | 649809 | 13.8704 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 46.23% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 108153 | 9.7596 ug/L |
| 2) TM Benzene | 3.74 | 591530 | 10.1179 ug/L |
| 4) TM Toluene | 7.77 | 535934 | 10.0148 ug/L |
| 5) TM Chlorobenzene | 12.38 | 566170 | 10.2058 ug/L |
| 6) TM Ethylbenzene | 13.45 | 462819 | 10.2546 ug/L |
| 7) TM m-,p-Xylene | 13.94 | 1120478 | 20.8737 ug/L |
| 8) TM o-Xylene | 15.04 | 490311 | 10.4536 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.54 | 455552 | 10.0395 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.71 | 520027 | 10.6529 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.37 | 407685 | 10.3252 ug/L |

Data File : C:\HPCHEM\2\DATA\092502\5G14870.D Vial: 3
Acq On : 25 Sep 2002 13:43 Operator: JLS
Sample : WG125957-03 8021 STD 3 20PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 14:12 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\092502\5G14870.D Vial: 3
Acq On : 25 Sep 2002 13:43 Operator: JLS
Sample : WG125957-03 8021 STD 3 20PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 14:12 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

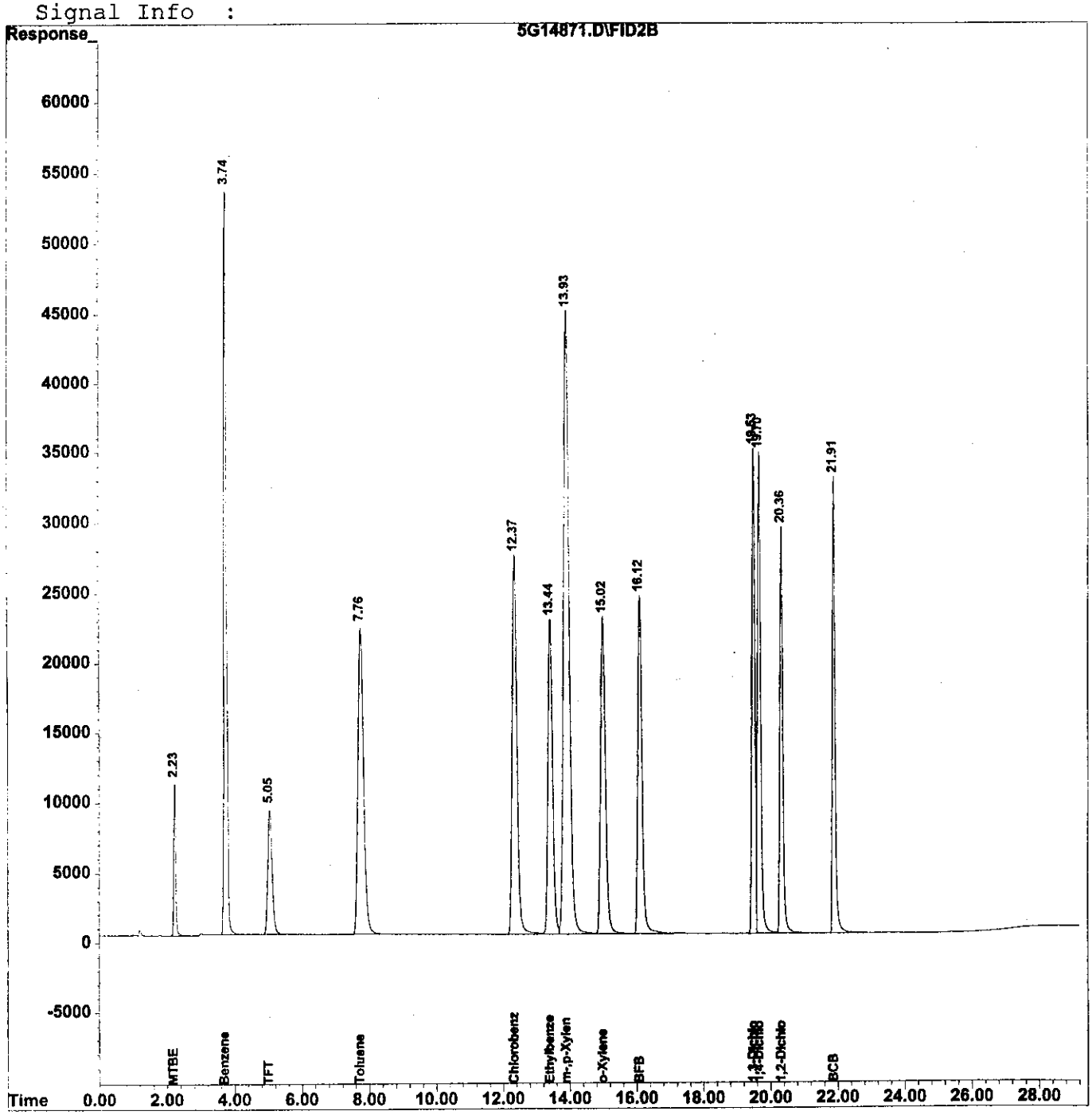
Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 534115 | 31.6311 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery | = 105.44% |
| 9) S BFB | 16.15 | 1395591 | 28.9195 ug/L |
| Spiked Amount 30.000 | | Recovery | = 96.40% |
| 13) S BCB | 21.93 | 1260400 | 26.9036 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery | = 89.68% |
| Target Compounds | | | |
| 1) TM MTBE | 2.24 | 202842 | 18.3041 ug/L |
| 2) TM Benzene | 3.75 | 1155658 | 19.7670 ug/L |
| 4) TM Toluene | 7.79 | 1058576 | 19.7812 ug/L |
| 5) TM Chlorobenzene | 12.41 | 1110942 | 20.0259 ug/L |
| 6) TM Ethylbenzene | 13.49 | 907299 | 20.1029 ug/L |
| 7) TM m-,p-Xylene | 13.99 | 2170819 | 40.4408 ug/L |
| 8) TM o-Xylene | 15.08 | 942781 | 20.1004 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.56 | 895215 | 19.7289 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.72 | 986503 | 20.2087 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.38 | 776325 | 19.6616 ug/L |

Data File : C:\HPCHEM\2\DATA\092502\5G14871.D  Vial: 4
Acq On : 25 Sep 2002 14:18  Operator: JLS
Sample : WG125957-04 8021 STD 4 50PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-43,100-01)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 14:47 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\092502\5G14871.D Vial: 4
Acq On : 25 Sep 2002 14:18 Operator: JLS
Sample : WG125957-04 8021 STD 4 50PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 14:47 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

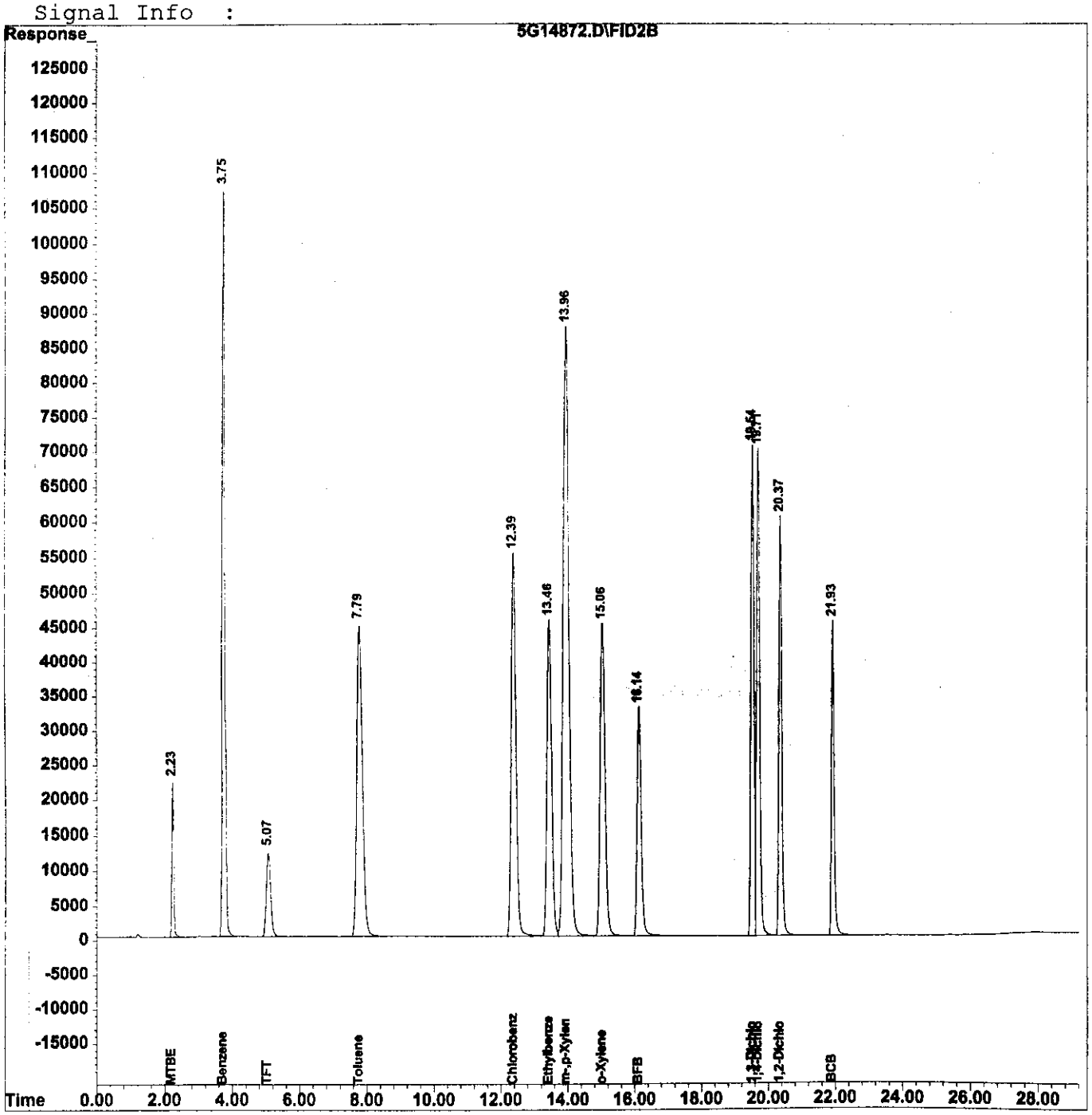
Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 803849 | 47.6052 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 158.68%# | | | |
| 9) S BFB | 16.12 | 2095267 | 43.4182 ug/L |
| Spiked Amount 30.000 Recovery = 144.73% | | | |
| 13) S BCB | 21.92 | 1801399 | 38.4515 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 128.17% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 425812 | 38.4245 ug/L |
| 2) TM Benzene | 3.74 | 2789679 | 47.7162 ug/L |
| 4) TM Toluene | 7.76 | 2549312 | 47.6380 ug/L |
| 5) TM Chlorobenzene | 12.37 | 2670218 | 48.1335 ug/L |
| 6) TM Ethylbenzene | 13.44 | 2203646 | 48.8259 ug/L |
| 7) TM m-,p-Xylene | 13.93 | 5234212 | 97.5097 ug/L |
| 8) TM o-Xylene | 15.02 | 2292191 | 48.8703 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 2142919 | 47.2259 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 2295282 | 47.0193 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 1761153 | 44.6038 ug/L |

Data File : C:\HPCHEM\2\DATA\092502\5G14872.D Vial: 5
Acq On : 25 Sep 2002 14:52 Operator: JLS
Sample : WG125957-05 8021 STD 5 100PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 15:22 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\092502\5G14872.D Vial: 5
Acq On : 25 Sep 2002 14:52 Operator: JLS
Sample : WG125957-05 8021 STD 5 100PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 15:22 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

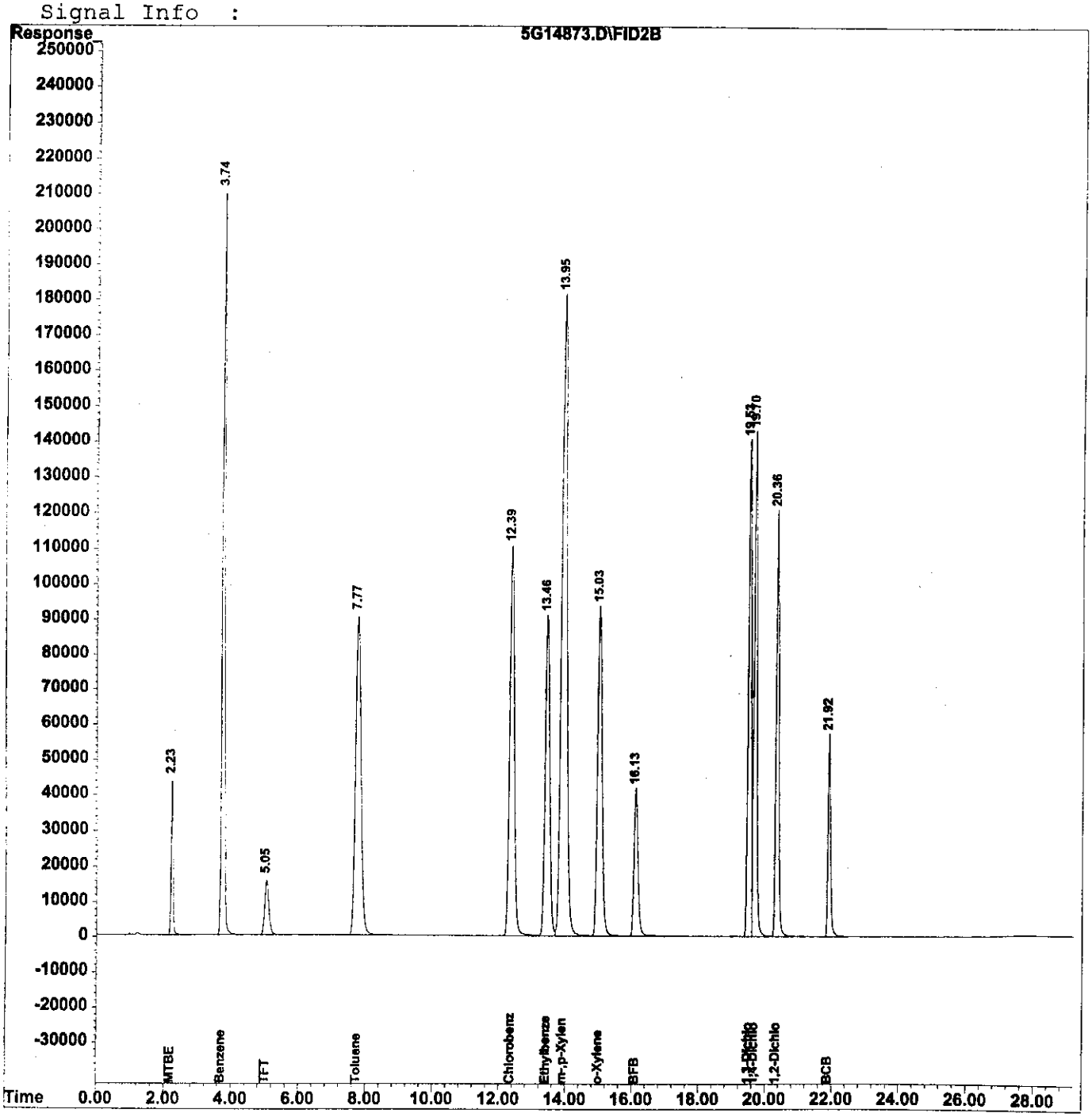
Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.07 | 1078015 | 60.1412 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 200.47%# | | | |
| 9) S BFB | 16.15 | 2807280 | 58.1402 ug/L |
| Spiked Amount 30.000 Recovery = 193.80% | | | |
| 13) S BCB | 21.93 | 2496185 | 55.9935 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 186.65%# | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.24 | 863182 | 82.8391 ug/L |
| 2) TM Benzene | 3.75 | 5587946 | 92.8750 ug/L |
| 4) TM Toluene | 7.79 | 5149087 | 93.1270 ug/L |
| 5) TM Chlorobenzene | 12.39 | 5338197 | 93.2088 ug/L |
| 6) TM Ethylbenzene | 13.46 | 4439526 | 95.1697 ug/L |
| 7) TM m-,p-Xylene | 13.96 | 10459707 | 187.3634 ug/L |
| 8) TM o-Xylene | 15.06 | 4562541 | 93.6213 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.54 | 4383256 | 95.2227 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.71 | 4585803 | 90.7784 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.37 | 3597917 | 89.1155 ug/L |

Data File : C:\HPCHEM\2\DATA\092502\5G14873.D  Vial: 6
Acq On : 25 Sep 2002 15:27  Operator: JLS
Sample : WG125957-06 8021 STD 6 200PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-43,100-01)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 15:56 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




7A

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\092502\5G14873.D Vial: 6
Acq On : 25 Sep 2002 15:27 Operator: JLS
Sample : WG125957-06 8021 STD 6 200PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 15:56 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

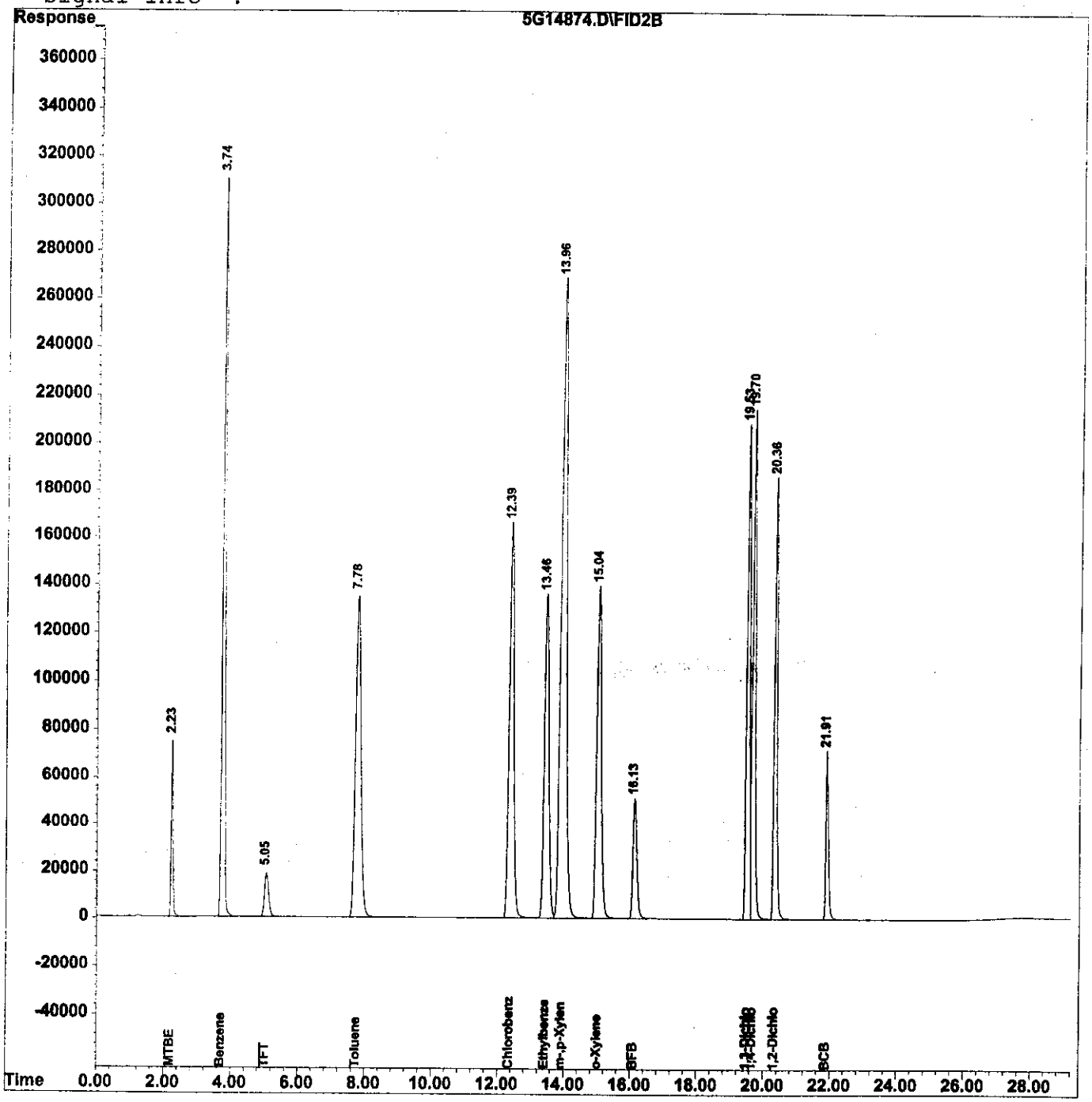
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 1356969 | 75.9102 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 253.03%# | | | |
| 9) S BFB | 16.13 | 3512350 | 73.7073 ug/L |
| Spiked Amount 30.000 Recovery = 245.69% | | | |
| 13) S BCB | 21.92 | 3051960 | 70.1584 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 233.86%# | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 1687701 | 167.2456 ug/L |
| 2) TM Benzene | 3.74 | 11102812 | 187.3691 ug/L |
| 4) TM Toluene | 7.77 | 10237313 | 187.9007 ug/L |
| 5) TM Chlorobenzene | 12.39 | 10714572 | 190.3608 ug/L |
| 6) TM Ethylbenzene | 13.46 | 8809101 | 191.8094 ug/L |
| 7) TM m-,p-Xylene | 13.95 | 20514947 | 372.9069 ug/L |
| 8) TM o-Xylene | 15.03 | 9014816 | 187.6206 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 8738138 | 192.7377 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 9016218 | 180.9203 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 7042582 | 177.8861 ug/L |

Data File : C:\HPCHEM\2\DATA\092502\5G14874.D
Acq On : 25 Sep 2002 16:02
Sample : WG125957-07 8021 STD 7 300PPB 5ML
Misc : 1,1 S-(99-43,100-01)
IntFile : autoint1.e
Quant Time: Sep 25 16:31 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

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Data File : C:\HPCHEM\2\DATA\092502\5G14874.D Vial: 7
Acq On : 25 Sep 2002 16:02 Operator: JLS
Sample : WG125957-07 8021 STD 7 300PPB 5ML Inst : HP5
Misc : 1,1 S-(99-43,100-01) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 16:31 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 1641351 | 92.0683 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 306.89%# | | | |
| 9) S BFB | 16.14 | 4219705 | 89.6431 ug/L |
| Spiked Amount 30.000 Recovery = 298.81% | | | |
| 13) S BCB | 21.92 | 3811771 | 90.0551 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 300.18%# | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 2919857 | 295.2272 ug/L |
| 2) TM Benzene | 3.74 | 16553679 | 279.4770 ug/L |
| 4) TM Toluene | 7.78 | 15334854 | 281.6636 ug/L |
| 5) TM Chlorobenzene | 12.40 | 15997539 | 284.4301 ug/L |
| 6) TM Ethylbenzene | 13.46 | 13238350 | 288.2701 ug/L |
| 7) TM m-,p-Xylene | 13.96 | 30716770 | 558.2166 ug/L |
| 8) TM o-Xylene | 15.05 | 13542221 | 281.9014 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 13062918 | 288.3763 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 13495842 | 270.9806 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 10862890 | 276.6168 ug/L |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\092502\5G14877.D  Vial: 10
Acq On : 25 Sep 2002 17:46  Operator: JLS
Sample : WG125957-08 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-49,99-16 ALT SOURCE  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:37:04 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 | 9.742 | 8.911 E3 | 8.5 | 88 | 0.00 |
| 2 | TM | Benzene | 58.428 | 57.444 E3 | 1.7 | 99 | 0.00 |
| 3 | S | TFT | 17.670 | 17.329 E3 | 1.9 | 97 | 0.00 |
| 4 | TM | Toluene | 53.676 | 52.819 E3 | 1.6 | 100 | 0.00 |
| 5 | TM | Chlorobenzene | 55.444 | 54.456 E3 | 1.8 | 98 | -0.02 |
| 6 | TM | Ethylbenzene | 45.245 | 46.026 E3 | -1.7 | 101 | -0.03 |
| 7 | TM | m-,p-Xylene | 54.303 | 54.080 E3 | 0.4 | 100 | -0.04 |
| 8 | TM | o-Xylene | 47.375 | 46.060 E3 | 2.8 | 98 | -0.04 |
| 9 | S | BFB | 46.400 | 45.235 E3 | 2.5 | 97 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 44.624 | 43.812 E3 | 1.8 | 98 | -0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 49.200 | 47.858 E3 | 2.7 | 97 | -0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 38.612 | 37.608 E3 | 2.6 | 97 | -0.02 |
| 13 | S | BCB | 41.339 | 40.712 E3 | 1.5 | 97 | -0.02 |

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

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\092502\5G14877.D  Vial: 10
Acq On : 25 Sep 2002 17:46  Operator: JLS
Sample : WG125957-08 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-49,99-16 ALT SOURCE  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:37:04 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 | 18.294 | 8.5 | 88 | 0.00 |
| 2 | TM | Benzene | 20.000 | 19.663 | 1.7 | 99 | 0.00 |
| 3 | S | TFT | 30.000 | 29.420 | 1.9 | 97 | 0.00 |
| 4 | TM | Toluene | 20.000 | 19.681 | 1.6 | 100 | 0.00 |
| 5 | TM | Chlorobenzene | 20.000 | 19.644 | 1.8 | 98 | -0.02 |
| 6 | TM | Ethylbenzene | 20.000 | 20.345 | -1.7 | 101 | -0.03 |
| 7 | TM | m-,p-Xylene | 40.000 | 39.836 | 0.4 | 100 | -0.04 |
| 8 | TM | o-Xylene | 20.000 | 19.445 | 2.8 | 98 | -0.04 |
| 9 | S | BFB | 30.000 | 29.247 | 2.5 | 97 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.636 | 1.8 | 98 | -0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.922 | 0.4 | 97 | -0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 20.658 | -3.3 | 97 | -0.02 |
| 13 | S | BCB | 30.000 | 29.545 | 1.5 | 97 | -0.02 |

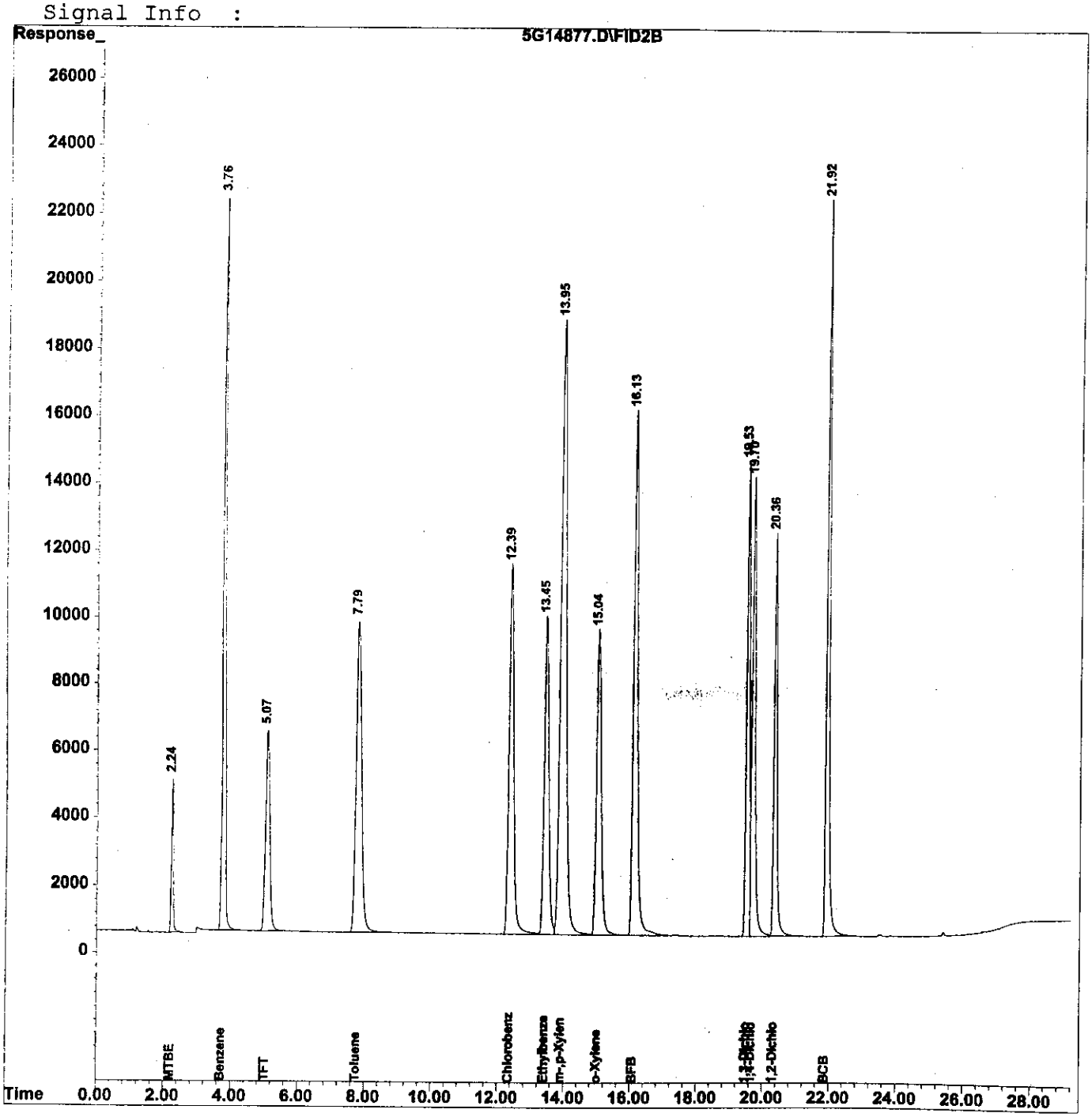
(#) = Out of Range  SPCC's out = 0  CCC's out = 0

Data File : C:\HPCHEM\2\DATA\092502\5G14877.D
Acq On : 25 Sep 2002 17:46
Sample : WG125957-08 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16 ALT SOURCE
IntFile : autoint1.e
Quant Time: Sep 25 18:15 2002 Quant Results File: 8021W.RES

Vial: 10
Operator: JLS
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\092502\5G14877.D Vial: 10
Acq On : 25 Sep 2002 17:46 Operator: JLS
Sample : WG125957-08 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(99-49,99-16 ALT SOURCE Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 25 18:15 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.07 | 519855 | 29.4199 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 98.07% | | | |
| 9) S BFB | 16.13 | 1357045 | 29.2466 ug/L |
| Spiked Amount 30.000 Recovery = 97.49% | | | |
| 13) S BCB | 21.92 | 1221366 | 29.5454 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 98.48% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.24 | 178214 | 18.2941 ug/L |
| 2) TM Benzene | 3.76 | 1148879 | 19.6630 ug/L |
| 4) TM Toluene | 7.80 | 1056378 | 19.6808 ug/L |
| 5) TM Chlorobenzene | 12.39 | 1089123 | 19.6437 ug/L |
| 6) TM Ethylbenzene | 13.46 | 920521 | 20.3452 ug/L |
| 7) TM m-,p-Xylene | 13.95 | 2163205 | 39.8358 ug/L |
| 8) TM o-Xylene | 15.04 | 921192 | 19.4445 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 876237 | 19.6360 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 957170 | 19.9215 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 752164 | 20.6579 ug/L |

Data File : C:\HPCHEM\2\DATA\092702\5G14906.D
Acq On : 27 Sep 2002 8:34
Sample : WG126113-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 9.742 | 9.631 E3 | 1.1 | 95 | -0.02 |
| 2 | TM | Benzene | 58.428 | 52.037 E3 | 10.9 | 90 | -0.03 |
| 3 | S | TFT | 17.670 | 15.970 E3 | 9.6 | 90 | -0.03 |
| 4 | TM | Toluene | 53.676 | 46.964 E3 | 12.5 | 89 | -0.05 |
| 5 | TM | Chlorobenzene | 55.444 | 50.132 E3 | 9.6 | 90 | -0.06 |
| 6 | TM | Ethylbenzene | 45.245 | 41.879 E3 | 7.4 | 92 | -0.07 |
| 7 | TM | m-,p-Xylene | 54.303 | 49.996 E3 | 7.9 | 92 | -0.09 |
| 8 | TM | o-Xylene | 47.375 | 42.295 E3 | 10.7 | 90 | -0.08 |
| 9 | S | BFB | 46.400 | 44.171 E3 | 4.8 | 95 | -0.06 |
| 10 | TM | 1,3-Dichlorobenzene | 44.624 | 40.572 E3 | 9.1 | 91 | -0.05 |
| 11 | TM | 1,4-Dichlorobenzene | 49.200 | 44.912 E3 | 8.7 | 91 | -0.05 |
| 12 | TM | 1,2-Dichlorobenzene | 38.612 | 36.314 E3 | 6.0 | 94 | -0.04 |
| 13 | S | BCB | 41.339 | 40.587 E3 | 1.8 | 97 | -0.03 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14906.D 8021W.M Fri Sep 27 09:35:56 2002

Data File : C:\HPCHEM\2\DATA\092702\5G14906.D
Acq On : 27 Sep 2002 8:34
Sample : WG126113-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 19.773 | 1.1 | 95 | -0.02 |
| 2 | TM | Benzene | 20.000 | 17.812 | 10.9 | 90 | -0.03 |
| 3 | S | TFT | 30.000 | 27.114 | 9.6 | 90 | -0.03 |
| 4 | TM | Toluene | 20.000 | 17.499 | 12.5 | 89 | -0.05 |
| 5 | TM | Chlorobenzene | 20.000 | 18.084 | 9.6 | 90 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 18.512 | 7.4 | 92 | -0.07 |
| 7 | TM | m-,p-Xylene | 40.000 | 36.828 | 7.9 | 92 | -0.09 |
| 8 | TM | o-Xylene | 20.000 | 17.855 | 10.7 | 90 | -0.08 |
| 9 | S | BFB | 30.000 | 28.559 | 4.8 | 95 | -0.06 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.184 | 9.1 | 91 | -0.05 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 18.606 | 7.0 | 91 | -0.05 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.936 | 0.3 | 94 | -0.04 |
| 13 | S | BCB | 30.000 | 29.455 | 1.8 | 97 | -0.03 |

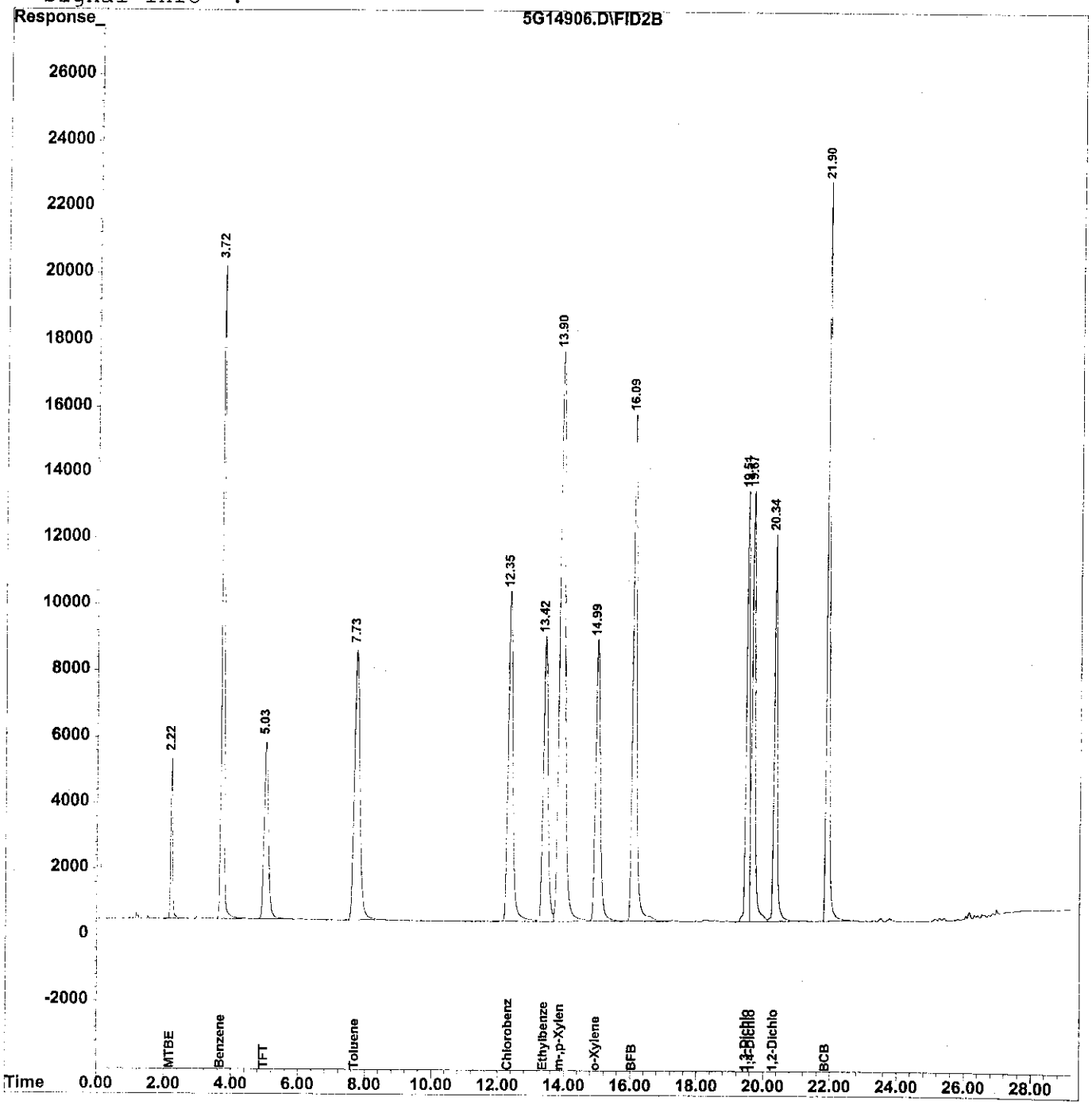
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14906.D 8021W.M Fri Sep 27 09:35:52 2002

Data File : C:\HPCHEM\2\DATA\092702\5G14906.D
Acq On : 27 Sep 2002 8:34
Sample : WG126113-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 27 9:03 2002 Quant Results File: 8021W.RES

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\092702\5G14906.D  Vial: 1
Acq On : 27 Sep 2002 8:34  Operator: CSH
Sample : WG126113-01 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-49,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 27 9:03 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 479104 | 27.1136 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 90.38% | | | |
| 9) S BFB | 16.10 | 1325117 | 28.5585 ug/L |
| Spiked Amount 30.000 Recovery = 95.19% | | | |
| 13) S BCB | 21.90 | 1217620 | 29.4547 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 98.18% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.22 | 192624 | 19.7734 ug/L |
| 2) TM Benzene | 3.72 | 1040746 | 17.8123 ug/L |
| 4) TM Toluene | 7.74 | 939285 | 17.4993 ug/L |
| 5) TM Chlorobenzene | 12.35 | 1002635 | 18.0838 ug/L |
| 6) TM Ethylbenzene | 13.42 | 837580 | 18.5121 ug/L |
| 7) TM m-,p-Xylene | 13.90 | 1999845 | 36.8275 ug/L |
| 8) TM o-Xylene | 15.00 | 845891 | 17.8551 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.51 | 811445 | 18.1841 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.68 | 898237 | 18.6060 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.34 | 726290 | 19.9362 ug/L |

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

Data File : C:\HPCHEM\2\DATA\092702\5G14917.D
Acq On : 27 Sep 2002 15:14
Sample : WG126113-02 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 9.742 | 9.517 E3 | 2.3 | 94 | -0.01 |
| 2 | TM | Benzene | 58.428 | 56.263 E3 | 3.7 | 97 | -0.02 |
| 3 | S | TFT | 17.670 | 16.874 E3 | 4.5 | 95 | -0.03 |
| 4 | TM | Toluene | 53.676 | 51.690 E3 | 3.7 | 98 | -0.05 |
| 5 | TM | Chlorobenzene | 55.444 | 53.525 E3 | 3.5 | 96 | -0.06 |
| 6 | TM | Ethylbenzene | 45.245 | 45.065 E3 | 0.4 | 99 | -0.06 |
| 7 | TM | m-,p-Xylene | 54.303 | 52.954 E3 | 2.5 | 98 | -0.07 |
| 8 | TM | o-Xylene | 47.375 | 45.135 E3 | 4.7 | 96 | -0.07 |
| 9 | S | BFB | 46.400 | 45.488 E3 | 2.0 | 98 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 44.624 | 43.596 E3 | 2.3 | 97 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 49.200 | 47.597 E3 | 3.3 | 96 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 38.612 | 38.066 E3 | 1.4 | 98 | -0.03 |
| 13 | S | BCB | 41.339 | 42.436 E3 | -2.7 | 101 | -0.02 |

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

Data File : C:\HPCHEM\2\DATA\092702\5G14917.D
Acq On : 27 Sep 2002 15:14
Sample : WG126113-02 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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%

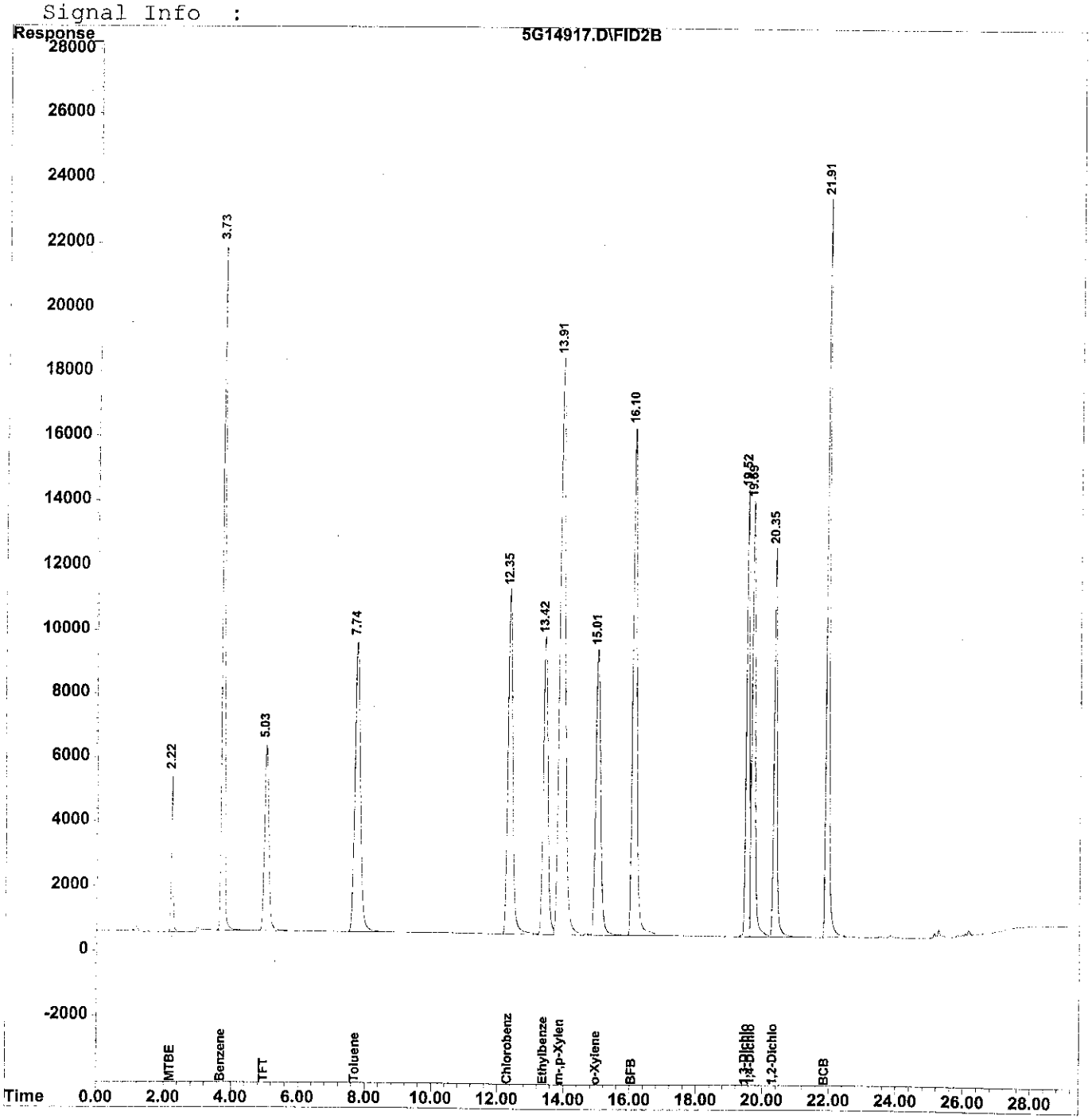
| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 19.540 | 2.3 | 94 | -0.01 |
| 2 | TM | Benzene | 20.000 | 19.259 | 3.7 | 97 | -0.02 |
| 3 | S | TFT | 30.000 | 28.648 | 4.5 | 95 | -0.03 |
| 4 | TM | Toluene | 20.000 | 19.260 | 3.7 | 98 | -0.05 |
| 5 | TM | Chlorobenzene | 20.000 | 19.308 | 3.5 | 96 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 19.920 | 0.4 | 99 | -0.06 |
| 7 | TM | m-,p-Xylene | 40.000 | 39.006 | 2.5 | 98 | -0.07 |
| 8 | TM | o-Xylene | 20.000 | 19.054 | 4.7 | 96 | -0.07 |
| 9 | S | BFB | 30.000 | 29.410 | 2.0 | 98 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.539 | 2.3 | 97 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.805 | 1.0 | 96 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 20.913 | -4.6 | 98 | -0.03 |
| 13 | S | BCB | 30.000 | 30.796 | -2.7 | 101 | -0.02 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14917.D 8021W.M Fri Sep 27 15:48:28 2002 Page 1

Data File : C:\HPCHEM\2\DATA\092702\5G14917.D  Vial: 9
Acq On : 27 Sep 2002 15:14  Operator: CSH
Sample : WG126113-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-49,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 27 15:44 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\092702\5G14917.D  Vial: 9
Acq On : 27 Sep 2002 15:14  Operator: CSH
Sample : WG126113-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(99-49,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 27 15:44 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 506222 | 28.6483 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 95.49% |
| 9) S BFB | 16.10 | 1364628 | 29.4101 ug/L |
| Spiked Amount 30.000 | | Recovery = | 98.03% |
| 13) S BCB | 21.91 | 1273068 | 30.7961 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 102.65% |
| Target Compounds | | | |
| 1) TM MTBE | 2.22 | 190348 | 19.5398 ug/L |
| 2) TM Benzene | 3.73 | 1125259 | 19.2587 ug/L |
| 4) TM Toluene | 7.74 | 1033794 | 19.2600 ug/L |
| 5) TM Chlorobenzene | 12.35 | 1070508 | 19.3080 ug/L |
| 6) TM Ethylbenzene | 13.42 | 901297 | 19.9203 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2118143 | 39.0060 ug/L |
| 8) TM o-Xylene | 15.01 | 902701 | 19.0542 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 871924 | 19.5394 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 951933 | 19.8046 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 761316 | 20.9131 ug/L |

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

Data File : C:\HPCHEM\2\DATA\092702\5G14925.D
Acq On : 27 Sep 2002 20:04
Sample : WG1260113-03 8021 STD 20PPB 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e

Vial: 17
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 9.742 | 9.138 E3 | 6.2 | 90 | -0.01 |
| 2 | TM | Benzene | 58.428 | 52.772 E3 | 9.7 | 91 | -0.02 |
| 3 | S | TFT | 17.670 | 16.483 E3 | 6.7 | 93 | -0.01 |
| 4 | TM | Toluene | 53.676 | 48.470 E3 | 9.7 | 92 | -0.03 |
| 5 | TM | Chlorobenzene | 55.444 | 50.963 E3 | 8.1 | 92 | -0.03 |
| 6 | TM | Ethylbenzene | 45.245 | 42.078 E3 | 7.0 | 93 | -0.04 |
| 7 | TM | m-,p-Xylene | 54.303 | 49.500 E3 | 8.8 | 91 | -0.06 |
| 8 | TM | o-Xylene | 47.375 | 42.595 E3 | 10.1 | 90 | -0.06 |
| 9 | S | BFB | 46.400 | 44.895 E3 | 3.2 | 97 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 44.624 | 40.475 E3 | 9.3 | 90 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 49.200 | 44.720 E3 | 9.1 | 91 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 38.612 | 36.091 E3 | 6.5 | 93 | -0.03 |
| 13 | S | BCB | 41.339 | 41.920 E3 | -1.4 | 100 | -0.02 |

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

Data File : C:\HPCHEM\2\DATA\092702\5G14925.D
Acq On : 27 Sep 2002 20:04
Sample : WG1260113-03 8021 STD 20PPB 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e

Vial: 17
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 18.760 | 6.2 | 90 | -0.01 |
| 2 | TM | Benzene | 20.000 | 18.064 | 9.7 | 91 | -0.02 |
| 3 | S | TFT | 30.000 | 27.984 | 6.7 | 93 | -0.01 |
| 4 | TM | Toluene | 20.000 | 18.060 | 9.7 | 92 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 18.384 | 8.1 | 92 | -0.03 |
| 6 | TM | Ethylbenzene | 20.000 | 18.600 | 7.0 | 93 | -0.04 |
| 7 | TM | m-,p-Xylene | 40.000 | 36.462 | 8.8 | 91 | -0.06 |
| 8 | TM | o-Xylene | 20.000 | 17.982 | 10.1 | 90 | -0.06 |
| 9 | S | BFB | 30.000 | 29.027 | 3.2 | 97 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.141 | 9.3 | 90 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 18.520 | 7.4 | 91 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.812 | 0.9 | 93 | -0.03 |
| 13 | S | BCB | 30.000 | 30.422 | -1.4 | 100 | -0.02 |

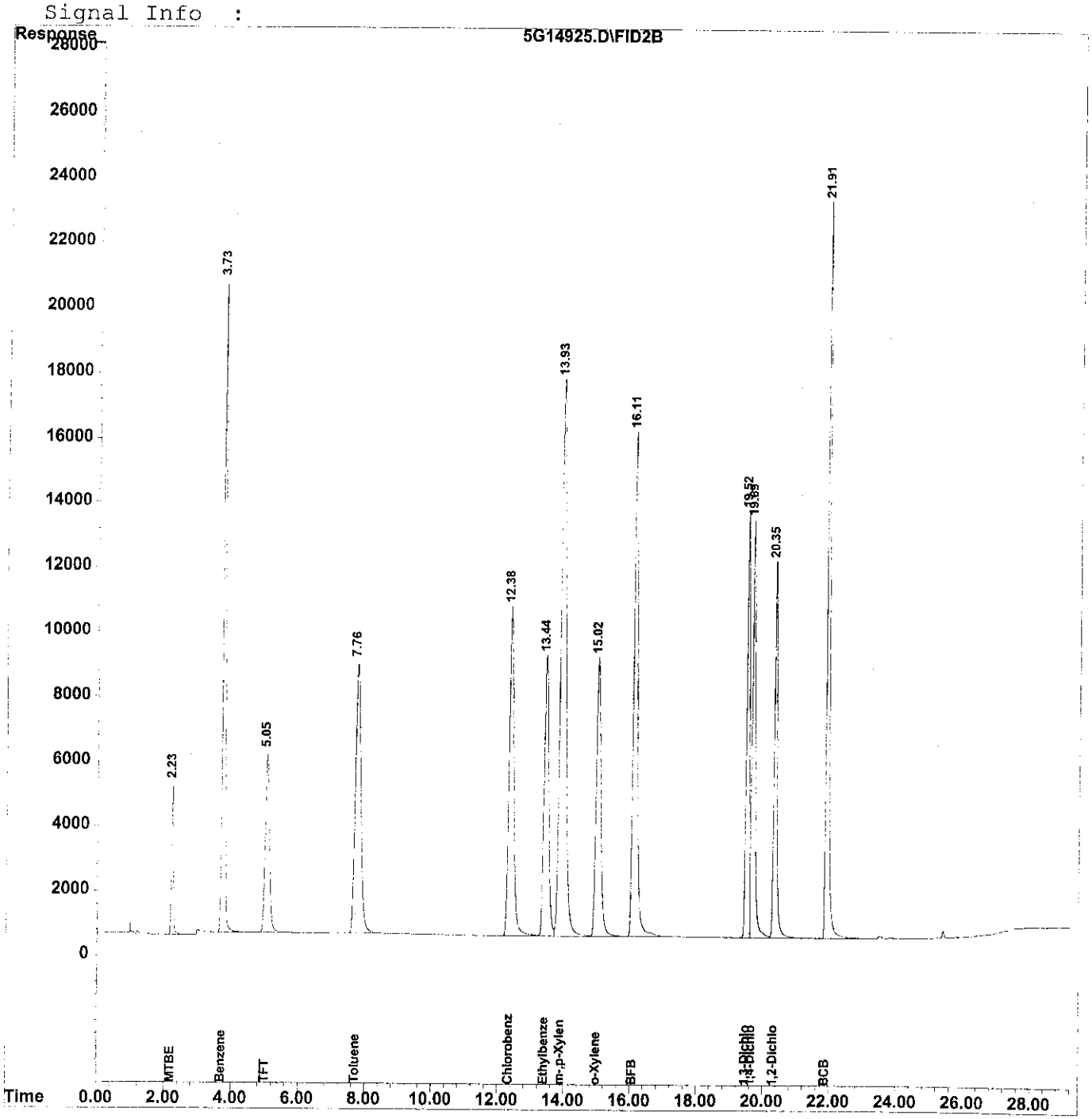
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14925.D 8021W.M Sat Sep 28 02:03:17 2002

Data File : C:\HPCHEM\2\DATA\092702\5G14925.D
Acq On : 27 Sep 2002 20:04
Sample : WG1260113-03 8021 STD 20PPB 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 27 20:33 2002 Quant Results File: 8021W.RES

Vial: 17
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\092702\5G14925.D
Acq On : 27 Sep 2002 20:04
Sample : WG1260113-03 8021 STD 20PPB 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 27 20:33 2002 Quant Results File: 8021W.RES

Vial: 17
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 494479 | 27.9838 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 93.28% |
| 9) S BFB | 16.11 | 1346842 | 29.0267 ug/L |
| Spiked Amount 30.000 | | Recovery = | 96.76% |
| 13) S BCB | 21.91 | 1257605 | 30.4220 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 101.41% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 182753 | 18.7602 ug/L |
| 2) TM Benzene | 3.73 | 1055439 | 18.0638 ug/L |
| 4) TM Toluene | 7.76 | 969406 | 18.0604 ug/L |
| 5) TM Chlorobenzene | 12.38 | 1019254 | 18.3835 ug/L |
| 6) TM Ethylbenzene | 13.44 | 841558 | 18.6000 ug/L |
| 7) TM m-,p-Xylene | 13.93 | 1979992 | 36.4619 ug/L |
| 8) TM o-Xylene | 15.02 | 851891 | 17.9817 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 809508 | 18.1407 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 894393 | 18.5202 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 721828 | 19.8117 ug/L |

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

Data File : C:\HPCHEM\1\DATA\092702\11G14584.D
Acq On : 27 Sep 2002 11:27
Sample : WG126147-01 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E

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

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | 68.789 | 73.745 | E3 | -7.2 | 111 | 0.00 |
| 2 | TM | Benzene | 150.164 | 173.051 | E3 | -15.2# | 118 | 0.00 |
| 3 | S | TFT | 48.210 | 49.184 | E3 | -2.0 | 101 | -0.01 |
| 4 | TM | Toluene | 142.460 | 157.618 | E3 | -10.6 | 110 | 0.00 |
| 5 | TM | Chlorobenzene | 143.443 | 142.024 | E3 | 1.0 | 104 | 0.01 |
| 6 | TM | Ethylbenzene | 130.324 | 133.482 | E3 | -2.4 | 105 | 0.00 |
| 7 | TM | m-,p-Xylene | 160.469 | 172.135 | E3 | -7.3 | 108 | 0.00 |
| 8 | TM | o-Xylene | 138.464 | 145.371 | E3 | -5.0 | 101 | 0.00 |
| 9 | S | BFB | 130.817 | 114.216 | E3 | 12.7 | 91 | 0.01 |
| 10 | TM | 1,3-Dichlorobenzene | 129.018 | 122.773 | E3 | 4.8 | 105 | 0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 132.722 | 134.624 | E3 | -1.4 | 110 | 0.01 |
| 12 | TM | 1,2-Dichlorobenzene | 118.420 | 127.562 | E3 | -7.7 | 117 | 0.01 |
| 13 | S | BCB | 122.675 | 103.691 | E3 | 15.5# | 98 | 0.01 |

average = 7.1%

(#) = Out of Range SPCC's out = 0 CCC's out = 0
11G14584.D 8021S.M Fri Sep 27 13:13:04 2002

Acq On : 27 Sep 2002 11:27 — C:\HPCHEM\1\DATA\092702\11G14584.D
Sample : WG126147-01 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E

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

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | 21.441 | -7.2 | 111 | 0.00 |
| 2 | TM | Benzene | 20.000 | 23.048 | -15.2# | 118 | 0.00 |
| 3 | S | TFT | 30.000 | 30.606 | -2.0 | 101 | -0.01 |
| 4 | TM | Toluene | 20.000 | 22.128 | -10.6 | 110 | 0.00 |
| 5 | TM | Chlorobenzene | 20.000 | 19.802 | 1.0 | 104 | 0.01 |
| 6 | TM | Ethylbenzene | 20.000 | 20.485 | -2.4 | 105 | 0.00 |
| 7 | TM | m-,p-Xylene | 40.000 | 42.908 | -7.3 | 108 | 0.00 |
| 8 | TM | o-Xylene | 20.000 | 20.998 | -5.0 | 101 | 0.00 |
| 9 | S | BFB | 30.000 | 26.193 | 12.7 | 91 | 0.01 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.032 | 4.8 | 105 | 0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.287 | -1.4 | 110 | 0.01 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 21.544 | -7.7 | 117 | 0.01 |
| 13 | S | BCB | 30.000 | 25.358 | 15.5# | 98 | 0.01 |

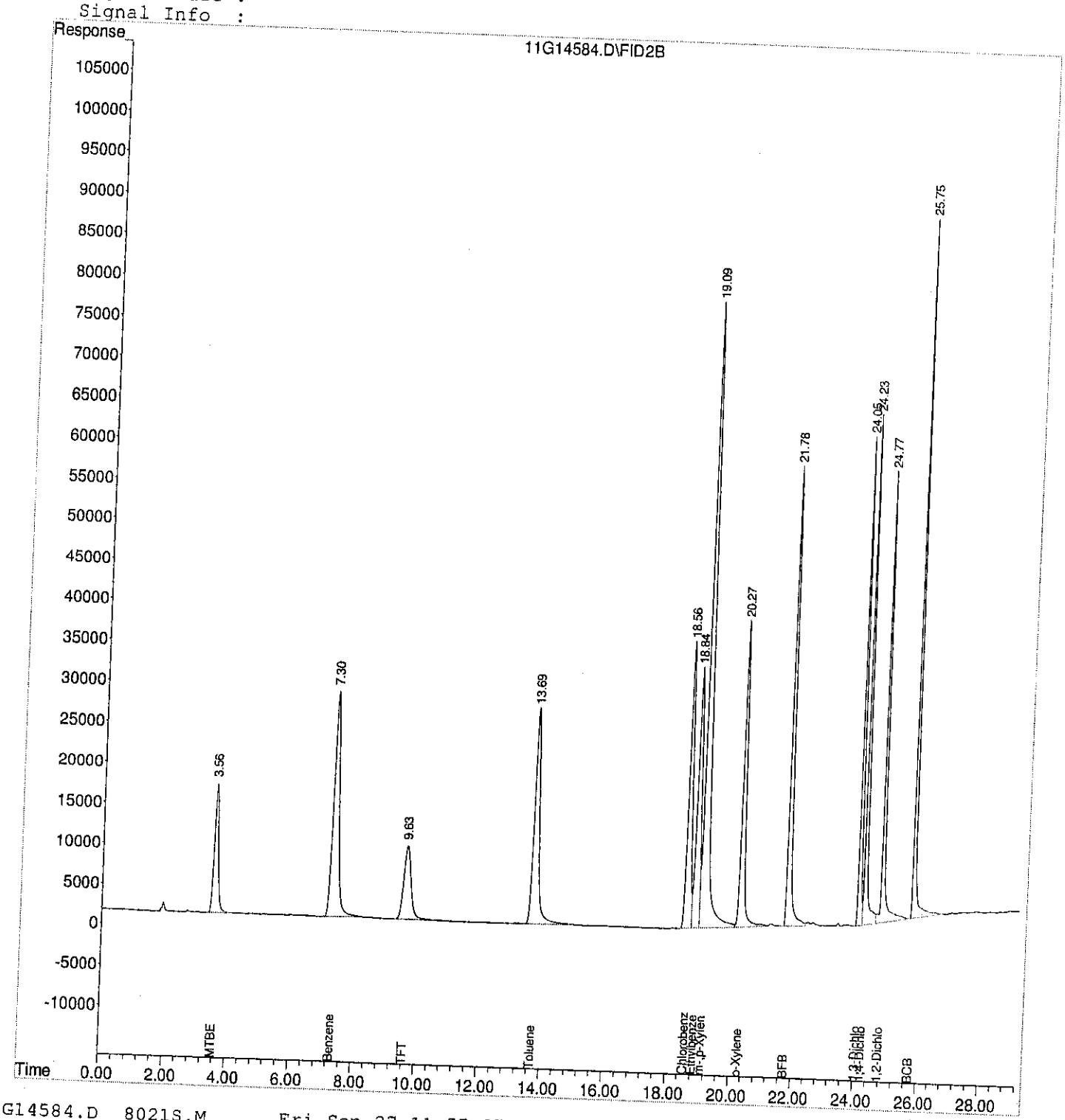
(#) = Out of Range SPCC's out = 0 CCC's out = 0
11G14584.D 8021S.M Fri Sep 27 13:13:08 2002

Data : C:\HPCHEM\1\DATA\092702\11G14584.D
Acq On : 27 Sep 2002 11:27 am
Sample : WG126147-01 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E
Quant Time: Sep 27 11:57 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14584.D 8021S.M Fri Sep 27 11:57:07 2002

Data File : C:\HPCHEM\1\DATA\092702\11G14584.D
Acq On : 27 Sep 2002 11:27 am
Sample : WG126147-01 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E
Quant Time: Sep 27 11:57 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | | 9.63 | 1475523 | 30.6062 UG/KG |
| Spiked Amount | 30.0000 | Range 47 - 121 | Recovery | = 102.02% |
| 9) S BFB | | 21.78 | 3426487 | 26.1930 UG/KG |
| Spiked Amount | 30.0000 | Range 70 - 130 | Recovery | = 87.31% |
| 13) S BCB | | 25.75 | 3110745 | 25.3577 UG/KG |
| Spiked Amount | 30.0000 | Range 37 - 137 | Recovery | = 84.53% |
| **Target Compounds** | | | | |
| 1) TM MTBE | | 3.56 | 1474898 | 21.4408 UG/KG |
| 2) TM Benzene | | 7.30 | 3461022 | 23.0483 UG/KG |
| 4) TM Toluene | | 13.69 | 3152363 | 22.1281 UG/KG |
| 5) TM Chlorobenzene | | 18.56 | 2840472 | 19.8021 UG/KG |
| 6) TM Ethylbenzene | | 18.85 | 2669632 | 20.4845 UG/KG |
| 7) TM m-,p-Xylene | | 19.09 | 6885400 | 42.9080 UG/KG |
| 8) TM o-Xylene | | 20.27 | 2907423 | 20.9977 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | 24.05 | 2455457 | 19.0318 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | 24.23 | 2692483 | 20.2866 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | 24.77 | 2551245 | 21.5440 UG/KG |

(f)=RT Delta > 1/2 Window
11G14584.D 8021S.M Fri Sep 27 11:57:07 2002 (m)=manual int.

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\092702\11G14591.D
Acq On : 27 Sep 2002 16:03
Sample : WG126147-02 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E

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

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | 68.789 | 77.005 E3 | -11.9 | 116 | 0.00 |
| 2 | TM | Benzene | 150.164 | 167.433 E3 | -11.5 | 114 | 0.00 |
| 3 | S | TFT | 48.210 | 58.887 E3 | -22.1# | 121 | 0.00 |
| 4 | TM | Toluene | 142.460 | 146.911 E3 | -3.1 | 103 | 0.00 |
| 5 | TM | Chlorobenzene | 143.443 | 137.396 E3 | 4.2 | 101 | 0.01 |
| 6 | TM | Ethylbenzene | 130.324 | 131.262 E3 | -0.7 | 104 | 0.01 |
| 7 | TM | m-,p-Xylene | 160.469 | 169.458 E3 | -5.6 | 106 | 0.00 |
| 8 | TM | o-Xylene | 138.464 | 142.685 E3 | -3.0 | 99 | 0.01 |
| 9 | S | BFB | 130.817 | 147.937 E3 | -13.1 | 118 | 0.01 |
| 10 | TM | 1,3-Dichlorobenzene | 129.018 | 125.853 E3 | 2.5 | 108 | 0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 132.722 | 132.958 E3 | -0.2 | 109 | 0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 118.420 | 122.729 E3 | -3.6 | 113 | 0.01 |
| 13 | S | BCB | 122.675 | 141.815 E3 | -15.6# | 133 | 0.01 |

AVG = 7.47

(#) = Out of Range SPCC's out = 0 CCC's out = 0
11G14591.D 8021S.M

Data File : C:\HPCHEM\1\DATA\092702\11G14591.D
Acq On : 27 Sep 2002 16:03
Sample : WG126147-02 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E

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

Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | 22.389 | -11.9 | 116 | 0.00 |
| 2 | TM | Benzene | 20.000 | 22.300 | -11.5 | 114 | 0.00 |
| 3 | S | TFT | 30.000 | 36.644 | -22.1# | 121 | 0.00 |
| 4 | TM | Toluene | 20.000 | 20.625 | -3.1 | 103 | 0.00 |
| 5 | TM | Chlorobenzene | 20.000 | 19.157 | 4.2 | 101 | 0.01 |
| 6 | TM | Ethylbenzene | 20.000 | 20.144 | -0.7 | 104 | 0.01 |
| 7 | TM | m-,p-Xylene | 40.000 | 42.241 | -5.6 | 106 | 0.00 |
| 8 | TM | o-Xylene | 20.000 | 20.610 | -3.0 | 99 | 0.01 |
| 9 | S | BFB | 30.000 | 33.926 | -13.1 | 118 | 0.01 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.509 | 2.5 | 108 | 0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.036 | -0.2 | 109 | 0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 20.728 | -3.6 | 113 | 0.01 |
| 13 | S | BCB | 30.000 | 34.681 | -15.6# | 133 | 0.01 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
11G14591.D 8021S.M Sat Sep 28 02:21:37 2002

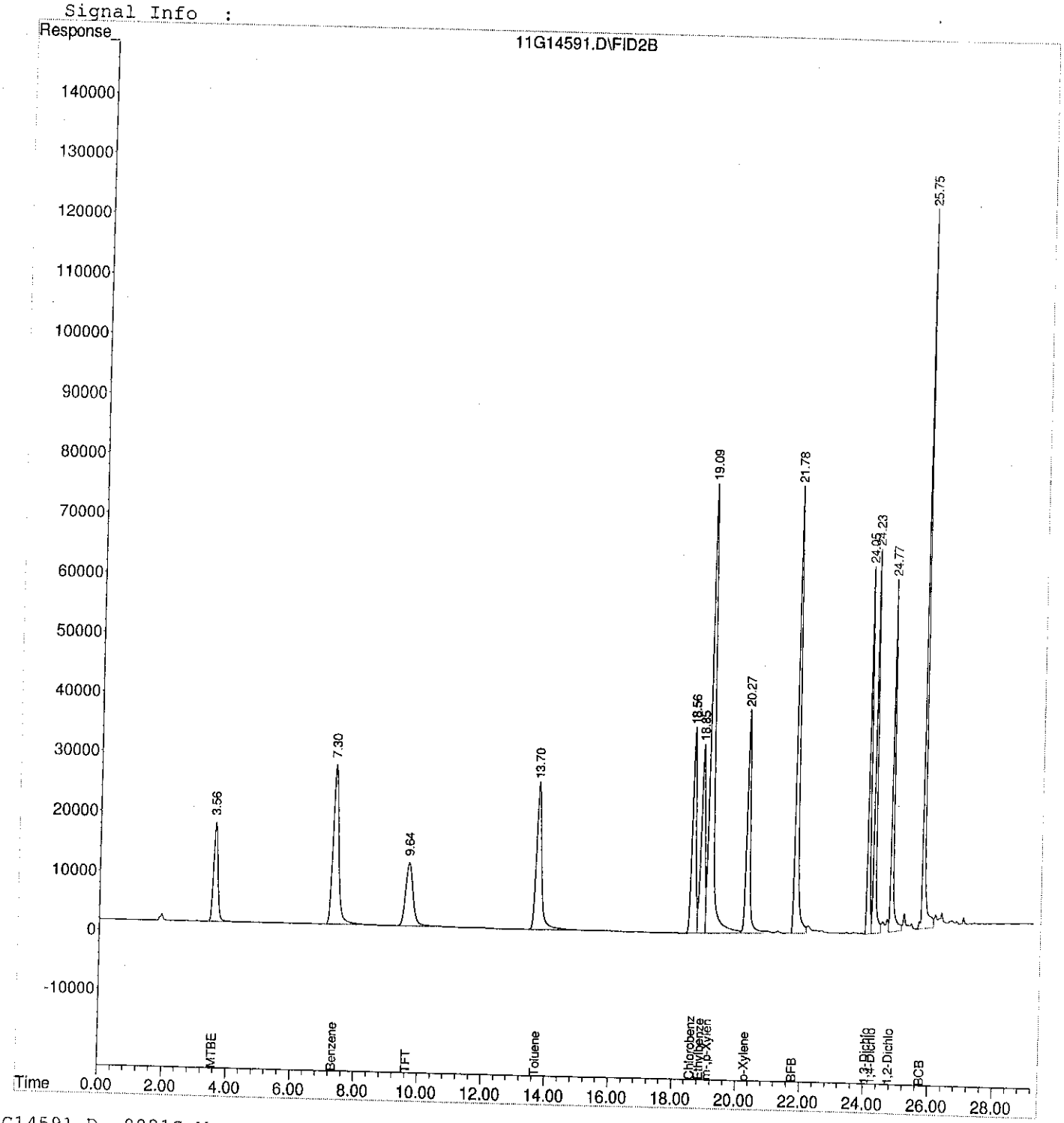
(Not Reviewed)

Data File : C:\HPCHEM\1\DATA\092702\11G14591.D
Acq On : 27 Sep 2002 4:03 pm
Sample : WG126147-02 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E
Quant Time: Sep 27 16:32 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14591.D 8021S.M Fri Sep 27 16:32:39 2002

Acq On : 27 Sep 2002 4:03 pm
Sample : WG126147-02 8021 STD 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E
Quant Time: Sep 27 16:32 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | | | 9.64 | 1766601 | 36.6439 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 122.15%# |
| 9) S BFB | | | 21.78 | 4438096 | 33.9260 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 113.09% |
| 13) S BCB | | | 25.75 | 4254451 | 34.6808 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 115.60% |
| Target Compounds | | | | | |
| 1) TM MTBE | | | 3.57 | 1540101 | 22.3886 UG/KG |
| 2) TM Benzene | | | 7.31 | 3348655 | 22.3000 UG/KG |
| 4) TM Toluene | | | 13.70 | 2938217 | 20.6249 UG/KG |
| 5) TM Chlorobenzene | | | 18.56 | 2747922 | 19.1569 UG/KG |
| 6) TM Ethylbenzene | | | 18.85 | 2625248 | 20.1439 UG/KG |
| 7) TM m-,p-Xylene | | | 19.09 | 6778333 | 42.2408 UG/KG |
| 8) TM o-Xylene | | | 20.27 | 2853708 | 20.6097 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.05 | 2517052 | 19.5093 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.23 | 2659153 | 20.0355 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.77 | 2454585 | 20.7277 UG/KG |

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

Data File : C:\HPCHEM\2\DATA\093002\5G14926.D
Acq On : 30 Sep 2002 8:57
Sample : WG126237-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 17.238 | 13.8 | 83 | 0.00 |
| 2 | TM | Benzene | 20.000 | 18.616 | 6.9 | 94 | 0.01 |
| 3 | S | TFT | 30.000 | 26.367 | 12.1 | 87 | 0.02 |
| 4 | TM | Toluene | 20.000 | 18.753 | 6.2 | 95 | 0.00 |
| 5 | TM | Chlorobenzene | 20.000 | 19.093 | 4.5 | 95 | -0.01 |
| 6 | TM | Ethylbenzene | 20.000 | 19.753 | 1.2 | 99 | -0.02 |
| 7 | TM | m-,p-Xylene | 40.000 | 38.718 | 3.2 | 97 | -0.03 |
| 8 | TM | o-Xylene | 20.000 | 18.834 | 5.8 | 95 | -0.03 |
| 9 | S | BFB | 30.000 | 29.918 | 0.3 | 99 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.164 | 4.2 | 96 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 18.438 | 7.8 | 90 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.666 | 1.7 | 92 | 0.00 |
| 13 | S | BCB | 30.000 | 29.898 | 0.3 | 98 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14926.D 8021W.M Mon Sep 30 11:39:06 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14926.D
Acq On : 30 Sep 2002 8:57
Sample : WG126237-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 9.742 | 8.396 E3 | 13.8 | 83 | 0.00 |
| 2 | TM | Benzene | 58.428 | 54.385 E3 | 6.9 | 94 | 0.01 |
| 3 | S | TFT | 17.670 | 15.530 E3 | 12.1 | 87 | 0.02 |
| 4 | TM | Toluene | 53.676 | 50.328 E3 | 6.2 | 95 | 0.00 |
| 5 | TM | Chlorobenzene | 55.444 | 52.930 E3 | 4.5 | 95 | -0.01 |
| 6 | TM | Ethylbenzene | 45.245 | 44.686 E3 | 1.2 | 99 | -0.02 |
| 7 | TM | m-,p-Xylene | 54.303 | 52.562 E3 | 3.2 | 97 | -0.03 |
| 8 | TM | o-Xylene | 47.375 | 44.614 E3 | 5.8 | 95 | -0.03 |
| 9 | S | BFB | 46.400 | 46.273 E3 | 0.3 | 99 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 44.624 | 42.759 E3 | 4.2 | 96 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 49.200 | 44.536 E3 | 9.5 | 90 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 38.612 | 35.829 E3 | 7.2 | 92 | 0.00 |
| 13 | S | BCB | 41.339 | 41.198 E3 | 0.3 | 98 | 0.00 |

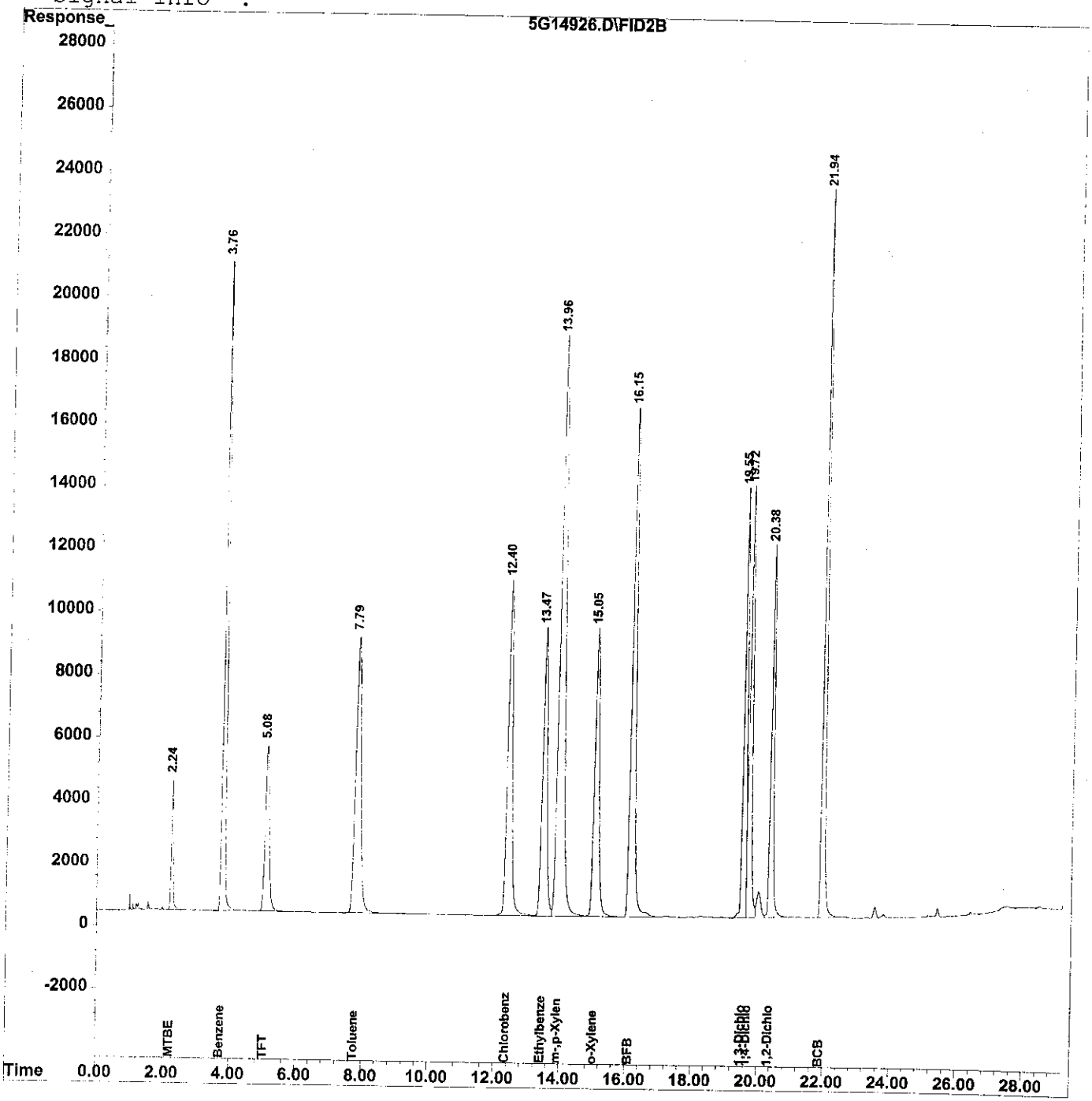
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14926.D 8021W.M Mon Sep 30 11:39:11 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14926.D
Acq On : 30 Sep 2002 8:57
Sample : WG126237-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 9:26 2002 Quant Results File: 8021W.RES

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\093002\5G14926.D
Acq On : 30 Sep 2002 8:57
Sample : WG126237-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 9:26 2002 Quant Results File: 8021W.RES

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.08 | 465902 | 26.3666 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 87.89% |
| 9) S BFB | 16.15 | 1388196 | 29.9180 ug/L |
| Spiked Amount 30.000 | | Recovery = | 99.73% |
| 13) S BCB | 21.94 | 1235946 | 29.8981 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 99.66% |
| Target Compounds | | | |
| 1) TM MTBE | 2.24 | 167921 | 17.2376 ug/L |
| 2) TM Benzene | 3.76 | 1087703 | 18.6160 ug/L |
| 4) TM Toluene | 7.80 | 1006554 | 18.7525 ug/L |
| 5) TM Chlorobenzene | 12.40 | 1058599 | 19.0932 ug/L |
| 6) TM Ethylbenzene | 13.47 | 893714 | 19.7527 ug/L |
| 7) TM m-,p-Xylene | 13.96 | 2102496 | 38.7179 ug/L |
| 8) TM o-Xylene | 15.05 | 892286 | 18.8344 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.56 | 855186 | 19.1643 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.72 | 890729 | 18.4384 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.38 | 716586 | 19.6655 ug/L |

(f)=RT Delta > 1/2 Window

Data File : C:\HPCHEM\2\DATA\093002\5G14937.D
Acq On : 30 Sep 2002 17:31
Sample : WG126237-02 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 20.198 | -1.0 | 97 | 0.00 |
| 2 | TM | Benzene | 20.000 | 19.536 | 2.3 | 99 | 0.00 |
| 3 | S | TFT | 30.000 | 28.458 | 5.1 | 94 | 0.02 |
| 4 | TM | Toluene | 20.000 | 19.674 | 1.6 | 100 | 0.02 |
| 5 | TM | Chlorobenzene | 20.000 | 19.868 | 0.7 | 99 | 0.00 |
| 6 | TM | Ethylbenzene | 20.000 | 20.475 | -2.4 | 102 | 0.00 |
| 7 | TM | m-,p-Xylene | 40.000 | 40.417 | -1.0 | 101 | -0.02 |
| 8 | TM | o-Xylene | 20.000 | 19.774 | 1.1 | 99 | -0.01 |
| 9 | S | BFB | 30.000 | 31.089 | -3.6 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 20.585 | -2.9 | 103 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.173 | -0.9 | 98 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 22.151 | -10.8 | 104 | 0.00 |
| 13 | S | BCB | 30.000 | 34.048 | -13.5 | 112 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14937.D 8021W.M Mon Sep 30 18:05:56 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14937.D
Acq On : 30 Sep 2002 17:31
Sample : WG126237-02 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 9.742 | 9.838 E3 | -1.0 | 97 | 0.00 |
| 2 | TM | Benzene | 58.428 | 57.073 E3 | 2.3 | 99 | 0.00 |
| 3 | S | TFT | 17.670 | 16.762 E3 | 5.1 | 94 | 0.02 |
| 4 | TM | Toluene | 53.676 | 52.800 E3 | 1.6 | 100 | 0.02 |
| 5 | TM | Chlorobenzene | 55.444 | 55.078 E3 | 0.7 | 99 | 0.00 |
| 6 | TM | Ethylbenzene | 45.245 | 46.319 E3 | -2.4 | 102 | 0.00 |
| 7 | TM | m-,p-Xylene | 54.303 | 54.869 E3 | -1.0 | 101 | -0.02 |
| 8 | TM | o-Xylene | 47.375 | 46.840 E3 | 1.1 | 99 | -0.01 |
| 9 | S | BFB | 46.400 | 48.085 E3 | -3.6 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 44.624 | 45.930 E3 | -2.9 | 103 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 49.200 | 48.422 E3 | 1.6 | 98 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 38.612 | 40.286 E3 | -4.3 | 104 | 0.00 |
| 13 | S | BCB | 41.339 | 46.916 E3 | -13.5 | 112 | 0.00 |

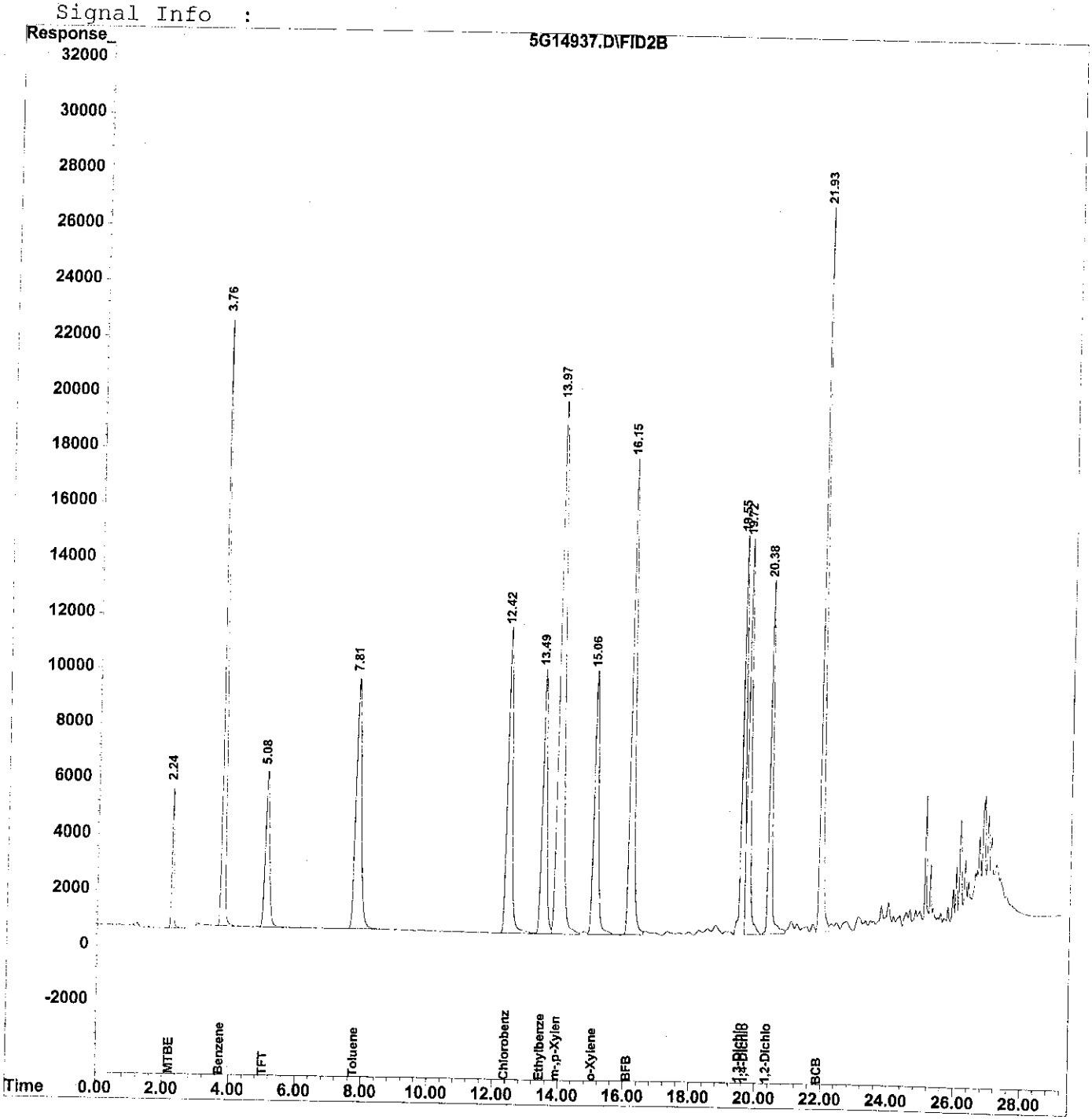
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14937.D 8021W.M Mon Sep 30 18:05:52 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14937.D
Acq On : 30 Sep 2002 17:31
Sample : WG126237-02 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 18:00 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14937.D 8021W.M Mon Sep 30 18:00:56 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14937.D
Acq On : 30 Sep 2002 17:31
Sample : WG126237-02 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 18:00 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.08 | 502863 | 28.4583 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 94.86% |
| 9) S BFB | 16.16 | 1442535 | 31.0891 ug/L |
| Spiked Amount 30.000 | | Recovery = | 103.63% |
| 13) S BCB | 21.94 | 1407481 | 34.0476 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 113.49% |
| **Target Compounds** | | | |
| 1) TM MTBE | 2.24 | 196758 | 20.1978 ug/L |
| 2) TM Benzene | 3.76 | 1141454 | 19.5359 ug/L |
| 4) TM Toluene | 7.81 | 1055993 | 19.6736 ug/L |
| 5) TM Chlorobenzene | 12.42 | 1101564 | 19.8681 ug/L |
| 6) TM Ethylbenzene | 13.49 | 926371 | 20.4745 ug/L |
| 7) TM m-,p-Xylene | 13.97 | 2194744 | 40.4166 ug/L |
| 8) TM o-Xylene | 15.06 | 936809 | 19.7742 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.55 | 918597 | 20.5853 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.72 | 968434 | 20.1730 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.38 | 805711 | 22.1514 ug/L |

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

Data File : C:\HPCHEM\2\DATA\093002\5G14939.D
Acq On : 30 Sep 2002 18:54
Sample : WG126237-03 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 9.742 | 9.711 E3 | 0.3 | 96 | 0.00 |
| 2 | TM | Benzene | 58.428 | 56.800 E3 | 2.8 | 98 | -0.01 |
| 3 | S | TFT | 17.670 | 16.734 E3 | 5.3 | 94 | 0.00 |
| 4 | TM | Toluene | 53.676 | 51.855 E3 | 3.4 | 98 | -0.02 |
| 5 | TM | Chlorobenzene | 55.444 | 53.622 E3 | 3.3 | 97 | -0.03 |
| 6 | TM | Ethylbenzene | 45.245 | 45.352 E3 | -0.2 | 100 | -0.04 |
| 7 | TM | m-,p-Xylene | 54.303 | 53.706 E3 | 1.1 | 99 | -0.07 |
| 8 | TM | o-Xylene | 47.375 | 46.046 E3 | 2.8 | 98 | -0.06 |
| 9 | S | BFB | 46.400 | 48.590 E3 | -4.7 | 104 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 44.624 | 44.788 E3 | -0.4 | 100 | -0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 49.200 | 47.653 E3 | 3.1 | 97 | -0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 38.612 | 38.821 E3 | -0.5 | 100 | -0.02 |
| 13 | S | BCB | 41.339 | 46.261 E3 | -11.9 | 110 | -0.01 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14939.D 8021W.M Tue Oct 01 09:46:10 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14939.D
Acq On : 30 Sep 2002 18:54
Sample : WG126237-03 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 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 | 19.937 | 0.3 | 96 | 0.00 |
| 2 | TM | Benzene | 20.000 | 19.443 | 2.8 | 98 | -0.01 |
| 3 | S | TFT | 30.000 | 28.411 | 5.3 | 94 | 0.00 |
| 4 | TM | Toluene | 20.000 | 19.321 | 3.4 | 98 | -0.02 |
| 5 | TM | Chlorobenzene | 20.000 | 19.343 | 3.3 | 97 | -0.03 |
| 6 | TM | Ethylbenzene | 20.000 | 20.047 | -0.2 | 100 | -0.04 |
| 7 | TM | m-,p-Xylene | 40.000 | 39.561 | 1.1 | 99 | -0.07 |
| 8 | TM | o-Xylene | 20.000 | 19.439 | 2.8 | 98 | -0.06 |
| 9 | S | BFB | 30.000 | 31.416 | -4.7 | 104 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 20.073 | -0.4 | 100 | -0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.830 | 0.9 | 97 | -0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 21.334 | -6.7 | 100 | -0.02 |
| 13 | S | BCB | 30.000 | 33.572 | -11.9 | 110 | -0.01 |

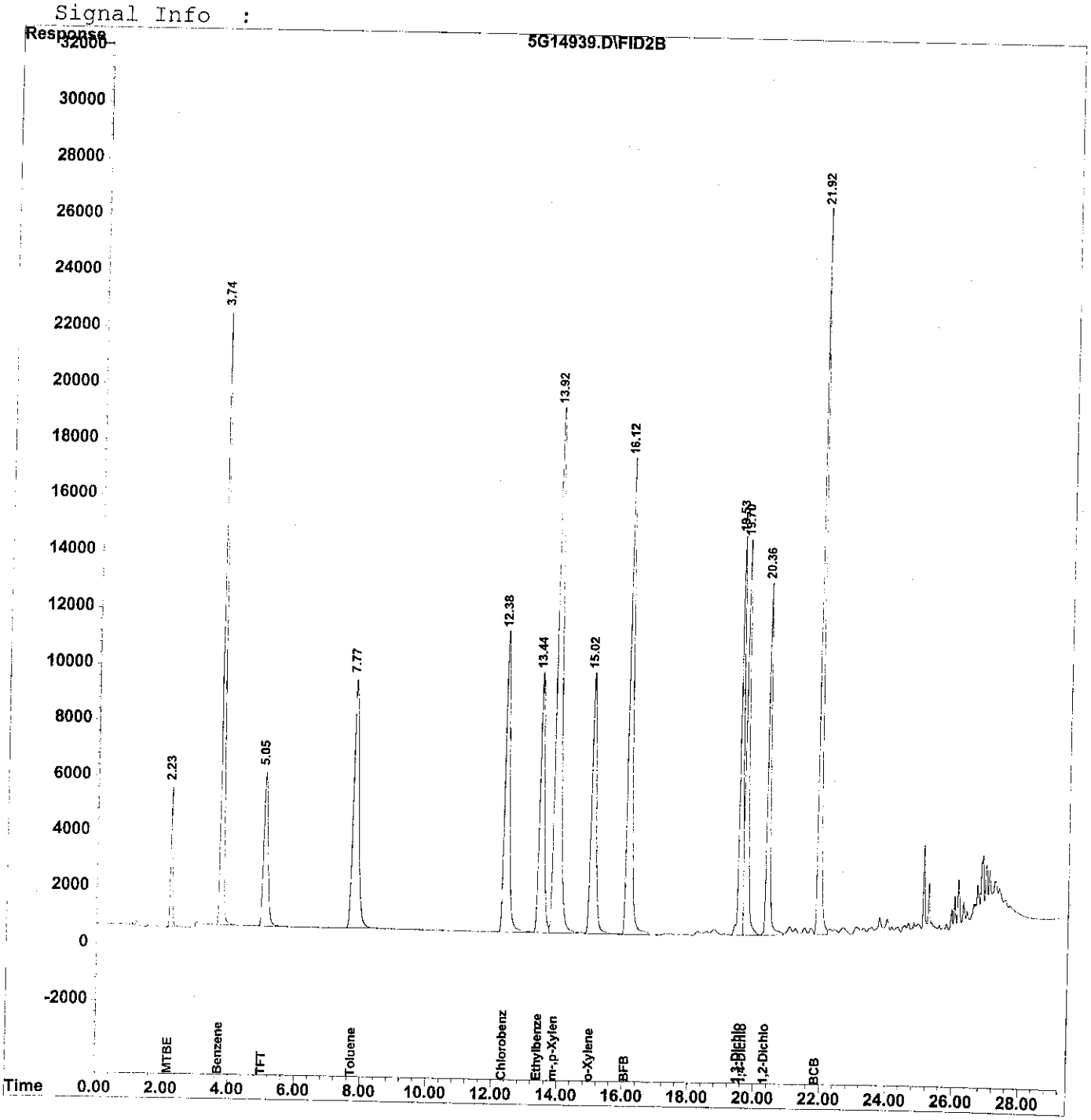
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14939.D 8021W.M Tue Oct 01 09:46:16 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14939.D
Acq On : 30 Sep 2002 18:54
Sample : WG126237-03 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 19:24 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14939.D 8021W.M Mon Sep 30 19:24:18 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14939.D
Acq On : 30 Sep 2002 18:54
Sample : WG126237-03 8021 STD 20PPB 5ML
Misc : 7,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 19:24 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 502024 | 28.4108 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 94.70% |
| 9) S BFB | 16.12 | 1457715 | 31.4162 ug/L |
| Spiked Amount 30.000 | | Recovery = | 104.72% |
| 13) S BCB | 21.92 | 1387830 | 33.5722 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 111.91% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 194217 | 19.9369 ug/L |
| 2) TM Benzene | 3.74 | 1135999 | 19.4426 ug/L |
| 4) TM Toluene | 7.77 | 1037093 | 19.3215 ug/L |
| 5) TM Chlorobenzene | 12.38 | 1072449 | 19.3430 ug/L |
| 6) TM Ethylbenzene | 13.44 | 907047 | 20.0474 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2148257 | 39.5606 ug/L |
| 8) TM o-Xylene | 15.02 | 920926 | 19.4389 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 895756 | 20.0735 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 953054 | 19.8296 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 776421 | 21.3344 ug/L |

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

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

**Date of Analysis:** 27-Sep-02
**Filename:** 5G14906
**Sub Directory:** 092702
**Instrument:** HP5
**Matrix:** WATER

| Analyte Name | STD RT | From RT | To RT |
|---|---|---|---|
| methyl-tert-butyl-ether | 2.218 | **2.195** | **2.241** |
| benzene | 3.721 | **3.691** | **3.751** |
| 1,1,1-trifluorotoluene (SS) | 5.027 | **4.983** | **5.071** |
| toluene | 7.736 | **7.668** | **7.804** |
| chlorobenzene | 12.350 | **12.273** | **12.427** |
| ethylbenzene | 13.419 | **13.333** | **13.505** |
| m+p-xylene | 13.903 | **13.800** | **14.006** |
| o-xylene | 14.998 | **14.895** | **15.101** |
| bromofluorobenzene (SS) | 16.096 | **16.010** | **16.182** |
| 1,3-dichlorobenzene | 19.510 | **19.445** | **19.575** |
| 1,4-dichlorobenzene | 19.678 | **19.614** | **19.742** |
| 1,2-dichlorobenzene | 20.342 | **20.285** | **20.399** |
| bromochlorobenzene (SS) | 21.904 | **21.851** | **21.957** |

**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** |

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

**Date of Analysis:** 26-Sep-02
**Filename:** 11G14584
**Sub Directory:** 092702
**Instrument:** HP11
**Matrix:** SOIL

| Analyte Name | STD RT | From RT | To RT |
|---|---|---|---|
| methyl-tert-butyl-ether | 3.562 | 3.541 | 3.583 |
| benzene | 7.302 | 7.257 | 7.347 |
| 1,1,1-trifluorotoluene (SS) | 9.633 | 9.568 | 9.698 |
| toluene | 13.691 | 13.635 | 13.747 |
| chlorobenzene | 18.562 | 18.512 | 18.612 |
| ethylbenzene | 18.845 | 18.797 | 18.893 |
| m+p-xylene | 19.092 | 19.045 | 19.139 |
| o-xylene | 20.267 | 20.225 | 20.309 |
| bromofluorobenzene (SS) | 21.782 | 21.744 | 21.820 |
| 1,3-dichlorobenzene | 24.050 | 24.027 | 24.073 |
| 1,4-dichlorobenzene | 24.234 | 24.226 | 24.257 |
| 1,2-dichlorobenzene | 24.772 | 24.749 | 24.795 |

**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:** 30-Sep-02
**Filename:** 5G14926
**Sub Directory:** 093002
**Instrument:** HP5
**Matrix:** WATER

| Analyte Name | STD RT | From RT | To RT |
|---|---|---|---|
| methyl-tert-butyl-ether | 2.243 | **2.220** | **2.266** |
| benzene | 3.762 | **3.732** | **3.792** |
| 1,1,1-trifluorotoluene (SS) | 5.078 | **5.034** | **5.122** |
| toluene | 7.799 | **7.731** | **7.867** |
| chlorobenzene | 12.402 | **12.325** | **12.479** |
| ethylbenzene | 13.471 | **13.385** | **13.557** |
| m+p-xylene | 13.957 | **13.854** | **14.060** |
| o-xylene | 15.052 | **14.949** | **15.155** |
| bromofluorobenzene (SS) | 16.149 | **16.063** | **16.235** |
| 1,3-dichlorobenzene | 19.556 | **19.491** | **19.621** |
| 1,4-dichlorobenzene | 19.723 | **19.659** | **19.787** |
| 1,2-dichlorobenzene | 20.384 | **20.327** | **20.441** |
| bromochlorobenzene (SS) | 21.938 | **21.885** | **21.991** |

| | | | |
|---|---|---|---|
| **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** |

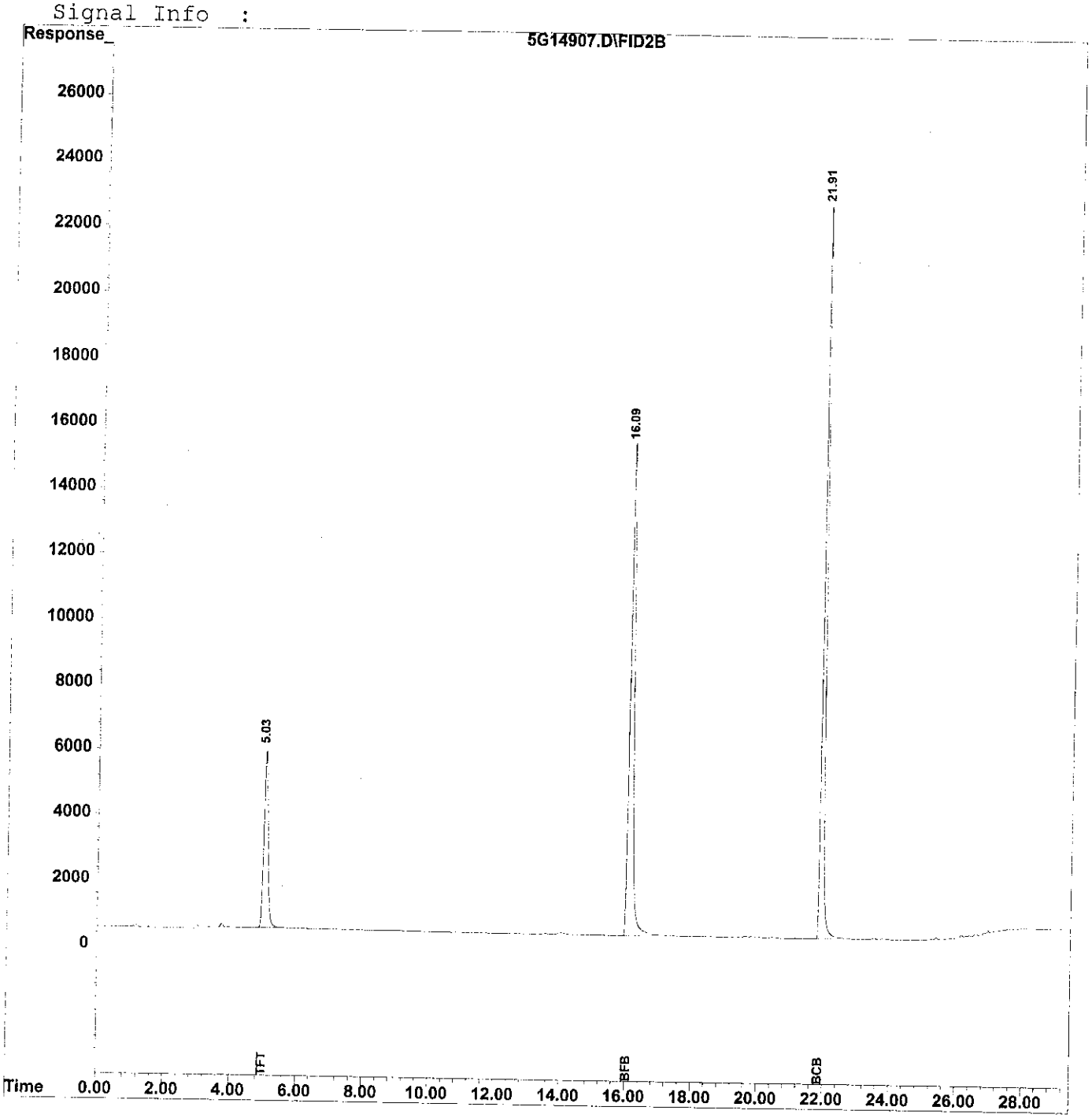
# 2.1.3.4 Raw Data

Data File : C:\HPCHEM\2\DATA\092702\5G14907.D
Acq On : 27 Sep 2002 9:18
Sample : WG126114-01 WATER BLANK 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 27 9:47 2002 Quant Results File: 8021W.RES

Vial: 2
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\092702\5G14907.D
Acq On : 27 Sep 2002 9:18
Sample : WG126114-01 WATER BLANK 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 27 9:47 2002 Quant Results File: 8021W.RES

Vial: 2
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.03 | 473118 | 26.7749 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 89.25% |
| 9) S BFB | 16.09 | 1296259 | 27.9366 ug/L |
| Spiked Amount 30.000 | | Recovery = | 93.12% |
| 13) S BCB | 21.91 | 1222707 | 29.5778 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 98.59% |
| **Target Compounds** | | | |
| 1) TM MTBE | 0.00 | 0 | N.D. ug/L |
| 2) TM Benzene | 3.74 | 5597 | <MDL 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 | 14.00 | 7933 | <MDL ug/L |
| 8) TM o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 1604 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.65 | 1604 | N.D. ug/L |
| 12) TM 1,2-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |

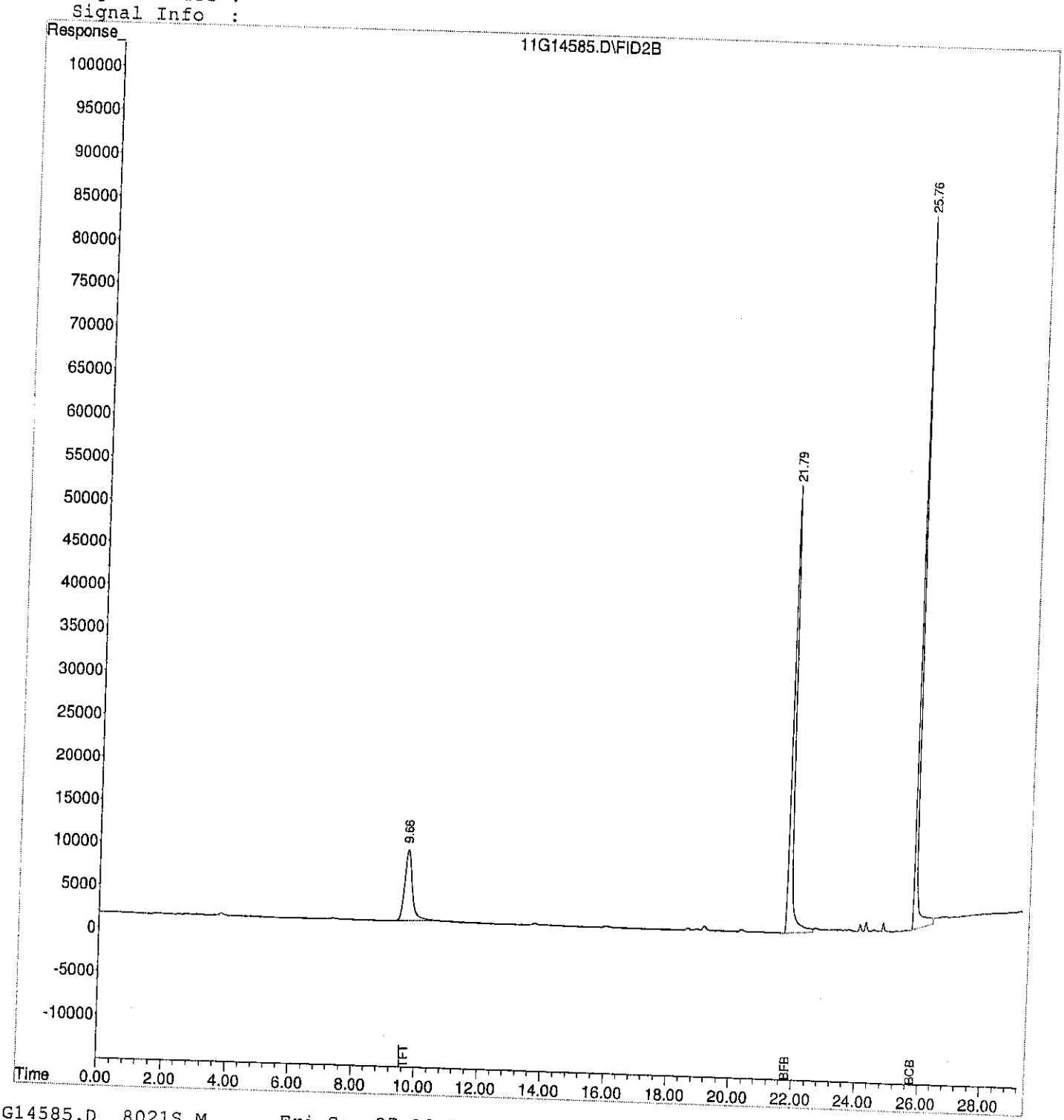
(f)=RT Delta > 1/2 Window (m)=manual int

Acq On : 27 Sep 2002 12:22 pm
Sample : WG126148-01 SOIL BLANK 5G
Misc : 7,1 S-99-50
IntFile : AUTOINT1.E
Quant Time: Sep 27 12:52 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14585.D 8021S.M Fri Sep 27 12:52:03 2002

C:\HPCHEM\1\DATA\092702\11G14585.D

| | | | |
|---|---|---|---|
| Acq On | : 27 Sep 2002 12:22 pm | Vial: | 2 |
| Sample | : WG126148-01 SOIL BLANK 5G | Operator: | CSH |
| Misc | : 7,1 S-99-50 | Inst | : HP11 |
| IntFile | : AUTOINT1.E | Multiplr: | 1.00 |

Quant Time: Sep 27 12:52 2002 Quant Results File: 8021S.RES

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | | | 9.67 | 1370978 | 28.4377 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 94.79% |
| 9) S BFB | | | 21.79 | 3251527 | 24.8556 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 82.85% |
| 13) S BCB | | | 25.76 | 3051092 | 24.8714 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 82.90% |
| **Target Compounds** | | | | | |
| 1) TM MTBE | | | 3.77 | 18788 | <MDL 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 | 16277 | <MDL UG/KG |
| 6) TM Ethylbenzene | | | 18.58f | 16277 | <MDL UG/KG |
| 7) TM m-,p-Xylene | | | 19.12 | 39616 | <MDL UG/KG |
| 8) TM o-Xylene | | | 20.29 | 18508 | <MDL UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.06 | 34433 | <MDL UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.24 | 46078 | <MDL UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.78 | 46537 | <MDL UG/KG |

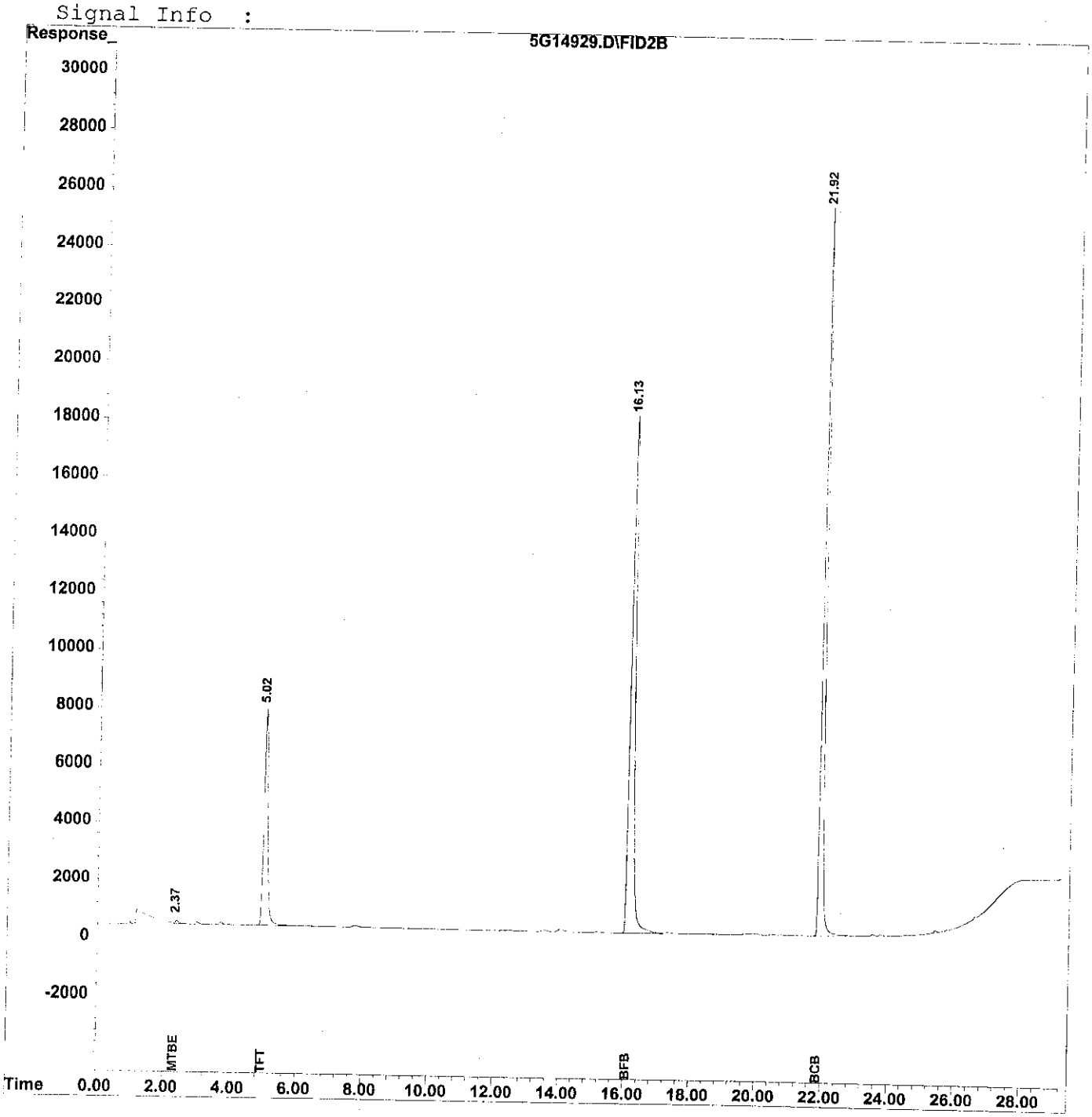
(f)=RT Delta > 1/2 Window
11G14585.D 8021S.M Fri Sep 27 12:52:03 2002 (m)=manual int.

Data File : C:\HPCHEM\2\DATA\093002\5G14929.D
Acq On : 30 Sep 2002 11:55
Sample : WG126238-01 EXT BLANK 5G/10ML 100X
Misc : 7,100 S-99-16
IntFile : autoint1.e
Quant Time: Sep 30 12:24 2002 Quant Results File: 8021W.RES

Vial: 4
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14929.D 8021W.M Mon Sep 30 12:24:55 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14929.D
Acq On : 30 Sep 2002 11:55
Sample : WG126238-01 EXT BLANK 5G/10ML 100X
Misc : 7,100 S-99-16
IntFile : autoint1.e
Quant Time: Sep 30 12:24 2002 Quant Results File: 8021W.RES

Vial: 4
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.02 | 640247 | 36.2332 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 120.78% ✓ |
| 9) S BFB | 16.13 | 1632161 | 35.1759 ug/L |
| Spiked Amount 30.000 | | Recovery = | 117.25% |
| 13) S BCB | 21.93 | 1452833 | 35.1447 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 117.15% |
| **Target Compounds** | | | |
| 1) TM MTBE | 2.37 | 8499 | ~~0.8724 ug/L~~ |
| 2) TM Benzene | 3.71 | 5481 | <MDL ug/L |
| 4) TM Toluene | 7.78 | 7074 | <MDL ug/L |
| 5) TM Chlorobenzene | 0.00 | 0 | N.D. ug/L |
| 6) TM Ethylbenzene | 13.52 | 6269 | <MDL ug/L |
| 7) TM m-,p-Xylene | 14.05 | 11019 | <MDL ug/L |
| 8) TM o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.64 | 1710 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.64 | 1710 | N.D. ug/L |
| 12) TM 1,2-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |

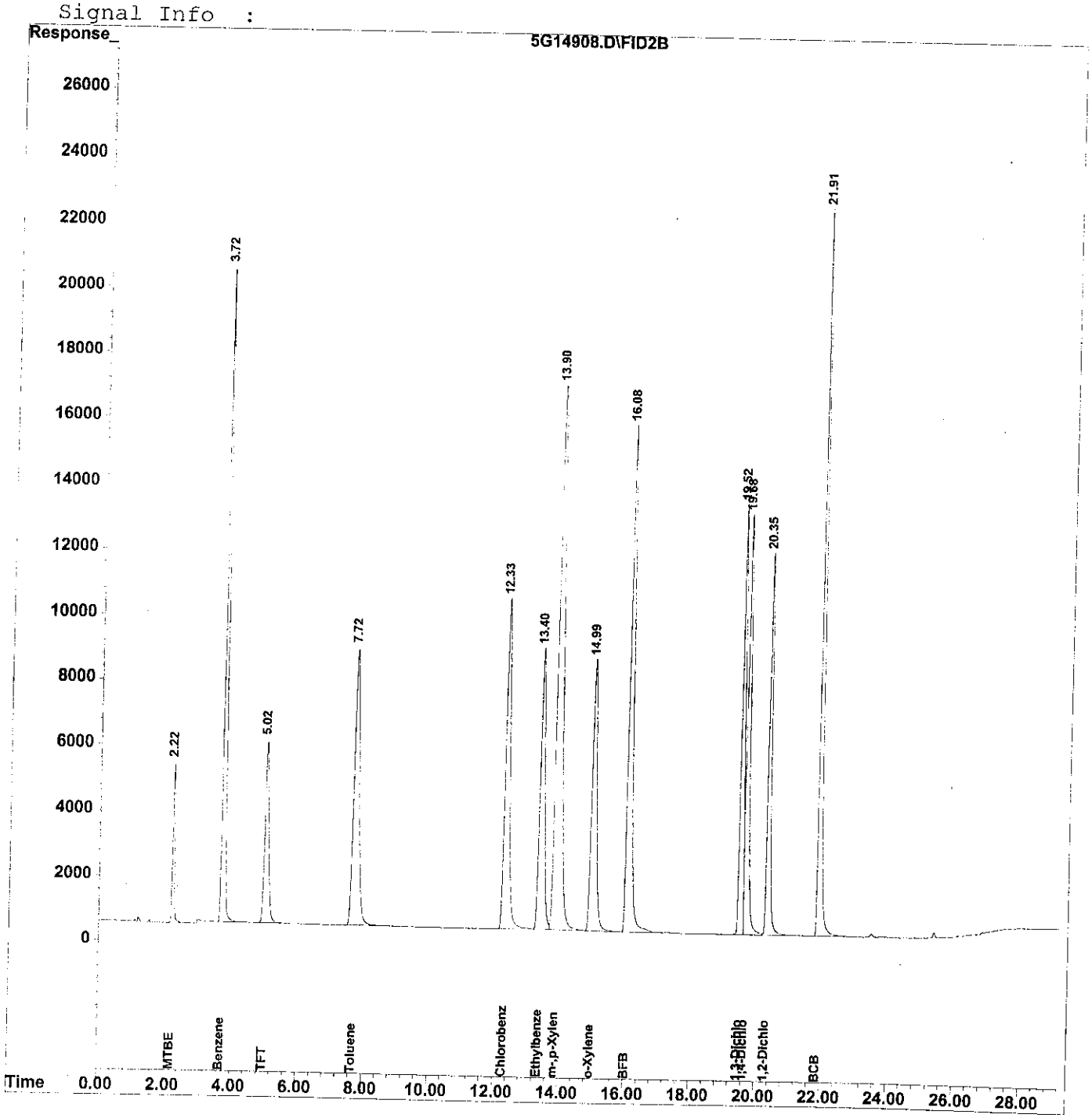
(f)=RT Delta > 1/2 Window (m)=manual int

Data File : C:\HPCHEM\2\DATA\092702\5G14908.D
Acq On : 27 Sep 2002 9:52
Sample : WG126114-02 WATER LCS 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 27 10:22 2002 Quant Results File: 8021W.RES

Vial: 3
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14908.D 8021W.M Fri Sep 27 10:22:17 2002

Data File : C:\HPCHEM\2\DATA\092702\5G14908.D
Acq On : 27 Sep 2002 9:52
Sample : WG126114-02 WATER LCS 20PPB 5ML
Misc : 1,1 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 27 10:22 2002 Quant Results File: 8021W.RES

Vial: 3
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.02 | 481955 | 27.2750 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 90.92% |
| 9) S BFB | 16.08 | 1344116 | 28.9680 ug/L |
| Spiked Amount 30.000 | | Recovery = | 96.56% |
| 13) S BCB | 21.91 | 1249755 | 30.2321 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 100.77% |
| Target Compounds | | | |
| 1) TM MTBE | 2.22 | 189118 | 19.4135 ug/L |
| 2) TM Benzene | 3.72 | 1052009 | 18.0051 ug/L |
| 4) TM Toluene | 7.72 | 957706 | 17.8425 ug/L |
| 5) TM Chlorobenzene | 12.33 | 990612 | 17.8669 ug/L |
| 6) TM Ethylbenzene | 13.40 | 836940 | 18.4979 ug/L |
| 7) TM m-,p-Xylene | 13.90 | 1988037 | 36.6101 ug/L |
| 8) TM o-Xylene | 14.99 | 851794 | 17.9797 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 827152 | 18.5361 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 914732 | 18.9742 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 739168 | 20.2954 ug/L |

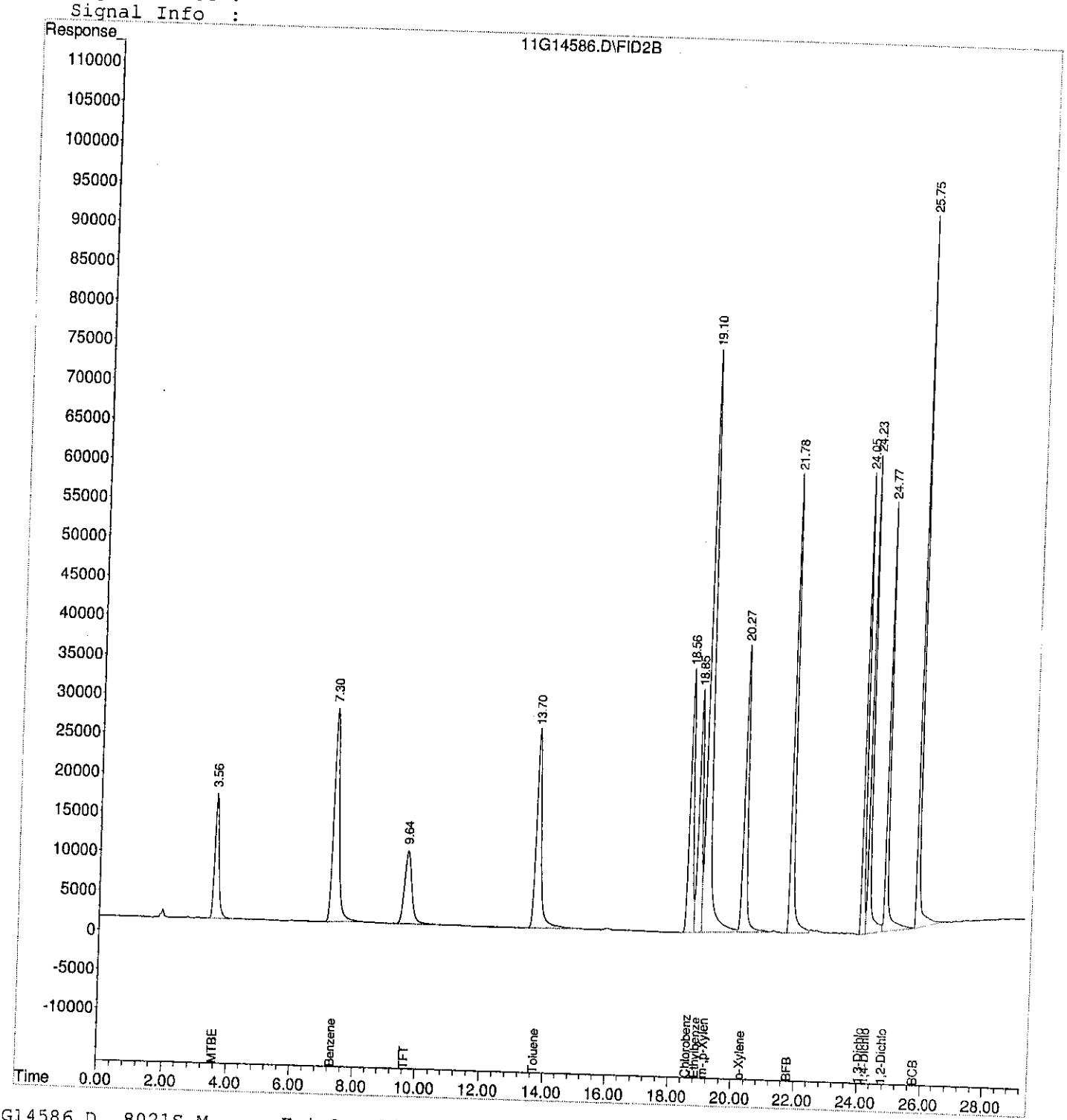
(f)=RT Delta > 1/2 Window (m)=manual int

Acq On : 27 Sep 2002 12:57 pm
Sample : WG126148-02 SOIL LCS 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E
Quant Time: Sep 27 13:26 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021S.M

Volume Inj. :
Signal Phase :
Signal Info :




11G14586.D 8021S.M Fri Sep 27 13:26:52 2002

C:\HPCHEM\1\DATA\092702\11G14586.D

Acq On : 27 Sep 2002 12:57 pm
Sample : WG126148-02 SOIL LCS 20PPB 5G
Misc : 7,1 S-99-(49,50)
IntFile : AUTOINT1.E
Quant Time: Sep 27 13:26 2002 Quant Results File: 8021S.RES

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

Quant Method : C:\HPCHEM\1\METHODS\8021S.M (Chemstation Integrator)
Title : Method 8021B- Soil 8/16/02
Last Update : Fri Aug 16 13:38:51 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 | | | 9.64 | 1513326 | 31.3903 UG/KG |
| Spiked Amount | 30.0000 | Range | 47 - 121 | Recovery | = 104.63% |
| 9) S BFB | | | 21.78 | 3549506 | 27.1334 UG/KG |
| Spiked Amount | 30.0000 | Range | 70 - 130 | Recovery | = 90.44% |
| 13) S BCB | | | 25.75 | 3327032 | 27.1208 UG/KG |
| Spiked Amount | 30.0000 | Range | 37 - 137 | Recovery | = 90.40% |
| **Target Compounds** | | | | | |
| 1) TM MTBE | | | 3.56 | 1479916 | 21.5137 UG/KG |
| 2) TM Benzene | | | 7.31 | 3381438 | 22.5183 UG/KG |
| 4) TM Toluene | | | 13.70 | 3008249 | 21.1165 UG/KG |
| 5) TM Chlorobenzene | | | 18.57 | 2700766 | 18.8282 UG/KG |
| 6) TM Ethylbenzene | | | 18.85 | 2570071 | 19.7206 UG/KG |
| 7) TM m-,p-Xylene | | | 19.10 | 6666779 | 41.5457 UG/KG |
| 8) TM o-Xylene | | | 20.27 | 2792982 | 20.1712 UG/KG |
| 10) TM 1,3-Dichlorobenzene | | | 24.05 | 2394759 | 18.5614 UG/KG |
| 11) TM 1,4-Dichlorobenzene | | | 24.23 | 2660704 | 20.0472 UG/KG |
| 12) TM 1,2-Dichlorobenzene | | | 24.77 | 2441191 | 20.6146 UG/KG |

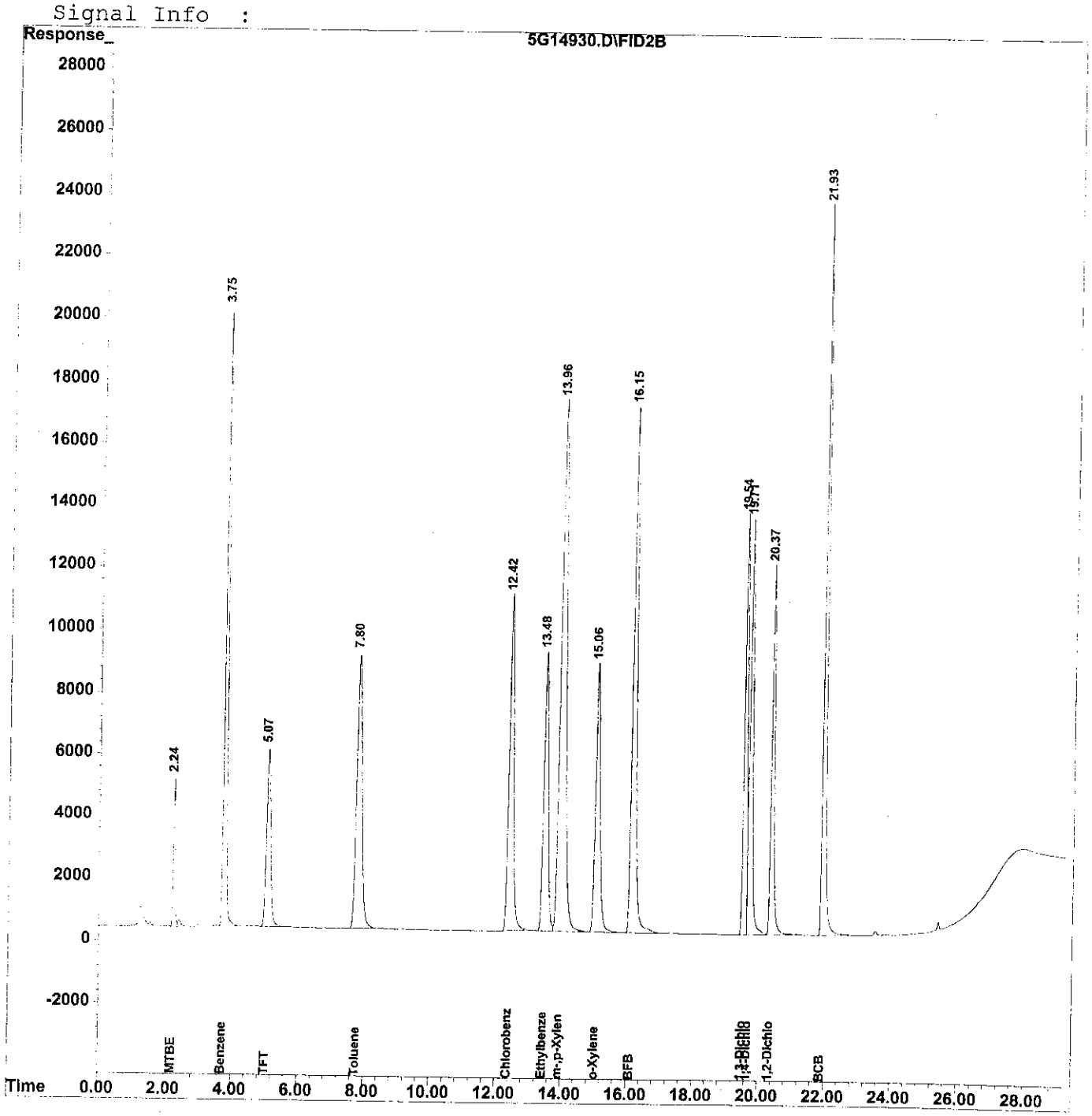
(f)=RT Delta > 1/2 Window
11G14586.D 8021S.M Fri Sep 27 13:26:51 2002 (m)=manual int.

Data File : C:\HPCHEM\2\DATA\093002\5G14930.D
Acq On : 30 Sep 2002 13:01
Sample : WG126238-02 EXT LCS 5G/10ML 100X
Misc : 7,100 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 13:31 2002 Quant Results File: 8021W.RES

Vial: 5
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14930.D 8021W.M Mon Sep 30 13:31:05 2002

Data File : C:\HPCHEM\2\DATA\093002\5G14930.D
Acq On : 30 Sep 2002 13:01
Sample : WG126238-02 EXT LCS 5G/10ML 100X
Misc : 7,100 S-(99-49,99-16)
IntFile : autoint1.e
Quant Time: Sep 30 13:31 2002 Quant Results File: 8021W.RES

Vial: 5
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 09/25/02
Last Update : Wed Sep 25 16:41:15 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.07 | 496157 | 28.0787 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 93.60% |
| 9) S BFB | 16.15 | 1440166 | 31.0380 ug/L |
| Spiked Amount 30.000 | | Recovery = | 103.46% |
| 13) S BCB | 21.94 | 1316999 | 31.8588 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 106.20% |
| Target Compounds | | | |
| 1) TM MTBE | 2.25 | 195880 | 20.1076 ug/L |
| 2) TM Benzene | 3.75 | 1063501 | 18.2018 ug/L |
| 4) TM Toluene | 7.80 | 991302 | 18.4684 ug/L |
| 5) TM Chlorobenzene | 12.42 | 1035363 | 18.6741 ug/L |
| 6) TM Ethylbenzene | 13.48 | 859966 | 19.0068 ug/L |
| 7) TM m-,p-Xylene | 13.97 | 2019940 | 37.1976 ug/L |
| 8) TM o-Xylene | 15.06 | 876425 | 18.4996 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.55 | 844151 | 18.9170 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.71 | 932599 | 19.3730 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.37 | 740296 | 20.3268 ug/L |

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

| | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 11g14242.d | 1. | WG123501-01 8021 STD 20PPB 5G HIGH | 7,1 S-97-(10,12) | 16 Aug 2002 08:02 |
| 2 | 1 | 11g14243.d | 1. | WG123501-01 8021 STD 20PPB 5G | 7,1 S-97-(10,12) | 16 Aug 2002 08:47 |
| 3 | 2 | 11g14244.d | 1. | WG123524-01 STD 1 1PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 09:41 |
| 4 | 3 | 11g14245.d | 1. | WG123524-02 STD 2 10PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 10:16 |
| 5 | 4 | 11g14246.d | 1. | WG123524-03 STD 3 20PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 10:50 |
| 6 | 5 | 11g14247.d | 1. | WG123524-04 STD 4 50PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 11:25 |
| 7 | 6 | 11g14248.d | 1. | WG123524-05 STD 5 100PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 11:59 |
| 8 | 7 | 11g14249.d | 1. | WG123524-06 STD 6 200PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 12:34 |
| 9 | 8 | 11g14250.d | 1. | WG123524-07 STD 3 300PPB 5G ✓ | 7,1 S-(98-13,97-30) | 16 Aug 2002 13:08 |
| 10 | 9 | 11g14251.d | 1. | RINSE c/o | 7,1 S-97-12 | 16 Aug 2002 13:43 |
| 11 | 10 | 11g14252.d | 1. | RINSE ✓ | 7,1 S-97-12 | 16 Aug 2002 14:18 |
| 12 | 1 | 11g14253.d | 1. | WG123524-08 ALT SOURCE 20PP... ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 15:21 |
| 13 | 2 | 11g14254.d | 1. | WG123502-01 SOIL BLANK 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 15:55 |
| 14 | 3 | 11g14255.d | 1. | WG123502-02 SOIL LCS 20PPB 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 16:30 |
| 15 | 4 | 11g14256.d | 1. | WG123502-03 L0208335-02 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 17:05 |
| 16 | 5 | 11g14257.d | 1. | WG123502-04 L0208335-02 MS 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 17:39 |
| 17 | 6 | 11g14258.d | 1. | WG123502-05 L0208335-02 MSD 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 18:14 |
| 18 | 7 | 11g14259.d | 1. | L0208371-06 00 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 18:48 |
| 19 | 8 | 11g14260.d | 1. | L0208331-02 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 19:23 |
| 20 | 9 | 11g14261.d | 1. | L0208331-03 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 19:58 |
| 21 | 10 | 11g14262.d | 1. | L0208331-04 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 20:32 |
| 22 | 11 | 11g14263.d | 1. | L0208331-06 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 21:07 |
| 23 | 12 | 11g14264.d | 1. | WG123501-01 8021 STD 20PPB 5G ✓ | 7,1 S-97-(10,12) | 16 Aug 2002 21:42 |
| 24 | 13 | 11g14265.d | 1. | L0208308-01 5G ✓ | 7,1 S-97-12 | 16 Aug 2002 22:16 |
| 25 | 14 | 11g14266.d | 1. | L0208331-01 1G 5X ✓ | 7,5 S-97-12 | 16 Aug 2002 22:51 |
| 26 | 15 | 11g14267.d | 1. | L0208331-07 1G 5X RR @ 100% | 7,5 S-97-12 | 16 Aug 2002 23:26 |
| 27 | 16 | 11g14268.d | 1. | RINSE 5G c/o | 7,1 S-97-12 | 17 Aug 2002 00:01 |
| 28 | 17 | 11g14269.d | 1. | RINSE 5G ✓ | 7,1 S-97-12 | 17 Aug 2002 00:36 |
| 29 | 18 | 11g14270.d | 1. | WG123501-02 8021 STD 20PPB 5G ✓ | 7,1 S-97-(10,12) | 17 Aug 2002 01:11 |

REANALYSIS FILE #

L0208331-07

Directory: c:\hpchem\2\data\092502

Injection Log

Analyst: QS

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14868.d | 1. | WG125957-01 8021 STD 1 1PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 13::3 |
| 2 | 2 | 5g14869.d | 1. | WG125957-02 8021 STD 2 10PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::0 |
| 3 | 3 | 5g14870.d | 1. | WG125957-03 8021 STD 3 20PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::4 |
| 4 | 4 | 5g14871.d | 1. | WG125957-04 8021 STD 4 50PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::1 |
| 5 | 5 | 5g14872.d | 1. | WG125957-05 8021 STD 5 100PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::5 |
| 6 | 6 | 5g14873.d | 1. | WG125957-06 8021 STD 6 200PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::2 |
| 7 | 7 | 5g14874.d | 1. | WG125957-07 8021 STD 7 300PPB 5ML ✓ | 1,1 S-(99-43,100-01) | 25 Sep 102 12::0 |
| 8 | 8 | 5g14875.d | 1. | RINSE 5ML do | 1,1 S-99-16 | 25 Sep 102 12::3 |
| 9 | 9 | 5g14876.d | 1. | RINSE 5ML ✓ | 1,1 S-99-16 | 25 Sep 102 12::1 |
| 10 | 10 | 5g14877.d | 1. | WG125957-08 8021 STD 20PPB 5ML ✓ | 1,1 S-(99-49,99-16 ALT SOURCE | 25 Sep 102 12::4 |

# Injection Log

Directory: c:\hpchem\2\data\092702

WG126114

ANALYST: CSH

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14906.d | 1. | WG126113-01 8021 STD 20PPB 5ML | 1,1 S-(99-49,99-16) | 27 Sep 102 12::3 |
| 2 | 2 | 5g14907.d | 1. | WG126114-01 WATER BLANK 5ML | 1,1 S-99-16 | 27 Sep 102 12::1 |
| 3 | 3 | 5g14908.d | 1. | WG126114-02 WATER LCS 20PPB 5ML | 1,1 S-(99-49,99-16) | 27 Sep 102 12::5 |
| 4 | 1 | 5g14909.d | 1. | L0209495-02 B 5ML 10X | 1,10 S-99-16 | 27 Sep 102 13::3 |
| 5 | 2 | 5g14910.d | 1. | L0209495-03 B 5ML | 1,1 S-99-16 | 27 Sep 102 13::1 |
| 6 | 3 | 5g14911.d | 1. | WG126114-03 L0209495-15 B 5ML 10X | 1,10 S-99-16 | 27 Sep 102 13::4 |
| 7 | 4 | 5g14912.d | 1. | WG126114-04 L0209495-15 MS B 5ML 10X | 1,10 S-(99-49,99-16) | 27 Sep 102 13::2 |
| 8 | 5 | 5g14913.d | 1. | WG126114-05 L0209495-15 MSD B 5ML 10X | 1,10 S-(99-49,99-16) | 27 Sep 102 13::5 |
| 9 | 6 | 5g14914.d | 1. | L0209495-17 B 5ML 50X | 1,50 S-99-16 | 27 Sep 102 12::3 |
| 10 | 7 | 5g14915.d | 1. | L0209495-18 B 5ML | 1,1 S-99-16 | 27 Sep 102 12::0 |
| 11 | 8 | 5g14916.d | 1. | L0209495-19 B 5ML 10X | 1,10 S-99-16 | 27 Sep 102 12::4 |
| 12 | 9 | 5g14917.d | 1. | WG126113-02 8021 STD 20PPB 5ML | 1,1 S-(99-49,99-16) | 27 Sep 102 12::1 |
| 13 | 10 | 5g14918.d | 1. | L0209495-20 B 5ML | 1,1 S-99-16 | 27 Sep 102 12::0 |
| 14 | 11 | 5g14919.d | 1. | L0209513-11 A 100X 5ML pH=7 RR START | 1,100 S-99-16 | 27 Sep 102 12::3 |
| 15 | 12 | 5g14920.d | 1. | L0209513-13 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::1 |
| 16 | 13 | 5g14921.d | 1. | L0209516-04 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::4 |
| 17 | 14 | 5g14922.d | 1. | L0209516-05 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::2 |
| 18 | 15 | 5g14923.d | 1. | L0209517-02 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::5 |
| 19 | 16 | 5g14924.d | 1. | L0209517-03 A 5ML | 1,1 S-99-16 | 27 Sep 102 12::2 |
| 20 | 17 | 5g14925.d | 1. | WG1260113-03 8021 STD 20PPB 5ML | 1,1 S-99-16 | 27 Sep 102 12::0 |

pH<2

pH<2

Directory: C:\HPCHEM\1\DATA\092702

# Injection Log

ANALYST: CSH

WG126148

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 11g14584.d | 1. | WG126147-01 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 11:27 |
| 2 | 2 | 11g14585.d | 1. | WG126148-01 SOIL BLANK 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 12:22 |
| 3 | 3 | 11g14586.d | 1. | WG126148-02 SOIL LCS 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 12:57 |
| 4 | 4 | 11g14587.d | 1. | L0209516-03 A 5.21G RR HIGH SS | 7,1 S-99-50 | 27 Sep 2002 13:44 |
| 5 | 5 | 11g14588.d | 1. | L0209517-01 A 4.81G ✓ | 7,1 S-99-50 | 27 Sep 2002 14:18 |
| 6 | 6 | 11g14589.d | 1. | L0209516-03 B 5.15G conf SS | 7,1 S-99-50 | 27 Sep 2002 14:53 |
| 7 | 7 | 11g14590.d | 1. | BATCH BLANK 09/27/02 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 15:28 |
| 8 | 5 | 11g14591.d | 1. | WG126147-02 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 16:03 |
| 9 | 6 | 11g14592.d | 1. | L0209513-01 1G 5X RR STRT ~~SS~~ conf. | 7,5 S-99-50 | 27 Sep 2002 16:50 |
| 10 | 7 | 11g14593.d | 1. | L0209513-02 1G 5X RR 100X, SS | 7,5 S-99-50 | 27 Sep 2002 17:25 |
| 11 | 8 | 11g14594.d | 1. | L0209513-03 1G 5X RR 100X, SS | 7,5 S-99-50 | 27 Sep 2002 18:00 |
| 12 | 9 | 11g14595.d | 1. | L0209513-04 1G 5X RR 100X, SS OVR | 7,5 S-99-50 | 27 Sep 2002 18:35 |
| 13 | 10 | 11g14596.d | 1. | L0209513-05 1G 5X RR c/o | 7,5 S-99-50 | 27 Sep 2002 19:10 |
| 14 | 11 | 11g14597.d | 1. | WG126148-03 L0209513-06 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 19:45 |
| 15 | 12 | 11g14598.d | 1. | WG126148-04 L0209513-06 MS 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 20:20 |
| 16 | 13 | 11g14599.d | 1. | WG126148-05 L0209513-06 MSD 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 20:55 |
| 17 | 14 | 11g14600.d | 1. | L0209513-07 5G RR HIGH SS | 7,1 S-99-50 | 27 Sep 2002 21:29 |
| 18 | 15 | 11g14601.d | 1. | L0209513-08 1G 5X RR STRT | 7,5 S-99-50 | 27 Sep 2002 22:04 |
| 19 | 16 | 11g14602.d | 1. | WG126147-03 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 27 Sep 2002 22:39 |
| 20 | 17 | 11g14603.d | 1. | L0209513-09 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 23:15 |
| 21 | 18 | 11g14604.d | 1. | L0209513-10 5G ✓ | 7,1 S-99-50 | 27 Sep 2002 23:50 |
| 22 | 19 | 11g14605.d | 1. | WG126147-04 8021 STD 20PPB 5G ✓ | 7,1 S-99-(49,50) | 28 Sep 2002 00:25 |

Reanalyses

File number

L0209513-02 100X

-03 |

-04 |

-05 5X

-07

-08

Directory: c:\hpchem\2\data\093002

# Injection Log

WG126238

ANALYST: CSH

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14926.d | 1. | WG126237-01 8021 STD 20PPB 5ML | 1,1 S-(99-49,99-16) | 30 Sep 102 12::5 |
| 2 | 2 | 5g14927.d | 1. | WG126238-01 EXT BLANK 5G/10ML 100X DNR | 7,100 S-99-16 | 30 Sep 102 13::0 |
| 3 | 3 | 5g14928.d | 1. | WG126238-02 EXT LCS 5G/10ML 100X | 7,100 S-(99-49,99-16) DNR | 30 Sep 102 13::4 |
| 4 | 4 | 5g14929.d | 1. | WG126238-01 EXT BLANK 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 13::5 |
| 5 | 5 | 5g14930.d | 1. | WG126238-02 EXT LCS 5G/10ML 100X | 7,100 S-(99-49,99-16) | 30 Sep 102 12::0 |
| 6 | 1 | 5g14931.d | 1. | WG126238-03 L0209513-02 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 12::0 |
| 7 | 2 | 5g14932.d | 1. | WG126238-04 L0209513-02 DUP 5G/10ML 100 | 7,100 S-99-16 | 30 Sep 102 12::3 |
| 8 | 3 | 5g14933.d | 1. | L0209513-03 5G/10ML 100X HIGH SS | 7,100 S-99-16 | 30 Sep 102 12::1 |
| 9 | 4 | 5g14934.d | 1. | L0209513-04 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 12::4 |
| 10 | 5 | 5g14935.d | 1. | L0209513-05 5G/10ML 100X | 7,100 S-99-16 | 30 Sep 102 12::2 |
| 11 | 6 | 5g14936.d | 1. | L0209516-01 C 5.14G/10ML 1000X | 7,1000 S-99-16 | 30 Sep 102 12::5 |
| 12 | 7 | 5g14937.d | 1. | WG126237-02 8021 STD 20PPB 5ML | 7,1 S-(99-49,99-16) | 30 Sep 102 12::3 |
| 13 | 8 | 5g14938.d | 1. | L0209516-02 C 4.85G/10ML 1000X | 7,1000 S-99-16 | 30 Sep 102 12::2 |
| 14 | 9 | 5g14939.d | 1. | WG126237-03 8021 STD 20PPB 5ML | 7,1 S-(99-49,99-16) | 30 Sep 102 12::5 |

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CCI-FL-667 | L0209516-01 | A | 9/26/02 | 1335 | 9/27/02 | 1310 | 3.97 | 5mL | NA | CSH | |
| | -01 | B | | | | | 5.16 | | | | |
| | -01 | C | | | | | 5.14 | NA | 10mL | | |
| | -02 | A | | 1355 | | 1312 | 4.80 | 5mL | NA | | |
| | -02 | B | | | | | 5.00 | | | | |
| | -02 | C | | | | | 4.85 | NA | 10mL | | |
| | -03 | A | | 1415 | | 1315 | 5.21 | 5mL | NA | | NO NaHSO4 |
| | -03 | B | | | | 1436 | 5.15 | | | | |
| | -03 | C | | | | 1315 | 5.02 | NA | 10mL | | |
| | L0209517-01 | A | | 1025 | | 1317 | 4.81 | 5mL | NA | | NO NAHSO4 |
| | -01 | B | | | | 1541 | 4.78 | | | | EF |
| | -01 | C | | | | 1317 | 4.75 | NA | | | |
| | BATCH BLANK | A | NA | NA | | 1319 | 5.01 | 5mL | | | |
| | | B | | | | | 5.02 | | | | |
| | | C | | | | | 5.00 | NA | 10mL | | |

Supervisor Review: _____

Comments:

* = improperly sealed cap
• = improperly sealed plunger
▲ = hydrocarbon odor

EF = sample effervesced

# 2.2 Semivolatiles

# 2.2.6 PRO QC Data (8015)

**REPORT NARRATIVE**
**GC PETROLEUM RANGE ORGANICS**

**KEMRON Report No.: L0209516**

**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 were not associated with this sample delivery group.

**SAMPLES**

**Samples:** Samples 01 and 03 were analyzed at a 2X dilution and sample 02 at a 5X dilution in order to maintain analysis within range of calibration. 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: Michael Cole DATE: 10/23/00

Rev. 7/14/00

## TRPH – GC DATA (FLA-PRO)

**Login Number** L0209516

### 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: CUK Date: 10/23/02

# 2.2.6.1 QC Summary

# METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 8G03801
Date Analyzed: 10/19/02
Time Analyzed: 15:34
Analyst: HV

Work Group: WG127555
Blank Sample ID: WG126468-01
Instrument ID: HP8
Method: 8015 MOD

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG126468-02 | 8G03802 | 10/19/02 16:27 | 01 |
| LCS2 | WG126468-03 | 8G03803 | 10/19/02 17:20 | 01 |
| 062-CEF46-EQB-W-Q3-02 | L0209516-04 | 8G03804 | 10/19/02 18:13 | 01 |

KEMRON FORMS - Modified 10/21/2002
Version 1.1
Report generated 10/23/2002 10:48

# METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 8G03811
Date Analyzed: 10/20/02
Time Analyzed: 00:21
Analyst: HV

Work Group: WG127556
Blank Sample ID: WG126437-01
Instrument ID: HP8
Method: 8015 MOD

This Method Blank Applies To The Following Samples:

| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG126437-02 | 8G03812 | 10/20/02 01:14 | 01 |
| LCS2 | WG126437-03 | 8G03813 | 10/20/02 02:07 | 01 |
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 | 8G03814 | 10/20/02 02:59 | 01 |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 | 8G03816 | 10/20/02 04:44 | 01 |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 | 8G03837 | 10/21/02 00:10 | 01 |

KEMRON FORMS - Modified 10/21/2002
Version 1.1
Report generated 10/23/2002 10:48

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516
Run Date: 10/19/2002
Sample ID: WG126468-01
Instrument ID: HP8
Run Time: 15:34
Method: 8015 MOD
File ID: 8G03801
Analyst: HV
Matrix: Water
Workgroup (AAB#): WG127555
Units: ug/L
Contract #:
Cal ID: HP8-18-OCT-2002 21:52

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TPH-Florida PRO | 250 | 500 | 250 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 63.3 | 49 - 174 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated 10/23/2002 10:48

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516
Run Date: 10/20/2002
Sample ID: WG126437-01
Instrument ID: HP8
Run Time: 00:21
Method: 8015 MOD
File ID: 8G03811
Analyst: HV
Matrix: Solid
Workgroup (AAB#): WG127556
Units: ug/kg
Contract #:
Cal ID: HP8-18-OCT-2002 21:52

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 4990 | 9980 | 6230 | 1 | J |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 76.6 | 43 - 136 | PASS |

* Analyte detected above RDL

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated 10/23/2002 10:48

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Instrument ID: HP8
File ID: 8G03802
Workgroup (AAB#): WG127555
Contract #:

Run Date: 10/19/2002
Run Time: 16:27
Analyst: HV

Sample ID: WG126468-02
Method: 8015 MOD
Matrix: Water
Units: ug/L

Cal ID: HP8-18-OCT-2002 21:52

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 3400 | 3060 | 90.1 | 50 - 150 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 79.2 | 49 - 174 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/15/2002
Version 1.3
Report generated 10/23/2002 10:49

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Run Date: 10/20/2002
Sample ID: WG126437-02
Instrument ID: HP8
Run Time: 01:14
Method: 8015 MOD
File ID: 8G03812
Analyst: HV
Matrix: Solid
Workgroup (AAB#): WG127556
Units: ug/kg
Contract #:
Cal ID: HP8-18-OCT-2002 21:52

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 136000 | 120000 | 88.2 | 63 - 153 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 79.8 | 43 - 136 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/15/2002
Version 1.3
Report generated 10/23/2002 10:49

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0209516 Worknum: WG127555 Method: 8015 MOD
Instrument ID: HP8 Cal ID: HP8-18-OCT-2002 21:52 Matrix: Water
Analyst: HV Contract #: Units: ug/L
Sample ID: WG126468-02 LCS File ID: 8G03802 Run Date: 10/19/2002 16:27
Sample ID: WG126468-03 LCS2 File ID: 8G03803 Run Date: 10/19/2002 17:20

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| TRPH-Florida PRO | 3400 | 3060 | 90.1 | 3400 | 3390 | 99.7 | 10.1 | 50 - 150 | 20 | |

| Surogates | LCS | LCS2 | Surrogate Limits | Qualifier |
|---|---|---|---|---|
| | % Recovery | % Recovery | | |
| o-Terphenyl | 79.2 | 85.9 | 49 - 174 | PASS |

* FAILS %REC LIMIT

\# FAILS RPD LIMIT

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated 10/23/2002 10:49

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLES

Loginnum: L0209516 Worknum: WG127556 Method: 8015 MOD
Instrument ID: HP8 Cal ID: HP8-18-OCT-2002 21:52 Matrix: Solid
Analyst: HV Contract #: Units: ug/kg
Sample ID: WG126437-02 LCS File ID: 8G03812 Run Date: 10/20/2002 01:14
Sample ID: WG126437-03 LCS2 File ID: 8G03813 Run Date: 10/20/2002 02:07

| Analytes | LCS | | | LCS2 | | | %RPD | %Rec Limits | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | Known | Found | % REC | Known | Found | % REC | | | | |
| TRPH-Florida PRO | 136000 | 120000 | 88.2 | 136000 | 113000 | 83.3 | 5.58 | 63 - 153 | 20 | |

| Surogates | LCS | LCS2 | Surrogate Limits | Qualifier |
|---|---|---|---|---|
| | % Recovery | % Recovery | | |
| o-Terphenyl | 79.8 | 78.7 | 43 - 136 | PASS |

* FAILS %REC LIMIT

# FAILS RPD LIMIT

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated 10/23/2002 10:49

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8015 MOD

Login Number: L0209516

AAB#: WG127555

| 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-CEF46-EQB-W-Q3-02 | 09/26/02 | 09/27/02 | 10/03/02 | 7 | 6.71 | 10/19/02 | 40 | 16.4 | |

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

KEMRON FORMS - Modified 09/12/2002
Version 1.2
Report generated 10/23/2002 10:48

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8015 MOD

Login Number: L0209516

AAB#: WG127556

| 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-CEF46-SB1-S-Q3-02 | 09/26/02 | 09/27/02 | 10/02/02 | 14 | 6.09 | 10/20/02 | 40 | 17.5 | |
| 062-CEF46-SB14-S-Q3-02 | 09/26/02 | 09/27/02 | 10/02/02 | 14 | 6.06 | 10/20/02 | 40 | 17.5 | |
| 062-CEF46-SB2-S-Q3-02 | 09/26/02 | 09/27/02 | 10/02/02 | 14 | 6.08 | 10/21/02 | 40 | 18.4 | |

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

KEMRON FORMS - Modified 09/12/2002
Version 1.2
Report generated 10/23/2002 10:48

SURROGATE STANDARDS

Login Number:L0209516
Instrument Id:HP8
Workgroup (AAB#):WG127555

Method:FLA-PRO
Matrix:WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209516-04 | 1.00 | 01 | 74.4 |
| WG126468-01 | 1.00 | 01 | 63.3 |
| WG126468-02 | 1.00 | 01 | 79.2 |
| WG126468-03 | 1.00 | 01 | 85.9 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - o-Terphenyl | 49 | - | 174 |

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 10/22/2002
Version 1.2
Report generated 10/23/2002 10:51

SURROGATE STANDARDS

Login Number: L0209516
Instrument Id: HP8
Workgroup (AAB#): WG127556

Method: FLA-PRO
Matrix: SOLID

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209516-01 | 2.00 | 01 | 73.0 |
| L0209516-02 | 5.00 | 01 | 70.0 |
| L0209516-03 | 2.00 | 01 | 74.6 |
| WG126437-01 | 1.00 | 01 | 76.6 |
| WG126437-02 | 1.00 | 01 | 79.8 |
| WG126437-03 | 1.00 | 01 | 78.7 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - o-Terphenyl | 43 | - | 136 |

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 10/22/2002
Version 1.2
Report generated 10/23/2002 10:51

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002

Calibration Files

| | | | | | |
|---|---|---|---|---|---|
| 600 | =8G03789.D | 400 | =8G03790.D | 200 | =8G03791.D |
| 100 | =8G03792.D | 50 | =8G03793.D | 5 | =8G03794.D |

| | Compound | 600 | 400 | 200 | 100 | 50 | 5 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) h | Petroleum Range | 3.517 | 4.005 | 4.310 | 5.377 | 3.262 | 4.966 | 4.240 | E3 | 19.24 |
| 2) s | O-Terphenyl | 4.480 | 4.670 | 4.766 | 4.316 | 4.583 | 5.590 | 4.734 | E3 | 9.45 |

#) = Out of Range

Login Number: L0209516
File ID: 8G03796
ALT ID: WG127599-07
Units: mg/L

Instrument ID: HP8
Run Date: 10/18/2002
Run Time: 23:37
Analyst: HV
Cal ID: HP8 - 18-OCT-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| Petroleum Range | | 3400 | 3310 | 4080 | 2.6 | |

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated 10/23/2002 10:49

Login Number: L0209516
File ID: 8G03797
CCV ID: WG127599-08
Units: mg/L

Instrument ID: HP8
Run Date: 10/19/2002
Run Time: 11:58
Analyst: HV
Cal ID: HP8 - 18-OCT-2002 21:52

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| Petroleum Range | | 3400 | 3780 | 4710 | 11.2 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2
Report generated 10/23/2002 10:51

Login Number: L0209516
File ID: 8G03807
CCV ID: WG127599-09
Units: mg/L

Instrument ID: HP8
Run Date: 10/19/2002
Run Time: 20:51
Analyst: HV
Cal ID: HP8 - 18-OCT-2002 21:52

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| Petroleum Range | | 3400 | 3360 | 4190 | 1.2 | |

* Exceeds %D Limit

Login Number: L0209516
File ID: 8G03818
CCV ID: WG127599-10
Units: mg/L

Instrument ID: HP8
Run Date: 10/20/2002
Run Time: 06:29
Analyst: HV
Cal ID: HP8 - 18-OCT-2002 21:52

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| Petroleum Range | | 3400 | 3590 | 4430 | 5.6 | |

Exceeds %D Limit

LEMRON FORMS - Modified 07/10/2002
Version 1.2
Report generated 10/23/2002 10:51

Login Number: L0209516
File ID: 8G03832
CCV ID: WG127599-13
Units: mg/L

Instrument ID: HP8
Run Date: 10/20/2002
Run Time: 19:48
Analyst: HV
Cal ID: HP8 - 18-OCT-2002 21:52

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| Petroleum Range | | 3400 | 3450 | 4300 | 1.5 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2
Report generated 10/23/2002 10:51

Login Number: L0209516
File ID: 8G03839
CCV ID: WG127599-14
Units: mg/L

Instrument ID: HP8
Run Date: 10/21/2002
Run Time: 01:55
Analyst: HV
Cal ID: HP8 - 18-OCT-2002 21:52

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| Petroleum Range | | 3400 | 3180 | 3970 | 6.5 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2
Report generated 10/23/2002 10:51

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 8g03787.d | 1. | MECL2 | 1,1 | 18 Oct 102 [illegible] |
| 2 | 2 | 8g03788.d | 1. | WIN DEF STD | 1,1 | 18 Oct 102 [illegible] |
| 3 | 2 | 8g03789.d | 1. | WG127599-01 PRO STD @600ppm | 1,1 SOS61-44 | 18 Oct 102 12::2 |
| 4 | 3 | 8g03790.d | 1. | WG127599-02 PRO STD @400ppm | 1,1 SOS61-44 | 18 Oct 102 12::1 |
| 5 | 4 | 8g03791.d | 1. | WG127599-03 PRO STD @200ppm | 1,1 SOS61-44 | 18 Oct 102 12::0 |
| 6 | 5 | 8g03792.d | 1. | WG127599-04 PRO STD @100ppm | 1,1 SOS61-44 | 18 Oct 102 12::5 |
| 7 | [illegible] | 8g03793.d | 1. | WG127599-02 PRO STD @50ppm | 1,1 SOS61-44 | 18 Oct 102 12::5 |
| 8 | [illegible] | 8g03794.d | 1. | WG127599-01 PRO STD @5ppm | 1,1 SOS61-44 | 18 Oct 102 12::3 |
| 9 | [illegible] | 8g03795.d | 1. | PRO STD @5ppm | 1,1 SOS61-44 | 18 Oct 102 13::4 |
| 10 | 8 | 8g03796.d | 1. | WG127599-07 ALT PRO STD @200pm | 1,1 SOS60-35 | 18 Oct 102 13::3 |
| 11 | 9 | 8g03797.d | 1. | PRO water MDL BLK V191-P163 | 1,1 water | 19 Oct 102 [illegible] |
| 12 | 10 | 8g03798.d | 1. | PRO water MDL #1 | 1,1 water | 19 Oct 102 [illegible] |
| 13 | 11 | 8g03799.d | 1. | PRO water MDL #2 | 1,1 water | 19 Oct 102 [illegible] |
| 14 | 12 | 8g03800.d | 1. | WG126468-01 PRO water BLK V191-P81 | 1,1 water | 19 Oct 102 [illegible] |
| 15 | 13 | 8g03801.d | 1. | WG126468-02 LCS V191-P81 | 1,1 water | 19 Oct 102 12::0 |
| 16 | 14 | 8g03802.d | 1. | WG126468-03 LCS2 V191-P81 | 1,1 water | 19 Oct 102 12::0 |
| 17 | 15 | 8g03803.d | 1. | L0209516-04 PRO water | 1,1 water | 19 Oct 102 12::5 |
| 18 | 16 | 8g03804.d | 1. | L0209517-02 PRO water | 1,1 water | 19 Oct 102 12::4 |
| 19 | 17 | 8g03805.d | 1. | PRO CCV @200ppm | 1,1 water | 19 Oct 102 13::0 |

RR

HV 10/20/02

TXEC 10/21/02

# Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 10-18-02 Instrument ID HP8 front Column ID DB-5 Data Subdirectory 101802
Analyst Initials HY

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**

* sequence was stopped by computer fault

Reviewed By: RDC 10/21/02

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 8 | 8g03796.d | 1. | ALT PRO STD @200pm | 1,1 SOS61-44 | 19 Oct 102 13::0 |
| 2 | 1 | 8g03797.d | 1. | WG127599-08 PRO CCV @200pm | 1,1 SOS61-44 | 19 Oct 102 13::5 |
| 3 | 2 | 8g03798.d | 1. | PRO water MDL BLK V191-P163 | 1,1 water | 19 Oct 102 13::5 |
| 4 | 3 | 8g03799.d | 1. | PRO water MDL #1 | 1,1 water | 19 Oct 102 12::4 |
| 5 | 4 | 8g03800.d | 1. | PRO water MDL #2 | 1,1 water | 19 Oct 102 12::4 |
| 6 | 5 | 8g03801.d | 1. | WG126468-01 PRO water BLK V191-P81 | 1,1 water | 19 Oct 102 12::3 |
| 7 | 6 | 8g03802.d | 1. | WG126468-02 LCS V191-P81 | 1,1 water | 19 Oct 102 12::2 |
| 8 | 7 | 8g03803.d | 1. | WG126468-03 LCS2 V191-P81 | 1,1 water | 19 Oct 102 12::2 |
| 9 | 8 | 8g03804.d | 1. | L0209516-04 PRO water | 1,1 water | 19 Oct 102 12::1 |
| 10 | 9 | 8g03805.d | 1. | L0209517-02 PRO water | 1,1 water | 19 Oct 102 12::0 |
| 11 | 10 | 8g03806.d | 1. | MECL2 | 1,1 water | 19 Oct 102 12::5 |
| 12 | 11 | 8g03807.d | 1. | WG127599-09 PRO CCV @200ppm | 1,1 water | 19 Oct 102 12::5 |
| 13 | 12 | 8g03808.d | 1. | PRO SOIL MDL BLK V192-P79 | 7,1 soil | 19 Oct 102 12::4 |
| 14 | 13 | 8g03809.d | 1. | PRO SOIL MDL #1 | 7,1 soil | 19 Oct 102 13::3 |
| 15 | 14 | 8g03810.d | 1. | PRO SOIL MDL #2 | 7,1 soil | 19 Oct 102 13::2 |
| 16 | 15 | 8g03811.d | 1. | WG126437-01 Soil BLK V192-P09 | 7,1 soil | 20 Oct 102 13::2 |
| 17 | 16 | 8g03812.d | 1. | WG126437-02 Soil LCS V192-P09 | 7,1 soil | 20 Oct 102 12::1 |
| 18 | 17 | 8g03813.d | 1. | WG126437-03 Soil LCS2 V192-P09 | 7,1 soil | 20 Oct 102 12::0 |
| 19 | 18 | 8g03814.d | 2. | L0209516-01 2x SOIL | 7,2 soil | 20 Oct 102 12::5 |
| 20 | 19 | 8g03815.d | 2. | RR L0209516-02 2x SOIL EAX | 7,2 soil | 20 Oct 102 12::5 |
| 21 | 20 | 8g03816.d | 2. | L0209516-03 2x SOIL | 7,2 soil | 20 Oct 102 12::4 |
| 22 | 21 | 8g03817.d | 1. | MECL2 | 1,1 water | 20 Oct 102 12::3 |
| 23 | 11 | 8g03818.d | 1. | WG127599-10 PRO CCV @200ppm | 1,1 water | 20 Oct 102 12::2 |
| 24 | 22 | 8g03819.d | 2. | L0209517-01 10x SOIL | 7,2 soil | 20 Oct 102 12::2 |
| 25 | 21 | 8g03820.d | 1. | MECL2 | 1,1 water | 20 Oct 102 12::1 |
| 26 | 11 | 8g03821.d | 1. | WG127599-11 PRO CCV @200ppm | 1,1 SOS61-44 | 20 Oct 102 12::0 |

HV 10/20/02

RDC 10/21/02

# Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 10-19-02 Instrument ID HP8 Column ID DB-5 Data Subdirectory 101902
Analyst Initials HV

SOP # GCS09 Rev. # ___ 8081A ___
SOP # GCS04 Rev. # ___ 8151A ___
SOP # GCS03 Rev. # ___ 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 Air

**Returned To Control?**
Yes ___ No ___

**Additional Maintenance**
Problem: ___

Action Taken: ___

**Comments**

Reviewed By: RDC 10/24/02

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 8g03822.d | 1. | ✓ WG127599-12 PRO CCV @200ppm | 1,1 water | 20 Oct 102 13::4 |
| 2 | 2 | 8g03823.d | 1. | WG126722-01 BLK V191-P107 | 1,1 water | 20 Oct 102 13::5 |
| 3 | 3 | 8g03824.d | 1. | WG126722-02 LCS V191-P107 | 1,1 water | 20 Oct 102 13::4 |
| 4 | 4 | 8g03825.d | 1. | WG126722-03 LCS2 V191-P107 | 1,1 water | 20 Oct 102 12::3 |
| 5 | 5 | 8g03826.d | 1. | RE L0210079-02 water | 1,1 water | 20 Oct 102 12::3 |
| 6 | 6 | 8g03827.d | 5. | ✓ L0210079-04 5x water | 1,5 water | 20 Oct 102 12::2 |
| 7 | 7 | 8g03828.d | 1. | RE L0210079-06 water | 1,1 water | 20 Oct 102 12::1 |
| 8 | 8 | 8g03829.d | 5. | * L0210079-07 5x water | 1,5 water | 20 Oct 102 12::1 |
| 9 | 9 | 8g03830.d | 1. | ✓ L0210079-10 water | 1,1 water | 20 Oct 102 12::0 |
| 10 | 10 | 8g03831.d | 1. | mecl2 | 1,1 water | 20 Oct 102 12::5 |
| 11 | 11 | 8g03832.d | 1. | ✓ WG127599-13 PRO CCV @200ppm | 1,1 SOS61-44 | 20 Oct 102 12::4 |
| 12 | 12 | 8g03833.d | 5. | ✓ L0210079-12 5x water | 1,5 water | 20 Oct 102 12::4 |
| 13 | 13 | 8g03834.d | 5. | * L0210079-16 5x water RR ~~SM~~ | 1,5 water | 20 Oct 102 12::3 |
| 14 | 14 | 8g03835.d | 5. | RR L0210079-05 5x water | 1,5 water | 20 Oct 102 12::2 |
| 15 | 15 | 8g03836.d | 10. | L0210079-05 10x water RR @ 50X | 1,10 water | 20 Oct 102 12::1 |
| 16 | 16 | 8g03837.d | 5. | ✓ L0209516-02 5x | 1,5 water | 21 Oct 102 13::1 |
| 17 | 10 | 8g03838.d | 1. | mecl2 | 1,1 water | 21 Oct 102 12::0 |
| 18 | 11 | 8g03839.d | 1. | ✓ WG127599-14 PRO CCV @200ppm | 1,1 SOS61-44 | 21 Oct 102 12::5 |

HV 10/21/02

* RR to confirm low surrogate rec.
(RR straight)

GC Laboratory Maintenance Log

Analysis Date/Time 10-20-02 Instrument ID HP8 Front Column ID DB-5 Data Subdirectory 102002
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**

* RR straight to confirm low sum. rec.

Reviewed By: RRC 10/21/02

Parameter: FL-Pro NLO SOP #: ExPRO Revision #: 3
Extraction Analyst(s): RCK TV/KD Analyst(s): RCK
Date/Time Extracted: 10/3/02 0730 Date TV/KD: 10/3/02
Spike/Surrogate Analyst: RCK Witness: CEB
Surrogate #: ES50041-31 Earliest Hold Date: 10/3
Spike #: A = ES50042-24 Spike #: B = –

Extraction Work Group WG 126468
Analytical Work Group WG [illegible]

Extract Relinquished By: RCK
Extract Received By & Date: CUC 10/3/02

| | Sample ID | Test Code | pH | | | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | <2 | N | >12 | | | | | | A | BN | N | |
| 1 | Blank | | ✓ | | | 1000 mL | 1 mL | | 1 mL | | | | | |
| 2 | LCS | | ✓ | | | ↓ | ↓ | 1 mL | ↓ | | | | | WG 126468-01 |
| 3 | LCS dup | | ✓ | | | ↓ | ↓ | ↓ | ↓ | | | | | WG ↓ -02 |
| 4 | 09-516-04 | FLA-PRO | ✓ | | | 960 mL | ↓ | ↓ | ↓ | | | | | ↓ -03 |
| 5 | 09-517-02 | ↓ | ✓ | | | 940 mL | ↓ | ↓ | ↓ | | | | | |
| 6 | 09-310-01 | ↓ | ✓ | | | 980 mL | ↓ | ↓ | ↓ | | | | | |
| 7 | | | | | | | | | | | | | | (Re-ext out/hold) |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

RCK 10/3/02

Methylene Chloride Lot #: 42084
Hexane Lot #: –
Ether Lot #: –
Methanol Lot #: –
Solvent: – Lot #: –
Reagent: – Lot #: –
Reagent: – Lot #: –
Reagent: – Lot #: –
Acid: HCl Lot #: EL2270
Florisil Lot #: –
Silica Gel Lot #: V4555
R Analyst / Date / Time: –
Dried $Na_2SO_4$ Lot #: EL2211

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 10/3/02

Extraction Notes For Volume # 191 Page # 81

General Comments: none

Extraction Anomalies: none

Concentration Anomalies: none

Clean-Up Anomalies: none

Supervisor Review: _____ Date: _____

Parameter: FLA-PRO SOP #: EXPRO Revision #: 3
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 10-02-02 @ 15:45 Date TV/KD: 10-02-02
Spike/Surrogate Analyst: CAF Witness: DP for RK
Surrogate #: ESS0041-31 Earliest Hold Date: 10-10-02
Spike #: A = ESSD041-41 Spike #: B = —

Extraction Work Group WG 126437
Analytical Work Group WG [illegible]

Extract Relinquished By: RK
Extract Received By & Date: [illegible]

| | 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 | | | | | 25.04 g | 1mL | | 1mL | T | | | | WG126437-01 |
| 2 | LCS | | | | | 25.04 g | | 1mL | | T | | | | WG -02 |
| 3 | LCS Dup | | | | | 25.02 g | | | | C | | | | WG -03 |
| 4 | 09-516-01 | FLA-PRO | | | | 25.04 g | | | | C | | | | |
| 5 | 09-516-02 | | | | | 25.05 g | | | | C | | | | |
| 6 | 09-516-03 | | | | | 25.06 g | | | | C | | | | |
| 7 | 09-517-01 | | | | | 25.18 g | | | | O | | | | |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

CAF 10-02-02

Methylene Chloride Lot #: 42087
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: V45553
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: ER 2211

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 10/7/02

Extraction Notes For Volume # 192 Page # 9

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\2\DATA\101902\8G03814.D
Acq On : 20 Oct 2002 2:59
Sample : L0209516-01 2x SOIL
Misc : 7,2 soil
IntFile : SURR.E
Quant Time: Oct 20 11:17 2002 Quant Results File: PROFRNT.RES

Vial: 18
Operator: HV
Inst : HP8
Multiplr: 2.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 34550 | 14.597 ppm |
| Spiked Amount 20.000 | Range 43 - 136 | Recovery = | 72.99% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 34797444 | 8207.824 ppm |

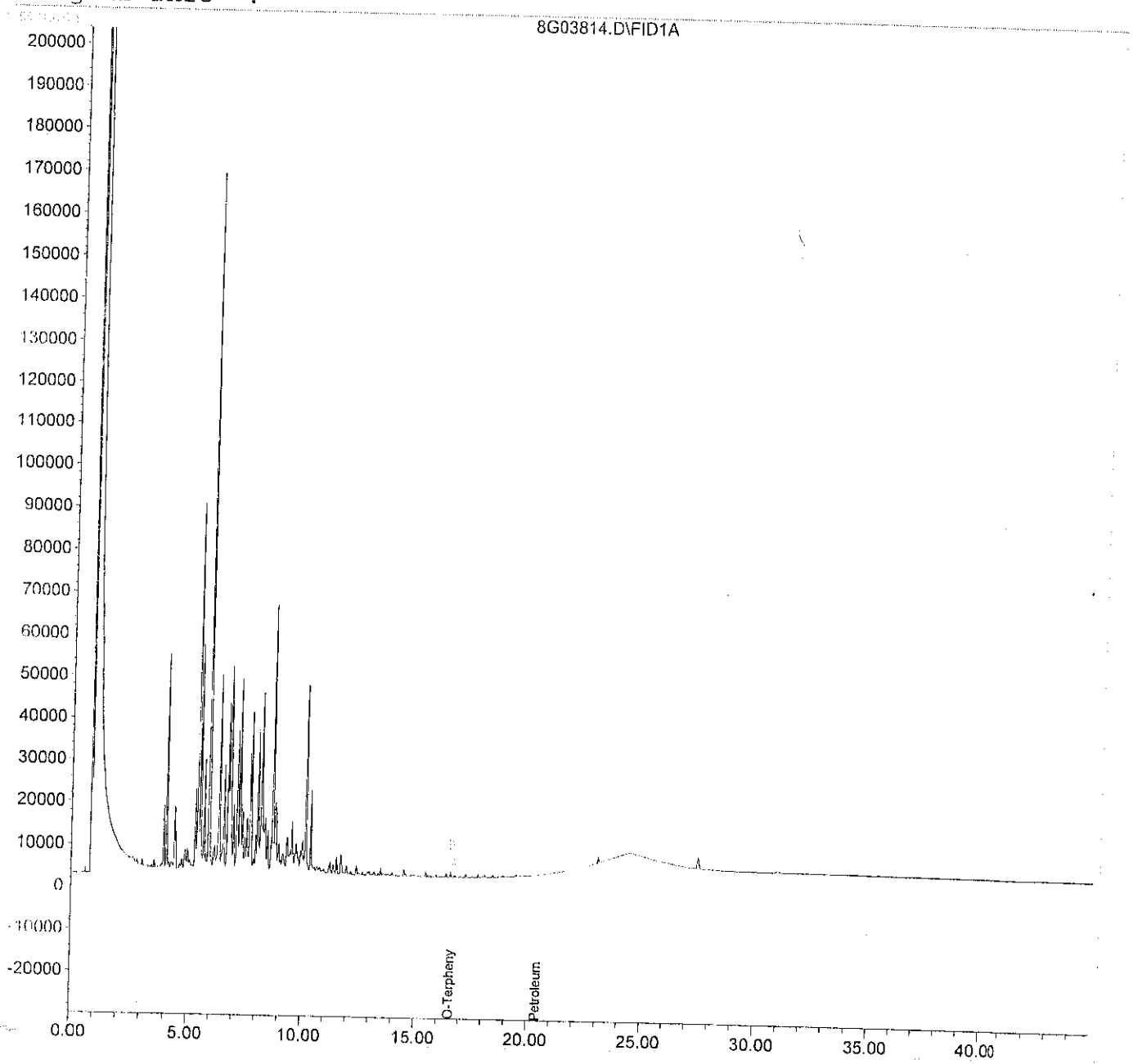
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03814.D PROFRNT.M Sun Oct 20 11:[illegible]:25 2002 HP2

Data File : C:\HPCHEM\2\DATA\101902\8G03814.D
Acq On : 20 Oct 2002 2:59
Sample : L0209516-01 2x SOIL
Misc : 7,2 soil
IntFile : SURR.E
Quant Time: Oct 20 11:17 2002 Quant Results File: PROFRNT.RES

Vial: 18
Operator: HV
Inst : HP8
Multiplr: 2.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\102002\8G03837.D
Acq On : 21 Oct 2002 00:10
Sample : L0209516-02 5x
Misc : 1,5 water
IntFile : SURR.E
Quant Time: Oct 21 8:26 2002 Quant Results File: PROFRNT.RES

Vial: 16
Operator: HV
Inst : HP8
Multiplr: 5.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 12:09:36 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.54 | 13252 | 13.996 ppm m |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery = | 69.98% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 17647118 | 4162.502 ppm ✓ |

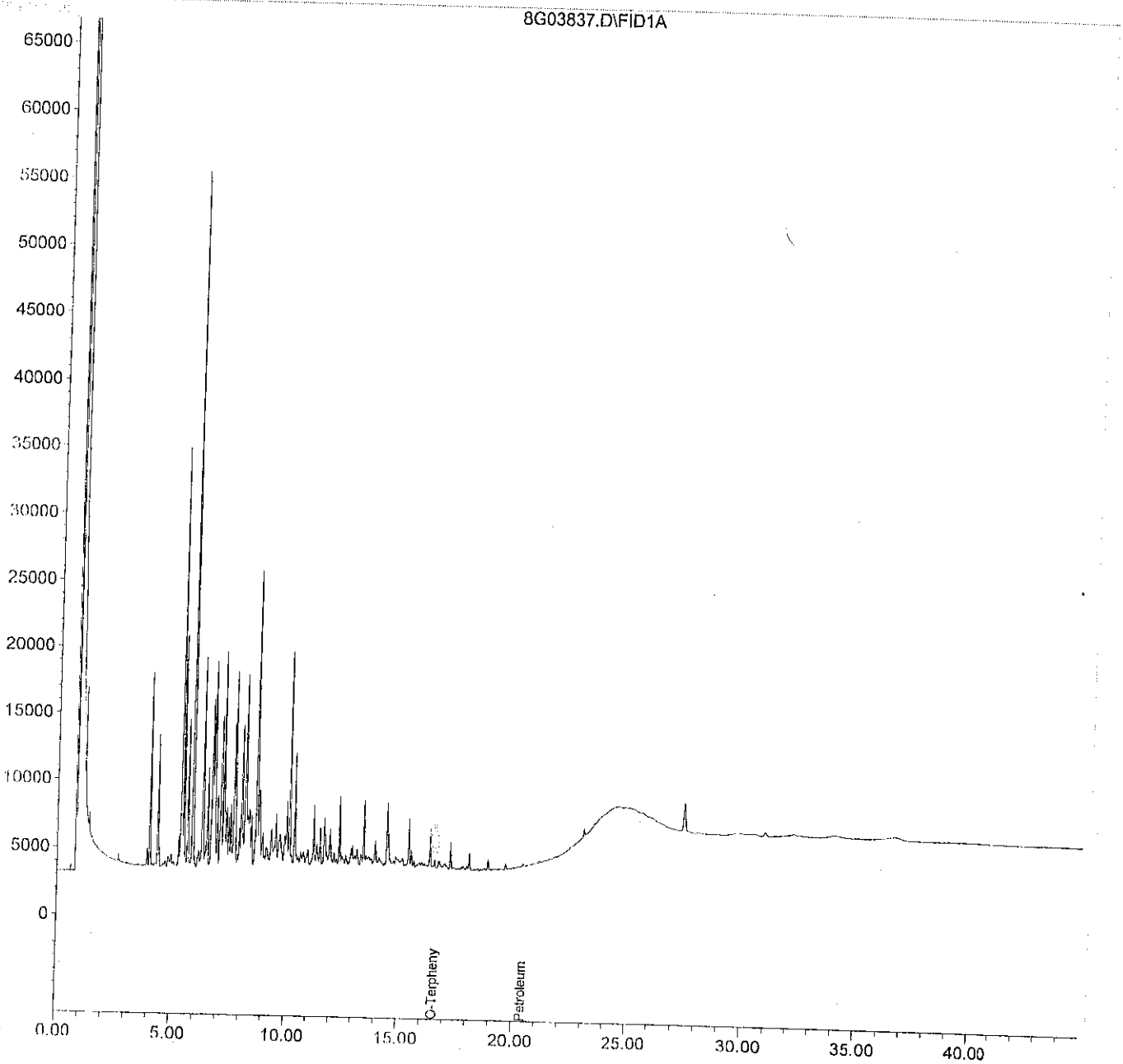
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\102002\8G03837.D
Acq On : 21 Oct 2002 00:10
Sample : L0209516-02 5x
Misc : 1,5 water
IntFile : SURR.E
Quant Time: Oct 21 8:26 2002 Quant Results File: PROFRNT.RES

Vial: 16
Operator: HV
Inst : HP8
Multiplr: 5.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 12:09:36 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

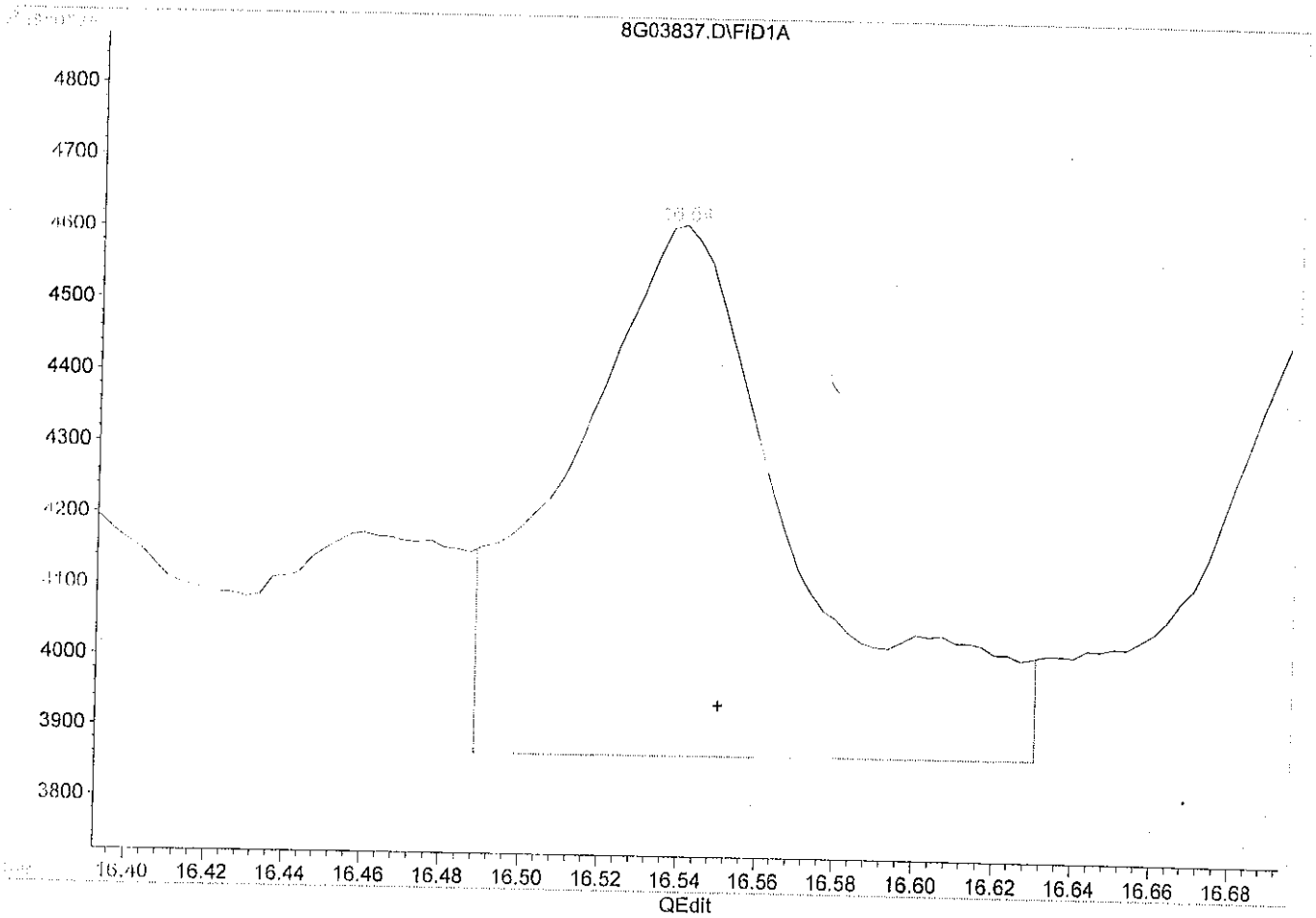
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\102002\8G03837.D
Acq On : 21 Oct 2002 00:10
Sample : L0209516-02 5x
Misc : 1,5 water
IntFile : SURR.E
Quant Time: Oct 21 8:25 2002 Quant Results File: PROFRNT.RES

Vial: 16
Operator: HV
Inst : HP8
Multiplr: 5.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration




(2) O-Terphenyl (s)

16.54min 32.445ppm

response 30719

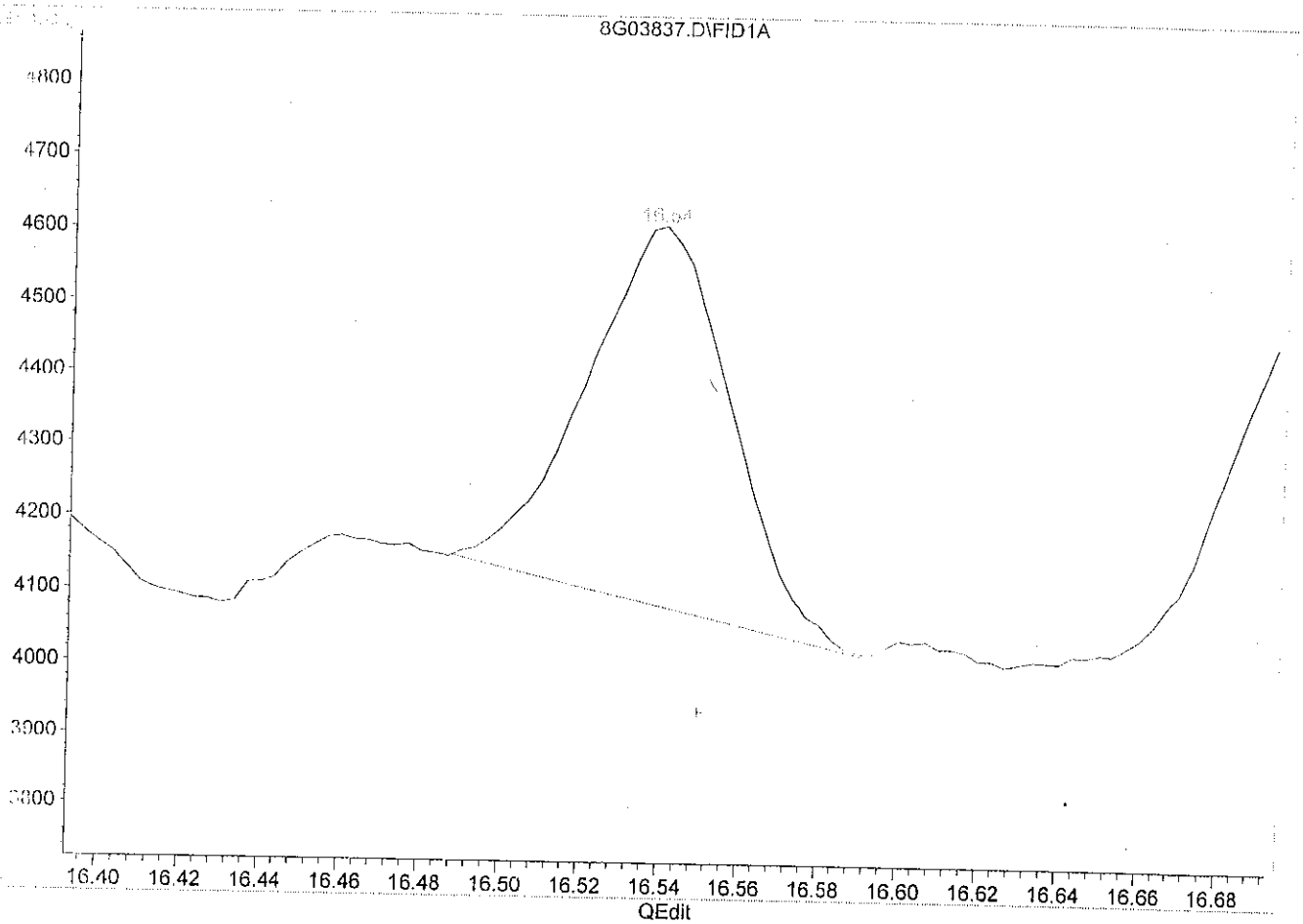
(+) = Expected Retention Time

8G03837.D PROFRNT.M Mon Oct 21 08:26:15 2002 HP2

Data File : C:\HPCHEM\2\DATA\102002\8G03837.D
Acq On : 21 Oct 2002 00:10
Sample : L0209516-02 5x
Misc : 1,5 water
IntFile : SURR.E
Quant Time: Oct 21 8:25 2002 Quant Results File: PROFRNT.RES

Vial: 16
Operator: HV
Inst : HP8
Multiplr: 5.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration




(2) O-Terphenyl (s)

16.54min 13.996ppm m

response 13252

HV 10/21/02

mc 10/22/02

(+) = Expected Retention Time

8G03837.D PROFRNT.M Mon Oct 21 08:26:21 2002 HP2

Data File : C:\HPCHEM\2\DATA\101902\8G03816.D
Acq On : 20 Oct 2002 4:44
Sample : L0209516-03 2x SOIL
Misc : 7,2 soil
IntFile : SURR.E
Quant Time: Oct 20 11:19 2002 Quant Results File: PROFRNT.RES

Vial: 20
Operator: HV
Inst : HP8
Multiplr: 2.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 35315 | 14.920 ppm |
| Spiked Amount 20.000 | Range 43 - 136 | Recovery = | 74.60% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 5474109 | 1291.202 ppm |

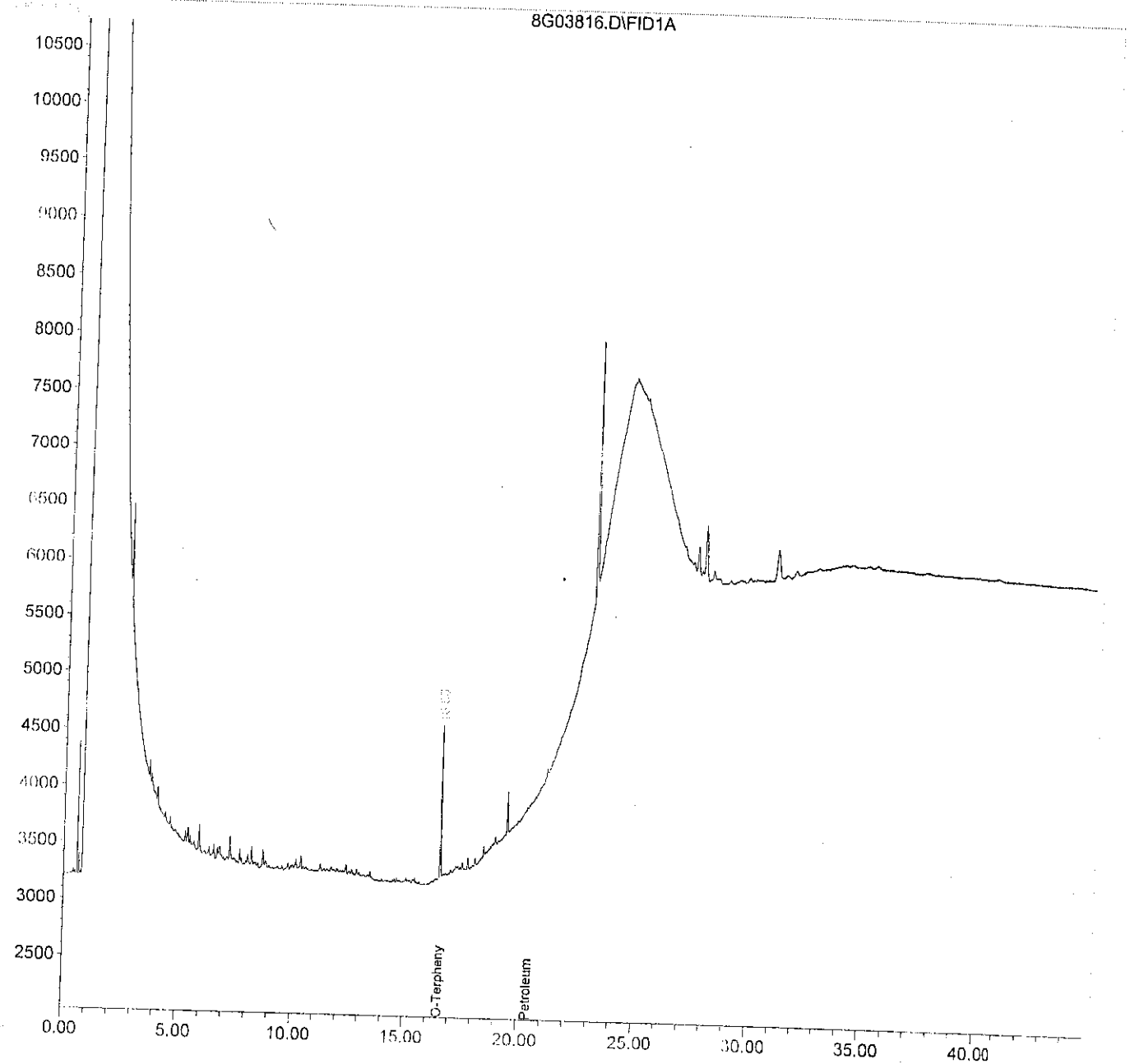
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101902\8G03816.D
Acq On : 20 Oct 2002 4:44
Sample : L0209516-03 2x SOIL
Misc : 7,2 soil
IntFile : SURR.E
Quant Time: Oct 20 11:19 2002 Quant Results File: PROFRNT.RES

Vial: 20
Operator: HV
Inst : HP8
Multiplr: 2.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03804.D
Acq On : 19 Oct 2002 18:13
Sample : L0209516-04 PRO water
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 19 18:58 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 70451 | 14.882 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery = | 74.41% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 4771677 | 1138.039 ppm |

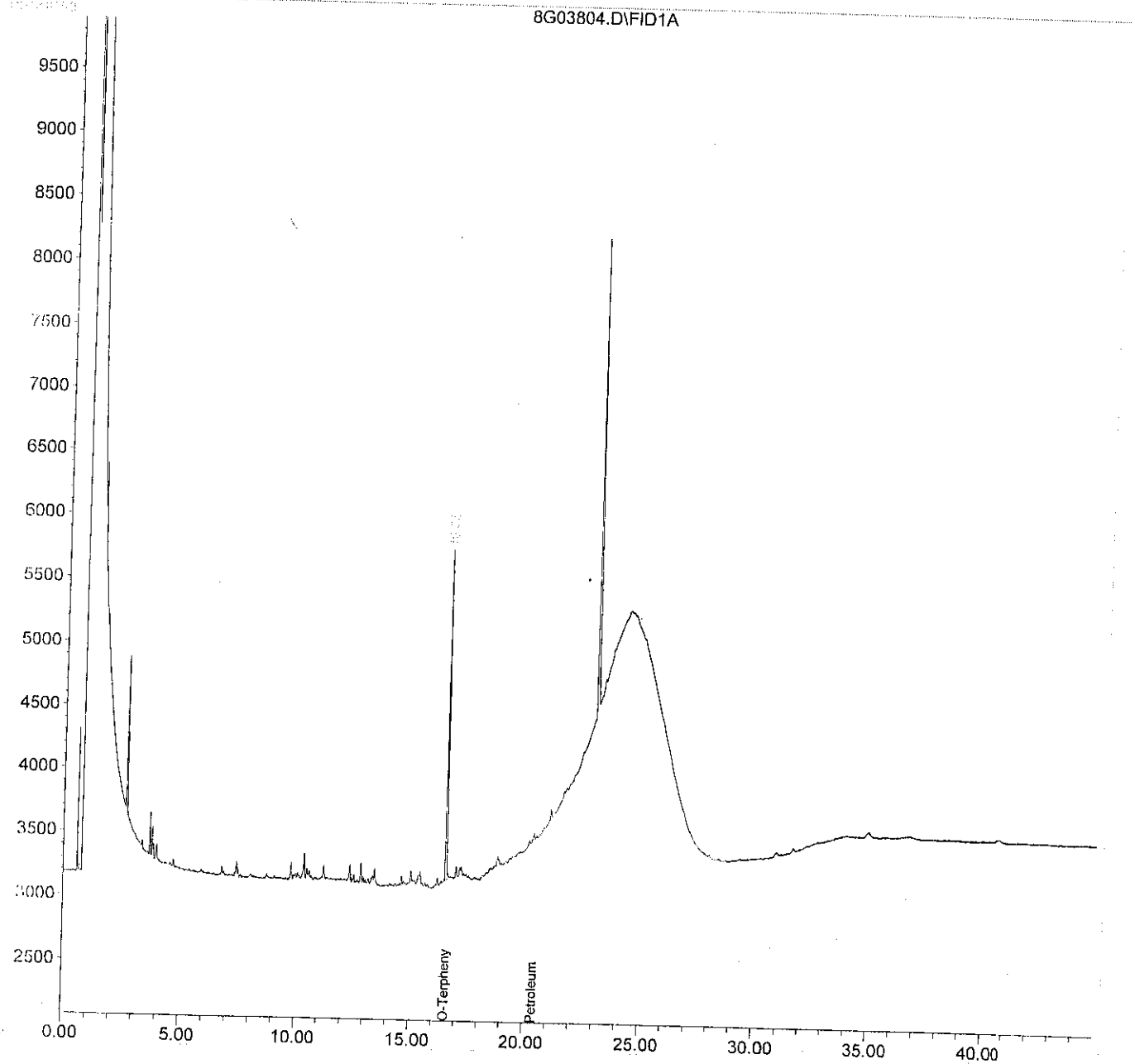
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101902\8G03804.D
Acq On : 19 Oct 2002 18:13
Sample : L0209516-04 PRO water
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 19 18:58 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



# 2.2.6.3 Standards Data

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002

Calibration Files

| | | | | | |
|---|---|---|---|---|---|
| 600 | =8G03789.D | 400 | =8G03790.D | 200 | =8G03791.D |
| 100 | =8G03792.D | 50 | =8G03793.D | 5 | =8G03794.D |

| | Compound | 600 | 400 | 200 | 100 | 50 | 5 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1) h | Petroleum Range | 3.517 | 4.005 | 4.310 | 5.377 | 3.262 | 4.966 | 4.240 | E3 | 19.34 |
| 2) s | O-Terphenyl | 4.480 | 4.670 | 4.766 | 4.316 | 4.583 | 5.590 | 4.734 | E3 | 9.45 |

(#) = Out of Range

Data File : C:\HPCHEM\2\DATA\101802\8G03789.D
Acq On : 18 Oct 2002 18:21
Sample : WG127599-01 PRO STD @600ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 2
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 19 10:38 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:38:27 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 3687918 | 347.256 ppm |
| Spiked Amount 100.000 | Range 49 - 174 | Recovery | = 347.26%# |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 35870131 | 5749.817 ppm |

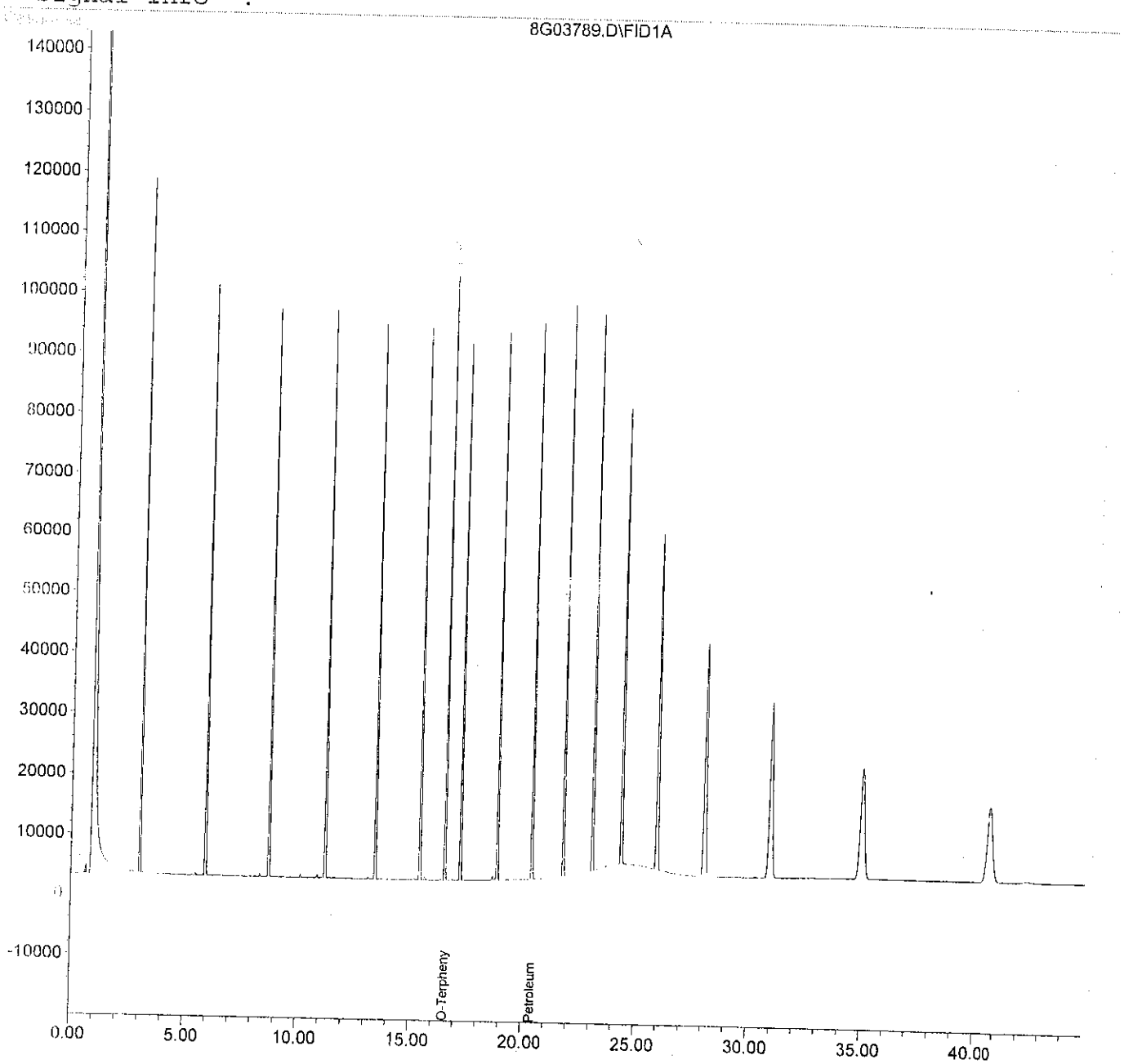
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101802\8G03789.D
Acq On : 18 Oct 2002 18:21
Sample : WG127599-01 PRO STD @600ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 10:38 2002 Quant Results File: PROFRNT.RES

Vial: 2
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:38:27 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101802\8G03790.D
Acq On : 18 Oct 2002 19:13
Sample : WG127599-02 PRO STD @400ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 3
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 19 10:40 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 1867869 | 416.948 ppm |
| Spiked Amount 100.000 | Range 49 - 174 | Recovery | = 416.95%# |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 27231584 | 455.503 ppm |

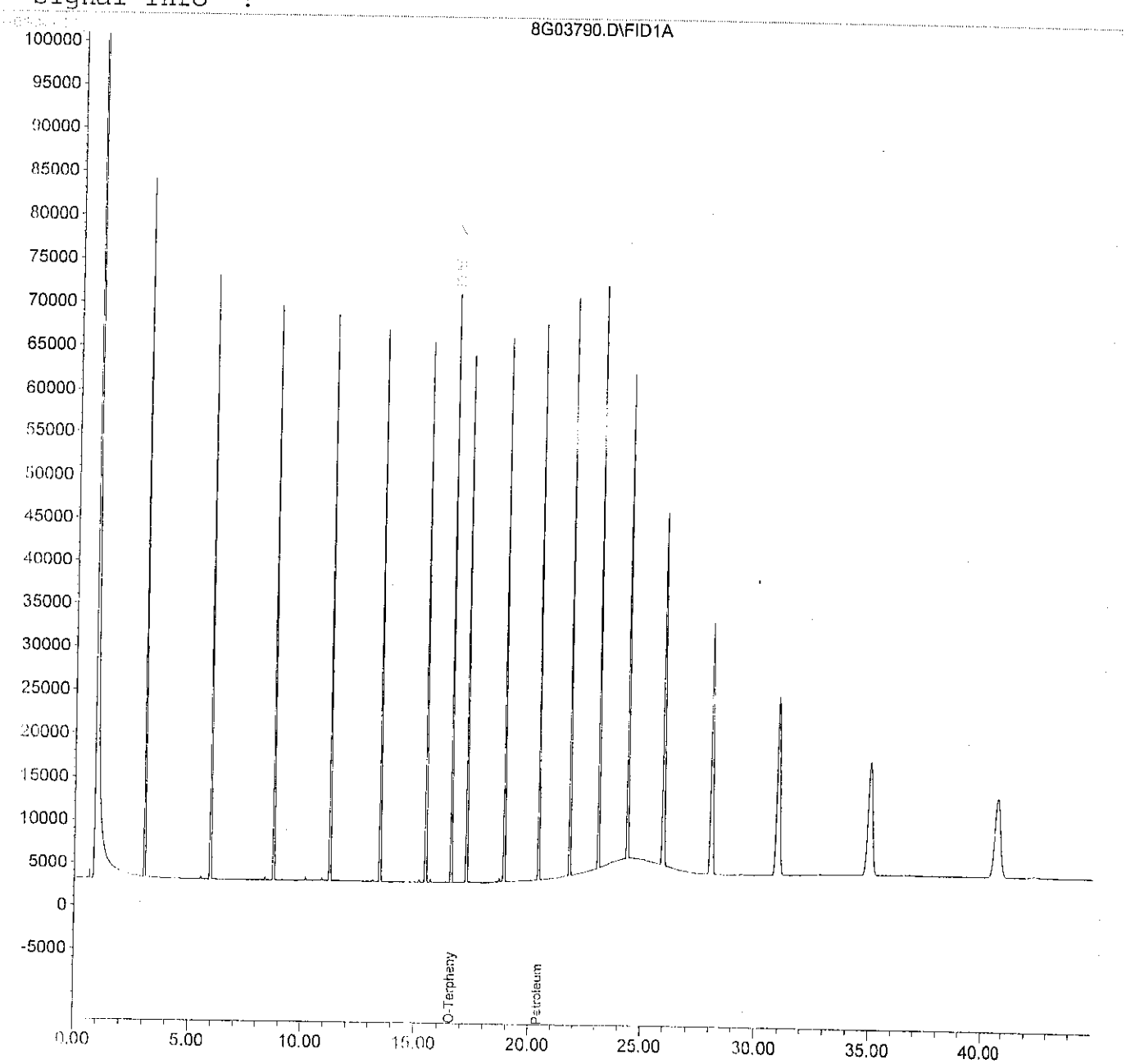
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101802\8G03790.D
Acq On : 18 Oct 2002 19:13
Sample : WG127599-02 PRO STD @400ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 10:40 2002 Quant Results File: PROFRNT.RES

Vial: 3
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Single Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101802\8G03791.D
Acq On : 18 Oct 2002 20:06
Sample : WG127599-03 PRO STD @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 10:40 2002 Quant Results File: PROFRNT.RES

Vial: 4
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 953116 | 208.342 ppm |
| Spiked Amount 100.000 | Range 49 - 174 | Recovery = 208.34%# | |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 14655501 | <MDL ppm |

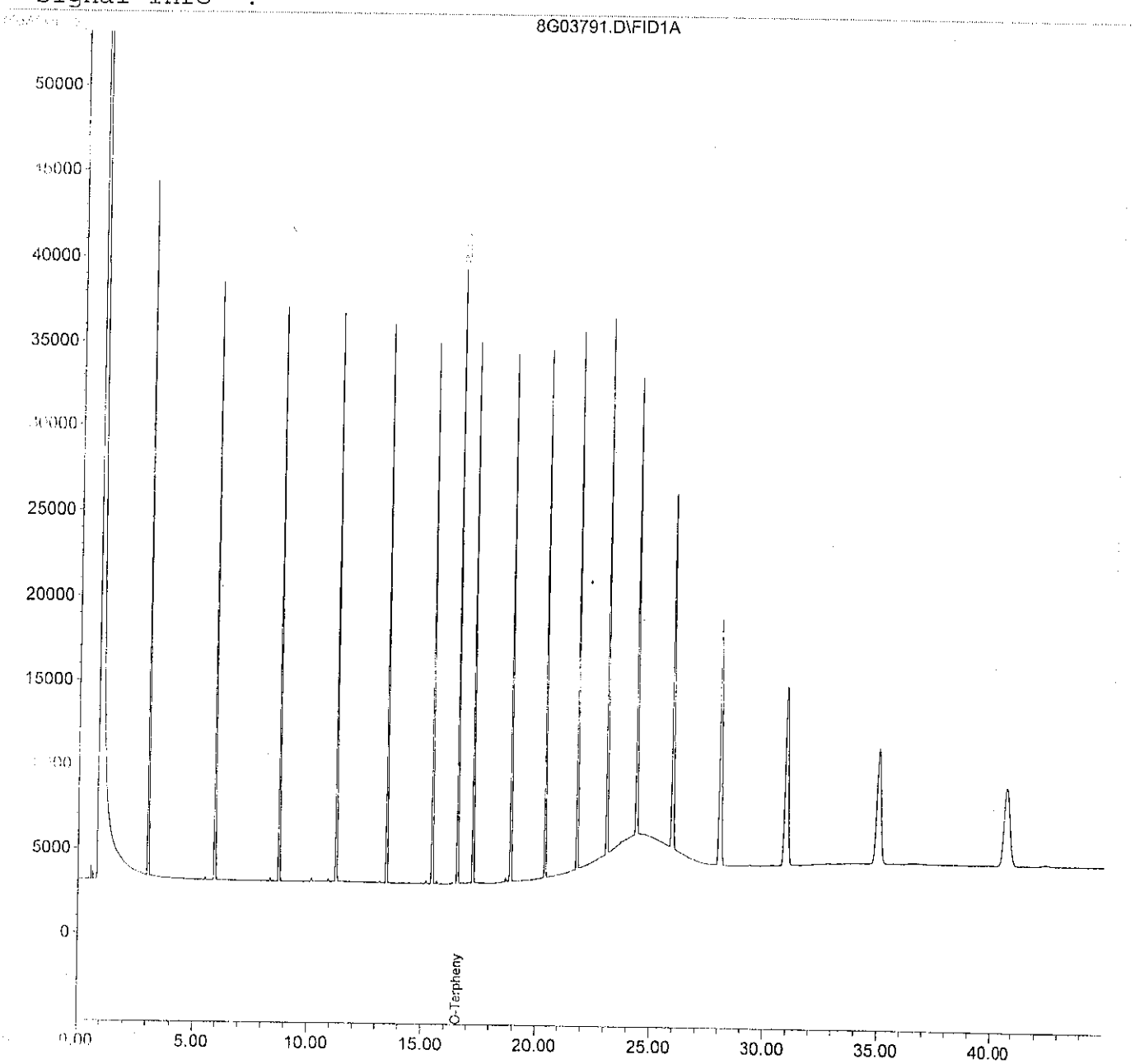
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101802\8G03791.D
Acq On : 18 Oct 2002 20:06
Sample : WG127599-03 PRO STD @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 10:40 2002 Quant Results File: PROFRNT.RES

Vial: 4
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101802\8G03792.D
Acq On : 18 Oct 2002 20:59
Sample : WG127599-04 PRO STD @100ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 5
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 19 10:41 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 431568 | 93.043 ppm |
| Spiked Amount 100.000 | Range 49 - 174 | Recovery = | 93.04% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 9141267 | <MDL ppm |

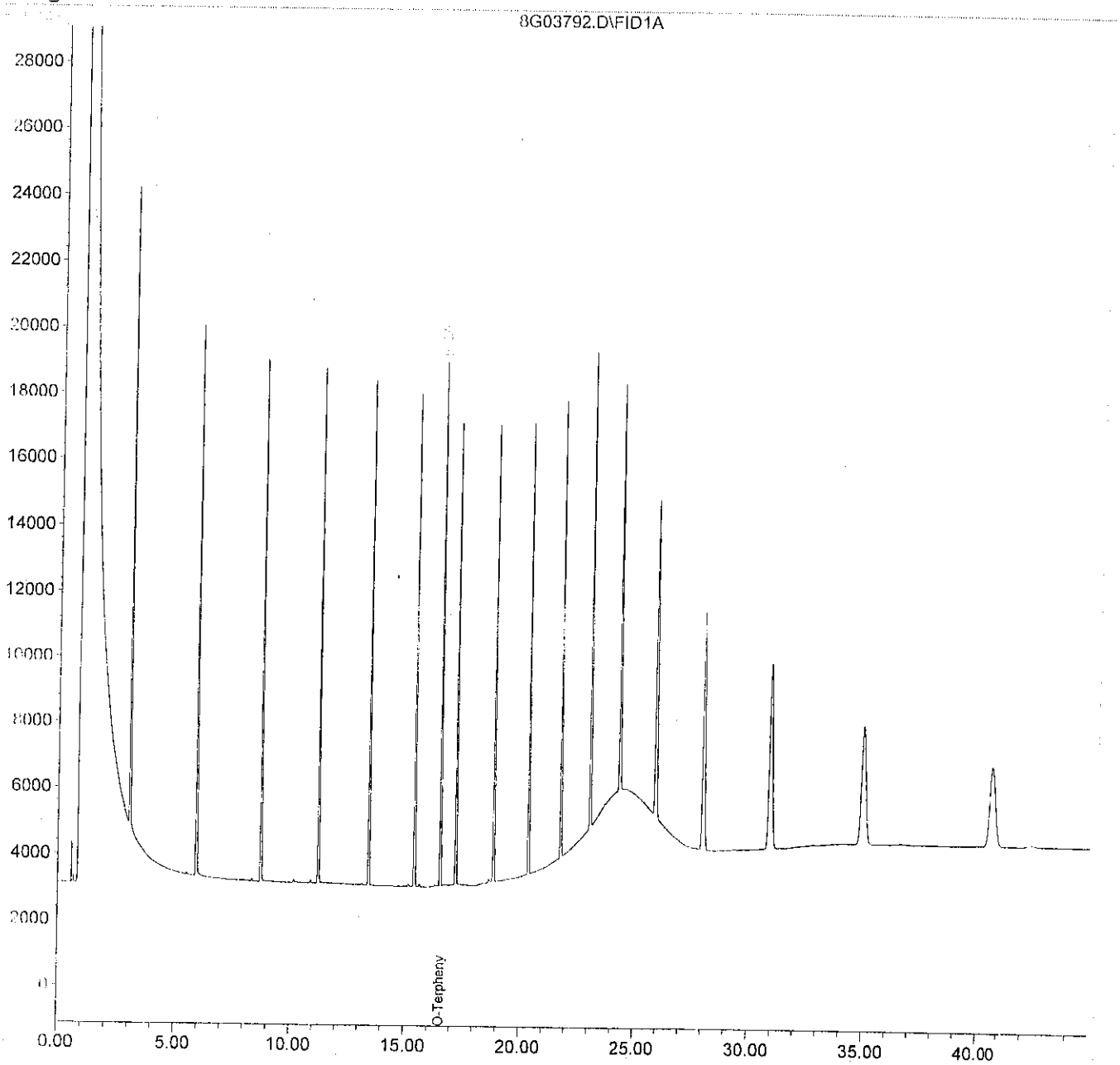
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03792.D PROFRNT.M Sun Oct 20 10:49:33 2002 HP2

Data File : C:\HPCHEM\2\DATA\101802\8G03792.D
Acq On : 18 Oct 2002 20:59
Sample : WG127599-04 PRO STD @100ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 10:41 2002 Quant Results File: PROFRNT.RES

Vial: 5
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101802\8G03793.D
Acq On : 18 Oct 2002 21:52
Sample : WG127599-05 PRO STD @50ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 6
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 19 10:41 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 229160 | 50.280 ppm |
| Spiked Amount 100.000 | Range 49 - 174 | Recovery = | 50.28% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 2772637 | <MDL ppm |

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

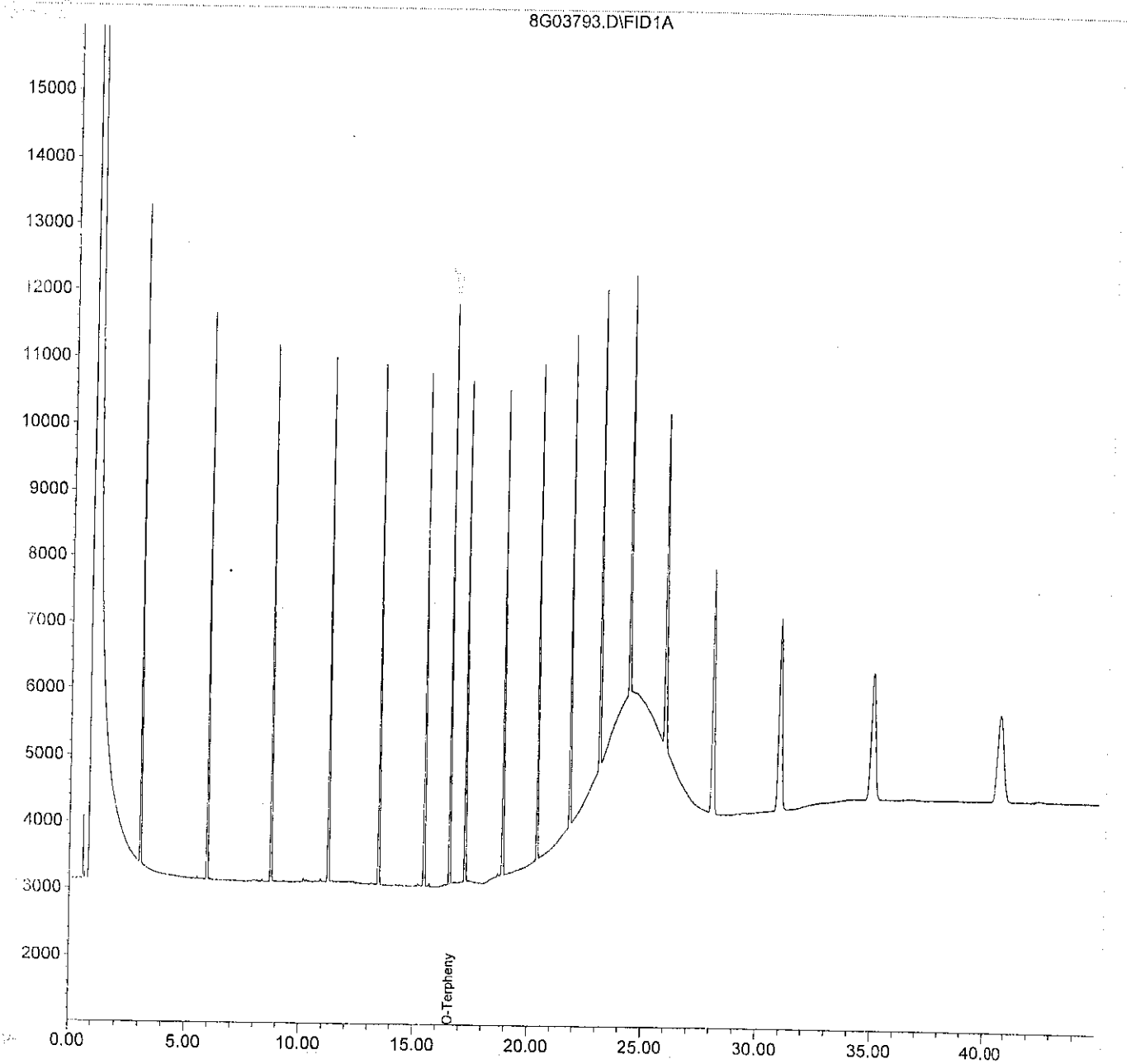
Data File : C:\HPCHEM\2\DATA\101802\8G03793.D
Acq On : 18 Oct 2002 21:52
Sample : WG127599-05 PRO STD @50ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 6
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 19 10:41 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:39:50 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101802\8G03794.D
Acq On : 18 Oct 2002 16:34
Sample : WG127599-06 PRO STD @5ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 20 10:54 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:46:28 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.56 | 27952 | 5.901 ppm |
| Spiked Amount 100.000 | Range 49 - 174 | Recovery = | 5.90%# |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 422141 | <MDL ppm |

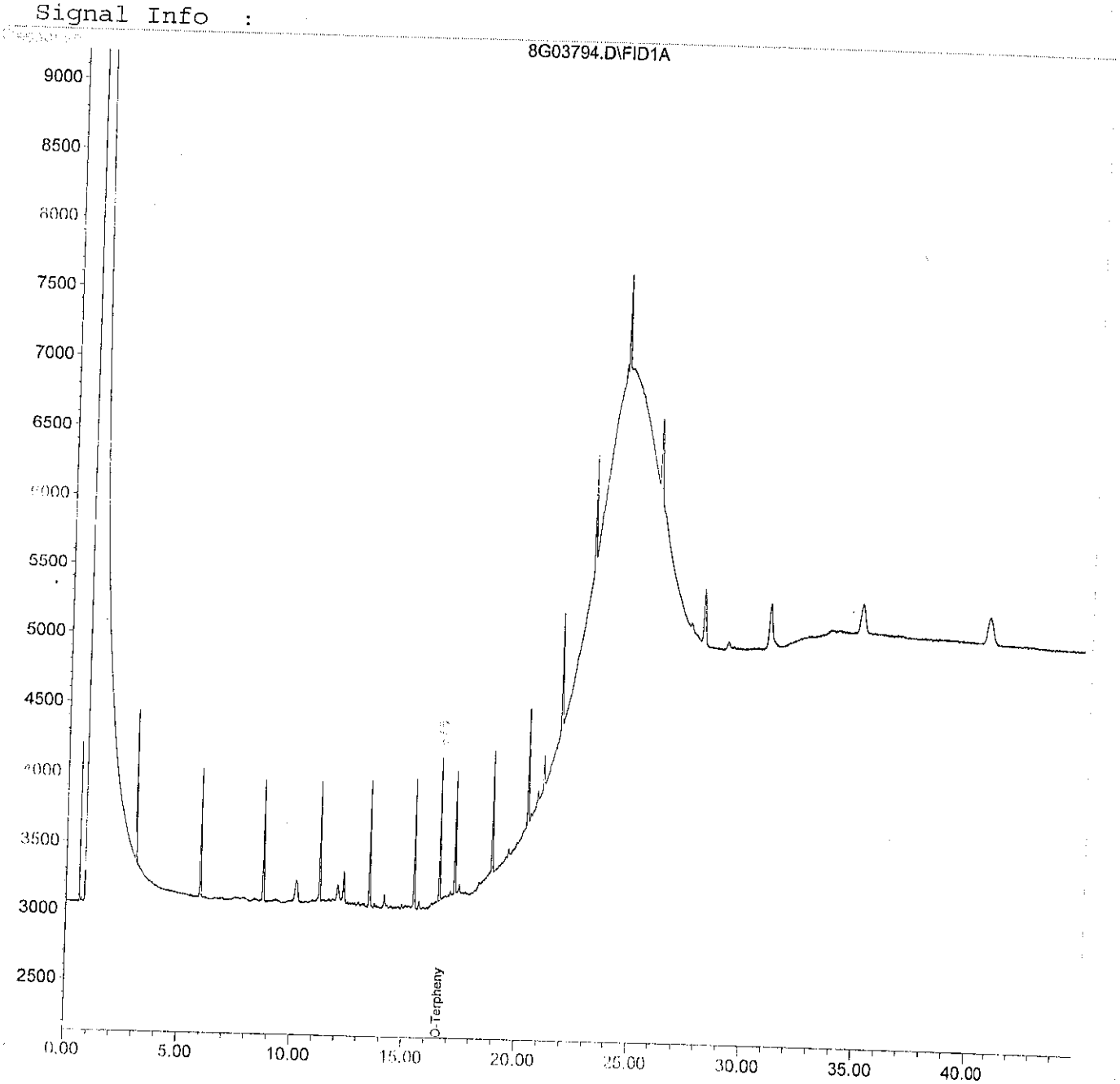
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03794.D PROFRNT.M Mon Oct 21 09:36:01 2002

Data File : C:\HPCHEM\2\DATA\101802\8G03794.D
Acq On : 18 Oct 2002 16:34
Sample : WG127599-06 PRO STD @5ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 20 10:54 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:46:28 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

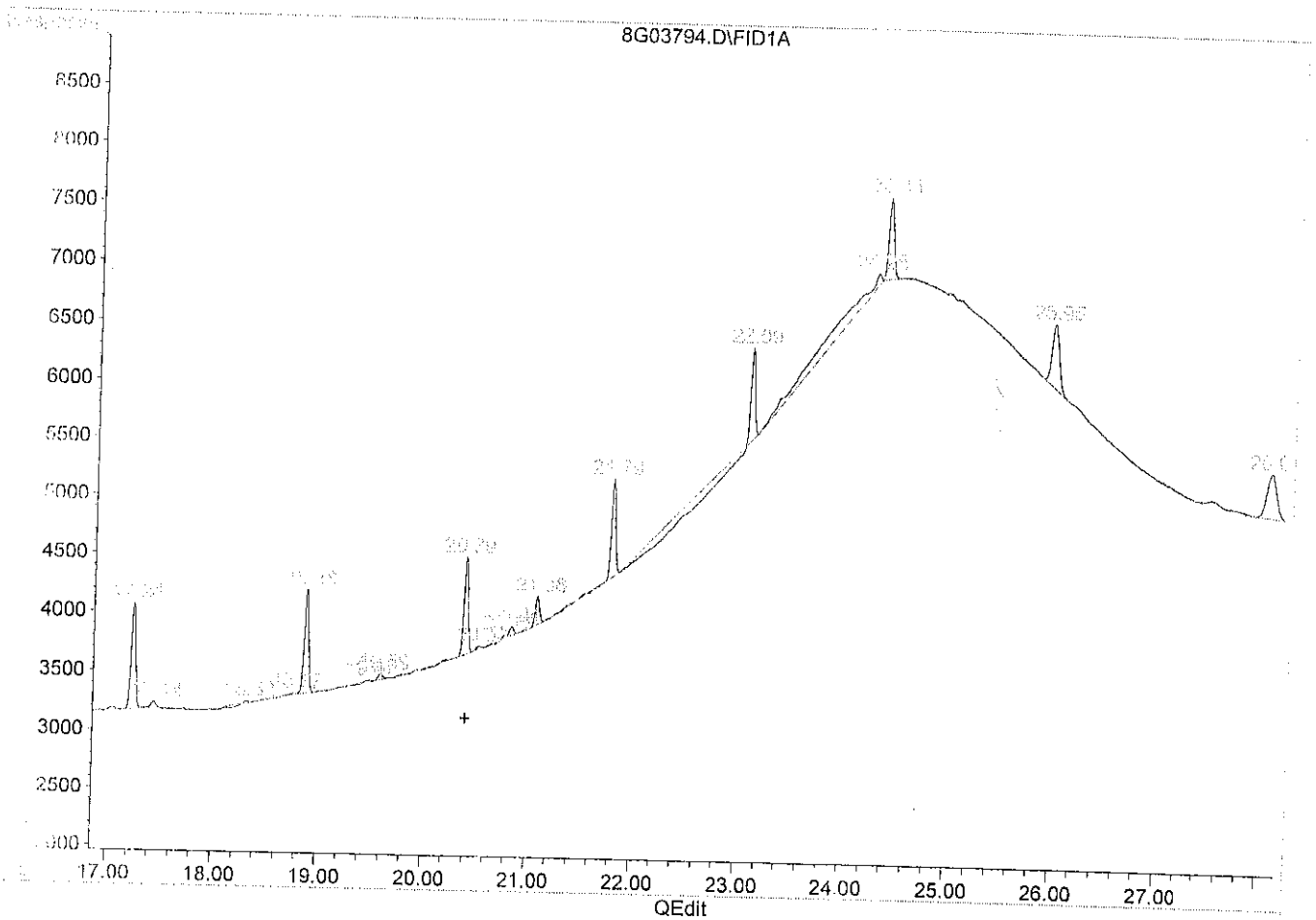
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101802\8G03794.D
Acq On : 18 Oct 2002 16:34
Sample : PRO STD @5ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 10:49 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 10:44:59 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 78.583ppm m

response 5469458

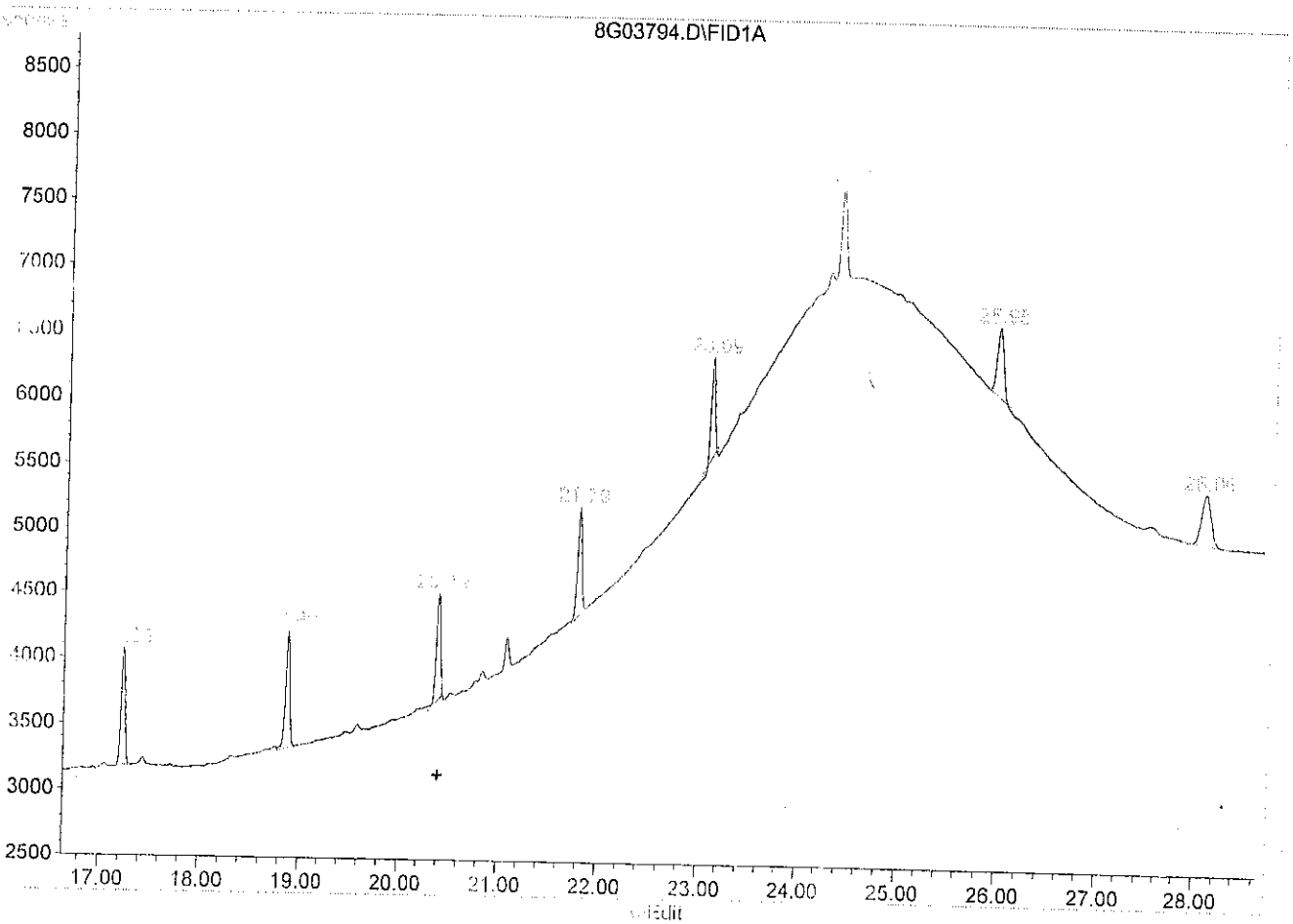
(+) = Expected Retention Time

8G03794.D PROFRNT.M Sat Oct 19 10:49:20 2002 HP2

Data File : C:\HPCHEM\2\DATA\101802\8G03794.D
Acq On : 18 Oct 2002 16:34
Sample : WG127599-01 PRO STD @5ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 11:01 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 6.065ppm m

response 422141

HV 10/19/02

(+) = Expected Retention Time

8G03794.D PROFRNT.M Sun Oct 20 10:55:11 2002 HP2

Data File : C:\HPCHEM\2\DATA\101802\8G03796.D
Acq On : 18 Oct 2002 23:37
Sample : WG127599-07 ALT PRO STD @200pm
Misc : 1,1 SOS60-35
IntFile : SURR.E

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 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 | 3308.894 | 2.7 | 95 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 1.157 | 99.4# | 1 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8G03796.D PROFRNT.M Sun Oct 20 10:57:08 2002 HP2 Page

Data File : C:\HPCHEM\2\DATA\101802\8G03796.D
Acq On : 18 Oct 2002 23:37
Sample : WG127599-07 ALT PRO STD @200pm
Misc : 1,1 SOS60-35
IntFile : SURR.E

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 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) |
|---|---|---|---|---|---|

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

Data File : C:\HPCHEM\2\DATA\101802\8G03796.D
Acq On : 18 Oct 2002 23:37
Sample : WG127599-07 ALT PRO STD @200pm
Misc : 1,1 SOS60-35
IntFile : SURR.E
Quant Time: Oct 19 11:15 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:06:19 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.56 | 5478 | 1.157 ppm |
| Spiked Amount 100.000 | Range 49 - 174 | Recovery = | 1.16%# |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 13873849 | 3308.894 ppm |

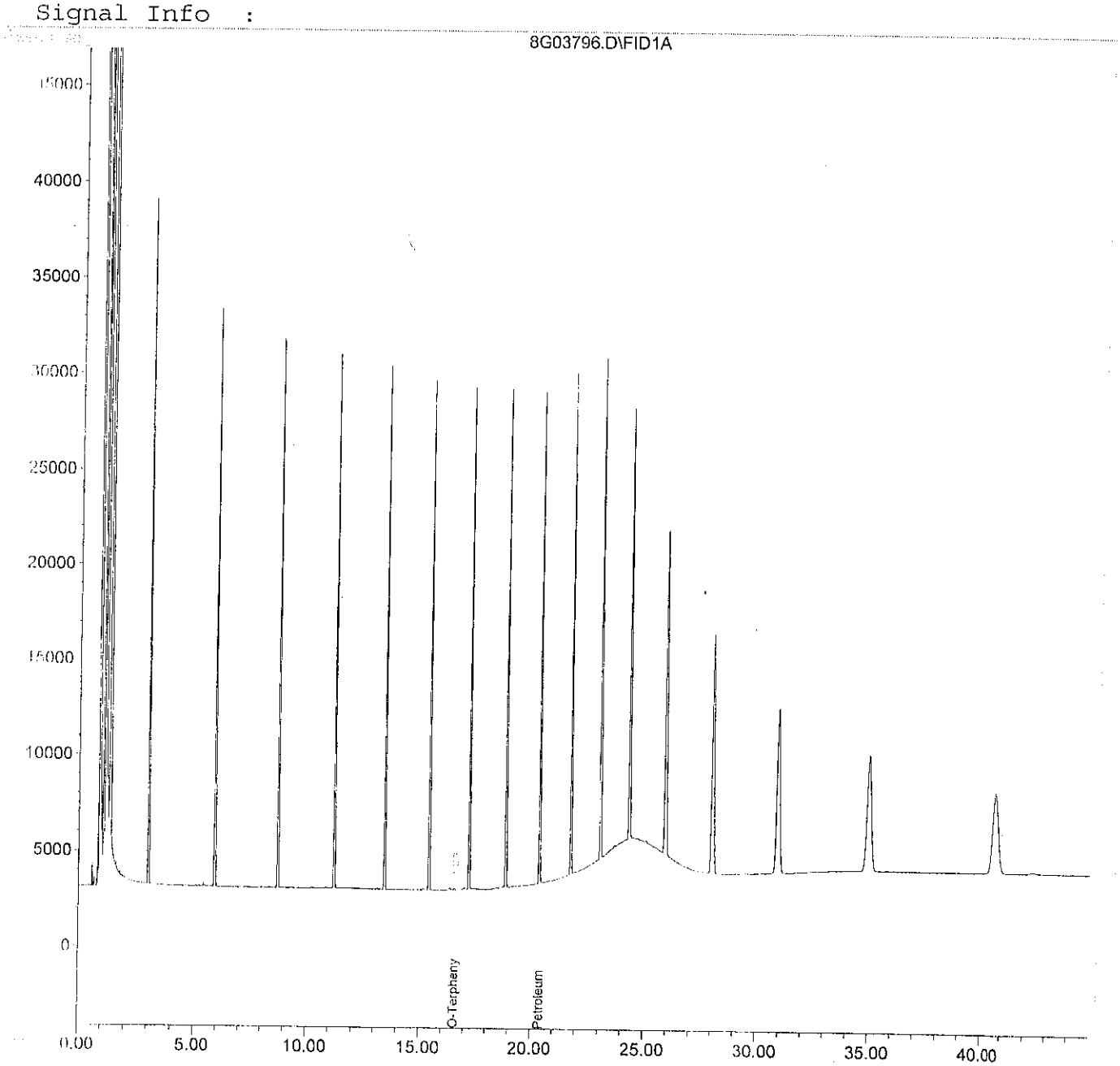
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03796.D PROFRNT.M Sun Oct 20 10:56:42 2002

Data File : C:\HPCHEM\2\DATA\101802\8G03796.D
Acq On : 18 Oct 2002 23:37
Sample : WG127599-07 ALT PRO STD @200pm
Misc : 1,1 SOS60-35
IntFile : SURR.E
Quant Time: Oct 19 11:15 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:06:19 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

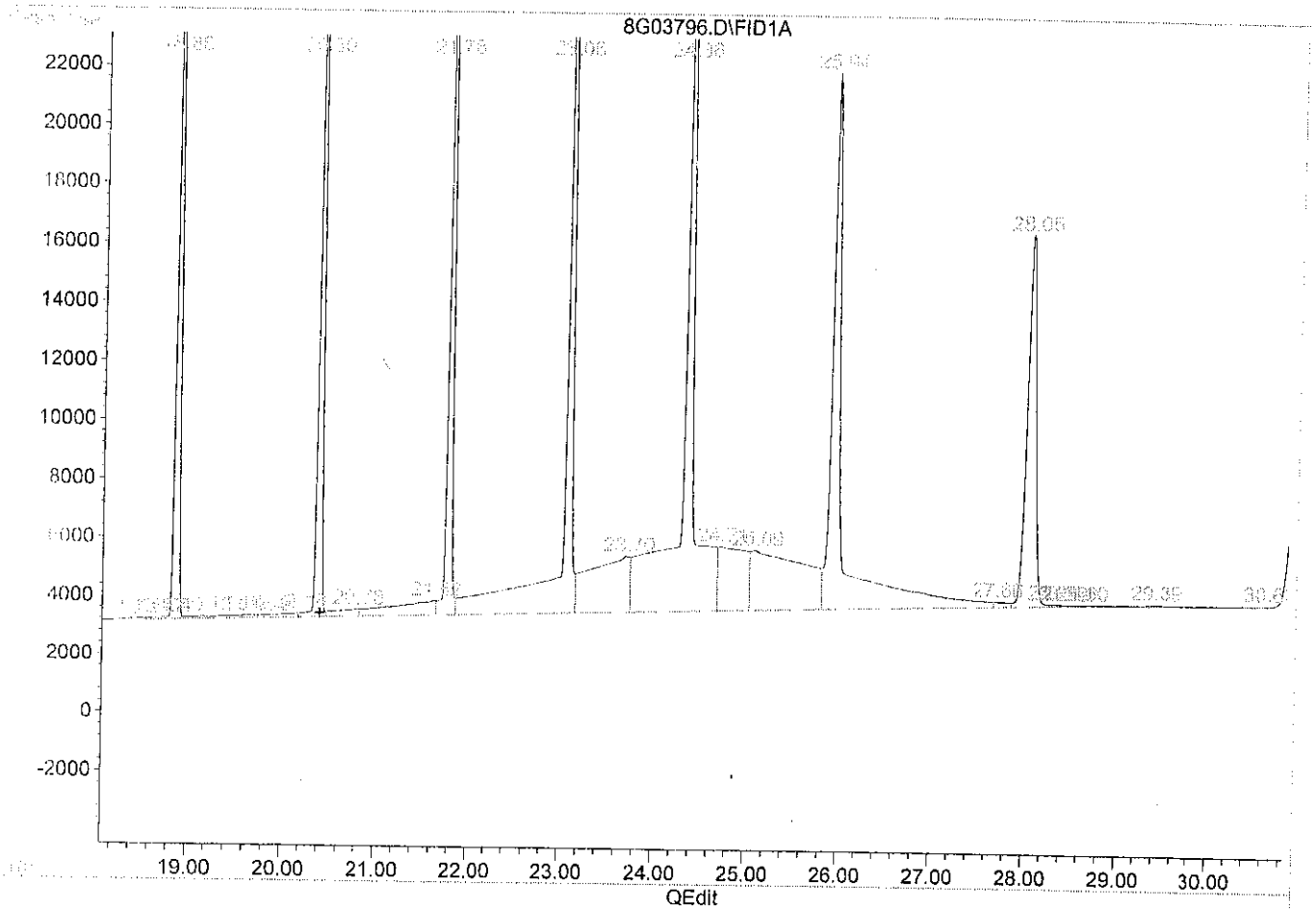



8G03796.D PROFRNT.M Sun Oct 20 10:56:43 2002 HP2 Page

Data File : C:\HPCHEM\2\DATA\101802\8G03796.D
Acq On : 18 Oct 2002 23:37
Sample : ALT PRO STD @200pm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 11:14 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:08:38 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 2247.173ppm m

response 9422163

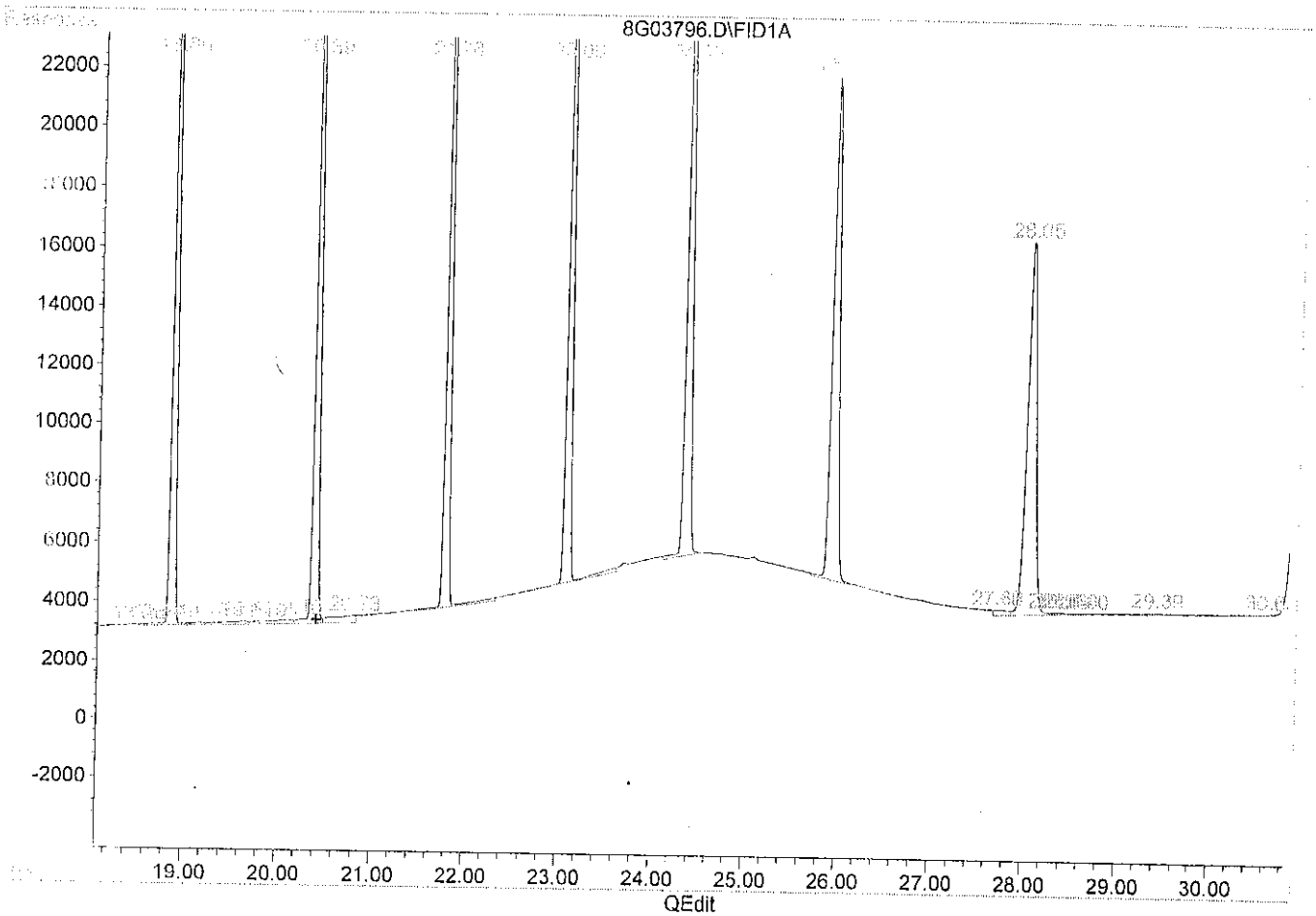
(+) = Expected Retention Time

8G03796.D PROFRNT.M Sat Oct 19 11:14:27 2002 HP2

Data File : C:\HPCHEM\2\DATA\101802\8G03796.D
Acq On : 18 Oct 2002 23:37
Sample : ALT PRO STD @200pm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 19 11:14 2002 Quant Results File: PROFRNT.RES

Vial: 8
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:08:38 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 3308.894ppm m

response 13873849

HV 10/19/02

(+) = Expected Retention Time

8G03796.D PROFRNT.M Sat Oct 19 11:15:08 2002 HP2

Data File : C:\HPCHEM\2\DATA\101902\8G03797.D
Acq On : 19 Oct 2002 11:58
Sample : WG127599-08 PRO CCV @200pm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 1
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 10:55:42 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 | 3775.378 | -11.0 | 109 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 214.513 | -7.3 | 107 | 0.00 |

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

Data File : C:\HPCHEM\2\DATA\101902\8G03797.D
Acq On : 19 Oct 2002 11:58
Sample : WG127599-08 PRO CCV @200pm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 1
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 20 10:58 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 1015514 | 214.513 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery | = 1072.57%# |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 16005888 | 3775.378 ppm |

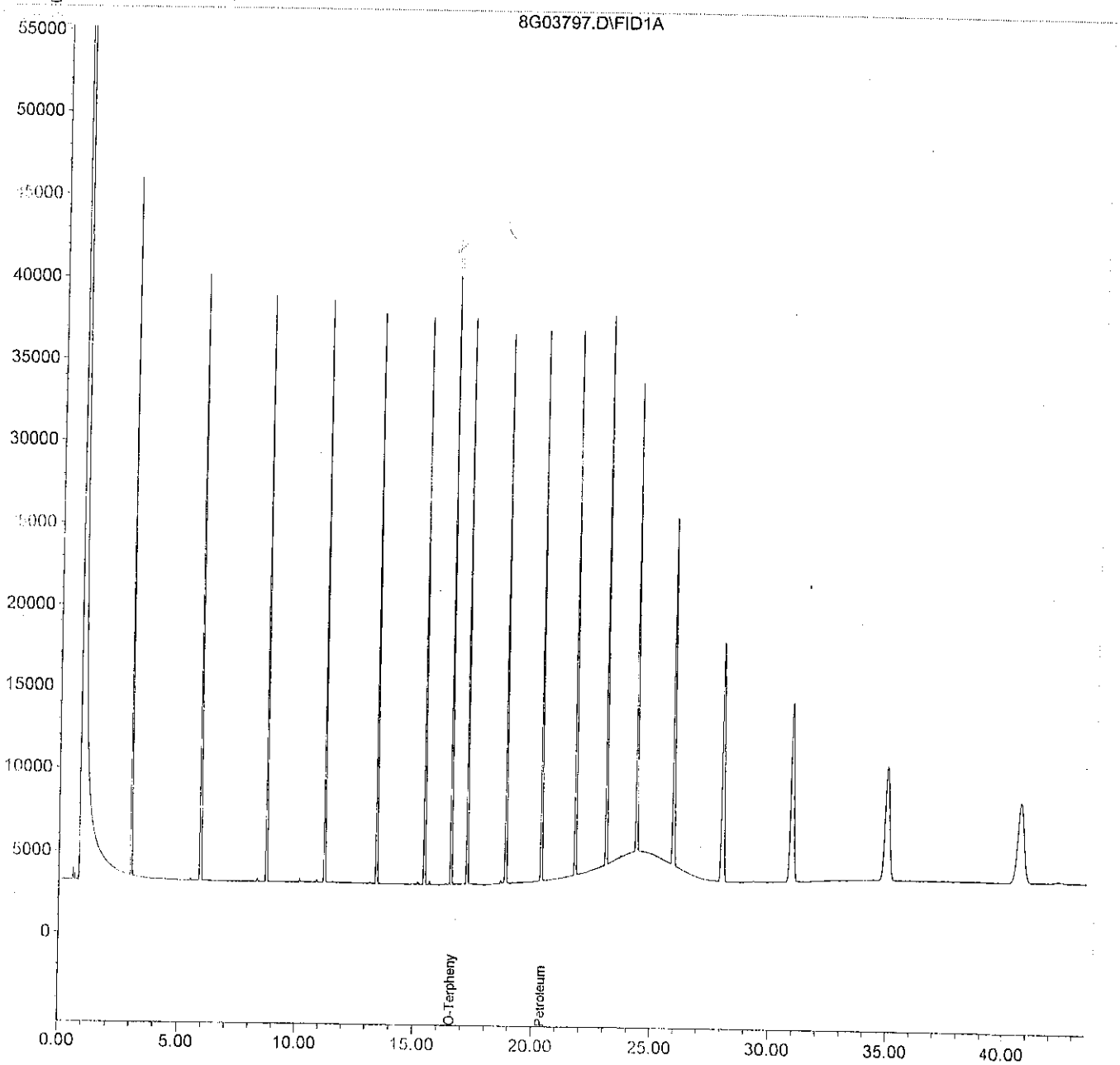
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03797.D PROFRNT.M Sun Oct 20 10:58:22 2002 HP2

Data File : C:\HPCHEM\2\DATA\101902\8G03797.D
Acq On : 19 Oct 2002 11:58
Sample : WG127599-08 PRO CCV @200pm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 20 10:58 2002 Quant Results File: PROFRNT.RES

Vial: 1
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03807.D
Acq On : 19 Oct 2002 20:51
Sample : WG127599-09 PRO CCV @200ppm
Misc : 1,1 water
IntFile : SURR.E

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 10:55:42 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 | 3364.111 | 1.1 | 97 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 188.616 | 5.7 | 94 | 0.00 |

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

Data File : C:\HPCHEM\2\DATA\101902\8G03807.D
Acq On : 19 Oct 2002 20:51
Sample : WG127599-09 PRO CCV @200ppm
Misc : 1,1 water
IntFile : SURR.E

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 20 10:58 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 892920 | 188.616 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery = 943.08%# | |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 14262302 | 3364.111 ppm |

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

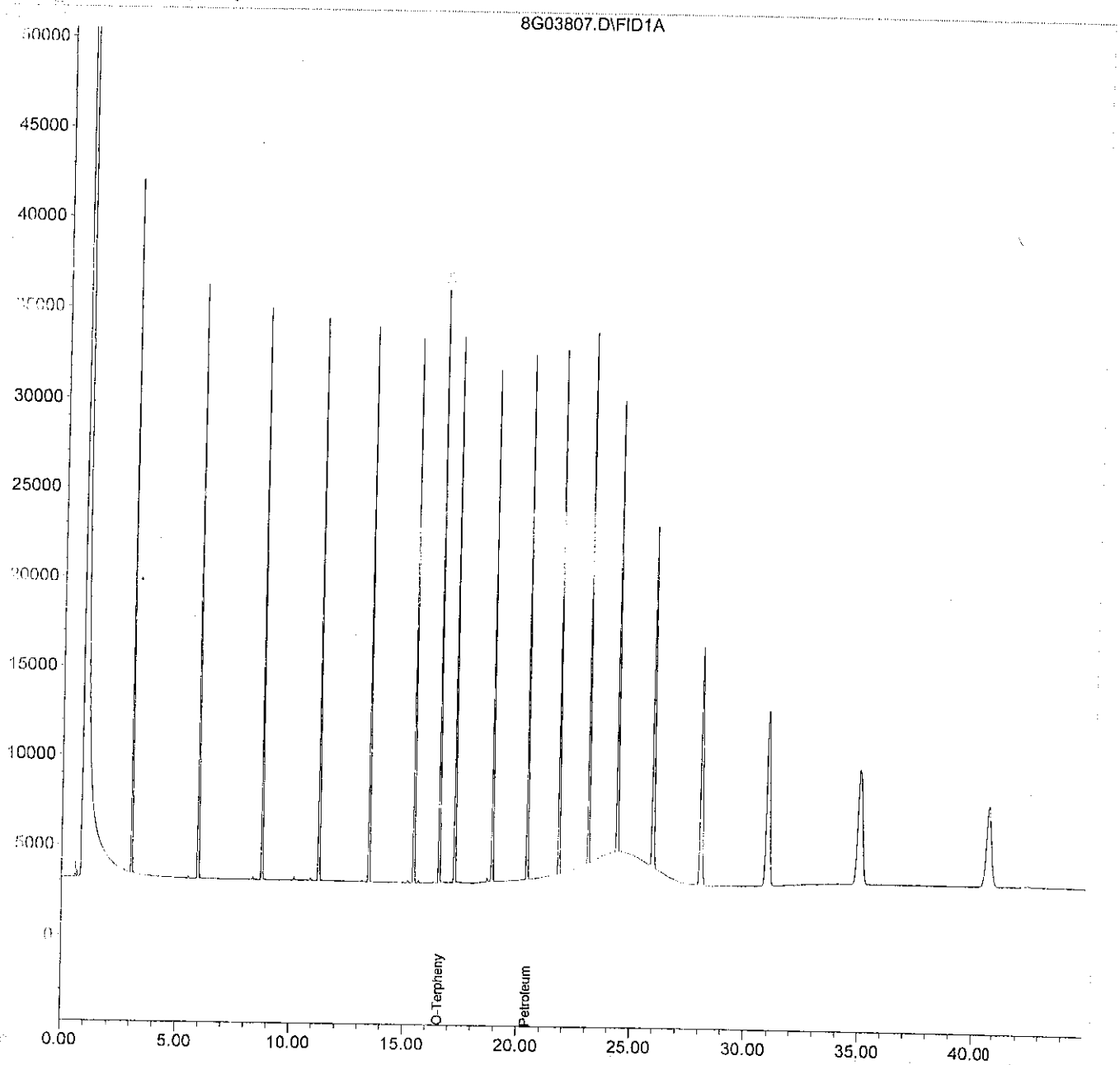
Data File : C:\HPCHEM\2\DATA\101902\8G03807.D
Acq On : 19 Oct 2002 20:51
Sample : WG127599-09 PRO CCV @200ppm
Misc : 1,1 water
IntFile : SURR.E

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 20 10:58 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03818.D
Acq On : 20 Oct 2002 6:29
Sample : WG127599-10 PRO CCV @200ppm
Misc : 1,1 water
IntFile : SURR.E

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 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 | 3590.399 | -5.6 | 103 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 178.649 | 10.7 | 89 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
8G03818.D PROFRNT.M Sun Oct 20 11:14:40 2002 HP2 Page 1

Data File : C:\HPCHEM\2\DATA\101902\8G03818.D
Acq On : 20 Oct 2002 6:29
Sample : WG127599-10 PRO CCV @200ppm
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 20 10:42 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 845732 | 178.649 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery | = 893.24%# |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 15054169 | 3590.399 ppm |

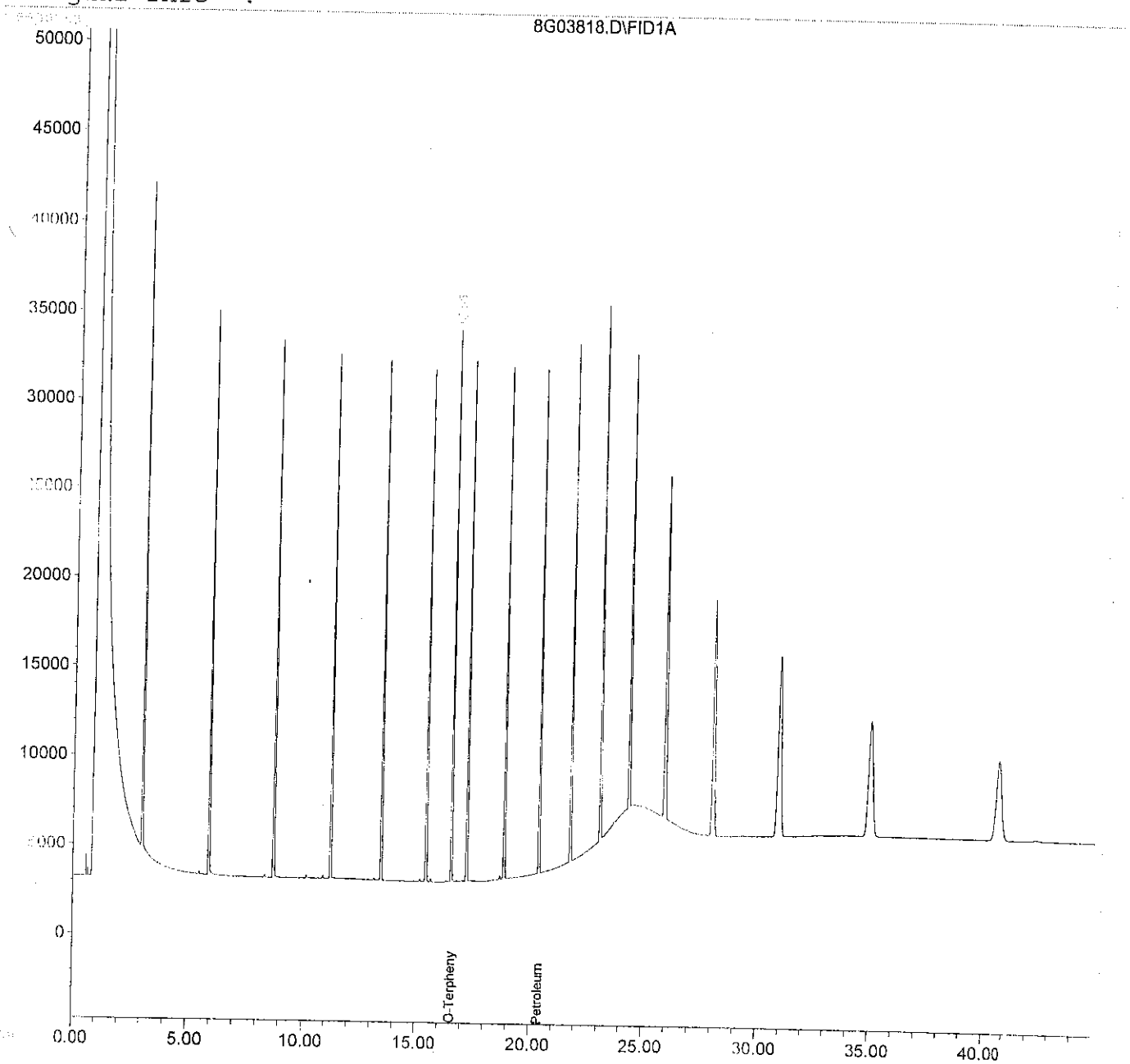
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03818.D PROFRNT.M Sun Oct 20 11:00:18 2002 HP2

Data File : C:\HPCHEM\2\DATA\101902\8G03818.D
Acq On : 20 Oct 2002 6:29
Sample : WG127599-10 PRO CCV @200ppm
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 20 10:42 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

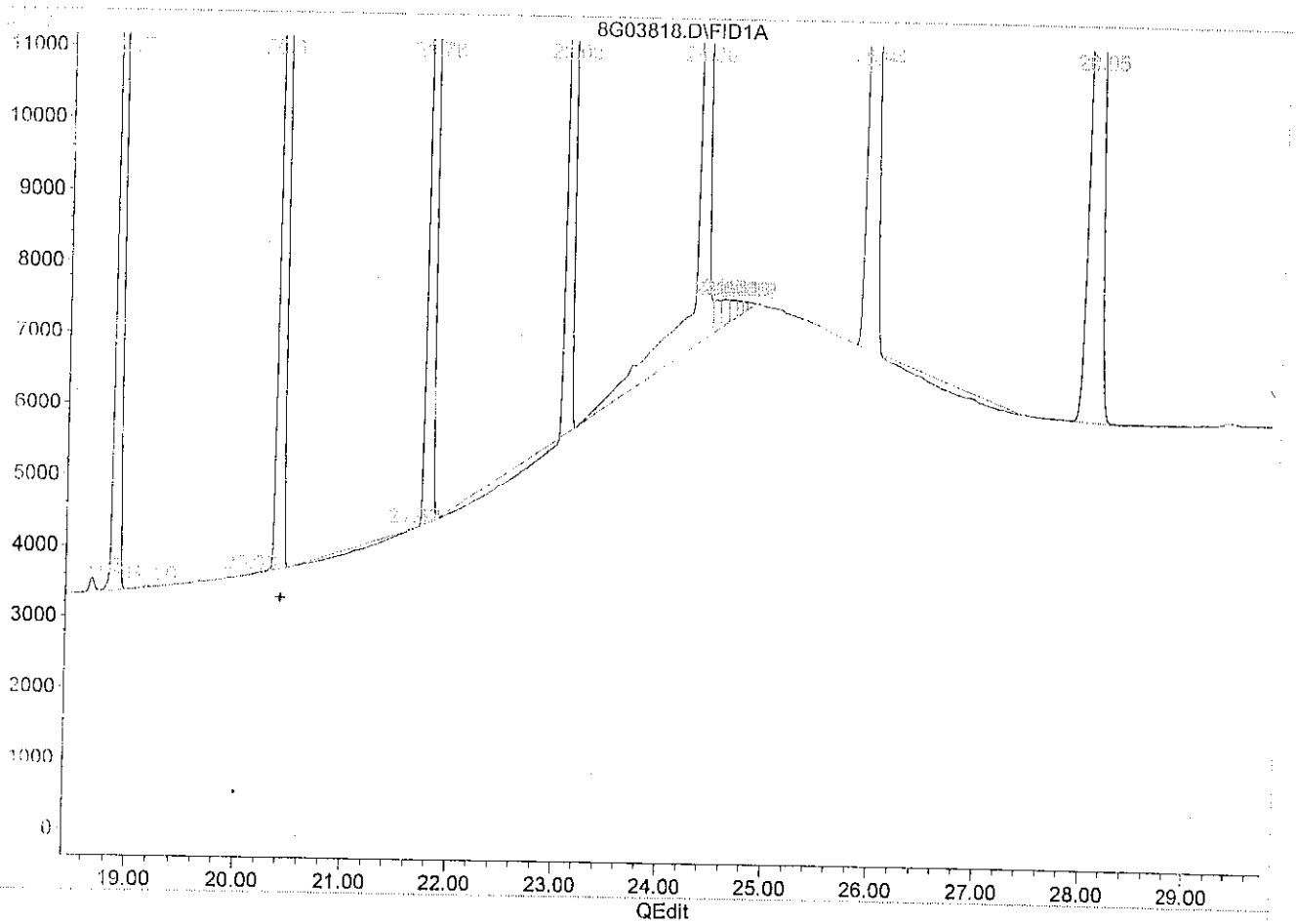
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03818.D
Acq On : 20 Oct 2002 6:29
Sample : PRO CCV @200ppm
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 20 10:41 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 2539.044ppm m

response 10645947

(+) = Expected Retention Time

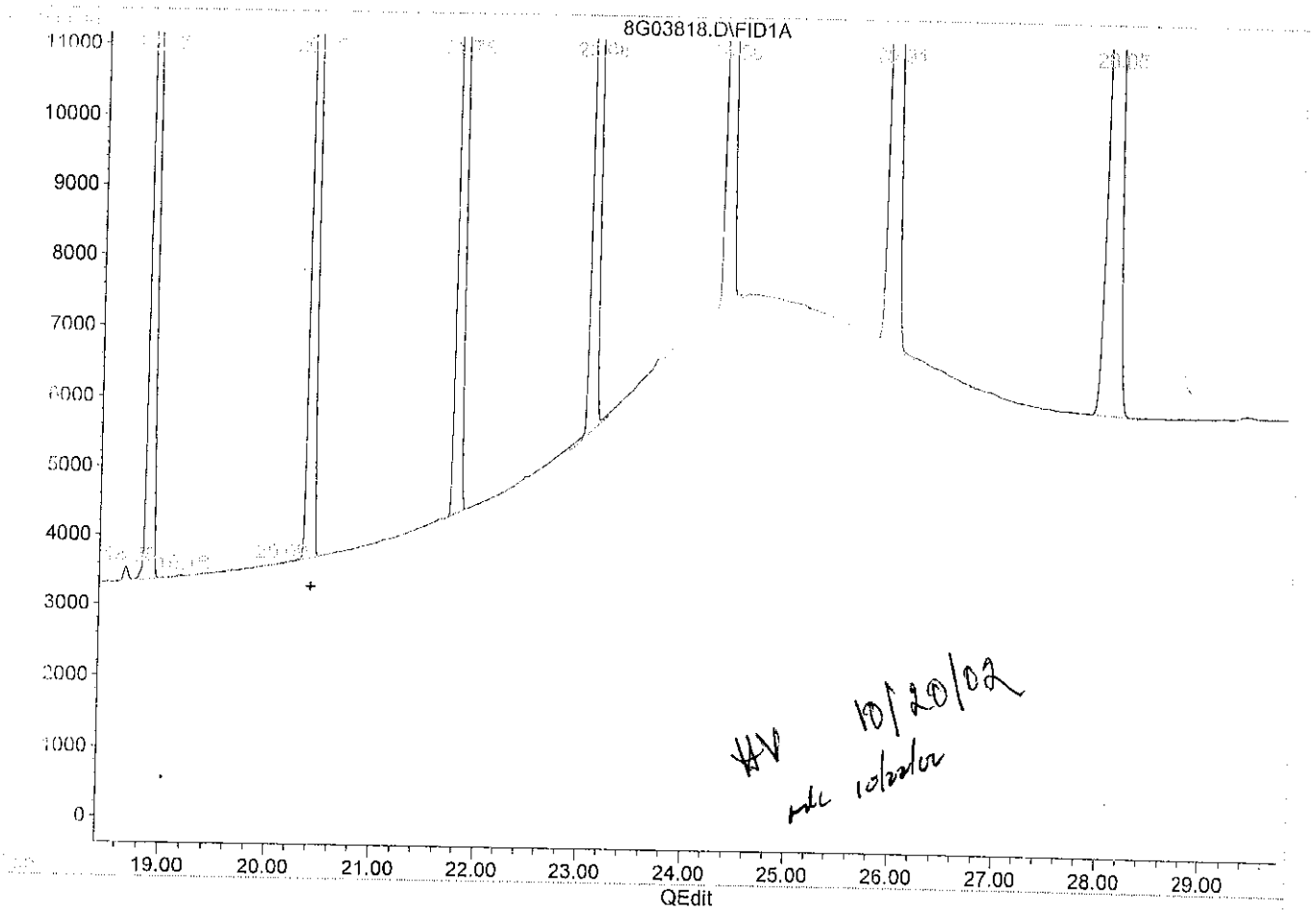
8G03818.D PROFRNT.M Sun Oct 20 10:41:27 2002 HP2

Data File : C:\HPCHEM\2\DATA\101902\8G03818.D
Acq On : 20 Oct 2002 6:29
Sample : PRO CCV @200ppm
Misc : 1,1 water
OutFile : SURR.E

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 20 10:41 2002 Quant Results File: PROFRNT.RES

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 3590.399ppm m

response 15054169

(+) = Expected Retention Time

8G03818.D PROFRNT.M Sun Oct 20 10:42:07 2002 HP2

Data File : C:\HPCHEM\2\DATA\102002\8G03832.D
Acq On : 20 Oct 2002 19:48
Sample : WG127599-13 PRO CCV @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 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 | 3447.274 | -1.4 | 100 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 175.706 | 12.1 | 87 | -0.01 |

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

Data File : C:\HPCHEM\2\DATA\102002\8G03832.D
Acq On : 20 Oct 2002 19:48
Sample : WG127599-13 PRO CCV @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 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) |
|---|---|---|---|---|---|

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

Data File : C:\HPCHEM\2\DATA\102002\8G03832.D
Acq On : 20 Oct 2002 19:48
Sample : WG127599-13 PRO CCV @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 21 8:17 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 12:09:36 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.54 | 831801 | 175.706 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery | = 878.53%# |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 14614877 | 3447.274 ppm |

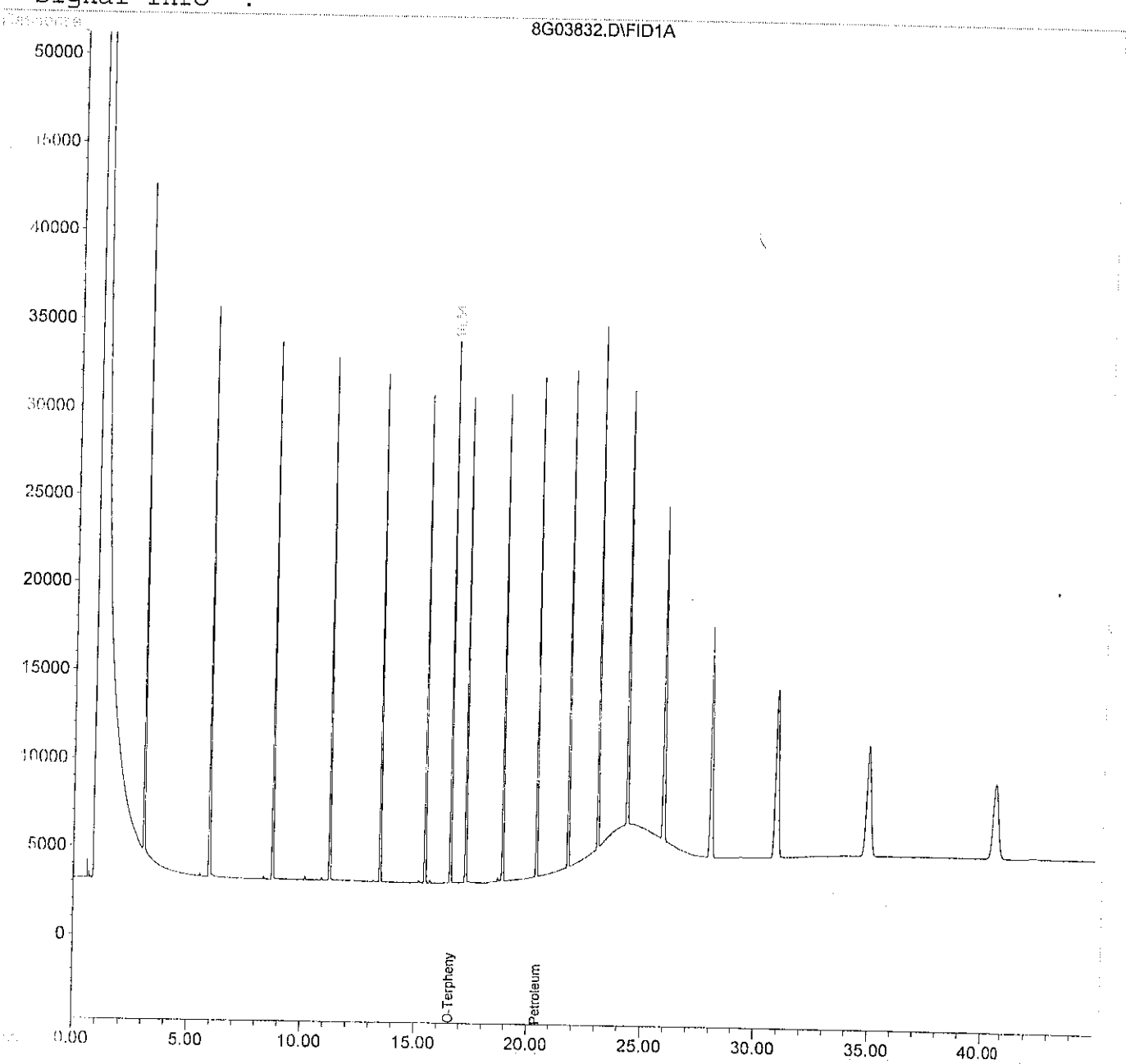
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03832.D PROFRNT.M Mon Oct 21 08:17:35 2002 HP2 Page 1

Data File : C:\HPCHEM\2\DATA\102002\8G03832.D
Acq On : 20 Oct 2002 19:48
Sample : WG127599-13 PRO CCV @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 21 8:17 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 12:09:36 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

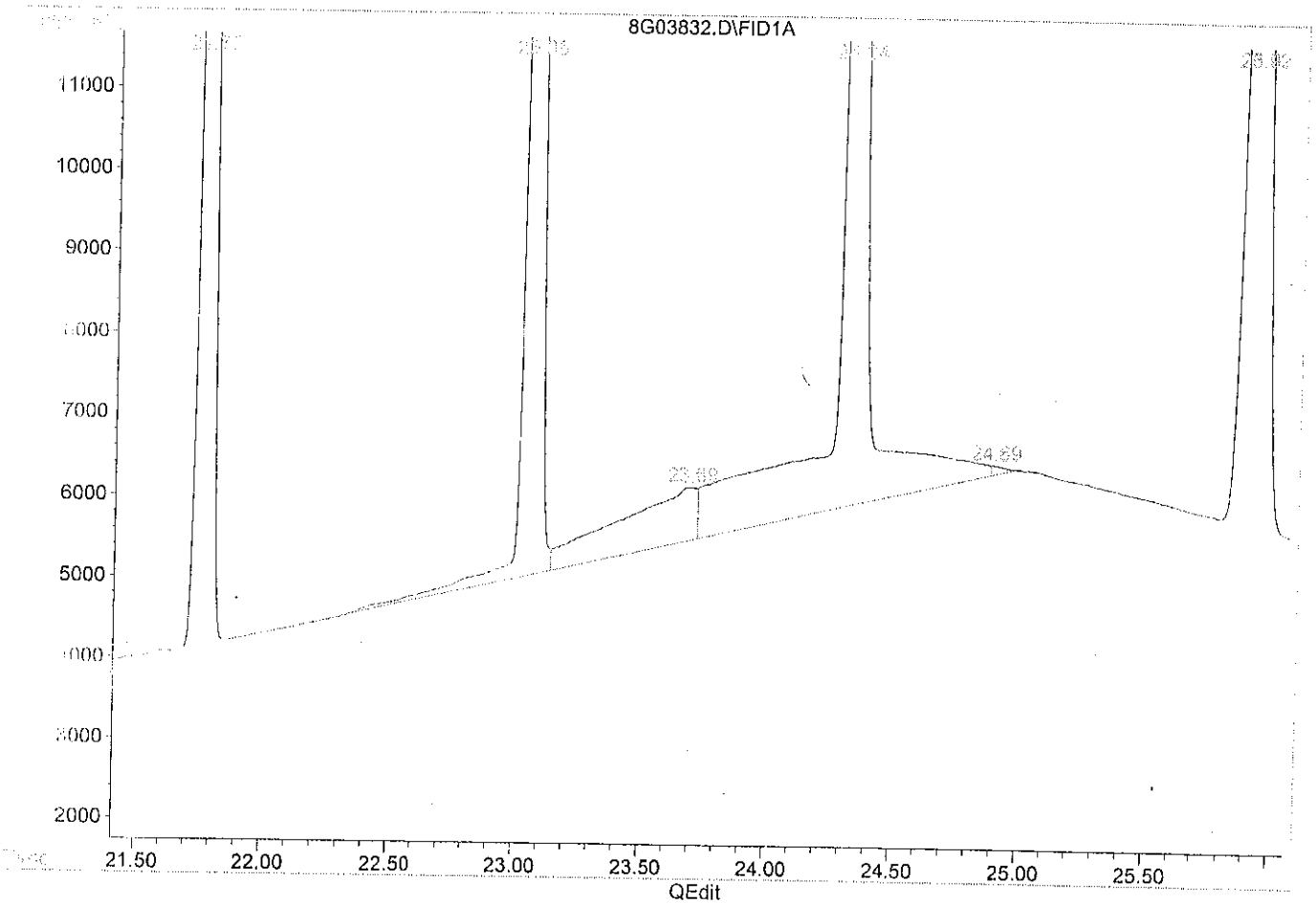
Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\102002\8G03832.D
Acq On : 20 Oct 2002 19:48
Sample : WG127599-13 PRO CCV @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 21 8:16 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 2411.846ppm m

Response 10225133

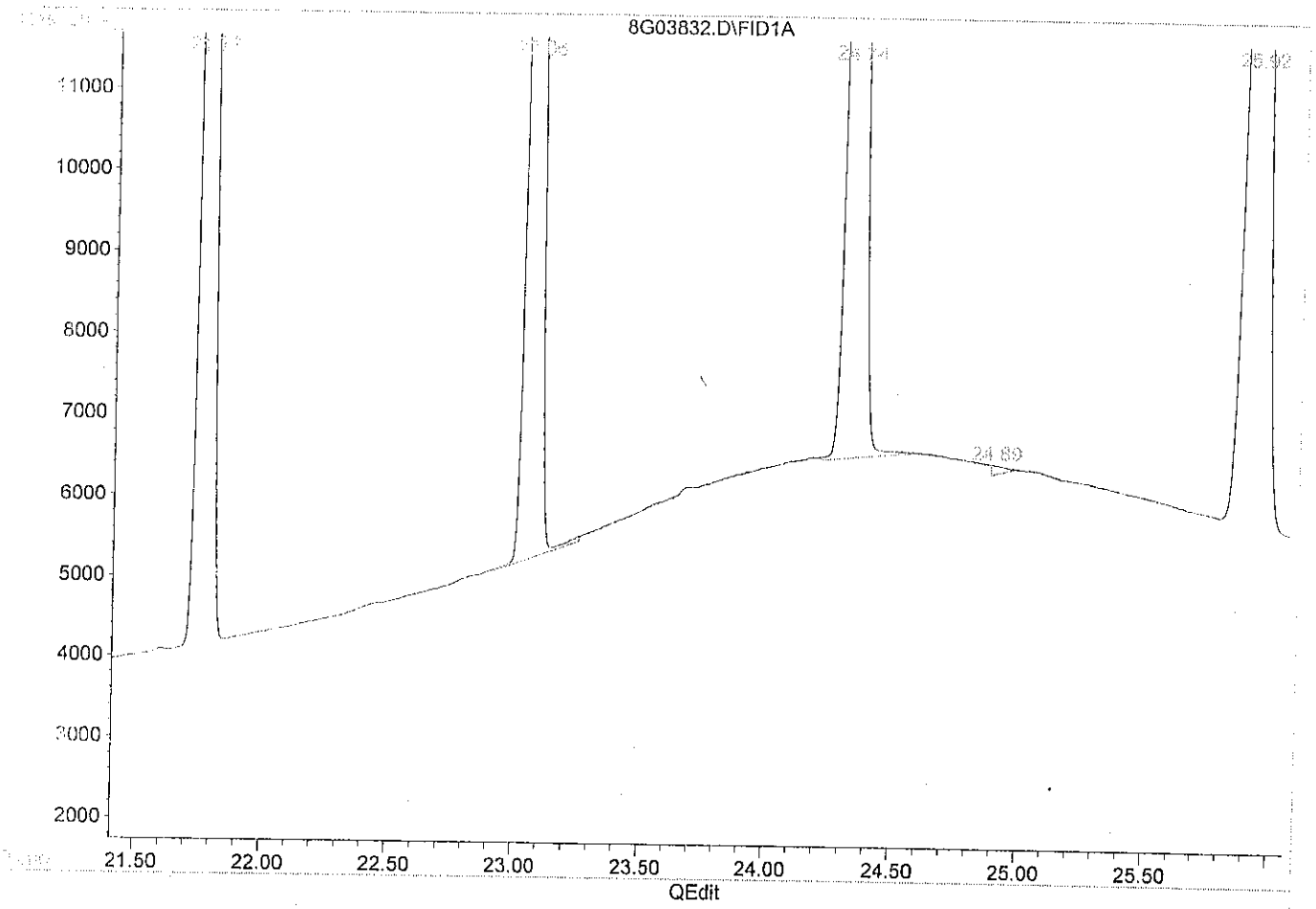
(+) = Expected Retention Time

8G03832.D PROFRNT.M Mon Oct 21 08:17:08 2002 HP2

Data File : C:\HPCHEM\2\DATA\102002\8G03832.D
Acq On : 20 Oct 2002 19:48
Sample : WG127599-13 PRO CCV @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 21 8:16 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration




(1) Petroleum Range (h)

20.40min 3447.274ppm m

response 14614877

HV 10/21/02

(+) = Expected Retention Time

8G03832.D PROFRNT.M Mon Oct 21 08:17:21 2002 HP2

Data File : C:\HPCHEM\2\DATA\102002\8G03839.D  Vial: 11
Acq On : 21 Oct 2002 1:55  Operator: HV
Sample : WG127599-14 PRO CCV @200ppm  Inst : HP8
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : SURR.E

Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 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 | 3180.282 | 6.5 | 92 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 175.583 | 12.2 | 87 | 0.00 |

(#) = Out of Range  SPCC's out = 0 CCC's out = 0
8G03839.D PROFRNT.M  Mon Oct 21 08:15:49 2002  HP2  Page 1

Data File : C:\HPCHEM\2\DATA\102002\8G03839.D Vial: 11
Acq On : 21 Oct 2002 1:55 Operator: HV
Sample : WG127599-14 PRO CCV @200ppm Inst : HP8
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : SURR.E
Quant Time: Oct 21 8:15 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 12:09:36 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.54 | 831220 | 175.583 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery = 877.92%# | |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 13482952 | 3180.282 ppm |

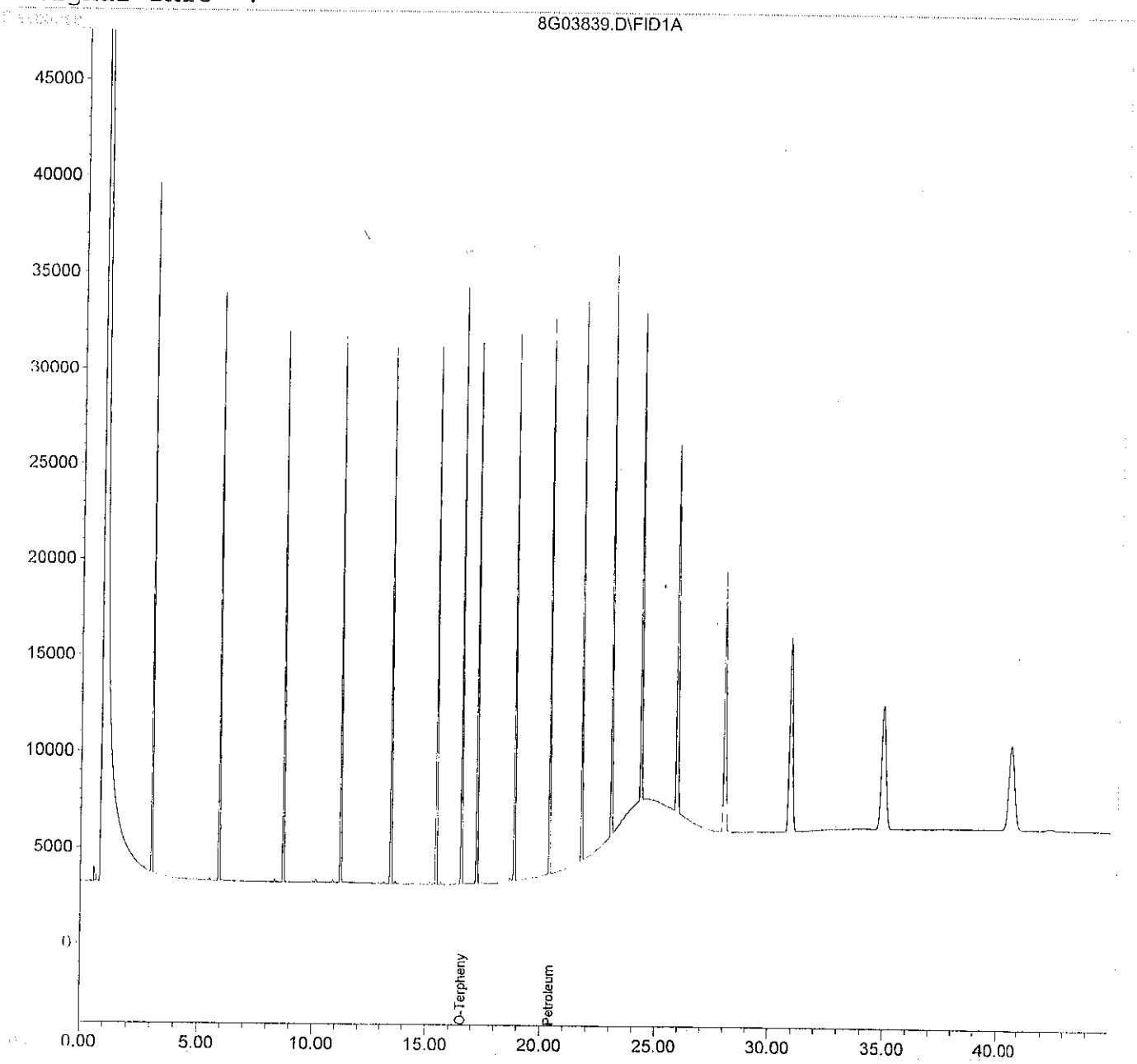
(f)=RT Delta > 1/2 Window (m)=manual int.
8G03839.D PROFRNT.M Mon Oct 21 08:15:54 2002 HP2 Page 1

Data File : C:\HPCHEM\2\DATA\102002\8G03839.D
Acq On : 21 Oct 2002 1:55
Sample : WG127599-14 PRO CCV @200ppm
Misc : 1,1 SOS61-44
IntFile : SURR.E
Quant Time: Oct 21 8:15 2002 Quant Results File: PROFRNT.RES

Vial: 11
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sun Oct 20 12:09:36 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.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\2\DATA\101902\8G03801.D
Acq On : 19 Oct 2002 15:34
Sample : WG126468-01 PRO water BLK V191-P81
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 19 16:20 2002 Quant Results File: PROFRNT.RES

Vial: 5
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 59912 | 12.655 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery = | 63.27% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 453189 | <MDL ppm |

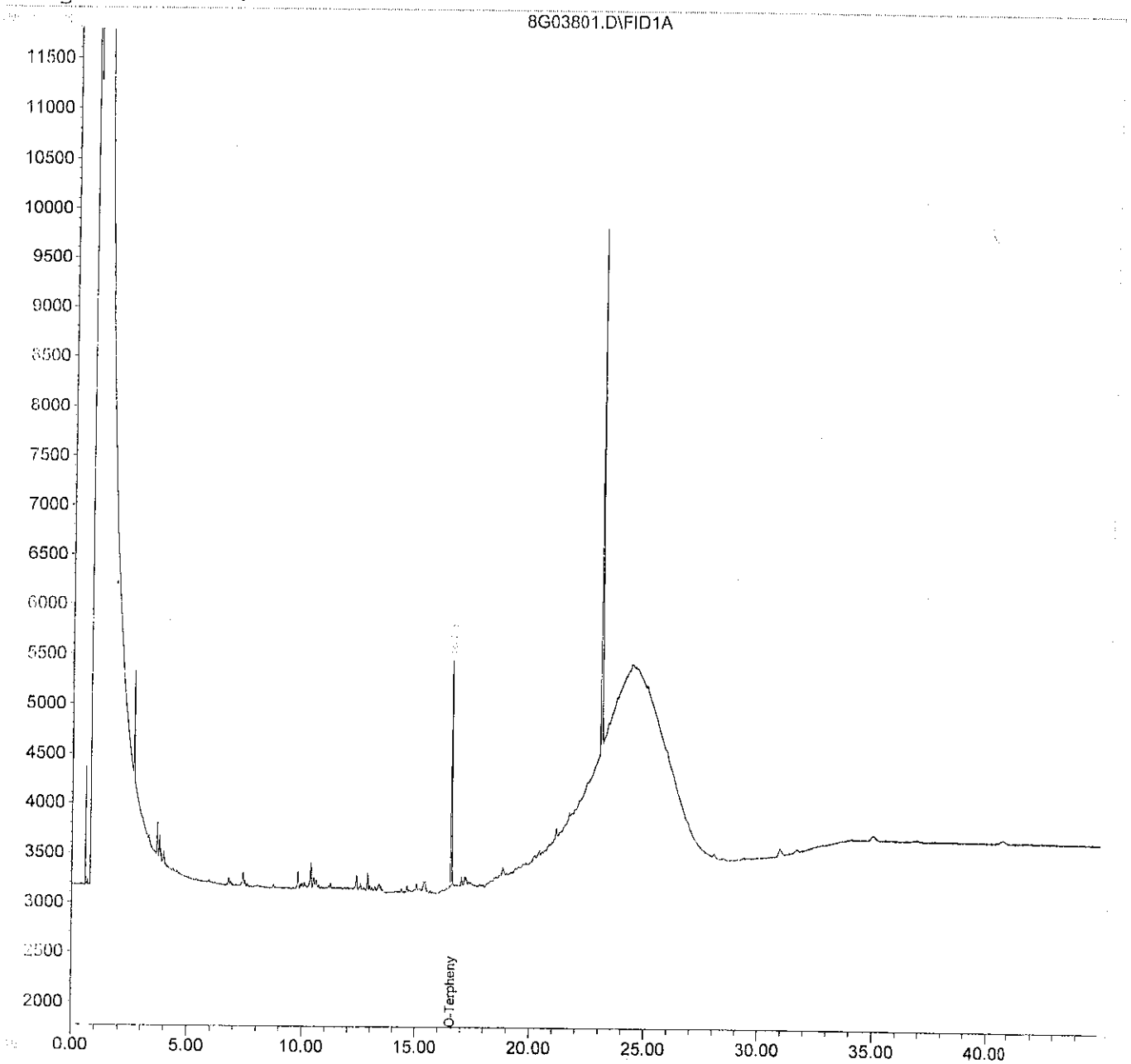
(f)=RT Delta > 1/2 Window
(m)=manual int.
8G03801.D PROFRNT.M Sun Oct 20 11:20:52 2002 HP2 Page 1 of 2

Data File : C:\HPCHEM\2\DATA\101902\8G03801.D
Acq On : 19 Oct 2002 15:34
Sample : WG126468-01 PRO water BLK V191-P81
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 19 16:20 2002 Quant Results File: PROFRNT.RES

Vial: 5
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03811.D
Acq On : 20 Oct 2002 00:21
Sample : WG126437-01 Soil BLK V192-P09
Misc : 7,1 soil
IntFile : SURR.E
Quant Time: Oct 20 11:16 2002 Quant Results File: PROFRNT.RES

Vial: 15
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 72463 | 15.307 ppm |
| Spiked Amount 20.000 | Range 43 - 136 | Recovery = | 76.54% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 661852 | 156.114 ppm |

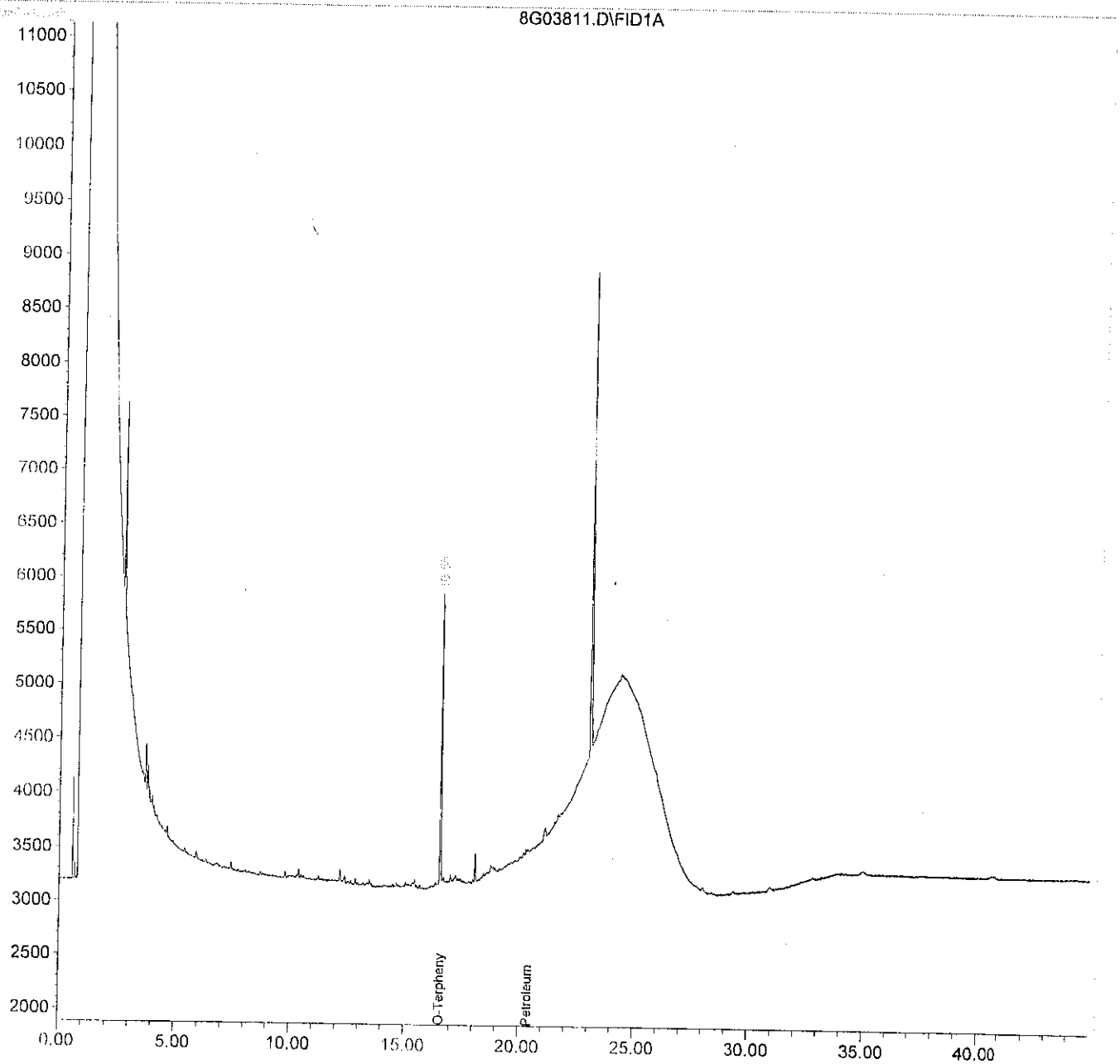
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101902\8G03811.D
Acq On : 20 Oct 2002 00:21
Sample : WG126437-01 Soil BLK V192-P09
Misc : 7,1 soil
IntFile : SURR.E
Quant Time: Oct 20 11:16 2002 Quant Results File: PROFRNT.RES

Vial: 15
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03802.D
Acq On : 19 Oct 2002 16:27
Sample : WG126468-02 LCS V191-P81
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 19 17:12 2002 Quant Results File: PROFRNT.RES

Vial: 6
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 74947 | 15.832 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery = | 79.16% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 12849241 | 3064.527 ppm |

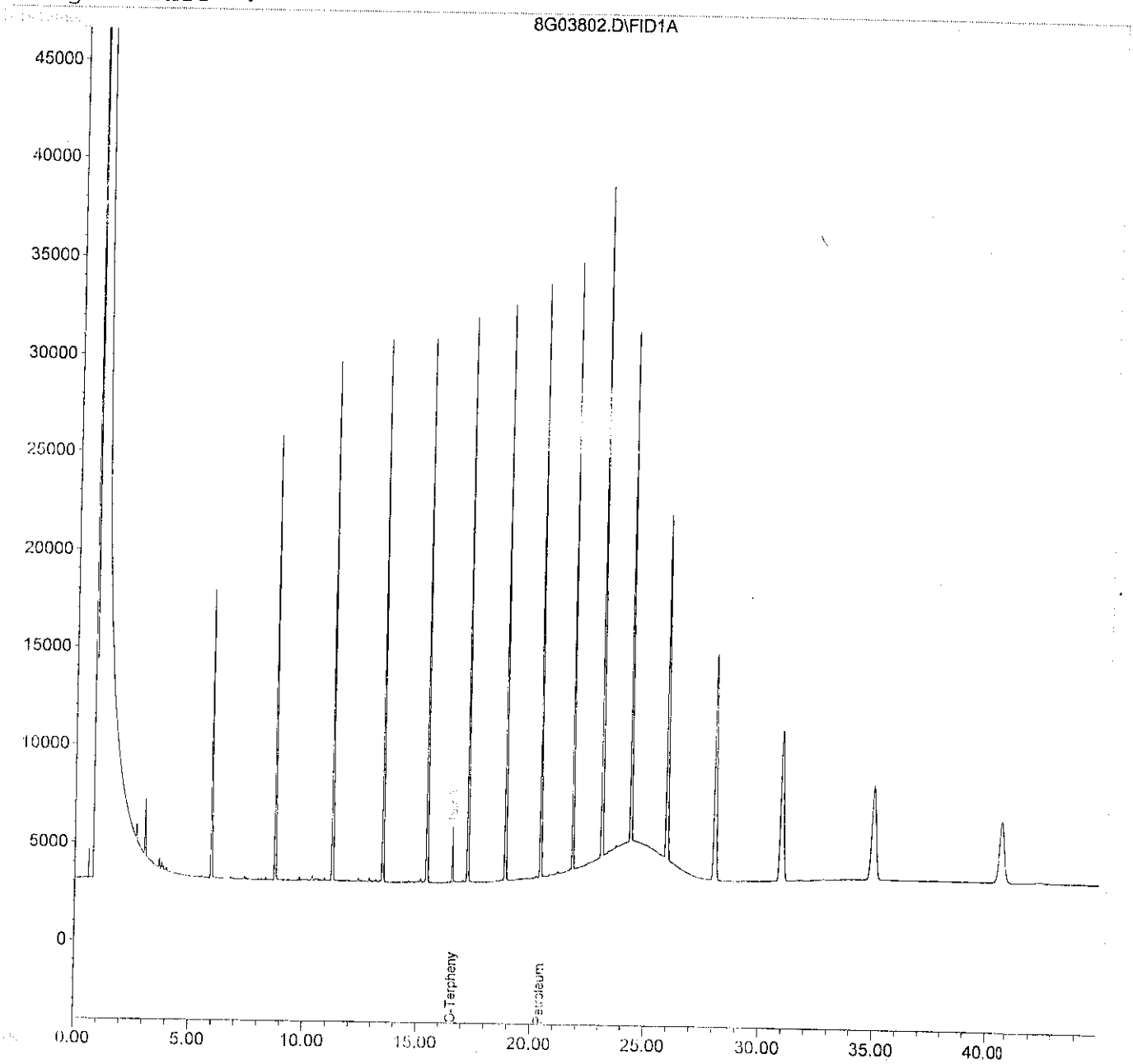
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101902\8G03802.D
Acq On : 19 Oct 2002 16:27
Sample : WG126468-02 LCS V191-P81
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 19 17:12 2002 Quant Results File: PROFRNT.RES

Vial: 6
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03803.D
Acq On : 19 Oct 2002 17:20
Sample : WG126468-03 LCS2 V191-P81
Misc : 1,1 water
IntFile : SURR.E

Vial: 7
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 19 18:05 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 81265 | 17.166 ppm |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery = | 85.83% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 14215641 | 3390.411 ppm |

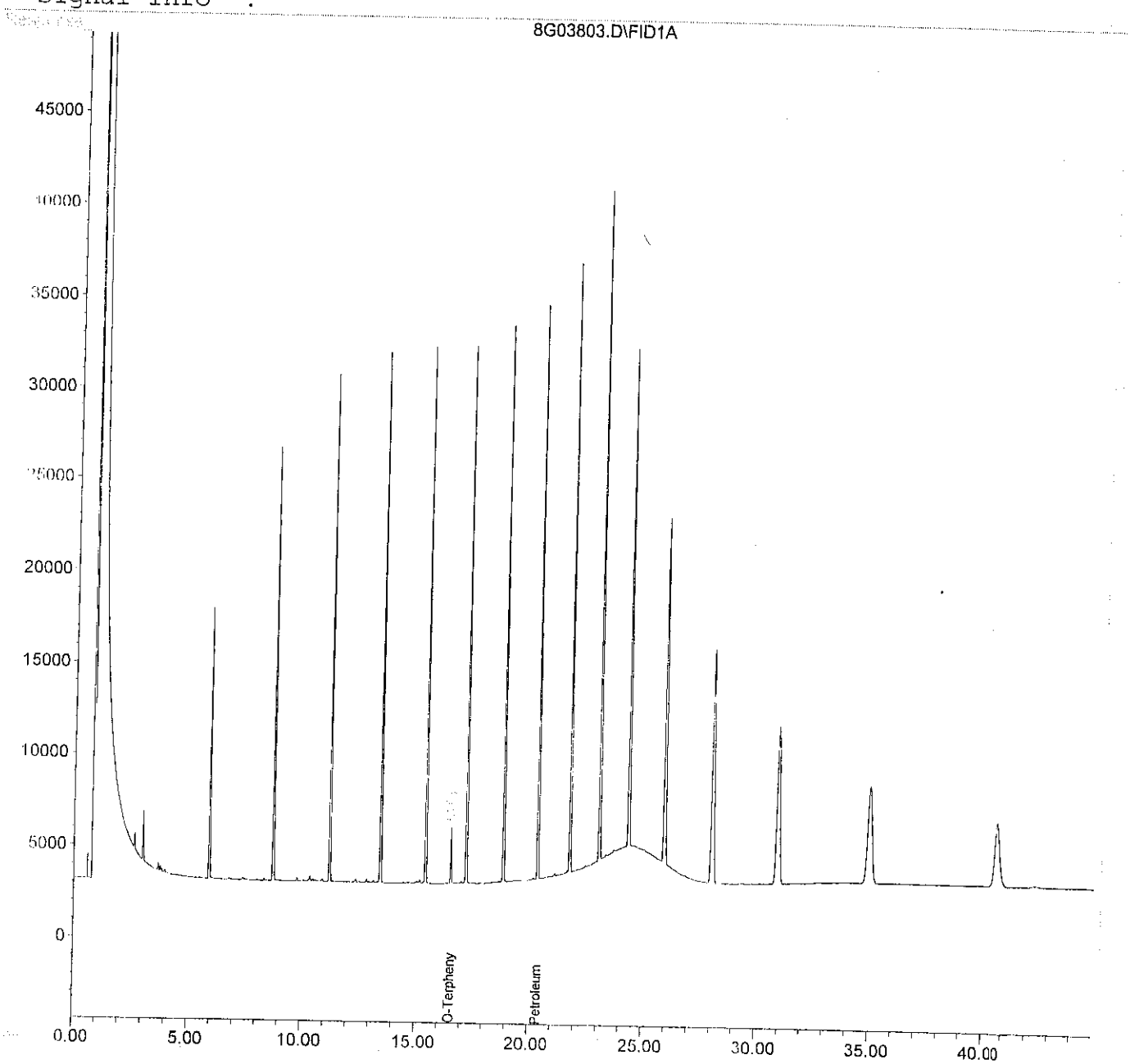
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101902\8G03803.D
Acq On : 19 Oct 2002 17:20
Sample : WG126468-03 LCS2 V191-P81
Misc : 1,1 water
IntFile : SURR.E
Quant Time: Oct 19 18:05 2002 Quant Results File: PROFRNT.RES

Vial: 7
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03812.D
Acq On : 20 Oct 2002 1:14
Sample : WG126437-02 Soil LCS V192-P09
Misc : 7,1 soil
IntFile : SURR.E
Quant Time: Oct 20 11:17 2002 Quant Results File: PROFRNT.RES

Vial: 16
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 75514 | 15.951 ppm |
| Spiked Amount 20.000 Range 43 - 136 Recovery = 79.76% | | | |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 12706679 | 2997.179 ppm |

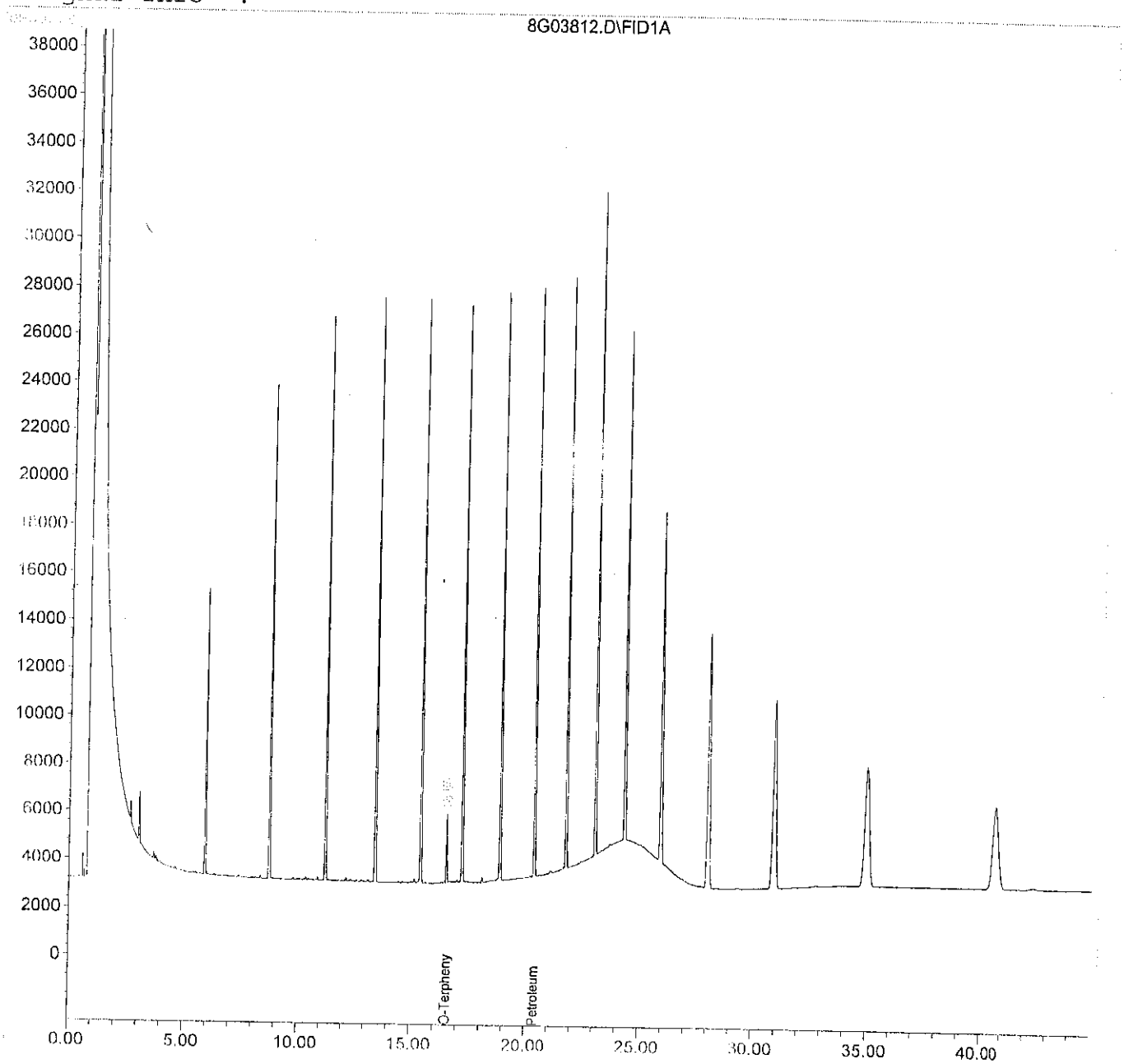
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\101902\8G03812.D
Acq On : 20 Oct 2002 1:14
Sample : WG126437-02 Soil LCS V192-P09
Misc : 7,1 soil
IntFile : SURR.E
Quant Time: Oct 20 11:17 2002 Quant Results File: PROFRNT.RES

Vial: 16
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\101902\8G03813.D
Acq On : 20 Oct 2002 2:07
Sample : WG126437-03 Soil LCS2 VL02-P09
Misc : 7,1 soil
IntFile : SURR.E

Vial: 17
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Time: Oct 20 11:17 2002 Quant Results File: PROFRNT.RES

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Initial Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 16.55 | 74464 | 15.729 ppm |
| Spiked Amount 20.000 | Range 43 - 136 | Recovery = | 78.65% |
| Target Compounds | | | |
| 1) h Petroleum Range | 20.40 | 12007262 | 2832.205 ppm |

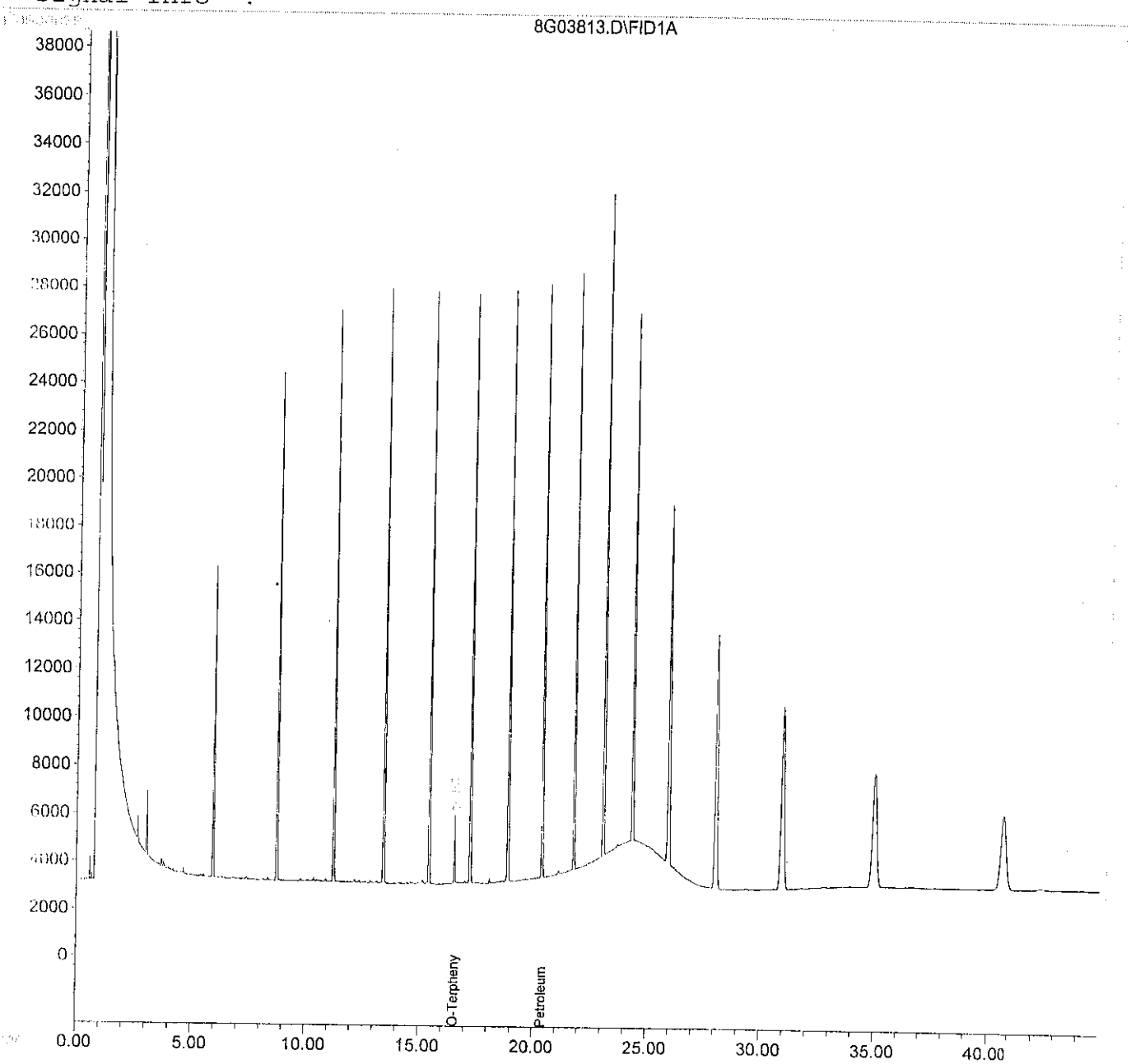
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\101902\8G03813.D
Acq On : 20 Oct 2002 2:07
Sample : WG126437-03 Soil LCS2 V192-P09
Misc : 7,1 soil
IntFile : SURR.E
Quant Time: Oct 20 11:17 2002 Quant Results File: PROFRNT.RES

Vial: 17
Operator: HV
Inst : HP8
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\PROFRNT.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS Oct 18, 2002 (DB-5)
Last Update : Sat Oct 19 11:21:16 2002
Response via : Multiple Level Calibration
DataAcq Meth : PROFRNT.M

Volume Inj. :
Signal Phase :
Signal Info :



| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 8g03787.d | 1. | MECL2 | 1,1 | 18 Oct 102 [illegible] |
| 2 | 2 | 8g03788.d | 1. | WIN DEF STD | 1,1 | 18 Oct 102 [illegible] |
| 3 | 2 | 8g03789.d | 1. | WG127599-01 PRO STD @600ppm | 1,1 SOS61-44 | 18 Oct 102 12::2 |
| 4 | 3 | 8g03790.d | 1. | WG127599-02 PRO STD @400ppm | 1,1 SOS61-44 | 18 Oct 102 12::1 |
| 5 | 4 | 8g03791.d | 1. | WG127599-03 PRO STD @200ppm | 1,1 SOS61-44 | 18 Oct 102 12::0 |
| 6 | 5 | 8g03792.d | 1. | WG127599-04 PRO STD @100ppm | 1,1 SOS61-44 | 18 Oct 102 12::5 |
| 7 | [illegible] | 8g03793.d | 1. | WG127599-02 PRO STD @50ppm | 1,1 SOS61-44 | 18 Oct 102 12::5 |
| 8 | [illegible] | 8g03794.d | 1. | WG127599-01 PRO STD @5ppm | 1,1 SOS61-44 | 18 Oct 102 12::3 |
| 9 | [illegible] | 8g03795.d | 1. | PRO STD @5ppm | 1,1 SOS61-44 | 18 Oct 102 13::4 |
| 10 | 8 | 8g03796.d | 1. | WG127599-07 ALT PRO STD @200pm | 1,1 SOS60-35 | 18 Oct 102 13::3 |
| 11 | 9 | 8g03797.d | 1. | PRO water MDL BLK V191-P163 | 1,1 water | 19 Oct 102 [illegible] |
| 12 | 10 | 8g03798.d | 1. | PRO water MDL #1 | 1,1 water | 19 Oct 102 [illegible] |
| 13 | 11 | 8g03799.d | 1. | PRO water MDL #2 | 1,1 water | 19 Oct 102 [illegible] |
| 14 | 12 | 8g03800.d | 1. | WG126468-01 PRO water BLK V191-P81 | 1,1 water | 19 Oct 102 [illegible] |
| 15 | 13 | 8g03801.d | 1. | WG126468-02 LCS V191-P81 | 1,1 water | 19 Oct 102 12::0 |
| 16 | 14 | 8g03802.d | 1. | WG126468-03 LCS2 V191-P81 | 1,1 water | 19 Oct 102 12::0 |
| 17 | 15 | 8g03803.d | 1. | L0209516-04 PRO water | 1,1 water | 19 Oct 102 12::5 |
| 18 | 16 | 8g03804.d | 1. | L0209517-02 PRO water | 1,1 water | 19 Oct 102 12::4 |
| 19 | 17 | 8g03805.d | 1. | PRO CCV @200ppm | 1,1 water | 19 Oct 102 13::0 |

RR

HV 10/20/02

TXEC 10/21/02

KEMRON ENVIRONMENTAL SERVICES
Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 10-18-02 Instrument ID HP8 front Column ID DB-5 Data Subdirectory 101802
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**

* sequence was stopped by computer fault

Reviewed By: RRC 10/21/02

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 8 | 8g03796.d | 1. | ALT PRO STD @200pm | 1,1 SOS61-44 | 19 Oct 102 13::0 |
| 2 | 1 | 8g03797.d | 1. | WG127599-08 PRO CCV @200pm | 1,1 SOS61-44 | 19 Oct 102 13::5 |
| 3 | 2 | 8g03798.d | 1. | PRO water MDL BLK V191-P163 | 1,1 water | 19 Oct 102 13::5 |
| 4 | 3 | 8g03799.d | 1. | PRO water MDL #1 | 1,1 water | 19 Oct 102 12::4 |
| 5 | 4 | 8g03800.d | 1. | PRO water MDL #2 | 1,1 water | 19 Oct 102 12::4 |
| 6 | 5 | 8g03801.d | 1. | WG126468-01 PRO water BLK V191-P81 | 1,1 water | 19 Oct 102 12::3 |
| 7 | 6 | 8g03802.d | 1. | WG126468-02 LCS V191-P81 | 1,1 water | 19 Oct 102 12::2 |
| 8 | 7 | 8g03803.d | 1. | WG126468-03 LCS2 V191-P81 | 1,1 water | 19 Oct 102 12::2 |
| 9 | 8 | 8g03804.d | 1. | L0209516-04 PRO water | 1,1 water | 19 Oct 102 12::1 |
| 10 | 9 | 8g03805.d | 1. | L0209517-02 PRO water | 1,1 water | 19 Oct 102 12::0 |
| 11 | 10 | 8g03806.d | 1. | MECL2 | 1,1 water | 19 Oct 102 12::5 |
| 12 | 11 | 8g03807.d | 1. | WG127599-09 PRO CCV @200ppm | 1,1 water | 19 Oct 102 12::5 |
| 13 | 12 | 8g03808.d | 1. | PRO SOIL MDL BLK V192-P79 | 7,1 soil | 19 Oct 102 12::4 |
| 14 | 13 | 8g03809.d | 1. | PRO SOIL MDL #1 | 7,1 soil | 19 Oct 102 13::3 |
| 15 | 14 | 8g03810.d | 1. | PRO SOIL MDL #2 | 7,1 soil | 19 Oct 102 13::2 |
| 16 | 15 | 8g03811.d | 1. | WG126437-01 Soil BLK V192-P09 | 7,1 soil | 20 Oct 102 13::2 |
| 17 | 16 | 8g03812.d | 1. | WG126437-02 Soil LCS V192-P09 | 7,1 soil | 20 Oct 102 12::1 |
| 18 | 17 | 8g03813.d | 1. | WG126437-03 Soil LCS2 V192-P09 | 7,1 soil | 20 Oct 102 12::0 |
| 19 | 18 | 8g03814.d | 2. | L0209516-01 2x SOIL | 7,2 soil | 20 Oct 102 12::5 |
| 20 | 19 | 8g03815.d | 2. | RR L0209516-02 2x SOIL @ 4X | 7,2 soil | 20 Oct 102 12::5 |
| 21 | 20 | 8g03816.d | 2. | L0209516-03 2x SOIL | 7,2 soil | 20 Oct 102 12::4 |
| 22 | 21 | 8g03817.d | 1. | MECL2 | 1,1 water | 20 Oct 102 12::3 |
| 23 | 11 | 8g03818.d | 1. | WG127599-10 PRO CCV @200ppm | 1,1 water | 20 Oct 102 12::2 |
| 24 | 22 | 8g03819.d | 2. | L0209517-01 10x SOIL | 7,2 soil | 20 Oct 102 12::2 |
| 25 | 21 | 8g03820.d | 1. | MECL2 | 1,1 water | 20 Oct 102 12::1 |
| 26 | 11 | 8g03821.d | 1. | WG127599-11 PRO CCV @200ppm | 1,1 SOS61-44 | 20 Oct 102 12::0 |

HV 10/20/02

RVC 10/21/02

## Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 10·19·02 Instrument ID HP8 Column ID DB-5 Data Subdirectory 101902
Analyst Initials HV

SOP # GCS09 Rev. # ___ 8081A ___
SOP # GCS04 Rev. # ___ 8151A ___
SOP # GCS03 Rev. # ___ 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 Air

**Returned To Control?**
Yes ___ No ___

**Additional Maintenance**
Problem: ___

Action Taken: ___

**Comments**

Reviewed By: RDC 10/21/02

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 8g03822.d | 1. | WG127599-12 PRO CCV @200ppm | 1,1 water | 20 Oct 102 12::4 |
| 2 | 2 | 8g03823.d | 1. | WG126722-01 BLK V191-P107 | 1,1 water | 20 Oct 102 12::5 |
| 3 | 3 | 8g03824.d | 1. | WG126722-02 LCS V191-P107 | 1,1 water | 20 Oct 102 12::4 |
| 4 | 4 | 8g03825.d | 1. | WG126722-03 LCS2 V191-P107 | 1,1 water | 20 Oct 102 12::4 |
| 5 | 5 | 8g03826.d | 1. | RE L0210079-02 water | 1,1 water | 20 Oct 102 12::3 |
| 6 | 6 | 8g03827.d | 5. | L0210079-04 5x water | 1,5 water | 20 Oct 102 12::3 |
| 7 | 7 | 8g03828.d | 1. | RE L0210079-06 water | 1,1 water | 20 Oct 102 12::2 |
| 8 | 8 | 8g03829.d | 5. | * L0210079-07 5x water | 1,5 water | 20 Oct 102 12::1 |
| 9 | 9 | 8g03830.d | 1. | L0210079-10 water | 1,1 water | 20 Oct 102 12::1 |
| 10 | 10 | 8g03831.d | 1. | mecl2 | 1,1 water | 20 Oct 102 12::0 |
| 11 | 11 | 8g03832.d | 1. | WG127599-13 PRO CCV @200ppm | 1,1 SOS61-44 | 20 Oct 102 12::5 |
| 12 | 12 | 8g03833.d | 5. | L0210079-12 5x water | 1,5 water | 20 Oct 102 12::4 |
| 13 | 13 | 8g03834.d | 5. | * L0210079-16 5x water RR SN. | 1,5 water | 20 Oct 102 12::4 |
| 14 | 14 | 8g03835.d | 5. | RR L0210079-05 5x water | 1,5 water | 20 Oct 102 12::3 |
| 15 | 15 | 8g03836.d | 10. | L0210079-05 10x water RR @ 10X | 1,10 water | 20 Oct 102 12::2 |
| 16 | 16 | 8g03837.d | 5. | L0209516-02 5x | 1,5 water | 20 Oct 102 12::1 |
| 17 | 10 | 8g03838.d | 1. | mecl2 | 1,1 water | 21 Oct 102 12::1 |
| 18 | 11 | 8g03839.d | 1. | WG127599-14 PRO CCV @200ppm | 1,1 SOS61-44 | 21 Oct 102 12::0 |
| | | | | | | 21 Oct 102 12::5 |

HV 10/21/02

* RR to confirm low surrogate rec.
(RR straight)

# Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 10-20-02 Instrument ID HP8 Front Column ID DB-5 Data Subdirectory 102002
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**

* RR straight to confirm low surr. rec.

Reviewed By: RRC 10/21/02

Parameter: FL-PRO N/O SOP #: EXPRO Revision #: 3
Extraction Analyst(s): PCK TV/KD Analyst(s): PCK
Date/Time Extracted: 10/7/02 0730 Date TV/KD: 10/3/02
Spike/Surrogate Analyst: PCK Witness: CEB
Surrogate #: ES50041-J1 Earliest Hold Date: 10/3
Spike #: A = ES50042-24 Spike #: B = –

Extraction Work Group WG 126468
Analytical Work Group WG 12 FRACS
Extract Relinquished By: PCK
Extract Received By & Date: CUL 10/3/02

| | Sample ID | Test Code | pH | | | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | <2 | N | >12 | | | | | | A | BN | N | |
| 1 | Blank | | ✓ | | | 1000 mL | 1 mL | | 1 mL | | | | | WG 126468-01 |
| 2 | LCS | | ✓ | | | ↓ | ↓ | 1 mL | ↓ | | | | | WG ↓ -02 |
| 3 | LCS DUP | | ✓ | | | ↓ | ↓ | ↓ | ↓ | | | | | ↓ -03 |
| 4 | 09-516-04 | FLA-PRO | ✓ | | | 960 mL | ↓ | | ↓ | | | | | |
| 5 | 09-517-02 | ↓ | ✓ | | | 940 mL | ↓ | | ↓ | | | | | |
| 6 | 09-310-01 | ↓ | ✓ | | | 980 mL | ↓ | | ↓ | | | | | |
| 7 | | | | | | | | | | | | | | (re-ex out/hold) |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

PCK 10/7/02

Methylene Chloride Lot #: 42084
Hexane Lot #: –
Ether Lot #: –
Methanol Lot #: –
Solvent: – Lot #: –
Reagent: – Lot #: –
Reagent: – Lot #: –
Reagent: – Lot #: –
Acid: 1:1 HCL Lot #: EL22270
Florisil Lot #: –
Silica Gel Lot #: V45553
IR Analyst / Date / Time: –
Dried $Na_2SO_4$ Lot #: EL22211

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 10/3/02

Extraction Notes For Volume # 191 Page # 81

General Comments: none

Extraction Anomalies: none

Concentration Anomalies: none

Clean-Up Anomalies: none

Supervisor Review: _____ Date: _____

Volume 192
Page 9

# Sample Extract Log Sheet

Parameter: FLA-PRO-S SOP #: EXPRO Revision #: 3
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 10-02-02 @ 15:45 Date TV/KD: 10-02-02
Spike/Surrogate Analyst: CAF Witness: DP Rec RK
Surrogate #: ESS0041-31 Earliest Hold Date: 10-10-02
Spike #: A = ESSD041-41 Spike #: B = —

Extraction Work Group WG 126437
Analytical Work Group WG [illegible]

Extract Relinquished By: RK
Extract Received By & Date: [illegible]

| | Sample ID | Test Code | pH | | | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | <2 | N | >12 | | | | | | A | BN | N | |
| 1 | Blank | | | | | 25.04 g | 1mL | | 1mL | T | | | | WG126437-01 |
| 2 | LCS | | | | | 25.04 g | | 1mL | | T | | | | WG -02 |
| 3 | LCS Dup | | | | | 25.02 g | | | | C | | | | WG -03 |
| 4 | 09-516-01 | FLA-PRO | | | | 25.04 g | | | | C | | | | |
| 5 | 09-516-02 | | | | | 25.05 g | | | | C | | | | |
| 6 | 09-516-03 | | | | | 25.06 g | | | | C | | | | |
| 7 | 09-517-01 | | | | | 25.08 g | | | | O | | | | |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

CAF 10-02-02

Methylene Chloride Lot #: 42087
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: V45553
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: ER 2211

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 10/3/02

Extraction Notes For Volume # 192 Page # 9

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: NONE

Supervisor Review: _____ Date: _____

# Semi-Volatile GC Checklist

Run Date: 10-18-02

Analyst: HV

Instrument: HP8 front

Method: 8 FLA-PRO - (CAL CURVES ONLY

Workorders: Due Date: Priority:

PRO
cal. curves only

| | | Analyst |
|---|---|---|
| System Performance Check: | Endrin/DDT Breakdown | NA |
| Initial Calibration: | Average RF | ✓ |
| | Linear or quadratic regression | |
| | Alt Source Check | ✓ |
| Continuing Calibration: | Continuing Calibration | |
| | Client Specific Requirements | |
| | Ending Standards | |
| | Special Standards | |
| Blanks: | Quant Report/Chromatogram | |
| | Surrogates | |
| LCS/LCS DUP: | Quant Report/Chromatogram | |
| | Surrogates | |
| | Spike Compounds | |
| | MS/MSD | |
| Samples: | Quant Reports/Chromatograms | |
| | Surrogates | |
| | Dilution runs | |
| | Check Sample Histories | |
| Data Package: | Run logs | |
| | Bench sheets | |
| | QC sheets | |
| | Upload results | |
| | Seedpak workgroups | |
| | Level 2 | |
| | Level 3 | |
| | Level 4 copies | |
| | Level x | |
| | Case narratives | |

| | Supervisor |
|---|---|
| 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: | |

√ = Checked & OK
NA = Not Applicable
Comments:

Primary Reviewer: HV 10-19-02

Secondary Reviewer: CLK 10/22/02

Supervisor Review: [illegible] 10/22/02

Run Date: 10-19-02

Analyst: HV

Instrument: HP8 Front

Method: GLA-PRO Water & soil

| Workorders: | Due Date: | Priority: |
|---|---|---|
| L4 - water | | |
| L0209516-04 | 10/8 | |
| 517-01 | 10/8 | |
| (WG127555) | | |
| L4 - soil | | |
| L0209516-01 | 10/8 | |
| -03 | " | |
| 517-01 | " | |
| (WG127556) | | |

| | | Analyst |
|---|---|---|
| System Performance Check: | Endrin/DDT Breakdown | NA |
| Initial Calibration: | Average RF | ✓ |
| | Linear or quadratic regression | |
| | Alt Source Check | |
| Continuing Calibration: | Continuing Calibration | ✓ |
| | Client Specific Requirements | |
| | Ending Standards | ✓ |
| | Special Standards | |
| Blanks: | Quant Report/Chromatogram | ✓ |
| | Surrogates | |
| LCS/LCS DUP: | Quant Report/Chromatogram | ✓ |
| | Surrogates | |
| | Spike Compounds | |
| | MS/MSD | |
| Samples: | Quant Reports/Chromatograms | ✓ |
| | Surrogates | ✓ |
| | Dilution runs | ✓ |
| | Check Sample Histories | |
| Data Package: | Run logs | ✓ |
| | Bench sheets | ✓ |
| | QC sheets | ✓ |
| | Upload results | ✓ |
| | Seedpak workgroups | |
| | Level 2 | |
| | Level 3 | |
| | Level 4 copies | |
| | Level x | |
| | Case narratives | |

| | Supervisor |
|---|---|
| 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: | |

√ = Checked & OK

NA = Not Applicable

Comments:

Sample L0209516-02 (soil) required to RR at 5X dil.

Primary Reviewer: HV 10/21/02

Secondary Reviewer: CLK 10/22/02

Supervisor Review: [illegible]

Run Date: 10-20-02

Analyst: HV

Instrument: HP8 Front

Method: 8FA-PRO (water & soil)

Workorders: WA127mint

Due Date:

Priority:

water L0210079-04, 07, 10

level-X 12 only.)

| | | Analyst |
|---|---|---|
| System Performance Check: | Endrin/DDT Breakdown | NA |
| Initial Calibration: | Average RF | ✓ |
| | Linear or quadratic regression | |
| | Alt Source Check | |
| Continuing Calibration: | Continuing Calibration | ✓ |
| | Client Specific Requirements | |
| | Ending Standards | ✓ |
| | Special Standards | |
| Blanks: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| LCS/LCS DUP: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| | Spike Compounds | ✓ |
| | MS/MSD | NA |
| Samples: | Quant Reports/Chromatograms | ✓ |
| | Surrogates | ✓ |
| | Dilution runs | ✓ |
| | Check Sample Histories | |
| Data Package: | Run logs | ✓ |
| | Bench sheets | ✓ |
| | QC sheets | ✓ |
| | Upload results | |
| | Seedpak workgroups | |
| | Level 2 | |
| | Level 3 | |
| | Level 4 copies | |
| | Level x | |
| | Case narratives | |

√ = Checked & OK

NA = Not Applicable

Comments:

samples need to RE
L0210079-02
-06
-10
"QNS
for RE-EXT"

| | Supervisor |
|---|---|
| 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: | |

Primary Reviewer: HV, 10/21/02

Secondary Reviewer: CLK 10/22/02

Supervisor Review: rdc 10/22/02

**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.: L0209516**

**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 LCS associated with the initial extraction of water fraction 04 yielded percent recoveries for thirteen analytes that were below advisory limits. This sample was re-extracted out of holding time with an LCS that yielded percent recoveries for fourteen analytes that were below advisory limits. All other acceptance criteria were met.
**Matrix Spikes**: The MS/MSD results were not associated with this sample delivery group.

**SAMPLES**

**Surrogates**: Sample fraction 04 yielded a percent recovery for the surrogate that was below the advisory limit. This sample fraction was re-extracted outside of holding time with similar results for the surrogate. Sample fraction 01 yielded a percent recovery for the surrogate by the fluorescence detector that was above the advisory limit. The surrogate for this fraction as determined by the UV detector met all acceptance criteria. Sample fraction 02 yielded a percent recovery for the surrogate by both detectors that was above the advisory limit. For sample fractions 01 and 02 there is chromatographic evidence of sample matrix effects for the recovery of the surrogate.
**Samples:** Sample fractions 01 and 02 were re-analyzed at a dilution in order to maintain the analysis within the range of calibration. 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: 10/23/6

Rev. 7/14/00

## PAH HPLC DATA (8310)

**Login Number** L0209516

### 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: RDC Date: 10/23/02

# 2.2.7.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 4L003656.R
Date Analyzed: 10/05/02
Time Analyzed: 16:23
Analyst: "

Work Group: WG126623
Blank Sample ID: WG126384-01
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 | WG126384-02 | 4L003657.R | 10/05/02 17:20 | 01 |
| LCS2 | WG126384-03 | 4L003658.R | 10/05/02 18:17 | 01 |
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 | 4L003680.R | 10/06/02 15:02 | 01 |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 | 4L003681.R | 10/06/02 15:59 | 01 |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 | 4L003682.R | 10/06/02 16:55 | 01 |

METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 4L003656.F
Date Analyzed: 10/05/02
Time Analyzed: 16:23
Analyst: "

Work Group: WG126623
Blank Sample ID: WG126384-01
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 | WG126384-02 | 4L003657.F | 10/05/02 17:20 | CF01 |
| LCS2 | WG126384-03 | 4L003658.F | 10/05/02 18:17 | CF01 |
| 062-CEF46-SB1-S-Q3-02 | L0209516-01 | 4L003680.F | 10/06/02 15:02 | CF01 |
| 062-CEF46-SB2-S-Q3-02 | L0209516-02 | 4L003681.F | 10/06/02 15:59 | CF01 |
| 062-CEF46-SB14-S-Q3-02 | L0209516-03 | 4L003682.F | 10/06/02 16:55 | CF01 |

KEMRON FORMS - Modified 10/21/2002
Version 1.1
Report generated 10/22/2002 11:03

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0209516
Blank File ID: 4L003667.R
Date Analyzed: 10/06/02
Time Analyzed: 02:46
Analyst: "

Work Group: WG126624
Blank Sample ID: WG126469-01
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 | WG126469-02 | 4L003668.R | 10/06/02 03:43 | 01 |
| LCS2 | WG126469-03 | 4L003669.R | 10/06/02 04:39 | 01 |
| 062-CEF46-EQB-W-Q3-02 | L0209516-04 | 4L003678.R | 10/06/02 13:09 | 01 |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516 Run Date: 10/05/2002 Sample ID: WG126384-01
Instrument ID: HPLC4 Run Time: 16:23 Method: 8310
File ID: 4L003656.R Analyst: " Matrix: Solid
Workgroup (AAB#): WG126623 Units: ug/kg
Contract #: Cal ID: HPLC4-04-OCT-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 55.9 | 160 | 55.9 | 1 | U |
| Acenaphthylene | 44.9 | 160 | 44.9 | 1 | U |
| Anthracene | 40.9 | 160 | 40.9 | 1 | U |
| Benzo(a)anthracene | 3.79 | 16 | 3.79 | 1 | U |
| Benzo(a)pyrene | 2.89 | 16 | 2.89 | 1 | U |
| Benzo(b)fluoranthene | 4.79 | 16 | 4.79 | 1 | U |
| Benzo(g,h,i)perylene | 3.59 | 16 | 3.59 | 1 | U |
| Benzo(k)fluoranthene | 1.99 | 16 | 1.99 | 1 | U |
| Chrysene | 3.79 | 16 | 3.79 | 1 | U |
| Dibenzo(a,h)anthracene | 4.49 | 16 | 4.49 | 1 | U |
| Fluoranthene | 3.69 | 16 | 3.69 | 1 | U |
| Fluorene | 56.8 | 160 | 56.8 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.19 | 16 | 3.19 | 1 | U |
| Naphthalene | 62.8 | 160 | 62.8 | 1 | U |
| 2-Methylnaphthalene | 4.55 | 160 | 4.55 | 1 | U |
| Phenanthrene | 46.9 | 160 | 46.9 | 1 | U |
| Pyrene | 3.69 | 16 | 3.69 | 1 | U |
| 1-Methylnaphthalene | 5.23 | 160 | 5.23 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 96.4 | 50 - 150 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516 Run Date: 10/05/2002 Sample ID: WG126384-01
Instrument ID: HPLC4 Run Time: 16:23 Method: 8310
File ID: 4L003656.F Analyst: " Matrix: Solid
Workgroup (AAB#): WG126623 Units: ug/kg
Contract #: Cal ID: HPLC4-04-OCT-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 55.9 | 160 | 55.9 | 1 | U |
| Acenaphthylene | 44.9 | 160 | 44.9 | 1 | U |
| Anthracene | 40.9 | 160 | 40.9 | 1 | U |
| Benzo(a)anthracene | 3.79 | 16 | 3.79 | 1 | U |
| Benzo(a)pyrene | 2.89 | 16 | 2.89 | 1 | U |
| Benzo(b)fluoranthene | 4.79 | 16 | 4.79 | 1 | U |
| Benzo(g,h,i)perylene | 3.59 | 16 | 3.59 | 1 | U |
| Benzo(k)fluoranthene | 1.99 | 16 | 1.99 | 1 | U |
| Chrysene | 3.79 | 16 | 3.79 | 1 | U |
| Dibenzo(a,h)anthracene | 4.49 | 16 | 4.49 | 1 | U |
| Fluoranthene | 3.69 | 16 | 3.69 | 1 | U |
| Fluorene | 56.8 | 160 | 56.8 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 3.19 | 16 | 3.19 | 1 | U |
| Naphthalene | 62.8 | 160 | 62.8 | 1 | U |
| 2-Methylnaphthalene | 4.55 | 160 | 4.55 | 1 | U |
| Phenanthrene | 46.9 | 160 | 46.9 | 1 | U |
| Pyrene | 3.69 | 16 | 3.69 | 1 | U |
| 1-Methylnaphthalene | 5.23 | 160 | 5.23 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 96.6 | 50 - 150 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209516 Run Date: 10/06/2002 Sample ID: WG126469-01
Instrument ID: HPLC4 Run Time: 02:46 Method: 8310
File ID: 4L003667.R Analyst: " Matrix: Water
Workgroup (AAB#): WG126624 Units: ug/L
Contract #: Cal ID: HPLC4-04-OCT-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.490 | 1 | J |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0896 | 1 | J |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.143 | 1 | J |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.102 | 1 | J |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0870 | 1 | J |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0846 | 1 | J |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0780 | 1 | J |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0983 | 1 | J |
| Phenanthrene | 0.287 | 1.0 | 0.372 | 1 | J |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 40.9 | 40 - 132 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/15/2002
Version 1.2
Report generated

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number:WG127725 Run Date:10/16/2002 Sample ID:WG127373-01
Instrument ID:HPLC4 Run Time:18:49 Method:8310
File ID:4L003722.R Analyst:RDC Matrix:WATER
Workgroup (AAB#):WG127725 Units:ug/L
Cal ID:HPLC4-04-OCT-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 0.415 | 1.00 | 0 | 1 | ND |
| Acenaphthylene | 0.351 | 1.00 | 0 | 1 | ND |
| Anthracene | 0.285 | 1.00 | 0.314 | 1 | J |
| Benzo(a)anthracene | 0.0300 | 0.200 | 0 | 1 | ND |
| Benzo[a]pyrene | 0.0530 | 0.200 | 0 | 1 | ND |
| Benzo(b)Fluoranthene | 0.0340 | 0.200 | 0 | 1 | ND |
| Benzo[ghi]perylene | 0.0500 | 0.200 | 0 | 1 | ND |
| Benzo[k]fluoranthene | 0.0720 | 0.200 | 0 | 1 | ND |
| Chrysene | 0.0240 | 0.200 | 0 | 1 | ND |
| Dibenz(a,h)Anthracene | 0.0770 | 0.200 | 0 | 1 | ND |
| Fluoranthene | 0.0500 | 0.200 | 0 | 1 | ND |
| Fluorene | 0.559 | 1.00 | 0 | 1 | ND |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.200 | 0 | 1 | ND |
| Naphthalene | 0.359 | 1.00 | 0 | 1 | ND |
| 2-Methylnaphthalene | 0.336 | 1.00 | 0 | 1 | ND |
| 1-Methylnaphthalene | 0.362 | 1.00 | 0 | 1 | ND |
| Phenanthrene | 0.287 | 1.00 | 0 | 1 | ND |
| Pyrene | 0.0680 | 0.200 | 0 | 1 | ND |

* Analyte detected above RDL

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: WG127725
Instrument ID: HPLC4
File ID: 4L003722.F
Workgroup (AAB#): WG127725

Run Date: 10/16/2002
Run Time: 18:49
Analyst: RDC

Sample ID: WG127373-01
Method: 8310
Matrix: WATER
Units: ug/L
Cal ID: HPLC4-04-OCT-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 0.415 | 1.00 | 0 | 1 | ND |
| Acenaphthylene | 0.351 | 1.00 | 0 | 1 | ND |
| Anthracene | 0.285 | 1.00 | 0.339 | 1 | J |
| Benzo(a)anthracene | 0.0300 | 0.200 | 0 | 1 | ND |
| Benzo[a]pyrene | 0.0530 | 0.200 | 0 | 1 | ND |
| Benzo(b)Fluoranthene | 0.0340 | 0.200 | 0 | 1 | ND |
| Benzo[ghi]perylene | 0.0500 | 0.200 | 0 | 1 | ND |
| Benzo[k]fluoranthene | 0.0720 | 0.200 | 0 | 1 | ND |
| Chrysene | 0.0240 | 0.200 | 0 | 1 | ND |
| Dibenz(a,h)Anthracene | 0.0770 | 0.200 | 0 | 1 | ND |
| Fluoranthene | 0.0500 | 0.200 | 0 | 1 | ND |
| Fluorene | 0.559 | 1.00 | 0 | 1 | ND |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.200 | 0 | 1 | ND |
| Naphthalene | 0.359 | 1.00 | 0 | 1 | ND |
| 2-Methylnaphthalene | 0.336 | 1.00 | 0 | 1 | ND |
| 1-Methylnaphthalene | 0.362 | 1.00 | 0 | 1 | ND |
| Phenanthrene | 0.287 | 1.00 | 0 | 1 | ND |
| Pyrene | 0.0680 | 0.200 | 0 | 1 | ND |

* Analyte detected above RDL

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Instrument ID: HPLC4
File ID: 4L003657.R
Workgroup (AAB#): WG126623
Contract #:

Run Date: 10/05/2002
Run Time: 17:20
Analyst: "

Sample ID: WG126384-02
Method: 8310
Matrix: Solid
Units: ug/kg
Cal ID: HPLC4-04-OCT-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 1670 | 771 | 46.3 | 24 - 100 | |
| Acenaphthylene | 1670 | 760 | 45.6 | 26 - 94 | |
| Anthracene | 1670 | 1100 | 66.3 | 40 - 92 | |
| Benzo(a)anthracene | 167 | 137 | 82.3 | 60 - 107 | |
| Benzo(a)pyrene | 167 | 135 | 81.2 | 51 - 101 | |
| Benzo(b)fluoranthene | 167 | 140 | 83.8 | 61 - 108 | |
| Benzo(g,h,i)perylene | 167 | 143 | 85.6 | 53 - 118 | |
| Benzo(k)fluoranthene | 83.3 | 70.0 | 84.1 | 59 - 112 | |
| Chrysene | 167 | 142 | 85.5 | 60 - 104 | |
| Dibenzo(a,h)anthracene | 167 | 141 | 84.7 | 58 - 113 | |
| Fluoranthene | 167 | 122 | 73.0 | 54 - 105 | |
| Fluorene | 1670 | 830 | 49.8 | 28 - 98 | |
| Indeno(1,2,3-cd)pyrene | 167 | 137 | 82.1 | 58 - 105 | |
| Naphthalene | 1670 | 720 | 43.3 | 22 - 85 | |
| 2-Methylnaphthalene | 1670 | 740 | 44.4 | 26 - 94 | |
| Phenanthrene | 1670 | 930 | 55.9 | 38 - 102 | |
| Pyrene | 167 | 126 | 75.6 | 50 - 108 | |
| 1-Methylnaphthalene | 1670 | 730 | 43.8 | 26 - 94 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 96.0 | 50 - 150 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/15/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Run Date: 10/05/2002
Sample ID: WG126384-02
Instrument ID: HPLC4
Run Time: 17:20
Method: 8310
File ID: 4L003657.F
Analyst: "
Matrix: Solid
Workgroup (AAB#): WG126623
Units: ug/kg
Contract #:
Cal ID: HPLC4-04-OCT-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 1670 | 767 | 46.1 | 24 - 100 | |
| Acenaphthylene | 1670 | | 0 | 26 - 94 | * |
| Anthracene | 1670 | 1070 | 64.2 | 40 - 92 | |
| Benzo(a)anthracene | 167 | 136 | 81.7 | 60 - 107 | |
| Benzo(a)pyrene | 167 | 134 | 80.2 | 51 - 101 | |
| Benzo(b)fluoranthene | 167 | 139 | 83.2 | 61 - 108 | |
| Benzo(g,h,i)perylene | 167 | 138 | 83.1 | 53 - 118 | |
| Benzo(k)fluoranthene | 83.3 | 69.7 | 83.7 | 59 - 112 | |
| Chrysene | 167 | 138 | 82.8 | 60 - 104 | |
| Dibenzo(a,h)anthracene | 167 | 138 | 82.8 | 58 - 113 | |
| Fluoranthene | 167 | 121 | 72.9 | 54 - 105 | |
| Fluorene | 1670 | 834 | 50.1 | 28 - 98 | |
| Indeno(1,2,3-cd)pyrene | 167 | 136 | 81.8 | 58 - 105 | |
| Naphthalene | 1670 | 702 | 42.2 | 22 - 85 | |
| 2-Methylnaphthalene | 1670 | 730 | 43.8 | 26 - 94 | |
| Phenanthrene | 1670 | 918 | 55.1 | 38 - 102 | |
| Pyrene | 167 | 122 | 73.5 | 50 - 108 | |
| 1-Methylnaphthalene | 1670 | 728 | 43.7 | 26 - 94 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 92.5 | 50 - 150 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/15/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209516
Instrument ID: HPLC4
File ID: 4L003668.R
Workgroup (AAB#): WG126624
Contract #:

Run Date: 10/06/2002
Run Time: 03:43
Analyst: "

Sample ID: WG126469-02
Method: 8310
Matrix: Water
Units: ug/L
Cal ID: HPLC4-04-OCT-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 50.0 | 10.0 | 20.1 | 25 - 78 | * |
| Acenaphthylene | 50.0 | 10.0 | 20.0 | 25 - 77 | * |
| Anthracene | 50.0 | 22.1 | 44.2 | 47 - 101 | * |
| Benzo(a)anthracene | 5.00 | 2.39 | 47.7 | 50 - 115 | * |
| Benzo(a)pyrene | 5.00 | 1.71 | 34.2 | 29 - 113 | |
| Benzo(b)fluoranthene | 5.00 | 1.89 | 37.7 | 41 - 110 | * |
| Benzo(g,h,i)perylene | 5.00 | 0.723 | 14.5 | 11 - 84 | |
| Benzo(k)fluoranthene | 2.50 | 0.662 | 26.5 | 25 - 107 | |
| Chrysene | 5.00 | 1.90 | 38.0 | 39 - 120 | * |
| Dibenzo(a,h)anthracene | 5.00 | 1.24 | 24.9 | 10 - 92 | |
| Fluoranthene | 5.00 | 2.33 | 46.6 | 55 - 104 | * |
| Fluorene | 50.0 | 12.2 | 24.4 | 29 - 84 | * |
| Indeno(1,2,3-cd)pyrene | 5.00 | 1.19 | 23.8 | 16 - 98 | |
| Naphthalene | 50.0 | 9.31 | 18.6 | 25 - 68 | * |
| 2-Methylnaphthalene | 50.0 | 9.61 | 19.2 | 26 - 72 | * |
| 1-Methylnaphthalene | 50.0 | 9.47 | 18.9 | 26 - 71 | * |
| Phenanthrene | 50.0 | 18.2 | 36.4 | 39 - 95 | * |
| Pyrene | 5.00 | 2.35 | 46.9 | 56 - 104 | * |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 42.5 | 40 - 132 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/15/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Workgroup (AAB#): WG127725
Instrument ID: HPLC4
File ID: 4L003723.R

Run Date: 10/16/2002
Run Time: 19:46
Analyst: RDC

Sample ID: WG127373-02
Method: 8310
Matrix: WATER
Units: ug/L
Cal ID: HPLC4-04-OCT-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 50 | 7.69 | 15.4 | 25 - 78 | * |
| Acenaphthylene | 50 | 7.67 | 15.3 | 25 - 77 | * |
| Anthracene | 50 | 13.5 | 27.0 | 47 - 101 | * |
| Benzo(a)anthracene | 5 | 2.10 | 42.1 | 50 - 115 | * |
| Benzo[a]pyrene | 5 | 1.55 | 31.0 | 29 - 113 | |
| Benzo(b)Fluoranthene | 5 | 1.79 | 35.8 | 41 - 110 | * |
| Benzo[ghi]perylene | 5 | 1.06 | 21.3 | 11 - 84 | |
| Benzo[k]fluoranthene | 2.5 | 0.621 | 24.8 | 25 - 107 | * |
| Chrysene | 5 | 1.55 | 31.0 | 39 - 120 | * |
| Dibenz(a,h)Anthracene | 5 | 1.14 | 22.8 | 10 - 92 | |
| Fluoranthene | 5 | 1.79 | 35.8 | 55 - 104 | * |
| Fluorene | 50 | 8.69 | 17.4 | 29 - 84 | * |
| Indeno(1,2,3-cd)pyrene | 5 | 1.15 | 22.9 | 16 - 98 | |
| Naphthalene | 50 | 7.41 | 14.8 | 25 - 68 | * |
| 2-Methylnaphthalene | 50 | 7.71 | 15.4 | 26 - 72 | * |
| 1-Methylnaphthalene | 50 | 7.48 | 15.0 | 26 - 71 | * |
| Phenanthrene | 50 | 10.4 | 20.8 | 39 - 95 | * |
| Pyrene | 5 | 1.83 | 36.7 | 56 - 104 | * |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| Triphenylene | | 25 - 157 | PASS |
| p-terphenyl-d14 | 37.2 | 40 - 132 | FAIL |

* Analyte outside control limits

NS Analyte not spiked

THIS REPORT FOR LAB USE ONLY
PERCENT SOLID CALCULATION IS NOT BEING DONE

KEMRON FORMS - Modified 08/20/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Workgroup (AAB#): WG127725
Instrument ID: HPLC4
File ID: 4L003723.F

Run Date: 10/16/2002
Run Time: 19:46
Analyst: RDC

Sample ID: WG127373-02
Method: 8310
Matrix: WATER
Units: ug/L
Cal ID: HPLC4-04-OCT-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 50 | 7.73 | 15.5 | 25 - 78 | * |
| Acenaphthylene | 50 | | 0 | 25 - 77 | * |
| Anthracene | 50 | 13.3 | 26.5 | 47 - 101 | * |
| Benzo(a)anthracene | 5 | 2.12 | 42.5 | 50 - 115 | * |
| Benzo[a]pyrene | 5 | 1.54 | 30.8 | 29 - 113 | |
| Benzo(b)Fluoranthene | 5 | 1.81 | 36.2 | 41 - 110 | * |
| Benzo[ghi]perylene | 5 | 1.05 | 21.0 | 11 - 84 | |
| Benzo[k]fluoranthene | 2.5 | 0.618 | 24.7 | 25 - 107 | * |
| Chrysene | 5 | 1.58 | 31.7 | 39 - 120 | * |
| Dibenz(a,h)Anthracene | 5 | 0.978 | 19.6 | 10 - 92 | |
| Fluoranthene | 5 | 1.80 | 36.1 | 55 - 104 | * |
| Fluorene | 50 | 8.72 | 17.4 | 29 - 84 | * |
| Indeno(1,2,3-cd)pyrene | 5 | 1.14 | 22.7 | 16 - 98 | |
| Naphthalene | 50 | 7.56 | 15.1 | 25 - 68 | * |
| 2-Methylnaphthalene | 50 | 7.81 | 15.6 | 26 - 72 | * |
| 1-Methylnaphthalene | 50 | 7.63 | 15.3 | 26 - 71 | * |
| Phenanthrene | 50 | 10.5 | 21.0 | 39 - 95 | * |
| Pyrene | 5 | 1.90 | 37.9 | 56 - 104 | * |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| Triphenylene | | 25 - 157 | PASS |
| p-terphenyl-d14 | 37.7 | 40 - 132 | FAIL |

* Analyte outside control limits

NS Analyte not spiked

THIS REPORT FOR LAB USE ONLY
PERCENT SOLID CALCULATION IS NOT BEING DONE

KEMRON FORMS - Modified 08/20/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8310

Login Number: L0209516

AAB#: WG126623

| 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-CEF46-SB1-S-Q3-02 | 09/26/02 | 09/27/02 | 10/02/02 | 14 | 5.83 | 10/06/02 | 40 | 4.23 | |
| 062-CEF46-SB14-S-Q3-02 | 09/26/02 | 09/27/02 | 10/02/02 | 14 | 5.80 | 10/06/02 | 40 | 4.31 | |
| 062-CEF46-SB2-S-Q3-02 | 09/26/02 | 09/27/02 | 10/02/02 | 14 | 5.82 | 10/06/02 | 40 | 4.27 | |

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

KEMRON FORMS - Modified 09/12/2002
Version 1.2
Report generated 10/22/2002 11:02

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8310

Login Number: L0209516

AAB#: WG126624

| 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-CEF46-EQB-W-Q3-02 | 09/26/02 | 09/27/02 | 10/03/02 | 7 | 6.75 | 10/06/02 | 40 | 3.19 | |
| 062-CEF46-EQB-W-Q3-02 | 09/26/02 | 09/27/02 | 10/03/02 | 7 | 6.75 | 10/06/02 | 40 | 3.23 | |

* EXT = MISSED EXTRACTION HOLD TIME

*ANAL = MISSED ANALYTICAL HOLD TIME

KEMRON FORMS - Modified 09/12/2002
Version 1.2
Report generated 10/22/2002 11:02

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209516
Instrument Id: HPLC4
Workgroup (AAB#): WG126623

Method: 8310
Matrix: SOLID

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209516-01 | 1.00 | 01 | 121 |
| L0209516-01 | 1.00 | CF01 | 564 |
| L0209516-02 | 1.00 | 01 | 184 |
| L0209516-02 | 1.00 | CF01 | 1160 |
| L0209516-03 | 1.00 | 01 | 90.5 |
| L0209516-03 | 1.00 | CF01 | 130 |
| WG126384-01 | 1.00 | 01 | 96.4 |
| WG126384-01 | 1.00 | CF01 | 96.6 |
| WG126384-02 | 1.00 | 01 | 96.0 |
| WG126384-02 | 1.00 | CF01 | 92.5 |
| WG126384-03 | 1.00 | 01 | 96.9 |
| WG126384-03 | 1.00 | CF01 | 92.7 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - p-terphenyl-d14 | 50 | - | 150 |

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 10/22/2002
Version 1.2
Report generated 10/22/2002 11:02

KEMRON ENVIRONMENTAL SERVICES

SURROGATE STANDARDS

Login Number: L0209516

Instrument Id: HPLC4

Workgroup (AAB#): WG126624

Method: 8310

Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209516-04 | 1.00 | 01 | 37.9 |
| WG126469-01 | 1.00 | 01 | 40.9 |
| WG126469-01 | 1.00 | CF01 | 43.8 |
| WG126469-02 | 1.00 | 01 | 42.5 |
| WG126469-02 | 1.00 | CF01 | 44.0 |
| WG126469-03 | 1.00 | 01 | 48.9 |
| WG126469-03 | 1.00 | CF01 | 49.5 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - p-terphenyl-d14 | 40 | - | 132 |

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 10/22/2002

Version 1.2

Report generated 10/22/2002 11:03

Calibration Table

==========

HPLC4 8310 CALIBRATION

Calib. Data Modified : 10/5/2002 1:59:25 PM

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=360,100, TT

| RetTime [min] | Sig | Lvl | Amount [ug/L] | Area | Amt/Area | Ref | Grp | Name |
|---|---|---|---|---|---|---|---|---|
| 9.328 | 2 | 1 | 1.00000 | 108.71868 | 9.19805e-3 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 577.20190 | 8.66248e-3 | | | |
| | | 3 | 10.00000 | 1170.17078 | 8.54576e-3 | | | |
| | | 4 | 20.00000 | 2412.53857 | 8.29002e-3 | | | |
| | | 5 | 50.00000 | 6068.75977 | 8.23892e-3 | | | |
| | | 6 | 100.00000 | 1.18189e4 | 8.46101e-3 | | | |
| 9.347 | 1 | 1 | 1.00000 | 33.87443 | 2.95208e-2 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 176.26851 | 2.83658e-2 | | | |
| | | 3 | 10.00000 | 359.10220 | 2.78472e-2 | | | |
| | | 4 | 20.00000 | 742.09198 | 2.69508e-2 | | | |
| | | 5 | 50.00000 | 1896.72388 | 2.63612e-2 | | | |
| | | 6 | 100.00000 | 3824.68286 | 2.61460e-2 | | | |
| 10.956 | 2 | 1 | 1.00000 | 27.07926 | 3.69286e-2 | | | Acenaphthylene #2 |
| | | 2 | 5.00000 | 138.46826 | 3.61094e-2 | | | |
| | | 3 | 10.00000 | 281.09235 | 3.55755e-2 | | | |
| | | 4 | 20.00000 | 577.54309 | 3.46295e-2 | | | |
| | | 5 | 50.00000 | 1469.66235 | 3.40214e-2 | | | |
| | | 6 | 100.00000 | 2955.51001 | 3.38351e-2 | | | |
| 11.903 | 2 | 1 | 1.00000 | 65.15134 | 1.53489e-2 | | | 1-Methylnaphthalene #3 |

| [min] | Sig | | [ug/L] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 2 | 5.00000 | 341.55984 | 1.46387e-2 | | | |
| | | 3 | 10.00000 | 694.18103 | 1.44055e-2 | | | |
| | | 4 | 20.00000 | 1425.69580 | 1.40282e-2 | | | |
| | | 5 | 50.00000 | 3618.98071 | 1.38160e-2 | | | |
| | | 6 | 100.00000 | 7215.58887 | 1.38589e-2 | | | |
| 11.922 | 1 | 1 | 1.00000 | 39.10516 | 2.55721e-2 | | | 1-Methylnaphthalene #3 |
| | | 2 | 5.00000 | 202.81273 | 2.46533e-2 | | | |
| | | 3 | 10.00000 | 412.86859 | 2.42208e-2 | | | |
| | | 4 | 20.00000 | 853.24036 | 2.34401e-2 | | | |
| | | 5 | 50.00000 | 2177.66138 | 2.29604e-2 | | | |
| | | 6 | 100.00000 | 4375.24463 | 2.28559e-2 | | | |
| 12.479 | 2 | 1 | 1.00000 | 77.43833 | 1.29135e-2 | | | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 397.01361 | 1.25940e-2 | | | |
| | | 3 | 10.00000 | 806.74365 | 1.23955e-2 | | | |
| | | 4 | 20.00000 | 1655.81189 | 1.20787e-2 | | | |
| | | 5 | 50.00000 | 4184.95117 | 1.19476e-2 | | | |
| | | 6 | 100.00000 | 8281.40723 | 1.20752e-2 | | | |
| 12.497 | 1 | 1 | 1.00000 | 50.80115 | 1.96846e-2 | | | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 263.61316 | 1.89672e-2 | | | |
| | | 3 | 10.00000 | 536.97241 | 1.86229e-2 | | | |
| | | 4 | 20.00000 | 1108.11157 | 1.80487e-2 | | | |
| | | 5 | 50.00000 | 2830.49658 | 1.76647e-2 | | | |
| | | 6 | 100.00000 | 5656.83252 | 1.76777e-2 | | | |
| 12.957 | 2 | 1 | 1.00000 | 40.46593 | 2.47121e-2 | | | Acenaphthene #5 |
| | | 2 | 5.00000 | 208.35878 | 2.39971e-2 | | | |
| | | 3 | 10.00000 | 424.02664 | 2.35834e-2 | | | |
| | | 4 | 20.00000 | 871.62915 | 2.29455e-2 | | | |
| | | 5 | 50.00000 | 2219.72949 | 2.25253e-2 | | | |
| | | 6 | 100.00000 | 4449.57959 | 2.24740e-2 | | | |
| 12.975 | 1 | 1 | 1.00000 | 64.19129 | 1.55784e-2 | | | Acenaphthene #5 |
| | | 2 | 5.00000 | 332.48251 | 1.50384e-2 | | | |
| | | 3 | 10.00000 | 677.32117 | 1.47640e-2 | | | |
| | | 4 | 20.00000 | 1395.03540 | 1.43366e-2 | | | |
| | | 5 | 50.00000 | 3561.19922 | 1.40402e-2 | | | |
| | | 6 | 100.00000 | 7075.27148 | 1.41337e-2 | | | |
| 13.613 | 2 | 1 | 1.00000 | 52.38352 | 1.90900e-2 | | | Fluorene #6 |
| | | 2 | 5.00000 | 271.59180 | 1.84100e-2 | | | |
| | | 3 | 10.00000 | 553.53839 | 1.80656e-2 | | | |
| | | 4 | 20.00000 | 1136.41162 | 1.75993e-2 | | | |
| | | 5 | 50.00000 | 2885.49780 | 1.73280e-2 | | | |
| | | 6 | 100.00000 | 5760.90283 | 1.73584e-2 | | | |
| 13.632 | 1 | 1 | 1.00000 | 137.57742 | 7.26863e-3 | | | Fluorene #6 |
| | | 2 | 5.00000 | 709.62726 | 7.04595e-3 | | | |
| | | 3 | 10.00000 | 1443.68811 | 6.92670e-3 | | | |
| | | 4 | 20.00000 | 2965.57007 | 6.74407e-3 | | | |
| | | 5 | 50.00000 | 7500.22803 | 6.66646e-3 | | | |
| | | 6 | 100.00000 | 1.48055e4 | 6.75425e-3 | | | |
| 15.001 | 2 | 1 | 1.00000 | 52.69966 | 1.89755e-2 | | | Phenanthrene #7 |
| | | 2 | 5.00000 | 272.13281 | 1.83734e-2 | | | |
| | | 3 | 10.00000 | 554.52924 | 1.80333e-2 | | | |
| | | 4 | 20.00000 | 1139.09326 | 1.75578e-2 | | | |
| | | 5 | 50.00000 | 2893.40918 | 1.72807e-2 | | | |
| | | 6 | 100.00000 | 5793.69580 | 1.72601e-2 | | | |
| 15.020 | 1 | 1 | 1.00000 | 4.94392 | 2.02269e-1 | | | Phenanthrene #7 |
| | | 2 | 5.00000 | 26.06303 | 1.91843e-1 | | | |
| | | 3 | 10.00000 | 53.41463 | 1.87215e-1 | | | |

| [min] | Sig | | [ug/L] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 4 | 20.00000 | 110.80046 | 1.80505e-1 | | | |
| | | 5 | 50.00000 | 285.91602 | 1.74877e-1 | | | |
| | | 6 | 100.00000 | 578.63593 | 1.72820e-1 | | | |
| 16.407 | 2 | 1 | 1.00000 | 79.06156 | 1.26484e-2 | | | Anthracene #8 |
| | | 2 | 5.00000 | 417.10779 | 1.19873e-2 | | | |
| | | 3 | 10.00000 | 853.74945 | 1.17130e-2 | | | |
| | | 4 | 20.00000 | 1749.78955 | 1.14299e-2 | | | |
| | | 5 | 50.00000 | 4501.37744 | 1.11077e-2 | | | |
| | | 6 | 100.00000 | 8865.23926 | 1.12800e-2 | | | |
| 16.426 | 1 | 1 | 1.00000 | 2.83787 | 3.52377e-1 | | | Anthracene #8 |
| | | 2 | 5.00000 | 14.63960 | 3.41539e-1 | | | |
| | | 3 | 10.00000 | 29.73066 | 3.36353e-1 | | | |
| | | 4 | 20.00000 | 62.22598 | 3.21409e-1 | | | |
| | | 5 | 50.00000 | 159.69156 | 3.13104e-1 | | | |
| | | 6 | 100.00000 | 316.79214 | 3.15664e-1 | | | |
| 17.789 | 2 | 1 | 1.00000e-1 | 4.11386 | 2.43081e-2 | | | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 22.34840 | 2.23730e-2 | | | |
| | | 3 | 1.00000 | 45.35046 | 2.20505e-2 | | | |
| | | 4 | 2.00000 | 93.34414 | 2.14261e-2 | | | |
| | | 5 | 5.00000 | 239.47792 | 2.08788e-2 | | | |
| | | 6 | 10.00000 | 483.08569 | 2.07003e-2 | | | |
| 17.808 | 1 | 1 | 1.00000e-1 | 3.57123 | 2.80015e-2 | | | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 18.35631 | 2.72386e-2 | | | |
| | | 3 | 1.00000 | 38.17557 | 2.61948e-2 | | | |
| | | 4 | 2.00000 | 76.49144 | 2.61467e-2 | | | |
| | | 5 | 5.00000 | 195.43803 | 2.55836e-2 | | | |
| | | 6 | 10.00000 | 393.10590 | 2.54384e-2 | | | |
| 18.794 | 2 | 1 | 1.00000e-1 | 7.85789 | 1.27261e-2 | | | Pyrene #10 |
| | | 2 | 5.00000e-1 | 41.78757 | 1.19653e-2 | | | |
| | | 3 | 1.00000 | 84.42243 | 1.18452e-2 | | | |
| | | 4 | 2.00000 | 176.22002 | 1.13494e-2 | | | |
| | | 5 | 5.00000 | 451.01443 | 1.10861e-2 | | | |
| | | 6 | 10.00000 | 906.94849 | 1.10260e-2 | | | |
| 18.816 | 1 | 1 | 1.00000e-1 | 2.11499 | 4.72815e-2 | | | Pyrene #10 |
| | | 2 | 5.00000e-1 | 11.17597 | 4.47388e-2 | | | |
| | | 3 | 1.00000 | 22.53931 | 4.43669e-2 | | | |
| | | 4 | 2.00000 | 47.12078 | 4.24441e-2 | | | |
| | | 5 | 5.00000 | 121.79258 | 4.10534e-2 | | | |
| | | 6 | 10.00000 | 248.00366 | 4.03220e-2 | | | |
| 21.148 | 2 | 1 | 1.00000 | 13.65795 | 7.32174e-2 | | | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 71.00721 | 7.04154e-2 | | | |
| | | 3 | 10.00000 | 149.49380 | 6.68924e-2 | | | |
| | | 4 | 20.00000 | 303.15381 | 6.59731e-2 | | | |
| | | 5 | 50.00000 | 754.74054 | 6.62479e-2 | | | |
| | | 6 | 100.00000 | 1525.64551 | 6.55460e-2 | | | |
| 21.165 | 1 | 1 | 1.00000 | 3.07198 | 3.25523e-1 | | | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 15.61307 | 3.20244e-1 | | | |
| | | 3 | 10.00000 | 32.18307 | 3.10722e-1 | | | |
| | | 4 | 20.00000 | 66.77608 | 2.99508e-1 | | | |
| | | 5 | 50.00000 | 164.39676 | 3.04142e-1 | | | |
| | | 6 | 100.00000 | 338.24698 | 2.95642e-1 | | | |
| 22.472 | 2 | 1 | 1.00000e-1 | 3.98452 | 2.50971e-2 | | | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 21.75884 | 2.29792e-2 | | | |
| | | 3 | 1.00000 | 44.98011 | 2.22320e-2 | | | |
| | | 4 | 2.00000 | 91.58590 | 2.18374e-2 | | | |
| | | 5 | 5.00000 | 234.38974 | 2.13320e-2 | | | |

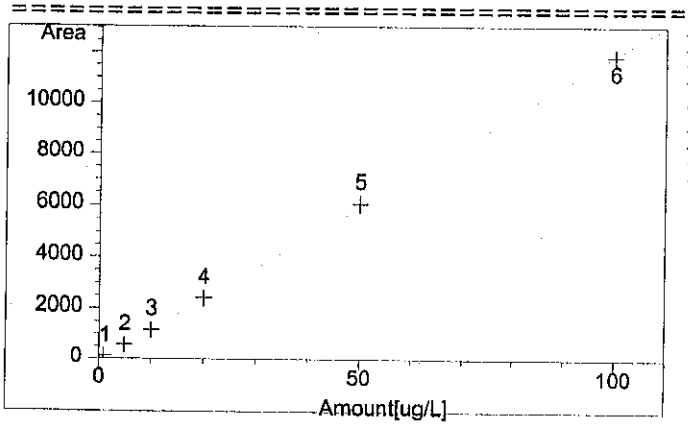
| [min] | Sig | | [ug/L] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 6 | 10.00000 | 474.98590 | 2.10533e-2 | | | |
| 22.487 | 1 | 1 | 1.00000e-1 | 10.50630 | 9.51810e-3 | | | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 55.10502 | 9.07358e-3 | | | |
| | | 3 | 1.00000 | 112.54045 | 8.88569e-3 | | | |
| | | 4 | 2.00000 | 231.76024 | 8.62961e-3 | | | |
| | | 5 | 5.00000 | 596.65259 | 8.38009e-3 | | | |
| | | 6 | 10.00000 | 1210.77991 | 8.25914e-3 | | | |
| 23.343 | 2 | 1 | 1.00000e-1 | 5.59298 | 1.78795e-2 | | | Chrysene #13 |
| | | 2 | 5.00000e-1 | 30.95954 | 1.61501e-2 | | | |
| | | 3 | 1.00000 | 61.95520 | 1.61407e-2 | | | |
| | | 4 | 2.00000 | 128.17973 | 1.56031e-2 | | | |
| | | 5 | 5.00000 | 328.84399 | 1.52048e-2 | | | |
| | | 6 | 10.00000 | 663.11285 | 1.50804e-2 | | | |
| 23.366 | 1 | 1 | 1.00000e-1 | 1.91021 | 5.23504e-2 | | | Chrysene #13 |
| | | 2 | 5.00000e-1 | 11.39551 | 4.38769e-2 | | | |
| | | 3 | 1.00000 | 22.94587 | 4.35808e-2 | | | |
| | | 4 | 2.00000 | 47.78686 | 4.18525e-2 | | | |
| | | 5 | 5.00000 | 122.28232 | 4.08890e-2 | | | |
| | | 6 | 10.00000 | 247.87633 | 4.03427e-2 | | | |
| 26.073 | 2 | 1 | 1.00000e-1 | 4.27175 | 2.34096e-2 | | | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 22.66298 | 2.20624e-2 | | | |
| | | 3 | 1.00000 | 46.75035 | 2.13902e-2 | | | |
| | | 4 | 2.00000 | 95.69762 | 2.08992e-2 | | | |
| | | 5 | 5.00000 | 245.54985 | 2.03625e-2 | | | |
| | | 6 | 10.00000 | 498.17334 | 2.00733e-2 | | | |
| 26.094 | 1 | 1 | 1.00000e-1 | 5.23515 | 1.91017e-2 | | | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 26.68732 | 1.87355e-2 | | | |
| | | 3 | 1.00000 | 55.36226 | 1.80628e-2 | | | |
| | | 4 | 2.00000 | 114.66280 | 1.74424e-2 | | | |
| | | 5 | 5.00000 | 290.14517 | 1.72328e-2 | | | |
| | | 6 | 10.00000 | 588.94989 | 1.69794e-2 | | | |
| 27.520 | 2 | 1 | 5.00000e-2 | 2.31917 | 2.15594e-2 | | | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 10.27585 | 2.43289e-2 | | | |
| | | 3 | 5.00000e-1 | 21.06332 | 2.37379e-2 | | | |
| | | 4 | 1.00000 | 42.04045 | 2.37866e-2 | | | |
| | | 5 | 2.50000 | 107.37804 | 2.32822e-2 | | | |
| | | 6 | 5.00000 | 216.25821 | 2.31205e-2 | | | |
| 27.537 | 1 | 1 | 5.00000e-2 | 15.77271 | 3.17003e-3 | | | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 81.33999 | 3.07352e-3 | | | |
| | | 3 | 5.00000e-1 | 166.50098 | 3.00299e-3 | | | |
| | | 4 | 1.00000 | 344.16122 | 2.90561e-3 | | | |
| | | 5 | 2.50000 | 879.75293 | 2.84171e-3 | | | |
| | | 6 | 5.00000 | 1768.03625 | 2.82800e-3 | | | |
| 28.617 | 2 | 1 | 1.00000e-1 | 2.89637 | 3.45260e-2 | | | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 15.99617 | 3.12575e-2 | | | |
| | | 3 | 1.00000 | 34.01420 | 2.93995e-2 | | | |
| | | 4 | 2.00000 | 69.83824 | 2.86376e-2 | | | |
| | | 5 | 5.00000 | 181.22298 | 2.75903e-2 | | | |
| | | 6 | 10.00000 | 370.09787 | 2.70199e-2 | | | |
| 28.638 | 1 | 1 | 1.00000e-1 | 16.52711 | 6.05067e-3 | | | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 86.37741 | 5.78855e-3 | | | |
| | | 3 | 1.00000 | 177.75235 | 5.62580e-3 | | | |
| | | 4 | 2.00000 | 370.21207 | 5.40231e-3 | | | |
| | | 5 | 5.00000 | 957.73456 | 5.22065e-3 | | | |
| | | 6 | 10.00000 | 1955.02771 | 5.11502e-3 | | | |
| 30.493 | 2 | 1 | 1.00000e-1 | 7.76671e-1 | 1.28755e-1 | | | Dibenz(a,h)anthracene |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000e-1 | 4.80888 | 1.03974e-1 | |
| | | 3 | 1.00000 | 9.07195 | 1.10230e-1 | |
| | | 4 | 2.00000 | 19.19596 | 1.04189e-1 | |
| | | 5 | 5.00000 | 49.99914 | 1.00002e-1 | |
| | | 6 | 10.00000 | 99.50796 | 1.00494e-1 | |
| 30.505 | 1 | 1 | 1.00000e-1 | 2.45930 | 4.06619e-2 | Dibenz(a,h)anthracene |
| | | 2 | 5.00000e-1 | 10.93452 | 4.57268e-2 | |
| | | 3 | 1.00000 | 22.23139 | 4.49814e-2 | |
| | | 4 | 2.00000 | 45.73194 | 4.37331e-2 | |
| | | 5 | 5.00000 | 118.50603 | 4.21919e-2 | |
| | | 6 | 10.00000 | 242.65541 | 4.12107e-2 | |
| 31.280 | 2 | 1 | 1.00000e-1 | 1.48871 | 6.71722e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 7.41438 | 6.74365e-2 | |
| | | 3 | 1.00000 | 15.40149 | 6.49288e-2 | |
| | | 4 | 2.00000 | 32.05828 | 6.23864e-2 | |
| | | 5 | 5.00000 | 84.00133 | 5.95229e-2 | |
| | | 6 | 10.00000 | 171.23235 | 5.84002e-2 | |
| 31.315 | 1 | 1 | 1.00000e-1 | 2.82300 | 3.54234e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 14.32241 | 3.49103e-2 | |
| | | 3 | 1.00000 | 29.67043 | 3.37036e-2 | |
| | | 4 | 2.00000 | 61.93504 | 3.22919e-2 | |
| | | 5 | 5.00000 | 160.60448 | 3.11324e-2 | |
| | | 6 | 10.00000 | 333.05783 | 3.00248e-2 | |
| 32.282 | 2 | 1 | 1.00000e-1 | 3.69404 | 2.70707e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 23.07085 | 2.16724e-2 | |
| | | 3 | 1.00000 | 47.43527 | 2.10814e-2 | |
| | | 4 | 2.00000 | 98.69339 | 2.02648e-2 | |
| | | 5 | 5.00000 | 254.47401 | 1.96484e-2 | |
| | | 6 | 10.00000 | 515.44202 | 1.94008e-2 | |
| 32.284 | 1 | 1 | 1.00000e-1 | 6.45037 | 1.55030e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 31.27388 | 1.59878e-2 | |
| | | 3 | 1.00000 | 65.40406 | 1.52896e-2 | |
| | | 4 | 2.00000 | 134.93365 | 1.48221e-2 | |
| | | 5 | 5.00000 | 342.39185 | 1.46032e-2 | |
| | | 6 | 10.00000 | 694.01044 | 1.44090e-2 | |

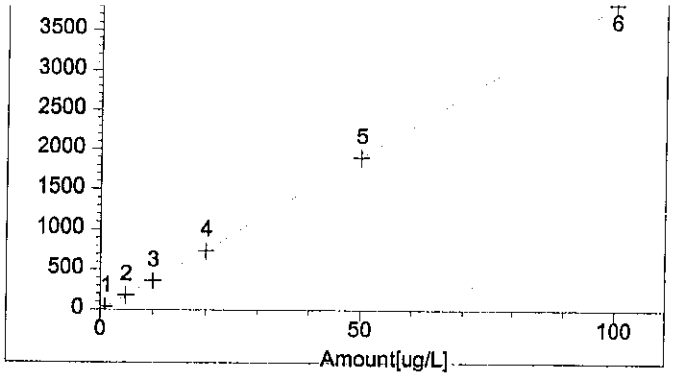
## Peak Sum Table

***No Entries in table***

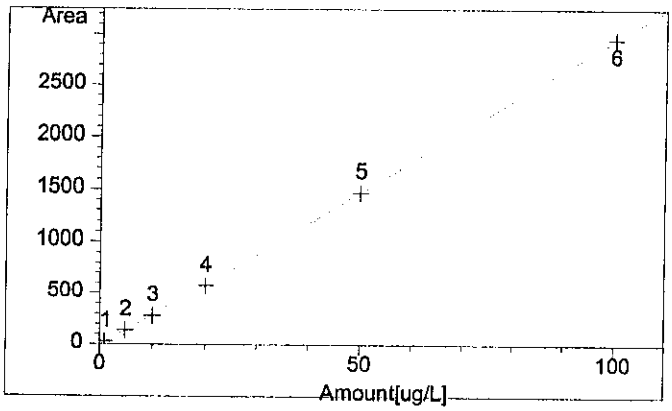
## Calibration Curves



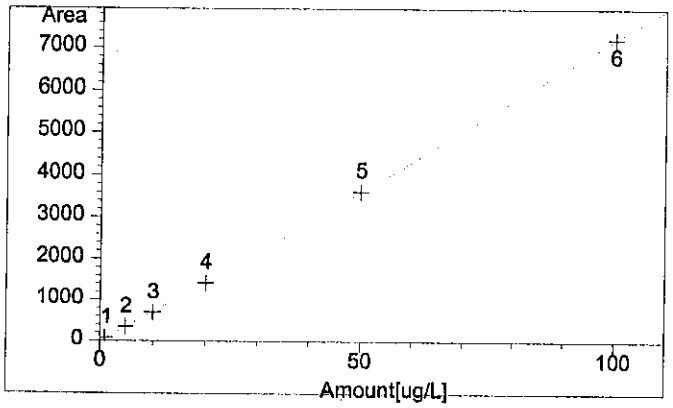

Naphthalene #1 at exp. RT: 9.328
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 65.97339
Formula: y = mx + b
m: 118.70195
b: 11.10717
x: Amount [ug/L]
y: Area



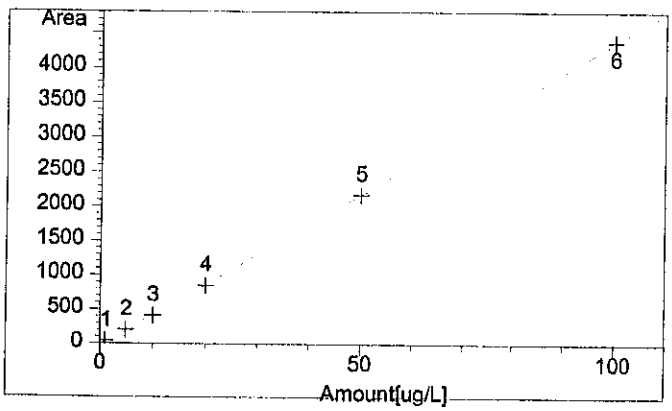

FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.66084
Formula: y = mx + b
m: 38.32180
b: -13.58736
x: Amount [ug/L]
y: Area



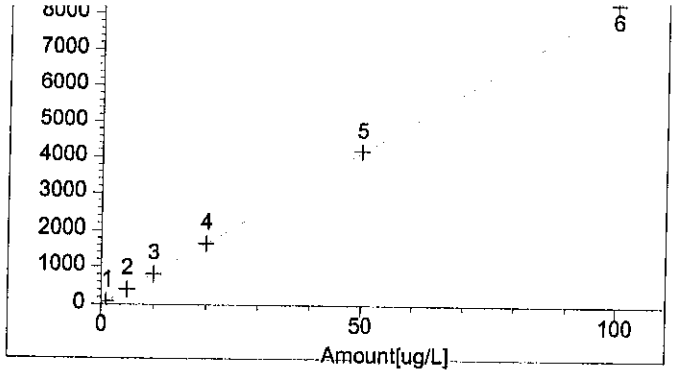

Acenaphthylene #2 at exp. RT: 10.956
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 6.37733
Formula: y = mx + b
m: 29.60498
b: -8.16718
x: Amount [ug/L]
y: Area



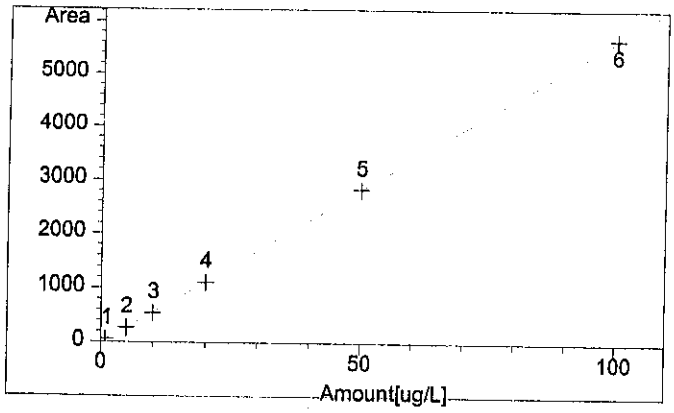

1-Methylnaphthalene #3 at exp. RT: 11.903
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 12.91758
Formula: y = mx + b
m: 72.33204
b: -13.22887
x: Amount [ug/L]
y: Area



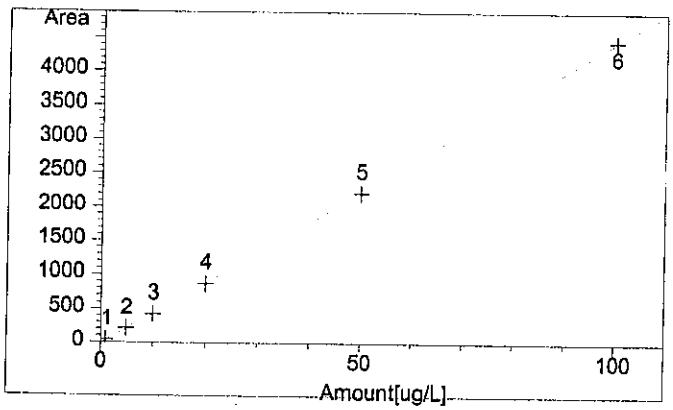

1-Methylnaphthalene #3 at exp. RT: 11.922
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.35090
Formula: y = mx + b
m: 43.84911
b: -13.57171
x: Amount [ug/L]
y: Area



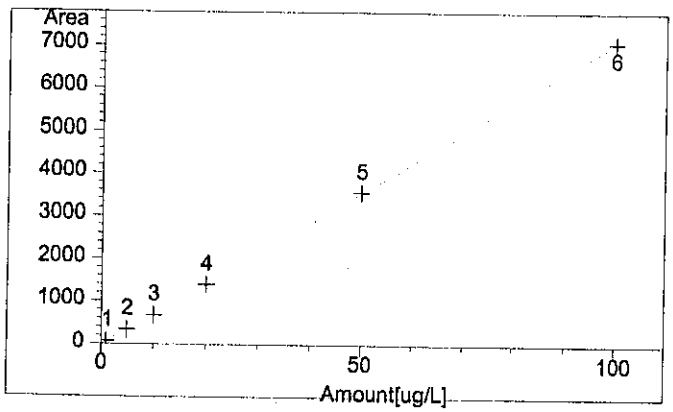

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 21.39759
Formula: y = mx + b
m: 83.04908
b: -6.25183
x: Amount [ug/L]
y: Area



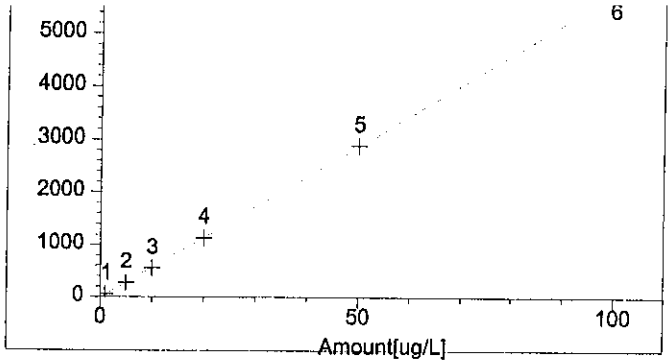

2-Methylnaphthalene #4 at exp. RT: 12.497
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 12.50052
Formula: y = mx + b
m: 56.72167
b: -14.77189
x: Amount [ug/L]
y: Area



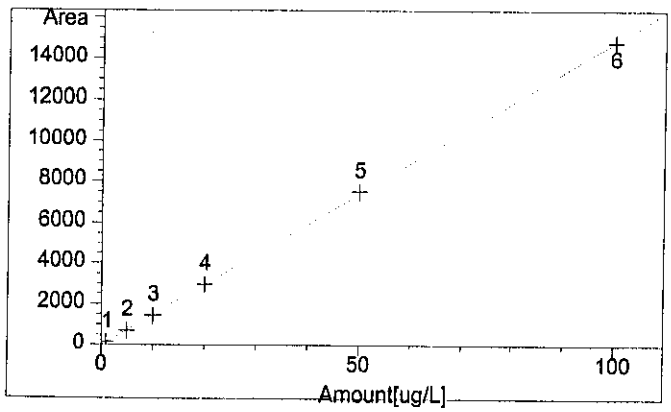

Acenaphthene #5 at exp. RT: 12.957
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 8.78942
Formula: y = mx + b
m: 44.58933
b: -11.40374
x: Amount [ug/L]
y: Area



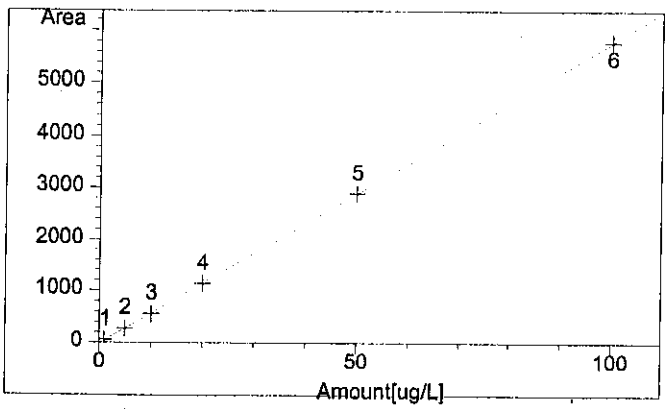

Acenaphthene #5 at exp. RT: 12.975
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 17.51698
Formula: y = mx + b
m: 70.97675
b: -13.73914
x: Amount [ug/L]
y: Area



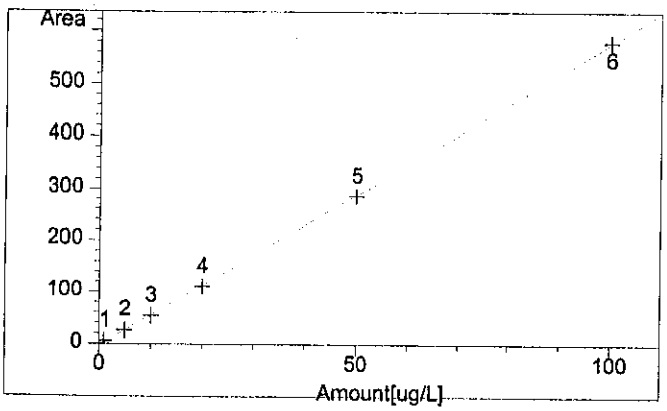

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 10.03923
Formula: y = mx + b
m: 57.74314
b: -11.41400
x: Amount [ug/L]
y: Area



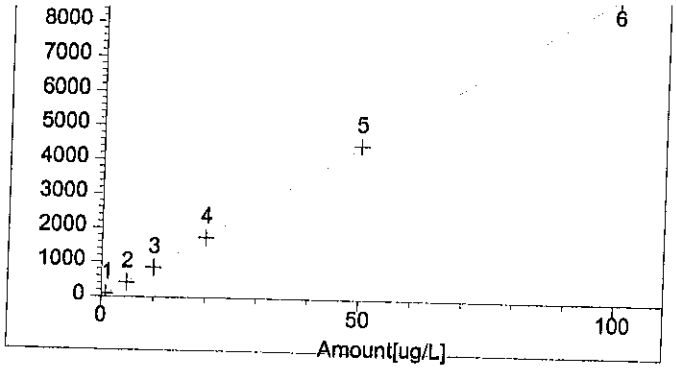

Fluorene #6 at exp. RT: 13.632
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 44.87141
Formula: y = mx + b
m: 148.52433
b: -9.04850
x: Amount [ug/L]
y: Area



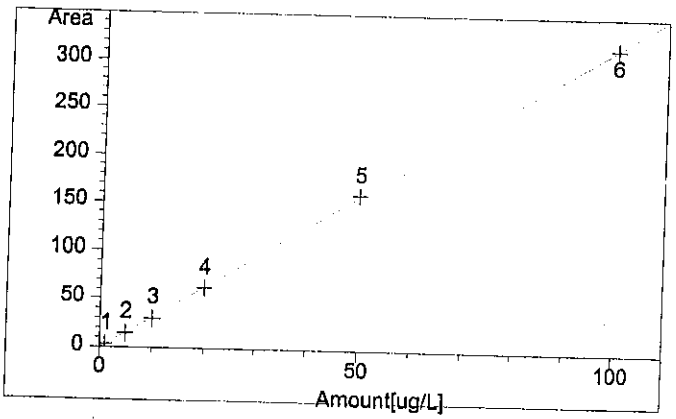

Phenanthrene #7 at exp. RT: 15.001
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 10.18748
Formula: y = mx + b
m: 58.05729
b: -13.29941
x: Amount [ug/L]
y: Area



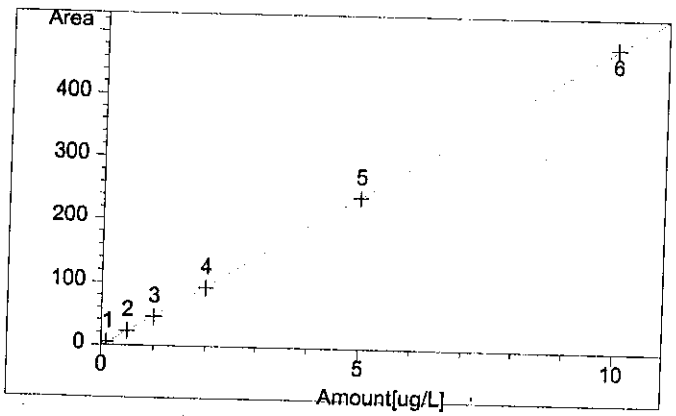

Phenanthrene #7 at exp. RT: 15.020
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 2.20211
Formula: y = mx + b
m: 5.79995
b: -2.71654
x: Amount [ug/L]
y: Area



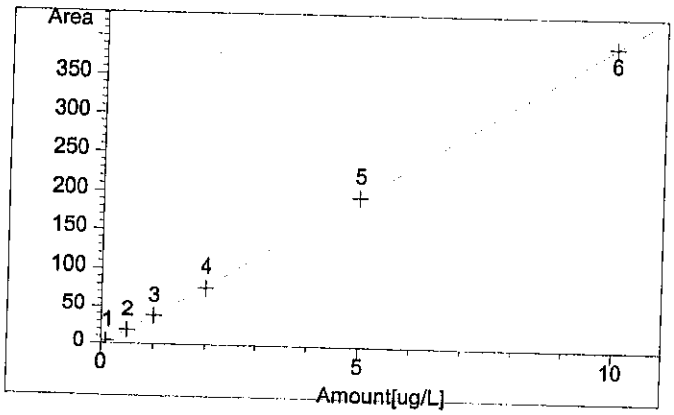

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 34.18109
Formula: y = mx + b
m: 89.03790
b: -13.53192
x: Amount [ug/L]
y: Area



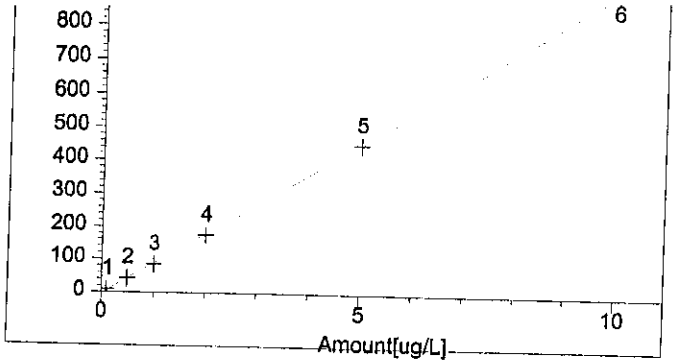

Anthracene #8 at exp. RT: 16.426
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.03803
Formula: y = mx + b
m: 3.18084
b: -8.16850e-1
x: Amount [ug/L]
y: Area



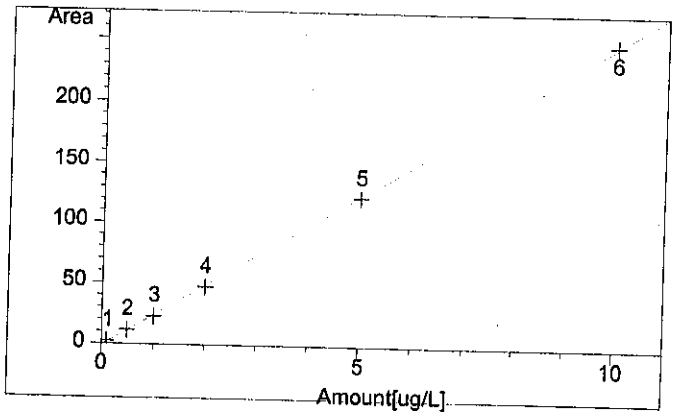

Fluoranthene #9 at exp. RT: 17.789
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 1.41423
Formula: y = mx + b
m: 48.40684
b: -1.80668
x: Amount [ug/L]
y: Area



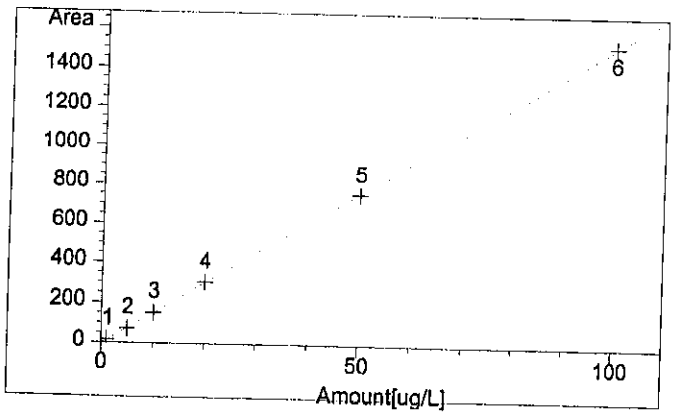

Fluoranthene #9 at exp. RT: 17.808
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.82903
Formula: y = mx + b
m: 39.36490
b: -1.00696
x: Amount [ug/L]
y: Area



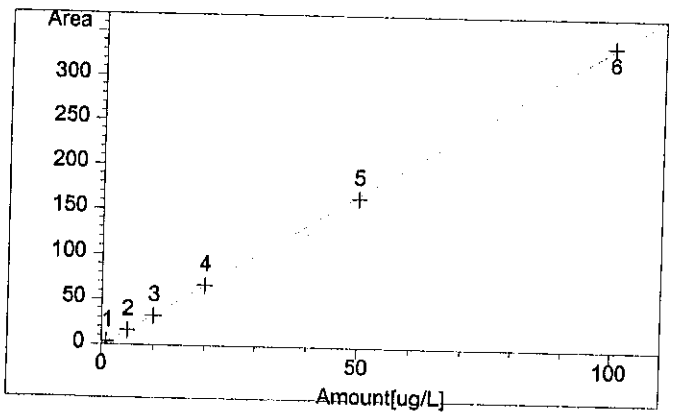

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 2.53265
Formula: y = mx + b
m: 90.92749
b: -3.28578
x: Amount [ug/L]
y: Area



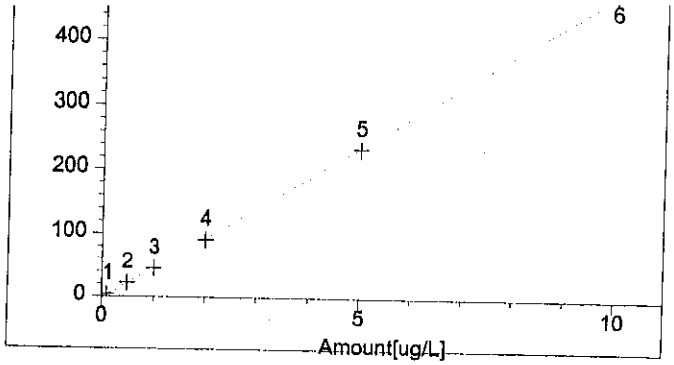

Pyrene #10 at exp. RT: 18.816
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.19845
Formula: y = mx + b
m: 24.84706
b: -1.34401
x: Amount [ug/L]
y: Area



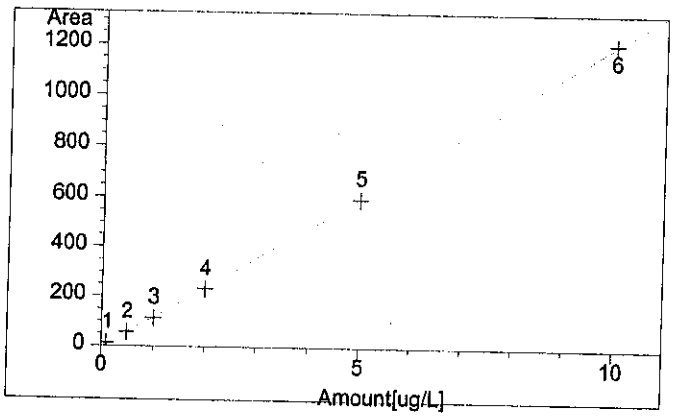

p-Terphenyl d14 #11* at exp. RT: 21.148
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 3.21796
Formula: y = mx + b
m: 15.26006
b: -2.95332
x: Amount [ug/L]
y: Area



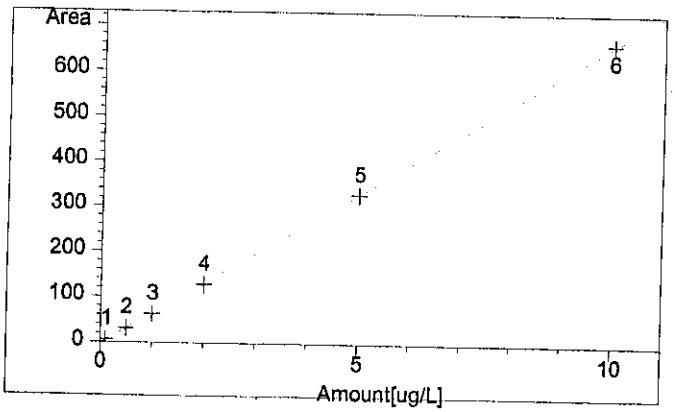

p-Terphenyl d14 #11* at exp. RT: 21.165
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99991
Residual Std. Dev.: 1.79862
Formula: y = mx + b
m: 3.37730
b: -1.12699
x: Amount [ug/L]
y: Area



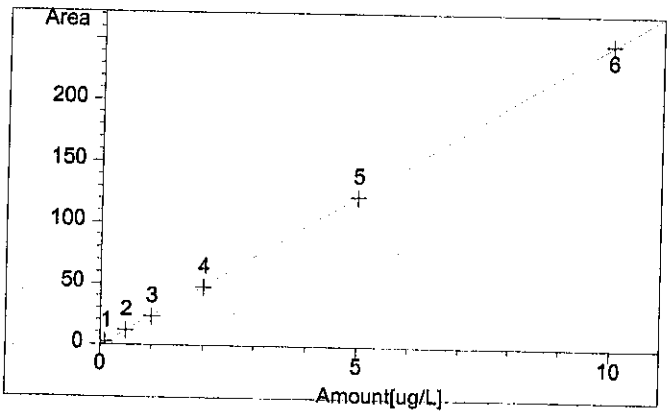

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 1.54554
Formula: y = mx + b
m: 47.56534
b: -1.86146
x: Amount [ug/L]
y: Area



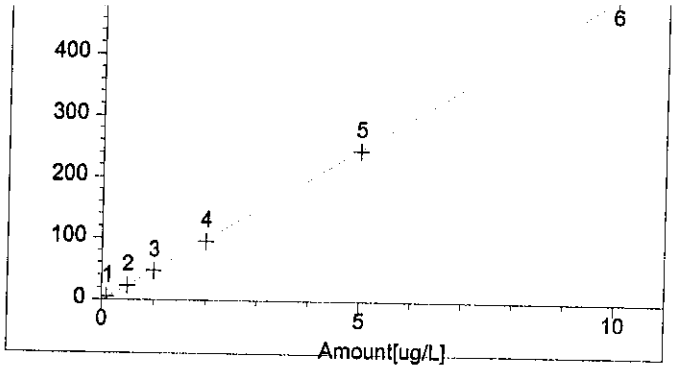

Benzo(a)anthracene #12 at exp. RT: 22.487
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 4.77545
Formula: y = mx + b
m: 121.27995
b: -5.49466
x: Amount [ug/L]
y: Area



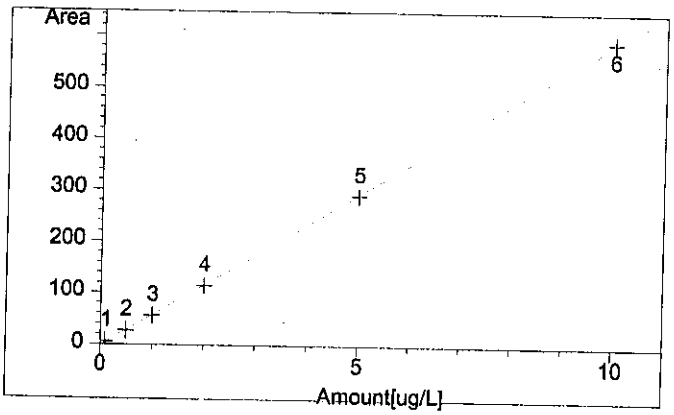

Chrysene #13 at exp. RT: 23.343
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 1.96801
Formula: y = mx + b
m: 66.44953
b: -2.47385
x: Amount [ug/L]
y: Area



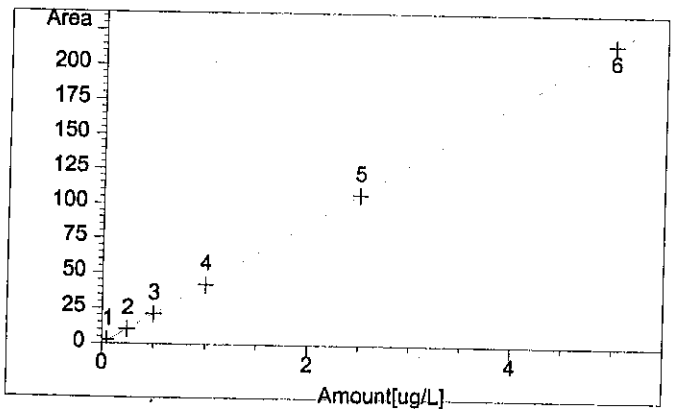

Chrysene #13 at exp. RT: 23.366
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 0.86600
Formula: y = mx + b
m: 24.83656
b: -1.10899
x: Amount [ug/L]
y: Area



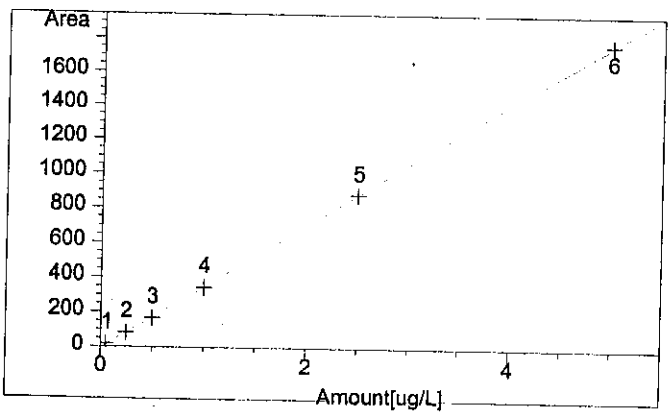

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 1.81598
Formula: y = mx + b
m: 49.89209
b: -2.12672
x: Amount [ug/L]
y: Area



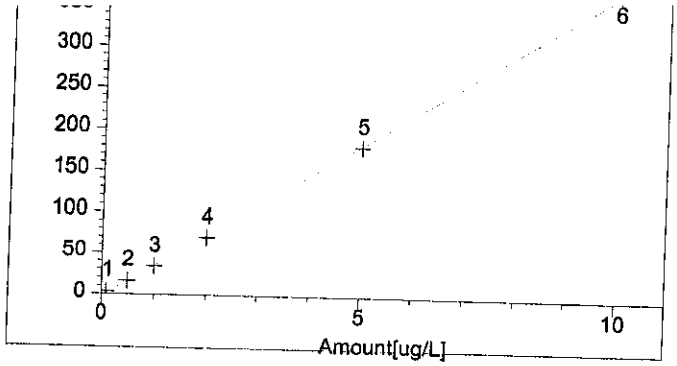

Benzo(b)fluoranthene #14 at exp. RT: 26.0
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.95209
Formula: y = mx + b
m: 58.96170
b: -2.23500
x: Amount [ug/L]
y: Area



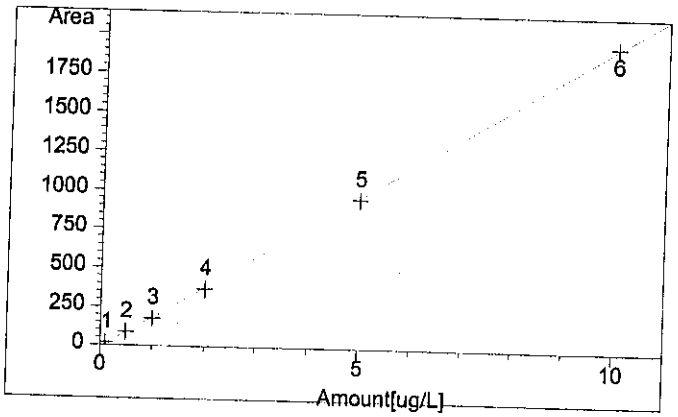

Benzo(k)fluoranthene #15 at exp. RT: 27.5
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 0.53817
Formula: y = mx + b
m: 43.26962
b: -4.38913e-1
x: Amount [ug/L]
y: Area



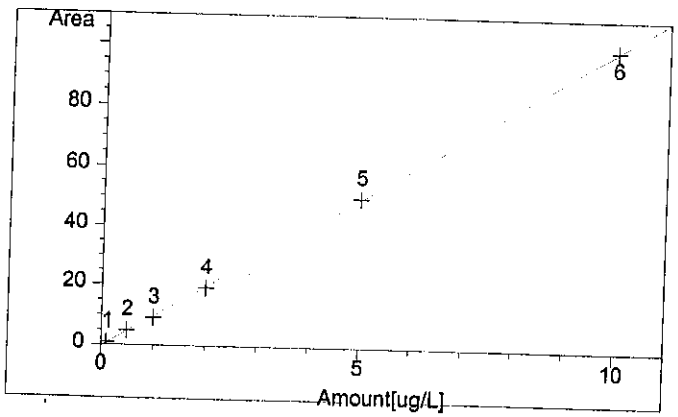

Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 4.42399
Formula: y = mx + b
m: 354.43358
b: -5.80975
x: Amount [ug/L]
y: Area



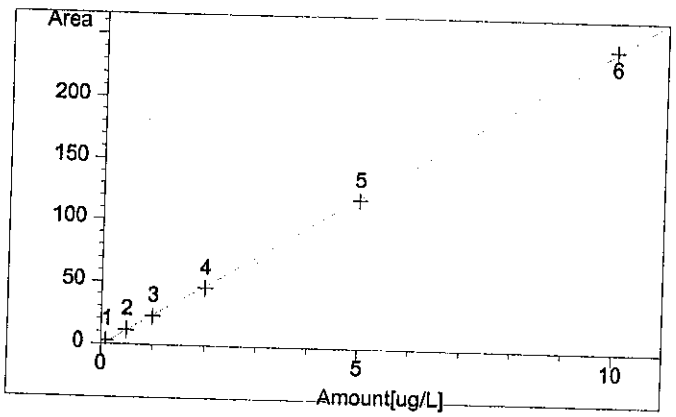

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99992
Residual Std. Dev.: 1.91201
Formula: y = mx + b
m: 37.08670
b: -2.24954
x: Amount [ug/L]
y: Area



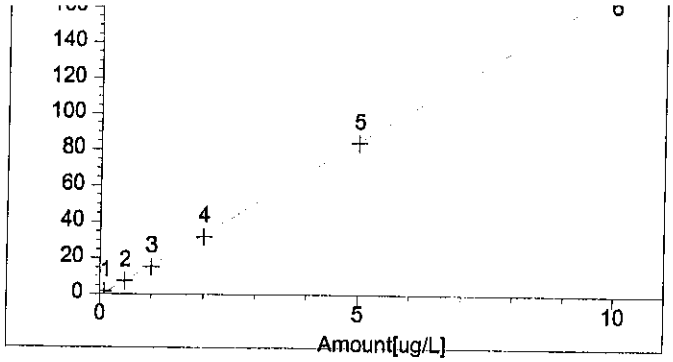

Benzo(a)pyrene #16 at exp. RT: 28.638
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 10.11239
Formula: y = mx + b
m: 195.86158
b: -11.34203
x: Amount [ug/L]
y: Area



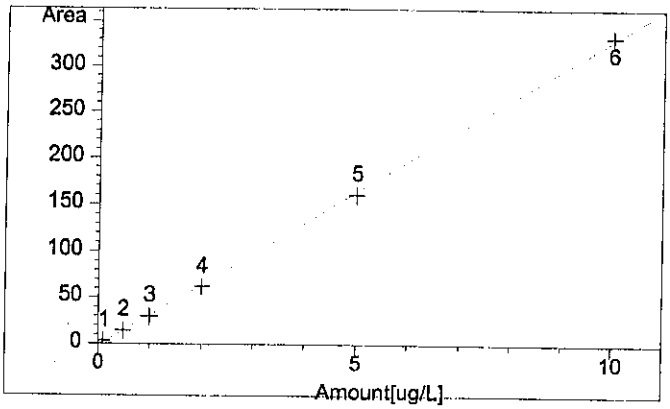

Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 0.40916
Formula: y = mx + b
m: 9.99301
b: -3.58480e-1
x: Amount [ug/L]
y: Area



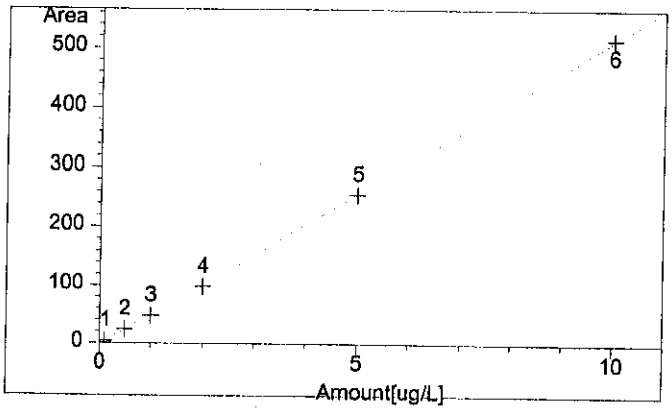

Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99989
Residual Std. Dev.: 1.43125
Formula: y = mx + b
m: 24.27916
b: -1.29624
x: Amount [ug/L]
y: Area



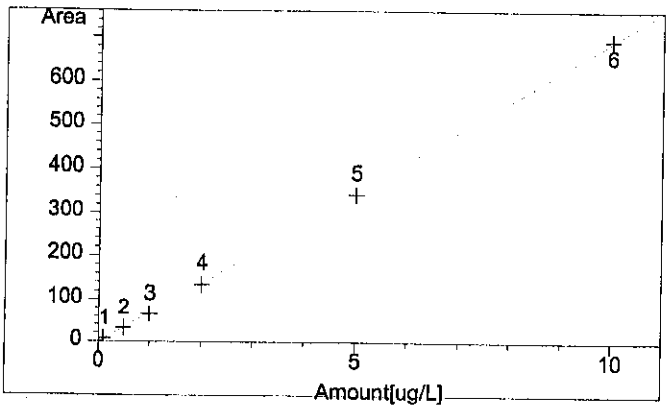

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 0.97748
Formula: y = mx + b
m: 17.16720
b: -1.10192
x: Amount [ug/L]
y: Area




Benzo(g,h,i)perylene #18 at exp. RT: 31.3
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99981
Residual Std. Dev.: 2.61520
Formula: y = mx + b
m: 33.32486
b: -2.48990
x: Amount [ug/L]
y: Area




Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 1.91414
Formula: y = mx + b
m: 51.68834
b: -2.65621
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.: 2.24495
Formula: y = mx + b
m: 69.48765
b: -2.57230
x: Amount [ug/L]
y: Area

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Data File C:\HPCHEM\2\DATA\100402\4L003653.D Sample Name: WG126622-08 ALT
HPLC4 10/5/2002 2:04:24 PM

1,1 SOS60-26/60-27 ALT. SOURCE @ 20/2/1 ppm

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Injection Date : 10/4/2002 11:42:43 PM Seq. Line : 11

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.348 | 20.0 | 19.276 | -3.6 |
| 1-Methylnaphthalene #3 | 11.922 | 20.0 | 18.503 | -7.5 |
| 2-Methylnaphthalene #4 | 12.497 | 20.0 | 18.166 | -9.2 |
| Acenaphthene #5 | 12.976 | 20.0 | 19.850 | -0.7 |
| Fluorene #6 | 13.632 | 20.0 | 19.884 | -0.6 |
| Phenanthrene #7 | 15.022 | 20.0 | 19.399 | -3.0 |
| Anthracene #8 | 16.428 | 20.0 | 20.326 | 1.6 |
| Fluoranthene #9 | 17.807 | 2.0 | 1.963 | -1.9 |
| Pyrene #10 | 18.812 | 2.0 | 1.840 | -8.0 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.484 | 2.0 | 1.829 | -8.6 |
| Chrysene #13 | 23.358 | 2.0 | 1.885 | -5.8 |
| Benzo(b)fluoranthene #14 | 26.091 | 2.0 | 1.951 | -2.4 |
| Benzo(k)fluoranthene #15 | 27.537 | 1.0 | 0.872 | -12.8 |
| Benzo(a)pyrene #16 | 28.637 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.502 | 2.0 | 2.170 | 8.5 |
| Benzo(g,h,i)perylene #18 | 31.316 | 2.0 | 1.946 | -2.7 |
| Indeno(1,2,3-cd)pyrene # | 32.285 | 2.0 | 1.910 | -4.5 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 19.954 | -0.2 |
| Acenaphthylene #2 | 10.954 | 20.0 | 18.940 | -5.3 |
| 1-Methylnaphthalene #3 | 11.902 | 20.0 | 18.874 | -5.6 |
| 2-Methylnaphthalene #4 | 12.478 | 20.0 | 18.583 | -7.1 |
| Acenaphthene #5 | 12.957 | 20.0 | 20.008 | 0.0 |
| Fluorene #6 | 13.612 | 20.0 | 19.841 | -0.8 |
| Phenanthrene #7 | 15.002 | 20.0 | 19.415 | -2.9 |
| Anthracene #8 | 16.408 | 20.0 | 20.499 | 2.5 |
| Fluoranthene #9 | 17.787 | 2.0 | 1.953 | -2.4 |
| Pyrene #10 | 18.792 | 2.0 | 1.928 | -3.6 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.465 | 2.0 | 1.854 | -7.3 |
| Chrysene #13 | 23.339 | 2.0 | 1.918 | -4.1 |
| Benzo(b)fluoranthene #14 | 26.070 | 2.0 | 2.161 | 8.1 |
| Benzo(k)fluoranthene #15 | 27.517 | 1.0 | 0.891 | -10.9 |
| Benzo(a)pyrene #16 | 28.617 | 2.0 | 1.995 | -0.3 |
| Dibenz(a,h)anthracene #1 | 30.482 | 2.0 | 2.145 | 7.2 |
| Benzo(g,h,i)perylene #18 | 31.293 | 2.0 | 1.919 | -4.0 |
| Indeno(1,2,3-cd)pyrene # | 32.268 | 2.0 | 1.896 | -5.2 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\100502\4L003655.D Sample Name: WG126673-01 CCV
HPLC4 10/10/2002 2:37:32 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/5/2002 3:07:09 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.346 | 20.0 | 20.181 | 0.9 |
| 1-Methylnaphthalene #3 | 11.920 | 20.0 | 20.208 | 1.0 |
| 2-Methylnaphthalene #4 | 12.494 | 20.0 | 20.165 | 0.8 |
| Acenaphthene #5 | 12.972 | 20.0 | 20.110 | 0.5 |
| Fluorene #6 | 13.626 | 20.0 | 20.064 | 0.3 |
| Phenanthrene #7 | 15.013 | 20.0 | 19.999 | 0.0 |
| Anthracene #8 | 16.422 | 20.0 | 20.041 | 0.2 |
| Fluoranthene #9 | 17.801 | 2.0 | 1.969 | -1.5 |
| Pyrene #10 | 18.806 | 2.0 | 2.039 | 2.0 |
| p-Terphenyl d14 #11* | 21.155 | 20.0 | 19.822 | -0.9 |
| Benzo(a)anthracene #12 | 22.476 | 2.0 | 1.966 | -1.7 |
| Chrysene #13 | 23.351 | 2.0 | 2.033 | 1.6 |
| Benzo(b)fluoranthene #14 | 26.087 | 2.0 | 1.963 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.531 | 1.0 | 0.982 | -1.8 |
| Benzo(a)pyrene #16 | 28.633 | 2.0 | 2.070 | 3.5 |
| Dibenz(a,h)anthracene #1 | 30.499 | 2.0 | 1.954 | -2.3 |
| Benzo(g,h,i)perylene #18 | 31.308 | 2.0 | 2.014 | 0.7 |
| Indeno(1,2,3-cd)pyrene # | 32.276 | 2.0 | 1.879 | -6.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 20.152 | 0.8 |
| Acenaphthylene #2 | 10.958 | 20.0 | 19.758 | -1.2 |
| 1-Methylnaphthalene #3 | 11.903 | 20.0 | 19.845 | -0.8 |
| 2-Methylnaphthalene #4 | 12.477 | 20.0 | 19.988 | -0.1 |
| Acenaphthene #5 | 12.956 | 20.0 | 19.745 | -1.3 |
| Fluorene #6 | 13.609 | 20.0 | 19.844 | -0.8 |
| Phenanthrene #7 | 14.996 | 20.0 | 19.778 | -1.1 |
| Anthracene #8 | 16.405 | 20.0 | 20.318 | 1.6 |
| Fluoranthene #9 | 17.783 | 2.0 | 1.968 | -1.6 |
| Pyrene #10 | 18.788 | 2.0 | 1.949 | -2.5 |
| p-Terphenyl d14 #11* | 21.139 | 20.0 | 20.070 | 0.3 |
| Benzo(a)anthracene #12 | 22.460 | 2.0 | 1.933 | -3.4 |
| Chrysene #13 | 23.334 | 2.0 | 1.999 | 0.0 |
| Benzo(b)fluoranthene #14 | 26.070 | 2.0 | 1.970 | -1.5 |
| Benzo(k)fluoranthene #15 | 27.514 | 1.0 | 0.973 | -2.7 |
| Benzo(a)pyrene #16 | 28.616 | 2.0 | 2.033 | 1.7 |
| Dibenz(a,h)anthracene #1 | 30.482 | 2.0 | 1.967 | -1.7 |
| Benzo(g,h,i)perylene #18 | 31.289 | 2.0 | 1.997 | -0.1 |
| Indeno(1,2,3-cd)pyrene # | 32.263 | 2.0 | 1.860 | -7.0 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\100502\4L003666.D Sample Name: WG126673-02 CCV
HPLC4 10/10/2002 3:21:20 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/6/2002 1:50:07 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.377 | 20.0 | 20.119 | 0.6 |
| 1-Methylnaphthalene #3 | 11.948 | 20.0 | 20.098 | 0.5 |
| 2-Methylnaphthalene #4 | 12.525 | 20.0 | 20.174 | 0.9 |
| Acenaphthene #5 | 13.002 | 20.0 | 20.312 | 1.6 |
| Fluorene #6 | 13.664 | 20.0 | 20.553 | 2.8 |
| Phenanthrene #7 | 15.057 | 20.0 | 19.986 | -0.1 |
| Anthracene #8 | 16.475 | 20.0 | 21.121 | 5.6 |
| Fluoranthene #9 | 17.859 | 2.0 | 2.034 | 1.7 |
| Pyrene #10 | 18.868 | 2.0 | 1.928 | -3.6 |
| p-Terphenyl d14 #11* | 21.241 | 20.0 | 20.339 | 1.7 |
| Benzo(a)anthracene #12 | 22.571 | 2.0 | 1.992 | -0.4 |
| Chrysene #13 | 23.458 | 2.0 | 1.969 | -1.6 |
| Benzo(b)fluoranthene #14 | 26.207 | 2.0 | 2.029 | 1.4 |
| Benzo(k)fluoranthene #15 | 27.671 | 1.0 | 1.013 | 1.3 |
| Benzo(a)pyrene #16 | 28.775 | 2.0 | 2.073 | 3.6 |
| Dibenz(a,h)anthracene #1 | 30.672 | 2.0 | 1.961 | -2.0 |
| Benzo(g,h,i)perylene #18 | 31.494 | 2.0 | 1.975 | -1.3 |
| Indeno(1,2,3-cd)pyrene # | 32.471 | 2.0 | 2.007 | 0.4 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.361 | 20.0 | 20.824 | 4.1 |
| Acenaphthylene #2 | 10.990 | 20.0 | 20.350 | 1.8 |
| 1-Methylnaphthalene #3 | 11.932 | 20.0 | 20.470 | 2.3 |
| 2-Methylnaphthalene #4 | 12.509 | 20.0 | 20.576 | 2.9 |
| Acenaphthene #5 | 12.986 | 20.0 | 20.395 | 2.0 |
| Fluorene #6 | 13.647 | 20.0 | 20.407 | 2.0 |
| Phenanthrene #7 | 15.041 | 20.0 | 20.424 | 2.1 |
| Anthracene #8 | 16.459 | 20.0 | 21.483 | 7.4 |
| Fluoranthene #9 | 17.843 | 2.0 | 2.031 | 1.5 |
| Pyrene #10 | 18.851 | 2.0 | 2.042 | 2.1 |
| p-Terphenyl d14 #11* | 21.225 | 20.0 | 20.677 | 3.4 |
| Benzo(a)anthracene #12 | 22.555 | 2.0 | 2.037 | 1.8 |
| Chrysene #13 | 23.443 | 2.0 | 2.040 | 2.0 |
| Benzo(b)fluoranthene #14 | 26.190 | 2.0 | 2.028 | 1.4 |
| Benzo(k)fluoranthene #15 | 27.654 | 1.0 | 1.005 | 0.5 |
| Benzo(a)pyrene #16 | 28.758 | 2.0 | 2.145 | 7.2 |
| Dibenz(a,h)anthracene #1 | 30.655 | 2.0 | 2.034 | 1.7 |
| Benzo(g,h,i)perylene #18 | 31.476 | 2.0 | 1.780 | -11.0 |
| Indeno(1,2,3-cd)pyrene # | 32.458 | 2.0 | 2.003 | 0.2 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\100502\4L003677.D Sample Name: WG126673-03 CCV
HPLC4 10/10/2002 4:18:53 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/6/2002 12:12:56 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.336 | 20.0 | 19.273 | -3.6 |
| 1-Methylnaphthalene #3 | 11.915 | 20.0 | 19.300 | -3.5 |
| 2-Methylnaphthalene #4 | 12.492 | 20.0 | 19.332 | -3.3 |
| Acenaphthene #5 | 12.972 | 20.0 | 19.591 | -2.0 |
| Fluorene #6 | 13.630 | 20.0 | 20.115 | 0.6 |
| Phenanthrene #7 | 15.019 | 20.0 | 19.185 | -4.1 |
| Anthracene #8 | 16.426 | 20.0 | 20.660 | 3.3 |
| Fluoranthene #9 | 17.805 | 2.0 | 2.009 | 0.5 |
| Pyrene #10 | 18.811 | 2.0 | 1.802 | -9.9 |
| p-Terphenyl d14 #11* | 21.165 | 20.0 | 20.348 | 1.7 |
| Benzo(a)anthracene #12 | 22.480 | 2.0 | 1.925 | -3.8 |
| Chrysene #13 | 23.353 | 2.0 | 1.935 | -3.3 |
| Benzo(b)fluoranthene #14 | 26.080 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.521 | 1.0 | 0.986 | -1.4 |
| Benzo(a)pyrene #16 | 28.624 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.488 | 2.0 | 1.916 | -4.2 |
| Benzo(g,h,i)perylene #18 | 31.297 | 2.0 | 1.881 | -5.9 |
| Indeno(1,2,3-cd)pyrene # | 32.260 | 2.0 | 1.964 | -1.8 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.316 | 20.0 | 20.570 | 2.8 |
| Acenaphthylene #2 | 10.943 | 20.0 | 19.980 | -0.1 |
| 1-Methylnaphthalene #3 | 11.895 | 20.0 | 20.177 | 0.9 |
| 2-Methylnaphthalene #4 | 12.472 | 20.0 | 20.269 | 1.3 |
| Acenaphthene #5 | 12.953 | 20.0 | 20.055 | 0.3 |
| Fluorene #6 | 13.610 | 20.0 | 20.125 | 0.6 |
| Phenanthrene #7 | 14.999 | 20.0 | 20.015 | 0.1 |
| Anthracene #8 | 16.405 | 20.0 | 21.127 | 5.6 |
| Fluoranthene #9 | 17.784 | 2.0 | 2.000 | 0.0 |
| Pyrene #10 | 18.790 | 2.0 | 2.010 | 0.5 |
| p-Terphenyl d14 #11* | 21.145 | 20.0 | 20.267 | 1.3 |
| Benzo(a)anthracene #12 | 22.460 | 2.0 | 1.998 | -0.1 |
| Chrysene #13 | 23.333 | 2.0 | 1.994 | -0.3 |
| Benzo(b)fluoranthene #14 | 26.058 | 2.0 | 1.994 | -0.3 |
| Benzo(k)fluoranthene #15 | 27.500 | 1.0 | 0.996 | -0.4 |
| Benzo(a)pyrene #16 | 28.604 | 2.0 | 2.134 | 6.7 |
| Dibenz(a,h)anthracene #1 | 30.468 | 2.0 | 1.874 | -6.3 |
| Benzo(g,h,i)perylene #18 | 31.275 | 2.0 | 2.114 | 5.7 |
| Indeno(1,2,3-cd)pyrene # | 32.241 | 2.0 | 1.969 | -1.5 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\100502\4L003685.D Sample Name: WG126673-04 CCV
HPLC4 10/10/2002 4:30:43 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/6/2002 7:45:56 PM Seq. Line : 32

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.376 | 20.0 | 19.686 | -1.6 |
| 1-Methylnaphthalene #3 | 11.947 | 20.0 | 19.680 | -1.6 |
| 2-Methylnaphthalene #4 | 12.524 | 20.0 | 19.728 | -1.4 |
| Acenaphthene #5 | 13.001 | 20.0 | 19.875 | -0.6 |
| Fluorene #6 | 13.657 | 20.0 | 20.231 | 1.2 |
| Phenanthrene #7 | 15.045 | 20.0 | 19.518 | -2.4 |
| Anthracene #8 | 16.453 | 20.0 | 20.601 | 3.0 |
| Fluoranthene #9 | 17.836 | 2.0 | 1.986 | -0.7 |
| Pyrene #10 | 18.841 | 2.0 | 1.906 | -4.7 |
| p-Terphenyl d14 #11* | 21.186 | 20.0 | 20.067 | 0.3 |
| Benzo(a)anthracene #12 | 22.506 | 2.0 | 1.968 | -1.6 |
| Chrysene #13 | 23.379 | 2.0 | 1.949 | -2.6 |
| Benzo(b)fluoranthene #14 | 26.111 | 2.0 | 1.956 | -2.2 |
| Benzo(k)fluoranthene #15 | 27.559 | 1.0 | 0.992 | -0.8 |
| Benzo(a)pyrene #16 | 28.668 | 2.0 | 2.051 | 2.5 |
| Dibenz(a,h)anthracene #1 | 30.540 | 2.0 | 1.872 | -6.4 |
| Benzo(g,h,i)perylene #18 | 31.353 | 2.0 | 2.096 | 4.8 |
| Indeno(1,2,3-cd)pyrene # | 32.306 | 2.0 | 1.837 | -8.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.360 | 20.0 | 20.600 | 3.0 |
| Acenaphthylene #2 | 10.986 | 20.0 | 20.012 | 0.1 |
| 1-Methylnaphthalene #3 | 11.932 | 20.0 | 20.210 | 1.0 |
| 2-Methylnaphthalene #4 | 12.508 | 20.0 | 20.289 | 1.4 |
| Acenaphthene #5 | 12.986 | 20.0 | 20.064 | 0.3 |
| Fluorene #6 | 13.641 | 20.0 | 20.155 | 0.8 |
| Phenanthrene #7 | 15.029 | 20.0 | 20.037 | 0.2 |
| Anthracene #8 | 16.437 | 20.0 | 20.998 | 5.0 |
| Fluoranthene #9 | 17.820 | 2.0 | 2.007 | 0.3 |
| Pyrene #10 | 18.824 | 2.0 | 2.018 | 0.9 |
| p-Terphenyl d14 #11* | 21.171 | 20.0 | 20.279 | 1.4 |
| Benzo(a)anthracene #12 | 22.490 | 2.0 | 1.997 | -0.1 |
| Chrysene #13 | 23.363 | 2.0 | 2.000 | 0.0 |
| Benzo(b)fluoranthene #14 | 26.095 | 2.0 | 1.993 | -0.3 |
| Benzo(k)fluoranthene #15 | 27.543 | 1.0 | 0.970 | -3.0 |
| Benzo(a)pyrene #16 | 28.652 | 2.0 | 2.076 | 3.8 |
| Dibenz(a,h)anthracene #1 | 30.523 | 2.0 | 1.981 | -0.9 |
| Benzo(g,h,i)perylene #18 | 31.335 | 2.0 | 2.168 | 8.4 |
| Indeno(1,2,3-cd)pyrene # | 32.294 | 2.0 | 1.996 | -0.2 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\101402\4L003716.D Sample Name: WG127222-02 CCV
HPLC4 10/22/2002 11:34:59 AM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/14/2002 6:18:01 PM Seq. Line : 6

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.320 | 20.0 | 19.232 | -3.8 |
| 1-Methylnaphthalene #3 | 11.893 | 20.0 | 19.286 | -3.6 |
| 2-Methylnaphthalene #4 | 12.469 | 20.0 | 19.319 | -3.4 |
| Acenaphthene #5 | 12.947 | 20.0 | 19.445 | -2.8 |
| Fluorene #6 | 13.602 | 20.0 | 19.788 | -1.1 |
| Phenanthrene #7 | 14.992 | 20.0 | 19.101 | -4.5 |
| Anthracene #8 | 16.399 | 20.0 | 19.938 | -0.3 |
| Fluoranthene #9 | 17.774 | 2.0 | 1.924 | -3.8 |
| Pyrene #10 | 18.780 | 2.0 | 1.778 | -11.1 |
| p-Terphenyl d14 #11* | 21.120 | 20.0 | 19.331 | -3.3 |
| Benzo(a)anthracene #12 | 22.443 | 2.0 | 1.930 | -3.5 |
| Chrysene #13 | 23.319 | 2.0 | 1.935 | -3.2 |
| Benzo(b)fluoranthene #14 | 26.060 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.516 | 1.0 | 0.973 | -2.7 |
| Benzo(a)pyrene #16 | 28.634 | 2.0 | 1.961 | -2.0 |
| Dibenz(a,h)anthracene #1 | 30.528 | 2.0 | 1.917 | -4.2 |
| Benzo(g,h,i)perylene #18 | 31.336 | 2.0 | 1.943 | -2.8 |
| Indeno(1,2,3-cd)pyrene # | 32.311 | 2.0 | 1.946 | -2.7 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.305 | 20.0 | 20.094 | 0.5 |
| Acenaphthylene #2 | 10.930 | 20.0 | 19.675 | -1.6 |
| 1-Methylnaphthalene #3 | 11.878 | 20.0 | 19.780 | -1.1 |
| 2-Methylnaphthalene #4 | 12.455 | 20.0 | 19.883 | -0.6 |
| Acenaphthene #5 | 12.932 | 20.0 | 19.721 | -1.4 |
| Fluorene #6 | 13.588 | 20.0 | 19.773 | -1.1 |
| Phenanthrene #7 | 14.977 | 20.0 | 19.707 | -1.5 |
| Anthracene #8 | 16.384 | 20.0 | 20.464 | 2.3 |
| Fluoranthene #9 | 17.758 | 2.0 | 1.971 | -1.5 |
| Pyrene #10 | 18.764 | 2.0 | 1.973 | -1.4 |
| p-Terphenyl d14 #11* | 21.106 | 20.0 | 19.781 | -1.1 |
| Benzo(a)anthracene #12 | 22.429 | 2.0 | 1.966 | -1.7 |
| Chrysene #13 | 23.305 | 2.0 | 1.965 | -1.8 |
| Benzo(b)fluoranthene #14 | 26.044 | 2.0 | 1.971 | -1.5 |
| Benzo(k)fluoranthene #15 | 27.501 | 1.0 | 0.976 | -2.4 |
| Benzo(a)pyrene #16 | 28.619 | 2.0 | 1.981 | -0.9 |
| Dibenz(a,h)anthracene #1 | 30.513 | 2.0 | 1.878 | -6.1 |
| Benzo(g,h,i)perylene #18 | 31.319 | 2.0 | 2.024 | 1.2 |
| Indeno(1,2,3-cd)pyrene # | 32.299 | 2.0 | 1.971 | -1.5 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\101402\4L003719.D Sample Name: WG127222-03 CCV
HPLC4 10/22/2002 11:37:48 AM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/14/2002 9:07:55 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.324 | 20.0 | 19.307 | -3.5 |
| 1-Methylnaphthalene #3 | 11.893 | 20.0 | 19.364 | -3.2 |
| 2-Methylnaphthalene #4 | 12.469 | 20.0 | 19.393 | -3.0 |
| Acenaphthene #5 | 12.945 | 20.0 | 19.514 | -2.4 |
| Fluorene #6 | 13.602 | 20.0 | 19.797 | -1.0 |
| Phenanthrene #7 | 14.992 | 20.0 | 19.267 | -3.7 |
| Anthracene #8 | 16.405 | 20.0 | 20.224 | 1.1 |
| Fluoranthene #9 | 17.789 | 2.0 | 1.955 | -2.2 |
| Pyrene #10 | 18.797 | 2.0 | 1.901 | -4.9 |
| p-Terphenyl d14 #11* | 21.151 | 20.0 | 19.575 | -2.1 |
| Benzo(a)anthracene #12 | 22.478 | 2.0 | 1.938 | -3.1 |
| Chrysene #13 | 23.362 | 2.0 | 1.928 | -3.6 |
| Benzo(b)fluoranthene #14 | 26.111 | 2.0 | 1.955 | -2.2 |
| Benzo(k)fluoranthene #15 | 27.575 | 1.0 | 0.975 | -2.5 |
| Benzo(a)pyrene #16 | 28.687 | 2.0 | 1.950 | -2.5 |
| Dibenz(a,h)anthracene #1 | 30.584 | 2.0 | 1.907 | -4.6 |
| Benzo(g,h,i)perylene #18 | 31.394 | 2.0 | 1.945 | -2.8 |
| Indeno(1,2,3-cd)pyrene # | 32.369 | 2.0 | 1.949 | -2.5 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.310 | 20.0 | 20.116 | 0.6 |
| Acenaphthylene #2 | 10.934 | 20.0 | 19.679 | -1.6 |
| 1-Methylnaphthalene #3 | 11.879 | 20.0 | 19.804 | -1.0 |
| 2-Methylnaphthalene #4 | 12.455 | 20.0 | 19.894 | -0.5 |
| Acenaphthene #5 | 12.931 | 20.0 | 19.733 | -1.3 |
| Fluorene #6 | 13.587 | 20.0 | 19.764 | -1.2 |
| Phenanthrene #7 | 14.978 | 20.0 | 19.732 | -1.3 |
| Anthracene #8 | 16.390 | 20.0 | 20.490 | 2.5 |
| Fluoranthene #9 | 17.773 | 2.0 | 1.971 | -1.4 |
| Pyrene #10 | 18.781 | 2.0 | 1.977 | -1.1 |
| p-Terphenyl d14 #11* | 21.137 | 20.0 | 19.719 | -1.4 |
| Benzo(a)anthracene #12 | 22.464 | 2.0 | 1.973 | -1.3 |
| Chrysene #13 | 23.348 | 2.0 | 1.971 | -1.5 |
| Benzo(b)fluoranthene #14 | 26.096 | 2.0 | 1.970 | -1.5 |
| Benzo(k)fluoranthene #15 | 27.560 | 1.0 | 0.981 | -1.9 |
| Benzo(a)pyrene #16 | 28.673 | 2.0 | 1.984 | -0.8 |
| Dibenz(a,h)anthracene #1 | 30.570 | 2.0 | 1.985 | -0.8 |
| Benzo(g,h,i)perylene #18 | 31.376 | 2.0 | 1.980 | -1.0 |
| Indeno(1,2,3-cd)pyrene # | 32.359 | 2.0 | 1.966 | -1.7 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\101602\4L003721.D Sample Name: WG127426-01 CCV
HPLC4 10/22/2002 1:25:20 PM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/16/2002 5:32:49 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.286 | 20.0 | 21.010 | 5.0 |
| 1-Methylnaphthalene #3 | 11.855 | 20.0 | 20.901 | 4.5 |
| 2-Methylnaphthalene #4 | 12.430 | 20.0 | 20.805 | 4.0 |
| Acenaphthene #5 | 12.908 | 20.0 | 20.716 | 3.6 |
| Fluorene #6 | 13.563 | 20.0 | 20.379 | 1.9 |
| Phenanthrene #7 | 14.951 | 20.0 | 20.428 | 2.1 |
| Anthracene #8 | 16.359 | 20.0 | 20.917 | 4.6 |
| Fluoranthene #9 | 17.739 | 2.0 | 2.082 | 4.1 |
| Pyrene #10 | 18.744 | 2.0 | 2.217 | 10.9 |
| p-Terphenyl d14 #11* | 21.085 | 20.0 | 19.574 | -2.1 |
| Benzo(a)anthracene #12 | 22.404 | 2.0 | 2.076 | 3.8 |
| Chrysene #13 | 23.281 | 2.0 | 2.082 | 4.1 |
| Benzo(b)fluoranthene #14 | 26.020 | 2.0 | 2.067 | 3.3 |
| Benzo(k)fluoranthene #15 | 27.473 | 1.0 | 1.012 | 1.2 |
| Benzo(a)pyrene #16 | 28.588 | 2.0 | 2.177 | 8.9 |
| Dibenz(a,h)anthracene #1 | 30.471 | 2.0 | 2.054 | 2.7 |
| Benzo(g,h,i)perylene #18 | 31.278 | 2.0 | 2.173 | 8.6 |
| Indeno(1,2,3-cd)pyrene # | 32.252 | 2.0 | 2.013 | 0.7 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.269 | 20.0 | 20.313 | 1.6 |
| Acenaphthylene #2 | 10.894 | 20.0 | 19.895 | -0.5 |
| 1-Methylnaphthalene #3 | 11.839 | 20.0 | 20.009 | 0.0 |
| 2-Methylnaphthalene #4 | 12.413 | 20.0 | 20.110 | 0.6 |
| Acenaphthene #5 | 12.891 | 20.0 | 19.976 | -0.1 |
| Fluorene #6 | 13.546 | 20.0 | 20.012 | 0.1 |
| Phenanthrene #7 | 14.934 | 20.0 | 19.930 | -0.3 |
| Anthracene #8 | 16.342 | 20.0 | 21.068 | 5.3 |
| Fluoranthene #9 | 17.721 | 2.0 | 1.993 | -0.3 |
| Pyrene #10 | 18.726 | 2.0 | 2.006 | 0.3 |
| p-Terphenyl d14 #11* | 21.068 | 20.0 | 19.546 | -2.3 |
| Benzo(a)anthracene #12 | 22.387 | 2.0 | 1.993 | -0.3 |
| Chrysene #13 | 23.264 | 2.0 | 1.991 | -0.5 |
| Benzo(b)fluoranthene #14 | 26.002 | 2.0 | 1.989 | -0.5 |
| Benzo(k)fluoranthene #15 | 27.455 | 1.0 | 0.993 | -0.7 |
| Benzo(a)pyrene #16 | 28.570 | 2.0 | 2.095 | 4.8 |
| Dibenz(a,h)anthracene #1 | 30.454 | 2.0 | 2.024 | 1.2 |
| Benzo(g,h,i)perylene #18 | 31.259 | 2.0 | 2.106 | 5.3 |
| Indeno(1,2,3-cd)pyrene # | 32.238 | 2.0 | 1.974 | -1.3 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\101602\4L003728.D Sample Name: WG127426-02 CCV
HPLC4 10/22/2002 1:29:21 PM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/17/2002 12:29:36 AM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.290 | 20.0 | 19.839 | -0.8 |
| 1-Methylnaphthalene #3 | 11.859 | 20.0 | 19.779 | -1.1 |
| 2-Methylnaphthalene #4 | 12.434 | 20.0 | 19.859 | -0.7 |
| Acenaphthene #5 | 12.911 | 20.0 | 20.040 | 0.2 |
| Fluorene #6 | 13.567 | 20.0 | 20.287 | 1.4 |
| Phenanthrene #7 | 14.956 | 20.0 | 19.847 | -0.8 |
| Anthracene #8 | 16.361 | 20.0 | 20.872 | 4.4 |
| Fluoranthene #9 | 17.739 | 2.0 | 2.001 | 0.1 |
| Pyrene #10 | 18.745 | 2.0 | 1.967 | -1.6 |
| p-Terphenyl d14 #11* | 21.092 | 20.0 | 19.535 | -2.3 |
| Benzo(a)anthracene #12 | 22.416 | 2.0 | 2.002 | 0.1 |
| Chrysene #13 | 23.294 | 2.0 | 1.985 | -0.8 |
| Benzo(b)fluoranthene #14 | 26.035 | 2.0 | 1.992 | -0.4 |
| Benzo(k)fluoranthene #15 | 27.492 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.606 | 2.0 | 2.037 | 1.8 |
| Dibenz(a,h)anthracene #1 | 30.488 | 2.0 | 1.962 | -1.9 |
| Benzo(g,h,i)perylene #18 | 31.294 | 2.0 | 2.077 | 3.8 |
| Indeno(1,2,3-cd)pyrene # | 32.267 | 2.0 | 2.006 | 0.3 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.275 | 20.0 | 20.471 | 2.4 |
| Acenaphthylene #2 | 10.899 | 20.0 | 20.039 | 0.2 |
| 1-Methylnaphthalene #3 | 11.844 | 20.0 | 20.149 | 0.7 |
| 2-Methylnaphthalene #4 | 12.419 | 20.0 | 20.253 | 1.3 |
| Acenaphthene #5 | 12.897 | 20.0 | 20.110 | 0.6 |
| Fluorene #6 | 13.552 | 20.0 | 20.164 | 0.8 |
| Phenanthrene #7 | 14.941 | 20.0 | 20.115 | 0.6 |
| Anthracene #8 | 16.346 | 20.0 | 21.306 | 6.5 |
| Fluoranthene #9 | 17.723 | 2.0 | 2.011 | 0.5 |
| Pyrene #10 | 18.729 | 2.0 | 2.016 | 0.8 |
| p-Terphenyl d14 #11* | 21.078 | 20.0 | 19.542 | -2.3 |
| Benzo(a)anthracene #12 | 22.401 | 2.0 | 2.022 | 1.1 |
| Chrysene #13 | 23.279 | 2.0 | 2.010 | 0.5 |
| Benzo(b)fluoranthene #14 | 26.019 | 2.0 | 2.001 | 0.0 |
| Benzo(k)fluoranthene #15 | 27.476 | 1.0 | 1.008 | 0.8 |
| Benzo(a)pyrene #16 | 28.590 | 2.0 | 2.088 | 4.4 |
| Dibenz(a,h)anthracene #1 | 30.473 | 2.0 | 2.063 | 3.2 |
| Benzo(g,h,i)perylene #18 | 31.278 | 2.0 | 2.173 | 8.6 |
| Indeno(1,2,3-cd)pyrene # | 32.255 | 2.0 | 2.009 | 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 | WG126622-01 CCV | 8310 | 1 | Sample | | |
| 3 | 2 | WG126622-01 CCV | 8310 | 1 | Sample | | |
| 4 | 3 | WG126622-01 STD6 | 8310 | 1 | Sample | | |
| 5 | 4 | WG126622-02 STD6 | 8310 | 1 | Sample | | |
| 6 | 5 | WG126622-03 STD5 | 8310 | 1 | Sample | | |
| 7 | 6 | WG126622-04 STD4 | 8310 | 1 | Sample | | |
| 8 | 7 | WG126622-05 STD3 | 8310 | 1 | Sample | | |
| 9 | 8 | WG126622-06 STD2 | 8310 | 1 | Sample | | |
| 10 | 9 | WG126622-07 STD1 | 8310 | 1 | Sample | | |
| 11 | 10 | WG126622-08 ALT | 8310 | 1 | Sample | | |



RDC 10/5/02

| --- | --- | --- | --- | Datafile | SeqTable | Calib:RF:RT | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003643 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003644 | 02:01 RR | | WG126622-01 CC |
| No | 3 | 2 | 8310 | 4L003645 | 03:01 RR | | WG126622-01 CC |
| No | 4 | 3 | 8310 | 4L003646 | 04:01 SOS 61-07 | | WG126622-01 ST |
| No | 5 | 4 | 8310 | 4L003647 | 05:01 SOS 59-38 | | WG126622-02 ST |
| No | 6 | 5 | 8310 | 4L003648 | 06:01 DILIN of SOS61-07/59-38 | | WG126622-03 ST |
| No | 7 | 6 | 8310 | 4L003649 | 07:01 | | WG126622-04 ST |
| No | 8 | 7 | 8310 | 4L003650 | 08:01 | | WG126622-05 ST |
| No | 9 | 8 | 8310 | 4L003651 | 09:01 | | WG126622-06 ST |
| No | 10 | 9 | 8310 | 4L003652 | 10:01 | | WG126622-07 ST |
| No | 11 | 10 | 8310 | 4L003653 | 11:01 DILIN of SOS60-26/60-27 | | WG126622-08 AL |

RQC 10/5/02

EC 10/22/02

REMKON ENVIRONMENTAL SERVICES
HPLC Laboratory Maintenance Log

Analysis Date/Time Oct. 4, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory ~~10/04/02~~ 100402
Analyst Initials RRC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # _____ 8330 RRC 10/5/02

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 109 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Reviewed By: ECZ 10/22/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG126673-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126384-01 BLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126384-02 LCS | 8310 | 1 | Sample | | |
| 5 | 5 | WG126384-03 LCS2 | 8310 | 1 | Sample | | |
| 6 | 6 | SOIL MDL #1 | 8310 | 1 | Sample | | |
| 7 | 7 | SOIL MDL #2 | 8310 | 1 | Sample | | |
| 8 | 8 | SOIL MDL #3 | 8310 | 1 | Sample | | |
| 9 | 9 | SOIL MDL #4 | 8310 | 1 | Sample | | |
| 10 | 10 | SOIL MDL #5 | 8310 | 1 | Sample | | |
| 11 | 11 | SOIL MDL #6 | 8310 | 1 | Sample | | |
| 12 | 12 | SOIL MDL #7 | 8310 | 1 | Sample | | |
| 13 | 13 | WG126673-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | WG126469-01 BLK | 8310 | 1 | Sample | | |
| 15 | 15 | WG126469-02 LCS | 8310 | 1 | Sample | | |
| 16 | 16 | WG126469-03 LCS2 | 8310 | 1 | Sample | | |
| 17 | 17 | WATER MDL #1 | 8310 | 1 | Sample | | |
| 18 | 18 | WATER MDL #2 | 8310 | 1 | Sample | | |
| 19 | 19 | WATER MDL #3 | 8310 | 1 | Sample | | |
| 20 | 20 | WATER MDL #4 | 8310 | 1 | Sample | | |
| 21 | 21 | WATER MDL #5 | 8310 | 1 | Sample | | |
| 22 | 22 | WATER MDL #6 | 8310 | 1 | Sample | | |
| 23 | 23 | WATER MDL #7 | 8310 | 1 | Sample | | |
| 24 | 24 | WG126673-03 CCV | 8310 | 1 | Sample | | |
| 25 | 25 | L0209516-04 831W | 8310 | 1 | Sample | | |
| 26 | 26 | L0209517-01 ~~L0209516-04~~ 831W | 8310 RDC 10/17/02 | 1 | Sample | | |
| 27 | 27 | L0209516-01 831S | 8310 | 1 | Sample | | |
| 28 | 28 | L0209516-02 831S | 8310 | 1 | Sample | | |
| 29 | 29 | L0209516-03 831S | 8310 | 1 | Sample | | |
| 30 | 30 | L0209517-01 831S | 8310 | 1 | Sample | | |
| 31 | 31 | L0209517-01 10X | 8310 | 1 | Sample | | |
| 32 | 24 | WG126673-04 CCV | 8310 | 1 | Sample | | |

RDC 10/17/02

| Sel | Run | Vial | Method | Datafile | Seqfile | Calib:RF:RT | Sample Name |
|---|---|---|---|---|---|---|---|
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | | | | PHOC 10/17/02 |
| No | 1 | 1 | 8310 | 4L003654 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003655 | 02:01 | S0561-07/59-38 | WG126673-01 CC |
| No | 3 | 3 | 8310 | 4L003656 | 03:01 | | WG126384-01 BL |
| No | 4 | 4 | 8310 | 4L003657 | 04:01 | | WG126384-02 LC |
| No | 5 | 5 | 8310 | 4L003658 | 05:01 | | WG126384-03 LC |
| No | 6 | 6 | 8310 | 4L003659 | 06:01 | | SOIL MDL #1 |
| No | 7 | 7 | 8310 | 4L003660 | 07:01 | | SOIL MDL #2 |
| No | 8 | 8 | 8310 | 4L003661 | 08:01 | | SOIL MDL #3 |
| No | 9 | 9 | 8310 | 4L003662 | 09:01 | | SOIL MDL #4 |
| No | 10 | 10 | 8310 | 4L003663 | 10:01 | | SOIL MDL #5 |
| No | 11 | 11 | 8310 | 4L003664 | 11:01 | | SOIL MDL #6 |
| No | 12 | 12 | 8310 | 4L003665 | 12:01 | | SOIL MDL #7 |
| No | 13 | 13 | 8310 | 4L003666 | 13:01 | S0561-07/59-38 | WG126673-02 CC |
| No | 14 | 14 | 8310 | 4L003667 | 14:01 | | WG126469-01 BL |
| No | 15 | 15 | 8310 | 4L003668 | 15:01 | | WG126469-02 LC |
| No | 16 | 16 | 8310 | 4L003669 | 16:01 | | WG126469-03 LC |
| No | 17 | 17 | 8310 | 4L003670 | 17:01 | | WATER MDL #1 |
| No | 18 | 18 | 8310 | 4L003671 | 18:01 | | WATER MDL #2 |
| No | 19 | 19 | 8310 | 4L003672 | 19:01 | | WATER MDL #3 |
| No | 20 | 20 | 8310 | 4L003673 | 20:01 | | WATER MDL #4 |
| No | 21 | 21 | 8310 | 4L003674 | 21:01 | | WATER MDL #5 |
| No | 22 | 22 | 8310 | 4L003675 | 22:01 | | WATER MDL #6 |
| No | 23 | 23 | 8310 | 4L003676 | 23:01 | | WATER MDL #7 |
| No | 24 | 24 | 8310 | 4L003677 | 24:01 | S0561-07/59-38 | WG126673-03 CC |
| No | 25 | 25 | 8310 | 4L003678 | RE 25:01 | | L0209516-04 83 |
| No | 26 | 26 | 8310 | 4L003679 | 26:01 | L0209517-02 | ~~L0209516-04~~ 83 |
| No | 27 | 27 | 8310 | 4L003680 | 27:01 | RE10X | L0209516-01 83 |
| No | 28 | 28 | 8310 | 4L003681 | 28:01 | | L0209516-02 83 |
| No | 29 | 29 | 8310 | 4L003682 | 29:01 | | L0209516-03 83 |
| No | 30 | 30 | 8310 | 4L003683 | 30:01 | | L0209517-01 83 |
| No | 31 | 31 | 8310 | 4L003684 | 31:01 | Not needed | L0209517-01 10 |
| No | 32 | 24 | 8310 | 4L003685 | 32:01 | S0561-07/59-37 | WG126673-04 CC |

TRC 10/18/02

EC 10/22/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Oct. 5, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 100502
Analyst Initials BDC SOP # HPLC01 Rev. # 3 8310 ✓ SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: ____

Action Taken: ____

**Comments**

L0209516-04 surr. <CCL need RE } LCS low for 11 analytes
L0209517-02 ↓ ↓

WG126469-02 LCS — low for 11 analytes

L0209516-01 surr. high by FLD *, SMI RE10X

L0209516-02 surr. high by both detector *, SMI RE10X

L0209517-01 surr. low by both detectors *, SMI

Water MDL #1 had low surr.

Reviewed By: ECZ 10/22/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG127222-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126769-01 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126769-02 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | WG126769-03 WLCS | 8310 | 1 | Sample | | |
| 6 | 2 | WG127222-02 CCV | 8310 | 1 | Sample | | |
| 7 | 6 | L0209516-01 831S | 8310 | 1 | Sample | | |
| 8 | 7 | L0209516-02 831S | 8310 | 1 | Sample | | |
| 9 | 2 | WG127222-03 CCV | 8310 | 1 | Sample | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003711 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003712 | 02:01 | 50561-07/59-38 | WG127222-01 CC |
| No | 3 | 3 | 8310 | 4L003713 | 03:01 | | WG126769-01 WB |
| No | 4 | 4 | 8310 | 4L003714 | 04:01 | | WG126769-02 WL |
| No | 5 | 5 | 8310 | 4L003715 | 05:01 | | WG126769-03 WL |
| No | 6 | 2 | 8310 | 4L003716 | 06:01 | 50561-07/59-38 | WG127222-02 CC |
| No | 7 | 6 | 8310 | 4L003717 | RE 07:01 | L0310079-15 | ~~L0209516-01~~ 83 |
| No | 8 | 7 | 8310 | 4L003718 | 08:01 | | L0209516-~~02~~ 01 83 |
| No | 9 | 2 | 8310 | 4L003719 | 09:01 | 50561-07/59-38 | WG127222-03 CC |

PAQC 10/22/02

ECZ 10/22/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Oct. 14, 2002 Instrument ID HPLC 4 Column ID LC-PAH Data Subdirectory 101402
Analyst Initials RRC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 112 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

L02 10079-15 sent for re-ext. due to low sum. recovery

Reviewed By: EC 10/22/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG127426-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG127373-01 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG127373-02 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | WG127373-03 WLCS | 8310 | 1 | Sample | | |
| 6 | 6 | L0209516-04 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209517-02 831W | 8310 | 1 | Sample | | |
| 8 | 8 | L0209516-02 10X | 8310 | 1 | Sample | | |
| 9 | 2 | WG127426-02 CCV | 8310 | 1 | Sample | | |

RDC 10/22/02

| Set | Run | Vial | Method | Datafile | Seqfable | Calib:RF:RT | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003720 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003721 | 02:01 | SOSW-07/59-38 | WG127426-01 CC |
| No | 3 | 3 | 8310 | 4L003722 | 03:01 | | WG127373-01 WB |
| No | 4 | 4 | 8310 | 4L003723 | 04:01 | | WG127373-02 WL |
| No | 5 | 5 | 8310 | 4L003724 | 05:01 | | WG127373-03 WL |
| No | 6 | 6 | 8310 | 4L003725 | 06:01 | | L0209516-04 83 |
| No | 7 | 7 | 8310 | 4L003726 | 07:01 | | L0209517-02 83 |
| No | 8 | 8 | 8310 | 4L003727 | 08:01 | | L0209516-02 10 |
| No | 9 | 2 | 8310 | 4L003728 | 09:01 | SOSCI-07/59-38 | WG127426-02 CC |

RWC 10/22/02

ECZ 10/23/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Oct. 16, 2002 Instrument ID ~~HPA~~ HPLC4 Column ID ~~HPA02~~ LCPAH Data Subdirectory 01602
Analyst Initials CdC SOP # HPLC01 Rev. # 3 8310 SOP # HPLC02 Rev. # 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 113 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: ____

Action Taken: ____

**Comments**

WG127373-01 BLK
-02 LCS
-03 LCS2
} low surr. (14 analytes low)

L0209516-04 RE — low surr.
L0209517-02 ↓ ↓

Reviewed By: ECZ 10/23/02

Parameter: 8310-S SOP #: EX HPLC2 Revision #: 6
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 10-02-02 @ 09:29 Date TV/KD: 10-02-02
Spike/Surrogate Analyst: DP/CAF Witness: CAF/
Surrogate #: ES50042-21 Earliest Hold Date: 10-10-02
Spike #: A = ES50042-19 Spike #: B = ES50042-31

Extraction Work Group WG 126384
Analytical Work Group WG 126623

Extract Relinquished By: CAF
Extract Received By & Date: RAL 10/2/02

| | Sample ID | Test Code | pH | | | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | <2 | N | >12 | | | | | | A | BN | N | |
| 1 | Blank | | | | | 30.08 g | 100 µl | | 1 mL | T | | | | WG 126384-01 |
| 2 | LCS | | | | | 30.02 g | | 500 µl | | C | | | | WG -02 |
| 3 | LCSDup | | | | | 30.08 g | | | | C | | | | WG -03 |
| 4 | 09-516-01 | 8310 | | | | 30.05 g | | | | O | | | | |
| 5 | -02 | | | | | 30.04 g | | | | O | | | | |
| 6 | -03 | | | | | 30.05 g | | | | O | | | | |
| 7 | 09-517-01 | | | | | 30.04 g | | | | C | | | | * |
| 8 | MDL #1 | | | | | 30.04 g | | 50 µl | | T | | | | |
| 9 | #2 | | | | | 30.04 g | | | | T | | | | |
| 10 | #3 | | | | | 30.03 g | | | | T | | | | |
| 11 | #4 | | | | | 30.08 g | | | | T | | | | |
| 12 | #5 | | | | | 30.09 g | | | | T | | | | |
| 13 | #6 | | | | | 30.02 g | | | | T | | | | |
| 14 | #7 | | | | | 30.04 g | | | | T | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

CAF 10-02-02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 420772-13
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: ER2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 10/02/02

Extraction Notes For Volume # 192 Page # 5

General Comments: NONE

Extraction Anomalies: * SX 09-517-01 was very dark and hard to filter during extration

Concentration Anomalies: * extract of SX 09-517-01 Had solid film that formed on sides of zymark + top of extract during concentration stage - Extract did not take a good exchange.

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

Volume 191
Page 83

Parameter: 8310 - $H_2O$ SOP #: EXHPLC1 Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAJ
Date/Time Extracted: 10/03/02 @ 0830 Date TV/KD: 10/03/02
Spike/Surrogate Analyst: DP Witness: RM
Surrogate #: CS500 42-21 Earliest Hold Date: 10/03/02
Spike #: A = CS500 42-19 Spike #: B = CS500 42-31

Extraction Work Group WG 126469
Analytical Work Group WG 126624

Extract Relinquished By: CAJ
Extract Received By & Date: HV 10/3/02

| | Sample ID | Test Code | pH a <2 | pH a N | pH a >12 | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions a A | Emulsions a BN | Emulsions a N | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Blank | | | ✓ | | 1000 mL | 100 uL | | 1 mL | T | | | | WG 126469-01 |
| 2 | LCS | | | ✓ | | | | 500 uL A | | | | | | WG -02 |
| 3 | LCS DUP | | | ✓ | | | | | | | | | | WG -03 |
| 4 | 09-516-04 | 8310 | | ✓ | | 910 mL | | | | | | | | |
| 5 | 09-517-02 | | | ✓ | | 940 mL | | | | | | | | |
| 6 | MDL 1 | | | ✓ | | 1000 mL | | 50 uL B | | | | | | |
| 7 | 2 | | | ✓ | | | | | | | | | | |
| 8 | 3 | | | ✓ | | | | | | | | | | |
| 9 | 4 | | | ✓ | | | | | | | | | | |
| 10 | 5 | | | ✓ | | | | | | | | | | |
| 11 | 6 | | | ✓ | | | | | | | | | | |
| 12 | 7 | | | ✓ | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

CAJ 10-03-02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 42077213
Reagent: Fortified Lot #: CR2261
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: CR2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 191 Page # 083

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: — NA —

Supervisor Review: _____ Date: _____

Parameter: 8310-$H_2O$ SOP #: EXHPLC1 Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAF
Date/Time Extracted: 10/16/02 @ 0940 Date TV/KD: 10-16-02
Spike/Surrogate Analyst: DP Witness: [illegible]
Surrogate #: CS500042-21 Earliest Hold Date: out
Spike #: A = CS500042-19 Spike #: B = —

Extraction Work Group WG 127373
Analytical Work Group WG 127725

Extract Relinquished By: CAF
Extract Received By & Date: HV 10/16/02

| | Sample ID | Test Code | pH a <2 | pH a N | pH a >12 | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions a A | Emulsions a BN | Emulsions a N | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Blank | | | ✓ | | 1000 mL | 100 µL | | 1 mL | T | | | | WG 127373-01 |
| 2 | LCS | | | ✓ | | ⊥ | ⊥ | 500 µL | ⊥ | ⊥ | | | | WG ⊥ -02 |
| 3 | LCS DUP | | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | WG ⊥ -03 |
| 4 | 09-516-04 | 8310 | | ✓ | | 940 mL | ⊥ | | ⊥ | ⊥ | | | | RE-EXT out hold |
| 5 | 09-517-02 | ⊥ | | ✓ | | 970 mL | ⊥ | | ⊥ | ⊥ | | | | ⊥ |
| 6 | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
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| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
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| 19 | | | | | | | | | | | | | | |
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| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

CAF 10-16-02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: X328 23
Reagent: Fortified Lot #: CR 2271
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: CR 2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: Cheryl Flowers Date: 10-16-02

Extraction Notes For Volume # _____ Page # _____

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: — NA —

Supervisor Review: _____ Date: _____

# 2.2.7.2 Sample Data

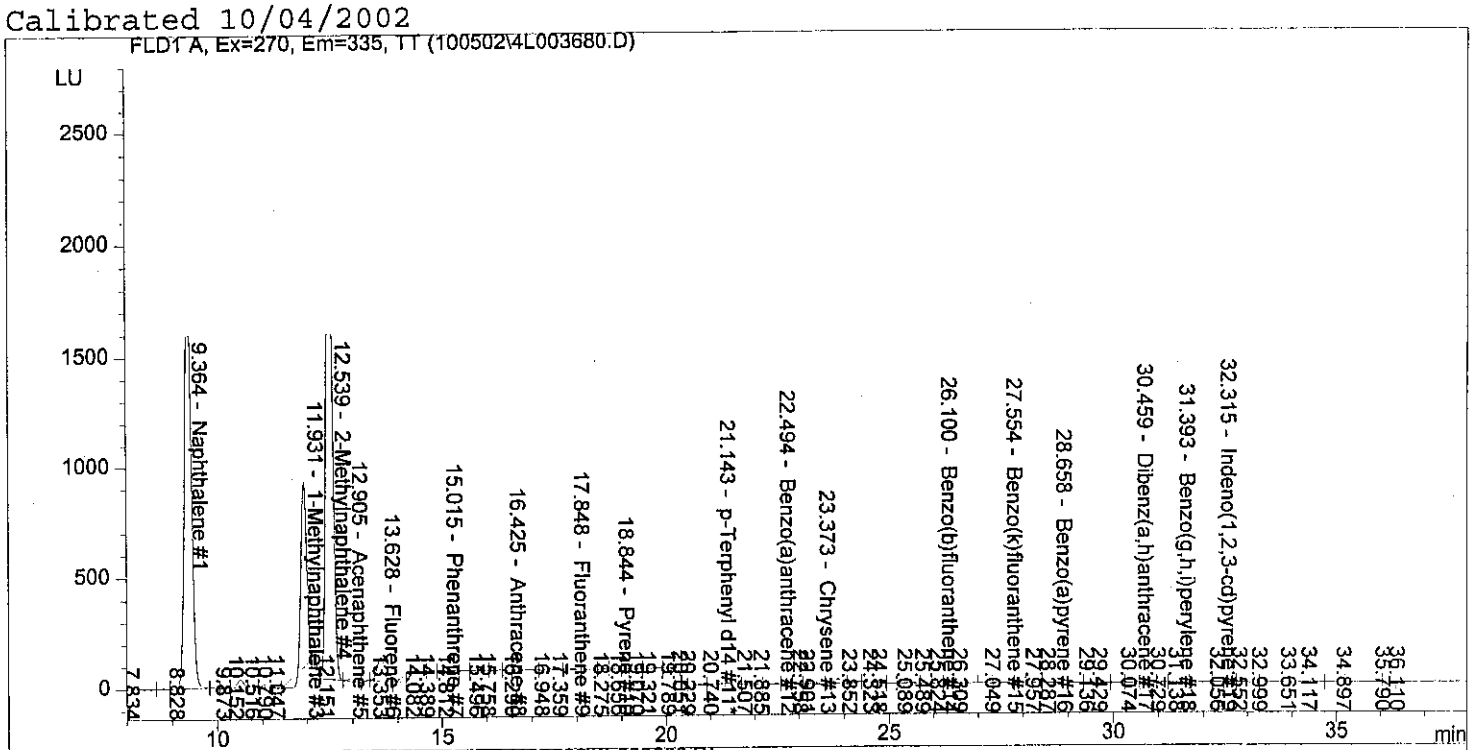
==========

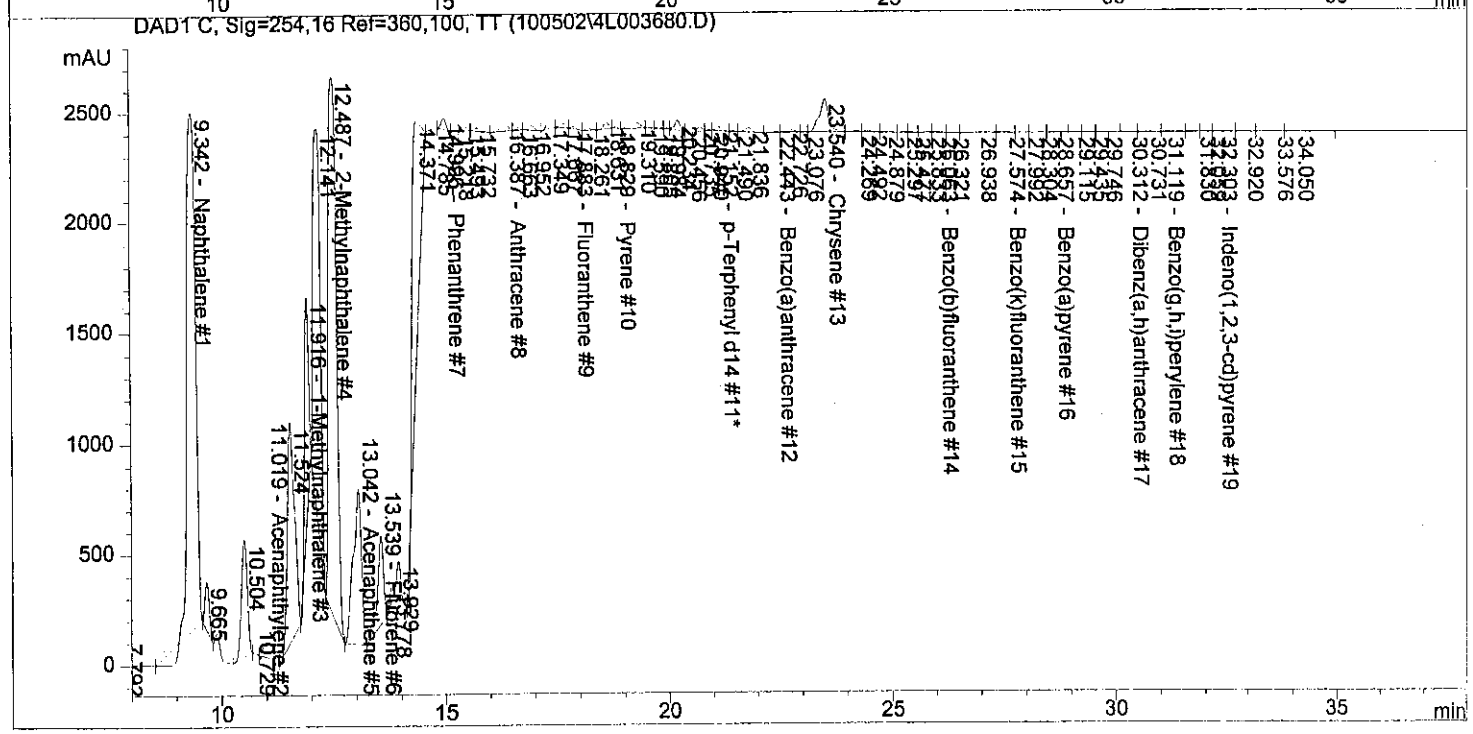
Injection Date : 10/6/2002 3:02:46 PM
Sample Name : L0209516-01 831S
Acq. Operator : RDC

Seq. Line : 27
Vial : 27
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:56:14 PM
(modified after loading)

Calibrated 10/04/2002



Search result of : DAD1, 11.018 (66.6 mAU, - ) Ref=10.818 & 11.265
Library used : C:\HPCHEM\SPECLIBS\8310_CCV.UVL
Library Name : 8310 CCV
Parameters : Window 10.467 | 10.467 min

Library search results

| # | Match | Entry | Time [min] | Name |
|---|---|---|---|---|
| 1 | 279.6336 | 1 | 10.972 | acenaphthylene |

*** End of Report ***

==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2002 3:56:14 PM
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 |
|---|---|---|---|---|---|---|
| 9.364 | BB | 1.80693e4 | 2.61144e-2 | 471.86838 | F | Naphthalene #1 |
| 11.931 | BB | 6592.09082 | 2.28524e-2 | 150.64530 | C | 1-Methylnaphthalene #3 (P) I |
| 12.539 | BB | 1.97180e4 | 1.76432e-2 | 347.88754 | F | 2-Methylnaphthalene #4 |
| 12.905 | BB | 99.55328 | 1.60335e-2 | 1.59619 | LMDL | Acenaphthene #5 |
| 13.628 | BB | 1349.21594 | 6.77806e-3 | 9.14506 | NC | Fluorene #6 |
| 15.015 | BB | 20.37540 | 1.95403e-1 | 3.98141 | C | Phenanthrene #7 (P) |
| 16.425 | BB | 1.12871 | 5.41903e-1 | 6.11650e-1 | NC | Anthracene #8 |
| 17.848 | BB | 30.50550 | 2.62419e-2 | 8.00522e-1 | C | Fluoranthene #9 (P) |
| 18.844 | BB | 13.13840 | 4.43633e-2 | 5.82862e-1 | C * | Pyrene #10 |
| 21.143 | BB | 189.25650 | 2.97858e-1 | 56.37159 | 54% | p-Terphenyl d14 #11* SMI |
| 22.494 | BB | 30.26726 | 9.74224e-3 | 2.94871e-1 | F | Benzo(a)anthracene #12 |
| 23.373 | BB | 96.43554 | 4.07262e-2 | 3.92746 | NC | Chrysene #13 |
| 26.100 | BB | 8.23501 | 2.15632e-2 | 1.77573e-1 | F | Benzo(b)fluoranthene #14 |
| 27.554 | BB | 29.07214 | 3.38523e-3 | 9.84159e-2 | F | Benzo(k)fluoranthene #15 |
| 28.658 | BB | 40.05680 | 6.55130e-3 | 2.62424e-1 | F | Benzo(a)pyrene #16 |
| 30.459 | BB | 2.53381 | 6.22583e-2 | 1.57751e-1 | F | Dibenz(a,h)anthracene #17 |
| 31.393 | BB | 7.29488 | 4.02499e-2 | 2.93618e-1 | F | Benzo(g,h,i)perylene #18 |
| 32.315 | BB | 1.42116 | 4.04388e-2 | 5.74702e-2 | LMDL | Indeno(1,2,3-cd)pyrene #1 |

Totals : 1048.76008

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.342 | BB | 3.01861e4 | 8.42136e-3 | 254.20827 | I | Naphthalene #1 |
| 11.019 | BB | 1000.59015 | 3.40538e-2 | 34.0~~7391~~ | NC | Acenaphthylene #2 |
| 11.916 | BB | 6550.31494 | 1.38531e-2 | 90.74186 | ✓ | 1-Methylnaphthalene #3 (P) |
| 12.487 | BB | 3.03788e4 | 1.20436e-2 | 365.86842 | I | 2-Methylnaphthalene #4 |
| 13.042 | BB | 9008.12207 | 2.24553e-2 | 202.27990 | NC | Acenaphthene #5 |
| 13.539 | BB | 3873.62183 | 1.73691e-2 | 67.28134 | NC | Fluorene #6 (RT) |
| 14.996 | BB | 379.76086 | 1.78276e-2 | 6.77021 | ✓ | Phenanthrene #7 (P) |
| 16.387 | BB | 337.75967 | 1.16811e-2 | 3.94542 | | Anthracene #8 (RT) |
| 17.883 | BB | 62.42338 | 2.12561e-2 | 1.32688 | ✓ | Fluoranthene #9 (P) |
| 18.829 | BB | 35.22040 | 1.20238e-2 | 4.23482e-1 | ✓ | Pyrene #10 |
| 21.152 | BB | 180.98929 | 6.65998e-2 | 12.05385 | 121% | p-Terphenyl d14 #11* |
| 22.443 | BB | 36.03599 | 2.21097e-2 | 7.96745e-1 | ✓ | Benzo(a)anthracene #12 (P) |
| 23.540 | BB | 2151.54077 | 1.50663e-2 | 32.41580 | ~~RT~~ | Chrysene #13 RT |
| 26.063 | BB | 16.27687 | 2.26621e-2 | 3.68868e-1 | F | Benzo(b)fluoranthene #14 |
| 27.574 | BB | 23.43547 | 2.35437e-2 | 5.51759e-1 | ✓ | Benzo(k)fluoranthene #15 (P) |
| 28.657 | BB | 7.47320 | 3.50803e-2 | 2.62162e-1 | F | Benzo(a)pyrene #16 |
| 30.312 | BB | 3.93733 | 1.09181e-1 | 4.29882e-1 | F | Dibenz(a,h)anthracene #17 |

22 @ ~~5X~~ 10X

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Sig | Name |
|---|---|---|---|---|---|---|
| 31.119 | BB | 4.02415 | 7.42012e-2 | 2.98597e-1 | F | Benzo(g,h,i)perylene #18 |
| 32.303 | BB | 1.86214 | 4.69434e-2 | 8.74153e-2 | CMOL | Indeno(1,2,3-cd)pyrene #1 |

Totals : 1074.18477

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Elution order of calibrated compounds may have changed

==========

*** End of Report ***

RDC 10/22/02

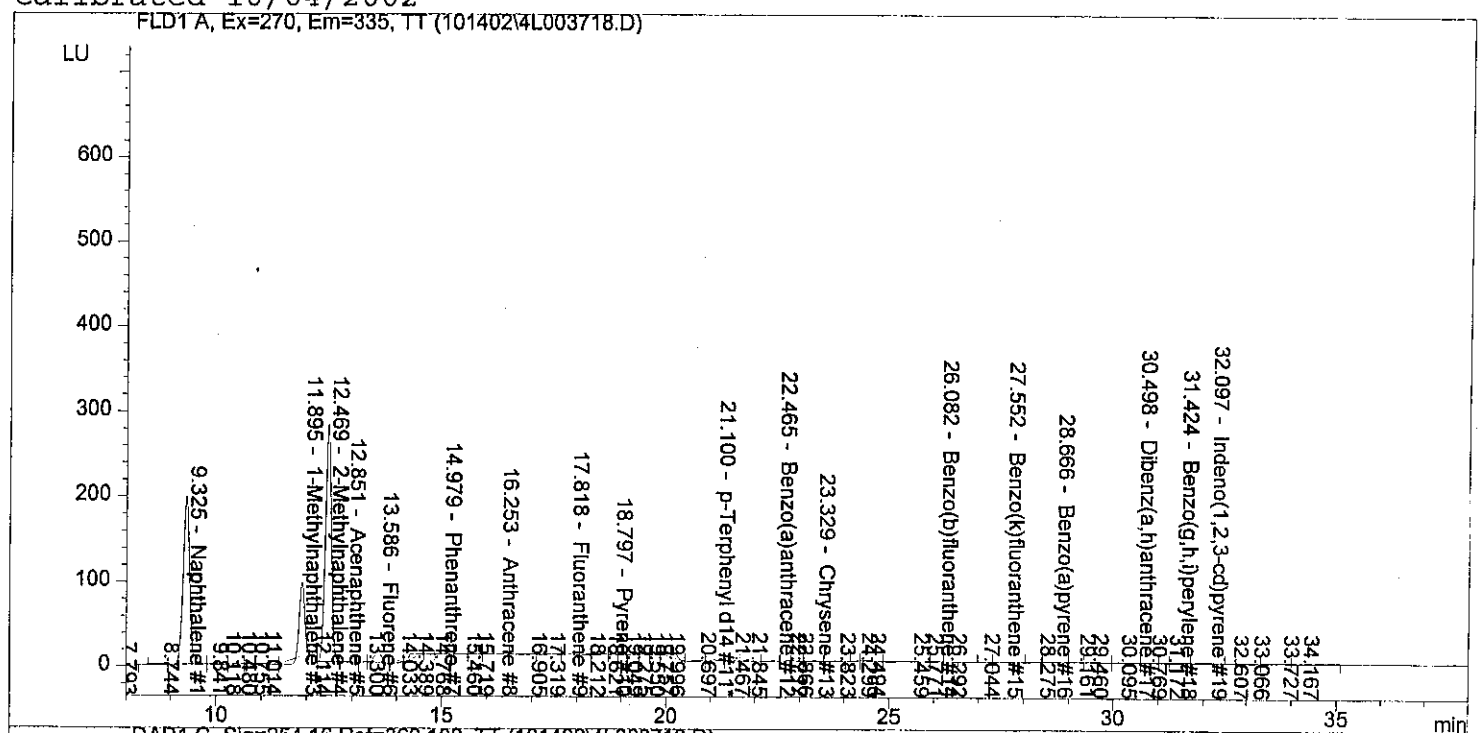
==========

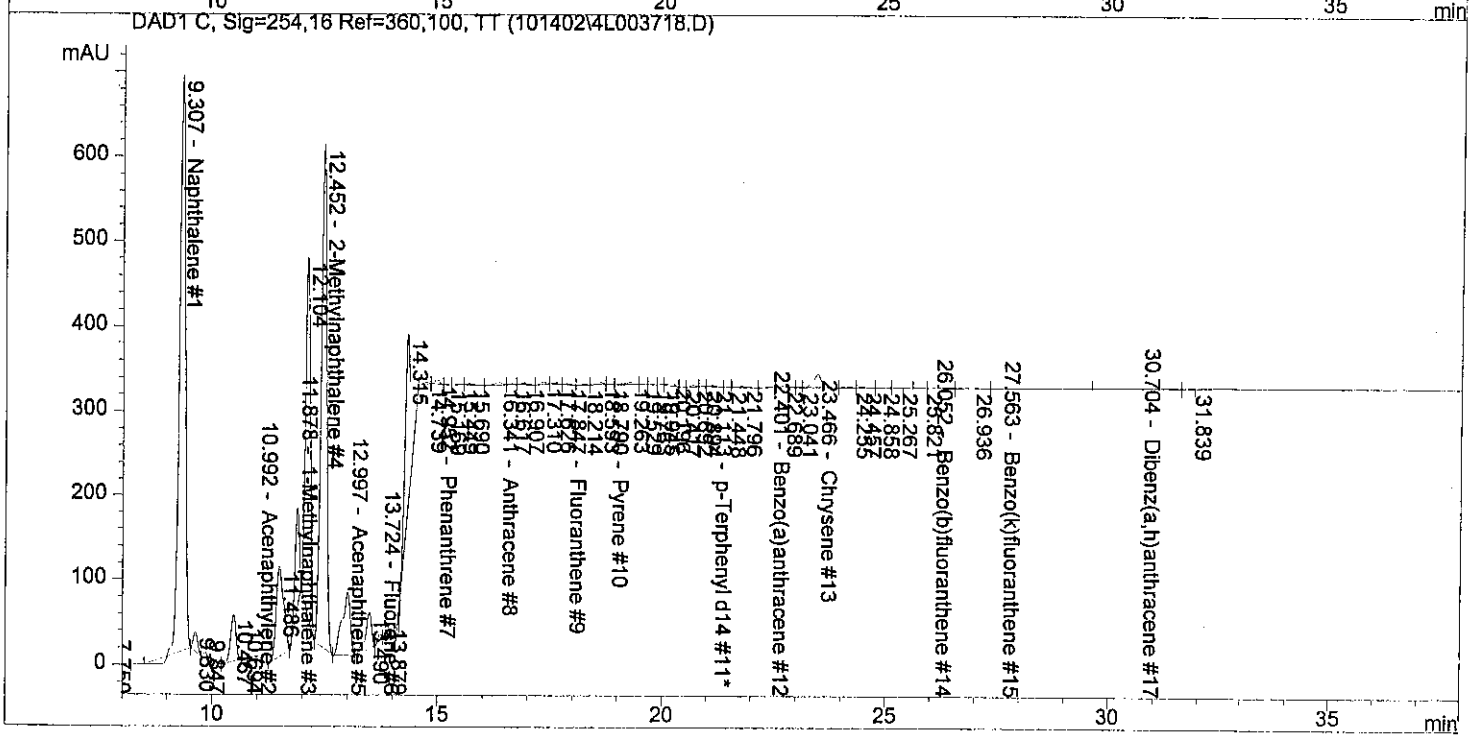
Injection Date : 10/14/2002 8:11:15 PM
Sample Name : L0209516-~~02~~ 831S
Acq. Operator : RDC 01 RDC 10/22/02

Seq. Line : 8
Vial : 7
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:31:57 AM by RDC
(modified after loading)

Calibrated 10/04/2002



RWC 10/22/02

# External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.325 | BB | 1974.72522 | 2.62744e-2 | 51.88463 | | Naphthalene #1 |
| 11.895 | BB | 687.96228 | 2.32554e-2 | 15.99882 | | 1-Methylnaphthalene #3 |
| 12.469 | BB | 2608.82861 | 1.77298e-2 | 46.25394 | | 2-Methylnaphthalene #4 |
| 12.851 | BB | 8.41499 | 3.70924e-2 | 3.12132e-1 | | Acenaphthene #5 |
| 13.586 | BB | 134.70847 | 7.18516e-3 | 9.67902e-1 | | Fluorene #6 |
| 14.979 | BB | 2.91963 | 3.32838e-1 | 9.71763e-1 | | Phenanthrene #7 |
| 16.253 | BB | 1.13815 | 5.40016e-1 | 6.14617e-1 | | Anthracene #8 |
| 17.818 | BB | 3.40637 | 3.29128e-2 | 1.12113e-1 | | Fluoranthene #9 |
| 18.797 | BB | 8.85424e-1 | 1.01337e-1 | 8.97264e-2 | | Pyrene #10 |
| 21.100 | BB | 18.96635 | 3.13689e-1 | 5.94954 | 595% | p-Terphenyl d14 #11* SMT |
| 22.465 | BB | 2.53020 | 2.61514e-2 | 6.61681e-2 | | Benzo(a)anthracene #12 |
| 23.329 | BB | 7.49404 | 4.62215e-2 | 3.46386e-1 | | Chrysene #13 |
| 26.082 | BB | 1.19497 | 4.86814e-2 | 5.81729e-2 | | Benzo(b)fluoranthene #14 |
| 27.552 | BB | 2.89049 | 8.49230e-3 | 2.45469e-2 | | Benzo(k)fluoranthene #15 |
| 28.666 | BB | 3.86823 | 2.00759e-2 | 7.76582e-2 | | Benzo(a)pyrene #16 |
| 30.498 | BB | 2.33671e-1 | 2.69668e-1 | 6.30135e-2 | | Dibenz(a,h)anthracene #17 |
| 31.424 | BB | 6.17109e-1 | 1.51082e-1 | 9.32339e-2 | | Benzo(g,h,i)perylene #18 |
| 32.097 | BB | 9.32306e-1 | 5.40970e-2 | 5.04350e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 123.93479

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.307 | PB | 6055.59521 | 8.40901e-3 | 50.92155 | | Naphthalene #1 |
| 10.992 | BB | 103.30549 | 3.64486e-2 | 3.76534 | NC | Acenaphthylene #2 |
| 11.878 | BB | 771.57721 | 1.40622e-2 | 10.85005 | | 1-Methylnaphthalene #3 |
| 12.452 | BB | 5196.83984 | 1.20556e-2 | 62.65081 | | 2-Methylnaphthalene #4 |
| 12.997 | BB | 921.65088 | 2.27044e-2 | 20.92551 | | Acenaphthene #5 |
| 13.724 | BB | 37.67392 | 2.25649e-2 | 8.50108e-1 | | Fluorene #6 |
| 14.952 | BB | 38.63136 | 2.31541e-2 | 8.94475e-1 | | Phenanthrene #7 |
| 16.341 | BB | 34.86736 | 1.55900e-2 | 5.43581e-1 | | Anthracene #8 |
| 17.847 | BB | 8.52341 | 2.50371e-2 | 2.13401e-1 | | Fluoranthene #9 |
| 18.790 | BB | 4.61564 | 1.88269e-2 | 8.68980e-2 | | Pyrene #10 |
| 21.113 | BB | 18.13083 | 7.62047e-2 | 1.38165 | 138% | p-Terphenyl d14 #11* |
| 22.401 | BB | 3.58809 | 3.19306e-2 | 1.14570e-1 | | Benzo(a)anthracene #12 |
| 23.466 | BB | 215.17973 | 1.52220e-2 | 3.27547 | | Chrysene #13 |
| 26.052 | BB | 1.14270 | 5.73465e-2 | 6.55298e-2 | | Benzo(b)fluoranthene #14 |
| 27.563 | BB | 2.46095 | 2.72328e-2 | 6.70185e-2 | | Benzo(k)fluoranthene #15 |
| 28.617 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.704 | BB | 18.72630 | 1.01986e-1 | 1.90981 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.280 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.282 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

01 RWC 10/22/02

Totals : 158.51578

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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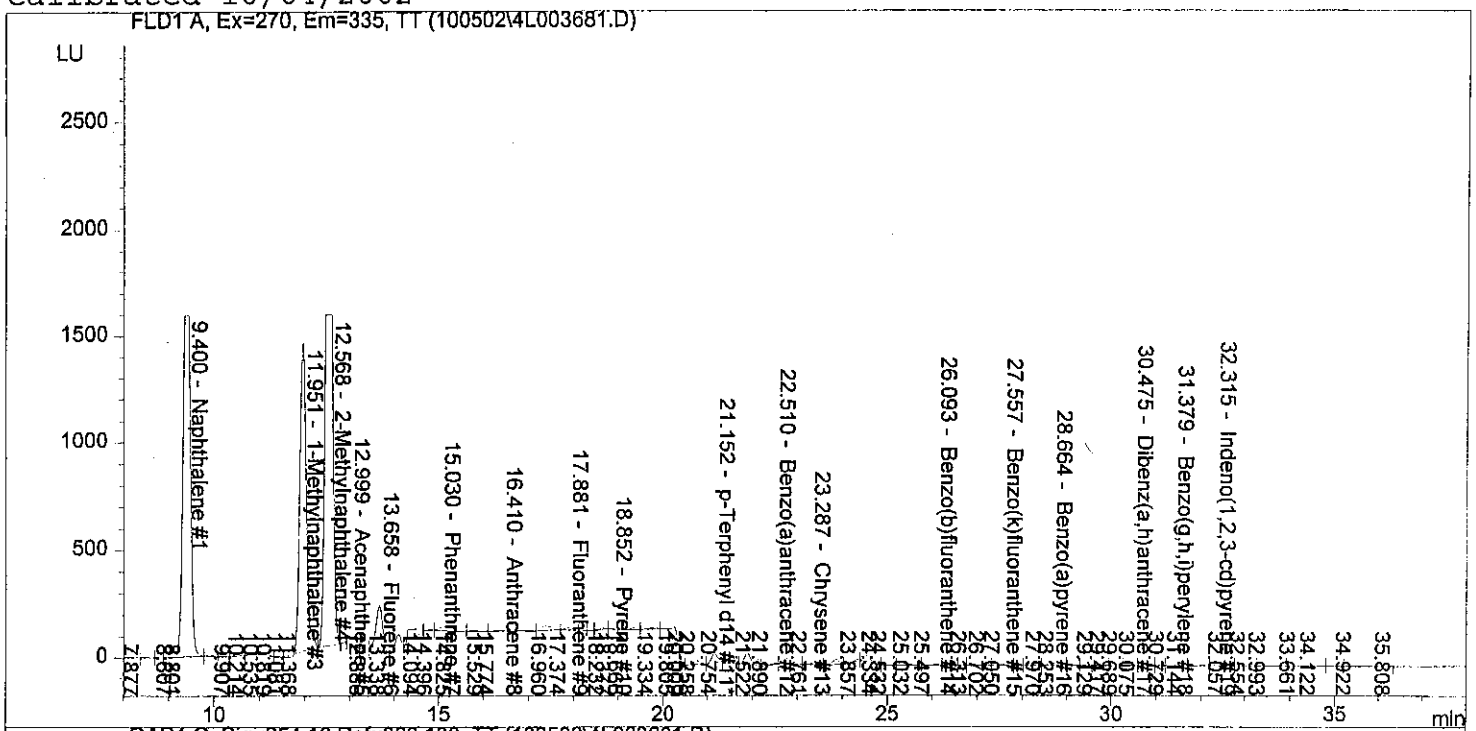
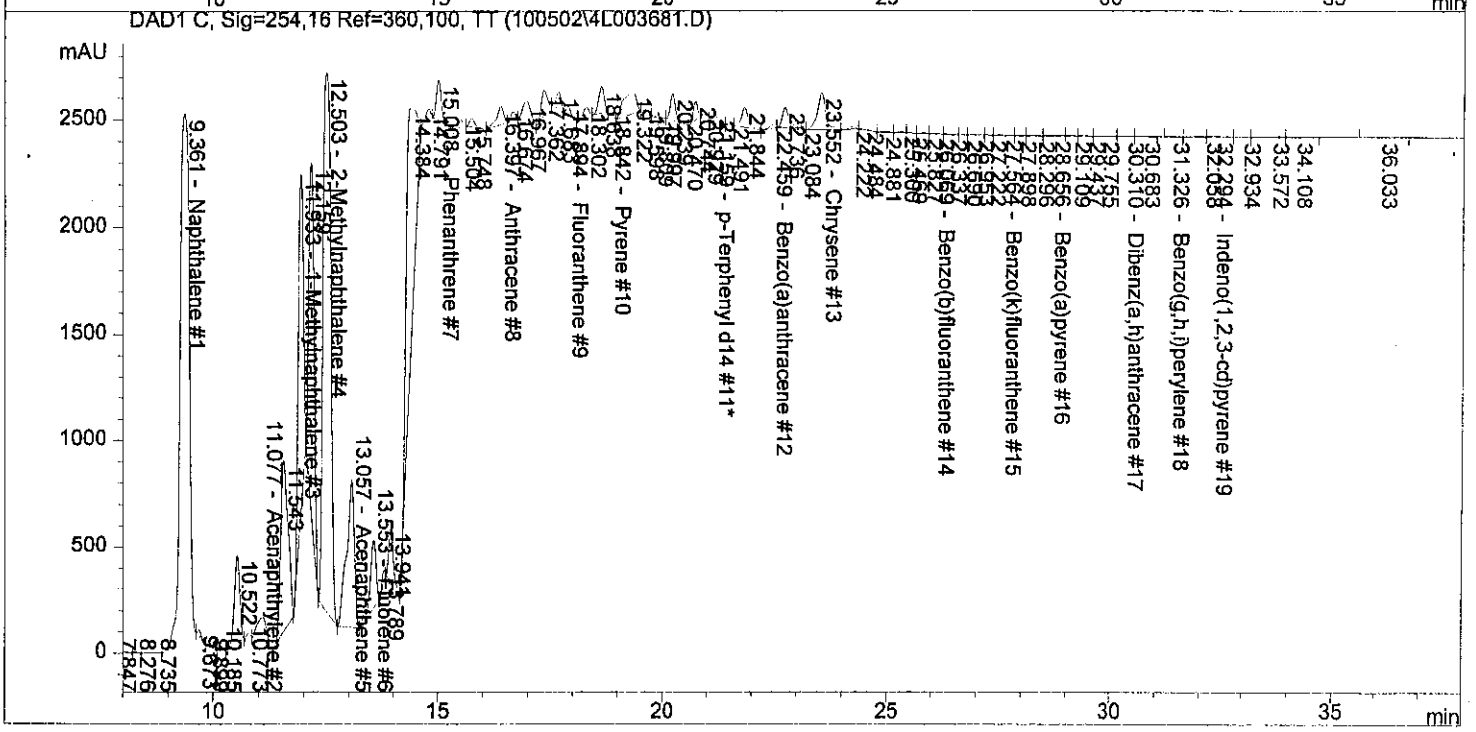
Injection Date : 10/6/2002 3:59:22 PM
Sample Name : L0209516-02 831S
Acq. Operator : RDC

Seq. Line : 28
Vial : 28
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:56:14 PM
(modified after loading)

Calibrated 10/04/2002



Search result of : DAD1, 11.077 (135 mAU, - ) Ref=10.844 & 11.291
Library used : C:\HPCHEM\SPECLIBS\8310_CCV.UVL
Library Name : 8310 CCV
Parameters : Window 10.523 | 10.523 min

Library search results

| # | Match | Entry | Time [min] | Name |
|---|---|---|---|---|
| 1 | 281.8806 | 1 | 10.972 | acenaphthylene |

*** End of Report ***

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2002 3:56:14 PM
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 |
|---|---|---|---|---|---|---|
| 9.400 | BB | 1.91060e4 | 2.61134e-2 | 498.92258 | I | Naphthalene #1 |
| 11.951 | BB | 1.41712e4 | 2.28273e-2 | 323.49052 | I | 1-Methylnaphthalene #3 |
| 12.568 | BB | 2.13880e4 | 1.76421e-2 | 377.32944 | I | 2-Methylnaphthalene #4 |
| 12.999 | BB | 66.32803 | 1.70075e-2 | 1.12808 | ma | Acenaphthene #5 |
| 13.658 | BB | 2173.97070 | 6.76093e-3 | 14.69806 | NC | Fluorene #6 |
| 15.030 | BB | 101.05639 | 1.77050e-1 | 17.89205 | C | Phenanthrene #7 |
| 16.410 | BB | 24.54397 | 3.24846e-1 | 7.97300 | | Anthracene #8 RT |
| 17.881 | BB | 110.95598 | 2.56339e-2 | 2.84423 | P | Fluoranthene #9 |
| 18.852 | BB | 22.90529 | 4.26077e-2 | 9.75942e-1 | P | Pyrene #10 |
| 21.152 | BB | 391.21985 | 2.96948e-1 | 116.17192 | 116.2% | p-Terphenyl d14 #11* |
| 22.510 | BB | 54.80071 | 9.07212e-3 | 4.97159e-1 | P | Benzo(a)anthracene #12 |
| 23.287 | BB | 97.45266 | 4.07214e-2 | 3.96841 | NC | Chrysene #13 |
| 26.093 | BB | 19.64184 | 1.88900e-2 | 3.71035e-1 | F | Benzo(b)fluoranthene #14 |
| 27.557 | BB | 67.22926 | 3.06522e-3 | 2.06072e-1 | F | Benzo(k)fluoranthene #15 |
| 28.664 | BB | 127.49613 | 5.55984e-3 | 7.08859e-1 | | Benzo(a)pyrene #16 |
| 30.475 | BB | 4.09484 | 5.42257e-2 | 2.22046e-1 | F | Dibenz(a,h)anthracene #17 |
| 31.379 | BB | 19.58451 | 3.38227e-2 | 6.62401e-1 | P | Benzo(g,h,i)perylene #18 |
| 32.315 | BB | 5.78632 | 2.07886e-2 | 1.20289e-1 | F | Indeno(1,2,3-cd)pyrene #1 |

Totals : 1368.18209

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

RL @ 10x

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.361 | BB | 3.43964e4 | 8.42174e-3 | 289.67742 | I | Naphthalene #1 |
| 11.077 | BB | 1689.04663 | 3.39414e-2 | 57.32867 | NC | Acenaphthylene #2 |
| 11.933 | BB | 1.24156e4 | 1.38399e-2 | 171.83018 | I | 1-Methylnaphthalene #3 |
| 12.503 | BB | 3.11566e4 | 1.20435e-2 | 375.23468 | I | 2-Methylnaphthalene #4 |
| 13.057 | BB | 8418.18945 | 2.24573e-2 | 189.04955 | NC | Acenaphthene #5 |
| 13.553 | BB | 2827.17065 | 1.73880e-2 | 49.15882 | RT | Fluorene #6 |
| 15.008 | BB | 1459.70605 | 1.73813e-2 | 25.37159 | | Phenanthrene #7 P okay |
| 16.397 | BB | 954.03375 | 1.13905e-2 | 10.86690 | | Anthracene #8 RT |
| 17.894 | BB | 213.94241 | 2.08327e-2 | 4.45700 | P | Fluoranthene #9 |
| 18.842 | BB | 137.20038 | 1.12612e-2 | 1.54504 | P | Pyrene #10 |
| 21.159 | BB | 277.08801 | 6.62290e-2 | 18.35125 | | p-Terphenyl d14 #11* 184%* |
| 22.459 | BB | 139.84360 | 2.13036e-2 | 2.97917 | P | Benzo(a)anthracene #12 |
| 23.552 | BB | 2210.21753 | 1.50659e-2 | 33.29883 | RT | Chrysene #13 |
| 26.069 | BB | 36.63725 | 2.12067e-2 | 7.76956e-1 | P | Benzo(b)fluoranthene #14 |
| 27.564 | BB | 46.19816 | 2.33305e-2 | 1.07782 | P | Benzo(k)fluoranthene #15 |
| 28.656 | BB | 25.77166 | 2.93174e-2 | 7.55559e-1 | | Benzo(a)pyrene #16 |
| 30.310 | BB | 7.90586 | 1.04608e-1 | 8.27013e-1 | P | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.326 | BB | 5.97950 | 6.89852e-2 | 4.12497e-1 | F | Benzo(g,h,i)perylene #18 |
| 32.294 | BB | 7.91576 | 2.58387e-2 | 2.04533e-1 | F | Indeno(1,2,3-cd)pyrene #1 |

Totals : 1233.20346

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

7

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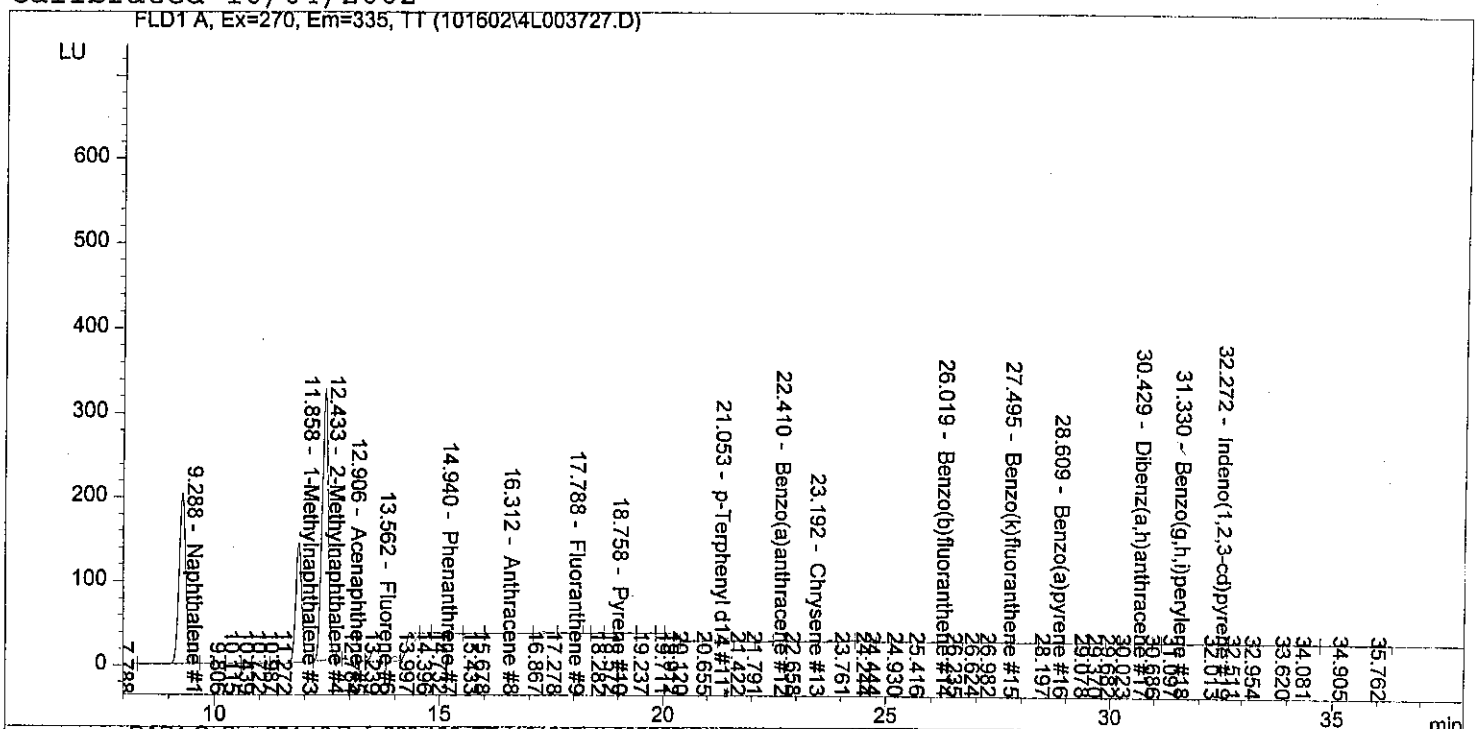
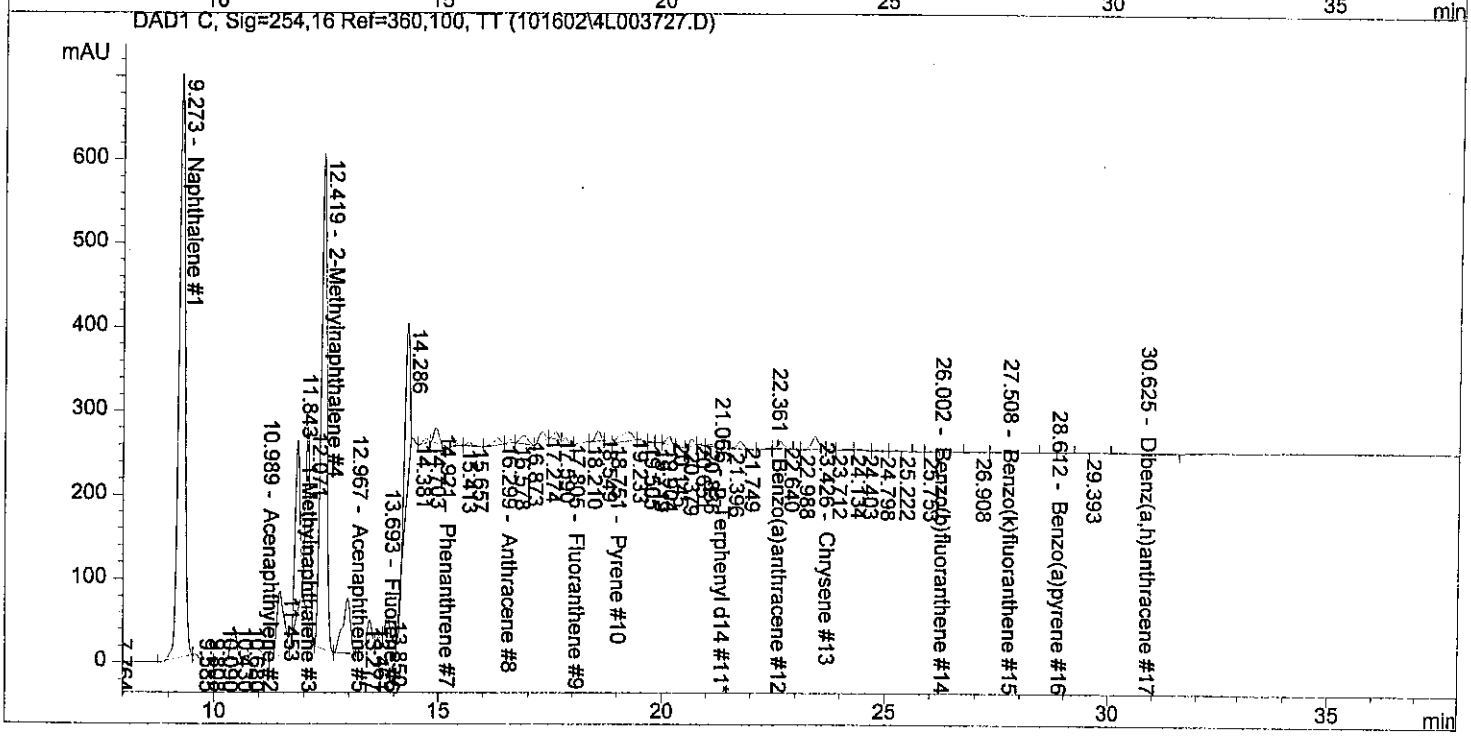
Injection Date : 10/16/2002 11:32:58 PM
Sample Name : L0209516-02 10X
Acq. Operator : RDC

Seq. Line : 8
Vial : 8
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:54:41 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Friday, October 18, 2002 4:30:18 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.288 | BB | 2011.65002 | 2.62711e-2 | 52.84818 | | Naphthalene #1 |
| 11.858 | BB | 1373.83838 | 2.30308e-2 | 31.64055 | | 1-Methylnaphthalene #3 |
| 12.433 | BB | 3032.98682 | 1.77158e-2 | 53.73182 | | 2-Methylnaphthalene #4 |
| 12.906 | BB | 6.65962 | 4.31557e-2 | 2.87401e-1 | | Acenaphthene #5 |
| 13.562 | BB | 199.82167 | 7.03779e-3 | 1.40630 | | Fluorene #6 |
| 14.940 | BB | 9.60151 | 2.21197e-1 | 2.12382 | | Phenanthrene #7 |
| 16.312 | BB | 2.16142 | 4.33195e-1 | 9.36317e-1 | | Anthracene #8 |
| 17.788 | BB | 10.48588 | 2.78428e-2 | 2.91957e-1 | | Fluoranthene #9 |
| 18.758 | BB | 2.38339 | 6.29413e-2 | 1.50014e-1 | | Pyrene #10 |
| 21.053 | BB | 34.86488 | 3.05666e-1 | 10.65701 | | p-Terphenyl d14 #11* |
| 22.410 | BB | 4.92909 | 1.74369e-2 | 8.59479e-2 | | Benzo(a)anthracene #12 |
| 23.192 | BB | 8.92428 | 4.52666e-2 | 4.03972e-1 | | Chrysene #13 |
| 26.019 | BB | 2.02888 | 3.56434e-2 | 7.23161e-2 | | Benzo(b)fluoranthene #14 |
| 27.495 | BB | 6.16106 | 5.48192e-3 | 3.37745e-2 | | Benzo(k)fluoranthene #15 |
| 28.609 | BB | 11.43642 | 1.01692e-2 | 1.16299e-1 | | Benzo(a)pyrene #16 |
| 30.429 | BB | 3.66437e-1 | 1.86886e-1 | 6.84819e-2 | | Dibenz(a,h)anthracene #17 |
| 31.330 | BB | 2.04877 | 6.64763e-2 | 1.36195e-1 | | Benzo(g,h,i)perylene #18 |
| 32.272 | BB | 5.44206e-1 | 8.24133e-2 | 4.48498e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 155.03521

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.273 | BB | 6443.04053 | 8.40994e-3 | 54.18557 | | Naphthalene #1 |
| 10.989 | BB | 157.50690 | 3.55296e-2 | 5.59616 | | Acenaphthylene #2 |
| 11.843 | BB | 1472.25879 | 1.39494e-2 | 20.53706 | | 1-Methylnaphthalene #3 |
| 12.419 | BB | 5102.41748 | 1.20558e-2 | 61.51386 | | 2-Methylnaphthalene #4 |
| 12.967 | BB | 781.61792 | 2.27541e-2 | 17.78501 | | Acenaphthene #5 |
| 13.693 | BB | 31.57030 | 2.35793e-2 | 7.44405e-1 | | Fluorene #6 |
| 14.921 | BB | 139.12224 | 1.88709e-2 | 2.62537 | | Phenanthrene #7 |
| 16.299 | BB | 90.25986 | 1.29150e-2 | 1.16570 | | Anthracene #8 |
| 17.805 | BB | 23.65538 | 2.22360e-2 | 5.26001e-1 | | Fluoranthene #9 |
| 18.751 | BB | 14.86321 | 1.34290e-2 | 1.99598e-1 | | Pyrene #10 |
| 21.066 | BB | 26.37719 | 7.28676e-2 | 1.92204 | | p-Terphenyl d14 #11* |
| 22.361 | BB | 13.29920 | 2.39664e-2 | 3.18733e-1 | | Benzo(a)anthracene #12 |
| 23.426 | BB | 161.71158 | 1.52792e-2 | 2.47083 | | Chrysene #13 |
| 26.002 | BB | 3.49163 | 3.22514e-2 | 1.12610e-1 | | Benzo(b)fluoranthene #14 |
| 27.508 | BB | 4.29203 | 2.54743e-2 | 1.09336e-1 | | Benzo(k)fluoranthene #15 |
| 28.612 | BB | 2.28011 | 5.35662e-2 | 1.22137e-1 | | Benzo(a)pyrene #16 |
| 30.625 | BB | 16.30768 | 1.02270e-1 | 1.66778 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.280 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.282 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 171.60221

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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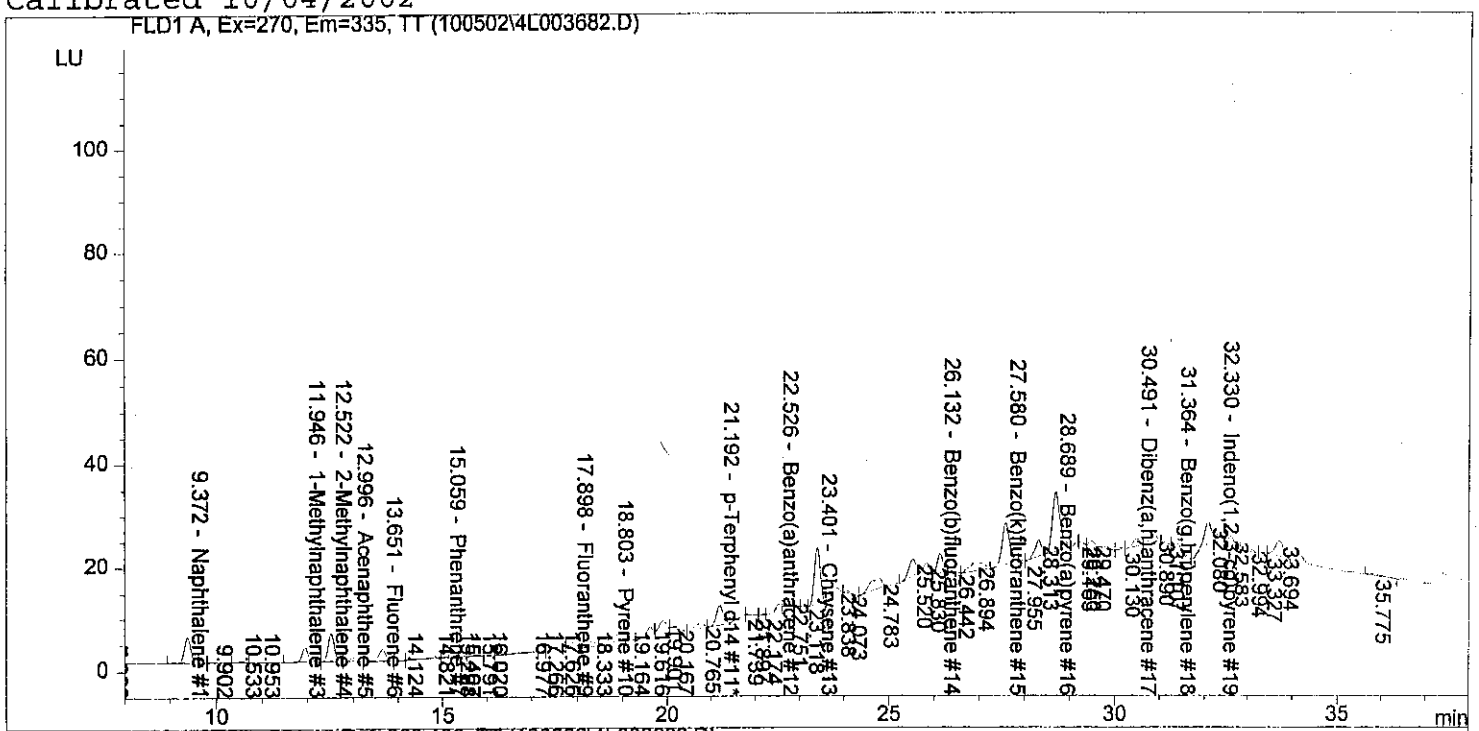
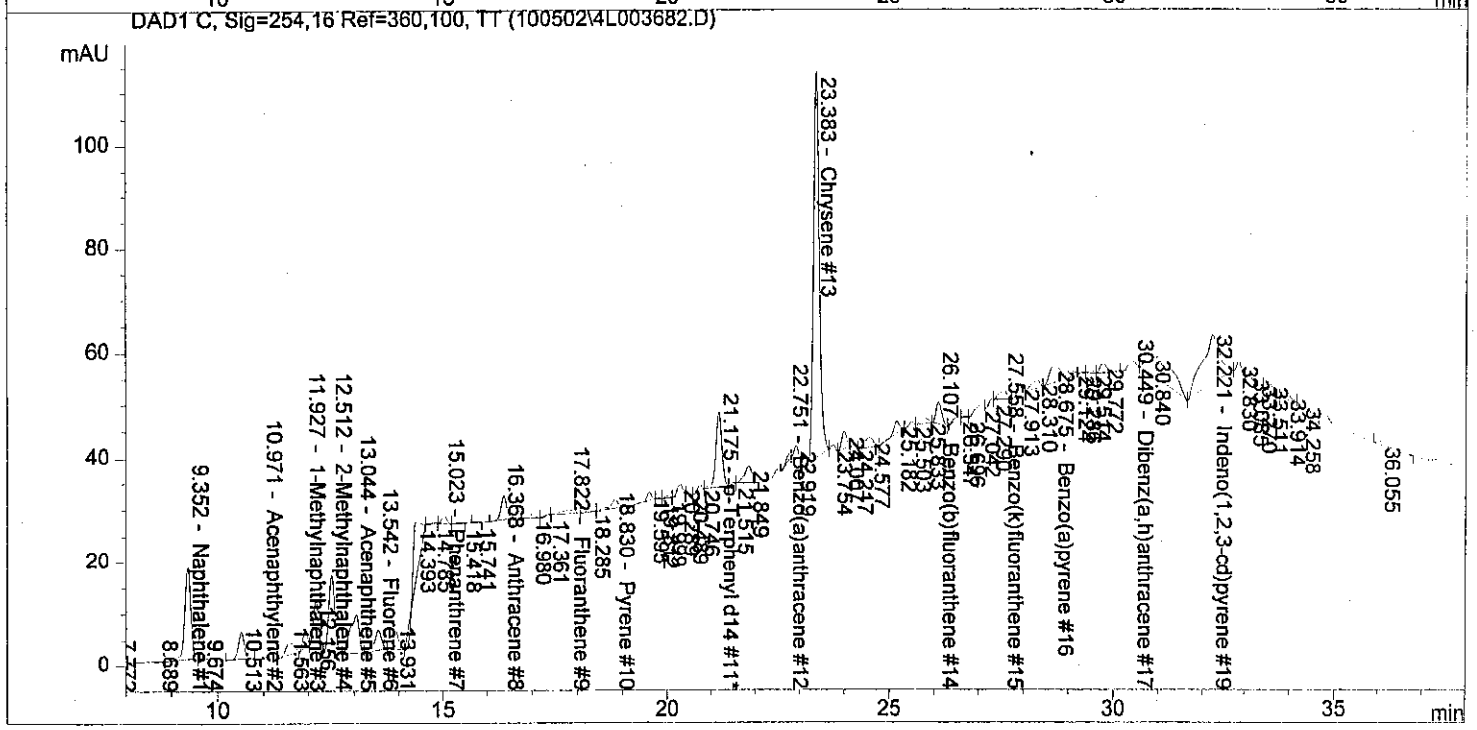
Injection Date : 10/6/2002 4:55:58 PM
Sample Name : L0209516-03 831S
Acq. Operator : RDC

Seq. Line : 29
Vial : 29
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:56:14 PM
(modified after loading)

Calibrated 10/04/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Thursday, October 10, 2002 3:56:14 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.372 | BB | 49.73351 | 3.32240e-2 | 1.65235 | <mdl | Naphthalene #1 |
| 11.946 | BB | 27.97507 | 3.38692e-2 | 9.47494e-1 | F | 1-Methylnaphthalene #3 |
| 12.522 | BB | 51.87342 | 2.26504e-2 | 1.17495 | F | 2-Methylnaphthalene #4 |
| 12.996 | BB | 7.60526 | 3.95416e-2 | 3.00724e-1 | <mdl | Acenaphthene #5 |
| 13.651 | BB | 25.23357 | 9.14725e-3 | 2.30818e-1 | <mdl | Fluorene #6 |
| 15.059 | BB | 1.98781e-1 | 2.52865 | 5.02647e-1 | <mdl | Phenanthrene #7 |
| 16.426 | | - | - | - | | Anthracene #8 |
| 17.898 | BB | 7.49034 | 2.88184e-2 | 2.15860e-1 | F | Fluoranthene #9 |
| 18.803 | BB | 21.20621 | 4.27969e-2 | 9.07561e-1 | P | Pyrene #10 |
| 21.192 | BB | 42.90219 | 3.03873e-1 | 13.03682 | 130% | p-Terphenyl d14 #11* |
| 22.526 | BB | 2.96091 | 2.35466e-2 | 6.97195e-2 | <mdl | Benzo(a)anthracene #12 |
| 23.401 | BB | 101.27474 | 4.07041e-2 | 4.12230 | P | Chrysene #13 |
| 26.132 | BB | 35.08836 | 1.80405e-2 | 6.33010e-1 | ✓ | Benzo(b)fluoranthene #14 |
| 27.580 | BB | 91.70638 | 3.00014e-3 | 2.75132e-1 | F | Benzo(k)fluoranthene #15 |
| 28.689 | BB | 140.59117 | 5.51754e-3 | 7.75717e-1 | P | Benzo(a)pyrene #16 |
| 30.491 | BB | 15.76082 | 4.45751e-2 | 7.02539e-1 | P | Dibenz(a,h)anthracene #17 |
| 31.364 | BB | 8.09902 | 3.92329e-2 | 3.17748e-1 | NC | Benzo(g,h,i)perylene #18 |
| 32.330 | BB | 7.95753 | 1.90430e-2 | 1.51535e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 26.01692

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.352 | BB | 165.20724 | 7.85807e-3 | 1.29821 | <mdl | Naphthalene #1 |
| 10.971 | BB | 5.79785 | 8.13599e-2 | 4.71712e-1 | ↓ | Acenaphthylene #2 |
| 11.927 | BB | 23.36328 | 2.16533e-2 | 5.05891e-1 | F | 1-Methylnaphthalene #3 |
| 12.512 | BB | 138.37480 | 1.25851e-2 | 1.74146 | F | 2-Methylnaphthalene #4 |
| 13.044 | BB | 98.26711 | 2.50295e-2 | 2.45958 | NC | Acenaphthene #5 |
| 13.542 | BB | 46.11073 | 2.16049e-2 | 9.96217e-1 | <mdl | Fluorene #6 |
| 15.023 | BB | 10.04318 | 4.00333e-2 | 4.02061e-1 | <mdl | Phenanthrene #7 |
| 16.368 | BB | 41.32176 | 1.49091e-2 | 6.16071e-1 | <mdl | Anthracene #8 |
| 17.822 | BB | 12.68844 | 2.35997e-2 | 2.99444e-1 | F | Fluoranthene #9 |
| 18.830 | BB | 20.42052 | 1.27674e-2 | 2.60716e-1 | F | Pyrene #10 |
| 21.175 | BB | 135.08316 | 6.69632e-2 | 9.04560 | 90.5% | p-Terphenyl d14 #11* |
| 22.751 | BB | 6.78721 | 2.67897e-2 | 1.81827e-1 | NC | Benzo(a)anthracene #12 |
| 23.383 | BB | 659.35272 | 1.51055e-2 | 9.95984 | P | Chrysene #13 |
| 26.107 | BB | 37.80207 | 2.11709e-2 | 8.00303e-1 | ✓ | Benzo(b)fluoranthene #14 |
| 27.558 | BB | 20.48885 | 2.36060e-2 | 4.83660e-1 | F | Benzo(k)fluoranthene #15 |
| 28.675 | BB | 58.15171 | 2.80069e-2 | 1.62865 | P | Benzo(a)pyrene #16 |
| 30.449 | BB | 15.29895 | 1.02415e-1 | 1.56684 | P | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.280 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.221 | BB | 273.31445 | 1.95347e-2 | 5.33913 | NC | Indeno(1,2,3-cd)pyrene #1 |

Totals : 38.05721

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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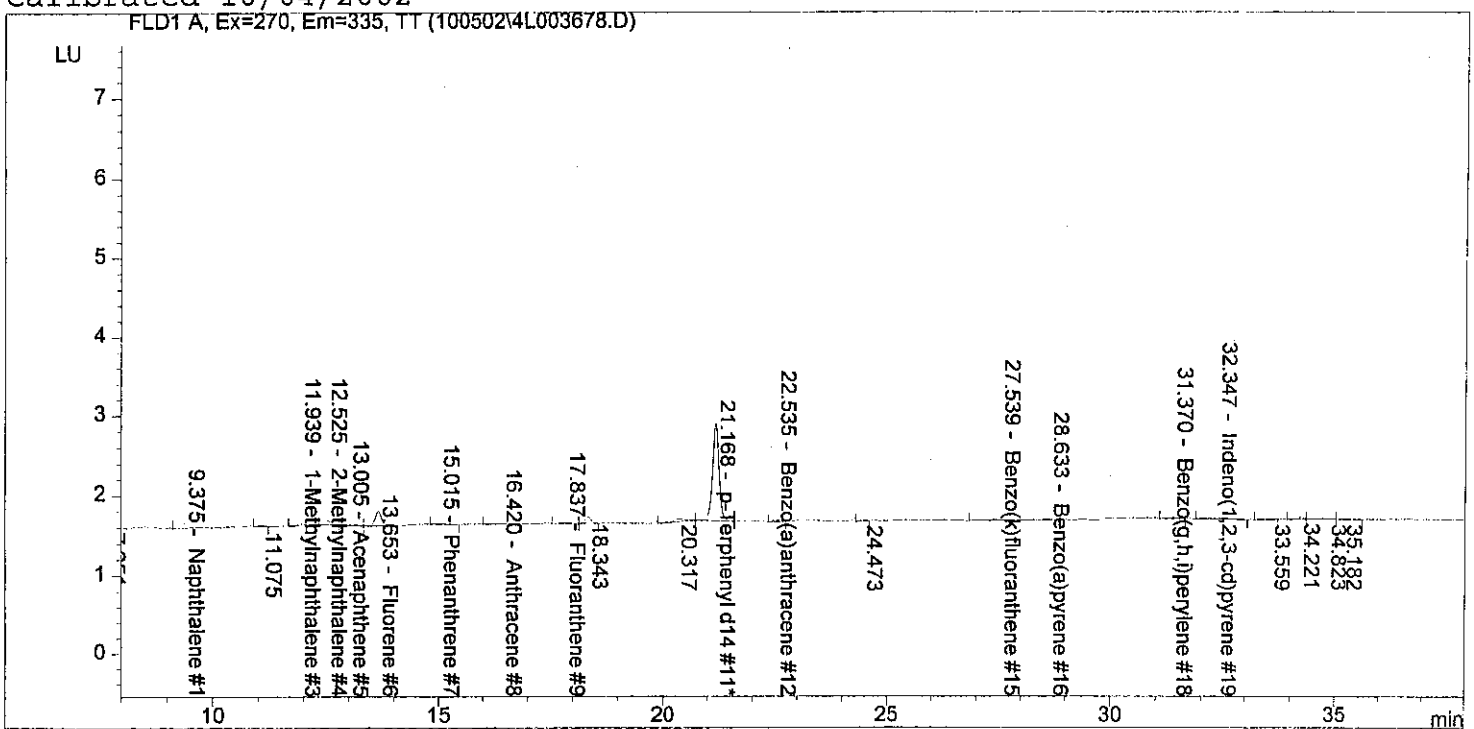
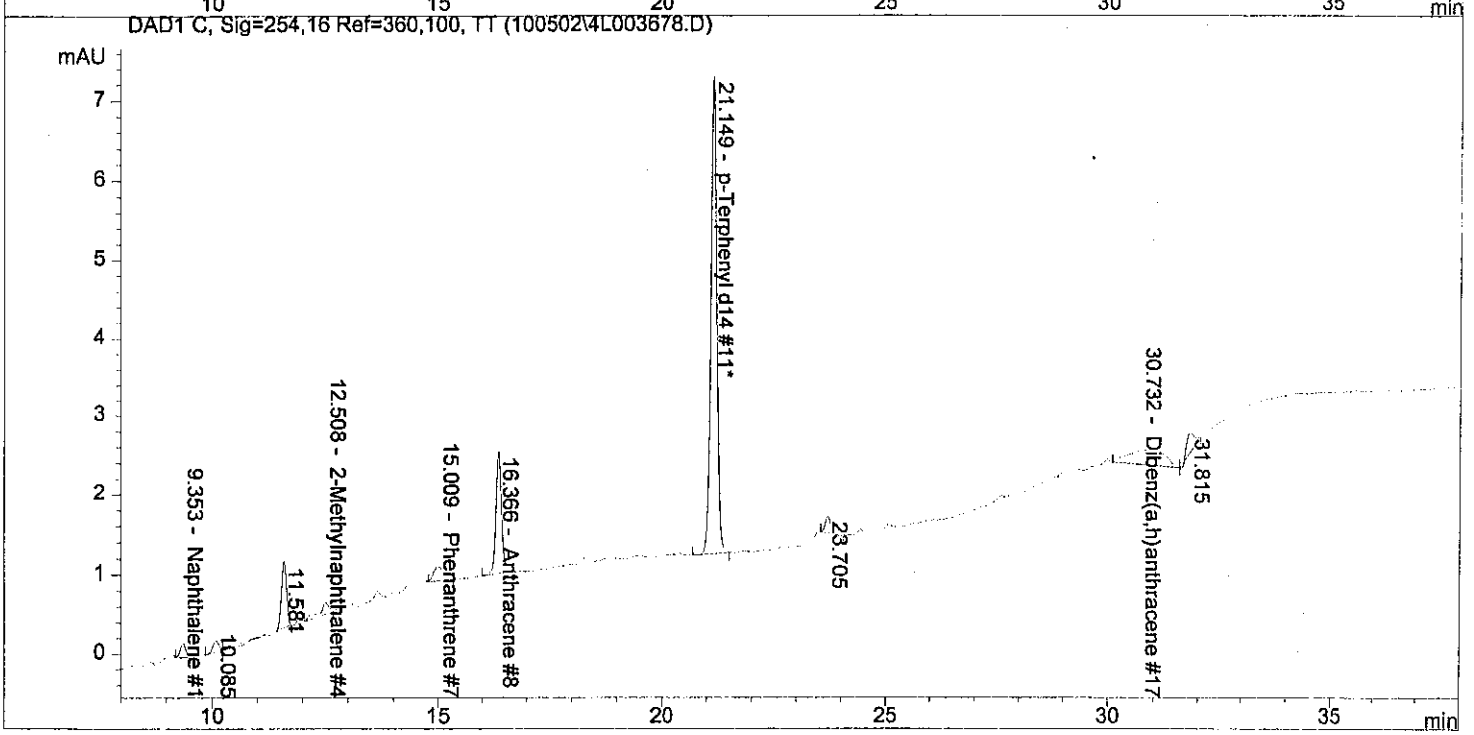
Injection Date : 10/6/2002 1:09:31 PM
Sample Name : L0209516-04 831W
Acq. Operator : RDC

Seq. Line : 25
Vial : 25
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:56:14 PM
(modified after loading)

Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2002 3:56:14 PM
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 | 7.32540e-1 | 5.10108e-1 | 3.73675e-1 | | Naphthalene #1 |
| 11.939 | BB | 2.08241e-1 | 1.50911 | 3.14258e-1 | | 1-Methylnaphthalene #3 |
| 12.525 | BB | 5.61991e-1 | 4.81032e-1 | 2.70336e-1 | | 2-Methylnaphthalene #4 |
| 13.005 | BB | 5.09874e-1 | 3.93737e-1 | 2.00756e-1 | | Acenaphthene #5 |
| 13.653 | BB | 1.89309 | 3.89144e-2 | 7.36687e-2 | | Fluorene #6 |
| 15.015 | BBA | 1.51634e-1 | 3.26126 | 4.94518e-1 | | Phenanthrene #7 |
| 16.420 | BBA | 1.96082e-1 | 1.62406 | 3.18448e-1 | F | Anthracene #8 |
| 17.837 | BB | 1.74431e-1 | 1.72052e-1 | 3.00112e-2 | | Fluoranthene #9 |
| 18.816 | | - | - | - | | Pyrene #10 |
| 21.168 | BB | 12.43453 | 3.22931e-1 | 4.01550 | | p-Terphenyl d14 #11* |
| 22.535 | BB | 2.73244e-1 | 1.74052e-1 | 4.75586e-2 | | Benzo(a)anthracene #12 |
| 23.366 | | - | - | - | | Chrysene #13 |
| 26.094 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.539 | PB | 5.49430e-1 | 3.26553e-2 | 1.79418e-2 | | Benzo(k)fluoranthene #15 |
| 28.633 | BB | 3.77658e-1 | 1.58441e-1 | 5.98366e-2 | | Benzo(a)pyrene #16 |
| 30.505 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.370 | BB | 2.24409e-1 | 3.62953e-1 | 8.14500e-2 | | Benzo(g,h,i)perylene #18 |
| 32.347 | BB | 6.36790e-1 | 7.25234e-2 | 4.61822e-2 | | Indeno(1,2,3-cd)pyrene #1 |

40.2%

Totals : 6.34414

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.353 | BB | 1.47403 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.956 | | - | - | - | | Acenaphthylene #2 |
| 11.903 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.508 | BB | 2.09448 | 4.79825e-2 | 1.00499e-1 | /mL | 2-Methylnaphthalene #4 |
| 12.957 | | - | - | - | | Acenaphthene #5 |
| 13.613 | | - | - | - | | Fluorene #6 |
| 15.009 | BB | 2.80127 | 9.89993e-2 | 2.77324e-1 | /mL | Phenanthrene #7 |
| 16.366 | BBA | 13.75552 | 2.22798e-2 | 3.06470e-1 | F | Anthracene #8 |
| 17.789 | | - | - | - | | Fluoranthene #9 |
| 18.794 | | - | - | - | | Pyrene #10 |
| 21.149 | PBA | 54.87244 | 6.90575e-2 | 3.78935 | * | p-Terphenyl d14 #11* |
| 22.472 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.343 | | - | - | - | | Chrysene #13 |
| 26.073 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.520 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.617 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.732 | BB | 10.14147 | 1.03607e-1 | 1.05073 | NC | Dibenz(a,h)anthracene #17 |

37.9%

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.280 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.282 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 5.52437

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
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

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*** End of Report ***

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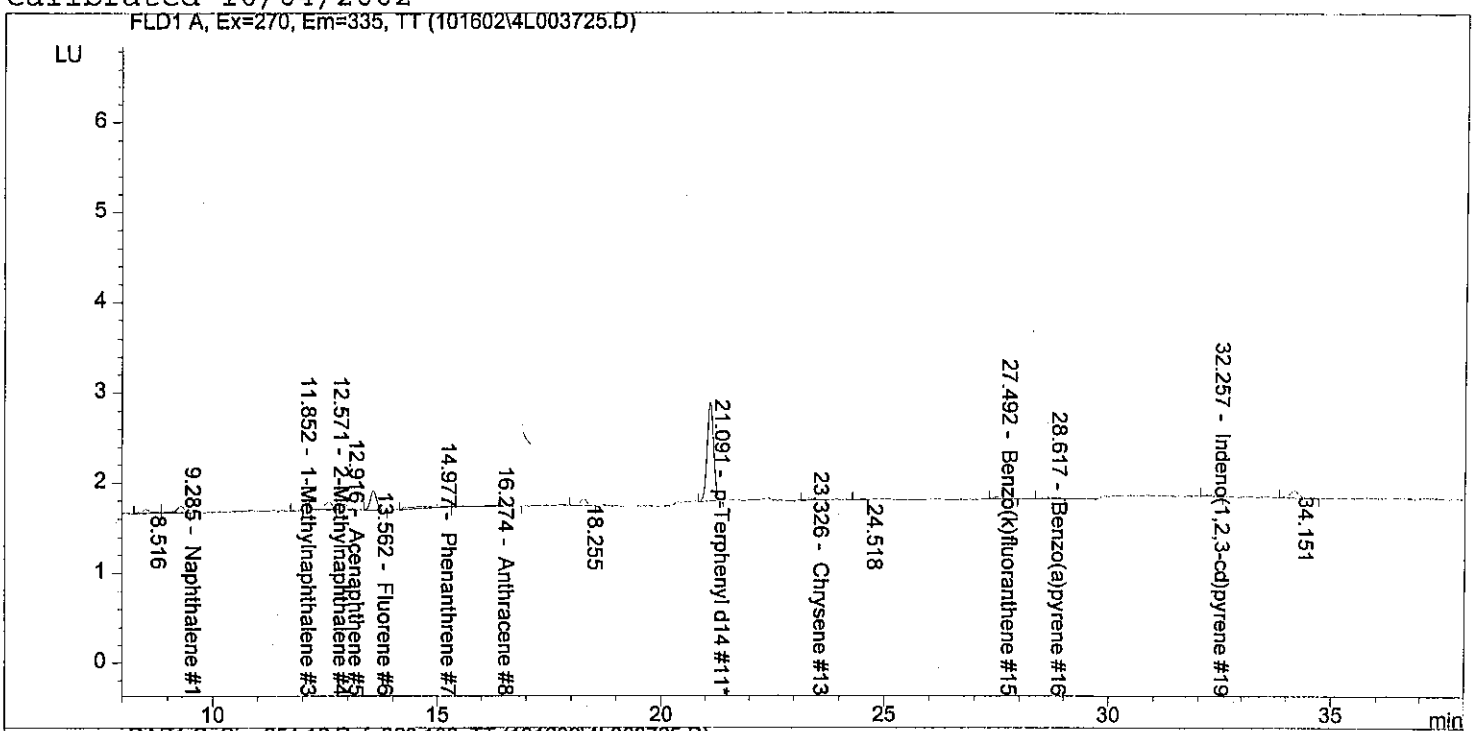
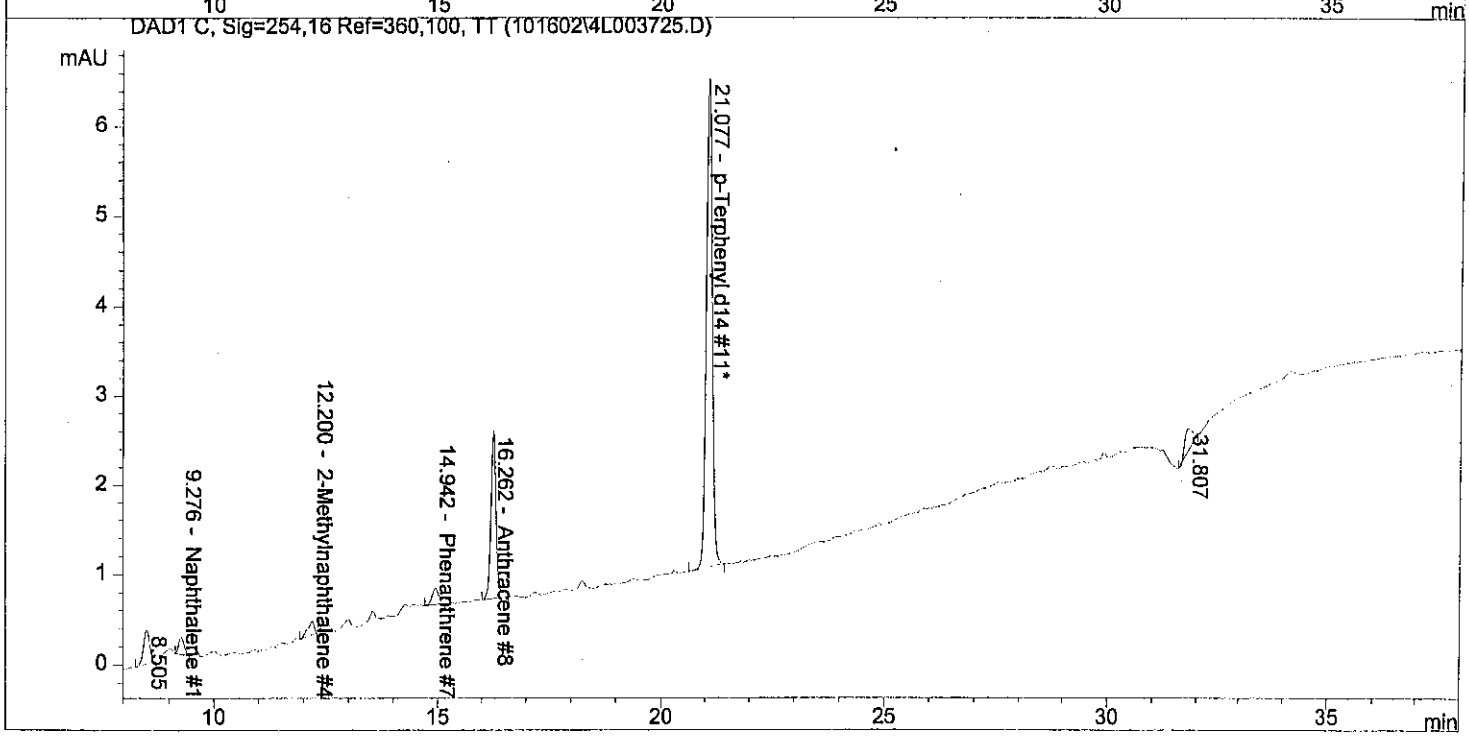
| | | | |
|---|---|---|---|
| Injection Date | : 10/16/2002 9:39:44 PM | Seq. Line | : 6 |
| Sample Name | : L0209516-04 831W | Vial | : 6 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:54:41 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.285 | BB | 9.46238e-1 | 4.00799e-1 | 3.79251e-1 | | Naphthalene #1 |
| 11.852 | BB | 2.60553e-1 | 1.21070 | 3.15451e-1 | | 1-Methylnaphthalene #3 |
| 12.571 | BB | 1.27202 | 2.22366e-1 | 2.82853e-1 | | 2-Methylnaphthalene #4 |
| 12.916 | BB | 7.40380e-1 | 2.75539e-1 | 2.04004e-1 | | Acenaphthene #5 |
| 13.562 | BB | 2.21813 | 3.41987e-2 | 7.58571e-2 | | Fluorene #6 |
| 14.977 | BB | 1.30906 | 5.30210e-1 | 6.94076e-1 | | Phenanthrene #7 |
| 16.274 | BB | 4.30756e-1 | 9.10552e-1 | 3.92226e-1 | | Anthracene #8 |
| 17.808 | | - | - | - | | Fluoranthene #9 |
| 18.816 | | - | - | - | | Pyrene #10 |
| 21.091 | BB | 10.79199 | 3.27016e-1 | 3.52915 | | p-Terphenyl d14 #11* |
| 22.487 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.326 | BB | 3.08743e-1 | 1.84887e-1 | 5.70826e-2 | | Chrysene #13 |
| 26.094 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.492 | BBA | 4.01500e-1 | 4.36474e-2 | 1.75244e-2 | | Benzo(k)fluoranthene #15 |
| 28.617 | PBA | 2.97873e-1 | 1.99512e-1 | 5.94292e-2 | | Benzo(a)pyrene #16 |
| 30.505 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.315 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.257 | BB | 2.73347e-1 | 1.49816e-1 | 4.09519e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.04786

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.276 | BB | 1.55056 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.956 | | - | - | - | | Acenaphthylene #2 |
| 11.903 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.200 | BB | 1.55317 | 6.05090e-2 | 9.39805e-2 | | 2-Methylnaphthalene #4 |
| 12.957 | | - | - | - | | Acenaphthene #5 |
| 13.613 | | - | - | - | | Fluorene #6 |
| 14.942 | BB | 1.95823 | 1.34204e-1 | 2.62803e-1 | | Phenanthrene #7 |
| 16.262 | BBA | 15.28117 | 2.11767e-2 | 3.23605e-1 | | Anthracene #8 |
| 17.789 | | - | - | - | | Fluoranthene #9 |
| 18.794 | | - | - | - | | Pyrene #10 |
| 21.077 | BBA | 48.61612 | 6.95113e-2 | 3.37937 | | p-Terphenyl d14 #11* |
| 22.472 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.343 | | - | - | - | | Chrysene #13 |
| 26.073 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.520 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.617 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.493 | | - | - | - | | Dibenz(a,h)anthracene #17 |

MDL

33.8%

| Retime [min] | Type | Area [mAU*s] | Area/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.280 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.282 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.05976

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
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

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*** End of Report ***

# 2.2.7.3 Standards Data

## Calibration Table

HPLC4 8310 CALIBRATION

Calib. Data Modified : 10/5/2002 1:59:25 PM

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=360,100, TT

| RetTime [min] | Sig | Lvl | Amount [ug/L] | Area | Amt/Area | Ref | Grp | Name |
|---|---|---|---|---|---|---|---|---|
| 9.328 | 2 | 1 | 1.00000 | 108.71868 | 9.19805e-3 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 577.20190 | 8.66248e-3 | | | |
| | | 3 | 10.00000 | 1170.17078 | 8.54576e-3 | | | |
| | | 4 | 20.00000 | 2412.53857 | 8.29002e-3 | | | |
| | | 5 | 50.00000 | 6068.75977 | 8.23892e-3 | | | |
| | | 6 | 100.00000 | 1.18189e4 | 8.46101e-3 | | | |
| 9.347 | 1 | 1 | 1.00000 | 33.87443 | 2.95208e-2 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 176.26851 | 2.83658e-2 | | | |
| | | 3 | 10.00000 | 359.10220 | 2.78472e-2 | | | |
| | | 4 | 20.00000 | 742.09198 | 2.69508e-2 | | | |
| | | 5 | 50.00000 | 1896.72388 | 2.63612e-2 | | | |
| | | 6 | 100.00000 | 3824.68286 | 2.61460e-2 | | | |
| 10.956 | 2 | 1 | 1.00000 | 27.07926 | 3.69286e-2 | | | Acenaphthylene #2 |
| | | 2 | 5.00000 | 138.46826 | 3.61094e-2 | | | |
| | | 3 | 10.00000 | 281.09235 | 3.55755e-2 | | | |
| | | 4 | 20.00000 | 577.54309 | 3.46295e-2 | | | |
| | | 5 | 50.00000 | 1469.66235 | 3.40214e-2 | | | |
| | | 6 | 100.00000 | 2955.51001 | 3.38351e-2 | | | |
| 11.903 | 2 | 1 | 1.00000 | 65.15134 | 1.53489e-2 | | | 1-Methylnaphthalene #3 |

| [min] | Sig | | [ug/L] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 2 | 5.00000 | 341.55984 | 1.46387e-2 | | | |
| | | 3 | 10.00000 | 694.18103 | 1.44055e-2 | | | |
| | | 4 | 20.00000 | 1425.69580 | 1.40282e-2 | | | |
| | | 5 | 50.00000 | 3618.98071 | 1.38160e-2 | | | |
| | | 6 | 100.00000 | 7215.58887 | 1.38589e-2 | | | |
| 11.922 | 1 | 1 | 1.00000 | 39.10516 | 2.55721e-2 | | | 1-Methylnaphthalene #3 |
| | | 2 | 5.00000 | 202.81273 | 2.46533e-2 | | | |
| | | 3 | 10.00000 | 412.86859 | 2.42208e-2 | | | |
| | | 4 | 20.00000 | 853.24036 | 2.34401e-2 | | | |
| | | 5 | 50.00000 | 2177.66138 | 2.29604e-2 | | | |
| | | 6 | 100.00000 | 4375.24463 | 2.28559e-2 | | | |
| 12.479 | 2 | 1 | 1.00000 | 77.43833 | 1.29135e-2 | | | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 397.01361 | 1.25940e-2 | | | |
| | | 3 | 10.00000 | 806.74365 | 1.23955e-2 | | | |
| | | 4 | 20.00000 | 1655.81189 | 1.20787e-2 | | | |
| | | 5 | 50.00000 | 4184.95117 | 1.19476e-2 | | | |
| | | 6 | 100.00000 | 8281.40723 | 1.20752e-2 | | | |
| 12.497 | 1 | 1 | 1.00000 | 50.80115 | 1.96846e-2 | | | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 263.61316 | 1.89672e-2 | | | |
| | | 3 | 10.00000 | 536.97241 | 1.86229e-2 | | | |
| | | 4 | 20.00000 | 1108.11157 | 1.80487e-2 | | | |
| | | 5 | 50.00000 | 2830.49658 | 1.76647e-2 | | | |
| | | 6 | 100.00000 | 5656.83252 | 1.76777e-2 | | | |
| 12.957 | 2 | 1 | 1.00000 | 40.46593 | 2.47121e-2 | | | Acenaphthene #5 |
| | | 2 | 5.00000 | 208.35878 | 2.39971e-2 | | | |
| | | 3 | 10.00000 | 424.02664 | 2.35834e-2 | | | |
| | | 4 | 20.00000 | 871.62915 | 2.29455e-2 | | | |
| | | 5 | 50.00000 | 2219.72949 | 2.25253e-2 | | | |
| | | 6 | 100.00000 | 4449.57959 | 2.24740e-2 | | | |
| 12.975 | 1 | 1 | 1.00000 | 64.19129 | 1.55784e-2 | | | Acenaphthene #5 |
| | | 2 | 5.00000 | 332.48251 | 1.50384e-2 | | | |
| | | 3 | 10.00000 | 677.32117 | 1.47640e-2 | | | |
| | | 4 | 20.00000 | 1395.03540 | 1.43366e-2 | | | |
| | | 5 | 50.00000 | 3561.19922 | 1.40402e-2 | | | |
| | | 6 | 100.00000 | 7075.27148 | 1.41337e-2 | | | |
| 13.613 | 2 | 1 | 1.00000 | 52.38352 | 1.90900e-2 | | | Fluorene #6 |
| | | 2 | 5.00000 | 271.59180 | 1.84100e-2 | | | |
| | | 3 | 10.00000 | 553.53839 | 1.80656e-2 | | | |
| | | 4 | 20.00000 | 1136.41162 | 1.75993e-2 | | | |
| | | 5 | 50.00000 | 2885.49780 | 1.73280e-2 | | | |
| | | 6 | 100.00000 | 5760.90283 | 1.73584e-2 | | | |
| 13.632 | 1 | 1 | 1.00000 | 137.57742 | 7.26863e-3 | | | Fluorene #6 |
| | | 2 | 5.00000 | 709.62726 | 7.04595e-3 | | | |
| | | 3 | 10.00000 | 1443.68811 | 6.92670e-3 | | | |
| | | 4 | 20.00000 | 2965.57007 | 6.74407e-3 | | | |
| | | 5 | 50.00000 | 7500.22803 | 6.66646e-3 | | | |
| | | 6 | 100.00000 | 1.48055e4 | 6.75425e-3 | | | |
| 15.001 | 2 | 1 | 1.00000 | 52.69966 | 1.89755e-2 | | | Phenanthrene #7 |
| | | 2 | 5.00000 | 272.13281 | 1.83734e-2 | | | |
| | | 3 | 10.00000 | 554.52924 | 1.80333e-2 | | | |
| | | 4 | 20.00000 | 1139.09326 | 1.75578e-2 | | | |
| | | 5 | 50.00000 | 2893.40918 | 1.72807e-2 | | | |
| | | 6 | 100.00000 | 5793.69580 | 1.72601e-2 | | | |
| 15.020 | 1 | 1 | 1.00000 | 4.94392 | 2.02269e-1 | | | Phenanthrene #7 |
| | | 2 | 5.00000 | 26.06303 | 1.91843e-1 | | | |
| | | 3 | 10.00000 | 53.41463 | 1.87215e-1 | | | |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 4 | 20.00000 | 110.80046 | 1.80505e-1 | |
| | | 5 | 50.00000 | 285.91602 | 1.74877e-1 | |
| | | 6 | 100.00000 | 578.63593 | 1.72820e-1 | |
| 16.407 | 2 | 1 | 1.00000 | 79.06156 | 1.26484e-2 | Anthracene #8 |
| | | 2 | 5.00000 | 417.10779 | 1.19873e-2 | |
| | | 3 | 10.00000 | 853.74945 | 1.17130e-2 | |
| | | 4 | 20.00000 | 1749.78955 | 1.14299e-2 | |
| | | 5 | 50.00000 | 4501.37744 | 1.11077e-2 | |
| | | 6 | 100.00000 | 8865.23926 | 1.12800e-2 | |
| 16.426 | 1 | 1 | 1.00000 | 2.83787 | 3.52377e-1 | Anthracene #8 |
| | | 2 | 5.00000 | 14.63960 | 3.41539e-1 | |
| | | 3 | 10.00000 | 29.73066 | 3.36353e-1 | |
| | | 4 | 20.00000 | 62.22598 | 3.21409e-1 | |
| | | 5 | 50.00000 | 159.69156 | 3.13104e-1 | |
| | | 6 | 100.00000 | 316.79214 | 3.15664e-1 | |
| 17.789 | 2 | 1 | 1.00000e-1 | 4.11386 | 2.43081e-2 | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 22.34840 | 2.23730e-2 | |
| | | 3 | 1.00000 | 45.35046 | 2.20505e-2 | |
| | | 4 | 2.00000 | 93.34414 | 2.14261e-2 | |
| | | 5 | 5.00000 | 239.47792 | 2.08788e-2 | |
| | | 6 | 10.00000 | 483.08569 | 2.07003e-2 | |
| 17.808 | 1 | 1 | 1.00000e-1 | 3.57123 | 2.80015e-2 | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 18.35631 | 2.72386e-2 | |
| | | 3 | 1.00000 | 38.17557 | 2.61948e-2 | |
| | | 4 | 2.00000 | 76.49144 | 2.61467e-2 | |
| | | 5 | 5.00000 | 195.43803 | 2.55836e-2 | |
| | | 6 | 10.00000 | 393.10590 | 2.54384e-2 | |
| 18.794 | 2 | 1 | 1.00000e-1 | 7.85789 | 1.27261e-2 | Pyrene #10 |
| | | 2 | 5.00000e-1 | 41.78757 | 1.19653e-2 | |
| | | 3 | 1.00000 | 84.42243 | 1.18452e-2 | |
| | | 4 | 2.00000 | 176.22002 | 1.13494e-2 | |
| | | 5 | 5.00000 | 451.01443 | 1.10861e-2 | |
| | | 6 | 10.00000 | 906.94849 | 1.10260e-2 | |
| 18.816 | 1 | 1 | 1.00000e-1 | 2.11499 | 4.72815e-2 | Pyrene #10 |
| | | 2 | 5.00000e-1 | 11.17597 | 4.47388e-2 | |
| | | 3 | 1.00000 | 22.53931 | 4.43669e-2 | |
| | | 4 | 2.00000 | 47.12078 | 4.24441e-2 | |
| | | 5 | 5.00000 | 121.79258 | 4.10534e-2 | |
| | | 6 | 10.00000 | 248.00366 | 4.03220e-2 | |
| 21.148 | 2 | 1 | 1.00000 | 13.65795 | 7.32174e-2 | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 71.00721 | 7.04154e-2 | |
| | | 3 | 10.00000 | 149.49380 | 6.68924e-2 | |
| | | 4 | 20.00000 | 303.15381 | 6.59731e-2 | |
| | | 5 | 50.00000 | 754.74054 | 6.62479e-2 | |
| | | 6 | 100.00000 | 1525.64551 | 6.55460e-2 | |
| 21.165 | 1 | 1 | 1.00000 | 3.07198 | 3.25523e-1 | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 15.61307 | 3.20244e-1 | |
| | | 3 | 10.00000 | 32.18307 | 3.10722e-1 | |
| | | 4 | 20.00000 | 66.77608 | 2.99508e-1 | |
| | | 5 | 50.00000 | 164.39676 | 3.04142e-1 | |
| | | 6 | 100.00000 | 338.24698 | 2.95642e-1 | |
| 22.472 | 2 | 1 | 1.00000e-1 | 3.98452 | 2.50971e-2 | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 21.75884 | 2.29792e-2 | |
| | | 3 | 1.00000 | 44.98011 | 2.22320e-2 | |
| | | 4 | 2.00000 | 91.58590 | 2.18374e-2 | |
| | | 5 | 5.00000 | 234.38974 | 2.13320e-2 | |

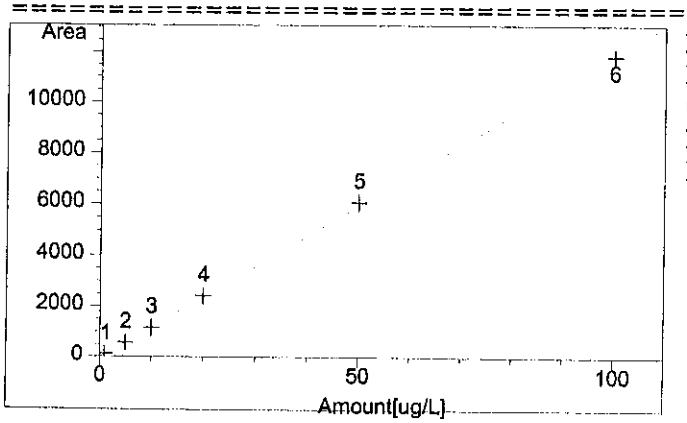
| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 6 | 10.00000 | 474.98590 | 2.10533e-2 | |
| 22.487 | 1 | 1 | 1.00000e-1 | 10.50630 | 9.51810e-3 | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 55.10502 | 9.07358e-3 | |
| | | 3 | 1.00000 | 112.54045 | 8.88569e-3 | |
| | | 4 | 2.00000 | 231.76024 | 8.62961e-3 | |
| | | 5 | 5.00000 | 596.65259 | 8.38009e-3 | |
| | | 6 | 10.00000 | 1210.77991 | 8.25914e-3 | |
| 23.343 | 2 | 1 | 1.00000e-1 | 5.59298 | 1.78795e-2 | Chrysene #13 |
| | | 2 | 5.00000e-1 | 30.95954 | 1.61501e-2 | |
| | | 3 | 1.00000 | 61.95520 | 1.61407e-2 | |
| | | 4 | 2.00000 | 128.17973 | 1.56031e-2 | |
| | | 5 | 5.00000 | 328.84399 | 1.52048e-2 | |
| | | 6 | 10.00000 | 663.11285 | 1.50804e-2 | |
| 23.366 | 1 | 1 | 1.00000e-1 | 1.91021 | 5.23504e-2 | Chrysene #13 |
| | | 2 | 5.00000e-1 | 11.39551 | 4.38769e-2 | |
| | | 3 | 1.00000 | 22.94587 | 4.35808e-2 | |
| | | 4 | 2.00000 | 47.78686 | 4.18525e-2 | |
| | | 5 | 5.00000 | 122.28232 | 4.08890e-2 | |
| | | 6 | 10.00000 | 247.87633 | 4.03427e-2 | |
| 26.073 | 2 | 1 | 1.00000e-1 | 4.27175 | 2.34096e-2 | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 22.66298 | 2.20624e-2 | |
| | | 3 | 1.00000 | 46.75035 | 2.13902e-2 | |
| | | 4 | 2.00000 | 95.69762 | 2.08992e-2 | |
| | | 5 | 5.00000 | 245.54985 | 2.03625e-2 | |
| | | 6 | 10.00000 | 498.17334 | 2.00733e-2 | |
| 26.094 | 1 | 1 | 1.00000e-1 | 5.23515 | 1.91017e-2 | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 26.68732 | 1.87355e-2 | |
| | | 3 | 1.00000 | 55.36226 | 1.80628e-2 | |
| | | 4 | 2.00000 | 114.66280 | 1.74424e-2 | |
| | | 5 | 5.00000 | 290.14517 | 1.72328e-2 | |
| | | 6 | 10.00000 | 588.94989 | 1.69794e-2 | |
| 27.520 | 2 | 1 | 5.00000e-2 | 2.31917 | 2.15594e-2 | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 10.27585 | 2.43289e-2 | |
| | | 3 | 5.00000e-1 | 21.06332 | 2.37379e-2 | |
| | | 4 | 1.00000 | 42.04045 | 2.37866e-2 | |
| | | 5 | 2.50000 | 107.37804 | 2.32822e-2 | |
| | | 6 | 5.00000 | 216.25821 | 2.31205e-2 | |
| 27.537 | 1 | 1 | 5.00000e-2 | 15.77271 | 3.17003e-3 | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 81.33999 | 3.07352e-3 | |
| | | 3 | 5.00000e-1 | 166.50098 | 3.00299e-3 | |
| | | 4 | 1.00000 | 344.16122 | 2.90561e-3 | |
| | | 5 | 2.50000 | 879.75293 | 2.84171e-3 | |
| | | 6 | 5.00000 | 1768.03625 | 2.82800e-3 | |
| 28.617 | 2 | 1 | 1.00000e-1 | 2.89637 | 3.45260e-2 | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 15.99617 | 3.12575e-2 | |
| | | 3 | 1.00000 | 34.01420 | 2.93995e-2 | |
| | | 4 | 2.00000 | 69.83824 | 2.86376e-2 | |
| | | 5 | 5.00000 | 181.22298 | 2.75903e-2 | |
| | | 6 | 10.00000 | 370.09787 | 2.70199e-2 | |
| 28.638 | 1 | 1 | 1.00000e-1 | 16.52711 | 6.05067e-3 | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 86.37741 | 5.78855e-3 | |
| | | 3 | 1.00000 | 177.75235 | 5.62580e-3 | |
| | | 4 | 2.00000 | 370.21207 | 5.40231e-3 | |
| | | 5 | 5.00000 | 957.73456 | 5.22065e-3 | |
| | | 6 | 10.00000 | 1955.02771 | 5.11502e-3 | |
| 30.493 | 2 | 1 | 1.00000e-1 | 7.76671e-1 | 1.28755e-1 | Dibenz(a,h)anthracene |

| [min] | Sig | | [ug/L] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 2 | 5.00000e-1 | 4.80888 | 1.03974e-1 | | | |
| | | 3 | 1.00000 | 9.07195 | 1.10230e-1 | | | |
| | | 4 | 2.00000 | 19.19596 | 1.04189e-1 | | | |
| | | 5 | 5.00000 | 49.99914 | 1.00002e-1 | | | |
| | | 6 | 10.00000 | 99.50796 | 1.00494e-1 | | | |
| 30.505 | 1 | 1 | 1.00000e-1 | 2.45930 | 4.06619e-2 | | | Dibenz(a,h)anthracene |
| | | 2 | 5.00000e-1 | 10.93452 | 4.57268e-2 | | | |
| | | 3 | 1.00000 | 22.23139 | 4.49814e-2 | | | |
| | | 4 | 2.00000 | 45.73194 | 4.37331e-2 | | | |
| | | 5 | 5.00000 | 118.50603 | 4.21919e-2 | | | |
| | | 6 | 10.00000 | 242.65541 | 4.12107e-2 | | | |
| 31.280 | 2 | 1 | 1.00000e-1 | 1.48871 | 6.71722e-2 | | | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 7.41438 | 6.74365e-2 | | | |
| | | 3 | 1.00000 | 15.40149 | 6.49288e-2 | | | |
| | | 4 | 2.00000 | 32.05828 | 6.23864e-2 | | | |
| | | 5 | 5.00000 | 84.00133 | 5.95229e-2 | | | |
| | | 6 | 10.00000 | 171.23235 | 5.84002e-2 | | | |
| 31.315 | 1 | 1 | 1.00000e-1 | 2.82300 | 3.54234e-2 | | | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 14.32241 | 3.49103e-2 | | | |
| | | 3 | 1.00000 | 29.67043 | 3.37036e-2 | | | |
| | | 4 | 2.00000 | 61.93504 | 3.22919e-2 | | | |
| | | 5 | 5.00000 | 160.60448 | 3.11324e-2 | | | |
| | | 6 | 10.00000 | 333.05783 | 3.00248e-2 | | | |
| 32.282 | 2 | 1 | 1.00000e-1 | 3.69404 | 2.70707e-2 | | | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 23.07085 | 2.16724e-2 | | | |
| | | 3 | 1.00000 | 47.43527 | 2.10814e-2 | | | |
| | | 4 | 2.00000 | 98.69339 | 2.02648e-2 | | | |
| | | 5 | 5.00000 | 254.47401 | 1.96484e-2 | | | |
| | | 6 | 10.00000 | 515.44202 | 1.94008e-2 | | | |
| 32.284 | 1 | 1 | 1.00000e-1 | 6.45037 | 1.55030e-2 | | | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 31.27388 | 1.59878e-2 | | | |
| | | 3 | 1.00000 | 65.40406 | 1.52896e-2 | | | |
| | | 4 | 2.00000 | 134.93365 | 1.48221e-2 | | | |
| | | 5 | 5.00000 | 342.39185 | 1.46032e-2 | | | |
| | | 6 | 10.00000 | 694.01044 | 1.44090e-2 | | | |

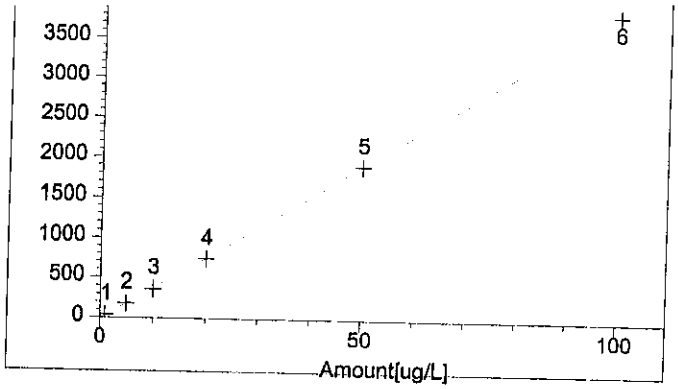
## Peak Sum Table

***No Entries in table***

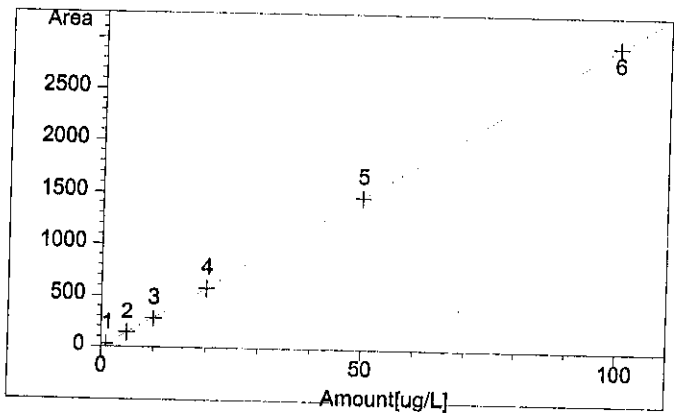
## Calibration Curves



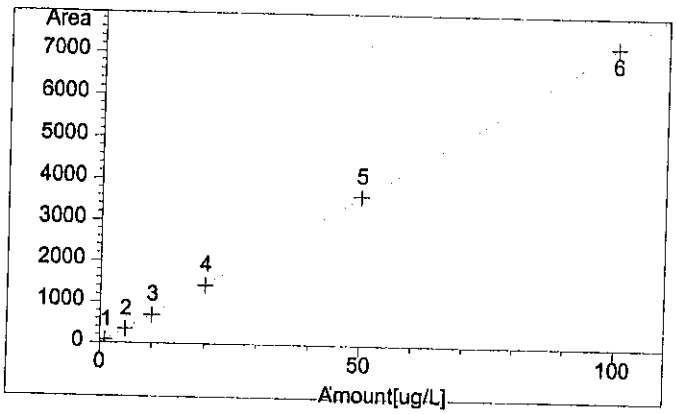

Naphthalene #1 at exp. RT: 9.328
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 65.97339
Formula: y = mx + b
m: 118.70195
b: 11.10717
x: Amount [ug/L]
y: Area



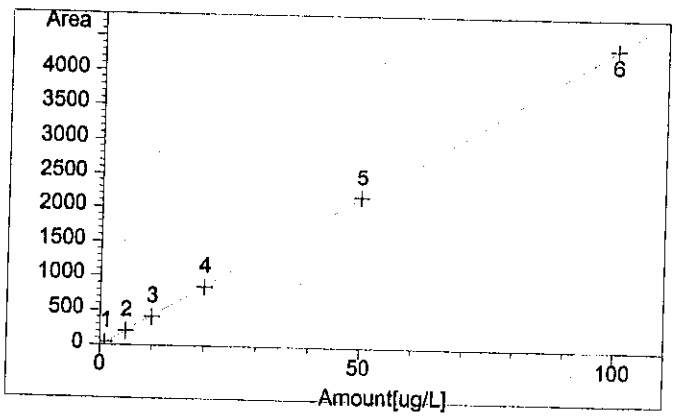

Naphthalene #1 at exp. RT: 9.347
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.66084
Formula: y = mx + b
m: 38.32180
b: -13.58736
x: Amount [ug/L]
y: Area



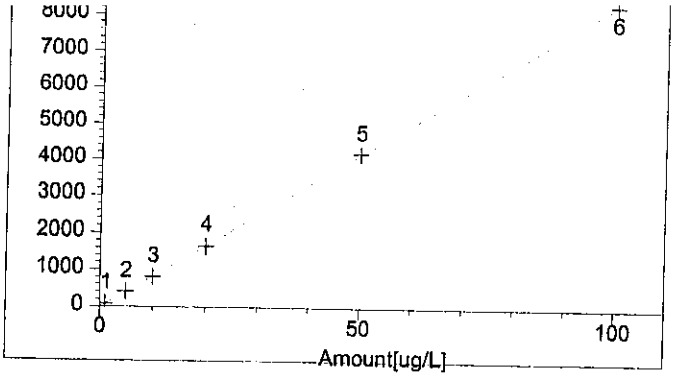

Acenaphthylene #2 at exp. RT: 10.956
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 6.37733
Formula: y = mx + b
m: 29.60498
b: -8.16718
x: Amount [ug/L]
y: Area



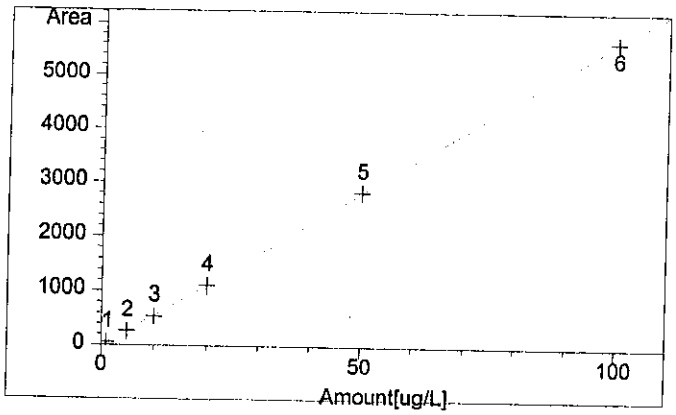

1-Methylnaphthalene #3 at exp. RT: 11.903
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 12.91758
Formula: y = mx + b
m: 72.33204
b: -13.22887
x: Amount [ug/L]
y: Area



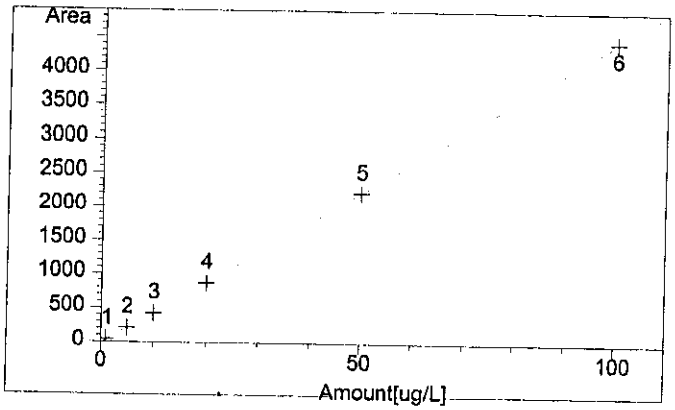

1-Methylnaphthalene #3 at exp. RT: 11.922
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 10.35090
Formula: y = mx + b
m: 43.84911
b: -13.57171
x: Amount [ug/L]
y: Area



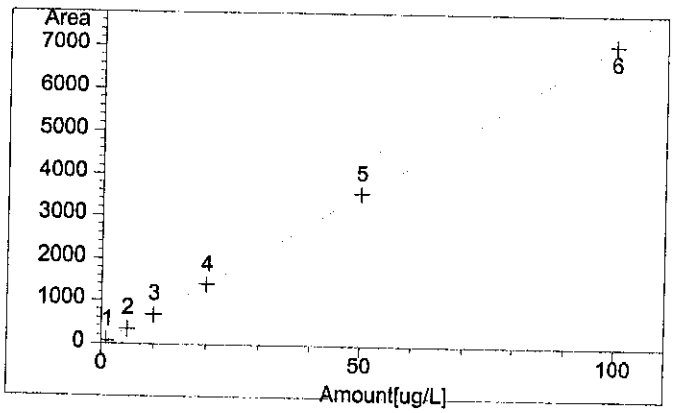

2-Methylnaphthalene #4 at exp. RT: 12.479
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 21.39759
Formula: y = mx + b
m: 83.04908
b: -6.25183
x: Amount [ug/L]
y: Area



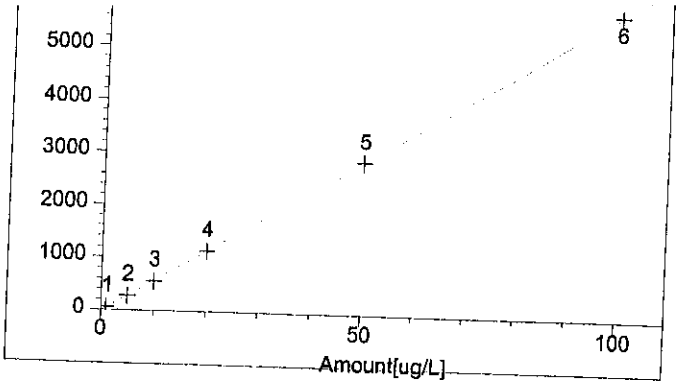

2-Methylnaphthalene #4 at exp. RT: 12.497
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 12.50052
Formula: y = mx + b
m: 56.72167
b: -14.77189
x: Amount [ug/L]
y: Area



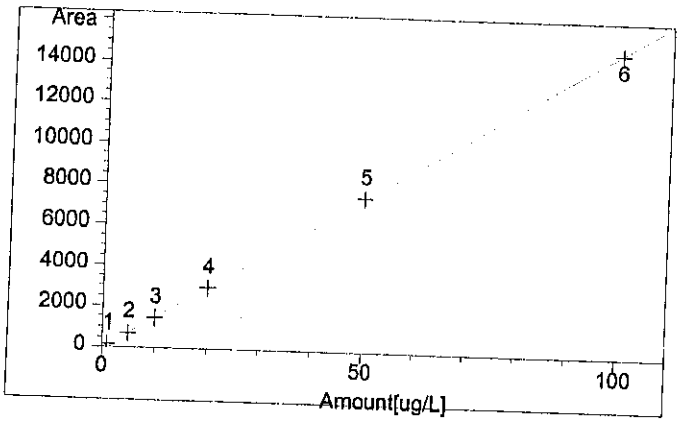

Acenaphthene #5 at exp. RT: 12.957
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 8.78942
Formula: y = mx + b
m: 44.58933
b: -11.40374
x: Amount [ug/L]
y: Area



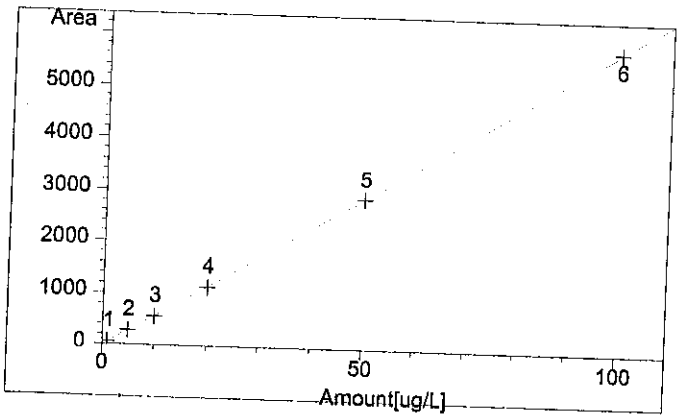

Acenaphthene #5 at exp. RT: 12.975
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 17.51698
Formula: y = mx + b
m: 70.97675
b: -13.73914
x: Amount [ug/L]
y: Area



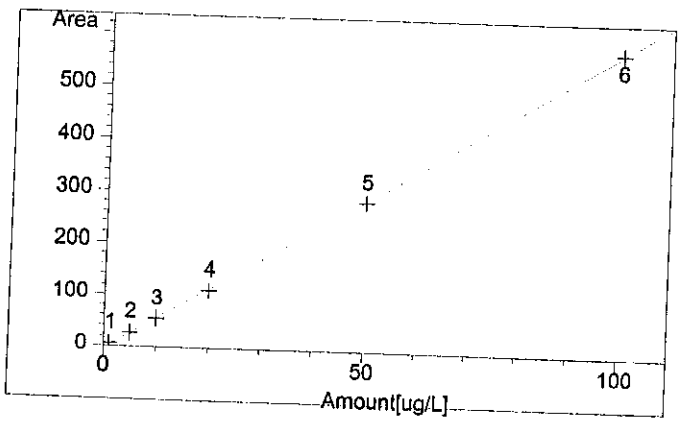

Fluorene #6 at exp. RT: 13.613
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 10.03923
Formula: y = mx + b
m: 57.74314
b: -11.41400
x: Amount [ug/L]
y: Area




Fluorene #6 at exp. RT: 13.632
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 44.87141
Formula: y = mx + b
m: 148.52433
b: -9.04850
x: Amount [ug/L]
y: Area




Phenanthrene #7 at exp. RT: 15.001
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 10.18748
Formula: y = mx + b
m: 58.05729
b: -13.29941
x: Amount [ug/L]
y: Area




Phenanthrene #7 at exp. RT: 15.020
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 2.20211
Formula: y = mx + b
m: 5.79995
b: -2.71654
x: Amount [ug/L]
y: Area

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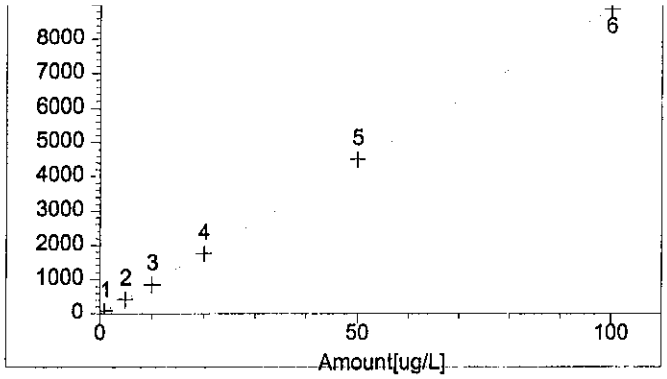
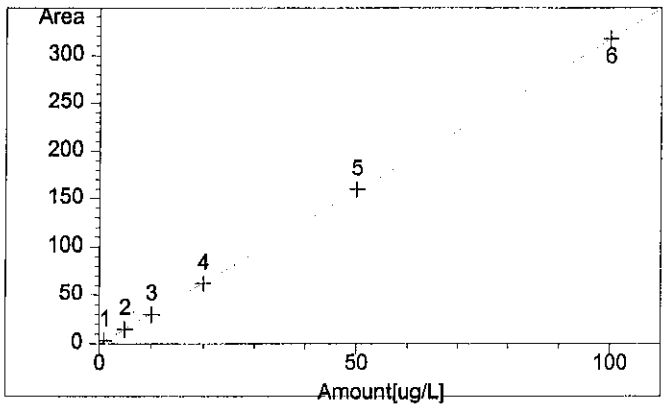
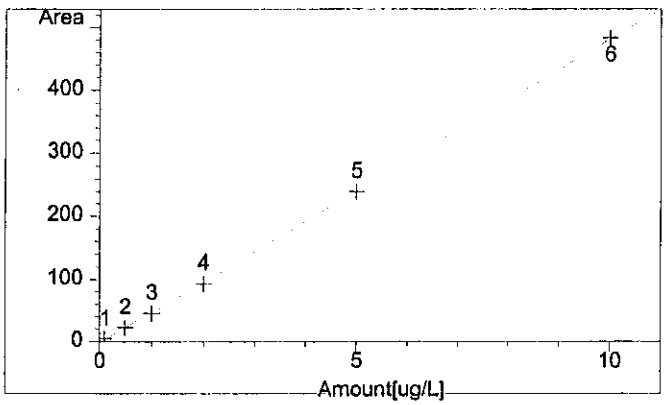


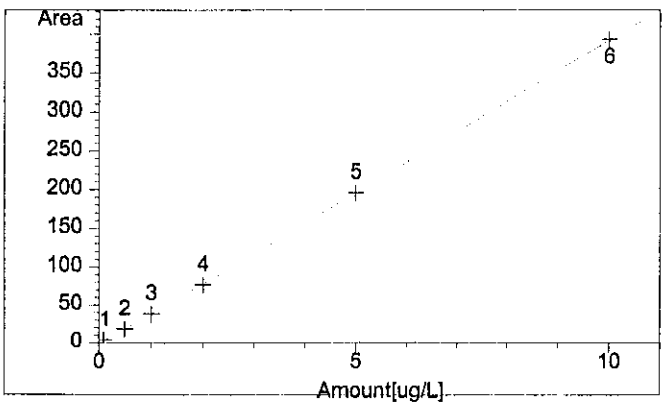

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 34.18109
Formula: y = mx + b
m: 89.03790
b: -13.53192
x: Amount [ug/L]
y: Area



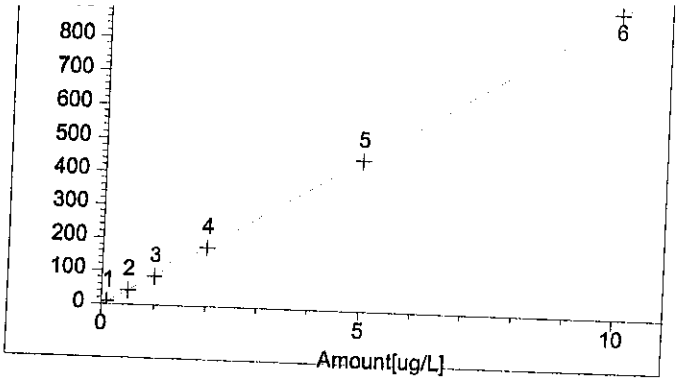

Anthracene #8 at exp. RT: 16.426
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.03803
Formula: y = mx + b
m: 3.18084
b: -8.16850e-1
x: Amount [ug/L]
y: Area



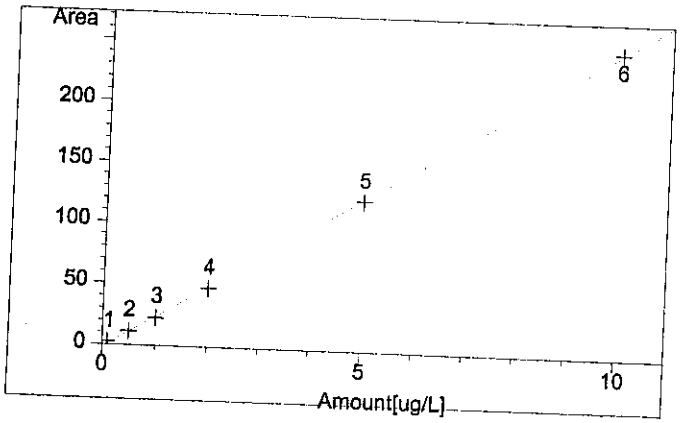

Fluoranthene #9 at exp. RT: 17.789
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 1.41423
Formula: y = mx + b
m: 48.40684
b: -1.80668
x: Amount [ug/L]
y: Area



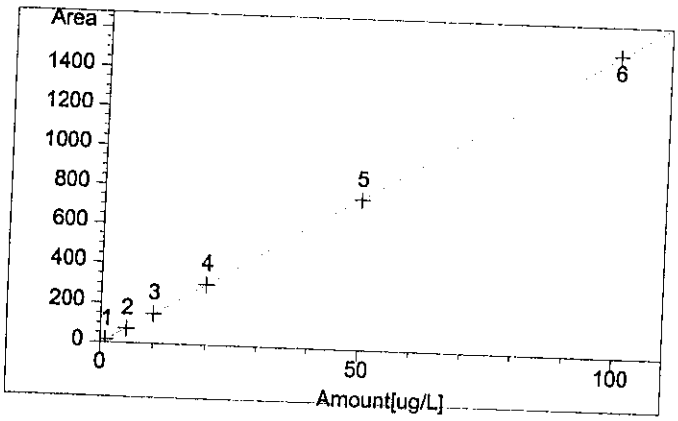

Fluoranthene #9 at exp. RT: 17.808
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.82903
Formula: y = mx + b
m: 39.36490
b: -1.00696
x: Amount [ug/L]
y: Area



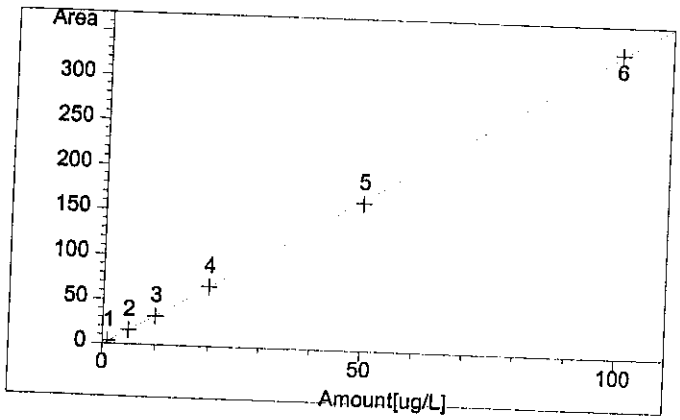

Pyrene #10 at exp. RT: 18.794
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 2.53265
Formula: y = mx + b
m: 90.92749
b: -3.28578
x: Amount [ug/L]
y: Area



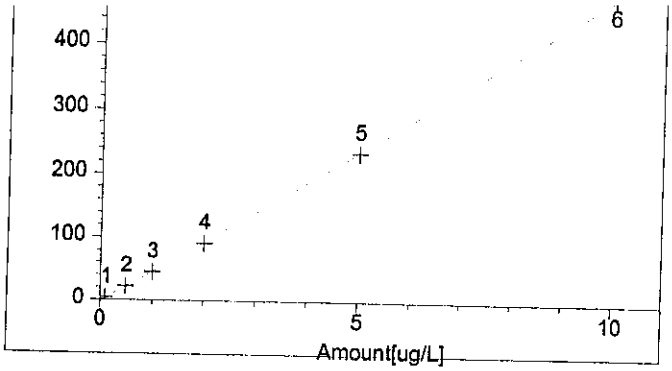

Pyrene #10 at exp. RT: 18.816
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99993
Residual Std. Dev.: 1.19845
Formula: y = mx + b
m: 24.84706
b: -1.34401
x: Amount [ug/L]
y: Area



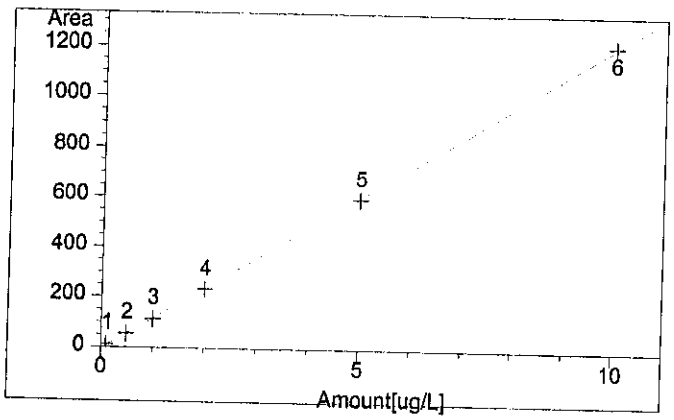

p-Terphenyl d14 #11* at exp. RT: 21.148
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99999
Residual Std. Dev.: 3.21796
Formula: y = mx + b
m: 15.26006
b: -2.95332
x: Amount [ug/L]
y: Area



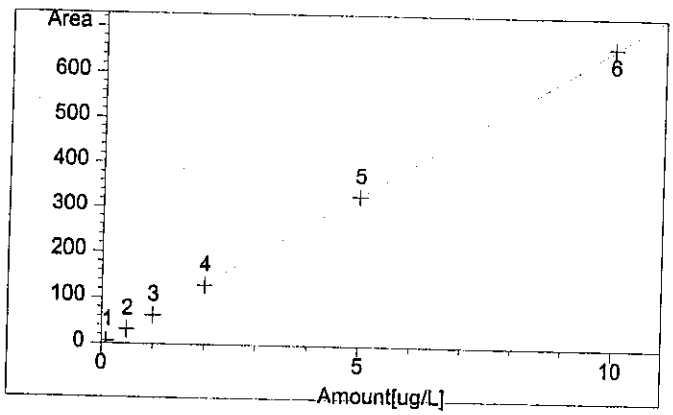

p-Terphenyl d14 #11* at exp. RT: 21.165
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99991
Residual Std. Dev.: 1.79862
Formula: y = mx + b
m: 3.37730
b: -1.12699
x: Amount [ug/L]
y: Area



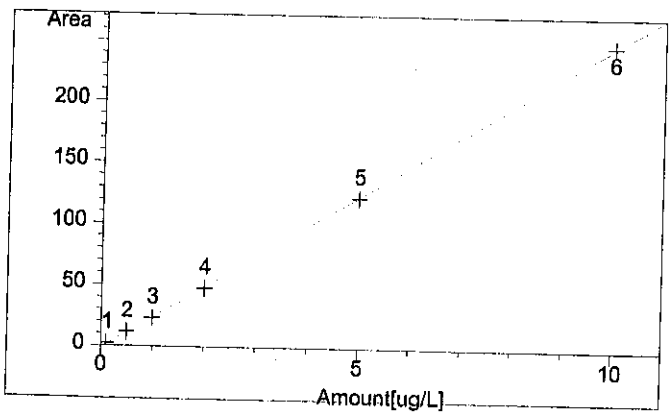

Benzo(a)anthracene #12 at exp. RT: 22.472
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 1.54554
Formula: y = mx + b
m: 47.56534
b: -1.86146
x: Amount [ug/L]
y: Area



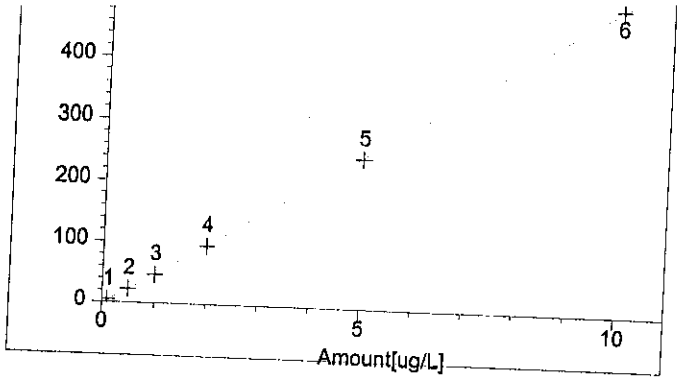

Benzo(a)anthracene #12 at exp. RT: 22.487
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 4.77545
Formula: y = mx + b
m: 121.27995
b: -5.49466
x: Amount [ug/L]
y: Area



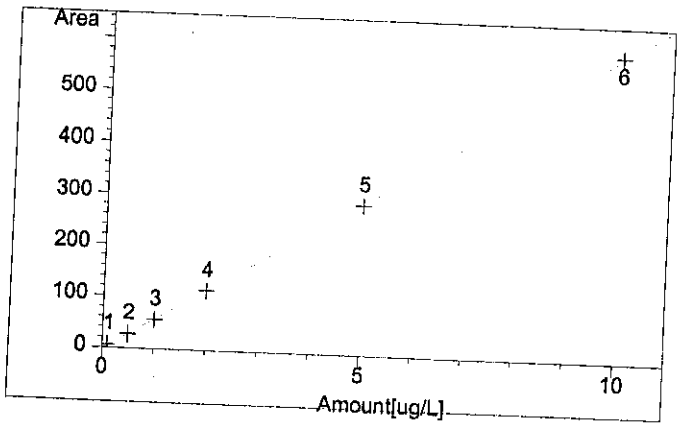

Chrysene #13 at exp. RT: 23.343
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 1.96801
Formula: y = mx + b
m: 66.44953
b: -2.47385
x: Amount [ug/L]
y: Area



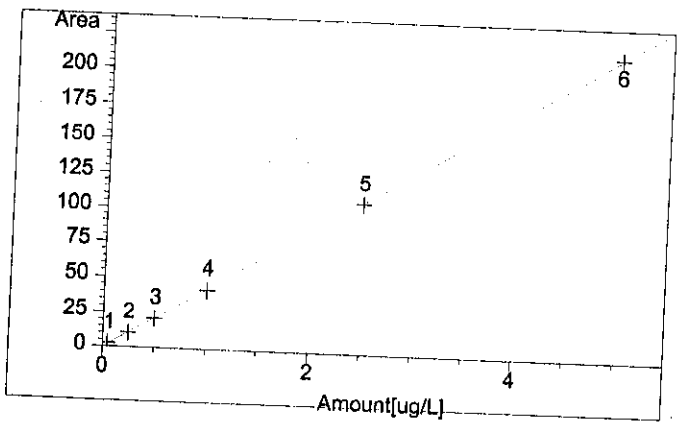

Chrysene #13 at exp. RT: 23.366
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99996
Residual Std. Dev.: 0.86600
Formula: y = mx + b
m: 24.83656
b: -1.10899
x: Amount [ug/L]
y: Area



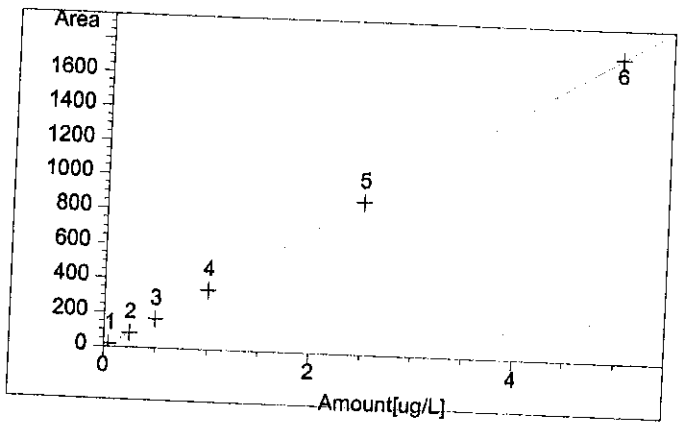

Benzo(b)fluoranthene #14 at exp. RT: 26.0
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 1.81598
Formula: y = mx + b
m: 49.89209
b: -2.12672
x: Amount [ug/L]
y: Area




Benzo(b)fluoranthene #14 at exp. RT: 26.0
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 1.95209
Formula: y = mx + b
m: 58.96170
b: -2.23500
x: Amount [ug/L]
y: Area

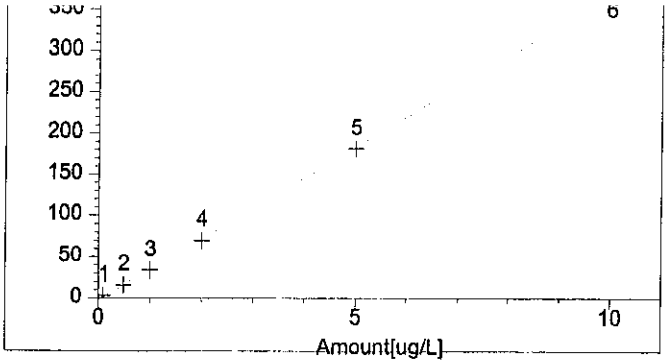



Benzo(k)fluoranthene #15 at exp. RT: 27.5
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 0.53817
Formula: y = mx + b
m: 43.26962
b: -4.38913e-1
x: Amount [ug/L]
y: Area

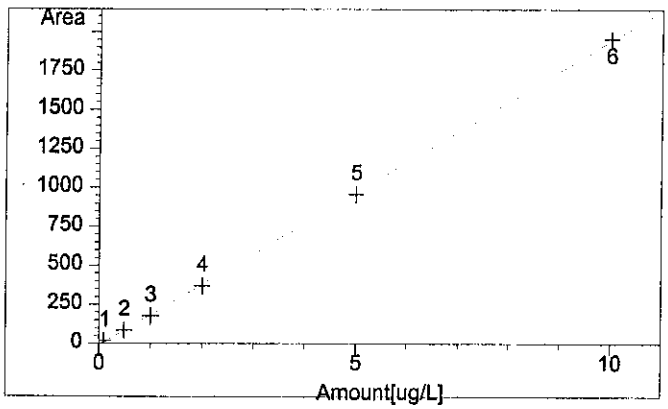



Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99998
Residual Std. Dev.: 4.42399
Formula: y = mx + b
m: 354.43358
b: -5.80975
x: Amount [ug/L]
y: Area

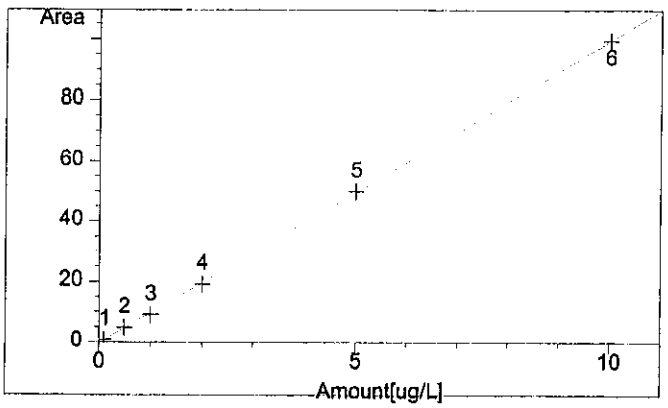
PLC4 10/5/2002 1:59:52 PM



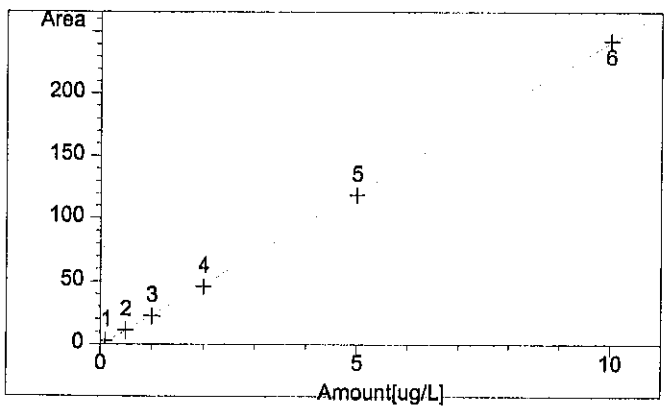

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99992
Residual Std. Dev.: 1.91201
Formula: y = mx + b
m: 37.08670
b: -2.24954
x: Amount [ug/L]
y: Area



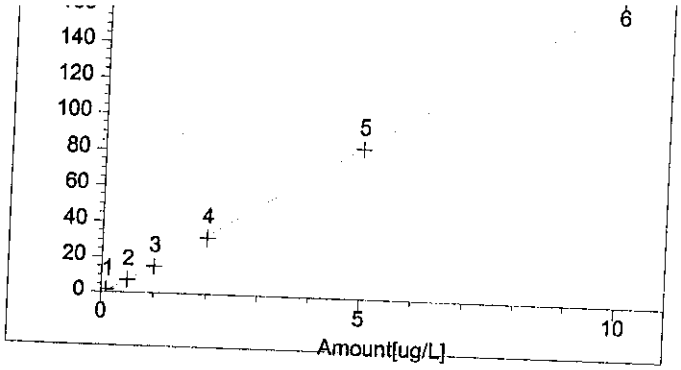

Benzo(a)pyrene #16 at exp. RT: 28.638
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 10.11239
Formula: y = mx + b
m: 195.86158
b: -11.34203
x: Amount [ug/L]
y: Area



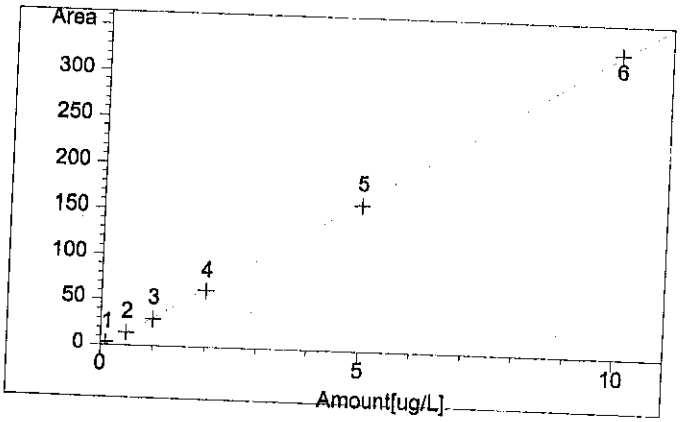

Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 0.40916
Formula: y = mx + b
m: 9.99301
b: -3.58480e-1
x: Amount [ug/L]
y: Area



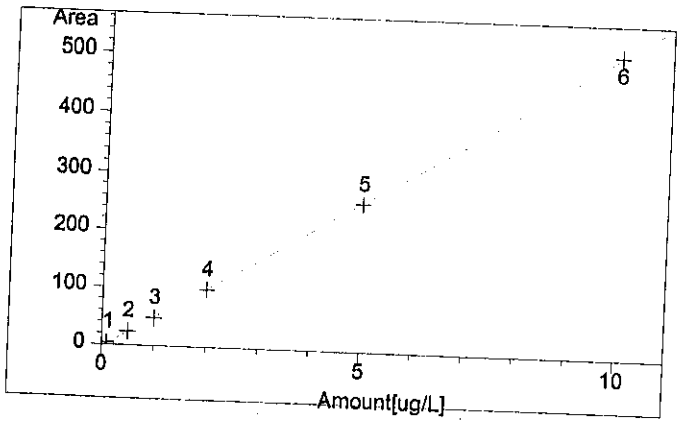

Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99989
Residual Std. Dev.: 1.43125
Formula: y = mx + b
m: 24.27916
b: -1.29624
x: Amount [ug/L]
y: Area



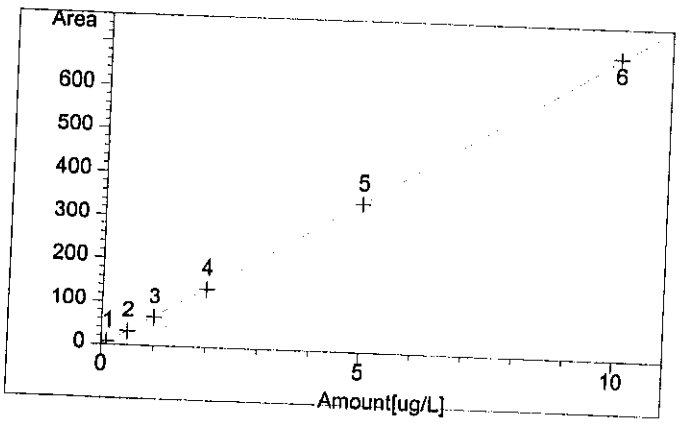

Benzo(g,h,i)perylene #18 at exp. RT: 31.2
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 0.97748
Formula: y = mx + b
m: 17.16720
b: -1.10192
x: Amount [ug/L]
y: Area




Benzo(g,h,i)perylene #18 at exp. RT: 31.3
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99981
Residual Std. Dev.: 2.61520
Formula: y = mx + b
m: 33.32486
b: -2.48990
x: Amount [ug/L]
y: Area




Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 1.91414
Formula: y = mx + b
m: 51.68834
b: -2.65621
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.: 2.24495
Formula: y = mx + b
m: 69.48765
b: -2.57230
x: Amount [ug/L]
y: Area

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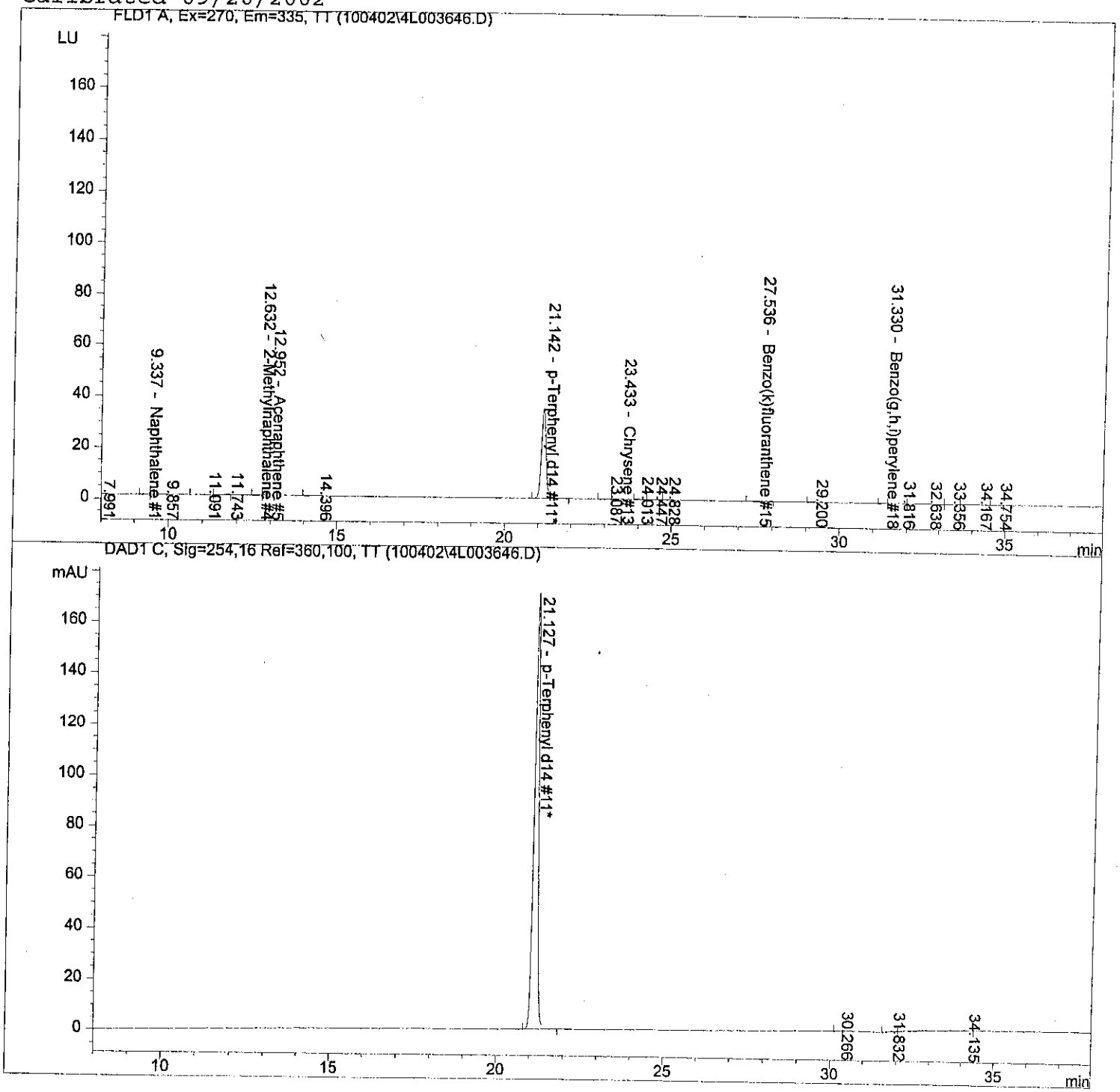
Injection Date : 10/4/2002 5:06:12 PM
Sample Name : WG126622-01 STD6
Acq. Operator : RDC

Seq. Line : 4
Vial : 3
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310_920.M
Last changed : 10/5/2002 1:52:06 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Saturday, October 05, 2002 1:51:49 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.337 | BB | 1.54267e-1 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 11.952 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.632 | BB | 1.44917e-1 | 0.00000 | 0.00000 | | 2-Methylnaphthalene #4 |
| 12.952 | BB | 1.55000e-1 | 0.00000 | 0.00000 | | Acenaphthene #5 |
| 13.661 | | - | - | - | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.142 | BB | 338.24698 | 2.98003e-1 | 100.79853 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.433 | BB | 3.95959e-1 | 0.00000 | 0.00000 | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.536 | BBA | 2.40464e-1 | 0.00000 | 0.00000 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | BB | 1.75320e-1 | 0.00000 | 0.00000 | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 100.79853 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.370 | | - | - | - | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.511 | | - | - | - | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.645 | | - | - | - | | Fluorene #6 |
| 15.030 | | - | - | - | | Phenanthrene #7 |
| 16.434 | | - | - | - | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.127 | PBA | 1525.64551 | 6.58411e-2 | 100.45017 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 100.45017 | | |

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), (2-Methylnaph
Warning : Negative results set to zero (cal. curve intercept), (Acenaphthene
Warning : Negative results set to zero (cal. curve intercept), (Chrysene #13
Warning : Negative results set to zero (cal. curve intercept), (Benzo(k)fluo
Warning : Negative results set to zero (cal. curve intercept), (Benzo(g,h,i)

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*** End of Report ***

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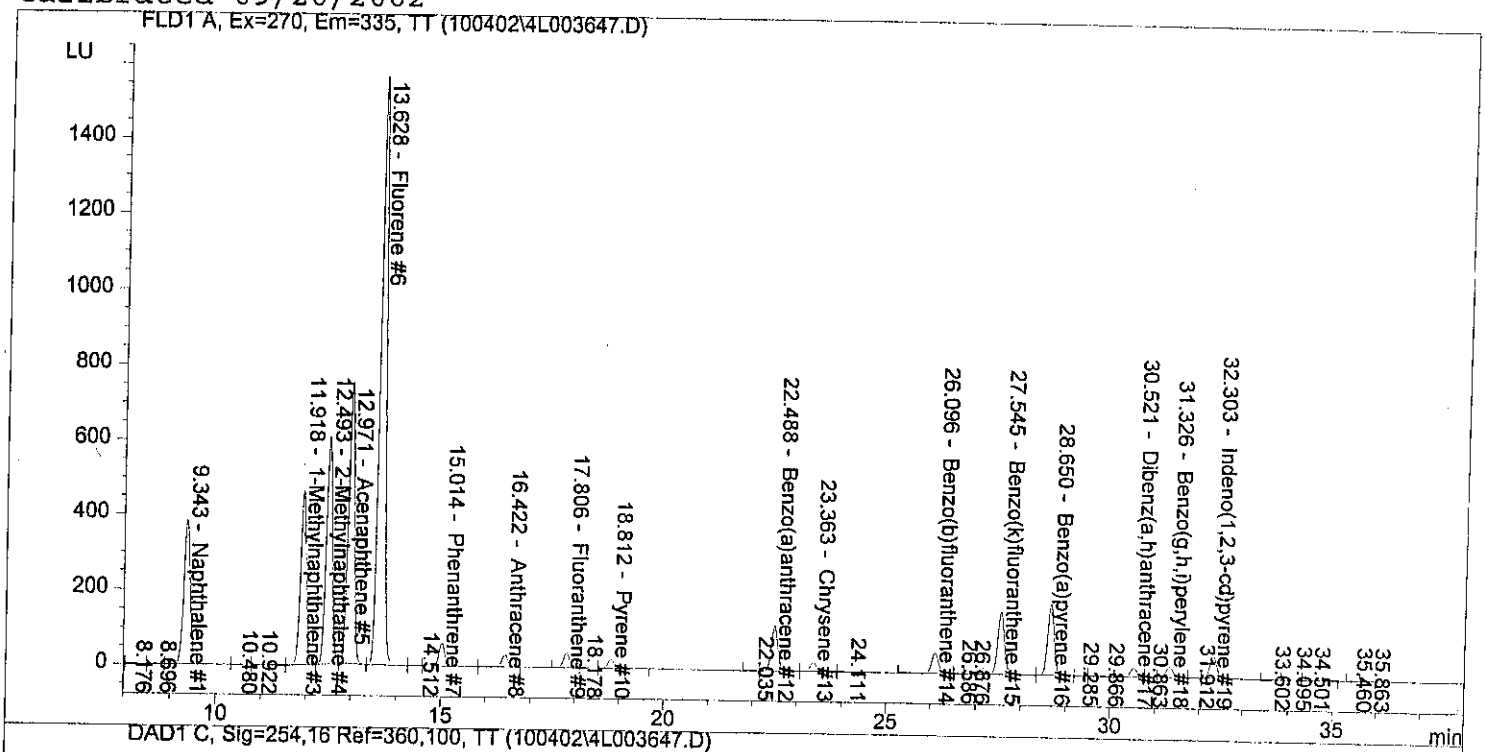
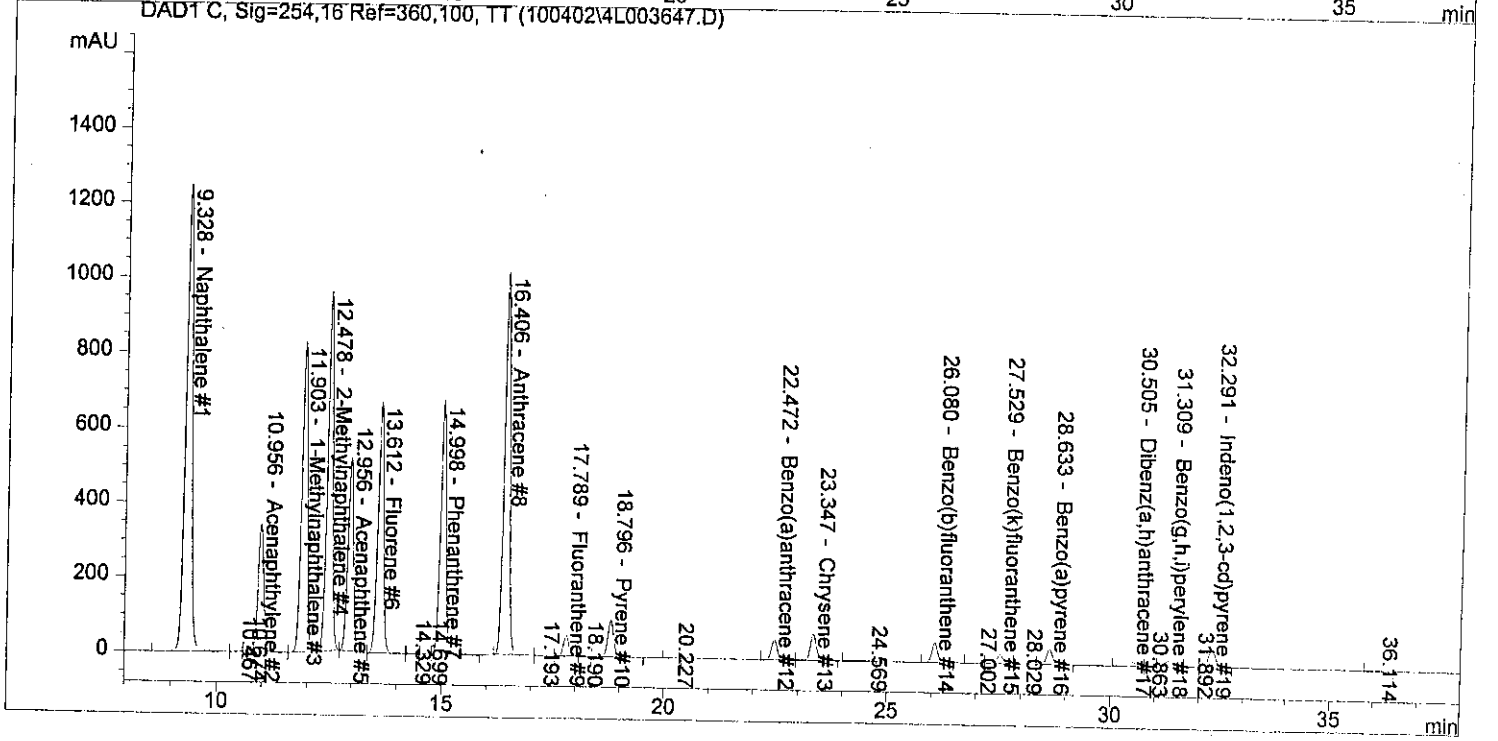
Injection Date : 10/4/2002 6:02:51 PM
Sample Name : WG126622-02 STD6
Acq. Operator : RDC

Seq. Line : 5
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310_920.M
Last changed : 10/5/2002 1:52:45 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Saturday, October 05, 2002 1:52:43 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.343 | BB | 3824.68286 | 2.61069e-2 | 99.85066 | | Naphthalene #1 |
| 11.918 | BB | 4375.24463 | 2.28326e-2 | 99.89826 | | 1-Methylnaphthalene #3 |
| 12.493 | BB | 5656.83252 | 1.76738e-2 | 99.97756 | | 2-Methylnaphthalene #4 |
| 12.971 | BB | 7075.27148 | 1.41204e-2 | 99.90594 | | Acenaphthene #5 |
| 13.628 | BB | 1.48055e4 | 6.75578e-3 | 100.02265 | | Fluorene #6 |
| 15.014 | BB | 578.63593 | 1.72789e-1 | 99.98204 | | Phenanthrene #7 |
| 16.422 | BB | 316.79214 | 3.13856e-1 | 99.42697 | | Anthracene #8 |
| 17.806 | BB | 393.10590 | 2.55383e-2 | 10.03924 | | Fluoranthene #9 |
| 18.812 | BBA | 248.00366 | 3.95658e-2 | 9.81247 | | Pyrene #10 |
| 21.142 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.488 | BB | 1210.77991 | 8.24477e-3 | 9.98261 | | Benzo(a)anthracene #12 |
| 23.363 | BB | 247.87633 | 4.02973e-2 | 9.98875 | | Chrysene #13 |
| 26.096 | BB | 588.94989 | 1.70372e-2 | 10.03408 | | Benzo(b)fluoranthene #14 |
| 27.545 | BB | 1768.03625 | 2.83657e-3 | 5.01515 | | Benzo(k)fluoranthene #15 |
| 28.650 | BB | 1955.02771 | 5.05810e-3 | 9.88873 | | Benzo(a)pyrene #16 |
| 30.521 | BB | 242.65541 | 4.10492e-2 | 9.96080 | | Dibenz(a,h)anthracene #17 |
| 31.326 | BB | 333.05783 | 2.93015e-2 | 9.75910 | | Benzo(g,h,i)perylene #18 |
| 32.303 | BB | 694.01044 | 1.44772e-2 | 10.04731 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 793.59232 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.328 | BB | 1.18189e4 | 8.44383e-3 | 99.79702 | | Naphthalene #1 |
| 10.956 | BB | 2955.51001 | 3.39936e-2 | 100.46856 | | Acenaphthylene #2 |
| 11.903 | BB | 7215.58887 | 1.38995e-2 | 100.29282 | | 1-Methylnaphthalene #3 |
| 12.478 | BB | 8281.40723 | 1.20918e-2 | 100.13736 | | 2-Methylnaphthalene #4 |
| 12.956 | BB | 4449.57959 | 2.25573e-2 | 100.37035 | | Acenaphthene #5 |
| 13.612 | BB | 5760.90283 | 1.73993e-2 | 100.23561 | | Fluorene #6 |
| 14.998 | BB | 5793.69580 | 1.73321e-2 | 100.41682 | | Phenanthrene #7 |
| 16.406 | BB | 8865.23926 | 1.11799e-2 | 99.11235 | | Anthracene #8 |
| 17.789 | BB | 483.08569 | 2.07903e-2 | 10.04349 | | Fluoranthene #9 |
| 18.796 | BBA | 906.94849 | 1.10596e-2 | 10.03051 | | Pyrene #10 |
| 21.127 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.472 | BB | 474.98590 | 2.11433e-2 | 10.04277 | | Benzo(a)anthracene #12 |
| 23.347 | BBA | 663.11285 | 1.51540e-2 | 10.04884 | | Chrysene #13 |
| 26.080 | BBA | 498.17334 | 2.01805e-2 | 10.05338 | | Benzo(b)fluoranthene #14 |
| 27.529 | BB | 216.25821 | 2.32297e-2 | 5.02361 | | Benzo(k)fluoranthene #15 |
| 28.633 | BB | 370.09787 | 2.69997e-2 | 9.99254 | | Benzo(a)pyrene #16 |
| 30.505 | BB | 99.50796 | 1.01174e-1 | 10.06763 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.309 | BB | 171.23235 | 5.78976e-2 | 9.91393 | | Benzo(g,h,i)perylene #18 |
| 32.291 | BB | 515.44202 | 1.95209e-2 | 10.06188 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 896.10946

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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*** End of Report ***

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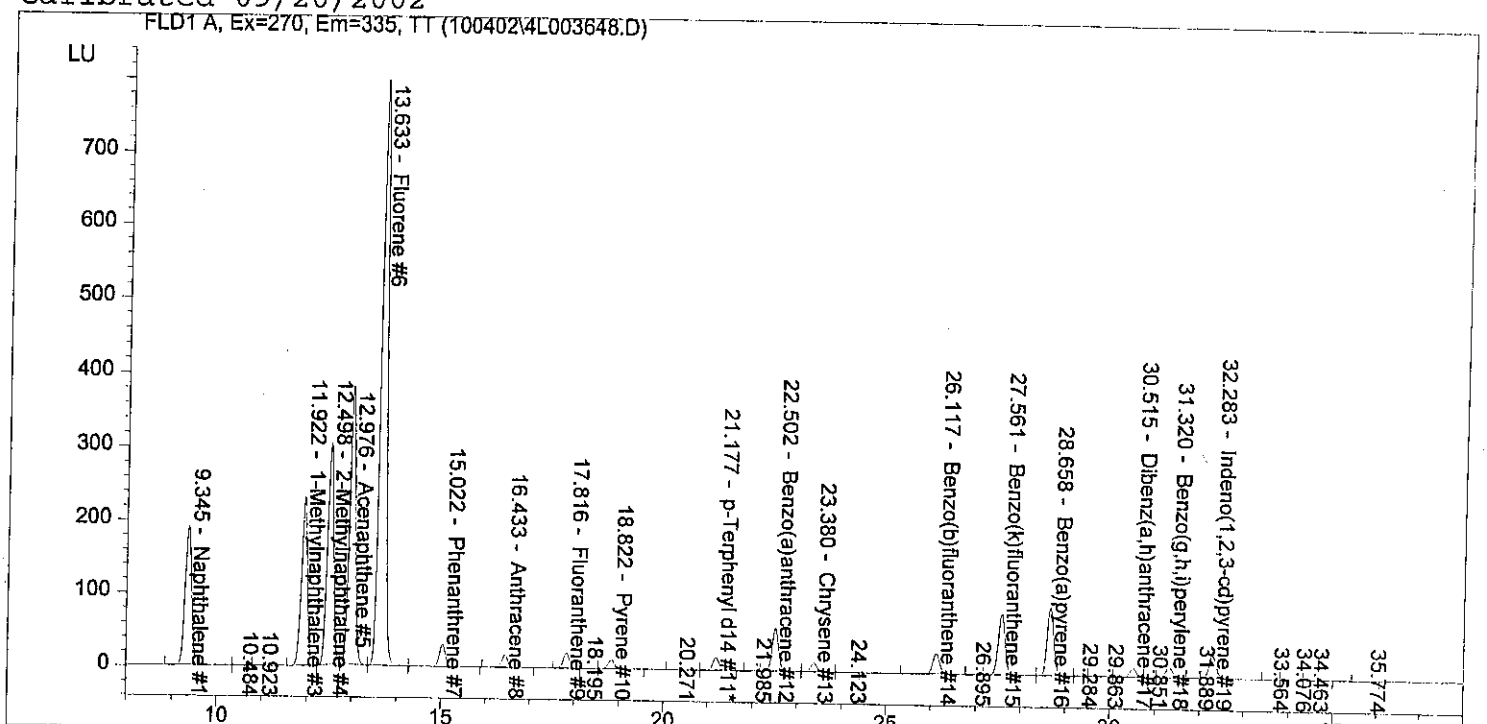
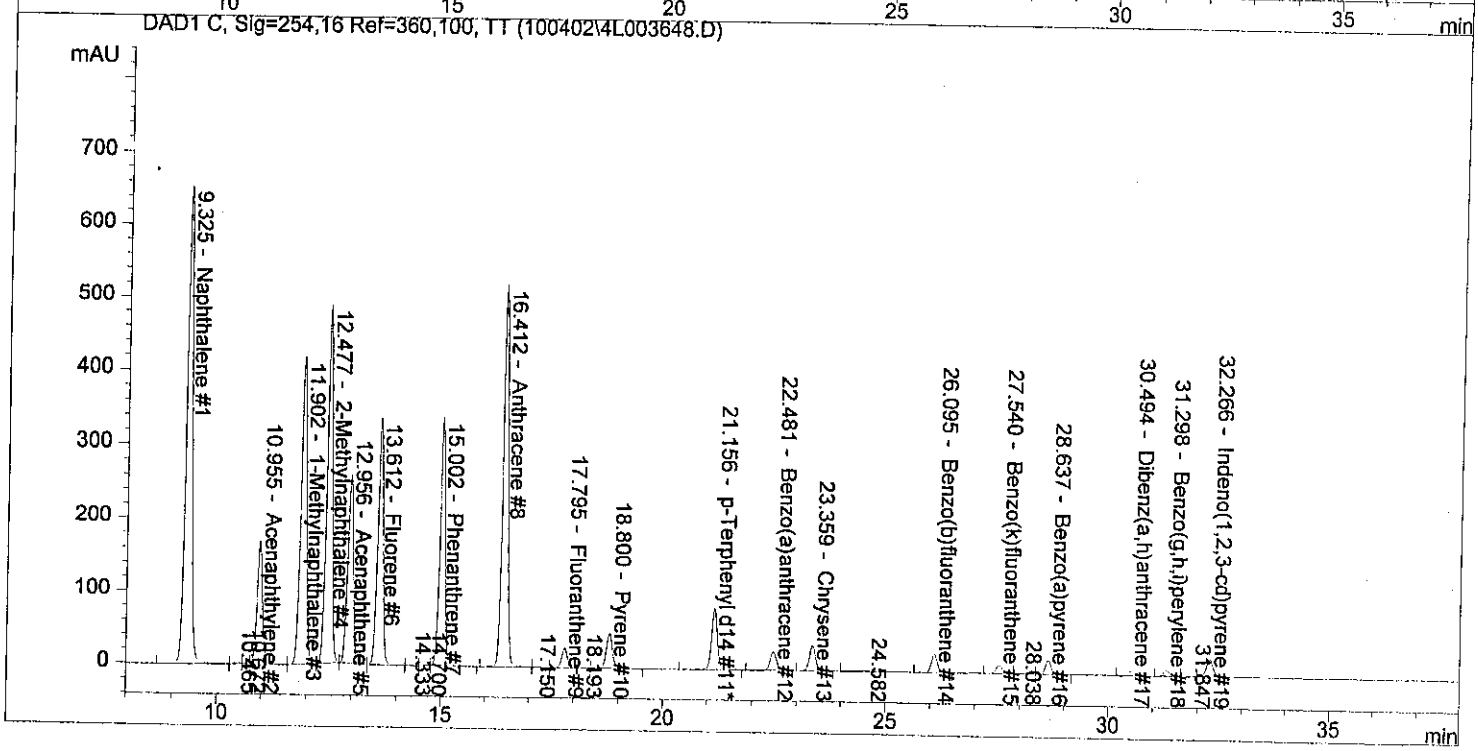
Injection Date : 10/4/2002 6:59:29 PM
Sample Name : WG126622-03 STD5
Acq. Operator : RDC

Seq. Line : 6
Vial : 5
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310_920.M
Last changed : 10/5/2002 1:54:04 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Saturday, October 05, 2002 1:54:00 PM |
| 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 | 1896.72388 | 2.61825e-2 | 49.66096 | | Naphthalene #1 |
| 11.922 | BB | 2177.66138 | 2.28790e-2 | 49.82278 | | 1-Methylnaphthalene #3 |
| 12.498 | BB | 2830.49658 | 1.76721e-2 | 50.02073 | | 2-Methylnaphthalene #4 |
| 12.976 | BB | 3561.19922 | 1.41028e-2 | 50.22292 | | Acenaphthene #5 |
| 13.633 | BB | 7500.22803 | 6.73068e-3 | 50.48165 | | Fluorene #6 |
| 15.022 | BBA | 285.91602 | 1.73392e-1 | 49.57560 | | Phenanthrene #7 |
| 16.433 | BBA | 159.69156 | 3.14463e-1 | 50.21704 | | Anthracene #8 |
| 17.816 | PB | 195.43803 | 2.55138e-2 | 4.98636 | | Fluoranthene #9 |
| 18.822 | BBA | 121.79258 | 4.02336e-2 | 4.90015 | | Pyrene #10 |
| 21.177 | BB | 164.39676 | 2.98126e-1 | 49.01088 | | p-Terphenyl d14 #11* |
| 22.502 | BB | 596.65259 | 8.28390e-3 | 4.94261 | | Benzo(a)anthracene #12 |
| 23.380 | BB | 122.28232 | 4.04186e-2 | 4.94248 | | Chrysene #13 |
| 26.117 | PB | 290.14517 | 1.70626e-2 | 4.95064 | | Benzo(b)fluoranthene #14 |
| 27.561 | BB | 879.75293 | 2.83545e-3 | 2.49449 | | Benzo(k)fluoranthene #15 |
| 28.658 | BB | 957.73456 | 5.12112e-3 | 4.90467 | | Benzo(a)pyrene #16 |
| 30.515 | BB | 118.50603 | 4.14357e-2 | 4.91037 | | Dibenz(a,h)anthracene #17 |
| 31.320 | BB | 160.60448 | 3.00321e-2 | 4.82329 | | Benzo(g,h,i)perylene #18 |
| 32.283 | BB | 342.39185 | 1.44805e-2 | 4.95801 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 445.82566 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.325 | PB | 6068.75977 | 8.39804e-3 | 50.96570 | | Naphthalene #1 |
| 10.955 | BB | 1469.66235 | 3.39301e-2 | 49.86577 | | Acenaphthylene #2 |
| 11.902 | BB | 3618.98071 | 1.38603e-2 | 50.16033 | | 1-Methylnaphthalene #3 |
| 12.477 | BB | 4184.95117 | 1.20462e-2 | 50.41269 | | 2-Methylnaphthalene #4 |
| 12.956 | BB | 2219.72949 | 2.25143e-2 | 49.97557 | | Acenaphthene #5 |
| 13.612 | BB | 2885.49780 | 1.73629e-2 | 50.10060 | | Fluorene #6 |
| 15.002 | BBA | 2893.40918 | 1.72857e-2 | 50.01450 | | Phenanthrene #7 |
| 16.412 | PB | 4501.37744 | 1.11995e-2 | 50.41337 | | Anthracene #8 |
| 17.795 | BB | 239.47792 | 2.07801e-2 | 4.97638 | | Fluoranthene #9 |
| 18.800 | BBA | 451.01443 | 1.10569e-2 | 4.98682 | | Pyrene #10 |
| 21.156 | BBA | 754.74054 | 6.58354e-2 | 49.68862 | | p-Terphenyl d14 #11* |
| 22.481 | BBA | 234.38974 | 2.11595e-2 | 4.95958 | | Benzo(a)anthracene #12 |
| 23.359 | BBA | 328.84399 | 1.51432e-2 | 4.97976 | | Chrysene #13 |
| 26.095 | BBA | 245.54985 | 2.01785e-2 | 4.95483 | | Benzo(b)fluoranthene #14 |
| 27.540 | BB | 107.37804 | 2.32123e-2 | 2.49249 | | Benzo(k)fluoranthene #15 |
| 28.637 | BBA | 181.22298 | 2.71851e-2 | 4.92656 | | Benzo(a)pyrene #16 |
| 30.494 | PB | 49.99914 | 9.87927e-2 | 4.93955 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | Name |
|---|---|---|---|---|---|---|
| 31.298 | BB | 84.00133 | 5.85328e-2 | 4.91683 | | Benzo(g,h,i)perylene #18 |
| 32.266 | BBA | 254.47401 | 1.95382e-2 | 4.97198 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 498.70193 | | |

Results obtained with enhanced integrator!

*** End of Report ***

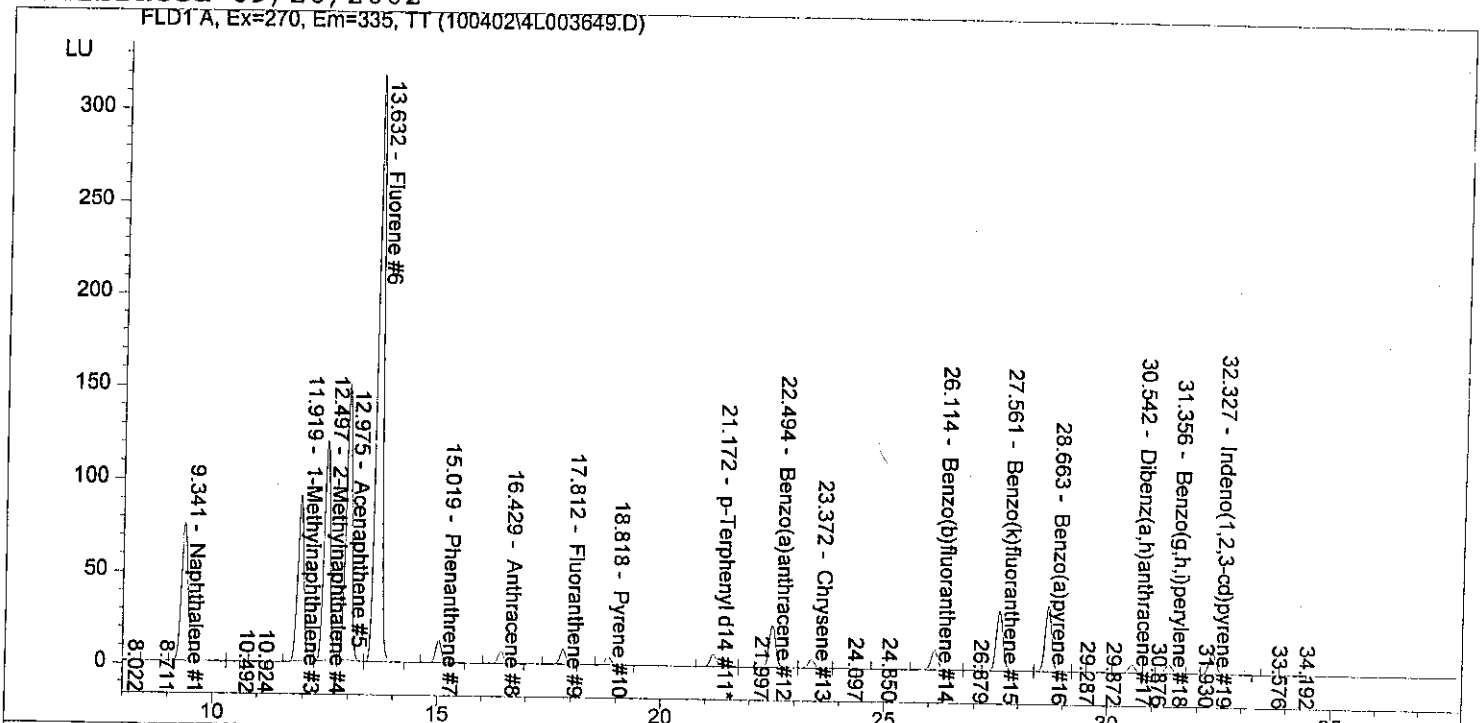
==========

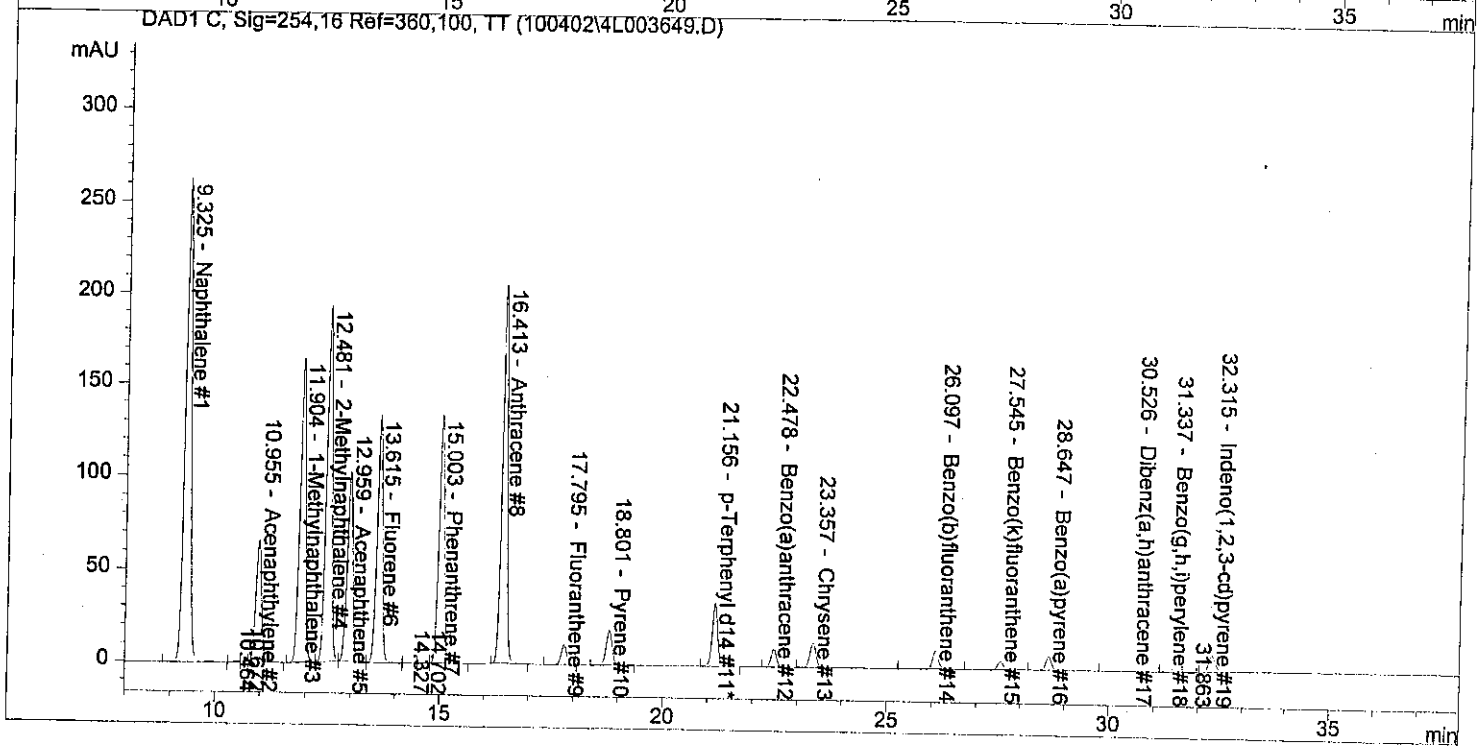
Injection Date : 10/4/2002 7:56:07 PM
Sample Name : WG126622-04 STD4
Acq. Operator : RDC

Seq. Line : 7
Vial : 6
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310_920.M
Last changed : 10/5/2002 1:54:35 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Saturday, October 05, 2002 1:54:32 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.341 | BB | 742.09198 | 2.64451e-2 | 19.62469 | | Naphthalene #1 |
| 11.919 | PB | 853.24036 | 2.30788e-2 | 19.69178 | | 1-Methylnaphthalene #3 |
| 12.497 | BB | 1108.11157 | 1.78046e-2 | 19.72947 | | 2-Methylnaphthalene #4 |
| 12.975 | BB | 1395.03540 | 1.41800e-2 | 19.78154 | | Acenaphthene #5 |
| 13.632 | BBA | 2965.57007 | 6.74365e-3 | 19.99878 | | Fluorene #6 |
| 15.019 | BBA | 110.80046 | 1.75665e-1 | 19.46373 | | Phenanthrene #7 |
| 16.429 | BBA | 62.22598 | 3.15911e-1 | 19.65784 | | Anthracene #8 |
| 17.812 | PB | 76.49144 | 2.57635e-2 | 1.97069 | | Fluoranthene #9 |
| 18.818 | BBA | 47.12078 | 4.07683e-2 | 1.92103 | | Pyrene #10 |
| 21.172 | BB | 66.77608 | 3.01184e-1 | 20.11190 | | p-Terphenyl d14 #11* |
| 22.494 | BB | 231.76024 | 8.39238e-3 | 1.94502 | | Benzo(a)anthracene #12 |
| 23.372 | BB | 47.78686 | 4.08069e-2 | 1.95003 | | Chrysene #13 |
| 26.114 | PB | 114.66280 | 1.72572e-2 | 1.97876 | | Benzo(b)fluoranthene #14 |
| 27.561 | BB | 344.16122 | 2.86668e-3 | 9.86599e-1 | | Benzo(k)fluoranthene #15 |
| 28.663 | BB | 370.21207 | 5.19659e-3 | 1.92384 | | Benzo(a)pyrene #16 |
| 30.542 | BB | 45.73194 | 4.22099e-2 | 1.93034 | | Dibenz(a,h)anthracene #17 |
| 31.356 | BB | 61.93504 | 3.05591e-2 | 1.89268 | | Benzo(g,h,i)perylene #18 |
| 32.327 | BBA | 134.93365 | 1.46415e-2 | 1.97563 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 176.53435 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.325 | BBA | 2412.53857 | 8.37738e-3 | 20.21075 | | Naphthalene #1 |
| 10.955 | BBA | 577.54309 | 3.42371e-2 | 19.77341 | | Acenaphthylene #2 |
| 11.904 | PB | 1425.69580 | 1.39474e-2 | 19.88481 | | 1-Methylnaphthalene #3 |
| 12.481 | BB | 1655.81189 | 1.20820e-2 | 20.00549 | | 2-Methylnaphthalene #4 |
| 12.959 | BB | 871.62915 | 2.27056e-2 | 19.79089 | | Acenaphthene #5 |
| 13.615 | BB | 1136.41162 | 1.74777e-2 | 19.86187 | | Fluorene #6 |
| 15.003 | BBA | 1139.09326 | 1.74172e-2 | 19.83985 | | Phenanthrene #7 |
| 16.413 | BB | 1749.78955 | 1.12264e-2 | 19.64381 | | Anthracene #8 |
| 17.795 | BB | 93.34414 | 2.10359e-2 | 1.96358 | | Fluoranthene #9 |
| 18.801 | BBA | 176.22002 | 1.11792e-2 | 1.97001 | | Pyrene #10 |
| 21.156 | PBA | 303.15381 | 6.63903e-2 | 20.12647 | | p-Terphenyl d14 #11* |
| 22.478 | PBA | 91.58590 | 2.14363e-2 | 1.96326 | | Benzo(a)anthracene #12 |
| 23.357 | PBA | 128.17973 | 1.53306e-2 | 1.96508 | | Chrysene #13 |
| 26.097 | BBA | 95.69762 | 2.04524e-2 | 1.95724 | | Benzo(b)fluoranthene #14 |
| 27.545 | PB | 42.04045 | 2.35289e-2 | 9.89164e-1 | | Benzo(k)fluoranthene #15 |
| 28.647 | BBA | 69.83824 | 2.77187e-2 | 1.93582 | | Benzo(a)pyrene #16 |
| 30.526 | PBA | 19.19596 | 9.32121e-2 | 1.78930 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.337 | BB | 32.05828 | 5.96385e-2 | 1.91191 | | Benzo(g,h,i)perylene #18 |
| 32.315 | BBA | 98.69339 | 1.98676e-2 | 1.96080 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 197.54351 | | |

Results obtained with enhanced integrator!

*** End of Report ***

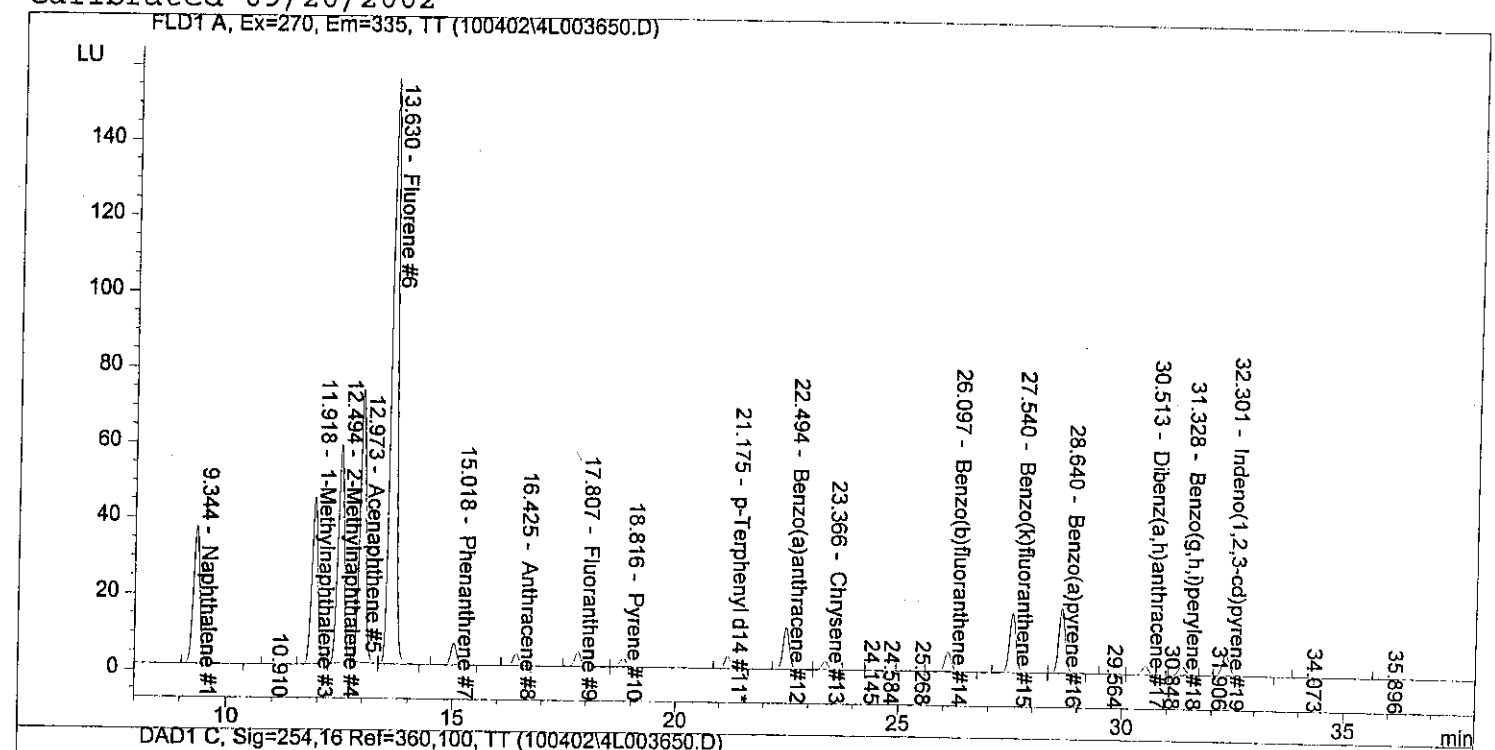
==========

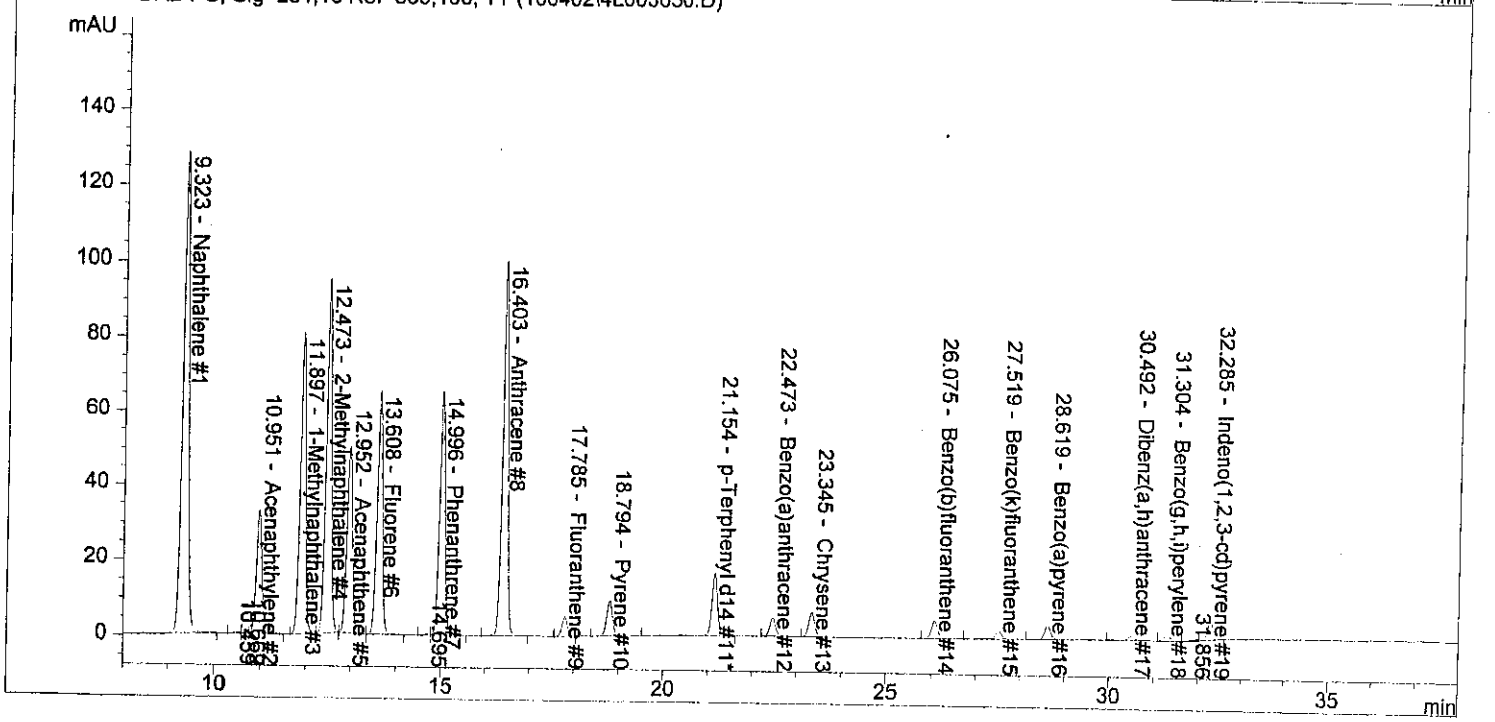
Injection Date : 10/4/2002 8:52:46 PM
Sample Name : WG126622-05 STD3
Acq. Operator : RDC

Seq. Line : 8
Vial : 7
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310_920.M
Last changed : 10/5/2002 1:55:12 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Saturday, October 05, 2002 1:55:08 PM |
| 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 | BBA | 359.10220 | 2.69809e-2 | 9.68892 | | Naphthalene #1 |
| 11.918 | BB | 412.86859 | 2.34751e-2 | 9.69214 | | 1-Methylnaphthalene #3 |
| 12.494 | BB | 536.97241 | 1.80669e-2 | 9.70142 | | 2-Methylnaphthalene #4 |
| 12.973 | BB | 677.32117 | 1.43368e-2 | 9.71062 | | Acenaphthene #5 |
| 13.630 | BBA | 1443.68811 | 6.76783e-3 | 9.77064 | | Fluorene #6 |
| 15.018 | BBA | 53.41463 | 1.80136e-1 | 9.62189 | | Phenanthrene #7 |
| 16.425 | BBA | 29.73066 | 3.20737e-1 | 9.53572 | | Anthracene #8 |
| 17.807 | BB | 38.17557 | 2.60554e-2 | 9.94681e-1 | | Fluoranthene #9 |
| 18.816 | BBA | 22.53931 | 4.21139e-2 | 9.49218e-1 | | Pyrene #10 |
| 21.175 | BB | 32.18307 | 3.05811e-1 | 9.84192 | | p-Terphenyl d14 #11* |
| 22.494 | BB | 112.54045 | 8.60977e-3 | 9.68947e-1 | | Benzo(a)anthracene #12 |
| 23.366 | BB | 22.94587 | 4.17013e-2 | 9.56872e-1 | | Chrysene #13 |
| 26.097 | BB | 55.36226 | 1.76014e-2 | 9.74453e-1 | | Benzo(b)fluoranthene #14 |
| 27.540 | BB | 166.50098 | 2.91727e-3 | 4.85728e-1 | | Benzo(k)fluoranthene #15 |
| 28.640 | BB | 177.75235 | 5.37341e-3 | 9.55137e-1 | | Benzo(a)pyrene #16 |
| 30.513 | BB | 22.23139 | 4.36837e-2 | 9.71148e-1 | | Dibenz(a,h)anthracene #17 |
| 31.328 | BB | 29.67043 | 3.19688e-2 | 9.48528e-1 | | Benzo(g,h,i)perylene #18 |
| 32.301 | BB | 65.40406 | 1.49119e-2 | 9.75297e-1 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 86.74328 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.323 | BBA | 1170.17078 | 8.34050e-3 | 9.75981 | | Naphthalene #1 |
| 10.951 | BBA | 281.09235 | 3.47524e-2 | 9.76863 | | Acenaphthylene #2 |
| 11.897 | PB | 694.18103 | 1.40866e-2 | 9.77867 | | 1-Methylnaphthalene #3 |
| 12.473 | BB | 806.74365 | 1.21363e-2 | 9.79087 | | 2-Methylnaphthalene #4 |
| 12.952 | BB | 424.02664 | 2.30261e-2 | 9.76370 | | Acenaphthene #5 |
| 13.608 | BB | 553.53839 | 1.76675e-2 | 9.77963 | | Fluorene #6 |
| 14.996 | BBA | 554.52924 | 1.76329e-2 | 9.77797 | | Phenanthrene #7 |
| 16.403 | PBA | 853.74945 | 1.13279e-2 | 9.67119 | | Anthracene #8 |
| 17.785 | PB | 45.35046 | 2.14757e-2 | 9.73931e-1 | | Fluoranthene #9 |
| 18.794 | BBA | 84.42243 | 1.14208e-2 | 9.64172e-1 | | Pyrene #10 |
| 21.154 | PBA | 149.49380 | 6.69500e-2 | 10.00861 | | p-Terphenyl d14 #11* |
| 22.473 | PBA | 44.98011 | 2.18387e-2 | 9.82305e-1 | | Benzo(a)anthracene #12 |
| 23.345 | BBA | 61.95520 | 1.56500e-2 | 9.69599e-1 | | Chrysene #13 |
| 26.075 | PBA | 46.75035 | 2.09263e-2 | 9.78310e-1 | | Benzo(b)fluoranthene #14 |
| 27.519 | BB | 21.06332 | 2.38138e-2 | 5.01597e-1 | | Benzo(k)fluoranthene #15 |
| 28.619 | BBA | 34.01420 | 2.86926e-2 | 9.75956e-1 | | Benzo(a)pyrene #16 |
| 30.492 | PBA | 9.07195 | 8.62892e-2 | 7.82812e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.304 | BB | 15.40149 | 6.22598e-2 | 9.58894e-1 | | Benzo(g,h,i)perylene #18 |
| 32.285 | BB | 47.43527 | 2.04087e-2 | 9.68090e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 97.15473

Results obtained with enhanced integrator!

*** End of Report ***

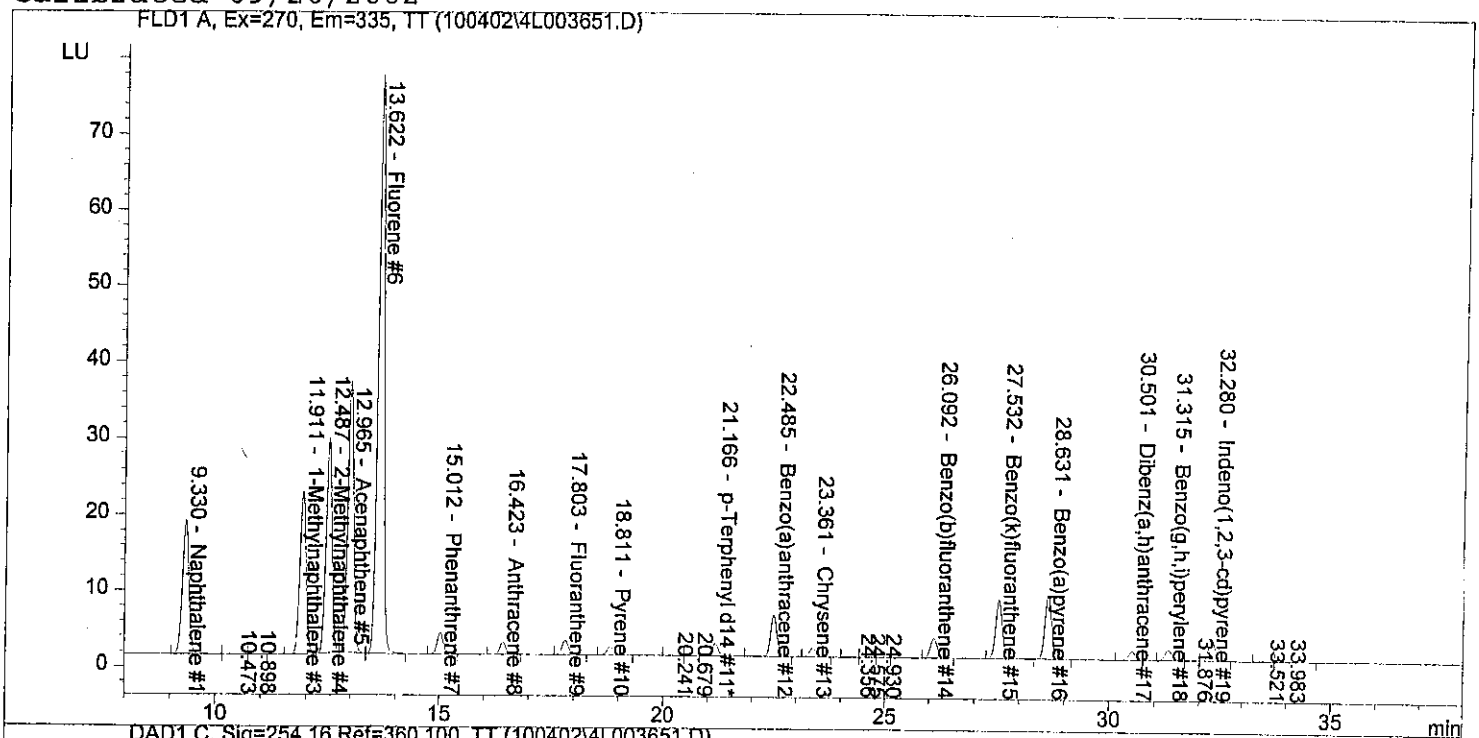
==========

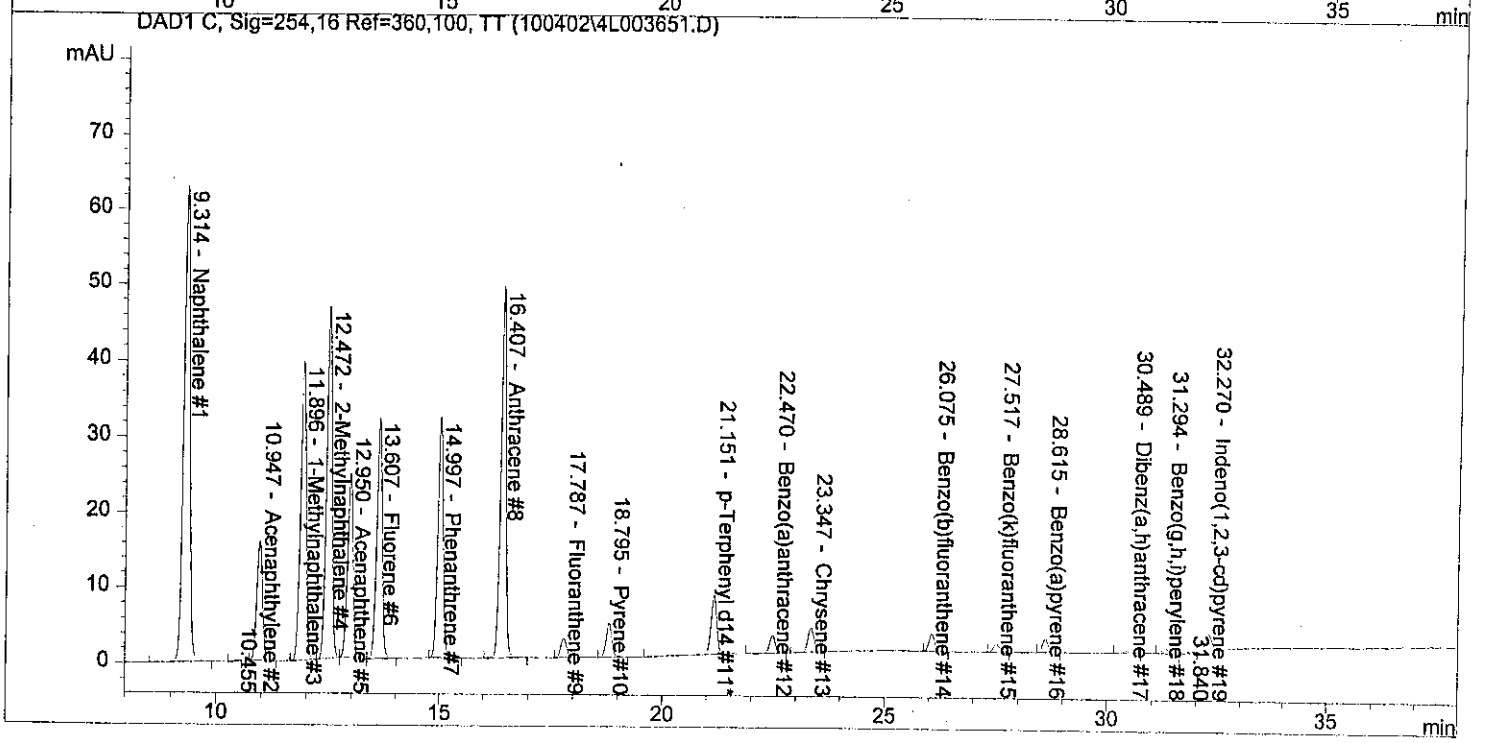
Injection Date : 10/4/2002 9:49:24 PM
Sample Name : WG126622-06 STD2
Acq. Operator : RDC

Seq. Line : 9
Vial : 8
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310_920.M
Last changed : 10/5/2002 1:55:42 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Saturday, October 05, 2002 1:55:39 PM |
| 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 | 176.26851 | 2.80349e-2 | 4.94166 | | Naphthalene #1 |
| 11.911 | BB | 202.81273 | 2.42778e-2 | 4.92384 | | 1-Methylnaphthalene #3 |
| 12.487 | BB | 263.61316 | 1.85767e-2 | 4.89705 | | 2-Methylnaphthalene #4 |
| 12.965 | BB | 332.48251 | 1.46411e-2 | 4.86792 | | Acenaphthene #5 |
| 13.622 | BB | 709.62726 | 6.80963e-3 | 4.83230 | | Fluorene #6 |
| 15.012 | BBA | 26.06303 | 1.88967e-1 | 4.92505 | | Phenanthrene #7 |
| 16.423 | PBA | 14.63960 | 3.30738e-1 | 4.84187 | | Anthracene #8 |
| 17.803 | BBA | 18.35631 | 2.67650e-2 | 4.91306e-1 | | Fluoranthene #9 |
| 18.811 | PB | 11.17597 | 4.47944e-2 | 5.00621e-1 | | Pyrene #10 |
| 21.166 | BB | 15.61307 | 3.15958e-1 | 4.93308 | | p-Terphenyl d14 #11* |
| 22.485 | BB | 55.10502 | 9.03888e-3 | 4.98088e-1 | | Benzo(a)anthracene #12 |
| 23.361 | BB | 11.39551 | 4.37657e-2 | 4.98733e-1 | | Chrysene #13 |
| 26.092 | BBA | 26.68732 | 1.83831e-2 | 4.90595e-1 | | Benzo(b)fluoranthene #14 |
| 27.532 | BB | 81.33999 | 3.02109e-3 | 2.45736e-1 | | Benzo(k)fluoranthene #15 |
| 28.631 | BB | 86.37741 | 5.74888e-3 | 4.96573e-1 | | Benzo(a)pyrene #16 |
| 30.501 | BB | 10.93452 | 4.61902e-2 | 5.05068e-1 | | Dibenz(a,h)anthracene #17 |
| 31.315 | BB | 14.32241 | 3.50327e-2 | 5.01753e-1 | | Benzo(g,h,i)perylene #18 |
| 32.280 | BBA | 31.27388 | 1.55771e-2 | 4.87157e-1 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 43.87840 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.314 | PBA | 577.20190 | 8.24754e-3 | 4.76050 | | Naphthalene #1 |
| 10.947 | BBA | 138.46826 | 3.57060e-2 | 4.94415 | | Acenaphthylene #2 |
| 11.896 | PB | 341.55984 | 1.43410e-2 | 4.89832 | | 1-Methylnaphthalene #3 |
| 12.472 | BB | 397.01361 | 1.22214e-2 | 4.85205 | | 2-Methylnaphthalene #4 |
| 12.950 | BB | 208.35878 | 2.36365e-2 | 4.92487 | | Acenaphthene #5 |
| 13.607 | BBA | 271.59180 | 1.80319e-2 | 4.89731 | | Fluorene #6 |
| 14.997 | BBA | 272.13281 | 1.80441e-2 | 4.91038 | | Phenanthrene #7 |
| 16.407 | PBA | 417.10779 | 1.15522e-2 | 4.81851 | | Anthracene #8 |
| 17.787 | BBA | 22.34840 | 2.22626e-2 | 4.97533e-1 | | Fluoranthene #9 |
| 18.795 | BBA | 41.78757 | 1.18524e-2 | 4.95282e-1 | | Pyrene #10 |
| 21.151 | PBA | 71.00721 | 6.82498e-2 | 4.84623 | | p-Terphenyl d14 #11* |
| 22.470 | PBA | 21.75884 | 2.27347e-2 | 4.94680e-1 | | Benzo(a)anthracene #12 |
| 23.347 | PB | 30.95954 | 1.61974e-2 | 5.01465e-1 | | Chrysene #13 |
| 26.075 | BBA | 22.66298 | 2.18881e-2 | 4.96049e-1 | | Benzo(b)fluoranthene #14 |
| 27.517 | BBA | 10.27585 | 2.45605e-2 | 2.52380e-1 | | Benzo(k)fluoranthene #15 |
| 28.615 | PBA | 15.99617 | 3.08529e-2 | 4.93528e-1 | | Benzo(a)pyrene #16 |
| 30.489 | PB | 4.80888 | 9.30893e-2 | 4.47655e-1 | | Dibenz(a,h)anthracene #17 |

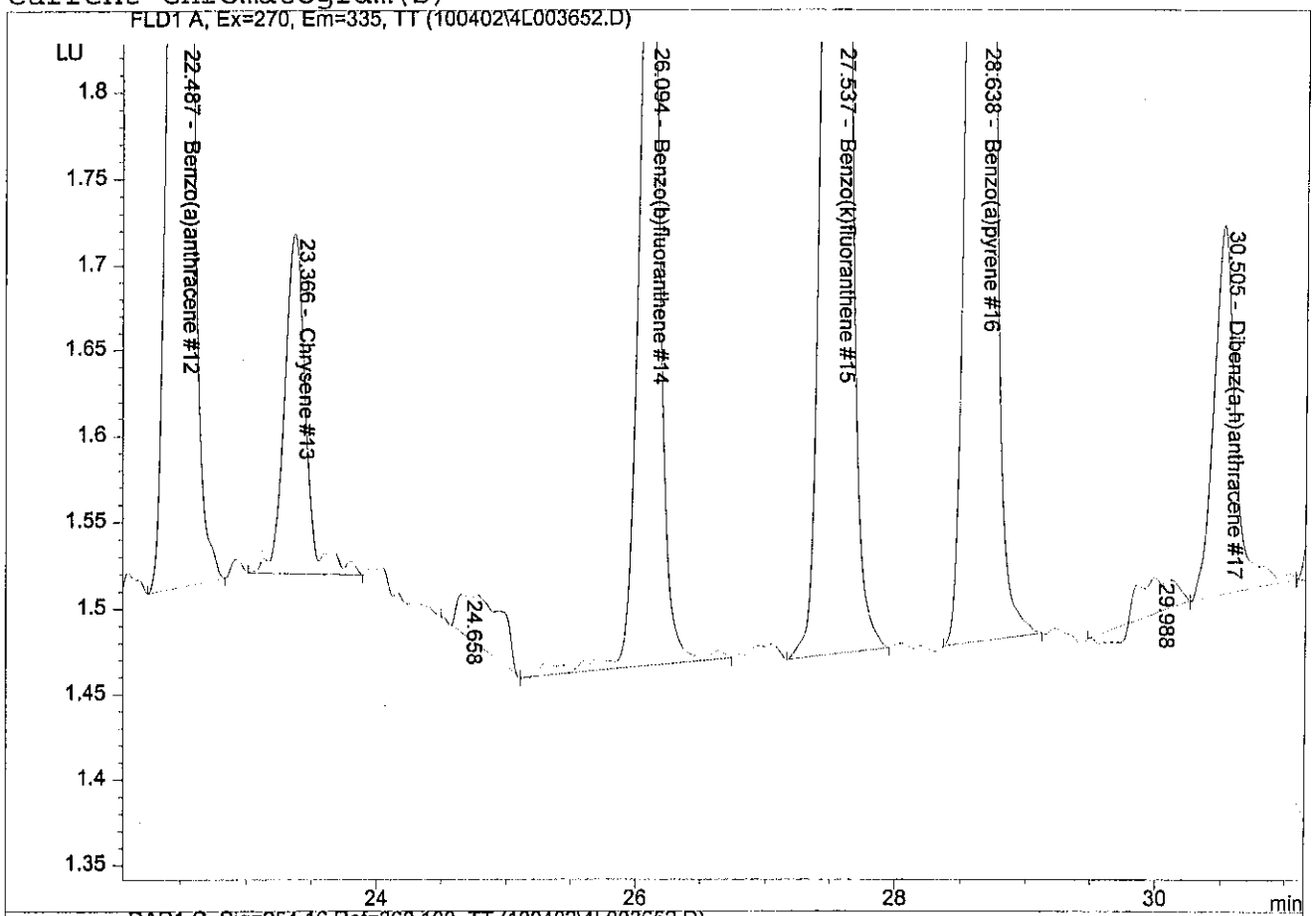
| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.294 | BB | 7.41438 | 6.73752e-2 | 4.99545e-1 | | Benzo(g,h,i)perylene #18 |
| 32.270 | BB | 23.07085 | 2.15140e-2 | 4.96346e-1 | | Indeno(1,2,3-cd)pyrene #1 |

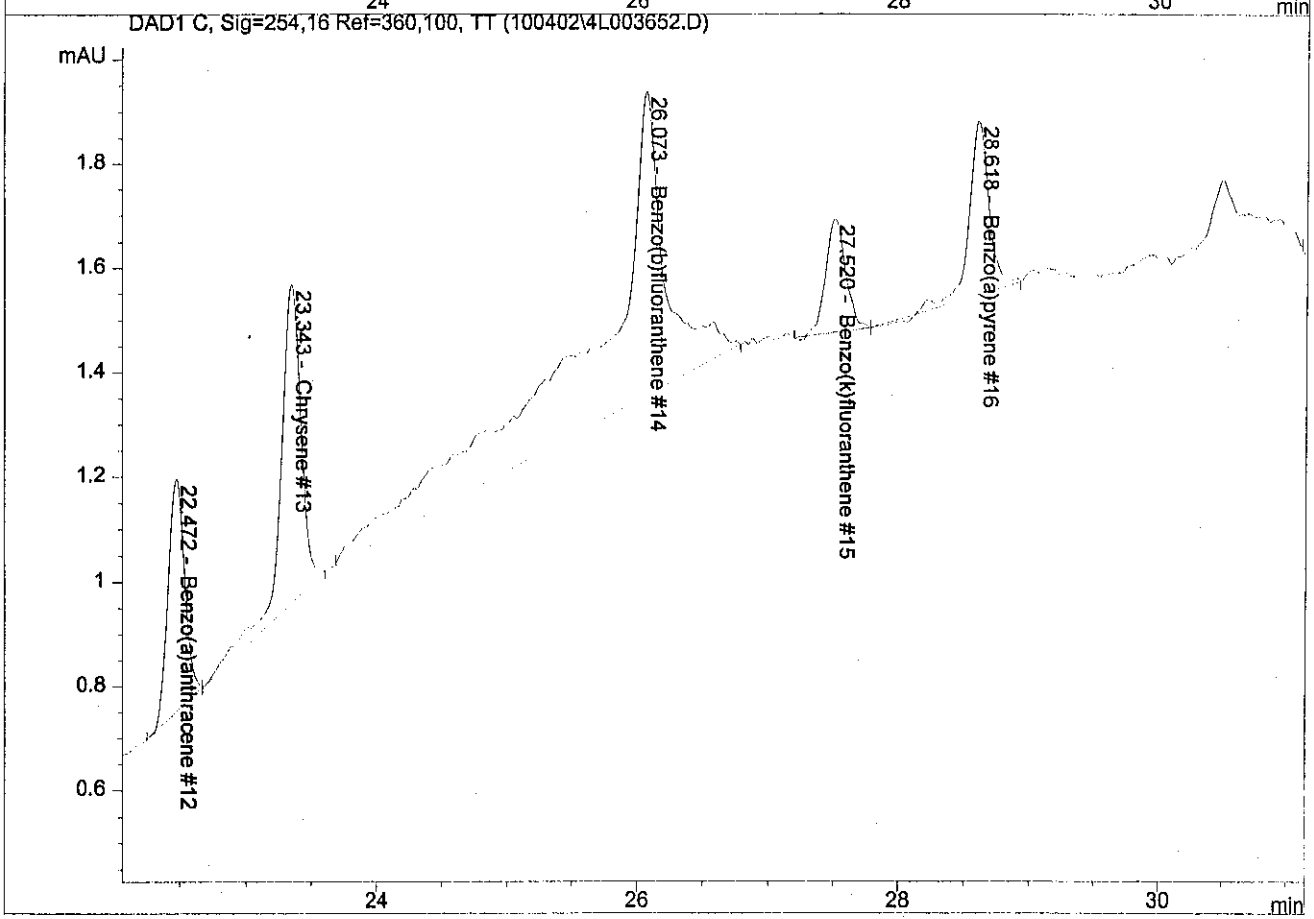
Totals : 48.52678

Results obtained with enhanced integrator!

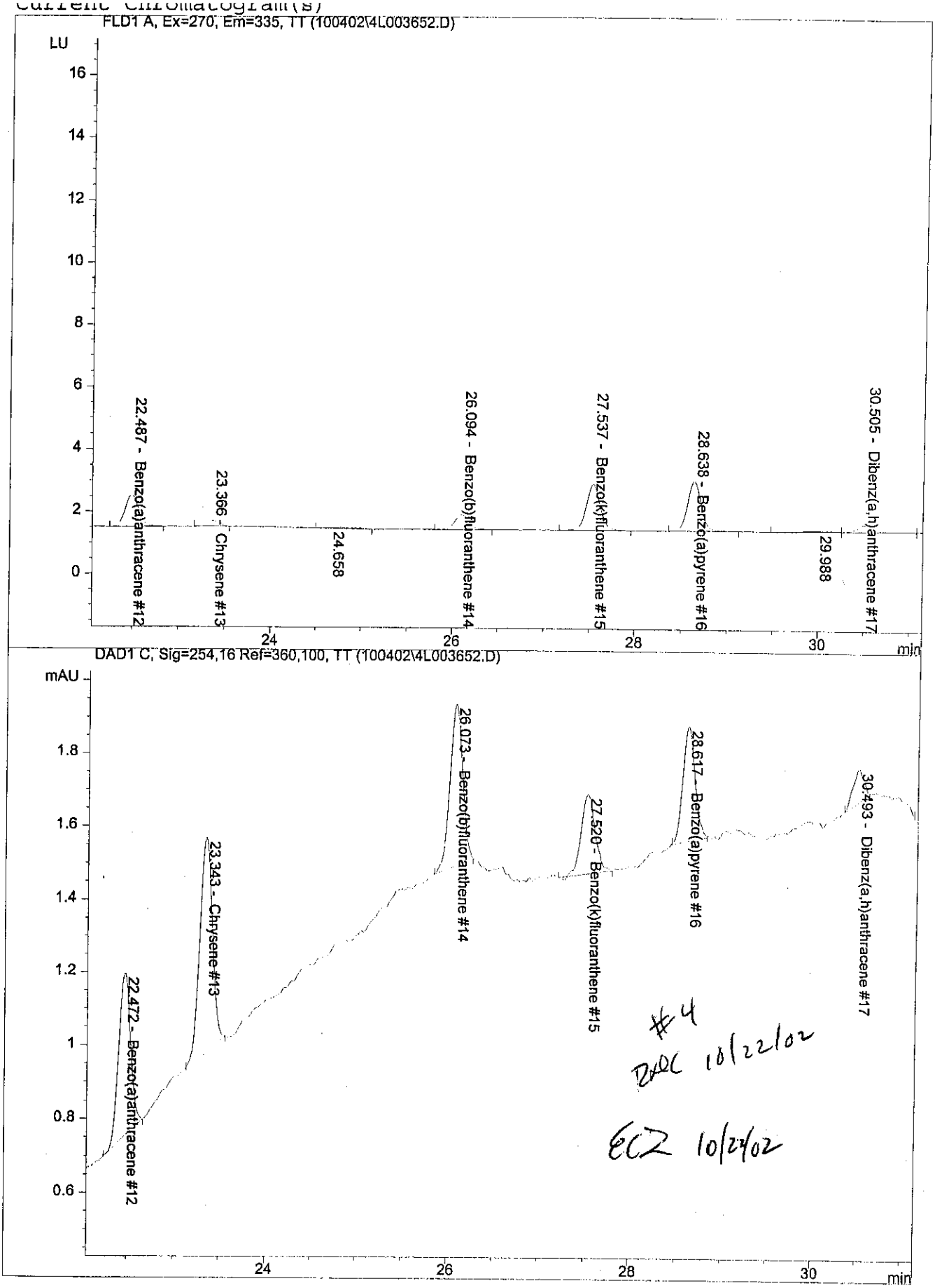
*** End of Report ***

Current Chromatogram(s)



Current Chromatogram(s)




HPLC4 10/5/2002 1:58:25 PM

Page 1 of 1

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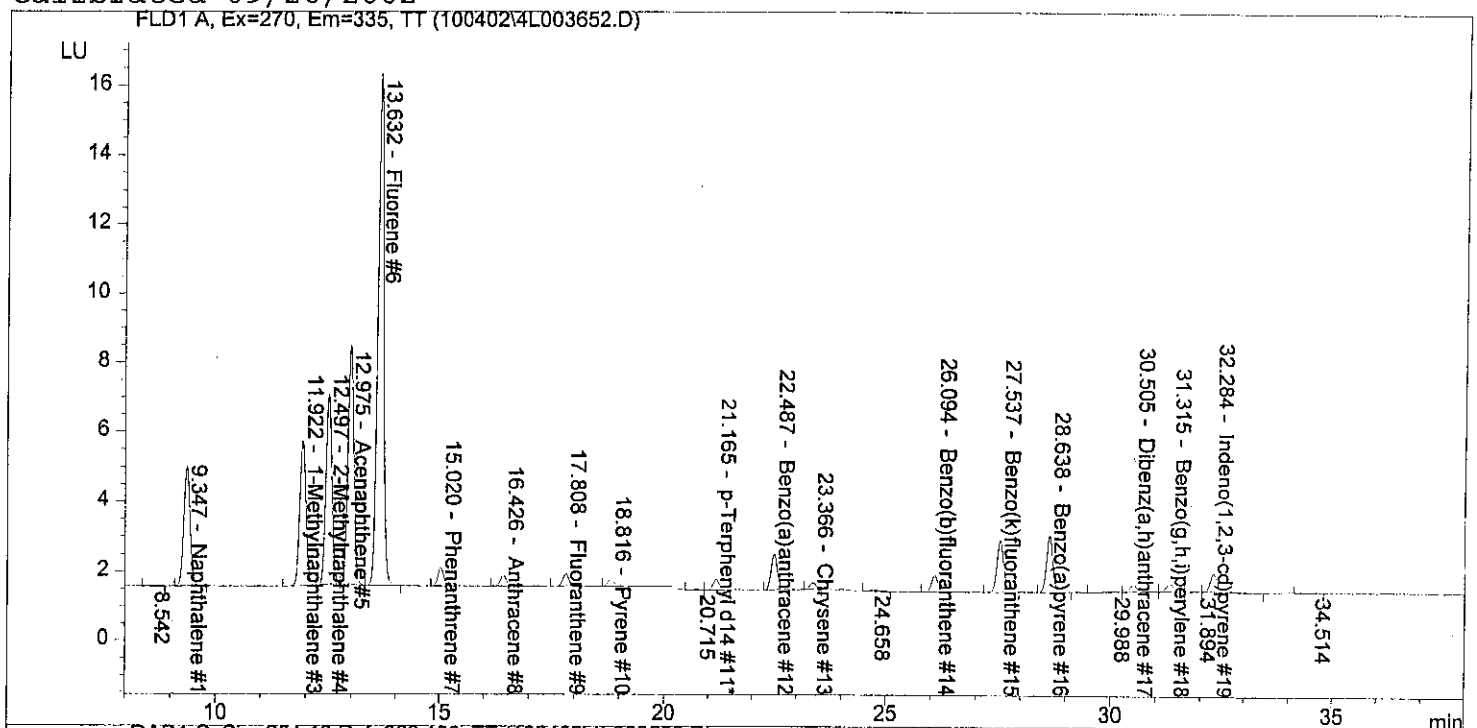
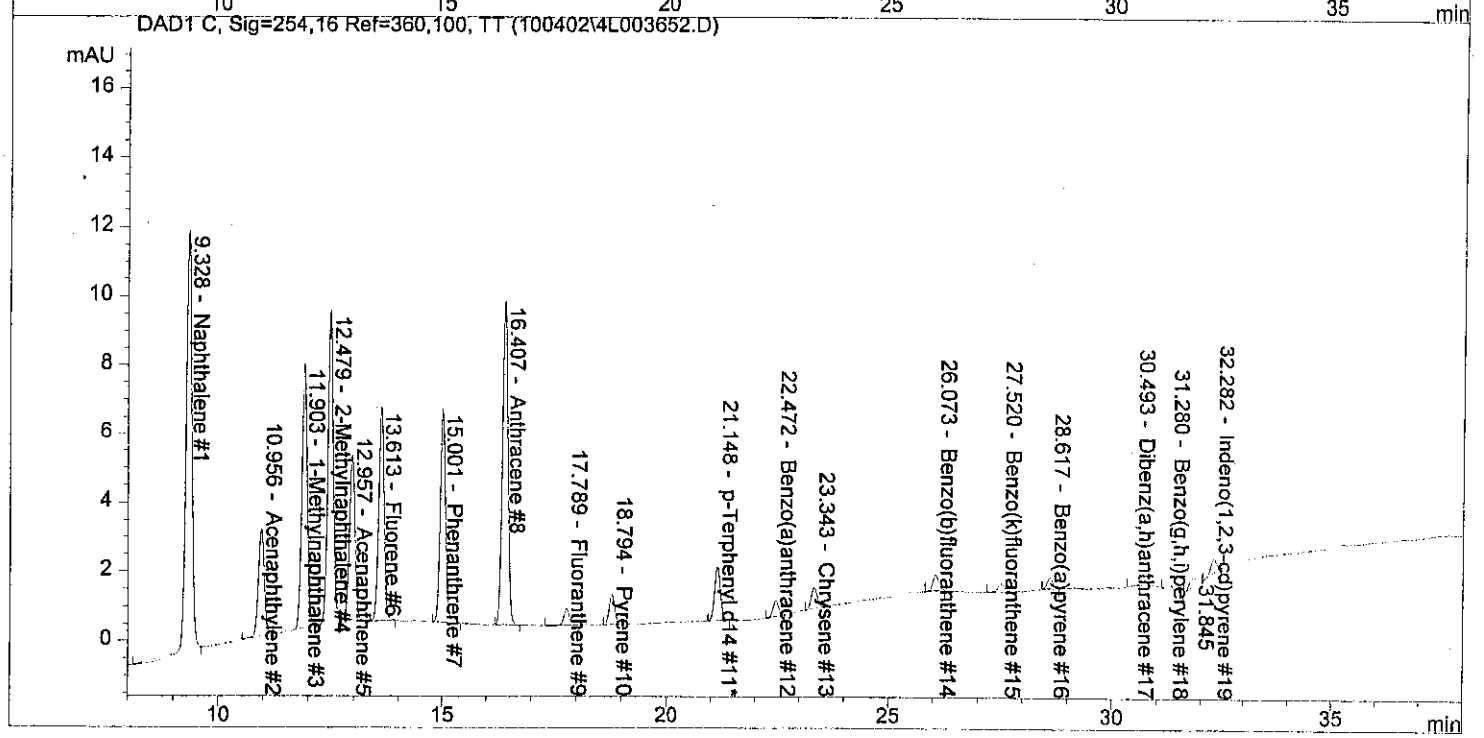
Injection Date : 10/4/2002 10:46:04 PM  Seq. Line : 10
Sample Name : WG126622-07 STD1  Vial : 9
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310_920.M
Last changed : 10/5/2002 1:59:13 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, October 05, 2002 1:59:08 PM
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 |
|---|---|---|---|---|---|---|
| 9.347 | BBA | 33.87443 | 3.65617e-2 | 1.23851 | | Naphthalene #1 |
| 11.922 | BB | 39.10516 | 3.07203e-2 | 1.20132 | | 1-Methylnaphthalene #3 |
| 12.497 | BB | 50.80115 | 2.27564e-2 | 1.15605 | | 2-Methylnaphthalene #4 |
| 12.975 | BB | 64.19129 | 1.71047e-2 | 1.09797 | | Acenaphthene #5 |
| 13.632 | BBA | 137.57742 | 7.17573e-3 | 9.87218e-1 | | Fluorene #6 |
| 15.020 | BBA | 4.94392 | 2.67153e-1 | 1.32078 | | Phenanthrene #7 |
| 16.426 | BBA | 2.83787 | 4.04874e-1 | 1.14898 | | Anthracene #8 |
| 17.808 | PBA | 3.57123 | 3.25662e-2 | 1.16301e-1 | | Fluoranthene #9 |
| 18.816 | BBA | 2.11499 | 6.58215e-2 | 1.39212e-1 | | Pyrene #10 |
| 21.165 | BB | 3.07198 | 4.04721e-1 | 1.24329 | | p-Terphenyl d14 #11* |
| 22.487 | BB | 10.50630 | 1.25576e-2 | 1.31934e-1 | | Benzo(a)anthracene #12 |
| 23.366 | MM | 1.91021 | 6.36385e-2 | 1.21563e-1 | | Chrysene #13 |
| 26.094 | FM | 5.23515 | 2.42008e-2 | 1.26695e-1 | | Benzo(b)fluoranthene #14 |
| 27.537 | BBA | 15.77271 | 3.86064e-3 | 6.08928e-2 | | Benzo(k)fluoranthene #15 |
| 28.638 | PBA | 16.52711 | 8.60949e-3 | 1.42290e-1 | | Benzo(a)pyrene #16 |
| 30.505 | BB | 2.45930 | 6.28967e-2 | 1.54682e-1 | | Dibenz(a,h)anthracene #17 |
| 31.315 | BB | 2.82300 | 5.64745e-2 | 1.59427e-1 | | Benzo(g,h,i)perylene #18 |
| 32.284 | BB | 6.45037 | 2.01300e-2 | 1.29846e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 10.67697

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.328 | PBA | 108.71868 | 7.56378e-3 | 8.22324e-1 | | Naphthalene #1 |
| 10.956 | BB | 27.07926 | 4.39657e-2 | 1.19056 | | Acenaphthylene #2 |
| 11.903 | BB | 65.15134 | 1.66323e-2 | 1.08362 | | 1-Methylnaphthalene #3 |
| 12.479 | BB | 77.43833 | 1.30132e-2 | 1.00772 | | 2-Methylnaphthalene #4 |
| 12.957 | BBA | 40.46593 | 2.87470e-2 | 1.16328 | | Acenaphthene #5 |
| 13.613 | PBA | 52.38352 | 2.10916e-2 | 1.10485 | | Fluorene #6 |
| 15.001 | BBA | 52.69966 | 2.15711e-2 | 1.13679 | | Phenanthrene #7 |
| 16.407 | BBA | 79.06156 | 1.31535e-2 | 1.03993 | | Anthracene #8 |
| 17.789 | PB | 4.11386 | 2.97307e-2 | 1.22308e-1 | | Fluoranthene #9 |
| 18.794 | BBA | 7.85789 | 1.55965e-2 | 1.22556e-1 | | Pyrene #10 |
| 21.148 | BBA | 13.65795 | 7.97005e-2 | 1.08855 | | p-Terphenyl d14 #11* |
| 22.472 | PB | 3.98452 | 3.08454e-2 | 1.22904e-1 | | Benzo(a)anthracene #12 |
| 23.343 | MM | 5.59298 | 2.17054e-2 | 1.21398e-1 | | Chrysene #13 |
| 26.073 | MM | 4.27175 | 3.00219e-2 | 1.28246e-1 | | Benzo(b)fluoranthene #14 |
| 27.520 | PB | 2.31917 | 2.74847e-2 | 6.37418e-2 | | Benzo(k)fluoranthene #15 |
| 28.617 | MM | 2.89637 | 4.79060e-2 | 1.38754e-1 | | Benzo(a)pyrene #16 |
| 30.493 | MM | 7.76671e-1 | 1.46258e-1 | 1.13595e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.280 | BBA | 1.48871 | 1.01367e-1 | 1.50906e-1 | | Benzo(g,h,i)perylene #18 |
| 32.282 | BB | 3.69404 | 3.32581e-2 | 1.22856e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 10.84488

Results obtained with enhanced integrator!

*** End of Report ***

==========

Data File C:\HPCHEM\2\DATA\100402\4L003653.D Sample Name: WG126622-08 ALT
HPLC4 10/5/2002 2:04:24 PM

1,1 SOS60-26/60-27 ALT. SOURCE @ 20/2/1 ppm

==========
Injection Date : 10/4/2002 11:42:43 PM Seq. Line : 11

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.348 | 20.0 | 19.276 | -3.6 |
| 1-Methylnaphthalene #3 | 11.922 | 20.0 | 18.503 | -7.5 |
| 2-Methylnaphthalene #4 | 12.497 | 20.0 | 18.166 | -9.2 |
| Acenaphthene #5 | 12.976 | 20.0 | 19.850 | -0.7 |
| Fluorene #6 | 13.632 | 20.0 | 19.884 | -0.6 |
| Phenanthrene #7 | 15.022 | 20.0 | 19.399 | -3.0 |
| Anthracene #8 | 16.428 | 20.0 | 20.326 | 1.6 |
| Fluoranthene #9 | 17.807 | 2.0 | 1.963 | -1.9 |
| Pyrene #10 | 18.812 | 2.0 | 1.840 | -8.0 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.484 | 2.0 | 1.829 | -8.6 |
| Chrysene #13 | 23.358 | 2.0 | 1.885 | -5.8 |
| Benzo(b)fluoranthene #14 | 26.091 | 2.0 | 1.951 | -2.4 |
| Benzo(k)fluoranthene #15 | 27.537 | 1.0 | 0.872 | -12.8 |
| Benzo(a)pyrene #16 | 28.637 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.502 | 2.0 | 2.170 | 8.5 |
| Benzo(g,h,i)perylene #18 | 31.316 | 2.0 | 1.946 | -2.7 |
| Indeno(1,2,3-cd)pyrene # | 32.285 | 2.0 | 1.910 | -4.5 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 19.954 | -0.2 |
| Acenaphthylene #2 | 10.954 | 20.0 | 18.940 | -5.3 |
| 1-Methylnaphthalene #3 | 11.902 | 20.0 | 18.874 | -5.6 |
| 2-Methylnaphthalene #4 | 12.478 | 20.0 | 18.583 | -7.1 |
| Acenaphthene #5 | 12.957 | 20.0 | 20.008 | 0.0 |
| Fluorene #6 | 13.612 | 20.0 | 19.841 | -0.8 |
| Phenanthrene #7 | 15.002 | 20.0 | 19.415 | -2.9 |
| Anthracene #8 | 16.408 | 20.0 | 20.499 | 2.5 |
| Fluoranthene #9 | 17.787 | 2.0 | 1.953 | -2.4 |
| Pyrene #10 | 18.792 | 2.0 | 1.928 | -3.6 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.465 | 2.0 | 1.854 | -7.3 |
| Chrysene #13 | 23.339 | 2.0 | 1.918 | -4.1 |
| Benzo(b)fluoranthene #14 | 26.070 | 2.0 | 2.161 | 8.1 |
| Benzo(k)fluoranthene #15 | 27.517 | 1.0 | 0.891 | -10.9 |
| Benzo(a)pyrene #16 | 28.617 | 2.0 | 1.995 | -0.3 |
| Dibenz(a,h)anthracene #1 | 30.482 | 2.0 | 2.145 | 7.2 |
| Benzo(g,h,i)perylene #18 | 31.293 | 2.0 | 1.919 | -4.0 |
| Indeno(1,2,3-cd)pyrene # | 32.268 | 2.0 | 1.896 | -5.2 |

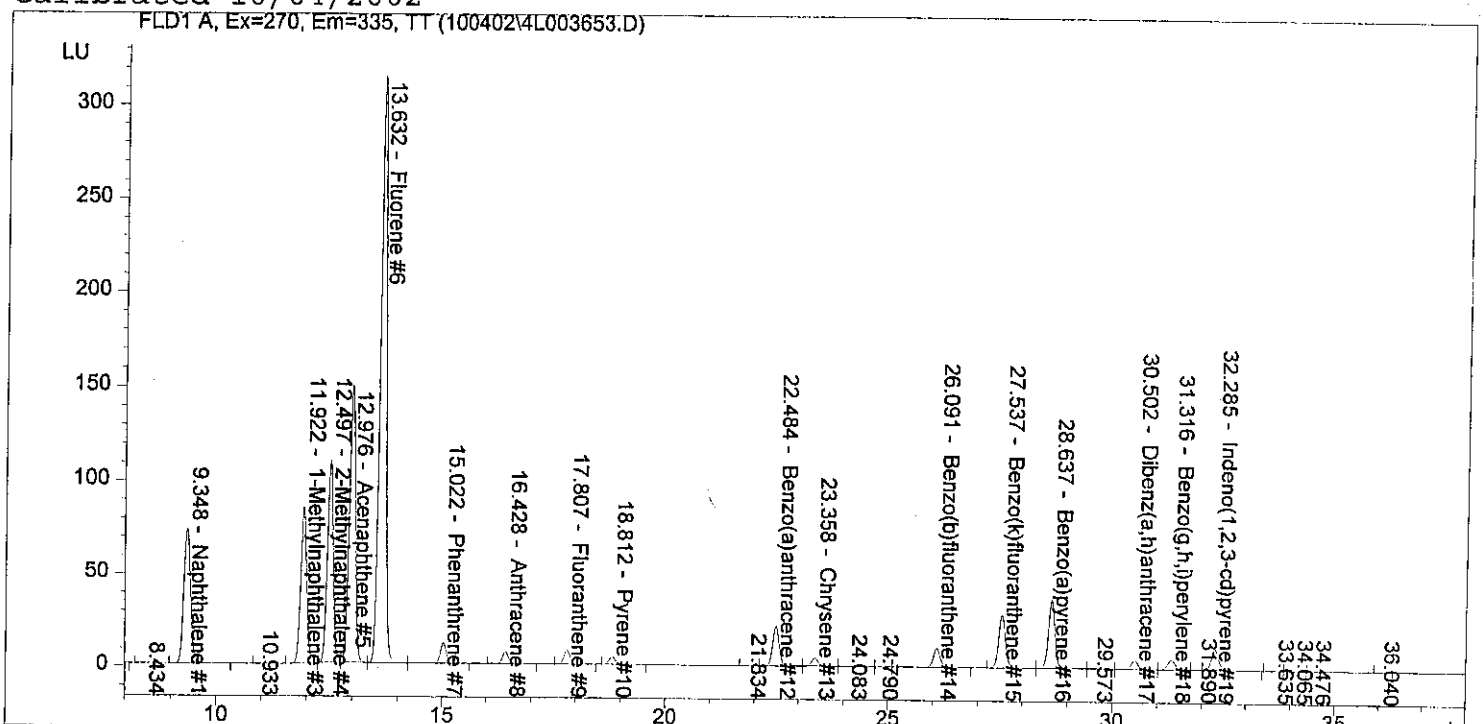
# = Failed 15.0% Criteria

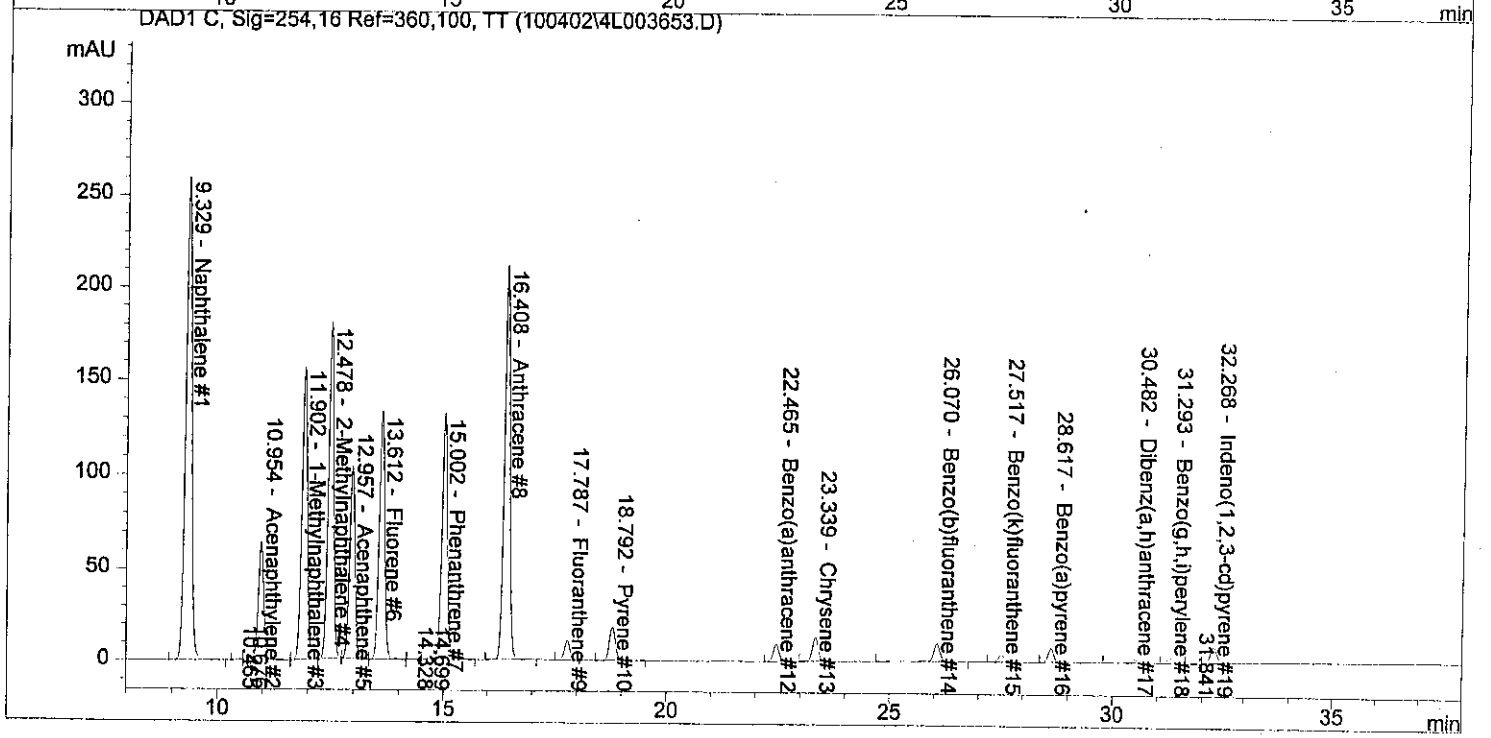
==========

Injection Date : 10/4/2002 11:42:43 PM
Sample Name : WG126622-08 ALT
Acq. Operator : RDC

Seq. Line : 11
Vial : 10
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/4/2002 5:04:42 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/5/2002 2:00:42 PM
Calibrated 10/04/2002



External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/5/2002 2:00:42 PM
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 |
|---|---|---|---|---|---|---|
| 9.348 | BBA | 725.12207 | 2.65838e-2 | 19.27648 | | Naphthalene #1 |
| 11.922 | PB | 797.78442 | 2.31934e-2 | 18.50337 | | 1-Methylnaphthalene #3 |
| 12.497 | BB | 1015.64270 | 1.78864e-2 | 18.16615 | | 2-Methylnaphthalene #4 |
| 12.976 | BB | 1395.15747 | 1.42279e-2 | 19.85012 | | Acenaphthene #5 |
| 13.632 | BB | 2944.19702 | 6.75360e-3 | 19.88392 | | Fluorene #6 |
| 15.022 | BBA | 109.79531 | 1.76681e-1 | 19.39878 | | Phenanthrene #7 |
| 16.428 | BBA | 63.83810 | 3.18405e-1 | 20.32639 | | Anthracene #8 |
| 17.807 | PBA | 76.24903 | 2.57388e-2 | 1.96256 | | Fluoranthene #9 |
| 18.812 | BBA | 44.37787 | 4.14651e-2 | 1.84013 | | Pyrene #10 |
| 21.165 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.484 | BB | 216.31520 | 8.45483e-3 | 1.82891 | | Benzo(a)anthracene #12 |
| 23.358 | BB | 45.69881 | 4.12403e-2 | 1.88463 | | Chrysene #13 |
| 26.091 | BBA | 112.80212 | 1.72962e-2 | 1.95105 | | Benzo(b)fluoranthene #14 |
| 27.537 | PB | 303.27371 | 2.87545e-3 | 8.72049e-1 | | Benzo(k)fluoranthene #15 |
| 28.637 | BB | 380.37936 | 5.25789e-3 | 1.99999 | | Benzo(a)pyrene #16 |
| 30.502 | BB | 51.38237 | 4.22266e-2 | 2.16971 | | Dibenz(a,h)anthracene #17 |
| 31.316 | BB | 62.35245 | 3.12059e-2 | 1.94576 | | Benzo(g,h,i)perylene #18 |
| 32.285 | BBA | 130.18146 | 1.46754e-2 | 1.91047 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 153.77046

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.329 | PBA | 2379.65576 | 8.38514e-3 | 19.95375 | | Naphthalene #1 |
| 10.954 | BB | 552.53632 | 3.42774e-2 | 18.93950 | | Acenaphthylene #2 |
| 11.902 | BB | 1351.97400 | 1.39604e-2 | 18.87411 | | 1-Methylnaphthalene #3 |
| 12.478 | BB | 1537.08752 | 1.20900e-2 | 18.58346 | | 2-Methylnaphthalene #4 |
| 12.957 | BB | 880.71930 | 2.27173e-2 | 20.00754 | | Acenaphthene #5 |
| 13.612 | BBA | 1134.26904 | 1.74923e-2 | 19.84102 | | Fluorene #6 |
| 15.002 | BBA | 1113.89734 | 1.74300e-2 | 19.41525 | | Phenanthrene #7 |
| 16.408 | PBA | 1811.62830 | 1.13151e-2 | 20.49869 | | Anthracene #8 |
| 17.787 | BB | 92.71174 | 2.10608e-2 | 1.95258 | | Fluoranthene #9 |
| 18.792 | BBA | 172.05194 | 1.12078e-2 | 1.92832 | | Pyrene #10 |
| 21.148 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.465 | PBA | 86.32630 | 2.14770e-2 | 1.85403 | | Benzo(a)anthracene #12 |
| 23.339 | PBA | 124.99447 | 1.53469e-2 | 1.91827 | | Chrysene #13 |
| 26.070 | BB | 105.69329 | 2.04466e-2 | 2.16106 | | Benzo(b)fluoranthene #14 |
| 27.517 | BBA | 38.11391 | 2.33770e-2 | 8.90991e-1 | | Benzo(k)fluoranthene #15 |
| 28.617 | BBA | 71.73656 | 2.78094e-2 | 1.99495 | | Benzo(a)pyrene #16 |
| 30.482 | PBA | 21.07165 | 1.01772e-1 | 2.14451 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.293 | BB | 31.84573 | 6.02662e-2 | 1.91922 | | Benzo(g,h,i)perylene #18 |
| 32.268 | BB | 95.34289 | 1.98857e-2 | 1.89596 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 174.77324

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\100502\4L003655.D Sample Name: WG126673-01 CCV
HPLC4 10/10/2002 2:37:32 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========
Injection Date : 10/5/2002 3:07:09 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.346 | 20.0 | 20.181 | 0.9 |
| 1-Methylnaphthalene #3 | 11.920 | 20.0 | 20.208 | 1.0 |
| 2-Methylnaphthalene #4 | 12.494 | 20.0 | 20.165 | 0.8 |
| Acenaphthene #5 | 12.972 | 20.0 | 20.110 | 0.5 |
| Fluorene #6 | 13.626 | 20.0 | 20.064 | 0.3 |
| Phenanthrene #7 | 15.013 | 20.0 | 19.999 | 0.0 |
| Anthracene #8 | 16.422 | 20.0 | 20.041 | 0.2 |
| Fluoranthene #9 | 17.801 | 2.0 | 1.969 | -1.5 |
| Pyrene #10 | 18.806 | 2.0 | 2.039 | 2.0 |
| p-Terphenyl d14 #11* | 21.155 | 20.0 | 19.822 | -0.9 |
| Benzo(a)anthracene #12 | 22.476 | 2.0 | 1.966 | -1.7 |
| Chrysene #13 | 23.351 | 2.0 | 2.033 | 1.6 |
| Benzo(b)fluoranthene #14 | 26.087 | 2.0 | 1.963 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.531 | 1.0 | 0.982 | -1.8 |
| Benzo(a)pyrene #16 | 28.633 | 2.0 | 2.070 | 3.5 |
| Dibenz(a,h)anthracene #1 | 30.499 | 2.0 | 1.954 | -2.3 |
| Benzo(g,h,i)perylene #18 | 31.308 | 2.0 | 2.014 | 0.7 |
| Indeno(1,2,3-cd)pyrene # | 32.276 | 2.0 | 1.879 | -6.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 20.152 | 0.8 |
| Acenaphthylene #2 | 10.958 | 20.0 | 19.758 | -1.2 |
| 1-Methylnaphthalene #3 | 11.903 | 20.0 | 19.845 | -0.8 |
| 2-Methylnaphthalene #4 | 12.477 | 20.0 | 19.988 | -0.1 |
| Acenaphthene #5 | 12.956 | 20.0 | 19.745 | -1.3 |
| Fluorene #6 | 13.609 | 20.0 | 19.844 | -0.8 |
| Phenanthrene #7 | 14.996 | 20.0 | 19.778 | -1.1 |
| Anthracene #8 | 16.405 | 20.0 | 20.318 | 1.6 |
| Fluoranthene #9 | 17.783 | 2.0 | 1.968 | -1.6 |
| Pyrene #10 | 18.788 | 2.0 | 1.949 | -2.5 |
| p-Terphenyl d14 #11* | 21.139 | 20.0 | 20.070 | 0.3 |
| Benzo(a)anthracene #12 | 22.460 | 2.0 | 1.933 | -3.4 |
| Chrysene #13 | 23.334 | 2.0 | 1.999 | 0.0 |
| Benzo(b)fluoranthene #14 | 26.070 | 2.0 | 1.970 | -1.5 |
| Benzo(k)fluoranthene #15 | 27.514 | 1.0 | 0.973 | -2.7 |
| Benzo(a)pyrene #16 | 28.616 | 2.0 | 2.033 | 1.7 |
| Dibenz(a,h)anthracene #1 | 30.482 | 2.0 | 1.967 | -1.7 |
| Benzo(g,h,i)perylene #18 | 31.289 | 2.0 | 1.997 | -0.1 |
| Indeno(1,2,3-cd)pyrene # | 32.263 | 2.0 | 1.860 | -7.0 |

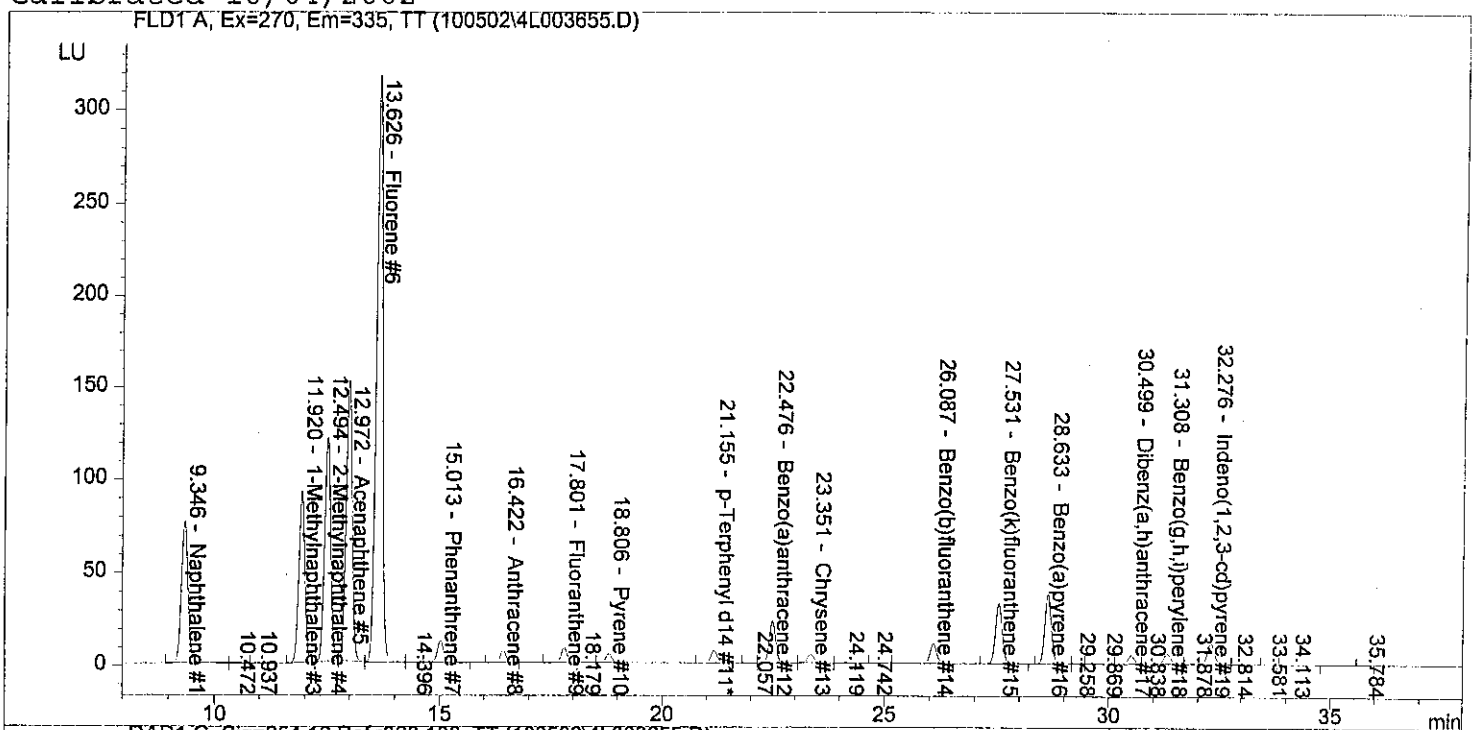
# = Failed 15.0% Criteria

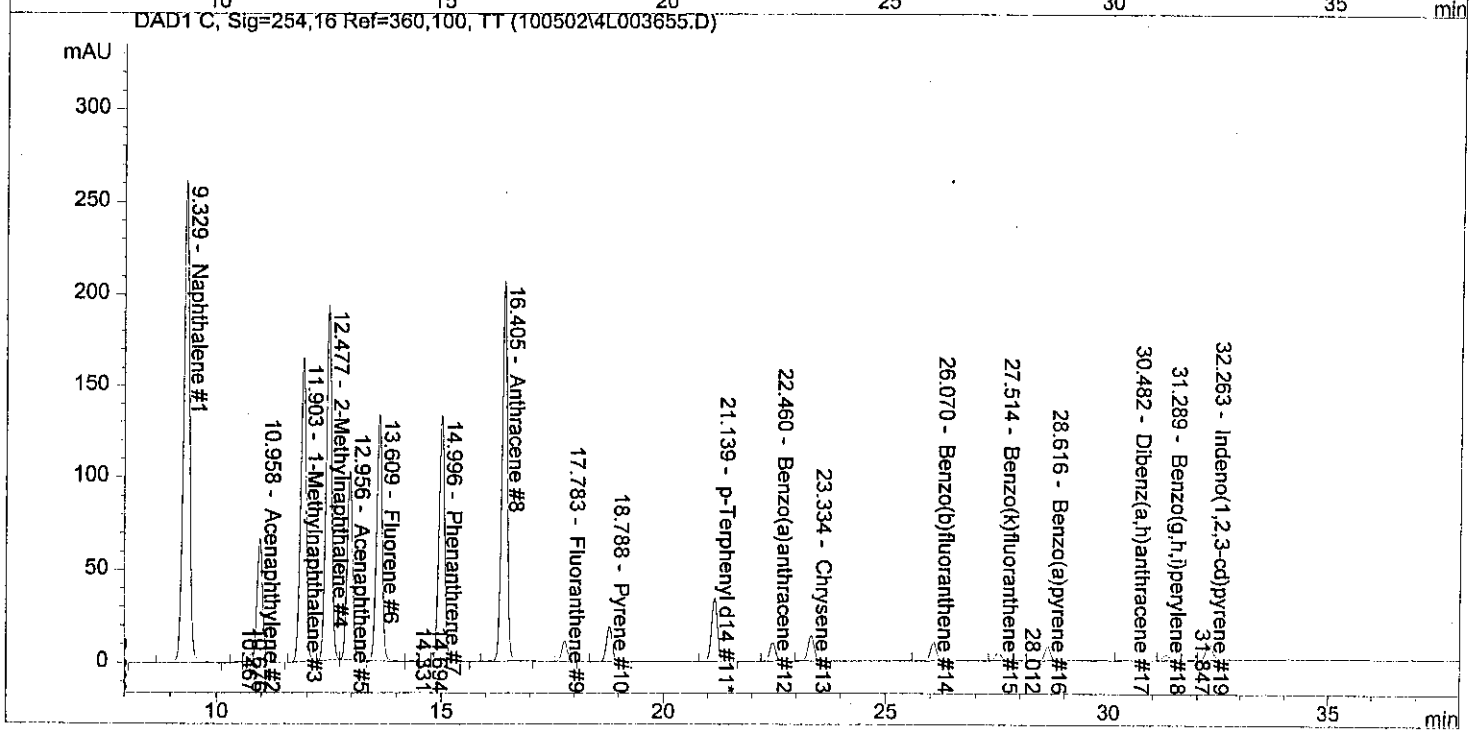
==========

Injection Date : 10/5/2002 3:07:09 PM
Sample Name : WG126673-01 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 : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/5/2002 2:03:10 PM
Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/2002 2:00:42 PM
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 |
|---|---|---|---|---|---|---|
| 9.346 | BB | 759.78961 | 2.65615e-2 | 20.18112 | | Naphthalene #1 |
| 11.920 | BB | 872.51031 | 2.31602e-2 | 20.20752 | | 1-Methylnaphthalene #3 |
| 12.494 | BB | 1129.03271 | 1.78606e-2 | 20.16521 | | 2-Methylnaphthalene #4 |
| 12.972 | BB | 1413.59045 | 1.42261e-2 | 20.10982 | | Acenaphthene #5 |
| 13.626 | BB | 2970.95752 | 6.75341e-3 | 20.06409 | | Fluorene #6 |
| 15.013 | BBA | 113.27578 | 1.76550e-1 | 19.99887 | | Phenanthrene #7 |
| 16.422 | BBA | 62.92943 | 3.18463e-1 | 20.04072 | | Anthracene #8 |
| 17.801 | BB | 76.51484 | 2.57377e-2 | 1.96931 | | Fluoranthene #9 |
| 18.806 | BB | 49.32228 | 4.13429e-2 | 2.03913 | | Pyrene #10 |
| 21.155 | BB | 65.81669 | 3.01165e-1 | 19.82169 | | p-Terphenyl d14 #11* |
| 22.476 | BB | 232.98126 | 8.43985e-3 | 1.96633 | | Benzo(a)anthracene #12 |
| 23.351 | BB | 49.37175 | 4.11676e-2 | 2.03252 | | Chrysene #13 |
| 26.087 | BB | 113.52775 | 1.72941e-2 | 1.96336 | | Benzo(b)fluoranthene #14 |
| 27.531 | BBA | 342.38400 | 2.86928e-3 | 9.82395e-1 | | Benzo(k)fluoranthene #15 |
| 28.633 | BB | 394.02606 | 5.25261e-3 | 2.06967 | | Benzo(a)pyrene #16 |
| 30.499 | BB | 46.13639 | 4.23448e-2 | 1.95364 | | Dibenz(a,h)anthracene #17 |
| 31.308 | BB | 64.61304 | 3.11640e-2 | 2.01360 | | Benzo(g,h,i)perylene #18 |
| 32.276 | BB | 127.98006 | 1.46803e-2 | 1.87879 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 179.45777

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.329 | PBA | 2403.18750 | 8.38552e-3 | 20.15199 | | Naphthalene #1 |
| 10.958 | BBA | 576.77789 | 3.42564e-2 | 19.75834 | | Acenaphthylene #2 |
| 11.903 | PB | 1422.23193 | 1.39537e-2 | 19.84543 | | 1-Methylnaphthalene #3 |
| 12.477 | BB | 1653.76440 | 1.20866e-2 | 19.98838 | | 2-Methylnaphthalene #4 |
| 12.956 | BB | 869.00562 | 2.27212e-2 | 19.74484 | | Acenaphthene #5 |
| 13.609 | BB | 1134.42419 | 1.74923e-2 | 19.84371 | | Fluorene #6 |
| 14.996 | BBA | 1134.98584 | 1.74262e-2 | 19.77849 | | Phenanthrene #7 |
| 16.405 | PBA | 1795.56165 | 1.13158e-2 | 20.31824 | | Anthracene #8 |
| 17.783 | PB | 93.44679 | 2.10576e-2 | 1.96777 | | Fluoranthene #9 |
| 18.788 | BBA | 173.94849 | 1.12055e-2 | 1.94918 | | Pyrene #10 |
| 21.139 | PBA | 303.30887 | 6.61686e-2 | 20.06952 | | p-Terphenyl d14 #11* |
| 22.460 | PBA | 90.06539 | 2.14582e-2 | 1.93264 | | Benzo(a)anthracene #12 |
| 23.334 | BBA | 130.38680 | 1.53345e-2 | 1.99942 | | Chrysene #13 |
| 26.070 | PBA | 96.16703 | 2.04865e-2 | 1.97013 | | Benzo(b)fluoranthene #14 |
| 27.514 | BBA | 41.66878 | 2.33543e-2 | 9.73147e-1 | | Benzo(k)fluoranthene #15 |
| 28.616 | BBA | 73.15720 | 2.77930e-2 | 2.03326 | | Benzo(a)pyrene #16 |
| 30.482 | PBA | 19.29675 | 1.01929e-1 | 1.96690 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.289 | BB | 33.18448 | 6.01849e-2 | 1.99720 | | Benzo(g,h,i)perylene #18 |
| 32.263 | BBA | 93.49360 | 1.98964e-2 | 1.86018 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 198.14877

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\100502\4L003666.D Sample Name: WG126673-02 CCV
HPLC4 10/10/2002 3:21:20 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/6/2002 1:50:07 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.377 | 20.0 | 20.119 | 0.6 |
| 1-Methylnaphthalene #3 | 11.948 | 20.0 | 20.098 | 0.5 |
| 2-Methylnaphthalene #4 | 12.525 | 20.0 | 20.174 | 0.9 |
| Acenaphthene #5 | 13.002 | 20.0 | 20.312 | 1.6 |
| Fluorene #6 | 13.664 | 20.0 | 20.553 | 2.8 |
| Phenanthrene #7 | 15.057 | 20.0 | 19.986 | -0.1 |
| Anthracene #8 | 16.475 | 20.0 | 21.121 | 5.6 |
| Fluoranthene #9 | 17.859 | 2.0 | 2.034 | 1.7 |
| Pyrene #10 | 18.868 | 2.0 | 1.928 | -3.6 |
| p-Terphenyl d14 #11* | 21.241 | 20.0 | 20.339 | 1.7 |
| Benzo(a)anthracene #12 | 22.571 | 2.0 | 1.992 | -0.4 |
| Chrysene #13 | 23.458 | 2.0 | 1.969 | -1.6 |
| Benzo(b)fluoranthene #14 | 26.207 | 2.0 | 2.029 | 1.4 |
| Benzo(k)fluoranthene #15 | 27.671 | 1.0 | 1.013 | 1.3 |
| Benzo(a)pyrene #16 | 28.775 | 2.0 | 2.073 | 3.6 |
| Dibenz(a,h)anthracene #1 | 30.672 | 2.0 | 1.961 | -2.0 |
| Benzo(g,h,i)perylene #18 | 31.494 | 2.0 | 1.975 | -1.3 |
| Indeno(1,2,3-cd)pyrene # | 32.471 | 2.0 | 2.007 | 0.4 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.361 | 20.0 | 20.824 | 4.1 |
| Acenaphthylene #2 | 10.990 | 20.0 | 20.350 | 1.8 |
| 1-Methylnaphthalene #3 | 11.932 | 20.0 | 20.470 | 2.3 |
| 2-Methylnaphthalene #4 | 12.509 | 20.0 | 20.576 | 2.9 |
| Acenaphthene #5 | 12.986 | 20.0 | 20.395 | 2.0 |
| Fluorene #6 | 13.647 | 20.0 | 20.407 | 2.0 |
| Phenanthrene #7 | 15.041 | 20.0 | 20.424 | 2.1 |
| Anthracene #8 | 16.459 | 20.0 | 21.483 | 7.4 |
| Fluoranthene #9 | 17.843 | 2.0 | 2.031 | 1.5 |
| Pyrene #10 | 18.851 | 2.0 | 2.042 | 2.1 |
| p-Terphenyl d14 #11* | 21.225 | 20.0 | 20.677 | 3.4 |
| Benzo(a)anthracene #12 | 22.555 | 2.0 | 2.037 | 1.8 |
| Chrysene #13 | 23.443 | 2.0 | 2.040 | 2.0 |
| Benzo(b)fluoranthene #14 | 26.190 | 2.0 | 2.028 | 1.4 |
| Benzo(k)fluoranthene #15 | 27.654 | 1.0 | 1.005 | 0.5 |
| Benzo(a)pyrene #16 | 28.758 | 2.0 | 2.145 | 7.2 |
| Dibenz(a,h)anthracene #1 | 30.655 | 2.0 | 2.034 | 1.7 |
| Benzo(g,h,i)perylene #18 | 31.476 | 2.0 | 1.780 | -11.0 |
| Indeno(1,2,3-cd)pyrene # | 32.458 | 2.0 | 2.003 | 0.2 |

# = Failed 15.0% Criteria

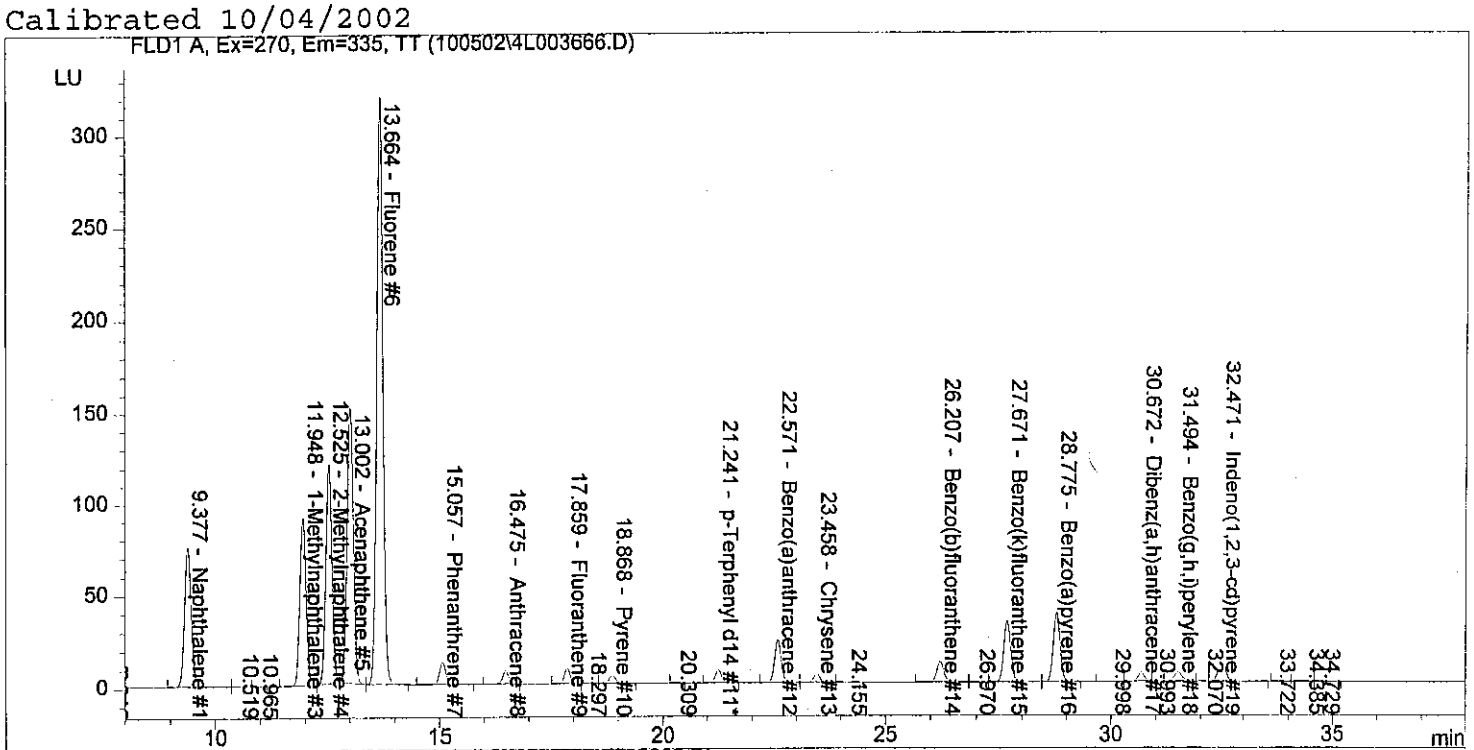
==========

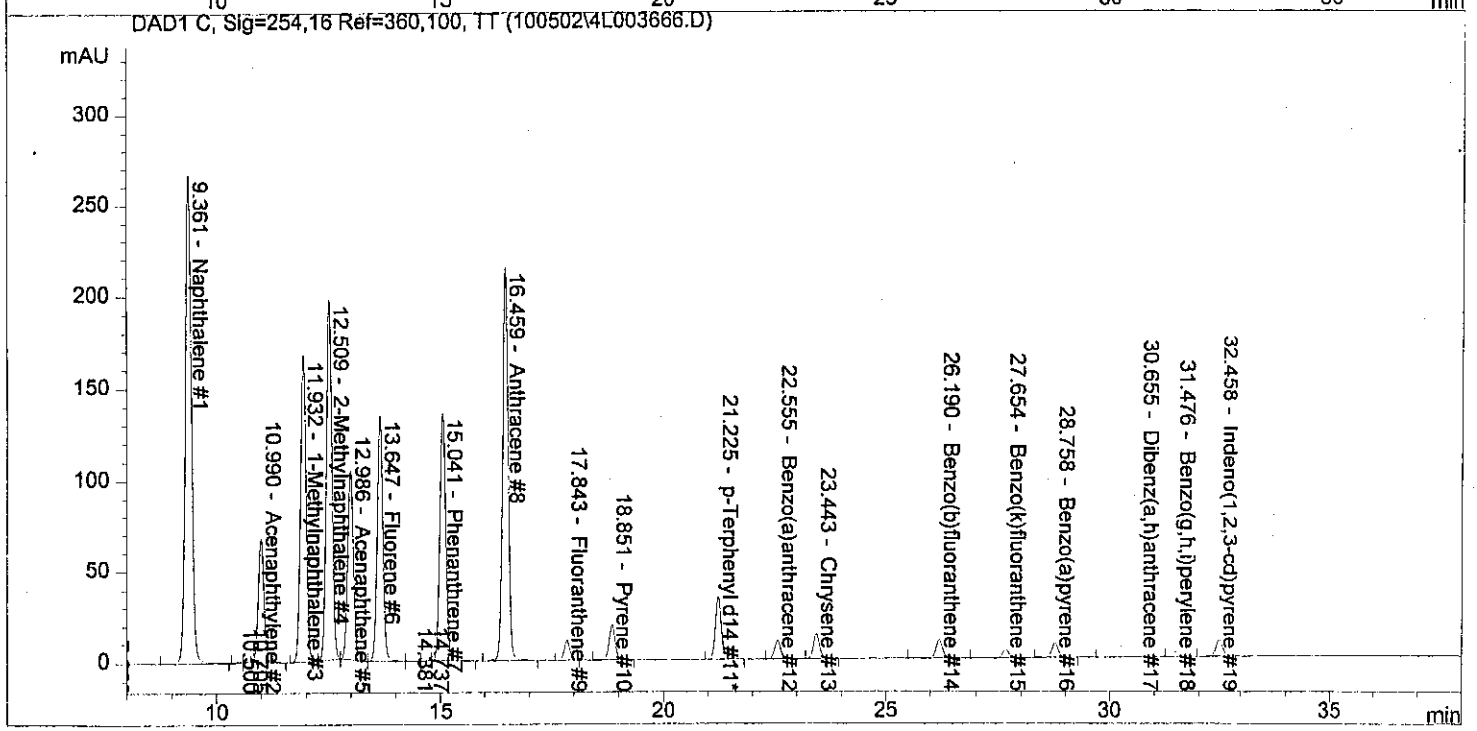
Injection Date : 10/6/2002 1:50:07 AM
Sample Name : WG126673-02 CCV
Acq. Operator : RDC

Seq. Line : 13
Vial : 13
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:20:13 PM
(modified after loading)

Calibrated 10/04/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Thursday, October 10, 2002 3:20:13 PM |
| 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 | 757.40363 | 2.65629e-2 | 20.11886 | | Naphthalene #1 |
| 11.948 | BB | 867.72461 | 2.31622e-2 | 20.09838 | | 1-Methylnaphthalene #3 |
| 12.525 | BB | 1129.53638 | 1.78605e-2 | 20.17409 | | 2-Methylnaphthalene #4 |
| 13.002 | BB | 1427.94189 | 1.42247e-2 | 20.31202 | | Acenaphthene #5 |
| 13.664 | BBA | 3043.54712 | 6.75292e-3 | 20.55283 | | Fluorene #6 |
| 15.057 | BBA | 113.19852 | 1.76553e-1 | 19.98554 | | Phenanthrene #7 |
| 16.475 | PBA | 66.36625 | 3.18252e-1 | 21.12120 | | Anthracene #8 |
| 17.859 | PB | 79.06336 | 2.57269e-2 | 2.03405 | | Fluoranthene #9 |
| 18.868 | BBA | 46.55648 | 4.14080e-2 | 1.92781 | | Pyrene #10 |
| 21.241 | BB | 67.56433 | 3.01034e-1 | 20.33915 | | p-Terphenyl d14 #11* |
| 22.571 | BB | 236.09430 | 8.43728e-3 | 1.99199 | | Benzo(a)anthracene #12 |
| 23.458 | BB | 47.78869 | 4.11976e-2 | 1.96878 | | Chrysene #13 |
| 26.207 | BB | 117.37299 | 1.72831e-2 | 2.02857 | | Benzo(b)fluoranthene #14 |
| 27.671 | BB | 353.24451 | 2.86781e-3 | 1.01304 | | Benzo(k)fluoranthene #15 |
| 28.775 | BB | 394.62430 | 5.25239e-3 | 2.07272 | | Benzo(a)pyrene #16 |
| 30.672 | BB | 46.30710 | 4.23405e-2 | 1.96067 | | Dibenz(a,h)anthracene #17 |
| 31.494 | BB | 63.31564 | 3.11877e-2 | 1.97467 | | Benzo(g,h,i)perylene #18 |
| 32.471 | BBA | 136.89922 | 1.46614e-2 | 2.00714 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 181.68153 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.361 | PBA | 2482.96851 | 8.38678e-3 | 20.82410 | | Naphthalene #1 |
| 10.990 | BBA | 594.29456 | 3.42423e-2 | 20.35002 | | Acenaphthylene #2 |
| 11.932 | PB | 1467.39038 | 1.39498e-2 | 20.46976 | | 1-Methylnaphthalene #3 |
| 12.509 | BB | 1702.59119 | 1.20853e-2 | 20.57630 | | 2-Methylnaphthalene #4 |
| 12.986 | BB | 897.97437 | 2.27117e-2 | 20.39452 | | Acenaphthene #5 |
| 13.647 | BBA | 1166.92273 | 1.74875e-2 | 20.40652 | | Fluorene #6 |
| 15.041 | BBA | 1172.47522 | 1.74197e-2 | 20.42422 | | Phenanthrene #7 |
| 16.459 | PB | 1899.23657 | 1.13112e-2 | 21.48263 | | Anthracene #8 |
| 17.843 | BB | 96.49622 | 2.10450e-2 | 2.03076 | | Fluoranthene #9 |
| 18.851 | BBA | 182.42557 | 1.11959e-2 | 2.04241 | | Pyrene #10 |
| 21.225 | BBA | 312.58340 | 6.61497e-2 | 20.67729 | | p-Terphenyl d14 #11* |
| 22.555 | PBA | 95.01171 | 2.14356e-2 | 2.03663 | | Benzo(a)anthracene #12 |
| 23.443 | BBA | 133.08841 | 1.53287e-2 | 2.04008 | | Chrysene #13 |
| 26.190 | BBA | 99.07352 | 2.04735e-2 | 2.02838 | | Benzo(b)fluoranthene #14 |
| 27.654 | PB | 43.03093 | 2.33466e-2 | 1.00463 | | Benzo(k)fluoranthene #15 |
| 28.758 | BBA | 77.30090 | 2.77485e-2 | 2.14499 | | Benzo(a)pyrene #16 |
| 30.655 | BBA | 19.96418 | 1.01867e-1 | 2.03369 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.476 | PB | 29.46308 | 6.04292e-2 | 1.78043 | | Benzo(g,h,i)perylene #18 |
| 32.458 | BBA | 100.88546 | 1.98561e-2 | 2.00319 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 204.75055

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\100502\4L003677.D Sample Name: WG126673-03 CCV
HPLC4 10/10/2002 4:18:53 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/6/2002 12:12:56 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.336 | 20.0 | 19.273 | -3.6 |
| 1-Methylnaphthalene #3 | 11.915 | 20.0 | 19.300 | -3.5 |
| 2-Methylnaphthalene #4 | 12.492 | 20.0 | 19.332 | -3.3 |
| Acenaphthene #5 | 12.972 | 20.0 | 19.591 | -2.0 |
| Fluorene #6 | 13.630 | 20.0 | 20.115 | 0.6 |
| Phenanthrene #7 | 15.019 | 20.0 | 19.185 | -4.1 |
| Anthracene #8 | 16.426 | 20.0 | 20.660 | 3.3 |
| Fluoranthene #9 | 17.805 | 2.0 | 2.009 | 0.5 |
| Pyrene #10 | 18.811 | 2.0 | 1.802 | -9.9 |
| p-Terphenyl d14 #11* | 21.165 | 20.0 | 20.348 | 1.7 |
| Benzo(a)anthracene #12 | 22.480 | 2.0 | 1.925 | -3.8 |
| Chrysene #13 | 23.353 | 2.0 | 1.935 | -3.3 |
| Benzo(b)fluoranthene #14 | 26.080 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.521 | 1.0 | 0.986 | -1.4 |
| Benzo(a)pyrene #16 | 28.624 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.488 | 2.0 | 1.916 | -4.2 |
| Benzo(g,h,i)perylene #18 | 31.297 | 2.0 | 1.881 | -5.9 |
| Indeno(1,2,3-cd)pyrene # | 32.260 | 2.0 | 1.964 | -1.8 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.316 | 20.0 | 20.570 | 2.8 |
| Acenaphthylene #2 | 10.943 | 20.0 | 19.980 | -0.1 |
| 1-Methylnaphthalene #3 | 11.895 | 20.0 | 20.177 | 0.9 |
| 2-Methylnaphthalene #4 | 12.472 | 20.0 | 20.269 | 1.3 |
| Acenaphthene #5 | 12.953 | 20.0 | 20.055 | 0.3 |
| Fluorene #6 | 13.610 | 20.0 | 20.125 | 0.6 |
| Phenanthrene #7 | 14.999 | 20.0 | 20.015 | 0.1 |
| Anthracene #8 | 16.405 | 20.0 | 21.127 | 5.6 |
| Fluoranthene #9 | 17.784 | 2.0 | 2.000 | 0.0 |
| Pyrene #10 | 18.790 | 2.0 | 2.010 | 0.5 |
| p-Terphenyl d14 #11* | 21.145 | 20.0 | 20.267 | 1.3 |
| Benzo(a)anthracene #12 | 22.460 | 2.0 | 1.998 | -0.1 |
| Chrysene #13 | 23.333 | 2.0 | 1.994 | -0.3 |
| Benzo(b)fluoranthene #14 | 26.058 | 2.0 | 1.994 | -0.3 |
| Benzo(k)fluoranthene #15 | 27.500 | 1.0 | 0.996 | -0.4 |
| Benzo(a)pyrene #16 | 28.604 | 2.0 | 2.134 | 6.7 |
| Dibenz(a,h)anthracene #1 | 30.468 | 2.0 | 1.874 | -6.3 |
| Benzo(g,h,i)perylene #18 | 31.275 | 2.0 | 2.114 | 5.7 |
| Indeno(1,2,3-cd)pyrene # | 32.241 | 2.0 | 1.969 | -1.5 |

# = Failed 15.0% Criteria

1/1 DCB01 07/99 50 CCV 8 level 1 20/2/1 ppm

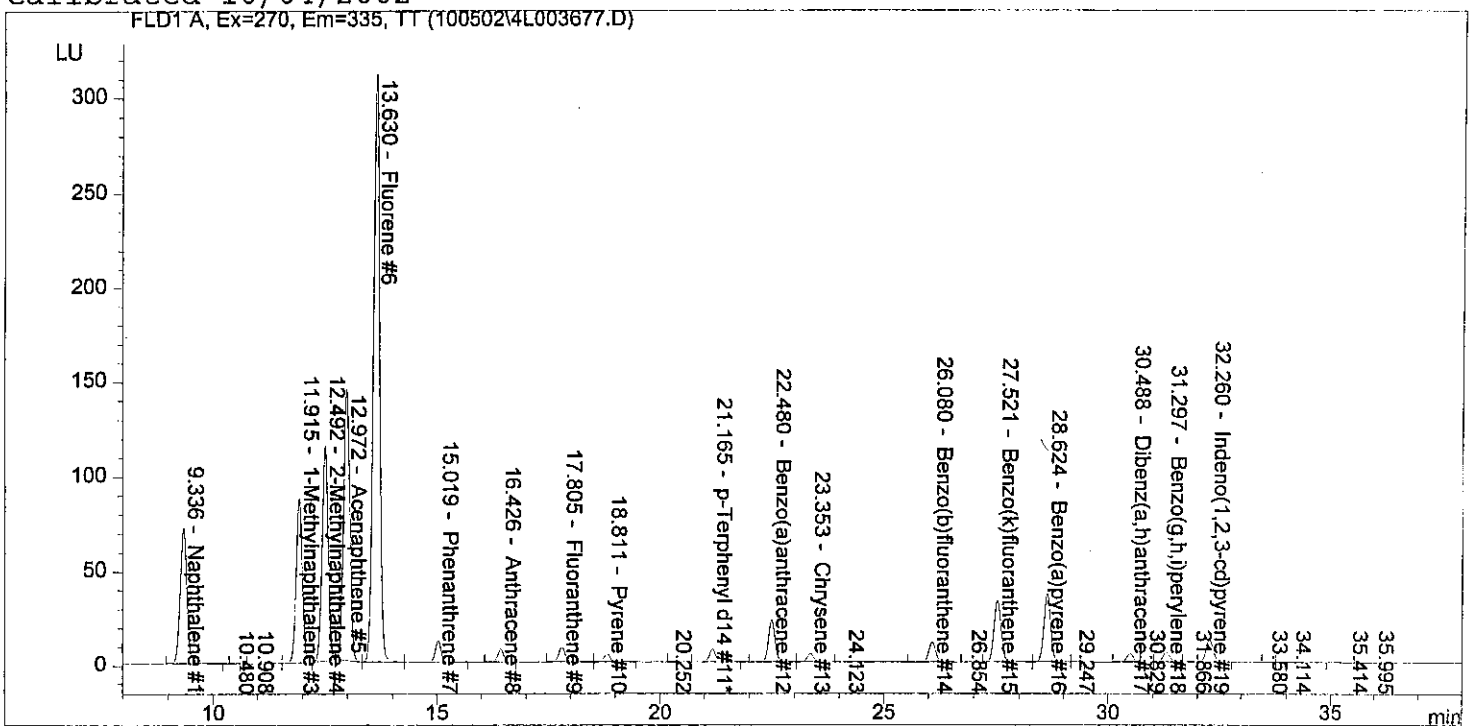
==========

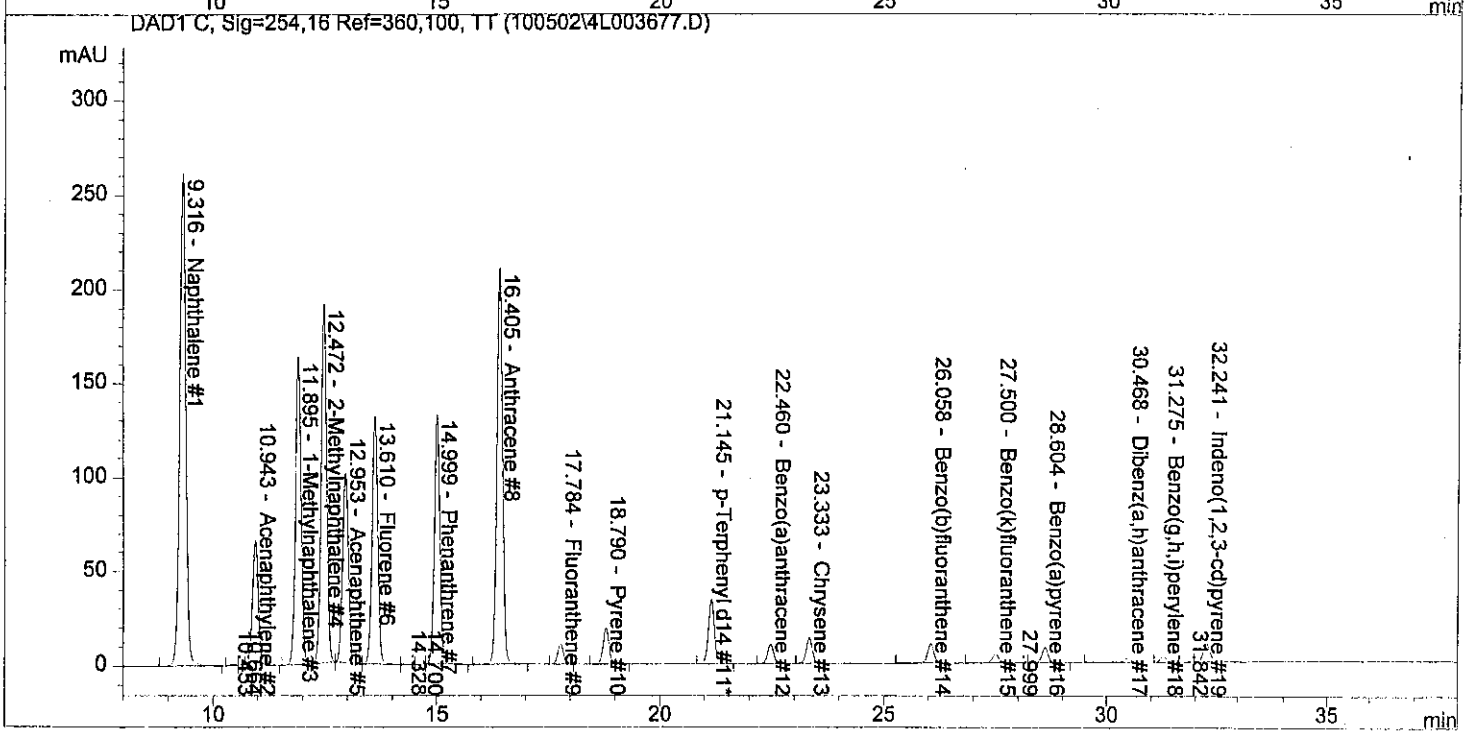
Injection Date : 10/6/2002 12:12:56 PM
Sample Name : WG126673-03 CCV
Acq. Operator : RDC

Seq. Line : 24
Vial : 24
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:56:14 PM
(modified after loading)

Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2002 3:56:14 PM
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 | BB | 724.97351 | 2.65839e-2 | 19.27260 | | Naphthalene #1 |
| 11.915 | BB | 832.72784 | 2.31772e-2 | 19.30027 | | 1-Methylnaphthalene #3 |
| 12.492 | BB | 1081.74365 | 1.78707e-2 | 19.33151 | | 2-Methylnaphthalene #4 |
| 12.972 | BB | 1376.76038 | 1.42297e-2 | 19.59092 | | Acenaphthene #5 |
| 13.630 | BB | 2978.50293 | 6.75336e-3 | 20.11490 | | Fluorene #6 |
| 15.019 | BBA | 108.55705 | 1.76730e-1 | 19.18528 | | Phenanthrene #7 |
| 16.426 | BB | 64.89926 | 3.18340e-1 | 20.66000 | | Anthracene #8 |
| 17.805 | BB | 78.09406 | 2.57309e-2 | 2.00943 | | Fluoranthene #9 |
| 18.811 | BBA | 43.42253 | 4.14919e-2 | 1.80168 | | Pyrene #10 |
| 21.165 | BB | 67.59357 | 3.01032e-1 | 20.34781 | | p-Terphenyl d14 #11* |
| 22.480 | BB | 227.94269 | 8.44414e-3 | 1.92478 | | Benzo(a)anthracene #12 |
| 23.353 | BB | 46.94181 | 4.12144e-2 | 1.93468 | | Chrysene #13 |
| 26.080 | PBA | 111.98196 | 1.72987e-2 | 1.93714 | | Benzo(b)fluoranthene #14 |
| 27.521 | BB | 343.56122 | 2.86911e-3 | 9.85716e-1 | | Benzo(k)fluoranthene #15 |
| 28.624 | BB | 380.31628 | 5.25791e-3 | 1.99967 | | Benzo(a)pyrene #16 |
| 30.488 | PB | 45.23372 | 4.23679e-2 | 1.91646 | | Dibenz(a,h)anthracene #17 |
| 31.297 | BB | 60.19867 | 3.12488e-2 | 1.88114 | | Benzo(g,h,i)perylene #18 |
| 32.260 | BB | 133.88007 | 1.46675e-2 | 1.96369 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 176.15767

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.316 | BBA | 2452.76538 | 8.38631e-3 | 20.56965 | | Naphthalene #1 |
| 10.943 | BBA | 583.33112 | 3.42510e-2 | 19.97969 | | Acenaphthylene #2 |
| 11.895 | PB | 1446.21204 | 1.39516e-2 | 20.17696 | | 1-Methylnaphthalene #3 |
| 12.472 | BB | 1677.04163 | 1.20860e-2 | 20.26866 | | 2-Methylnaphthalene #4 |
| 12.953 | BB | 882.82892 | 2.27166e-2 | 20.05486 | | Acenaphthene #5 |
| 13.610 | BB | 1150.68774 | 1.74899e-2 | 20.12536 | | Fluorene #6 |
| 14.999 | BBA | 1148.72314 | 1.74238e-2 | 20.01510 | | Phenanthrene #7 |
| 16.405 | PBA | 1867.58240 | 1.13126e-2 | 21.12712 | | Anthracene #8 |
| 17.784 | PB | 95.00542 | 2.10511e-2 | 1.99997 | | Fluoranthene #9 |
| 18.790 | PBA | 179.49019 | 1.11991e-2 | 2.01013 | | Pyrene #10 |
| 21.145 | PBA | 306.32306 | 6.61623e-2 | 20.26704 | | p-Terphenyl d14 #11* |
| 22.460 | PBA | 93.17780 | 2.14437e-2 | 1.99808 | | Benzo(a)anthracene #12 |
| 23.333 | BBA | 130.00659 | 1.53354e-2 | 1.99370 | | Chrysene #13 |
| 26.058 | BBA | 97.37346 | 2.04810e-2 | 1.99431 | | Benzo(b)fluoranthene #14 |
| 27.500 | BB | 42.65299 | 2.33487e-2 | 9.95893e-1 | | Benzo(k)fluoranthene #15 |
| 28.604 | BBA | 76.89071 | 2.77527e-2 | 2.13393 | | Benzo(a)pyrene #16 |
| 30.468 | PBA | 18.37278 | 1.02023e-1 | 1.87444 | | Dibenz(a,h)anthracene #17 |

| Retime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.275 | BB | 35.18312 | 6.00750e-2 | 2.11363 | | Benzo(g,h,i)perylene #18 |
| 32.241 | BBA | 99.12119 | 1.98652e-2 | 1.96906 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 201.66758

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\100502\4L003685.D Sample Name: WG126673-04 CCV
HPLC4 10/10/2002 4:30:43 PM

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/6/2002 7:45:56 PM Seq. Line : 32

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.376 | 20.0 | 19.686 | -1.6 |
| 1-Methylnaphthalene #3 | 11.947 | 20.0 | 19.680 | -1.6 |
| 2-Methylnaphthalene #4 | 12.524 | 20.0 | 19.728 | -1.4 |
| Acenaphthene #5 | 13.001 | 20.0 | 19.875 | -0.6 |
| Fluorene #6 | 13.657 | 20.0 | 20.231 | 1.2 |
| Phenanthrene #7 | 15.045 | 20.0 | 19.518 | -2.4 |
| Anthracene #8 | 16.453 | 20.0 | 20.601 | 3.0 |
| Fluoranthene #9 | 17.836 | 2.0 | 1.986 | -0.7 |
| Pyrene #10 | 18.841 | 2.0 | 1.906 | -4.7 |
| p-Terphenyl d14 #11* | 21.186 | 20.0 | 20.067 | 0.3 |
| Benzo(a)anthracene #12 | 22.506 | 2.0 | 1.968 | -1.6 |
| Chrysene #13 | 23.379 | 2.0 | 1.949 | -2.6 |
| Benzo(b)fluoranthene #14 | 26.111 | 2.0 | 1.956 | -2.2 |
| Benzo(k)fluoranthene #15 | 27.559 | 1.0 | 0.992 | -0.8 |
| Benzo(a)pyrene #16 | 28.668 | 2.0 | 2.051 | 2.5 |
| Dibenz(a,h)anthracene #1 | 30.540 | 2.0 | 1.872 | -6.4 |
| Benzo(g,h,i)perylene #18 | 31.353 | 2.0 | 2.096 | 4.8 |
| Indeno(1,2,3-cd)pyrene # | 32.306 | 2.0 | 1.837 | -8.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.360 | 20.0 | 20.600 | 3.0 |
| Acenaphthylene #2 | 10.986 | 20.0 | 20.012 | 0.1 |
| 1-Methylnaphthalene #3 | 11.932 | 20.0 | 20.210 | 1.0 |
| 2-Methylnaphthalene #4 | 12.508 | 20.0 | 20.289 | 1.4 |
| Acenaphthene #5 | 12.986 | 20.0 | 20.064 | 0.3 |
| Fluorene #6 | 13.641 | 20.0 | 20.155 | 0.8 |
| Phenanthrene #7 | 15.029 | 20.0 | 20.037 | 0.2 |
| Anthracene #8 | 16.437 | 20.0 | 20.998 | 5.0 |
| Fluoranthene #9 | 17.820 | 2.0 | 2.007 | 0.3 |
| Pyrene #10 | 18.824 | 2.0 | 2.018 | 0.9 |
| p-Terphenyl d14 #11* | 21.171 | 20.0 | 20.279 | 1.4 |
| Benzo(a)anthracene #12 | 22.490 | 2.0 | 1.997 | -0.1 |
| Chrysene #13 | 23.363 | 2.0 | 2.000 | 0.0 |
| Benzo(b)fluoranthene #14 | 26.095 | 2.0 | 1.993 | -0.3 |
| Benzo(k)fluoranthene #15 | 27.543 | 1.0 | 0.970 | -3.0 |
| Benzo(a)pyrene #16 | 28.652 | 2.0 | 2.076 | 3.8 |
| Dibenz(a,h)anthracene #1 | 30.523 | 2.0 | 1.981 | -0.9 |
| Benzo(g,h,i)perylene #18 | 31.335 | 2.0 | 2.168 | 8.4 |
| Indeno(1,2,3-cd)pyrene # | 32.294 | 2.0 | 1.996 | -0.2 |

# = Failed 15.0% Criteria

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

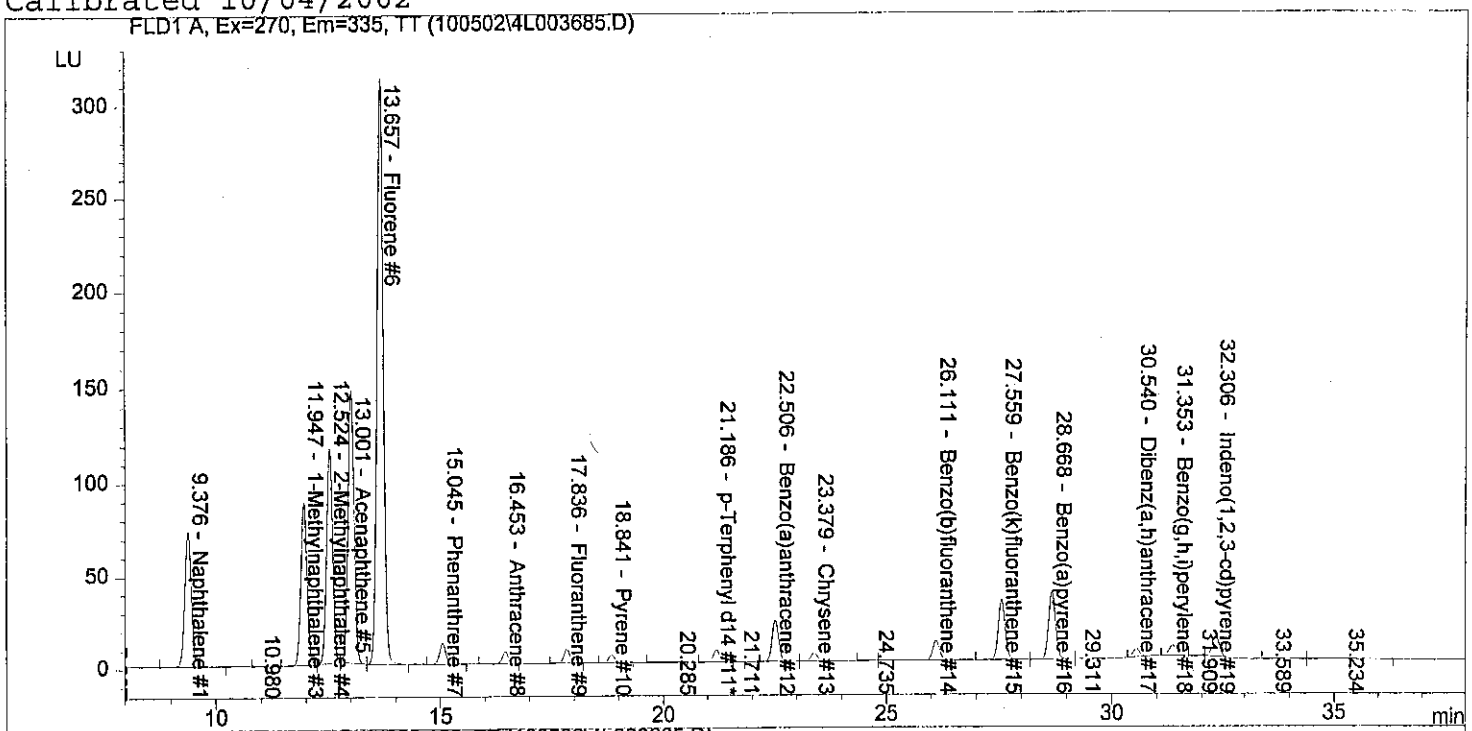
==========

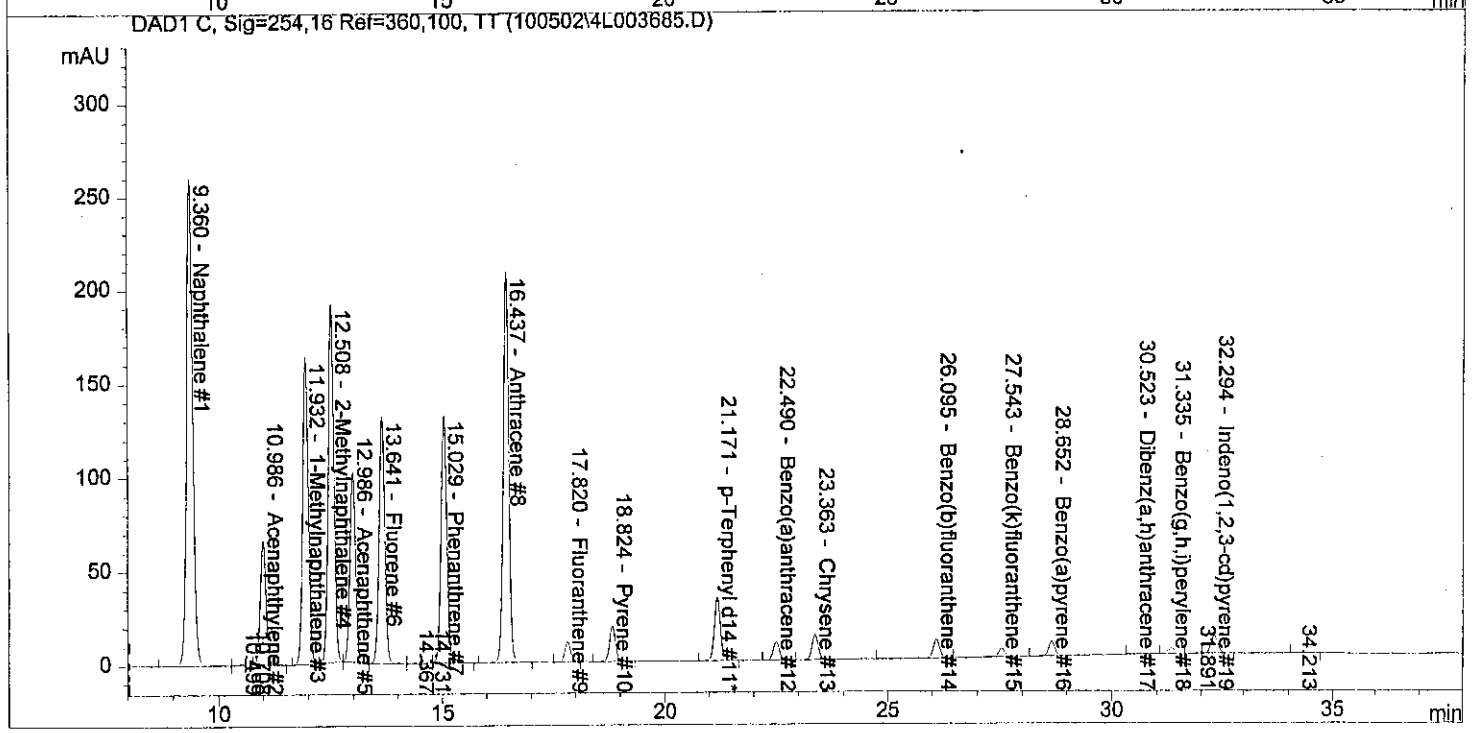
Injection Date : 10/6/2002 7:45:56 PM
Sample Name : WG126673-04 CCV
Acq. Operator : RDC

Seq. Line : 32
Vial : 24
Inj : 1
Inj Volume : 8 µl

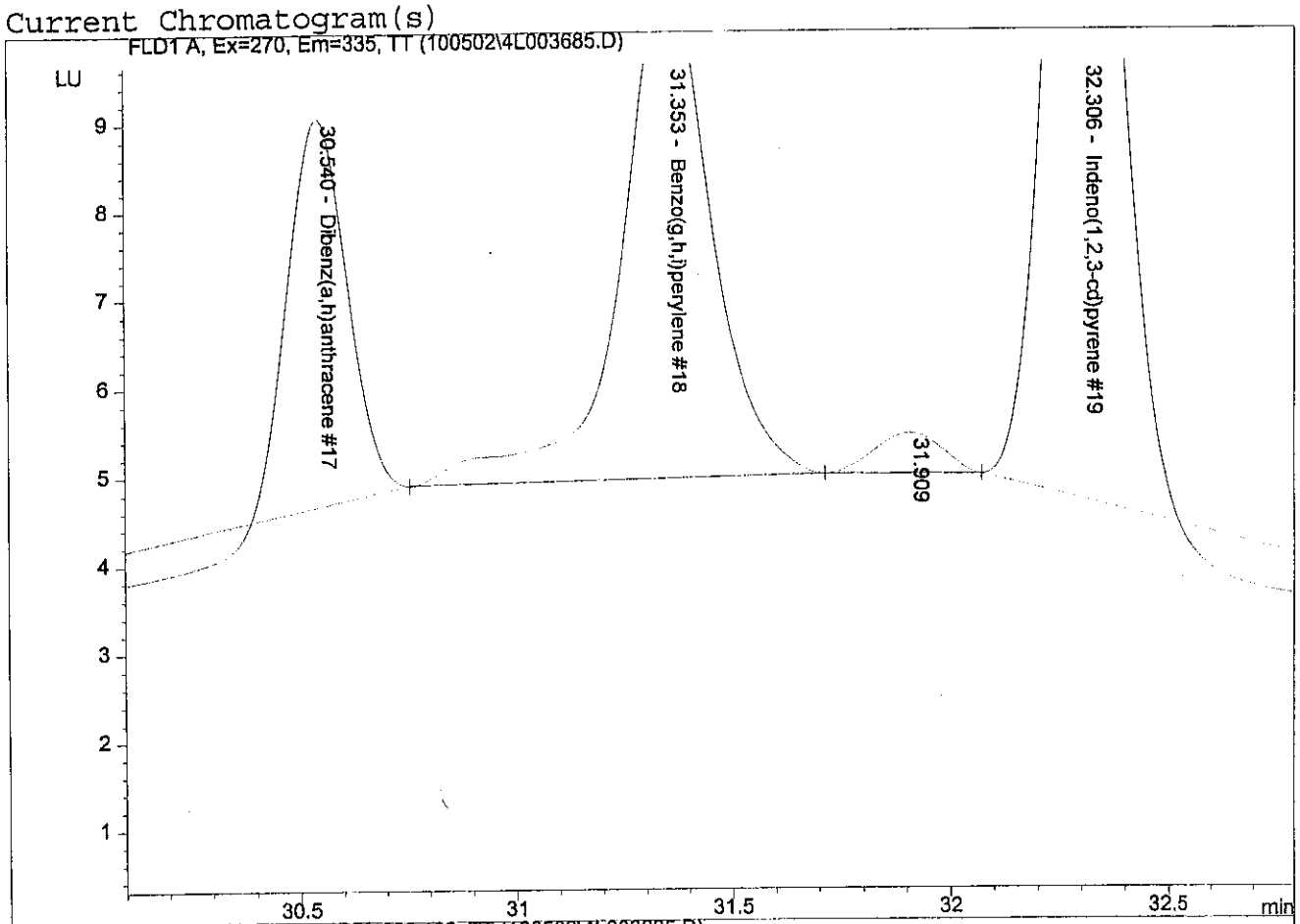
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:56:14 PM
(modified after loading)

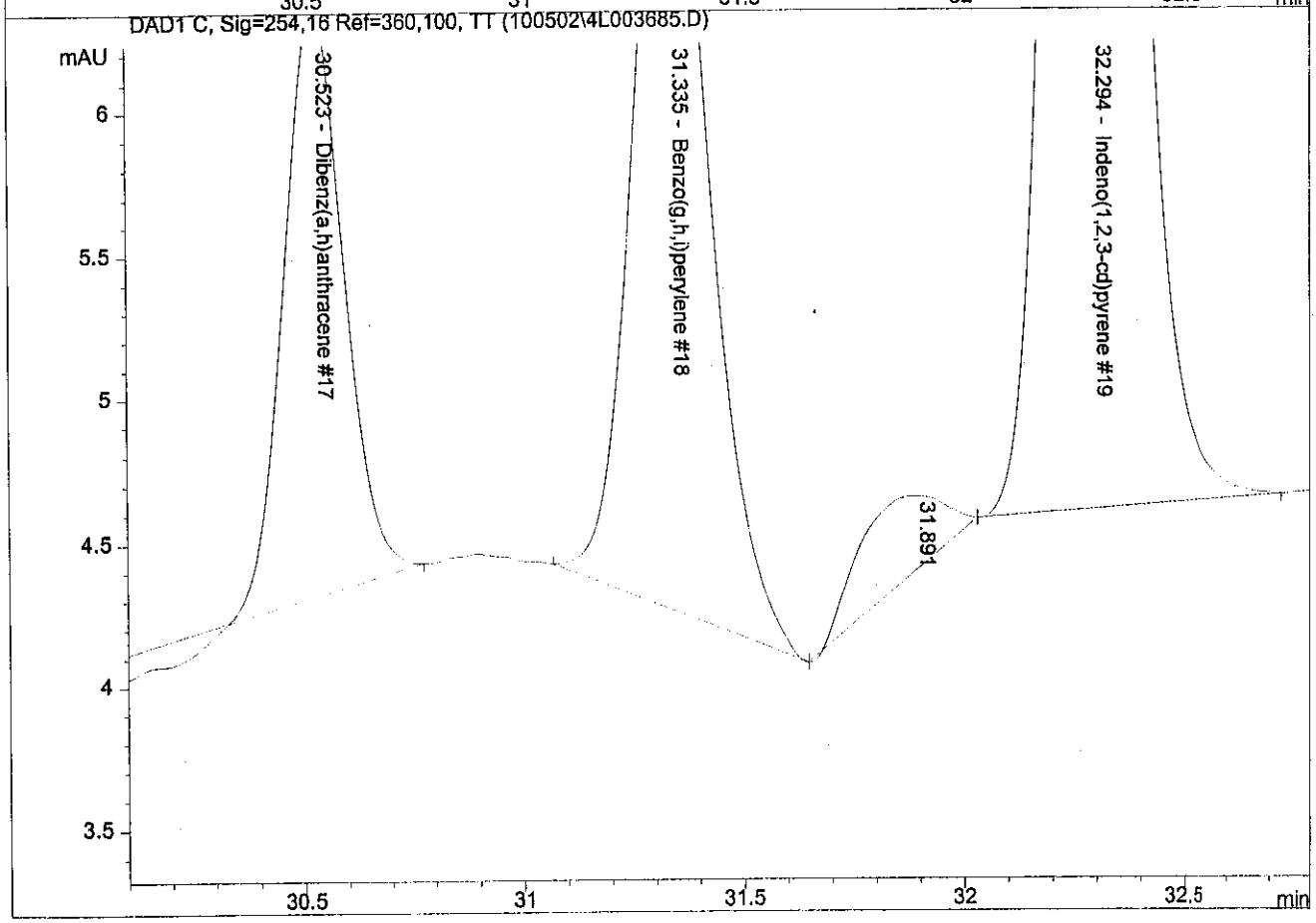
Calibrated 10/04/2002



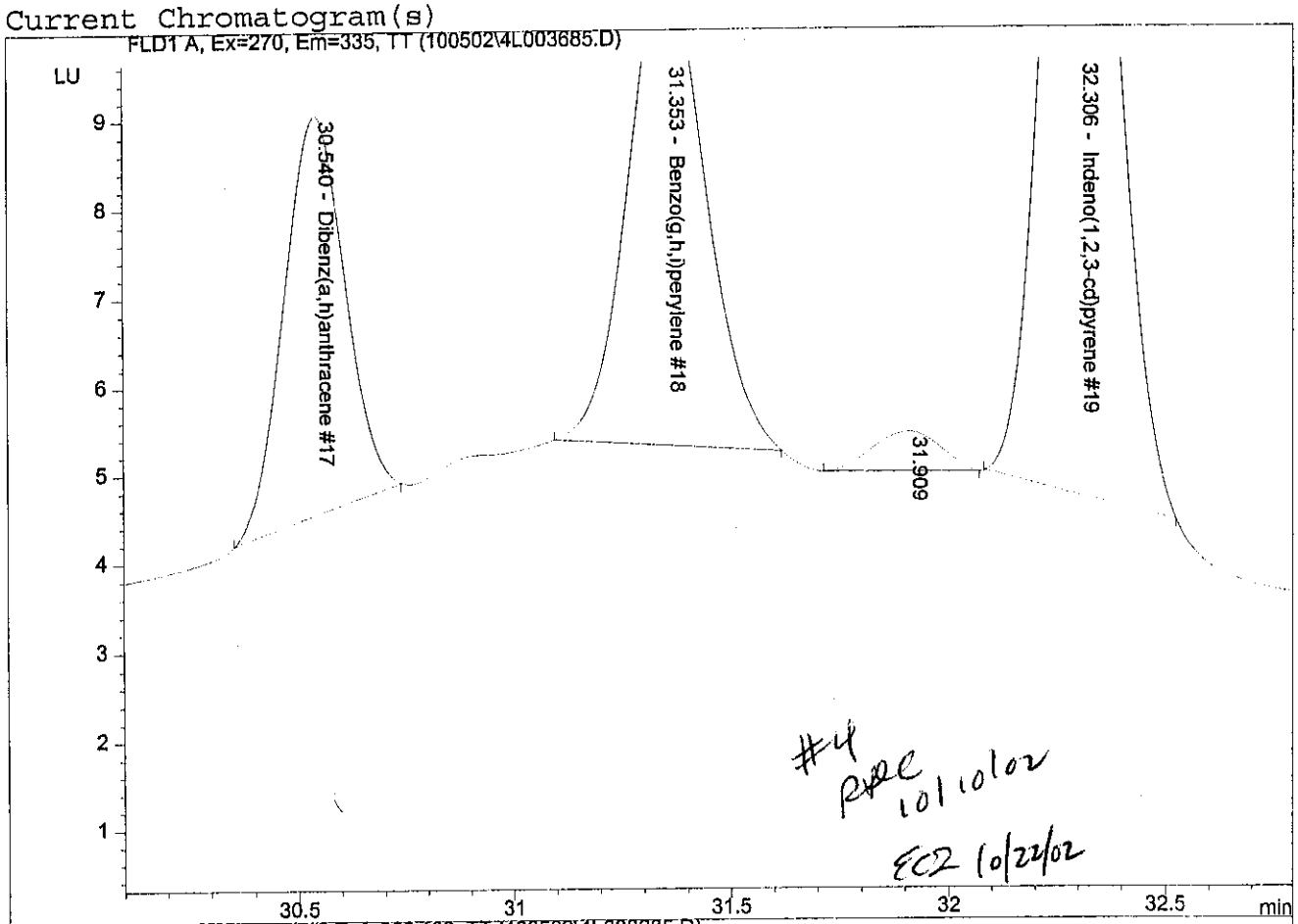



Current Chromatogram(s)

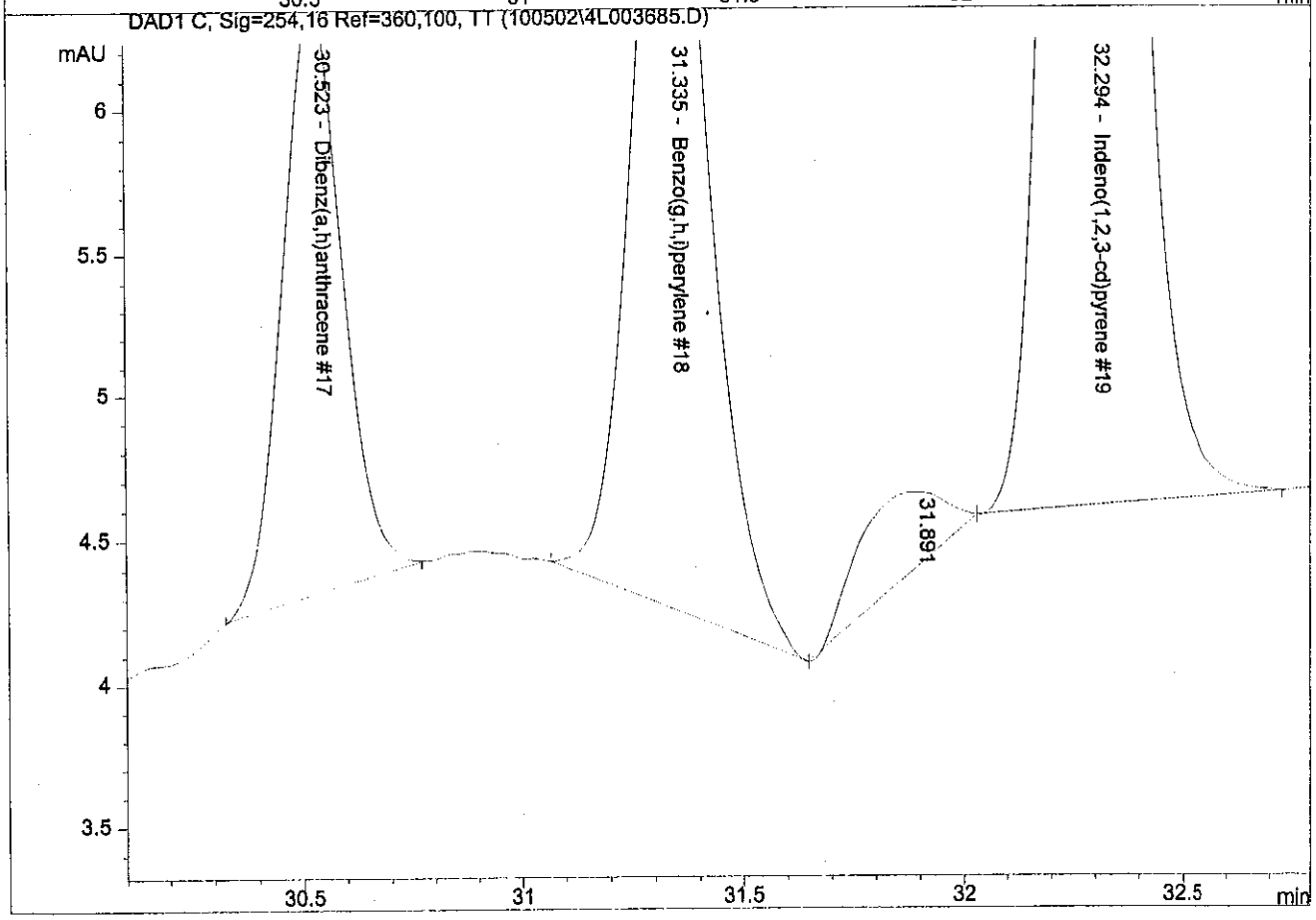


Current Chromatogram(s)




#4
RAC 10/10/02
ECZ 10/22/02



External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2002 3:56:14 PM
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 |
|---|---|---|---|---|---|---|
| 9.376 | BBA | 740.81995 | 2.65734e-2 | 19.68611 | | Naphthalene #1 |
| 11.947 | BB | 849.37439 | 2.31699e-2 | 19.67990 | | 1-Methylnaphthalene #3 |
| 12.524 | BB | 1104.23328 | 1.78658e-2 | 19.72800 | | 2-Methylnaphthalene #4 |
| 13.001 | BB | 1396.89636 | 1.42277e-2 | 19.87461 | | Acenaphthene #5 |
| 13.657 | BBA | 2995.72021 | 6.75324e-3 | 20.23082 | | Fluorene #6 |
| 15.045 | PBA | 110.48567 | 1.76655e-1 | 19.51781 | | Phenanthrene #7 |
| 16.453 | PBA | 64.71095 | 3.18351e-1 | 20.60080 | | Anthracene #8 |
| 17.836 | PBA | 77.18157 | 2.57348e-2 | 1.98625 | | Fluoranthene #9 |
| 18.841 | PBA | 46.01500 | 4.14217e-2 | 1.90602 | | Pyrene #10 |
| 21.186 | BB | 66.64658 | 3.01102e-1 | 20.06741 | | p-Terphenyl d14 #11* |
| 22.506 | BB | 233.19904 | 8.43966e-3 | 1.96812 | | Benzo(a)anthracene #12 |
| 23.379 | BB | 47.29702 | 4.12073e-2 | 1.94898 | | Chrysene #13 |
| 26.111 | BB | 113.07153 | 1.72954e-2 | 1.95562 | | Benzo(b)fluoranthene #14 |
| 27.559 | BB | 345.80896 | 2.86880e-3 | 9.92058e-1 | | Benzo(k)fluoranthene #15 |
| 28.668 | BB | 390.31732 | 5.25401e-3 | 2.05073 | | Benzo(a)pyrene #16 |
| 30.540 | MM | 44.15191 | 4.23968e-2 | 1.87190 | | Dibenz(a,h)anthracene #17 |
| 31.353 | MM | 67.34692 | 3.11170e-2 | 2.09564 | | Benzo(g,h,i)perylene #18 |
| 32.306 | MM | 125.07478 | 1.46870e-2 | 1.83697 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 177.99776 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.360 | BB | 2456.36792 | 8.38637e-3 | 20.60000 | | Naphthalene #1 |
| 10.986 | BBA | 584.28809 | 3.42503e-2 | 20.01202 | | Acenaphthylene #2 |
| 11.932 | PB | 1448.57837 | 1.39514e-2 | 20.20968 | | 1-Methylnaphthalene #3 |
| 12.508 | BB | 1678.75977 | 1.20859e-2 | 20.28935 | | 2-Methylnaphthalene #4 |
| 12.986 | BB | 883.24860 | 2.27164e-2 | 20.06427 | | Acenaphthene #5 |
| 13.641 | BB | 1152.37207 | 1.74896e-2 | 20.15453 | | Fluorene #6 |
| 15.029 | BBA | 1149.99536 | 1.74236e-2 | 20.03701 | | Phenanthrene #7 |
| 16.437 | PBA | 1856.04944 | 1.13131e-2 | 20.99759 | | Anthracene #8 |
| 17.820 | PB | 95.33717 | 2.10497e-2 | 2.00682 | | Fluoranthene #9 |
| 18.824 | BBA | 180.19534 | 1.11983e-2 | 2.01788 | | Pyrene #10 |
| 21.171 | PBA | 306.51300 | 6.61619e-2 | 20.27949 | | p-Terphenyl d14 #11* |
| 22.490 | PBA | 93.14632 | 2.14439e-2 | 1.99742 | | Benzo(a)anthracene #12 |
| 23.363 | BBA | 130.43787 | 1.53344e-2 | 2.00019 | | Chrysene #13 |
| 26.095 | BB | 97.31250 | 2.04813e-2 | 1.99309 | | Benzo(b)fluoranthene #14 |
| 27.543 | BB | 41.51981 | 2.33552e-2 | 9.69704e-1 | | Benzo(k)fluoranthene #15 |
| 28.652 | BB | 74.72803 | 2.77755e-2 | 2.07561 | | Benzo(a)pyrene #16 |
| 30.523 | MM | 19.44160 | 1.01915e-1 | 1.98139 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.335 | BB | 36.12427 | 6.00275e-2 | 2.16845 | | Benzo(g,h,i)perylene #18 |
| 32.294 | BBA | 100.50941 | 1.98580e-2 | 1.99592 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 201.85042

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\101402\4L003716.D Sample Name: WG127222-02 CCV
HPLC4 10/22/2002 11:34:59 AM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/14/2002 6:18:01 PM Seq. Line : 6

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.320 | 20.0 | 19.232 | -3.8 |
| 1-Methylnaphthalene #3 | 11.893 | 20.0 | 19.286 | -3.6 |
| 2-Methylnaphthalene #4 | 12.469 | 20.0 | 19.319 | -3.4 |
| Acenaphthene #5 | 12.947 | 20.0 | 19.445 | -2.8 |
| Fluorene #6 | 13.602 | 20.0 | 19.788 | -1.1 |
| Phenanthrene #7 | 14.992 | 20.0 | 19.101 | -4.5 |
| Anthracene #8 | 16.399 | 20.0 | 19.938 | -0.3 |
| Fluoranthene #9 | 17.774 | 2.0 | 1.924 | -3.8 |
| Pyrene #10 | 18.780 | 2.0 | 1.778 | -11.1 |
| p-Terphenyl d14 #11* | 21.120 | 20.0 | 19.331 | -3.3 |
| Benzo(a)anthracene #12 | 22.443 | 2.0 | 1.930 | -3.5 |
| Chrysene #13 | 23.319 | 2.0 | 1.935 | -3.2 |
| Benzo(b)fluoranthene #14 | 26.060 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.516 | 1.0 | 0.973 | -2.7 |
| Benzo(a)pyrene #16 | 28.634 | 2.0 | 1.961 | -2.0 |
| Dibenz(a,h)anthracene #1 | 30.528 | 2.0 | 1.917 | -4.2 |
| Benzo(g,h,i)perylene #18 | 31.336 | 2.0 | 1.943 | -2.8 |
| Indeno(1,2,3-cd)pyrene # | 32.311 | 2.0 | 1.946 | -2.7 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.305 | 20.0 | 20.094 | 0.5 |
| Acenaphthylene #2 | 10.930 | 20.0 | 19.675 | -1.6 |
| 1-Methylnaphthalene #3 | 11.878 | 20.0 | 19.780 | -1.1 |
| 2-Methylnaphthalene #4 | 12.455 | 20.0 | 19.883 | -0.6 |
| Acenaphthene #5 | 12.932 | 20.0 | 19.721 | -1.4 |
| Fluorene #6 | 13.588 | 20.0 | 19.773 | -1.1 |
| Phenanthrene #7 | 14.977 | 20.0 | 19.707 | -1.5 |
| Anthracene #8 | 16.384 | 20.0 | 20.464 | 2.3 |
| Fluoranthene #9 | 17.758 | 2.0 | 1.971 | -1.5 |
| Pyrene #10 | 18.764 | 2.0 | 1.973 | -1.4 |
| p-Terphenyl d14 #11* | 21.106 | 20.0 | 19.781 | -1.1 |
| Benzo(a)anthracene #12 | 22.429 | 2.0 | 1.966 | -1.7 |
| Chrysene #13 | 23.305 | 2.0 | 1.965 | -1.8 |
| Benzo(b)fluoranthene #14 | 26.044 | 2.0 | 1.971 | -1.5 |
| Benzo(k)fluoranthene #15 | 27.501 | 1.0 | 0.976 | -2.4 |
| Benzo(a)pyrene #16 | 28.619 | 2.0 | 1.981 | -0.9 |
| Dibenz(a,h)anthracene #1 | 30.513 | 2.0 | 1.878 | -6.1 |
| Benzo(g,h,i)perylene #18 | 31.319 | 2.0 | 2.024 | 1.2 |
| Indeno(1,2,3-cd)pyrene # | 32.299 | 2.0 | 1.971 | -1.5 |

# = Failed 15.0% Criteria

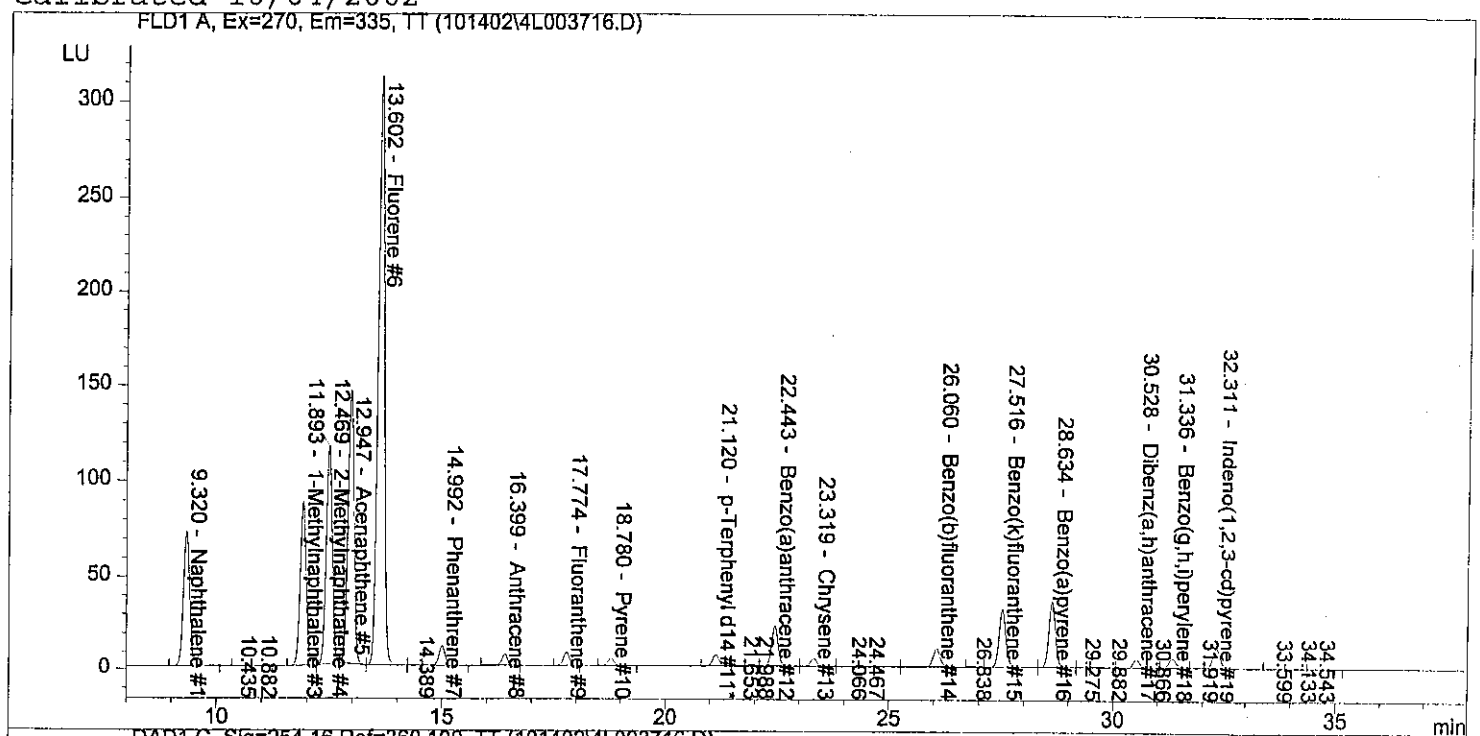
1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

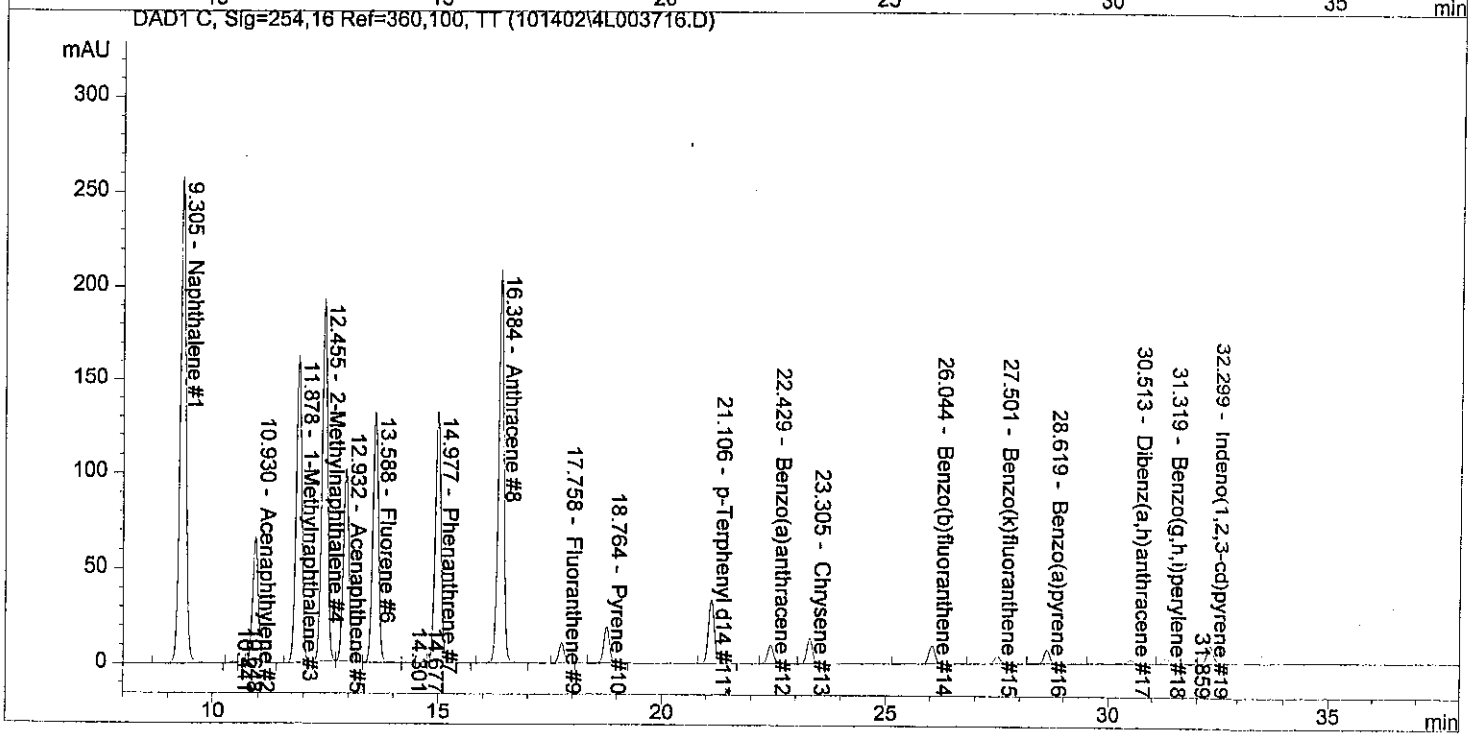
==========

| | | | |
|---|---|---|---|
| Injection Date | : 10/14/2002 6:18:01 PM | Seq. Line : | 6 |
| Sample Name | : WG127222-02 CCV | Vial : | 2 |
| Acq. Operator | : RDC | Inj : | 1 |
| | | Inj Volume : | 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:31:57 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.320 | BBA | 723.41632 | 2.65849e-2 | 19.23197 | | Naphthalene #1 |
| 11.893 | PB | 832.09393 | 2.31774e-2 | 19.28581 | | 1-Methylnaphthalene #3 |
| 12.469 | BB | 1081.01526 | 1.78709e-2 | 19.31867 | | 2-Methylnaphthalene #4 |
| 12.947 | BB | 1366.39819 | 1.42308e-2 | 19.44492 | | Acenaphthene #5 |
| 13.602 | BB | 2929.92090 | 6.75370e-3 | 19.78780 | | Fluorene #6 |
| 14.992 | BBA | 108.06924 | 1.76749e-1 | 19.10118 | | Phenanthrene #7 |
| 16.399 | BBA | 62.60403 | 3.18485e-1 | 19.93842 | | Anthracene #8 |
| 17.774 | PB | 74.73016 | 2.57456e-2 | 1.92398 | | Fluoranthene #9 |
| 18.780 | BBA | 42.83611 | 4.15090e-2 | 1.77808 | | Pyrene #10 |
| 21.120 | BB | 64.15982 | 3.01296e-1 | 19.33110 | | p-Terphenyl d14 #11* |
| 22.443 | BB | 228.59671 | 8.44358e-3 | 1.93017 | | Benzo(a)anthracene #12 |
| 23.319 | BB | 46.95811 | 4.12141e-2 | 1.93534 | | Chrysene #13 |
| 26.060 | BB | 111.99316 | 1.72986e-2 | 1.93733 | | Benzo(b)fluoranthene #14 |
| 27.516 | BB | 339.03363 | 2.86975e-3 | 9.72942e-1 | | Benzo(k)fluoranthene #15 |
| 28.634 | BB | 372.65906 | 5.26104e-3 | 1.96057 | | Benzo(a)pyrene #16 |
| 30.528 | BB | 45.24090 | 4.23677e-2 | 1.91675 | | Dibenz(a,h)anthracene #17 |
| 31.336 | BB | 62.27265 | 3.12074e-2 | 1.94337 | | Benzo(g,h,i)perylene #18 |
| 32.311 | BB | 132.67572 | 1.46701e-2 | 1.94636 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.68476

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.305 | BBA | 2396.35864 | 8.38541e-3 | 20.09446 | | Naphthalene #1 |
| 10.930 | BBA | 574.31055 | 3.42585e-2 | 19.67499 | | Acenaphthylene #2 |
| 11.878 | PB | 1417.49634 | 1.39542e-2 | 19.77996 | | 1-Methylnaphthalene #3 |
| 12.455 | BB | 1645.01685 | 1.20868e-2 | 19.88305 | | 2-Methylnaphthalene #4 |
| 12.932 | BB | 867.92218 | 2.27216e-2 | 19.72054 | | Acenaphthene #5 |
| 13.588 | BB | 1130.31714 | 1.74930e-2 | 19.77259 | | Fluorene #6 |
| 14.977 | BBA | 1130.83594 | 1.74269e-2 | 19.70701 | | Phenanthrene #7 |
| 16.384 | PBA | 1808.58081 | 1.13152e-2 | 20.46446 | | Anthracene #8 |
| 17.758 | PB | 93.58150 | 2.10571e-2 | 1.97055 | | Fluoranthene #9 |
| 18.764 | BBA | 176.11322 | 1.12030e-2 | 1.97299 | | Pyrene #10 |
| 21.106 | PBA | 298.89941 | 6.61780e-2 | 19.78057 | | p-Terphenyl d14 #11* |
| 22.429 | PBA | 91.65668 | 2.14507e-2 | 1.96610 | | Benzo(a)anthracene #12 |
| 23.305 | BBA | 128.07172 | 1.53397e-2 | 1.96458 | | Chrysene #13 |
| 26.044 | PBA | 96.19656 | 2.04864e-2 | 1.97072 | | Benzo(b)fluoranthene #14 |
| 27.501 | BB | 41.79835 | 2.33536e-2 | 9.76141e-1 | | Benzo(k)fluoranthene #15 |
| 28.619 | BBA | 71.23193 | 2.78154e-2 | 1.98134 | | Benzo(a)pyrene #16 |
| 30.513 | PBA | 18.40720 | 1.02019e-1 | 1.87788 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.319 | BB | 33.65217 | 6.01580e-2 | 2.02445 | | Benzo(g,h,i)perylene #18 |
| 32.299 | BB | 99.21613 | 1.98647e-2 | 1.97090 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 197.55328

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\101402\4L003719.D Sample Name: WG127222-03 CCV
HPLC4 10/22/2002 11:37:48 AM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/14/2002 9:07:55 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.324 | 20.0 | 19.307 | -3.5 |
| 1-Methylnaphthalene #3 | 11.893 | 20.0 | 19.364 | -3.2 |
| 2-Methylnaphthalene #4 | 12.469 | 20.0 | 19.393 | -3.0 |
| Acenaphthene #5 | 12.945 | 20.0 | 19.514 | -2.4 |
| Fluorene #6 | 13.602 | 20.0 | 19.797 | -1.0 |
| Phenanthrene #7 | 14.992 | 20.0 | 19.267 | -3.7 |
| Anthracene #8 | 16.405 | 20.0 | 20.224 | 1.1 |
| Fluoranthene #9 | 17.789 | 2.0 | 1.955 | -2.2 |
| Pyrene #10 | 18.797 | 2.0 | 1.901 | -4.9 |
| p-Terphenyl d14 #11* | 21.151 | 20.0 | 19.575 | -2.1 |
| Benzo(a)anthracene #12 | 22.478 | 2.0 | 1.938 | -3.1 |
| Chrysene #13 | 23.362 | 2.0 | 1.928 | -3.6 |
| Benzo(b)fluoranthene #14 | 26.111 | 2.0 | 1.955 | -2.2 |
| Benzo(k)fluoranthene #15 | 27.575 | 1.0 | 0.975 | -2.5 |
| Benzo(a)pyrene #16 | 28.687 | 2.0 | 1.950 | -2.5 |
| Dibenz(a,h)anthracene #1 | 30.584 | 2.0 | 1.907 | -4.6 |
| Benzo(g,h,i)perylene #18 | 31.394 | 2.0 | 1.945 | -2.8 |
| Indeno(1,2,3-cd)pyrene # | 32.369 | 2.0 | 1.949 | -2.5 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.310 | 20.0 | 20.116 | 0.6 |
| Acenaphthylene #2 | 10.934 | 20.0 | 19.679 | -1.6 |
| 1-Methylnaphthalene #3 | 11.879 | 20.0 | 19.804 | -1.0 |
| 2-Methylnaphthalene #4 | 12.455 | 20.0 | 19.894 | -0.5 |
| Acenaphthene #5 | 12.931 | 20.0 | 19.733 | -1.3 |
| Fluorene #6 | 13.587 | 20.0 | 19.764 | -1.2 |
| Phenanthrene #7 | 14.978 | 20.0 | 19.732 | -1.3 |
| Anthracene #8 | 16.390 | 20.0 | 20.490 | 2.5 |
| Fluoranthene #9 | 17.773 | 2.0 | 1.971 | -1.4 |
| Pyrene #10 | 18.781 | 2.0 | 1.977 | -1.1 |
| p-Terphenyl d14 #11* | 21.137 | 20.0 | 19.719 | -1.4 |
| Benzo(a)anthracene #12 | 22.464 | 2.0 | 1.973 | -1.3 |
| Chrysene #13 | 23.348 | 2.0 | 1.971 | -1.5 |
| Benzo(b)fluoranthene #14 | 26.096 | 2.0 | 1.970 | -1.5 |
| Benzo(k)fluoranthene #15 | 27.560 | 1.0 | 0.981 | -1.9 |
| Benzo(a)pyrene #16 | 28.673 | 2.0 | 1.984 | -0.8 |
| Dibenz(a,h)anthracene #1 | 30.570 | 2.0 | 1.985 | -0.8 |
| Benzo(g,h,i)perylene #18 | 31.376 | 2.0 | 1.980 | -1.0 |
| Indeno(1,2,3-cd)pyrene # | 32.359 | 2.0 | 1.966 | -1.7 |

# = Failed 15.0% Criteria

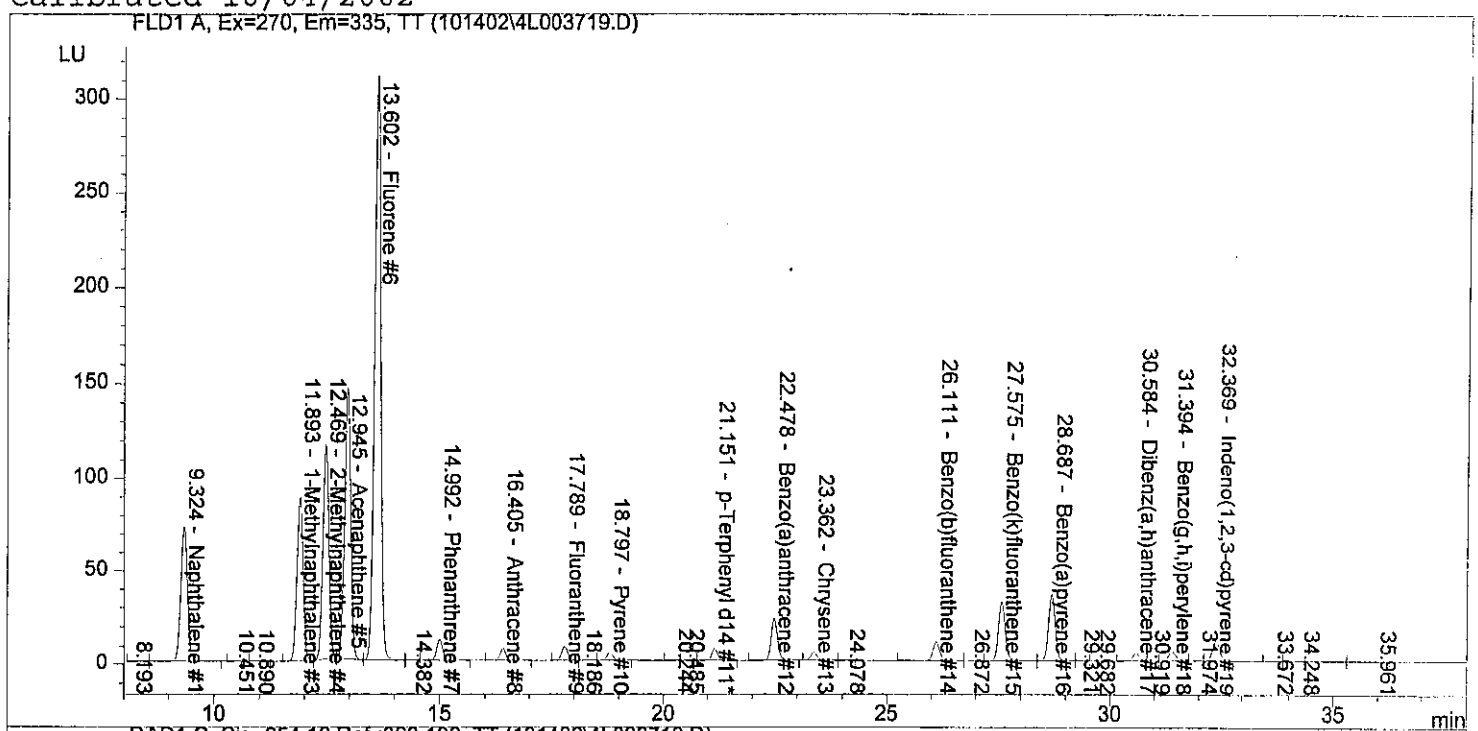
1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

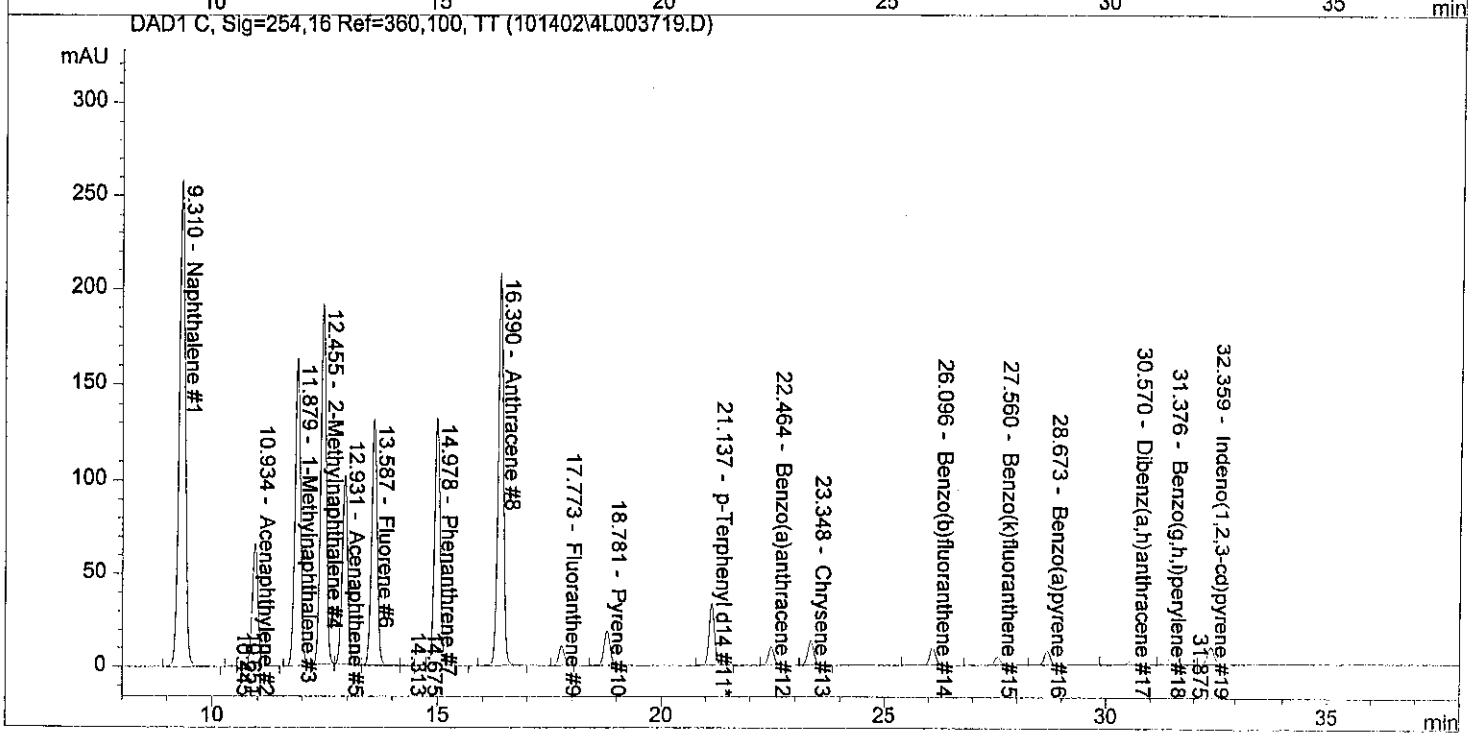
==========

| | | | |
|---|---|---|---|
| Injection Date | : 10/14/2002 9:07:55 PM | Seq. Line | : 9 |
| Sample Name | : WG127222-03 CCV | Vial | : 2 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:31:57 AM by RDC
(modified after loading)

Calibrated 10/04/2002



## External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.324 | BBA | 726.28113 | 2.65830e-2 | 19.30672 | | Naphthalene #1 |
| 11.893 | BB | 835.51105 | 2.31759e-2 | 19.36374 | | 1-Methylnaphthalene #3 |
| 12.469 | BB | 1085.22632 | 1.78699e-2 | 19.39291 | | 2-Methylnaphthalene #4 |
| 12.945 | BB | 1371.30408 | 1.42303e-2 | 19.51404 | | Acenaphthene #5 |
| 13.602 | BB | 2931.22803 | 6.75369e-3 | 19.79660 | | Fluorene #6 |
| 14.992 | BBA | 109.03305 | 1.76711e-1 | 19.26735 | | Phenanthrene #7 |
| 16.405 | BBA | 63.51139 | 3.18426e-1 | 20.22368 | | Anthracene #8 |
| 17.789 | PB | 75.96098 | 2.57401e-2 | 1.95524 | | Fluoranthene #9 |
| 18.797 | BBA | 45.90194 | 4.14246e-2 | 1.90147 | | Pyrene #10 |
| 21.151 | BB | 64.98461 | 3.01230e-1 | 19.57531 | | p-Terphenyl d14 #11* |
| 22.478 | BBA | 229.53844 | 8.44276e-3 | 1.93794 | | Benzo(a)anthracene #12 |
| 23.362 | BB | 46.77588 | 4.12178e-2 | 1.92800 | | Chrysene #13 |
| 26.111 | BB | 113.05033 | 1.72955e-2 | 1.95526 | | Benzo(b)fluoranthene #14 |
| 27.575 | BB | 339.74149 | 2.86965e-3 | 9.74939e-1 | | Benzo(k)fluoranthene #15 |
| 28.687 | BB | 370.63437 | 5.26189e-3 | 1.95024 | | Benzo(a)pyrene #16 |
| 30.584 | BB | 45.01465 | 4.23736e-2 | 1.90743 | | Dibenz(a,h)anthracene #17 |
| 31.394 | BB | 62.31543 | 3.12066e-2 | 1.94465 | | Benzo(g,h,i)perylene #18 |
| 32.369 | BB | 132.87910 | 1.46696e-2 | 1.94929 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 174.84482 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.310 | BBA | 2398.89575 | 8.38545e-3 | 20.11583 | | Naphthalene #1 |
| 10.934 | BBA | 574.41425 | 3.42584e-2 | 19.67850 | | Acenaphthylene #2 |
| 11.879 | PB | 1419.21094 | 1.39540e-2 | 19.80367 | | 1-Methylnaphthalene #3 |
| 12.455 | BB | 1645.93250 | 1.20868e-2 | 19.89407 | | 2-Methylnaphthalene #4 |
| 12.931 | BB | 868.47266 | 2.27214e-2 | 19.73289 | | Acenaphthene #5 |
| 13.587 | BB | 1129.80371 | 1.74930e-2 | 19.76369 | | Fluorene #6 |
| 14.978 | BBA | 1132.30066 | 1.74267e-2 | 19.73223 | | Phenanthrene #7 |
| 16.390 | PBA | 1810.87024 | 1.13151e-2 | 20.49018 | | Anthracene #8 |
| 17.773 | BB | 93.62366 | 2.10569e-2 | 1.97142 | | Fluoranthene #9 |
| 18.781 | BBA | 176.48297 | 1.12025e-2 | 1.97706 | | Pyrene #10 |
| 21.137 | PBA | 297.96667 | 6.61800e-2 | 19.71944 | | p-Terphenyl d14 #11* |
| 22.464 | BBA | 91.99438 | 2.14491e-2 | 1.97320 | | Benzo(a)anthracene #12 |
| 23.348 | BBA | 128.47067 | 1.53388e-2 | 1.97059 | | Chrysene #13 |
| 26.096 | BBA | 96.15672 | 2.04866e-2 | 1.96992 | | Benzo(b)fluoranthene #14 |
| 27.560 | PB | 42.01801 | 2.33523e-2 | 9.81218e-1 | | Benzo(k)fluoranthene #15 |
| 28.673 | BBA | 71.31456 | 2.78144e-2 | 1.98357 | | Benzo(a)pyrene #16 |
| 30.570 | PBA | 19.47542 | 1.01912e-1 | 1.98478 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.376 | BB | 32.88554 | 6.02025e-2 | 1.97979 | | Benzo(g,h,i)perylene #18 |
| 32.359 | BB | 98.94385 | 1.98661e-2 | 1.96563 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 197.68768

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\101602\4L003721.D Sample Name: WG127426-01 CCV
HPLC4 10/22/2002 1:25:20 PM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========
Injection Date : 10/16/2002 5:32:49 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.286 | 20.0 | 21.010 | 5.0 |
| 1-Methylnaphthalene #3 | 11.855 | 20.0 | 20.901 | 4.5 |
| 2-Methylnaphthalene #4 | 12.430 | 20.0 | 20.805 | 4.0 |
| Acenaphthene #5 | 12.908 | 20.0 | 20.716 | 3.6 |
| Fluorene #6 | 13.563 | 20.0 | 20.379 | 1.9 |
| Phenanthrene #7 | 14.951 | 20.0 | 20.428 | 2.1 |
| Anthracene #8 | 16.359 | 20.0 | 20.917 | 4.6 |
| Fluoranthene #9 | 17.739 | 2.0 | 2.082 | 4.1 |
| Pyrene #10 | 18.744 | 2.0 | 2.217 | 10.9 |
| p-Terphenyl d14 #11* | 21.085 | 20.0 | 19.574 | -2.1 |
| Benzo(a)anthracene #12 | 22.404 | 2.0 | 2.076 | 3.8 |
| Chrysene #13 | 23.281 | 2.0 | 2.082 | 4.1 |
| Benzo(b)fluoranthene #14 | 26.020 | 2.0 | 2.067 | 3.3 |
| Benzo(k)fluoranthene #15 | 27.473 | 1.0 | 1.012 | 1.2 |
| Benzo(a)pyrene #16 | 28.588 | 2.0 | 2.177 | 8.9 |
| Dibenz(a,h)anthracene #1 | 30.471 | 2.0 | 2.054 | 2.7 |
| Benzo(g,h,i)perylene #18 | 31.278 | 2.0 | 2.173 | 8.6 |
| Indeno(1,2,3-cd)pyrene # | 32.252 | 2.0 | 2.013 | 0.7 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.269 | 20.0 | 20.313 | 1.6 |
| Acenaphthylene #2 | 10.894 | 20.0 | 19.895 | -0.5 |
| 1-Methylnaphthalene #3 | 11.839 | 20.0 | 20.009 | 0.0 |
| 2-Methylnaphthalene #4 | 12.413 | 20.0 | 20.110 | 0.6 |
| Acenaphthene #5 | 12.891 | 20.0 | 19.976 | -0.1 |
| Fluorene #6 | 13.546 | 20.0 | 20.012 | 0.1 |
| Phenanthrene #7 | 14.934 | 20.0 | 19.930 | -0.3 |
| Anthracene #8 | 16.342 | 20.0 | 21.068 | 5.3 |
| Fluoranthene #9 | 17.721 | 2.0 | 1.993 | -0.3 |
| Pyrene #10 | 18.726 | 2.0 | 2.006 | 0.3 |
| p-Terphenyl d14 #11* | 21.068 | 20.0 | 19.546 | -2.3 |
| Benzo(a)anthracene #12 | 22.387 | 2.0 | 1.993 | -0.3 |
| Chrysene #13 | 23.264 | 2.0 | 1.991 | -0.5 |
| Benzo(b)fluoranthene #14 | 26.002 | 2.0 | 1.989 | -0.5 |
| Benzo(k)fluoranthene #15 | 27.455 | 1.0 | 0.993 | -0.7 |
| Benzo(a)pyrene #16 | 28.570 | 2.0 | 2.095 | 4.8 |
| Dibenz(a,h)anthracene #1 | 30.454 | 2.0 | 2.024 | 1.2 |
| Benzo(g,h,i)perylene #18 | 31.259 | 2.0 | 2.106 | 5.3 |
| Indeno(1,2,3-cd)pyrene # | 32.238 | 2.0 | 1.974 | -1.3 |

# = Failed 15.0% Criteria

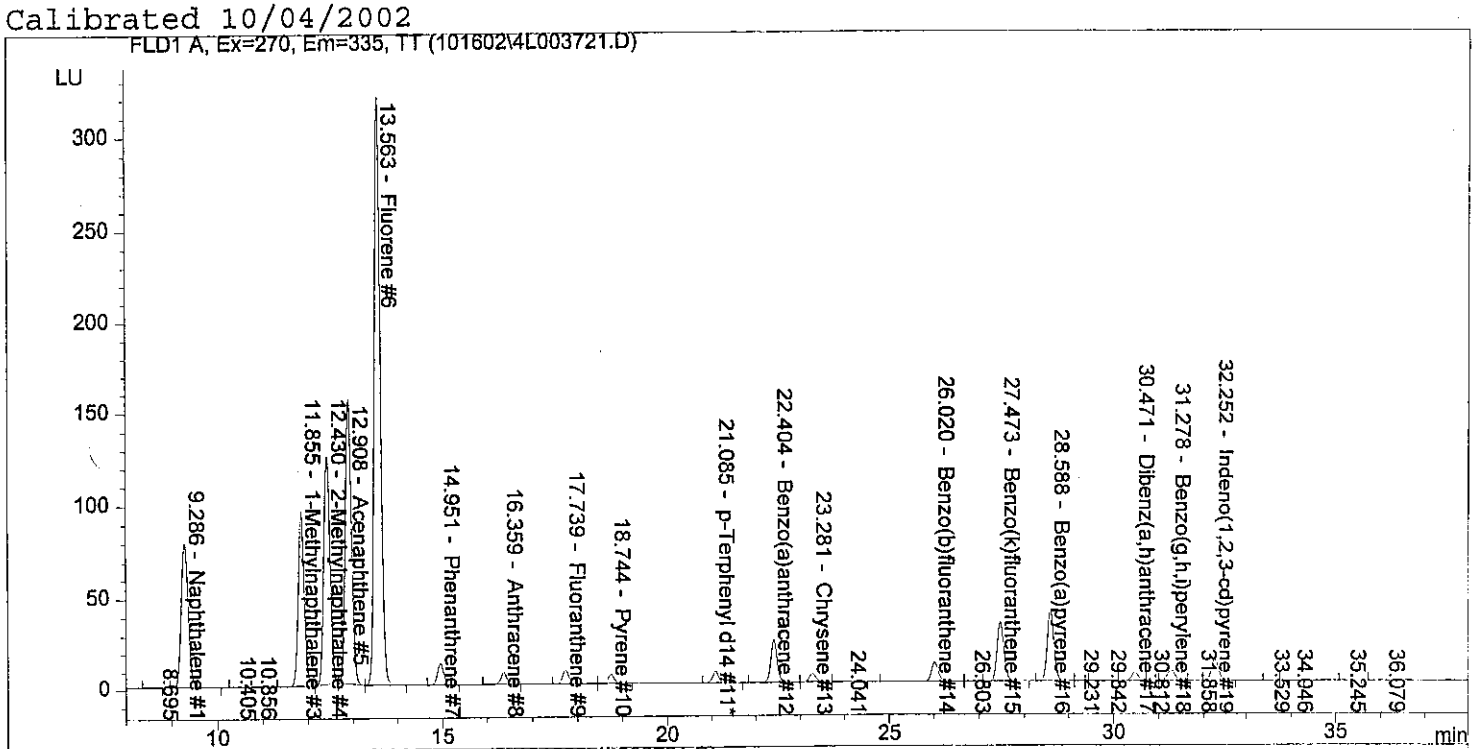
==========

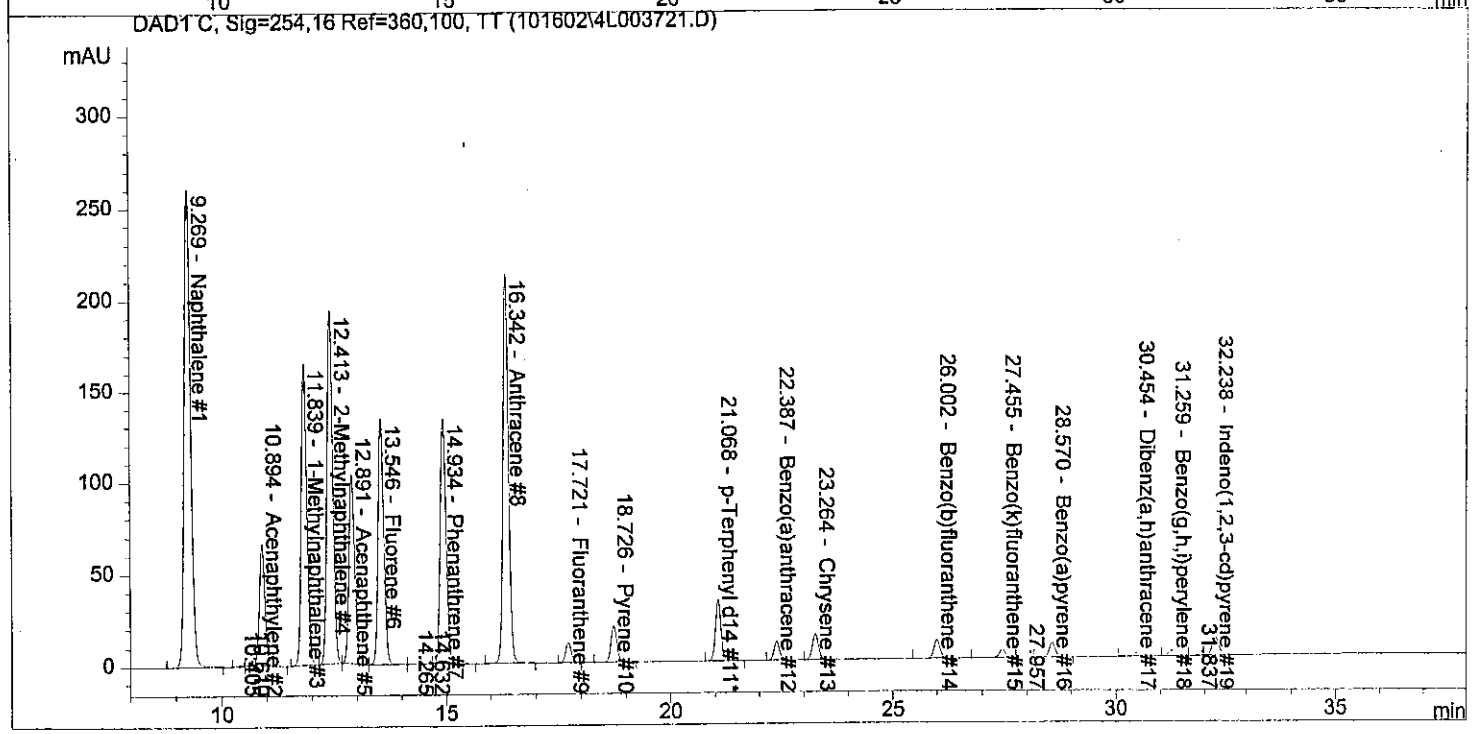
Injection Date : 10/16/2002 5:32:49 PM
Sample Name : WG127426-01 CCV
Acq. Operator : RDC

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:54:41 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.286 | BBA | 791.54303 | 2.65427e-2 | 21.00972 | | Naphthalene #1 |
| 11.855 | BB | 902.91986 | 2.31483e-2 | 20.90103 | | 1-Methylnaphthalene #3 |
| 12.430 | BB | 1165.35010 | 1.78534e-2 | 20.80549 | | 2-Methylnaphthalene #4 |
| 12.908 | BB | 1456.59656 | 1.42220e-2 | 20.71574 | | Acenaphthene #5 |
| 13.563 | BB | 3017.66040 | 6.75309e-3 | 20.37854 | | Fluorene #6 |
| 14.951 | PBA | 115.76241 | 1.76461e-1 | 20.42760 | | Phenanthrene #7 |
| 16.359 | BBA | 65.71666 | 3.18290e-1 | 20.91698 | | Anthracene #8 |
| 17.739 | PB | 80.95736 | 2.57193e-2 | 2.08217 | | Fluoranthene #9 |
| 18.744 | BBA | 53.74880 | 4.12526e-2 | 2.21728 | | Pyrene #10 |
| 21.085 | BB | 64.97864 | 3.01230e-1 | 19.57354 | | p-Terphenyl d14 #11* |
| 22.404 | BB | 246.34087 | 8.42930e-3 | 2.07648 | | Benzo(a)anthracene #12 |
| 23.281 | BB | 50.59459 | 4.11458e-2 | 2.08175 | | Chrysene #13 |
| 26.020 | BB | 119.62005 | 1.72770e-2 | 2.06668 | | Benzo(b)fluoranthene #14 |
| 27.473 | BB | 352.89783 | 2.86785e-3 | 1.01206 | | Benzo(k)fluoranthene #15 |
| 28.588 | BB | 415.11264 | 5.24515e-3 | 2.17733 | | Benzo(a)pyrene #16 |
| 30.471 | BB | 48.57233 | 4.22868e-2 | 2.05397 | | Dibenz(a,h)anthracene #17 |
| 31.278 | BB | 69.91885 | 3.10762e-2 | 2.17281 | | Benzo(g,h,i)perylene #18 |
| 32.252 | BB | 137.30759 | 1.46606e-2 | 2.01302 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 184.68218 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.269 | BBA | 2422.27905 | 8.38583e-3 | 20.31282 | | Naphthalene #1 |
| 10.894 | BBA | 580.83099 | 3.42531e-2 | 19.89524 | | Acenaphthylene #2 |
| 11.839 | PB | 1434.07434 | 1.39527e-2 | 20.00916 | | 1-Methylnaphthalene #3 |
| 12.413 | BB | 1663.90332 | 1.20863e-2 | 20.11046 | | 2-Methylnaphthalene #4 |
| 12.891 | BB | 879.31403 | 2.27177e-2 | 19.97603 | | Acenaphthene #5 |
| 13.546 | BB | 1144.14600 | 1.74908e-2 | 20.01207 | | Fluorene #6 |
| 14.934 | BBA | 1143.78650 | 1.74246e-2 | 19.93007 | | Phenanthrene #7 |
| 16.342 | PBA | 1862.29688 | 1.13128e-2 | 21.06776 | | Anthracene #8 |
| 17.721 | PB | 94.66975 | 2.10525e-2 | 1.99303 | | Fluoranthene #9 |
| 18.726 | BBA | 179.13889 | 1.11995e-2 | 2.00627 | | Pyrene #10 |
| 21.068 | BBA | 295.31958 | 6.61859e-2 | 19.54598 | | p-Terphenyl d14 #11* |
| 22.387 | BBA | 92.95953 | 2.14447e-2 | 1.99349 | | Benzo(a)anthracene #12 |
| 23.264 | BBA | 129.82010 | 1.53358e-2 | 1.99089 | | Chrysene #13 |
| 26.002 | BBA | 97.12513 | 2.04821e-2 | 1.98933 | | Benzo(b)fluoranthene #14 |
| 27.455 | PB | 42.52499 | 2.33494e-2 | 9.92935e-1 | | Benzo(k)fluoranthene #15 |
| 28.570 | BBA | 75.44759 | 2.77678e-2 | 2.09501 | | Benzo(a)pyrene #16 |
| 30.454 | PBA | 19.86379 | 1.01876e-1 | 2.02364 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.259 | BB | 35.05420 | 6.00817e-2 | 2.10612 | | Benzo(g,h,i)perylene #18 |
| 32.238 | BBA | 99.36916 | 1.98639e-2 | 1.97386 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 200.02417

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\101602\4L003728.D Sample Name: WG127426-02 CCV
HPLC4 10/22/2002 1:29:21 PM RDC

1,1 SOS61-07/59-38 CCV @ level 4 20/2/1 ppm

==========

Injection Date : 10/17/2002 12:29:36 AM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.290 | 20.0 | 19.839 | -0.8 |
| 1-Methylnaphthalene #3 | 11.859 | 20.0 | 19.779 | -1.1 |
| 2-Methylnaphthalene #4 | 12.434 | 20.0 | 19.859 | -0.7 |
| Acenaphthene #5 | 12.911 | 20.0 | 20.040 | 0.2 |
| Fluorene #6 | 13.567 | 20.0 | 20.287 | 1.4 |
| Phenanthrene #7 | 14.956 | 20.0 | 19.847 | -0.8 |
| Anthracene #8 | 16.361 | 20.0 | 20.872 | 4.4 |
| Fluoranthene #9 | 17.739 | 2.0 | 2.001 | 0.1 |
| Pyrene #10 | 18.745 | 2.0 | 1.967 | -1.6 |
| p-Terphenyl d14 #11* | 21.092 | 20.0 | 19.535 | -2.3 |
| Benzo(a)anthracene #12 | 22.416 | 2.0 | 2.002 | 0.1 |
| Chrysene #13 | 23.294 | 2.0 | 1.985 | -0.8 |
| Benzo(b)fluoranthene #14 | 26.035 | 2.0 | 1.992 | -0.4 |
| Benzo(k)fluoranthene #15 | 27.492 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.606 | 2.0 | 2.037 | 1.8 |
| Dibenz(a,h)anthracene #1 | 30.488 | 2.0 | 1.962 | -1.9 |
| Benzo(g,h,i)perylene #18 | 31.294 | 2.0 | 2.077 | 3.8 |
| Indeno(1,2,3-cd)pyrene # | 32.267 | 2.0 | 2.006 | 0.3 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.275 | 20.0 | 20.471 | 2.4 |
| Acenaphthylene #2 | 10.899 | 20.0 | 20.039 | 0.2 |
| 1-Methylnaphthalene #3 | 11.844 | 20.0 | 20.149 | 0.7 |
| 2-Methylnaphthalene #4 | 12.419 | 20.0 | 20.253 | 1.3 |
| Acenaphthene #5 | 12.897 | 20.0 | 20.110 | 0.6 |
| Fluorene #6 | 13.552 | 20.0 | 20.164 | 0.8 |
| Phenanthrene #7 | 14.941 | 20.0 | 20.115 | 0.6 |
| Anthracene #8 | 16.346 | 20.0 | 21.306 | 6.5 |
| Fluoranthene #9 | 17.723 | 2.0 | 2.011 | 0.5 |
| Pyrene #10 | 18.729 | 2.0 | 2.016 | 0.8 |
| p-Terphenyl d14 #11* | 21.078 | 20.0 | 19.542 | -2.3 |
| Benzo(a)anthracene #12 | 22.401 | 2.0 | 2.022 | 1.1 |
| Chrysene #13 | 23.279 | 2.0 | 2.010 | 0.5 |
| Benzo(b)fluoranthene #14 | 26.019 | 2.0 | 2.001 | 0.0 |
| Benzo(k)fluoranthene #15 | 27.476 | 1.0 | 1.008 | 0.8 |
| Benzo(a)pyrene #16 | 28.590 | 2.0 | 2.088 | 4.4 |
| Dibenz(a,h)anthracene #1 | 30.473 | 2.0 | 2.063 | 3.2 |
| Benzo(g,h,i)perylene #18 | 31.278 | 2.0 | 2.173 | 8.6 |
| Indeno(1,2,3-cd)pyrene # | 32.255 | 2.0 | 2.009 | 0.5 |

# = Failed 15.0% Criteria

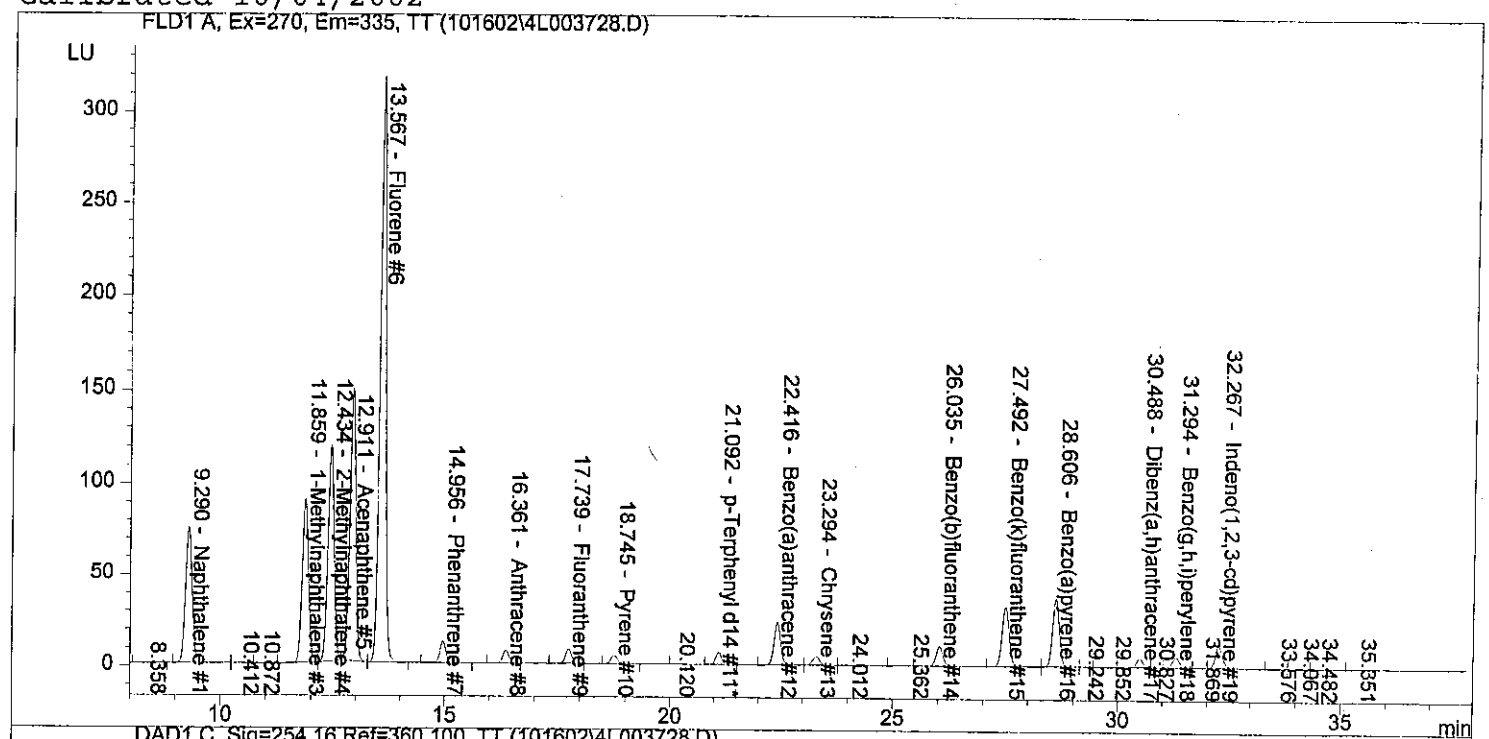
==========

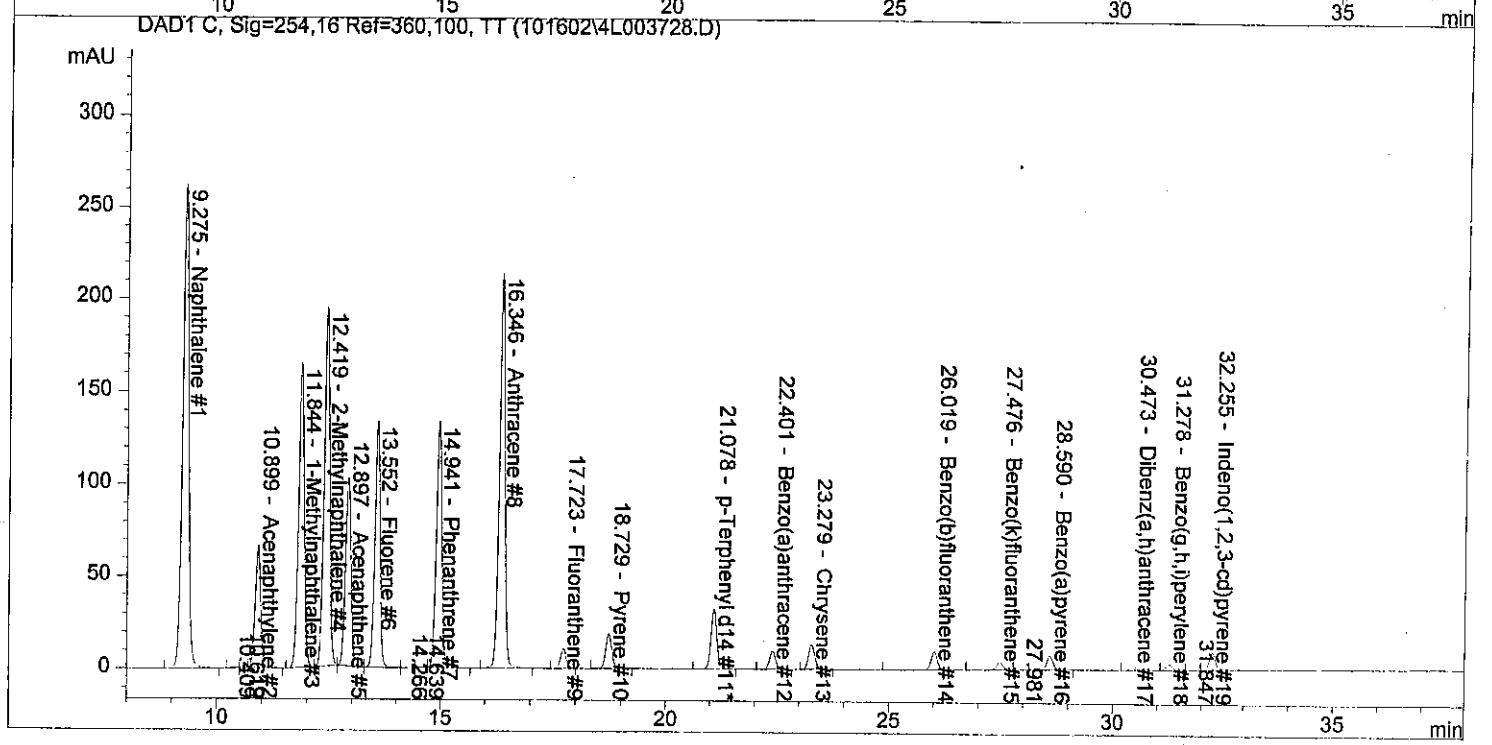
Injection Date : 10/17/2002 12:29:36 AM
Sample Name : WG127426-02 CCV
Acq. Operator : RDC

Seq. Line : 9
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:54:41 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.290 | PB | 746.67523 | 2.65697e-2 | 19.83890 | | Naphthalene #1 |
| 11.859 | BB | 853.73846 | 2.31680e-2 | 19.77942 | | 1-Methylnaphthalene #3 |
| 12.434 | BB | 1111.68188 | 1.78642e-2 | 19.85932 | | 2-Methylnaphthalene #4 |
| 12.911 | BB | 1408.66345 | 1.42265e-2 | 20.04040 | | Acenaphthene #5 |
| 13.567 | BB | 3004.01001 | 6.75318e-3 | 20.28663 | | Fluorene #6 |
| 14.956 | BBA | 112.39420 | 1.76583e-1 | 19.84687 | | Phenanthrene #7 |
| 16.361 | BBA | 65.57492 | 3.18299e-1 | 20.87242 | | Anthracene #8 |
| 17.739 | PBA | 77.76916 | 2.57323e-2 | 2.00118 | | Fluoranthene #9 |
| 18.745 | BBA | 47.53758 | 4.13841e-2 | 1.96730 | | Pyrene #10 |
| 21.092 | BB | 64.84682 | 3.01241e-1 | 19.53451 | | p-Terphenyl d14 #11* |
| 22.416 | BB | 237.29529 | 8.43631e-3 | 2.00190 | | Benzo(a)anthracene #12 |
| 23.294 | BB | 48.18151 | 4.11900e-2 | 1.98459 | | Chrysene #13 |
| 26.035 | BBA | 115.21776 | 1.72892e-2 | 1.99202 | | Benzo(b)fluoranthene #14 |
| 27.492 | BB | 348.40695 | 2.86845e-3 | 9.99388e-1 | | Benzo(k)fluoranthene #15 |
| 28.606 | BB | 387.62445 | 5.25504e-3 | 2.03698 | | Benzo(a)pyrene #16 |
| 30.488 | BB | 46.33644 | 4.23398e-2 | 1.96188 | | Dibenz(a,h)anthracene #17 |
| 31.294 | BB | 66.72353 | 3.11274e-2 | 2.07693 | | Benzo(g,h,i)perylene #18 |
| 32.267 | BB | 136.82491 | 1.46616e-2 | 2.00607 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 179.08671

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.275 | BBA | 2441.01172 | 8.38613e-3 | 20.47064 | | Naphthalene #1 |
| 10.899 | BBA | 585.09064 | 3.42496e-2 | 20.03912 | | Acenaphthylene #2 |
| 11.844 | PB | 1444.17603 | 1.39518e-2 | 20.14881 | | 1-Methylnaphthalene #3 |
| 12.419 | BB | 1675.75305 | 1.20860e-2 | 20.25314 | | 2-Methylnaphthalene #4 |
| 12.897 | BB | 885.30682 | 2.27158e-2 | 20.11043 | | Acenaphthene #5 |
| 13.552 | BB | 1152.92358 | 1.74895e-2 | 20.16409 | | Fluorene #6 |
| 14.941 | BBA | 1154.52368 | 1.74228e-2 | 20.11501 | | Phenanthrene #7 |
| 16.346 | PBA | 1883.49451 | 1.13119e-2 | 21.30583 | | Anthracene #8 |
| 17.723 | BB | 95.51704 | 2.10490e-2 | 2.01054 | | Fluoranthene #9 |
| 18.729 | BBA | 180.06207 | 1.11985e-2 | 2.01642 | | Pyrene #10 |
| 21.078 | PBA | 295.25470 | 6.61860e-2 | 19.54173 | | p-Terphenyl d14 #11* |
| 22.401 | PBA | 94.32371 | 2.14386e-2 | 2.02217 | | Benzo(a)anthracene #12 |
| 23.279 | BBA | 131.09550 | 1.53330e-2 | 2.01009 | | Chrysene #13 |
| 26.019 | BBA | 97.68999 | 2.04796e-2 | 2.00065 | | Benzo(b)fluoranthene #14 |
| 27.476 | PB | 43.16803 | 2.33459e-2 | 1.00780 | | Benzo(k)fluoranthene #15 |
| 28.590 | BBA | 75.17266 | 2.77707e-2 | 2.08760 | | Benzo(a)pyrene #16 |
| 30.473 | PBA | 20.26096 | 1.01841e-1 | 2.06339 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.278 | BB | 36.20100 | 6.00237e-2 | 2.17292 | | Benzo(g,h,i)perylene #18 |
| 32.255 | BBA | 101.19722 | 1.98545e-2 | 2.00922 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 201.54959 | | |

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** 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 |

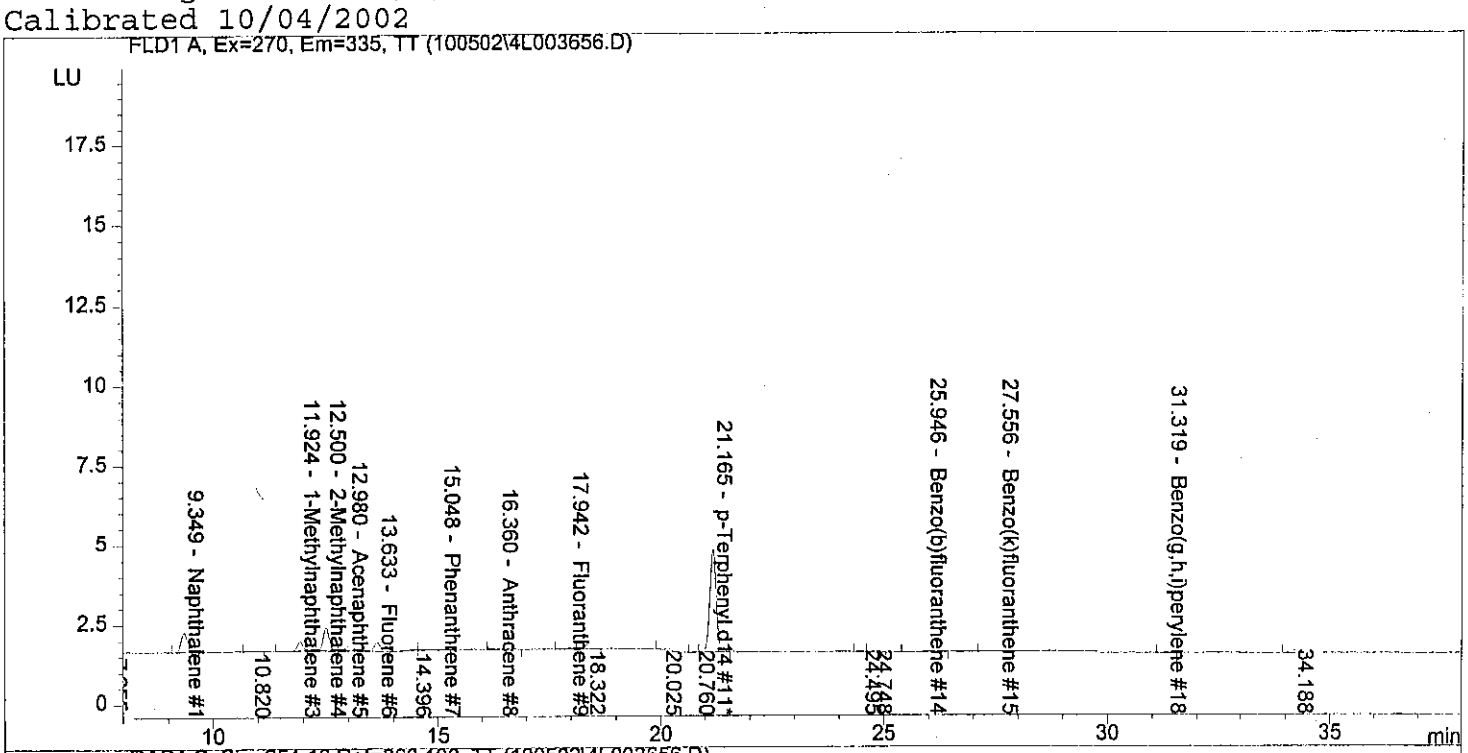
# 2.2.7.4 Raw QC Data

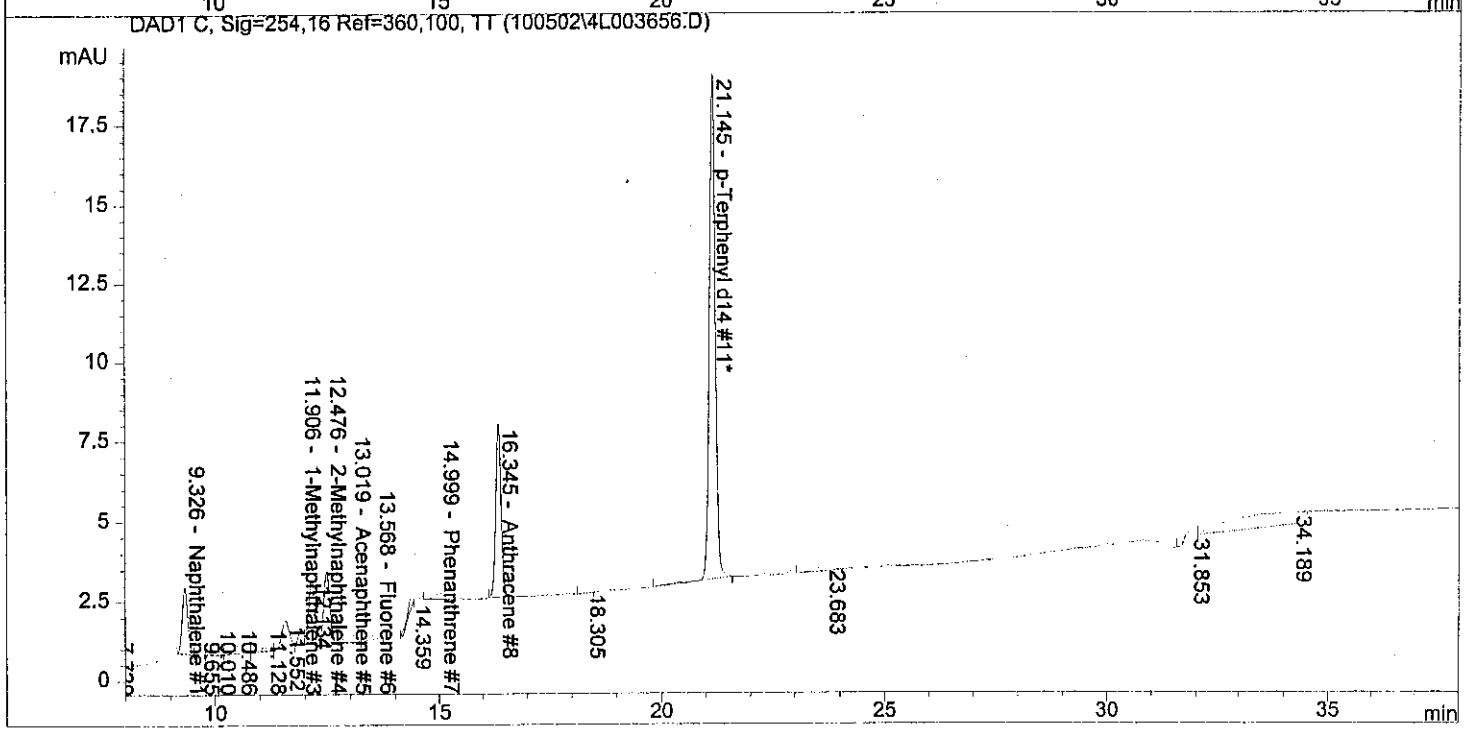
==========

Injection Date : 10/5/2002 4:23:17 PM
Sample Name : WG126384-01 BLK
Acq. Operator : RDC

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/5/2002 2:03:10 PM
Calibrated 10/04/2002



## External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/2002 2:00:42 PM
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 |
|---|---|---|---|---|---|---|
| 9.349 | BBA | 6.09584 | 8.42590e-2 | 5.13629e-1 | | Naphthalene #1 |
| 11.924 | BB | 2.41569 | 1.50930e-1 | 3.64600e-1 | | 1-Methylnaphthalene #3 |
| 12.500 | BB | 6.89959 | 5.53753e-2 | 3.82067e-1 | | 2-Methylnaphthalene #4 |
| 12.980 | BB | 1.29699 | 1.63337e-1 | 2.11846e-1 | | Acenaphthene #5 |
| 13.633 | BB | 3.08740 | 2.64656e-2 | 8.17098e-2 | | Fluorene #6 |
| 15.048 | BB | 2.38930e-1 | 2.13271 | 5.09569e-1 | | Phenanthrene #7 |
| 16.360 | BBA | 4.60493e-1 | 8.72054e-1 | 4.01574e-1 | | Anthracene #8 <MDL |
| 17.942 | BB | 4.55300e-1 | 8.15863e-2 | 3.71463e-2 | | Fluoranthene #9 RAE 10/10/02 |
| 18.816 | | - | - | - | | Pyrene #10 |
| 21.165 | BB | 31.49635 | 3.06690e-1 | 9.65961 | | p-Terphenyl d14 #11* 96.66 |
| 22.487 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.366 | | - | - | - | | Chrysene #13 |
| 25.946 | BB | 2.49476e-1 | 1.68903e-1 | 4.21371e-2 | | Benzo(b)fluoranthene #14 |
| 27.556 | BBA | 2.19960e-1 | 7.73422e-2 | 1.70122e-2 | | Benzo(k)fluoranthene #15 |
| 28.638 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.505 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.319 | BB | 2.16175e-1 | 3.75635e-1 | 8.12029e-2 | | Benzo(g,h,i)perylene #18 |
| 32.284 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 12.30210

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.326 | BB | 18.14086 | 3.26639e-3 | 5.92550e-2 | <MDL | Naphthalene #1 |
| 10.956 | | - | - | - | | Acenaphthylene #2 |
| 11.906 | BB | 2.05831 | 1.02680e-1 | 2.11347e-1 | <MDL | 1-Methylnaphthalene #3 |
| 12.476 | BB | 20.29639 | 1.57500e-2 | 3.19669e-1 | | 2-Methylnaphthalene #4 |
| 13.019 | BB | 4.34413 | 8.12995e-2 | 3.53176e-1 | | Acenaphthene #5 |
| 13.568 | BB | 2.03689 | 1.14362e-1 | 2.32944e-1 | | Fluorene #6 |
| 14.999 | BB | 2.90209 | 9.61586e-2 | 2.79060e-1 | | Phenanthrene #7 RAE 10/10/02 |
| 16.345 | BBA | 45.40028 | 1.45787e-2 | 6.61878e-1 | | Anthracene #8 <MDL |
| 17.789 | | - | - | - | | Fluoranthene #9 |
| 18.794 | | - | - | - | | Pyrene #10 |
| 21.145 | BBA | 144.11961 | 6.68734e-2 | 9.63777 | | p-Terphenyl d14 #11* |
| 22.472 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.343 | | - | - | - | | Chrysene #13 96.4% |
| 26.073 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.520 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.617 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.493 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.280 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.282 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 11.75509

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 ***

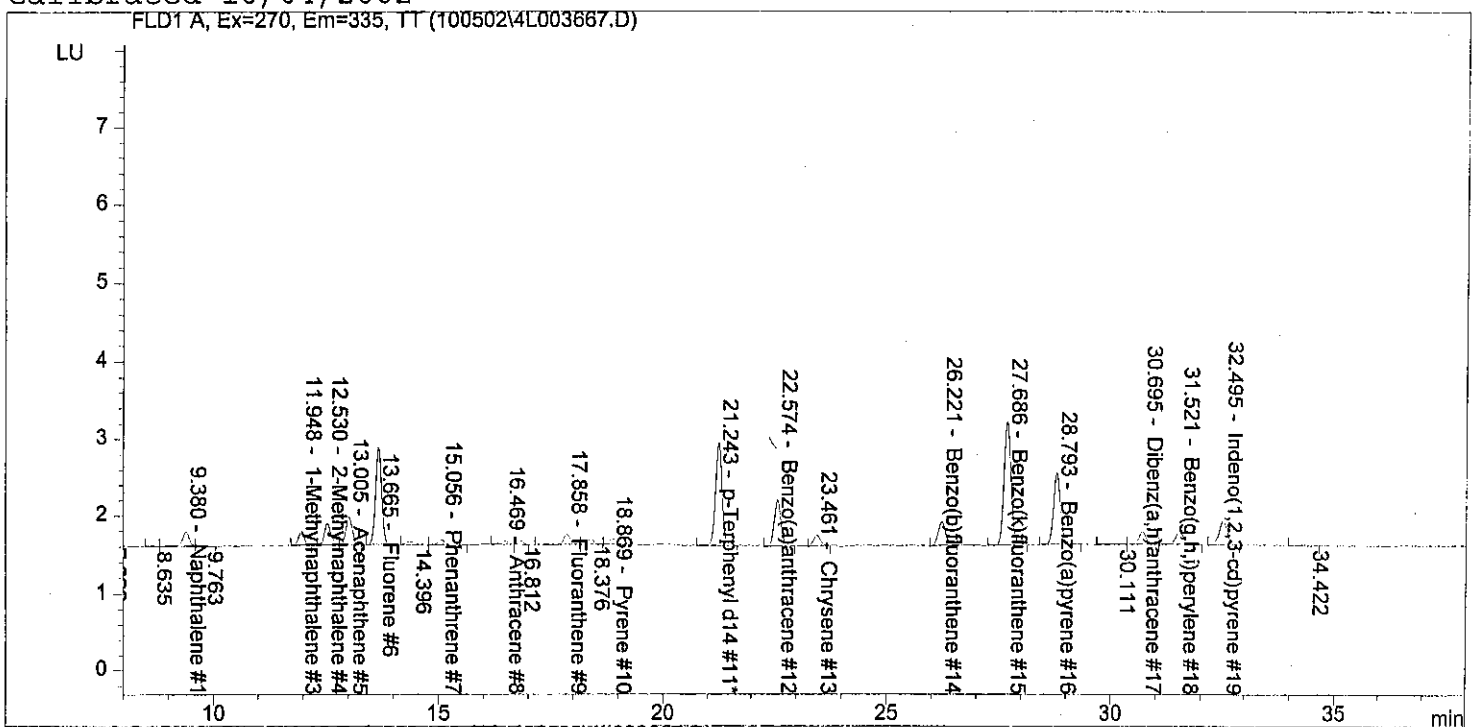
==========

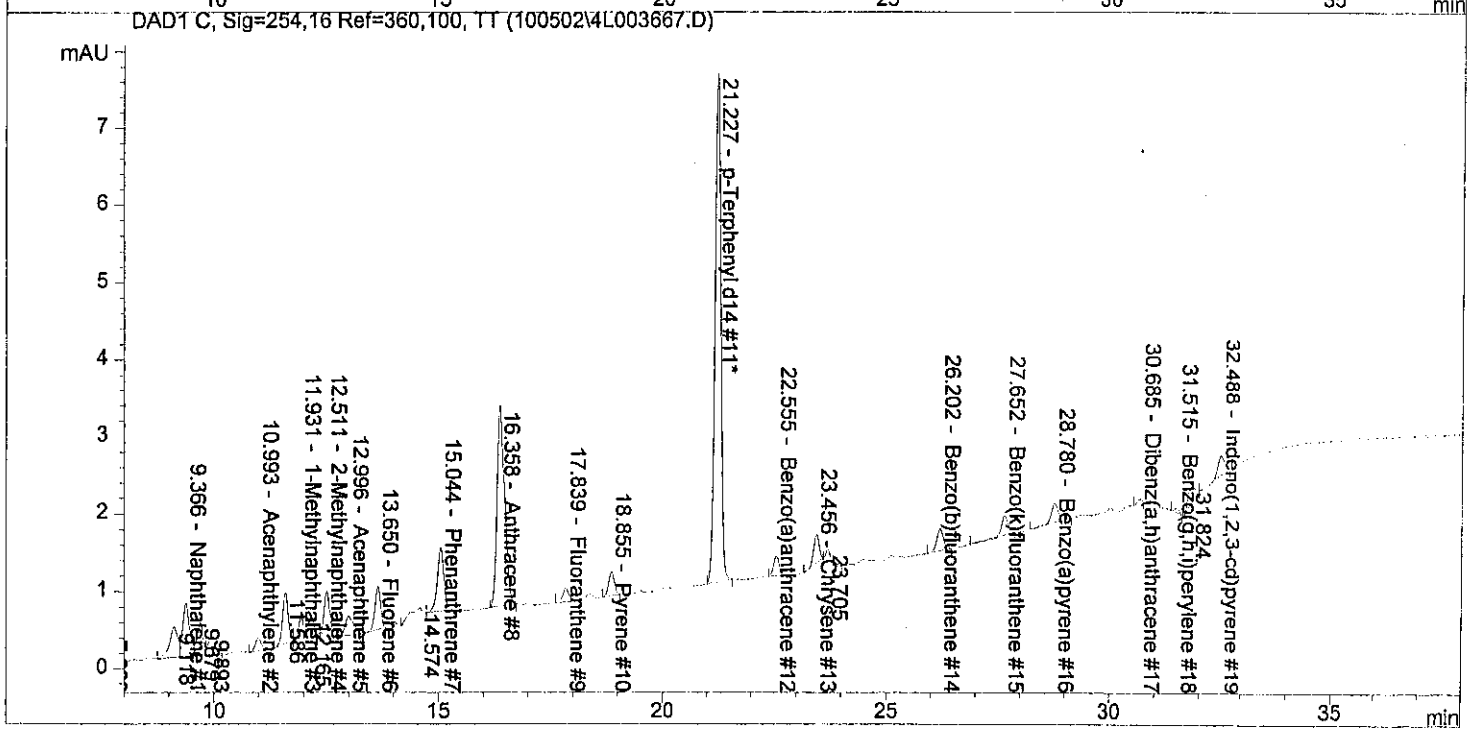
Injection Date : 10/6/2002 2:46:42 AM
Sample Name : WG126469-01 BLK
Acq. Operator : RDC

Seq. Line : 14
Vial : 14
Inj : 1
Inj Volume : 8 µl

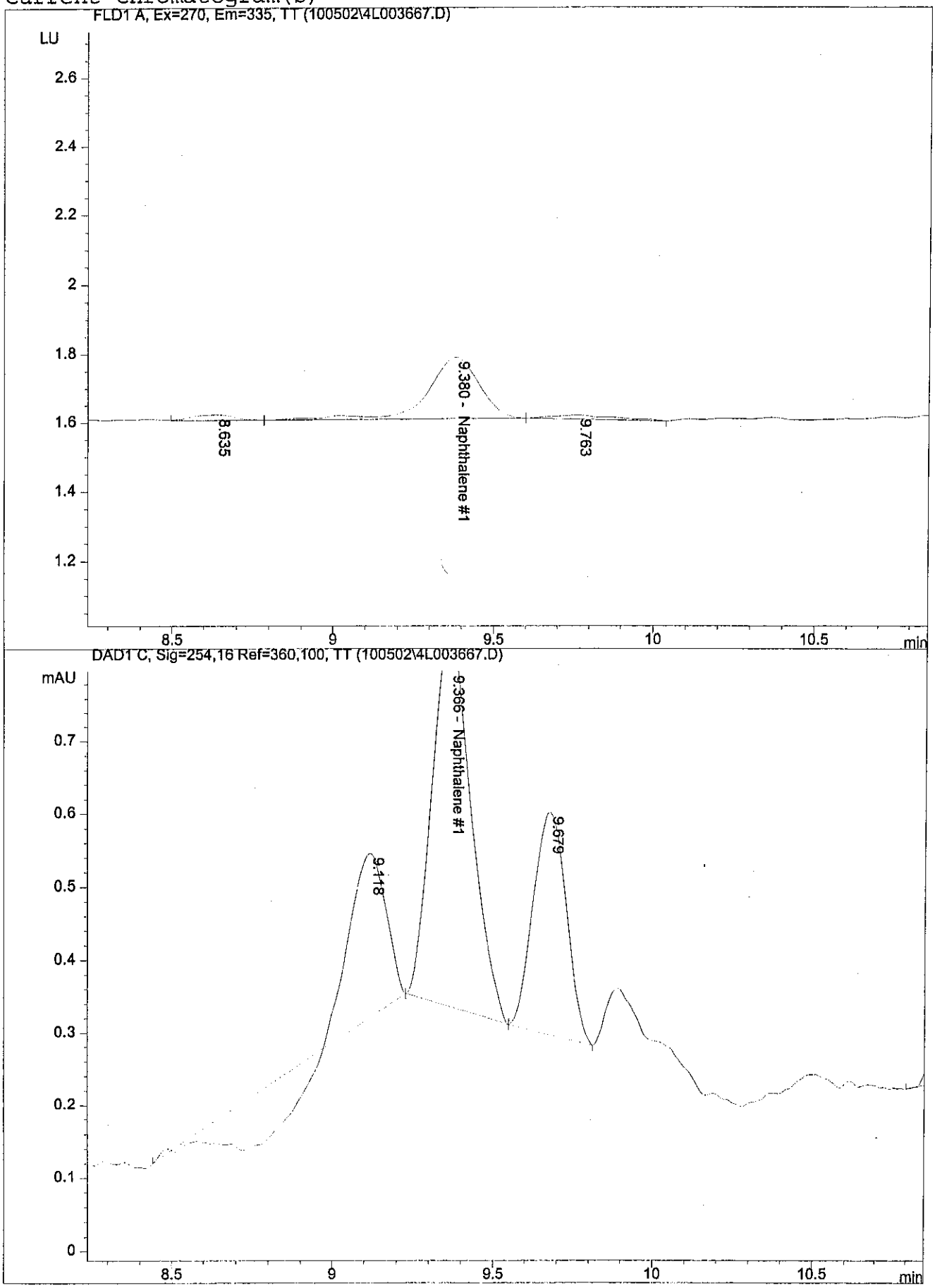
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:48:31 PM
(modified after loading)

Calibrated 10/04/2002

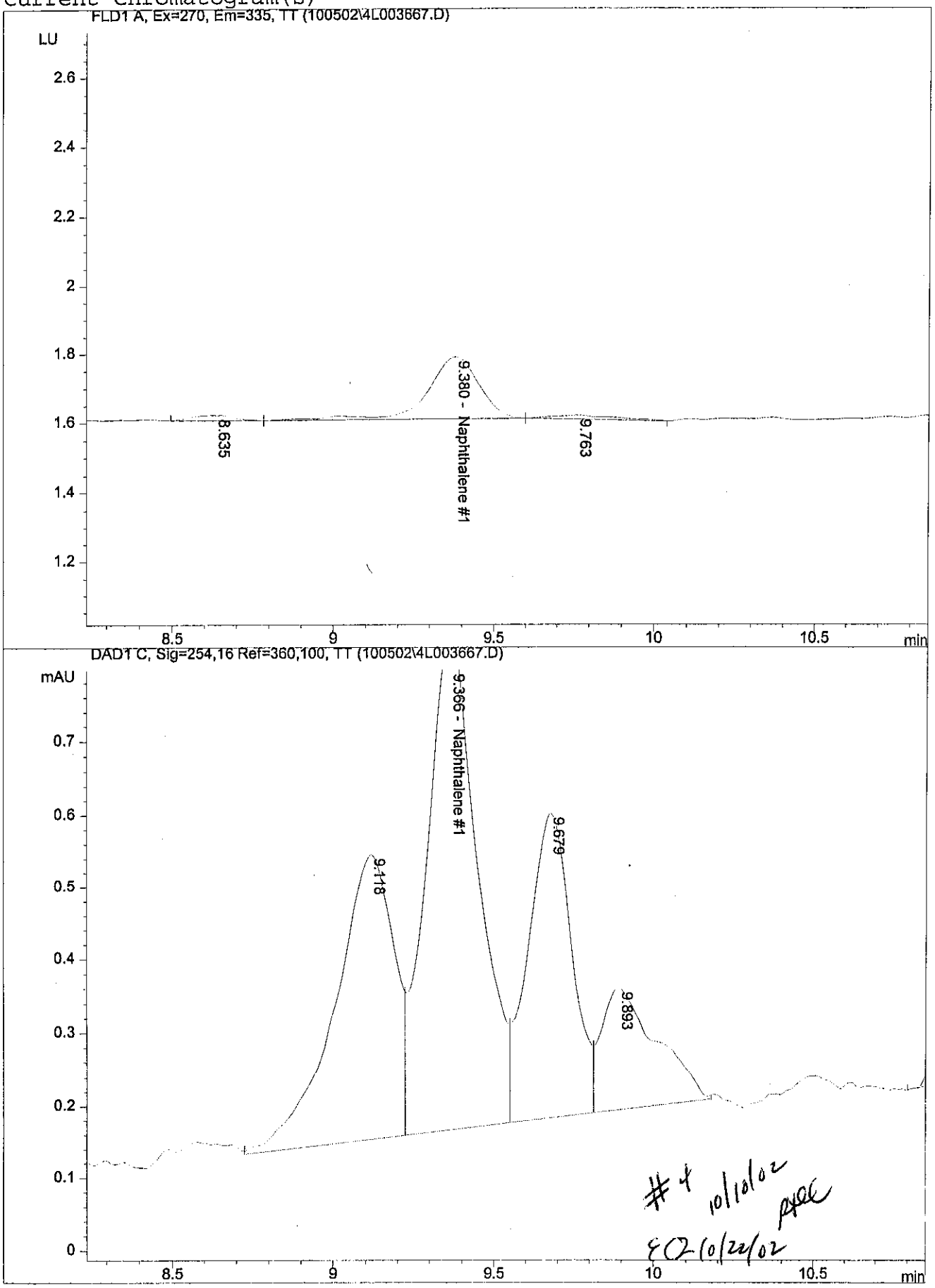


Current Chromatogram(s)



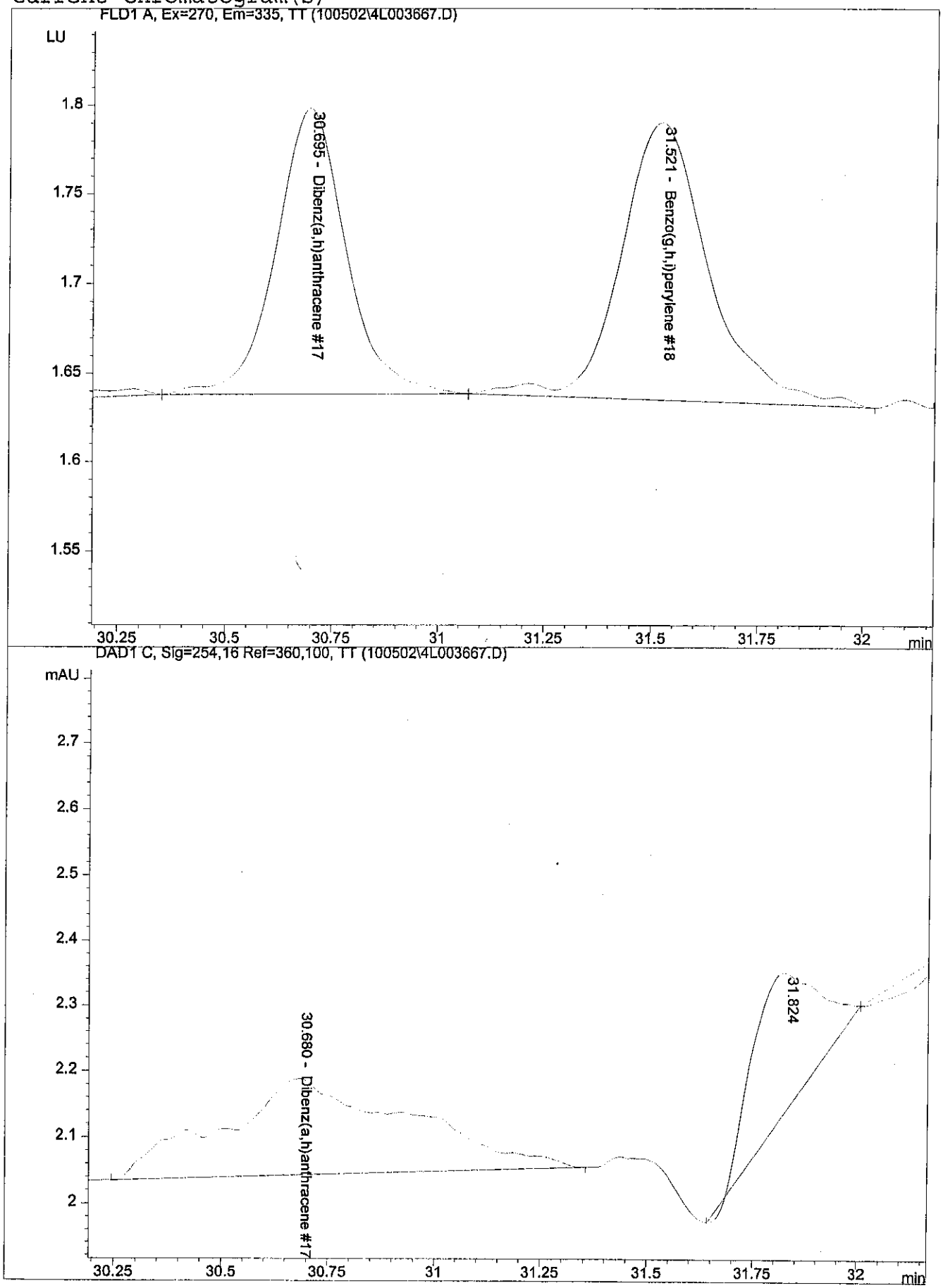
Current Chromatogram(s)



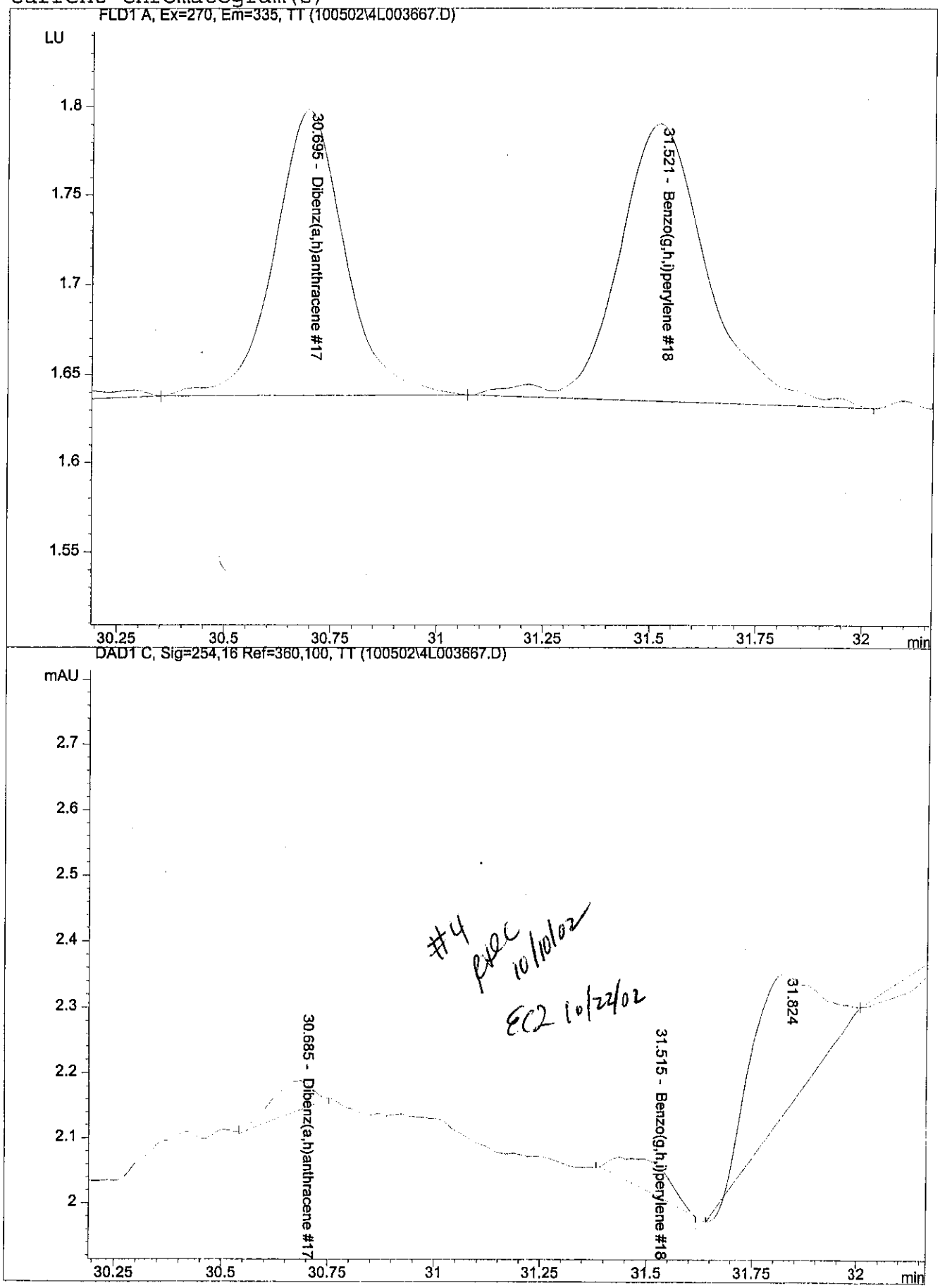

#4 10/10/02 ppe

EC 10/22/02

Current Chromatogram(s)



Current Chromatogram(s)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2002 3:48:31 PM
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 | 2.02978 | 2.00774e-1 | 4.07526e-1 | F | Naphthalene #1 |
| 11.948 | BB | 1.75082 | 1.99586e-1 | 3.49438e-1 | <MDL | 1-Methylnaphthalene #3 |
| 12.530 | BB | 2.82082 | 1.09953e-1 | 3.10159e-1 | ↓ | 2-Methylnaphthalene #4 |
| 13.005 | BB | 3.41593 | 7.07566e-2 | 2.41700e-1 | <MDL | Acenaphthene #5 |
| 13.665 | BB | 11.87852 | 1.18617e-2 | 1.40900e-1 | ↓ | Fluorene #6 |
| 15.056 | BBA | 7.22365e-1 | 8.20805e-1 | 5.92921e-1 | F | Phenanthrene #7 |
| 16.469 | PB | 5.30553e-1 | 7.98413e-1 | 4.23600e-1 | F | Anthracene #8 |
| 17.858 | BB | 1.44344 | 4.31250e-2 | 6.22482e-2 | F | Fluoranthene #9 |
| 18.869 | BB | 7.35100e-1 | 1.13830e-1 | 8.36764e-2 | F | Pyrene #10 |
| 21.243 | BB | 13.68010 | 3.20488e-1 | 4.38431 | 43.8% | p-Terphenyl d14 #11* |
| 22.574 | BB | 6.53606 | 1.51770e-2 | 9.91980e-2 | F | Benzo(a)anthracene #12 |
| 23.461 | BB | 1.51064 | 6.98214e-2 | 1.05475e-1 | F | Chrysene #13 |
| 26.221 | BB | 3.42072 | 2.80414e-2 | 9.59220e-2 | F | Benzo(b)fluoranthene #14 |
| 27.686 | PBA | 17.48266 | 3.75900e-3 | 6.57173e-2 | F | Benzo(k)fluoranthene #15 |
| 28.793 | BBA | 10.27223 | 1.07430e-2 | 1.10355e-1 | F | Benzo(a)pyrene #16 |
| 30.695 | BB | 1.83386 | 7.03006e-2 | 1.28922e-1 | F | Dibenz(a,h)anthracene #17 |
| 31.521 | BB | 2.23800 | 6.33927e-2 | 1.41873e-1 | F | Benzo(g,h,i)perylene #18 |
| 32.495 | BBA | 4.02886 | 2.35793e-2 | 9.49976e-2 | F | Indeno(1,2,3-cd)pyrene #1 |

Totals : 7.83893

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.366 | MF | 7.62226 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.993 | PBA | 1.77053 | 1.89591e-1 | 3.35677e-1 | <MDL | Acenaphthylene #2 |
| 11.931 | BB | 1.75772 | 1.17875e-1 | 2.07192e-1 | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 4.72716 | 2.79658e-2 | 1.32199e-1 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 3.06175 | 1.05958e-1 | 3.24416e-1 | | Acenaphthene #5 |
| 13.650 | BB | 4.98832 | 5.69444e-2 | 2.84057e-1 | ↓ | Fluorene #6 |
| 15.044 | BB | 8.29260 | 4.48482e-2 | 3.71909e-1 | F | Phenanthrene #7 |
| 16.358 | BBA | 30.06151 | 1.62868e-2 | 4.89605e-1 | F | Anthracene #8 |
| 17.839 | BBA | 1.96932 | 3.96104e-2 | 7.80056e-2 | F | Fluoranthene #9 |
| 18.855 | BBA | 2.84536 | 2.36978e-2 | 6.74288e-2 | <MDL | Pyrene #10 |
| 21.227 | BBA | 59.40337 | 6.87885e-2 | 4.08627 | 40.9% | p-Terphenyl d14 #11* |
| 22.555 | BBA | 2.40039 | 3.73272e-2 | 8.96000e-2 | F | Benzo(a)anthracene #12 |
| 23.456 | PB | 3.14528 | 2.68855e-2 | 8.45625e-2 | F | Chrysene #13 |
| 26.202 | BBA | 2.95089 | 3.44885e-2 | 1.01772e-1 | F | Benzo(b)fluoranthene #14 |
| 27.652 | BBA | 2.66361 | 2.69191e-2 | 7.17022e-2 | F | Benzo(k)fluoranthene #15 |
| 28.780 | PBA | 3.04822 | 4.68628e-2 | 1.42848e-1 | F | Benzo(a)pyrene #16 |
| 30.685 | MM | 3.32180e-1 | 2.08063e-1 | 6.91144e-2 | <MDL | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Sig | Name |
|---|---|---|---|---|---|---|
| 31.515 | MM | 3.91318e-1 | 2.22280e-1 | 8.69821e-2 | F | Benzo(g,h,i)perylene #18 |
| 32.488 | BB | 2.42565 | 4.05324e-2 | 9.83173e-2 | F | Indeno(1,2,3-cd)pyrene #1 |

Totals : 7.12165

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Negative results set to zero (cal. curve intercept), (Naphthalene

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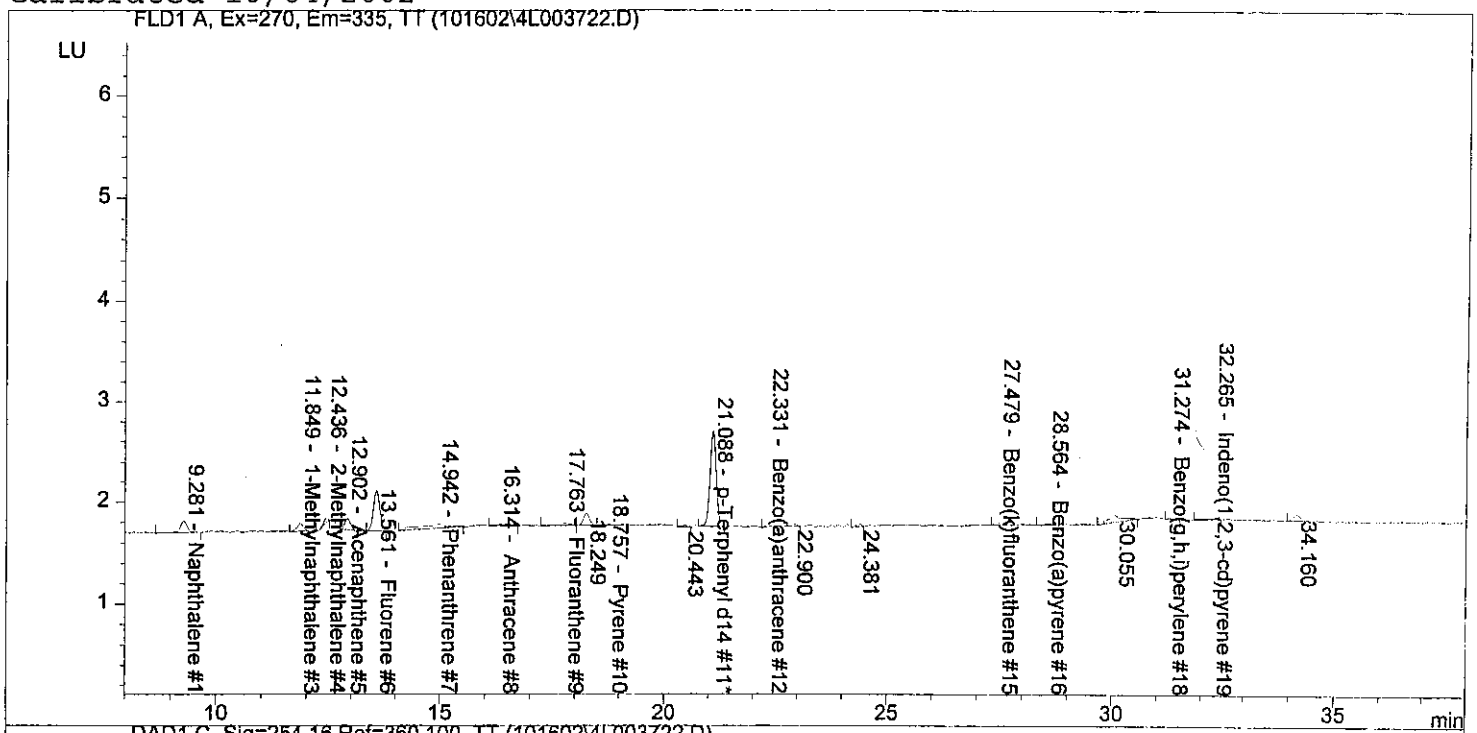
*** End of Report ***

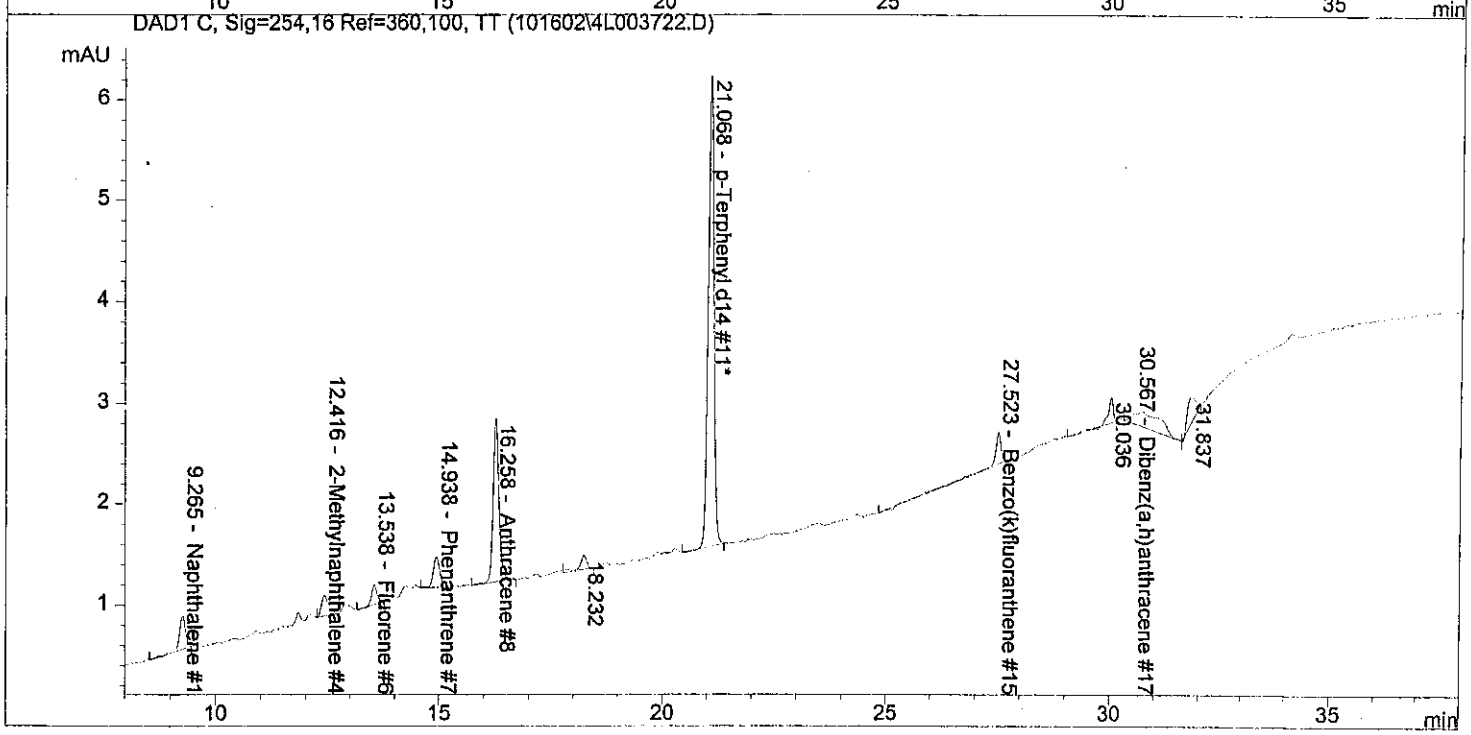
==========

Injection Date : 10/16/2002 6:49:59 PM  Seq. Line : 3
Sample Name : WG127373-01 WBLK  Vial : 3
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:54:41 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.281 | BB | 1.31136 | 2.96470e-1 | 3.88779e-1 | | Naphthalene #1 |
| 11.849 | BB | 7.79795e-1 | 4.19717e-1 | 3.27293e-1 | | 1-Methylnaphthalene #3 |
| 12.436 | BB | 2.42596e-1 | 1.09113 | 2.64705e-1 | | 2-Methylnaphthalene #4 |
| 12.902 | BBA | 1.02596 | 2.02764e-1 | 2.08027e-1 | | Acenaphthene #5 |
| 13.561 | BB | 3.76579 | 2.29108e-2 | 8.62774e-2 | | Fluorene #6 |
| 14.942 | BB | 1.85626 | 4.24736e-1 | 7.88423e-1 | | Phenanthrene #7 |
| 16.314 | BB | 2.60017e-1 | 1.30202 | 3.38548e-1 | F | Anthracene #8 |
| 17.763 | BB | 3.85209e-1 | 9.18092e-2 | 3.53657e-2 | | Fluoranthene #9 |
| 18.757 | BBA | 1.75267e-1 | 3.48869e-1 | 6.11452e-2 | | Pyrene #10 |
| 21.088 | BBA | 9.12321 | 3.32672e-1 | 3.03503 | 30.4% | p-Terphenyl d14 #11* |
| 22.331 | BB | 3.49113e-1 | 1.38019e-1 | 4.81842e-2 | X | Benzo(a)anthracene #12 |
| 23.366 | | - | - | - | | Chrysene #13 |
| 26.094 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.479 | BB | 2.72627e-1 | 6.29463e-2 | 1.71608e-2 | | Benzo(k)fluoranthene #15 |
| 28.564 | PBA | 1.61345e-1 | 3.64017e-1 | 5.87322e-2 | | Benzo(a)pyrene #16 |
| 30.505 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.274 | BBA | 1.45679e-1 | 5.42888e-1 | 7.90875e-2 | | Benzo(g,h,i)perylene #18 |
| 32.265 | BB | 2.57721e-1 | 1.58028e-1 | 4.07270e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 5.77749

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.265 | BB | 3.30202 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.956 | | - | - | - | | Acenaphthylene #2 |
| 11.903 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.416 | BB | 2.44601 | 4.28172e-2 | 1.04731e-1 | mix | 2-Methylnaphthalene #4 |
| 12.957 | | - | - | - | | Acenaphthene #5 |
| 13.538 | BB | 1.75809 | 1.29752e-1 | 2.28115e-1 | mix | Fluorene #6 |
| 14.938 | BB | 3.11714 | 9.07129e-2 | 2.82765e-1 | ↓ | Phenanthrene #7 |
| 16.258 | PB | 14.45341 | 2.17463e-2 | 3.14308e-1 | F | Anthracene #8 |
| 17.789 | | - | - | - | | Fluoranthene #9 |
| 18.794 | | - | - | - | X | Pyrene #10 |
| 21.068 | BBA | 41.29102 | 7.02176e-2 | 2.89935 | | p-Terphenyl d14 #11* |
| 22.472 | | - | - | - | 29.0% | Benzo(a)anthracene #12 |
| 23.343 | | - | - | - | | Chrysene #13 |
| 26.073 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.523 | PB | 3.10992 | 2.63726e-2 | 8.20167e-2 | NC | Benzo(k)fluoranthene #15 |
| 28.617 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.567 | BB | 6.81492 | 1.05334e-1 | 7.17842e-1 | NC | Dibenz(a,h)anthracene #17 |

| Retime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.280 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.282 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.62913

Results obtained with enhanced integrator!
4 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
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

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*** End of Report ***

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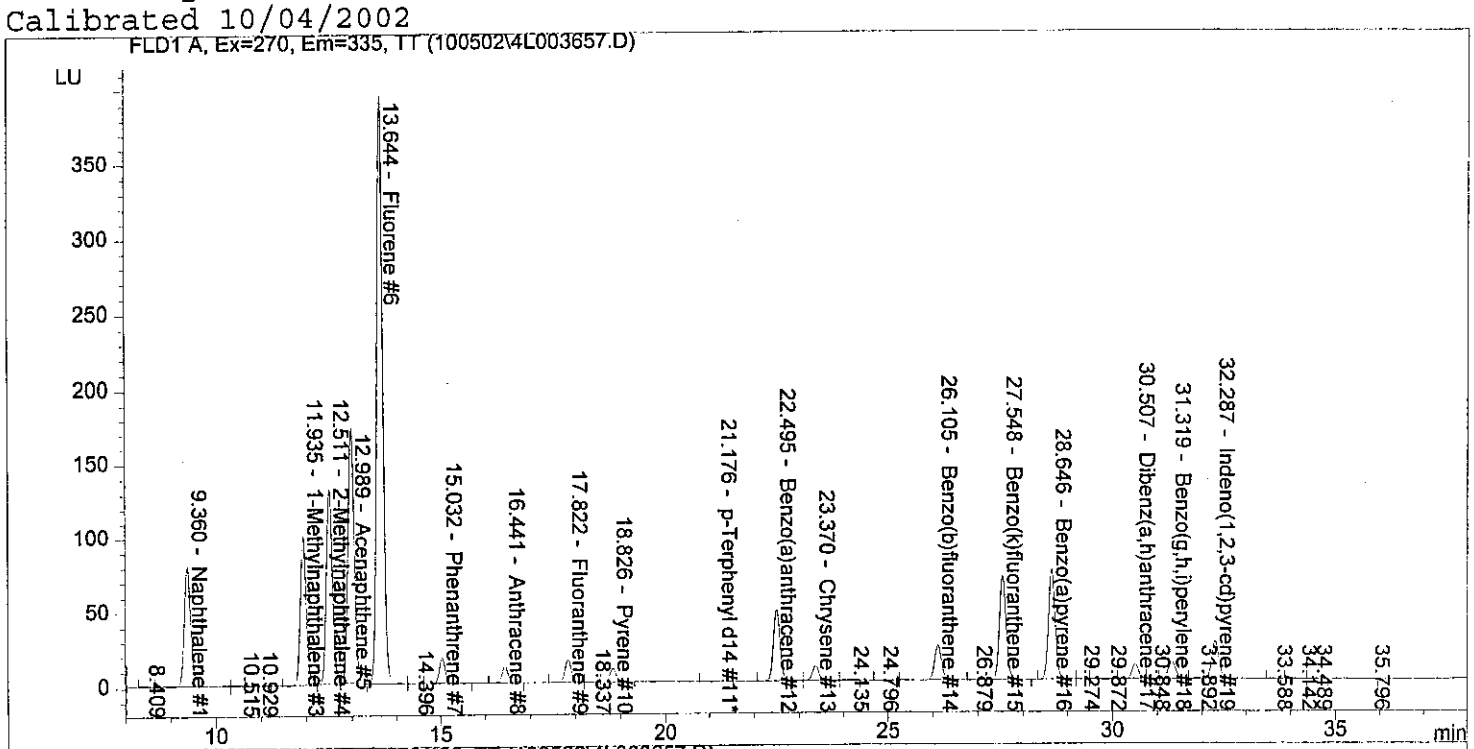
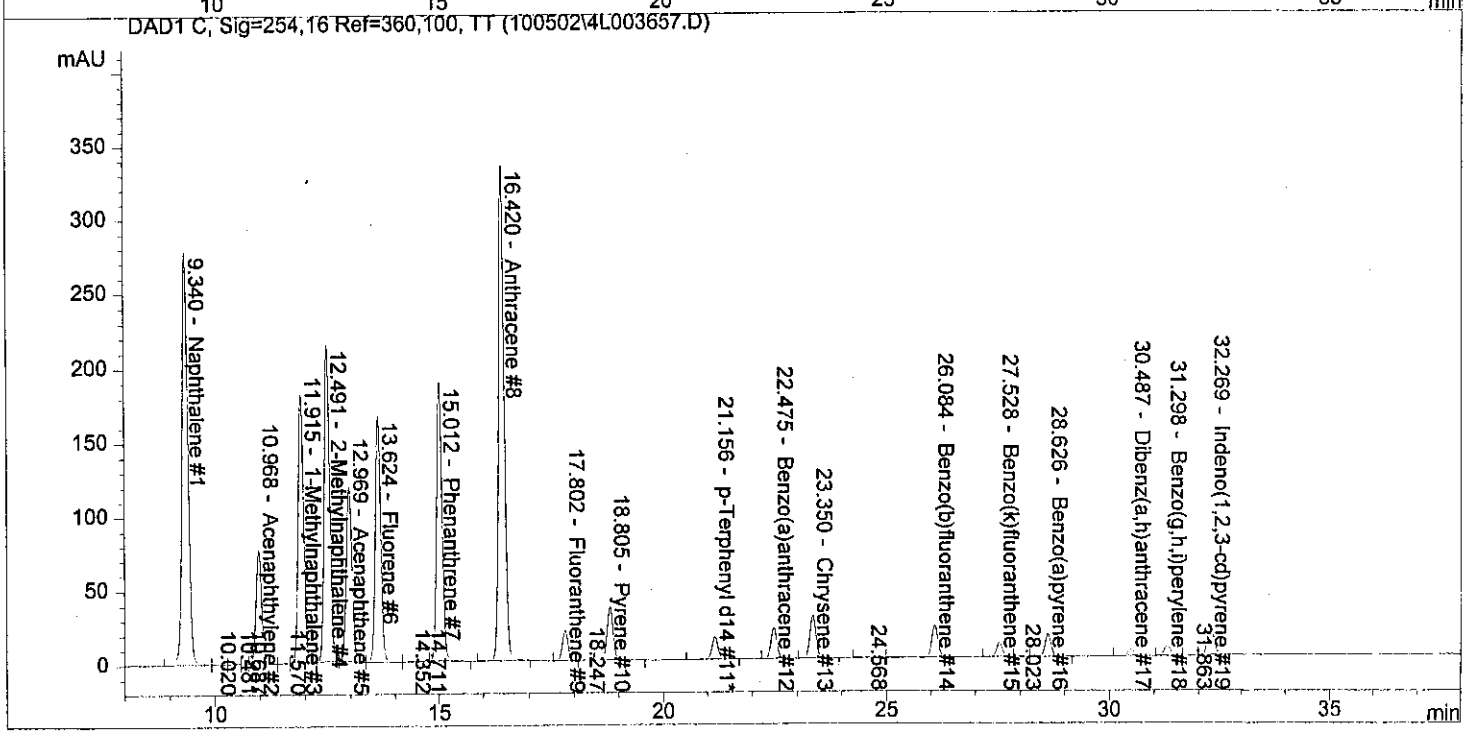
Injection Date : 10/5/2002 5:20:31 PM
Sample Name : WG126384-02 LCS
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/5/2002 2:03:10 PM
Calibrated 10/04/2002



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/5/2002 2:00:42 PM
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 | 794.35876 | 2.65412e-2 | 21.08320 | | Naphthalene #1 |
| 11.935 | BB | 944.21588 | 2.31333e-2 | 21.84280 | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 1228.51379 | 1.78419e-2 | 21.91906 | | 2-Methylnaphthalene #4 |
| 12.989 | BB | 1620.81104 | 1.42086e-2 | 23.02938 | | Acenaphthene #5 |
| 13.644 | BB | 3707.98682 | 6.74933e-3 | 25.02644 | | Fluorene #6 |
| 15.032 | BBA | 157.20619 | 1.75395e-1 | 27.57315 | | Phenanthrene #7 |
| 16.441 | BBA | 101.36361 | 3.16916e-1 | 32.12376 | | Anthracene #8 |
| 17.822 | PB | 142.54491 | 2.55828e-2 | 3.64670 | | Fluoranthene #9 |
| 18.826 | BBA | 89.96833 | 4.08474e-2 | 3.67498 | | Pyrene #10 |
| 21.176 | BBA | 30.12641 | 3.07172e-1 | 9.25397 | 92.5 | p-Terphenyl d14 #11* |
| 22.495 | BB | 490.08051 | 8.33783e-3 | 4.08621 | | Benzo(a)anthracene #12 |
| 23.370 | BB | 101.72439 | 4.07022e-2 | 4.14040 | | Chrysene #13 |
| 26.105 | BB | 243.15295 | 1.71161e-2 | 4.16182 | | Benzo(b)fluoranthene #14 |
| 27.548 | BB | 735.55109 | 2.84369e-3 | 2.09168 | | Benzo(k)fluoranthene #15 |
| 28.646 | BB | 773.75085 | 5.18049e-3 | 4.00841 | | Benzo(a)pyrene #16 |
| 30.507 | BB | 99.17483 | 4.17259e-2 | 4.13816 | | Dibenz(a,h)anthracene #17 |
| 31.319 | BB | 135.96109 | 3.05572e-2 | 4.15459 | | Benzo(g,h,i)perylene #18 |
| 32.287 | BB | 281.67059 | 1.45225e-2 | 4.09055 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 220.04525

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.340 | BB | 2578.03760 | 8.38817e-3 | 21.62501 | | Naphthalene #1 |
| 10.968 | BB | 667.15979 | 3.41916e-2 | 22.81127 | | Acenaphthylene #2 |
| 11.915 | BB | 1572.27930 | 1.39415e-2 | 21.91986 | | 1-Methylnaphthalene #3 |
| 12.491 | BB | 1837.59167 | 1.20820e-2 | 22.20185 | | 2-Methylnaphthalene #4 |
| 12.969 | BB | 1020.68274 | 2.26775e-2 | 23.14649 | | Acenaphthene #5 |
| 13.624 | BB | 1427.52344 | 1.74565e-2 | 24.91963 | | Fluorene #6 |
| 15.012 | BBA | 1608.26550 | 1.73668e-2 | 27.93043 | | Phenanthrene #7 |
| 16.420 | PB | 2935.98926 | 1.12829e-2 | 33.12658 | | Anthracene #8 |
| 17.802 | BB | 174.79576 | 2.08718e-2 | 3.64830 | | Fluoranthene #9 |
| 18.805 | BBA | 340.42560 | 1.11039e-2 | 3.78006 | | Pyrene #10 |
| 21.156 | BBA | 143.47383 | 6.68794e-2 | 9.59545 | 96.0 | p-Terphenyl d14 #11* |
| 22.475 | PB | 193.87291 | 2.12256e-2 | 4.11506 | | Benzo(a)anthracene #12 |
| 23.350 | BB | 281.51797 | 1.51813e-2 | 4.27380 | | Chrysene #13 |
| 26.084 | BBA | 206.85004 | 2.02493e-2 | 4.18857 | | Benzo(b)fluoranthene #14 |
| 27.528 | BB | 90.54131 | 2.32229e-2 | 2.10264 | | Benzo(k)fluoranthene #15 |
| 28.626 | BBA | 148.33144 | 2.73728e-2 | 4.06024 | | Benzo(a)pyrene #16 |
| 30.487 | BB | 41.94336 | 1.00925e-1 | 4.23314 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.298 | BB | 72.33908 | 5.91379e-2 | 4.27798 | | Benzo(g,h,i)perylene #18 |
| 32.269 | BBA | 209.50449 | 1.95920e-2 | 4.10461 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 246.06097 | | |

Results obtained with enhanced integrator!

*** End of Report ***

1,1 V191P83 LCS 100302 @ 08:30

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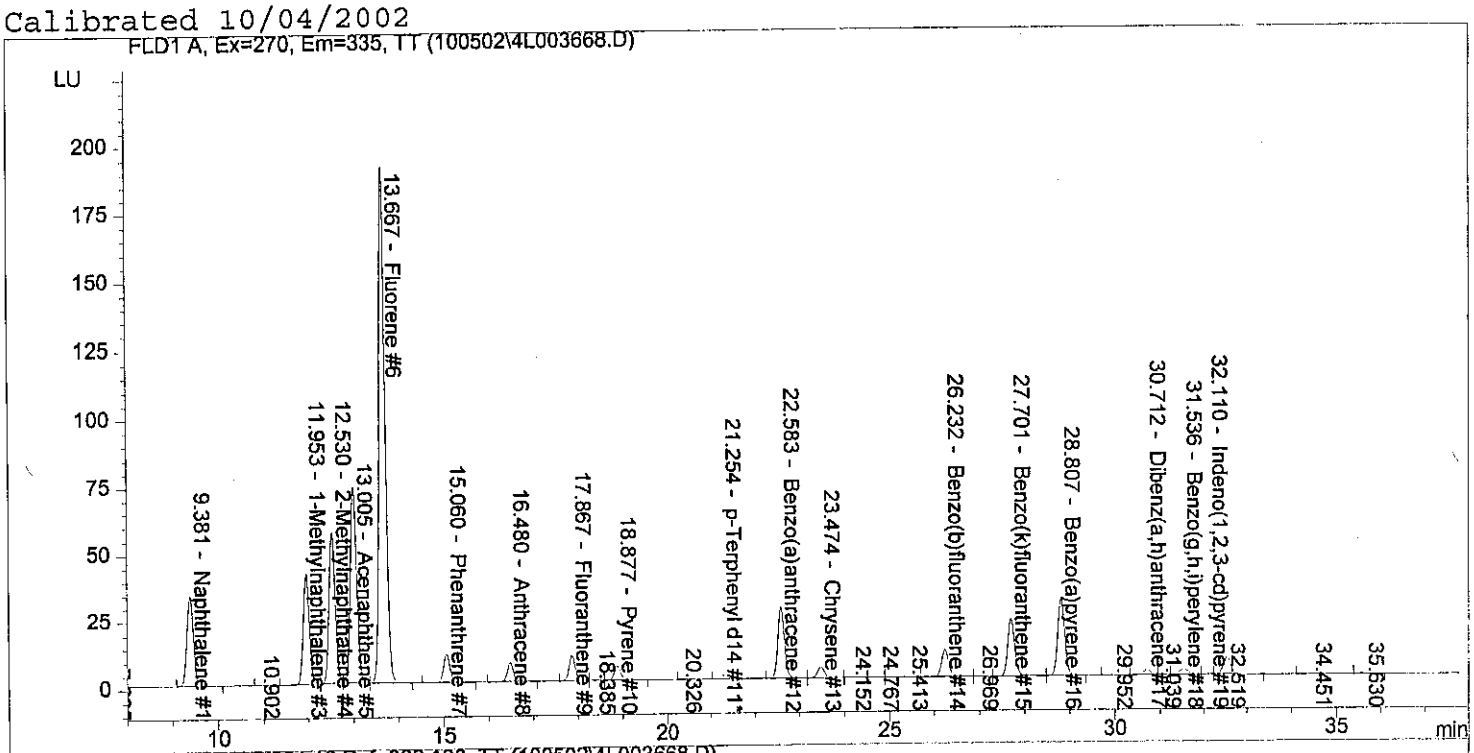
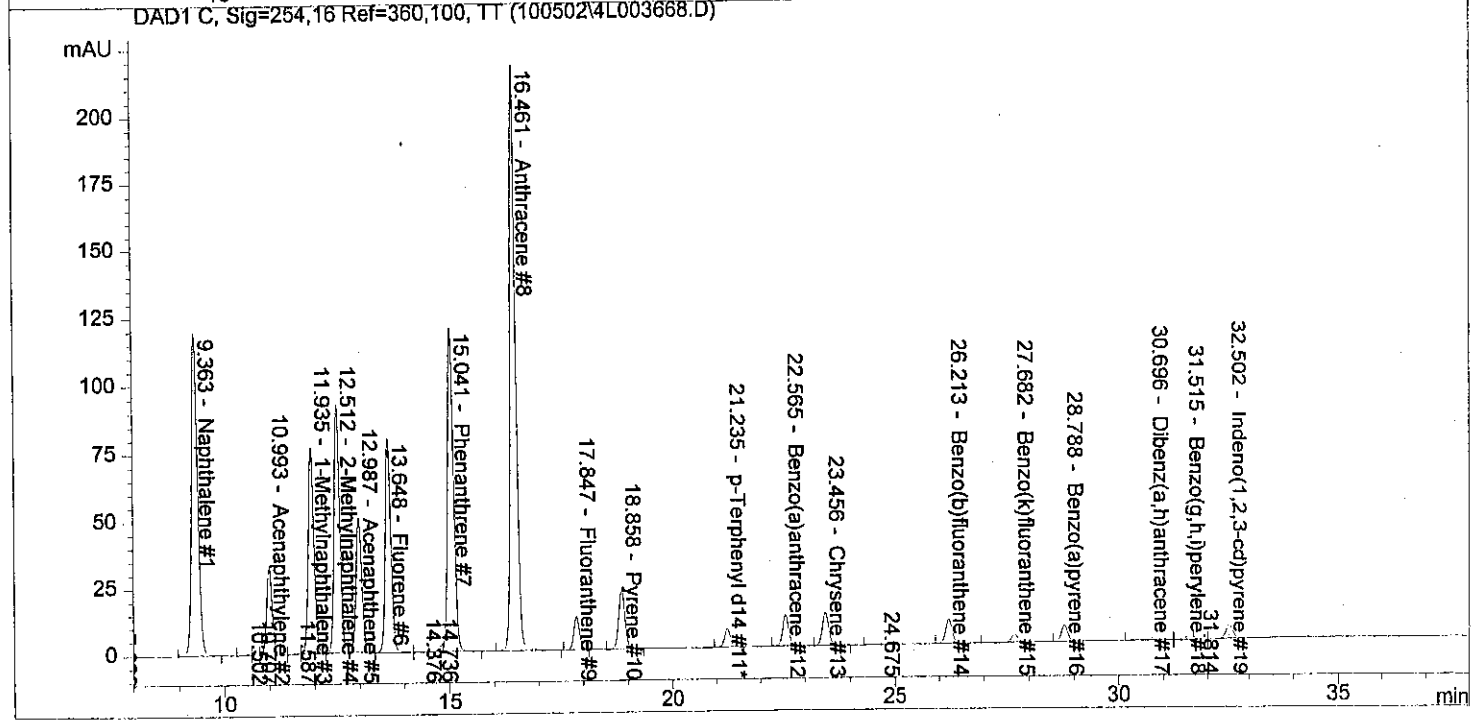
| | | | |
|---|---|---|---|
| Injection Date | : 10/6/2002 3:43:20 AM | Seq. Line | : 15 |
| Sample Name | : WG126469-02 LCS | Vial | : 15 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:48:31 PM
(modified after loading)

Calibrated 10/04/2002



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, October 10, 2002 3:48:31 PM
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 | 336.95935 | 2.71470e-2 | 9.14745 | | Naphthalene #1 |
| 11.953 | BB | 397.33240 | 2.35844e-2 | 9.37086 | | 1-Methylnaphthalene #3 |
| 12.530 | BB | 523.87598 | 1.81271e-2 | 9.49633 | | 2-Methylnaphthalene #4 |
| 13.005 | BB | 691.62677 | 1.43690e-2 | 9.93799 | | Acenaphthene #5 |
| 13.667 | BBA | 1803.56299 | 6.76668e-3 | 12.20414 | | Fluorene #6 |
| 15.060 | BBA | 99.74997 | 1.77111e-1 | 17.66681 | | Phenanthrene #7 |
| 16.480 | BBA | 68.70655 | 3.18120e-1 | 21.85695 | | Anthracene #8 |
| 17.867 | PB | 91.32411 | 2.56834e-2 | 2.34552 | | Fluoranthene #9 |
| 18.877 | BBA | 53.84673 | 4.12507e-2 | 2.22122 | | Pyrene #10 |
| 21.254 | BB | 13.72034 | 3.20416e-1 | 4.39622 | 44.0% | p-Terphenyl d14 #11* |
| 22.583 | BB | 277.44870 | 8.40868e-3 | 2.33298 | | Benzo(a)anthracene #12 |
| 23.474 | BB | 43.86277 | 4.12812e-2 | 1.81071 | | Chrysene #13 |
| 26.232 | BB | 108.56080 | 1.73093e-2 | 1.87911 | | Benzo(b)fluoranthene #14 |
| 27.701 | BB | 231.19699 | 2.89230e-3 | 6.68692e-1 | | Benzo(k)fluoranthene #15 |
| 28.807 | BB | 309.79651 | 5.29257e-3 | 1.63962 | | Benzo(a)pyrene #16 |
| 30.712 | BB | 20.63094 | 4.37754e-2 | 9.03128e-1 | | Dibenz(a,h)anthracene #17 |
| 31.536 | BB | 28.05673 | 3.26707e-2 | 9.16632e-1 | | Benzo(g,h,i)perylene #18 |
| 32.110 | BB | 7.45625e-1 | 6.40382e-2 | 4.77484e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 108.84210

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.363 | PB | 1116.04224 | 8.34062e-3 | 9.30848 | | Naphthalene #1 |
| 10.993 | BB | 288.27289 | 3.47351e-2 | 10.01318 | | Acenaphthylene #2 |
| 11.935 | BB | 671.89081 | 1.40973e-2 | 9.47187 | | 1-Methylnaphthalene #3 |
| 12.512 | BB | 792.11426 | 1.21361e-2 | 9.61318 | | 2-Methylnaphthalene #4 |
| 12.987 | BB | 435.93686 | 2.30136e-2 | 10.03246 | | Acenaphthene #5 |
| 13.648 | BB | 692.70459 | 1.76034e-2 | 12.19398 | | Fluorene #6 |
| 15.041 | BBA | 1042.99182 | 1.74440e-2 | 18.19395 | | Phenanthrene #7 |
| 16.461 | BBA | 1952.66333 | 1.13090e-2 | 22.08268 | | Anthracene #8 |
| 17.847 | BB | 111.03839 | 2.09944e-2 | 2.33118 | | Fluoranthene #9 |
| 18.858 | BBA | 210.16260 | 1.11697e-2 | 2.34746 | | Pyrene #10 |
| 21.235 | BBA | 61.87623 | 6.86583e-2 | 4.24831 | 43.5% | p-Terphenyl d14 #11* |
| 22.565 | PBA | 111.61691 | 2.13743e-2 | 2.38574 | | Benzo(a)anthracene #12 |
| 23.456 | BBA | 123.75798 | 1.53498e-2 | 1.89966 | | Chrysene #13 |
| 26.213 | BBA | 92.01299 | 2.05065e-2 | 1.88687 | | Benzo(b)fluoranthene #14 |
| 27.682 | PBA | 28.21361 | 2.34704e-2 | 6.62186e-1 | | Benzo(k)fluoranthene #15 |
| 28.788 | BBA | 61.20135 | 2.79549e-2 | 1.71088 | | Benzo(a)pyrene #16 |
| 30.696 | BB | 12.07410 | 1.03041e-1 | 1.24413 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Cap | Name |
|---|---|---|---|---|---|---|
| 31.515 | BB | 11.31095 | 6.39254e-2 | 7.23057e-1 | | Benzo(g,h,i)perylene #18 |
| 32.502 | BB | 58.75436 | 2.02214e-2 | 1.18809 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 121.53735

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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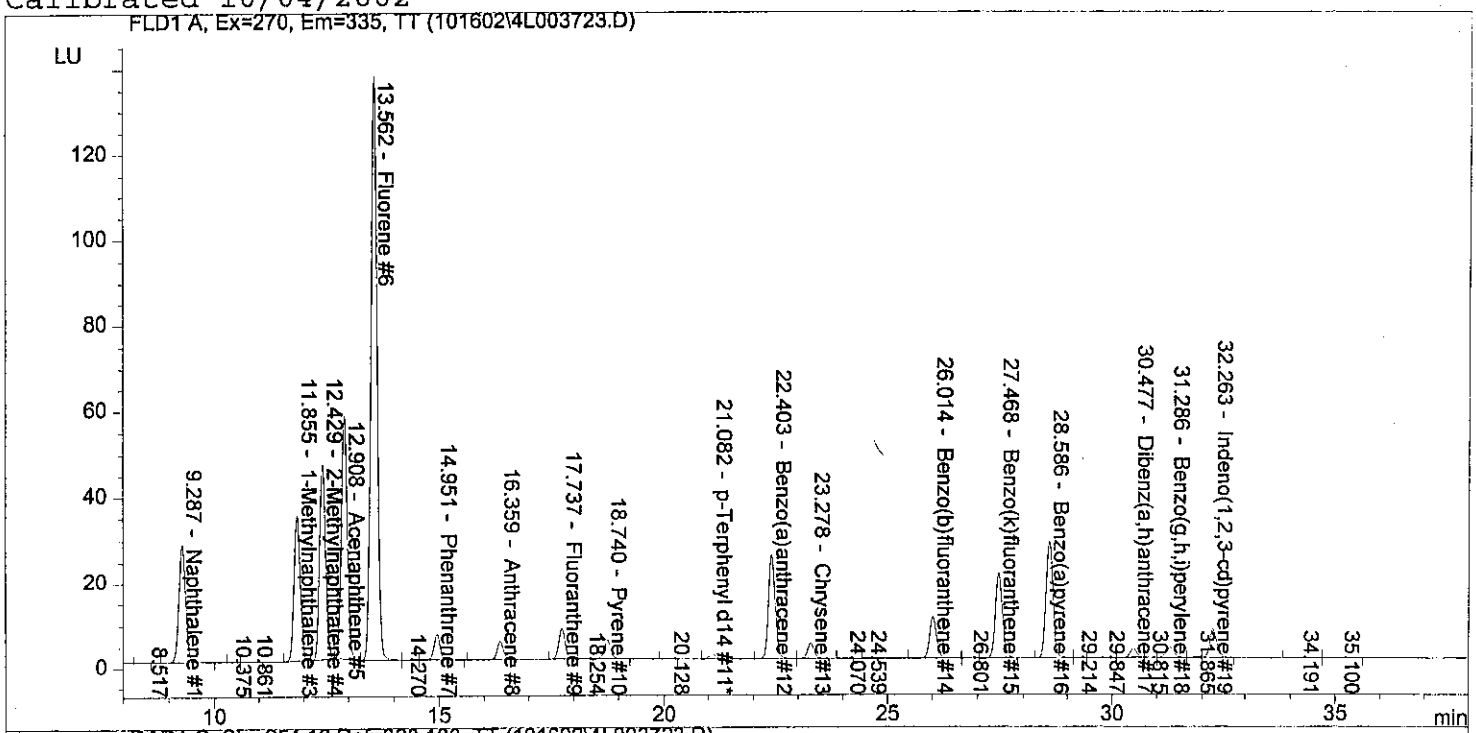
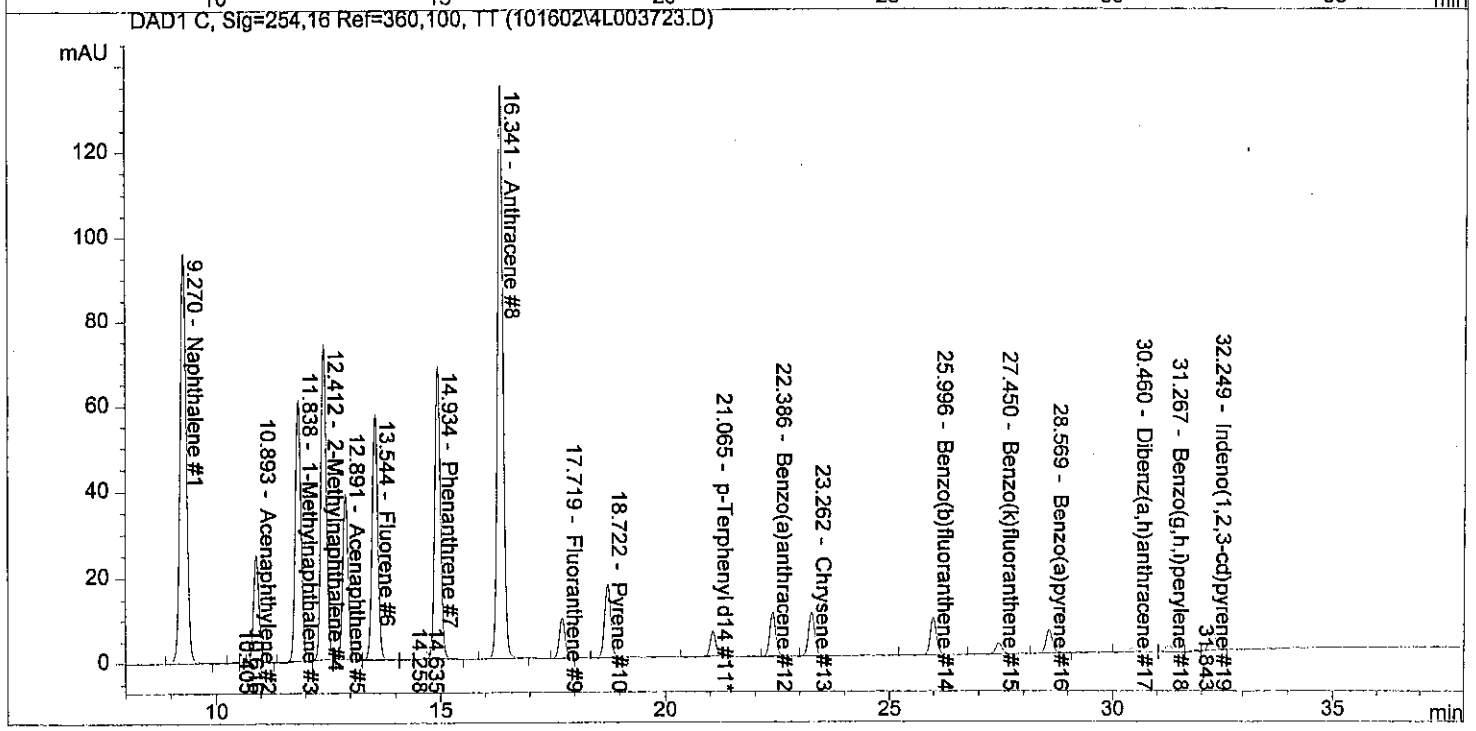
Injection Date : 10/16/2002 7:46:34 PM
Sample Name : WG127373-02 WLCS
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:54:41 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.287 | BB | 276.09952 | 2.73790e-2 | 7.55932 | | Naphthalene #1 |
| 11.855 | PB | 320.88712 | 2.37700e-2 | 7.62749 | | 1-Methylnaphthalene #3 |
| 12.429 | BB | 428.32739 | 1.82380e-2 | 7.81182 | | 2-Methylnaphthalene #4 |
| 12.908 | BB | 534.89636 | 1.44510e-2 | 7.72979 | | Acenaphthene #5 |
| 13.562 | BB | 1286.52075 | 6.78026e-3 | 8.72294 | | Fluorene #6 |
| 14.951 | BBA | 58.06692 | 1.80482e-1 | 10.48001 | | Phenanthrene #7 |
| 16.359 | BB | 41.38502 | 3.20588e-1 | 13.26753 | | Anthracene #8 |
| 17.737 | PB | 70.00790 | 2.57687e-2 | 1.80401 | * | Fluoranthene #9 |
| 18.740 | BBA | 45.78605 | 4.14276e-2 | 1.89681 | | Pyrene #10 |
| 21.082 | BB | 11.59124 | 3.24884e-1 | 3.76580 | 37.7% | p-Terphenyl d14 #11* |
| 22.403 | BB | 252.11848 | 8.42509e-3 | 2.12412 | | Benzo(a)anthracene #12 |
| 23.278 | BB | 38.19770 | 4.14322e-2 | 1.58261 | | Chrysene #13 |
| 26.014 | BB | 104.46865 | 1.73230e-2 | 1.80971 | | Benzo(b)fluoranthene #14 |
| 27.468 | BB | 213.39876 | 2.89822e-3 | 6.18476e-1 | | Benzo(k)fluoranthene #15 |
| 28.586 | BB | 290.11102 | 5.30525e-3 | 1.53911 | | Benzo(a)pyrene #16 |
| 30.477 | BB | 22.44571 | 4.35662e-2 | 9.77874e-1 | | Dibenz(a,h)anthracene #17 |
| 31.286 | BB | 32.47486 | 3.23084e-2 | 1.04921 | | Benzo(g,h,i)perylene #18 |
| 32.263 | BB | 76.30367 | 1.48762e-2 | 1.13511 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 81.50176

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.270 | PBA | 890.80829 | 8.31942e-3 | 7.41101 | | Naphthalene #1 |
| 10.893 | BBA | 219.03227 | 3.50376e-2 | 7.67437 | | Acenaphthylene #2 |
| 11.838 | PB | 528.07776 | 1.41715e-2 | 7.48364 | | 1-Methylnaphthalene #3 |
| 12.412 | BB | 633.98694 | 1.21598e-2 | 7.70916 | | 2-Methylnaphthalene #4 |
| 12.891 | BB | 331.70737 | 2.31979e-2 | 7.69491 | | Acenaphthene #5 |
| 13.544 | BB | 490.51526 | 1.77211e-2 | 8.69245 | | Fluorene #6 |
| 14.934 | BBA | 589.19360 | 1.76132e-2 | 10.37756 | | Phenanthrene #7 |
| 16.341 | PBA | 1186.79846 | 1.13592e-2 | 13.48112 | | Anthracene #8 |
| 17.719 | BB | 84.92260 | 2.10977e-2 | 1.79167 | * | Fluoranthene #9 |
| 18.722 | BBA | 163.39580 | 1.12189e-2 | 1.83313 | | Pyrene #10 |
| 21.065 | BBA | 53.84613 | 6.91247e-2 | 3.72210 | 37.3% | p-Terphenyl d14 #11* |
| 22.386 | BBA | 98.19310 | 2.14223e-2 | 2.10352 | | Benzo(a)anthracene #12 |
| 23.262 | BBA | 100.44763 | 1.54196e-2 | 1.54887 | | Chrysene #13 |
| 25.996 | BBA | 87.18840 | 2.05322e-2 | 1.79017 | | Benzo(b)fluoranthene #14 |
| 27.450 | BB | 26.42905 | 2.34947e-2 | 6.20943e-1 | | Benzo(k)fluoranthene #15 |
| 28.569 | BB | 55.25716 | 2.80616e-2 | 1.55060 | | Benzo(a)pyrene #16 |
| 30.460 | BB | 11.04381 | 1.03318e-1 | 1.14103 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.267 | BB | 17.14227 | 6.19950e-2 | 1.06274 | | Benzo(g,h,i)perylene #18 |
| 32.249 | BB | 56.60835 | 2.02545e-2 | 1.14658 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 88.83554

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

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*** End of Report ***

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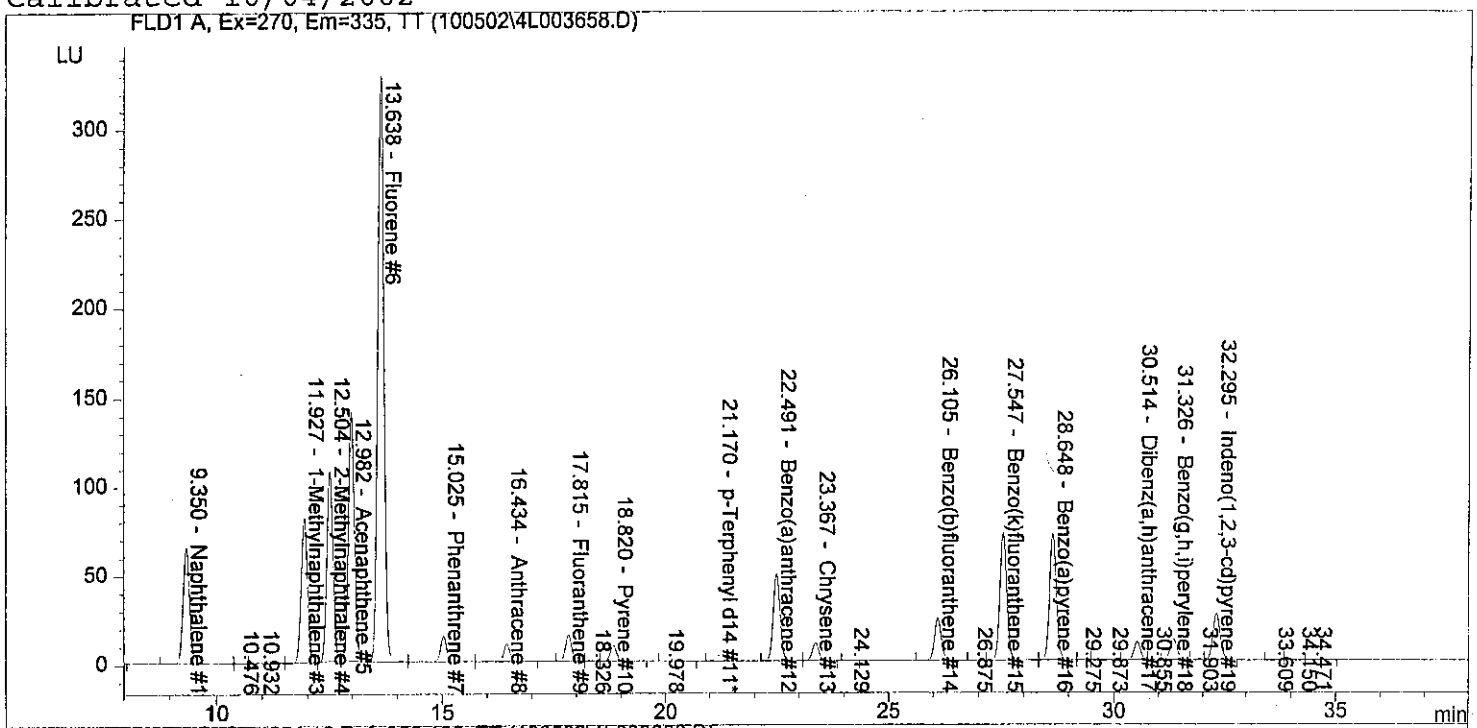
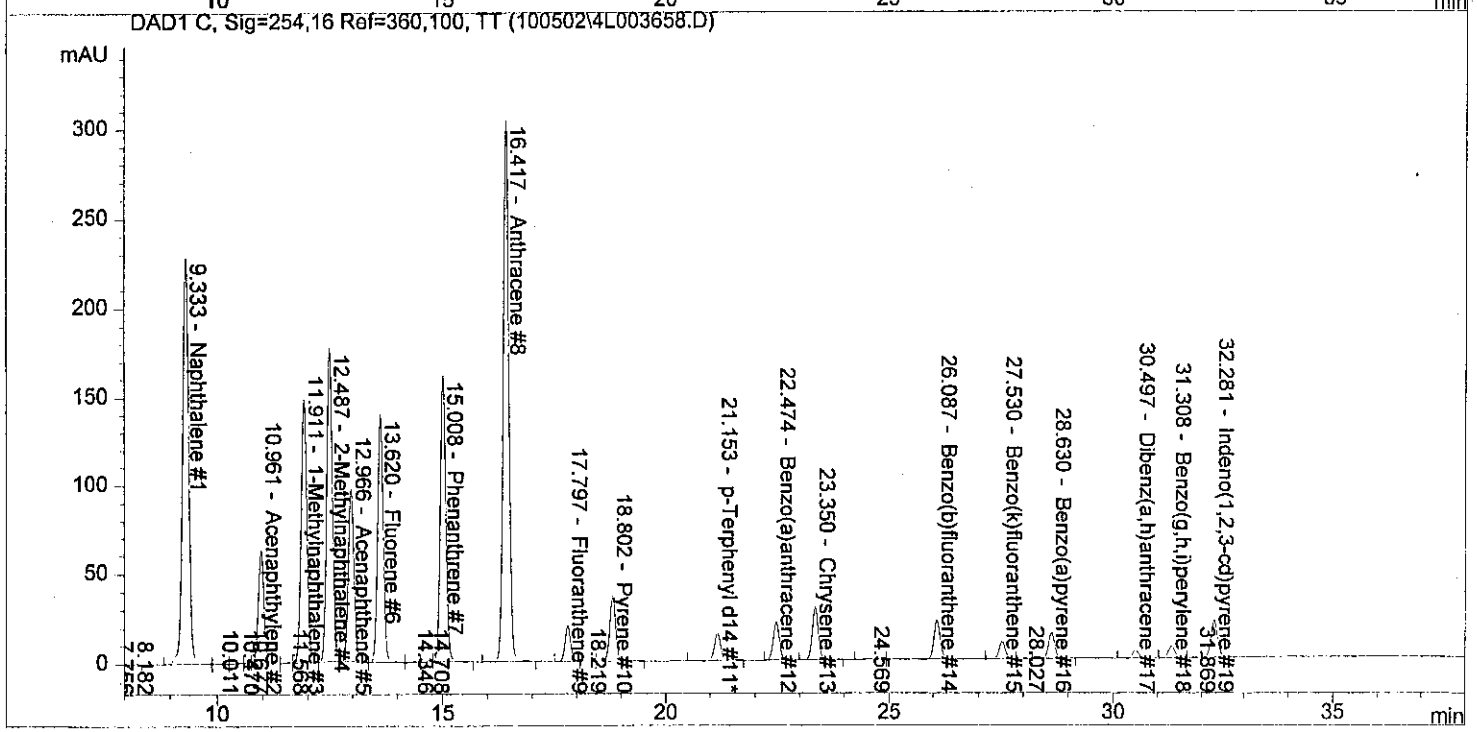
| | | | |
|---|---|---|---|
| Injection Date | : 10/5/2002 6:17:07 PM | Seq. Line | : 5 |
| Sample Name | : WG126384-03 LCS2 | Vial | : 5 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/5/2002 2:03:10 PM
Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/2002 2:00:42 PM
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 | 639.90356 | 2.66489e-2 | 17.05272 | | Naphthalene #1 |
| 11.927 | BB | 765.99780 | 2.32095e-2 | 17.77846 | | 1-Methylnaphthalene #3 |
| 12.504 | BB | 999.62201 | 1.78905e-2 | 17.88371 | | 2-Methylnaphthalene #4 |
| 12.982 | BB | 1316.97437 | 1.42361e-2 | 18.74858 | | Acenaphthene #5 |
| 13.638 | BB | 3083.37769 | 6.75266e-3 | 20.82101 | | Fluorene #6 |
| 15.025 | BB | 134.29782 | 1.75903e-1 | 23.62339 | | Phenanthrene #7 |
| 16.434 | BBA | 93.16190 | 3.17139e-1 | 29.54528 | | Anthracene #8 |
| 17.815 | PB | 142.16243 | 2.55833e-2 | 3.63698 | | Fluoranthene #9 |
| 18.820 | BBA | 90.56316 | 4.08435e-2 | 3.69891 | | Pyrene #10 |
| 21.170 | BB | 30.18926 | 3.07148e-1 | 9.27258 | 92.7 | p-Terphenyl d14 #11* |
| 22.491 | BB | 497.84833 | 8.33639e-3 | 4.15026 | | Benzo(a)anthracene #12 |
| 23.367 | BBA | 103.86010 | 4.06931e-2 | 4.22639 | | Chrysene #13 |
| 26.105 | PBA | 249.33513 | 1.71122e-2 | 4.26667 | | Benzo(b)fluoranthene #14 |
| 27.547 | BB | 753.72009 | 2.84315e-3 | 2.14294 | | Benzo(k)fluoranthene #15 |
| 28.648 | BB | 743.17944 | 5.18357e-3 | 3.85232 | | Benzo(a)pyrene #16 |
| 30.514 | BB | 101.43478 | 4.17139e-2 | 4.23124 | | Dibenz(a,h)anthracene #17 |
| 31.326 | BB | 138.69180 | 3.05463e-2 | 4.23653 | | Benzo(g,h,i)perylene #18 |
| 32.295 | BB | 290.32919 | 1.45185e-2 | 4.21516 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 193.38314

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.333 | BB | 2119.19434 | 8.38031e-3 | 17.75950 | | Naphthalene #1 |
| 10.961 | BB | 547.41949 | 3.42821e-2 | 18.76667 | | Acenaphthylene #2 |
| 11.911 | BB | 1285.66406 | 1.39674e-2 | 17.95737 | | 1-Methylnaphthalene #3 |
| 12.487 | BB | 1508.43408 | 1.20910e-2 | 18.23844 | | 2-Methylnaphthalene #4 |
| 12.966 | BB | 839.66644 | 2.27315e-2 | 19.08686 | | Acenaphthene #5 |
| 13.620 | BB | 1190.13342 | 1.74842e-2 | 20.80849 | | Fluorene #6 |
| 15.008 | BBA | 1372.21851 | 1.73913e-2 | 23.86467 | | Phenanthrene #7 |
| 16.417 | PB | 2659.27808 | 1.12883e-2 | 30.01879 | | Anthracene #8 |
| 17.797 | BB | 175.12166 | 2.08714e-2 | 3.65503 | | Fluoranthene #9 |
| 18.802 | BBA | 342.13293 | 1.11034e-2 | 3.79884 | | Pyrene #10 |
| 21.153 | BBA | 144.87480 | 6.68664e-2 | 9.68725 | 96.9 | p-Terphenyl d14 #11* |
| 22.474 | PB | 196.66510 | 2.12227e-2 | 4.17377 | | Benzo(a)anthracene #12 |
| 23.350 | BB | 288.28235 | 1.51782e-2 | 4.37559 | | Chrysene #13 |
| 26.087 | BBA | 211.40295 | 2.02449e-2 | 4.27983 | | Benzo(b)fluoranthene #14 |
| 27.530 | BB | 93.33454 | 2.32196e-2 | 2.16719 | | Benzo(k)fluoranthene #15 |
| 28.630 | BBA | 144.06311 | 2.73849e-2 | 3.94515 | | Benzo(a)pyrene #16 |
| 30.497 | BB | 43.12313 | 1.00902e-1 | 4.35120 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.308 | BB | 74.15588 | 5.91162e-2 | 4.38381 | | Benzo(g,h,i)perylene #18 |
| 32.281 | BBA | 216.77284 | 1.95838e-2 | 4.24523 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 215.56368

Results obtained with enhanced integrator!

*** End of Report ***

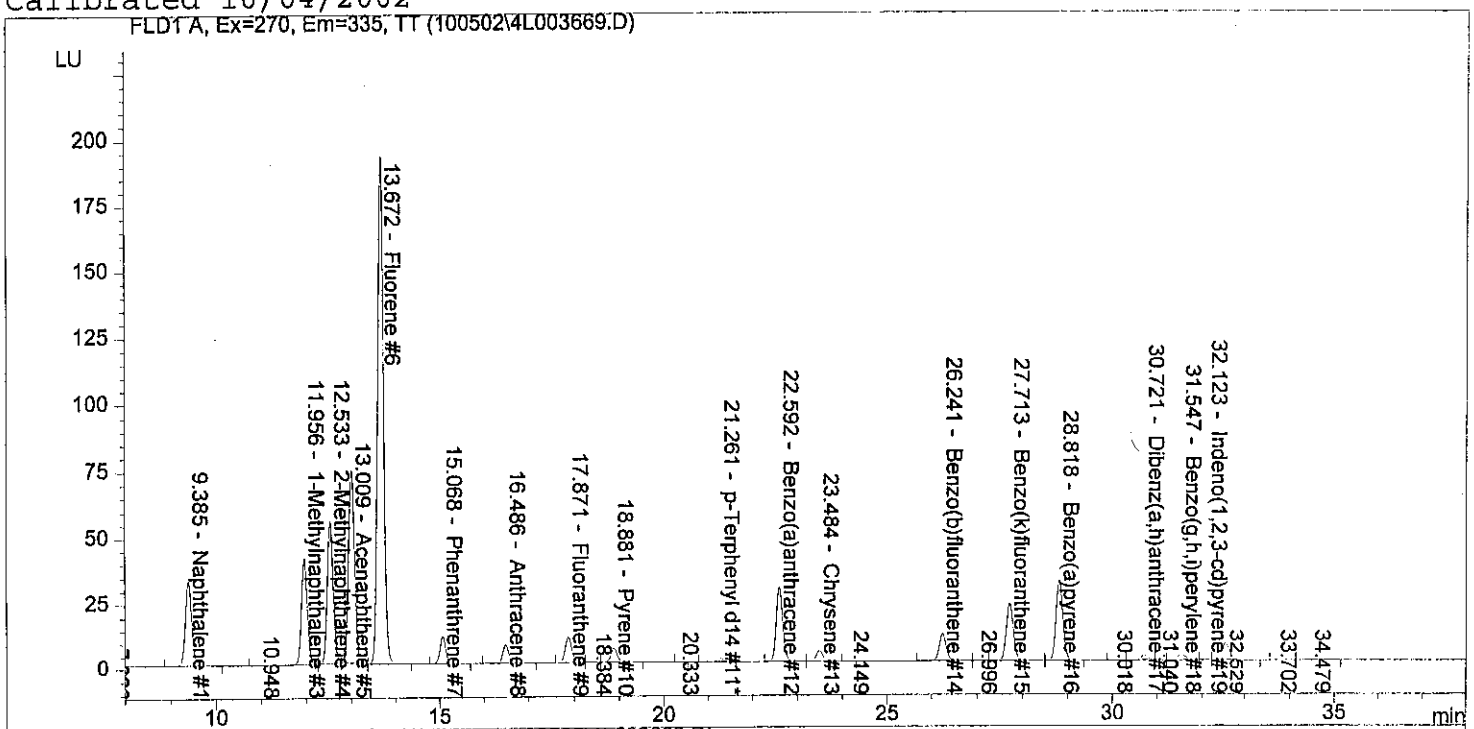
==========

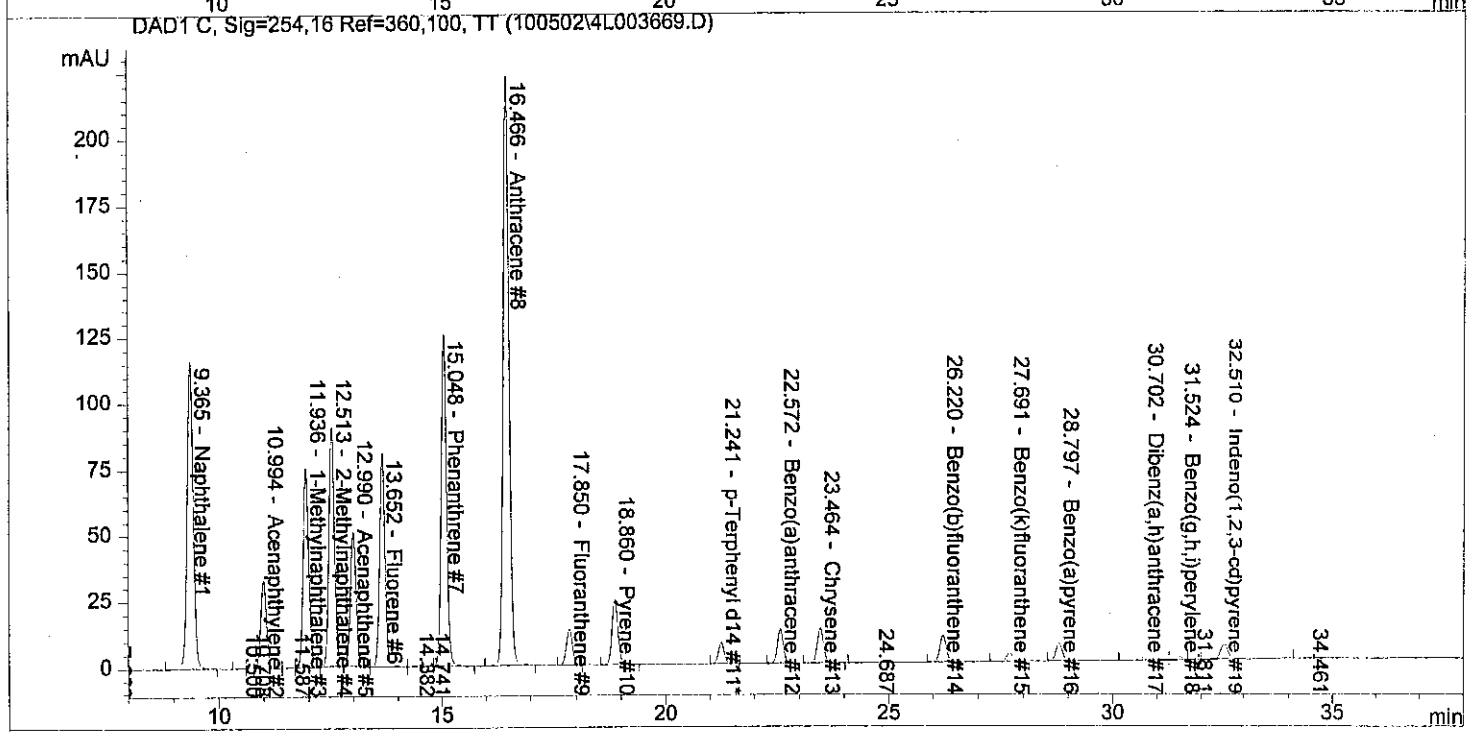
Injection Date : 10/6/2002 4:39:56 AM
Sample Name : WG126469-03 LCS2
Acq. Operator : RDC

Seq. Line : 16
Vial : 16
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/10/2002 3:48:31 PM
(modified after loading)

Calibrated 10/04/2002



## External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | Thursday, October 10, 2002 3:48:31 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.385 | BBA | 326.94040 | 2.71793e-2 | 8.88601 | | Naphthalene #1 |
| 11.956 | BB | 390.78589 | 2.35975e-2 | 9.22157 | | 1-Methylnaphthalene #3 |
| 12.533 | BB | 514.07385 | 1.81365e-2 | 9.32352 | | 2-Methylnaphthalene #4 |
| 13.009 | BB | 694.95306 | 1.43677e-2 | 9.98485 | | Acenaphthene #5 |
| 13.672 | BBA | 1823.09802 | 6.76632e-3 | 12.33567 | | Fluorene #6 |
| 15.068 | PBA | 103.67623 | 1.76933e-1 | 18.34376 | | Phenanthrene #7 |
| 16.486 | BBA | 70.28530 | 3.18036e-1 | 22.35328 | | Anthracene #8 |
| 17.871 | PB | 99.11053 | 2.56614e-2 | 2.54332 | | Fluoranthene #9 |
| 18.881 | BBA | 58.35670 | 4.11731e-2 | 2.40273 | | Pyrene #10 |
| 21.261 | PB | 15.58531 | 3.17506e-1 | 4.94843 | 49.5% | p-Terphenyl d14 #11* |
| 22.592 | BB | 296.65320 | 8.39811e-3 | 2.49133 | | Benzo(a)anthracene #12 |
| 23.484 | BBA | 45.28195 | 4.12493e-2 | 1.86785 | | Chrysene #13 |
| 26.241 | BB | 115.85702 | 1.72873e-2 | 2.00286 | | Benzo(b)fluoranthene #14 |
| 27.713 | BB | 241.04047 | 2.88941e-3 | 6.96464e-1 | | Benzo(k)fluoranthene #15 |
| 28.818 | BB | 327.53717 | 5.28245e-3 | 1.73020 | | Benzo(a)pyrene #16 |
| 30.721 | BB | 20.98481 | 4.37318e-2 | 9.17703e-1 | | Dibenz(a,h)anthracene #17 |
| 31.547 | BB | 28.58616 | 3.26213e-2 | 9.32519e-1 | | Benzo(g,h,i)perylene #18 |
| 32.123 | BB | 7.69866e-1 | 6.24749e-2 | 4.80973e-2 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 111.03014 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.365 | PBA | 1085.78760 | 8.33828e-3 | 9.05360 | | Naphthalene #1 |
| 10.994 | BB | 289.14725 | 3.47322e-2 | 10.04272 | | Acenaphthylene #2 |
| 11.936 | BB | 659.98608 | 1.41022e-2 | 9.30729 | | 1-Methylnaphthalene #3 |
| 12.513 | BB | 777.87140 | 1.21378e-2 | 9.44168 | | 2-Methylnaphthalene #4 |
| 12.990 | BB | 438.89975 | 2.30096e-2 | 10.09891 | | Acenaphthene #5 |
| 13.652 | BB | 700.13489 | 1.76004e-2 | 12.32266 | | Fluorene #6 |
| 15.048 | BBA | 1086.77344 | 1.74351e-2 | 18.94806 | | Phenanthrene #7 |
| 16.466 | PBA | 1987.48914 | 1.13076e-2 | 22.47381 | | Anthracene #8 |
| 17.850 | PB | 120.16196 | 2.09688e-2 | 2.51966 | | Fluoranthene #9 |
| 18.860 | BBA | 229.13226 | 1.11555e-2 | 2.55608 | | Pyrene #10 |
| 21.241 | BBA | 71.73671 | 6.82283e-2 | 4.89448 | 48.9% | p-Terphenyl d14 #11* |
| 22.572 | PBA | 119.78541 | 2.13504e-2 | 2.55747 | | Benzo(a)anthracene #12 |
| 23.464 | BBA | 129.33763 | 1.53369e-2 | 1.98363 | | Chrysene #13 |
| 26.220 | PBA | 98.31422 | 2.04768e-2 | 2.01316 | | Benzo(b)fluoranthene #14 |
| 27.691 | BBA | 29.74156 | 2.34520e-2 | 6.97498e-1 | | Benzo(k)fluoranthene #15 |
| 28.797 | BBA | 64.71127 | 2.79012e-2 | 1.80552 | | Benzo(a)pyrene #16 |
| 30.702 | BB | 12.94032 | 1.02842e-1 | 1.33081 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.524 | BB | 11.13462 | 6.40153e-2 | 7.12786e-1 | | Benzo(g,h,i)perylene #18 |
| 32.510 | BBA | 60.76896 | 2.01924e-2 | 1.22707 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 123.98689 | | |

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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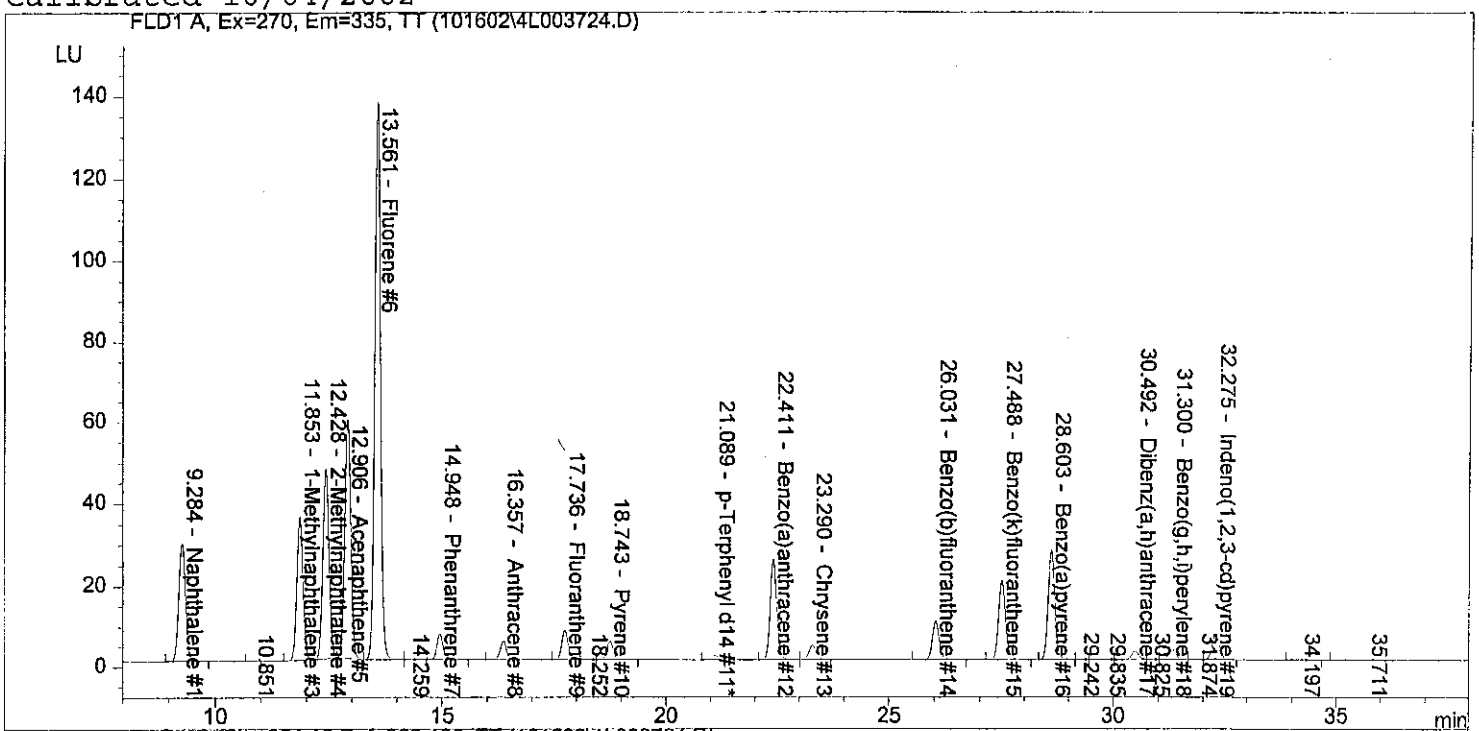
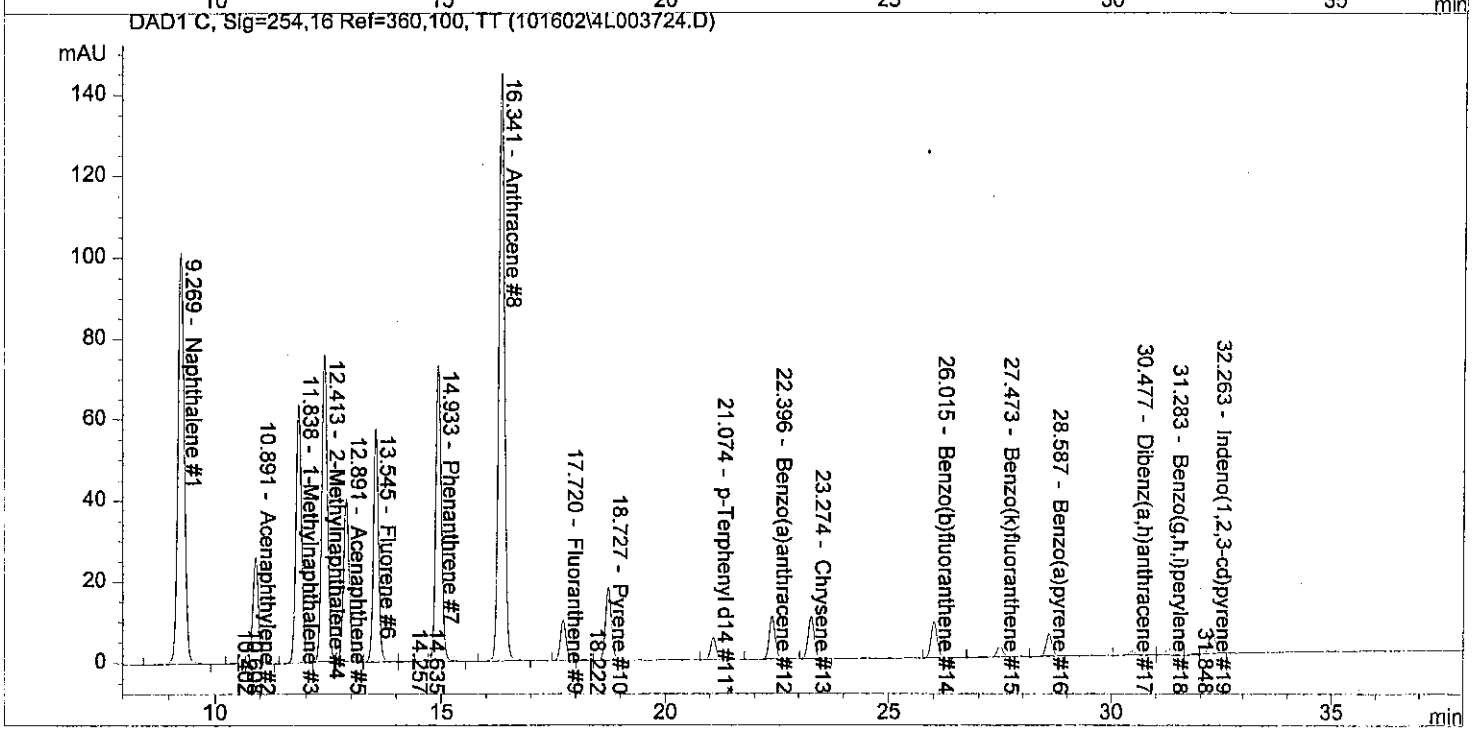
| | | | |
|---|---|---|---|
| Injection Date | : 10/16/2002 8:43:10 PM | Seq. Line : | 5 |
| Sample Name | : WG127373-03 WLCS | Vial : | 5 |
| Acq. Operator | : RDC | Inj : | 1 |
| | | Inj Volume : | 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 10/5/2002 2:03:30 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M
Last changed : 10/22/2002 11:54:41 AM by RDC
(modified after loading)

Calibrated 10/04/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Friday, October 18, 2002 4:30:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.284 | BBA | 288.89651 | 2.73221e-2 | 7.89326 | | Naphthalene #1 |
| 11.853 | BB | 332.91635 | 2.37352e-2 | 7.90183 | | 1-Methylnaphthalene #3 |
| 12.428 | BB | 438.27505 | 1.82242e-2 | 7.98719 | | 2-Methylnaphthalene #4 |
| 12.906 | BB | 553.37311 | 1.44389e-2 | 7.99011 | | Acenaphthene #5 |
| 13.561 | BB | 1291.35632 | 6.78008e-3 | 8.75550 | | Fluorene #6 |
| 14.948 | BB | 61.84620 | 1.79989e-1 | 11.13161 | | Phenanthrene #7 |
| 16.357 | BBA | 44.46349 | 3.20158e-1 | 14.23535 | | Anthracene #8 |
| 17.736 | PB | 72.39103 | 2.57567e-2 | 1.86455 | | Fluoranthene #9 |
| 18.743 | BB | 46.91520 | 4.13992e-2 | 1.94225 | * | Pyrene #10 |
| 21.089 | BB | 10.69244 | 3.27304e-1 | 3.49967 | 35% | p-Terphenyl d14 #11* |
| 22.411 | BB | 255.21512 | 8.42291e-3 | 2.14965 | | Benzo(a)anthracene #12 |
| 23.290 | BB | 37.79485 | 4.14446e-2 | 1.56639 | | Chrysene #13 |
| 26.031 | PB | 104.92645 | 1.73214e-2 | 1.81748 | | Benzo(b)fluoranthene #14 |
| 27.488 | BBA | 211.11046 | 2.89905e-3 | 6.12019e-1 | | Benzo(k)fluoranthene #15 |
| 28.603 | PB | 285.01758 | 5.30882e-3 | 1.51311 | | Benzo(a)pyrene #16 |
| 30.492 | BB | 21.40976 | 4.36813e-2 | 9.35205e-1 | | Dibenz(a,h)anthracene #17 |
| 31.300 | BB | 30.96220 | 3.24208e-2 | 1.00382 | | Benzo(g,h,i)perylene #18 |
| 32.275 | BB | 74.59007 | 1.48873e-2 | 1.11045 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 83.90945

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.269 | PBA | 939.98969 | 8.32492e-3 | 7.82533 | | Naphthalene #1 |
| 10.891 | BBA | 229.88324 | 3.49782e-2 | 8.04089 | | Acenaphthylene #2 |
| 11.838 | PB | 552.07971 | 1.41564e-2 | 7.81547 | | 1-Methylnaphthalene #3 |
| 12.413 | BB | 652.82721 | 1.21564e-2 | 7.93602 | | 2-Methylnaphthalene #4 |
| 12.891 | BB | 344.65326 | 2.31689e-2 | 7.98525 | | Acenaphthene #5 |
| 13.545 | BB | 493.52206 | 1.77186e-2 | 8.74452 | | Fluorene #6 |
| 14.933 | BBA | 629.87909 | 1.75880e-2 | 11.07834 | | Phenanthrene #7 |
| 16.341 | PBA | 1275.84766 | 1.13503e-2 | 14.48125 | | Anthracene #8 |
| 17.720 | PB | 88.17204 | 2.10815e-2 | 1.85880 | * | Fluoranthene #9 |
| 18.727 | BBA | 168.92120 | 1.12117e-2 | 1.89389 | | Pyrene #10 |
| 21.074 | PBA | 48.80862 | 6.94956e-2 | 3.39199 33% | | p-Terphenyl d14 #11* |
| 22.396 | PBA | 100.12001 | 2.14146e-2 | 2.14403 | | Benzo(a)anthracene #12 |
| 23.274 | BBA | 101.15968 | 1.54170e-2 | 1.55958 | | Chrysene #13 |
| 26.015 | BBA | 88.01210 | 2.05276e-2 | 1.80668 | | Benzo(b)fluoranthene #14 |
| 27.473 | PBA | 26.34352 | 2.34960e-2 | 6.18966e-1 | | Benzo(k)fluoranthene #15 |
| 28.587 | BBA | 53.74568 | 2.80924e-2 | 1.50985 | | Benzo(a)pyrene #16 |
| 30.477 | BB | 11.10372 | 1.03301e-1 | 1.14702 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.283 | BB | 17.00200 | 6.20259e-2 | 1.05456 | | Benzo(g,h,i)perylene #18 |
| 32.263 | BB | 55.40979 | 2.02742e-2 | 1.12339 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 92.01582

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)

==========

*** 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 | WG126622-01 CCV | 8310 | 1 | Sample | | |
| 3 | 2 | WG126622-01 CCV | 8310 | 1 | Sample | | |
| 4 | 3 | WG126622-01 STD6 | 8310 | 1 | Sample | | |
| 5 | 4 | WG126622-02 STD6 | 8310 | 1 | Sample | | |
| 6 | 5 | WG126622-03 STD5 | 8310 | 1 | Sample | | |
| 7 | 6 | WG126622-04 STD4 | 8310 | 1 | Sample | | |
| 8 | 7 | WG126622-05 STD3 | 8310 | 1 | Sample | | |
| 9 | 8 | WG126622-06 STD2 | 8310 | 1 | Sample | | |
| 10 | 9 | WG126622-07 STD1 | 8310 | 1 | Sample | | |
| 11 | 10 | WG126622-08 ALT | 8310 | 1 | Sample | | |

| --- | --- | --- | Method | Datafile | Seqfable | Calib:RF:RT | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003643 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003644 | 02:01 RR | | WG126622-01 CC |
| No | 3 | 2 | 8310 | 4L003645 | 03:01 RR | | WG126622-01 CC |
| No | 4 | 3 | 8310 | 4L003646 | 04:01 SOS 61-07 | | WG126622-01 ST |
| No | 5 | 4 | 8310 | 4L003647 | 05:01 SOS 54-38 | | WG126622-02 ST |
| No | 6 | 5 | 8310 | 4L003648 | 06:01 DILIN of SOS61-07/54-38 | | WG126622-03 ST |
| No | 7 | 6 | 8310 | 4L003649 | 07:01 | | WG126622-04 ST |
| No | 8 | 7 | 8310 | 4L003650 | 08:01 | | WG126622-05 ST |
| No | 9 | 8 | 8310 | 4L003651 | 09:01 | | WG126622-06 ST |
| No | 10 | 9 | 8310 | 4L003652 | 10:01 | | WG126622-07 ST |
| No | 11 | 10 | 8310 | 4L003653 | 11:01 DILIN of SOS60-26/60-27 | | WG126622-08 AL |

BQC 10/5/02

EC 10/22/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

100402

Analysis Date/Time Oct. 4, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory ~~10/04/02~~ Page 10/5/02
Analyst Initials PAC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ___ ___ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 109 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No _____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Reviewed By: ECZ 10/22/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG126673-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126384-01 BLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126384-02 LCS | 8310 | 1 | Sample | | |
| 5 | 5 | WG126384-03 LCS2 | 8310 | 1 | Sample | | |
| 6 | 6 | SOIL MDL #1 | 8310 | 1 | Sample | | |
| 7 | 7 | SOIL MDL #2 | 8310 | 1 | Sample | | |
| 8 | 8 | SOIL MDL #3 | 8310 | 1 | Sample | | |
| 9 | 9 | SOIL MDL #4 | 8310 | 1 | Sample | | |
| 10 | 10 | SOIL MDL #5 | 8310 | 1 | Sample | | |
| 11 | 11 | SOIL MDL #6 | 8310 | 1 | Sample | | |
| 12 | 12 | SOIL MDL #7 | 8310 | 1 | Sample | | |
| 13 | 13 | WG126673-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | WG126469-01 BLK | 8310 | 1 | Sample | | |
| 15 | 15 | WG126469-02 LCS | 8310 | 1 | Sample | | |
| 16 | 16 | WG126469-03 LCS2 | 8310 | 1 | Sample | | |
| 17 | 17 | WATER MDL #1 | 8310 | 1 | Sample | | |
| 18 | 18 | WATER MDL #2 | 8310 | 1 | Sample | | |
| 19 | 19 | WATER MDL #3 | 8310 | 1 | Sample | | |
| 20 | 20 | WATER MDL #4 | 8310 | 1 | Sample | | |
| 21 | 21 | WATER MDL #5 | 8310 | 1 | Sample | | |
| 22 | 22 | WATER MDL #6 | 8310 | 1 | Sample | | |
| 23 | 23 | WATER MDL #7 | 8310 | 1 | Sample | | |
| 24 | 24 | WG126673-03 CCV | 8310 | 1 | Sample | | |
| 25 | 25 | L0209516-04 831W | 8310 | 1 | Sample | | |
| 26 | 26 | ~~L0209516-04~~ L0209517-01X 831W | 8310 RDC 10/17/02 | 1 | Sample | | |
| 27 | 27 | L0209516-01 831S | 8310 | 1 | Sample | | |
| 28 | 28 | L0209516-02 831S | 8310 | 1 | Sample | | |
| 29 | 29 | L0209516-03 831S | 8310 | 1 | Sample | | |
| 30 | 30 | L0209517-01 831S | 8310 | 1 | Sample | | |
| 31 | 31 | L0209517-01 10X | 8310 | 1 | Sample | | |
| 32 | 24 | WG126673-04 CCV | 8310 | 1 | Sample | | |

RDC 10/17/02

| Set | Run | Vial | Method | Datafile | Sequence | Calib.Fil.Ki | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003654 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003655 | 02:01 | S0561-07/59-38 | WG126673-01 CC |
| No | 3 | 3 | 8310 | 4L003656 | 03:01 | | WG126384-01 BL |
| No | 4 | 4 | 8310 | 4L003657 | 04:01 | | WG126384-02 LC |
| No | 5 | 5 | 8310 | 4L003658 | 05:01 | | WG126384-03 LC |
| No | 6 | 6 | 8310 | 4L003659 | 06:01 | | SOIL MDL #1 |
| No | 7 | 7 | 8310 | 4L003660 | 07:01 | | SOIL MDL #2 |
| No | 8 | 8 | 8310 | 4L003661 | 08:01 | | SOIL MDL #3 |
| No | 9 | 9 | 8310 | 4L003662 | 09:01 | | SOIL MDL #4 |
| No | 10 | 10 | 8310 | 4L003663 | 10:01 | | SOIL MDL #5 |
| No | 11 | 11 | 8310 | 4L003664 | 11:01 | | SOIL MDL #6 |
| No | 12 | 12 | 8310 | 4L003665 | 12:01 | | SOIL MDL #7 |
| No | 13 | 13 | 8310 | 4L003666 | 13:01 | S0561-07/59-38 | WG126673-02 CC |
| No | 14 | 14 | 8310 | 4L003667 | 14:01 | | WG126469-01 BL |
| No | 15 | 15 | 8310 | 4L003668 | 15:01 | | WG126469-02 LC |
| No | 16 | 16 | 8310 | 4L003669 | 16:01 | | WG126469-03 LC |
| No | 17 | 17 | 8310 | 4L003670 | 17:01 | | WATER MDL #1 |
| No | 18 | 18 | 8310 | 4L003671 | 18:01 | | WATER MDL #2 |
| No | 19 | 19 | 8310 | 4L003672 | 19:01 | | WATER MDL #3 |
| No | 20 | 20 | 8310 | 4L003673 | 20:01 | | WATER MDL #4 |
| No | 21 | 21 | 8310 | 4L003674 | 21:01 | | WATER MDL #5 |
| No | 22 | 22 | 8310 | 4L003675 | 22:01 | | WATER MDL #6 |
| No | 23 | 23 | 8310 | 4L003676 | 23:01 | | WATER MDL #7 |
| No | 24 | 24 | 8310 | 4L003677 | 24:01 | S0561-07/59-38 | WG126673-03 CC |
| No | 25 | 25 | 8310 | 4L003678 | RE 25:01 | | L0209516-04 83 |
| No | 26 | 26 | 8310 | 4L003679 | 26:01 | L0209517-02 | ~~L0209516-04~~ 83 |
| No | 27 | 27 | 8310 | 4L003680 | 27:01 | RE10X | L0209516-01 83 |
| No | 28 | 28 | 8310 | 4L003681 | 28:01 | | L0209516-02 83 |
| No | 29 | 29 | 8310 | 4L003682 | 29:01 | | L0209516-03 83 |
| No | 30 | 30 | 8310 | 4L003683 | 30:01 | | L0209517-01 83 |
| No | 31 | 31 | 8310 | 4L003684 | 31:01 | Not needed | L0209517-01 10 |
| No | 32 | 24 | 8310 | 4L003685 | 32:01 | S0561-07/59-38 | WG126673-04 CC |

RAC 10/18/02

EC 10/22/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

**Analysis Date/Time** Oct 5, 2002 **Instrument ID** HPLC4 **Column ID** LC-PAH **Data Subdirectory** 100502
**Analyst Initials** BDL **SOP # HPLC01 Rev. #** 3 8310 8310 ✓ **SOP # HPLC02 Rev. #** ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: ____

Action Taken: ____

**Comments**

L0209516-04 surr. <CCL need RE } LCS low for 11 analytes
L0209517-02 ↓ ↓

WG126409-02 LCS — low for 11 analytes

L0209516-01 surr. high by FLD *, SMI RE10X

L0209516-02 surr. high by both detector *, SMI RE10X

L0209517-01 surr. low by both detectors *, SMI

Water MDL #1 had low surr.

**Reviewed By:** ECZ 10/22/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG127222-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126769-01 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126769-02 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | WG126769-03 WLCS | 8310 | 1 | Sample | | |
| 6 | 2 | WG127222-02 CCV | 8310 | 1 | Sample | | |
| 7 | 6 | L0209516-01 831S | 8310 | 1 | Sample | | |
| 8 | 7 | L0209516-02 831S | 8310 | 1 | Sample | | |
| 9 | 2 | WG127222-03 CCV | 8310 | 1 | Sample | | |

| Set | Run | Vial | Method | Datafile | Sequence | Calibration | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003711 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003712 | 02:01 | 50561-07/59-38 | WG127222-01 CC |
| No | 3 | 3 | 8310 | 4L003713 | 03:01 | | WG126769-01 WB |
| No | 4 | 4 | 8310 | 4L003714 | 04:01 | | WG126769-02 WL |
| No | 5 | 5 | 8310 | 4L003715 | 05:01 | | WG126769-03 WL |
| No | 6 | 2 | 8310 | 4L003716 | 06:01 | 50561-07/59-38 | WG127222-02 CC |
| No | 7 | 6 | 8310 | 4L003717 | RE 07:01 | L0210079-15 | ~~L0209516-01~~ 83 |
| No | 8 | 7 | 8310 | 4L003718 | 08:01 | | L0209516-~~02~~ 01, 83 |
| No | 9 | 2 | 8310 | 4L003719 | 09:01 | 50561-07/59-38 | WG127222-03 CC |

PAQC 10/22/02

ECZ 10/22/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Oct. 14, 2002 Instrument ID HPLC 4 Column ID LC-PAH Data Subdirectory 101402
Analyst Initials RRC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 112 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: ____

Action Taken: ____

**Comments**

L02 10079-15 sent for re-ext. due to low surr. recovery

Reviewed By: EC 10/22/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG127426-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG127373-01 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG127373-02 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | WG127373-03 WLCS | 8310 | 1 | Sample | | |
| 6 | 6 | L0209516-04 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209517-02 831W | 8310 | 1 | Sample | | |
| 8 | 8 | L0209516-02 10X | 8310 | 1 | Sample | | |
| 9 | 2 | WG127426-02 CCV | 8310 | 1 | Sample | | |

RDC 10/22/02

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003720 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003721 | 02:01 | SOSW-07/59-38 | WG127426-01 CC |
| No | 3 | 3 | 8310 | 4L003722 | 03:01 | | WG127373-01 WB |
| No | 4 | 4 | 8310 | 4L003723 | 04:01 | | WG127373-02 WL |
| No | 5 | 5 | 8310 | 4L003724 | 05:01 | | WG127373-03 WL |
| No | 6 | 6 | 8310 | 4L003725 | 06:01 | | L0209516-04 83 |
| No | 7 | 7 | 8310 | 4L003726 | 07:01 | | L0209517-02 83 |
| No | 8 | 8 | 8310 | 4L003727 | 08:01 | | L0209516-02 10 |
| No | 9 | 2 | 8310 | 4L003728 | 09:01 | SOSCI-07/59-38 | WG127426-02 CC |

RWC 10/22/02

ECZ 10/23/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Oct. 16, 2002 Instrument ID ~~HPA~~ HPLC4 Column ID ~~#1602~~ LCPAH Data Subdirectory 01602
Analyst Initials RDC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 113 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: ____

Action Taken: ____

**Comments**

WG 177373-01 BLK
-02 LCS
-03 LCS2
} low surr. (14 analytes low)

L0209516-04 RE — low surr.
L0209517-02 ↓ ↓

Reviewed By: ECZ 10/23/02

Parameter: 8310-S SOP #: EX HPLC2 Revision #: 6
Extraction Analyst(s): CAF TV/KD Analyst(s): CAF
Date/Time Extracted: 10-02-02 @ 09:29 Date TV/KD: 10-02-02
Spike/Surrogate Analyst: DP/CAF Witness: CAF/
Surrogate #: ESS0042-21 Earliest Hold Date: 10-10-02
Spike #: A = ESS0042-19 Spike #: B = ESS0042-31

Extraction Work Group WG 126384
Analytical Work Group WG 126623

Extract Relinquished By: CAF
Extract Received By & Date: 10/2/02

| | Sample ID | Test Code | pH | | | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | <2 | N | >12 | | | | | | A | BN | N | |
| 1 | Blank | | | | | 30.08 g | 100 µl | | 1 mL | T | | | | WG 126384-01 |
| 2 | LCS | | | | | 30.02 g | | 500 µl | | C | | | | WG -02 |
| 3 | LCSDup | | | | | 30.08 g | | | | C | | | | WG -03 |
| 4 | 09-516-01 | 8310 | | | | 30.05 g | | | | O | | | | |
| 5 | -02 | | | | | 30.04 g | | | | O | | | | |
| 6 | -03 | | | | | 30.05 g | | | | O | | | | |
| 7 | 09-517-01 | | | | | 30.04 g | | | | C | | | | * |
| 8 | MDL #1 | | | | | 30.04 g | | 50 µl | | T | | | | |
| 9 | #2 | | | | | 30.04 g | | | | T | | | | |
| 10 | #3 | | | | | 30.03 g | | | | T | | | | |
| 11 | #4 | | | | | 30.08 g | | | | T | | | | |
| 12 | #5 | | | | | 30.09 g | | | | T | | | | |
| 13 | #6 | | | | | 30.02 g | | | | T | | | | |
| 14 | #7 | | | | | 30.04 g | | | | T | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
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| 24 | | | | | | | | | | | | | | |

CAF 10-02-02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 420772-13
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: ER2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 10/02/02

Extraction Notes For Volume # 192 Page # 5

General Comments: NONE

Extraction Anomalies: * SX 09-517-01 was very dark and hard to filter during extration

Concentration Anomalies: * extract of SX 09-517-01 Had solid film that firmed on sides of zymark + top of extract during concentration stage - Extract did not take a good exchange.

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

Parameter: 8310 - $H_2O$ SOP #: EXHPLC1 Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAJ
Date/Time Extracted: 10/03/02 @ 0830 Date TV/KD: 10/03/02
Spike/Surrogate Analyst: DP Witness: PM
Surrogate #: ES500 42-21 Earliest Hold Date: 10/03/02
Spike #: A = ES500 42-19 Spike #: B = ES500 42-31

Extraction Work Group WG 126469
Analytical Work Group WG 126624

Extract Relinquished By: CAJ
Extract Received By & Date: HV 10/3/02

| | 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 | | | ✓ | | 1000mL | 100uL | | 1mL | T | | | | WG 126469-01 |
| 2 | LCS | | | ✓ | | ⊥ | ⊥ | 500uL A | ⊥ | ⊥ | | | | WG ⊥ -02 |
| 3 | LCS DUP | | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | WG ⊥ -03 |
| 4 | 09-516-04 | 8310 | | ✓ | | 910 mL | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
| 5 | 09-517-02 | ⊥ | | ✓ | | 940 mL | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
| 6 | MDL 1 | ⊥ | | ✓ | | 1000 mL | ⊥ | 50uL B | ⊥ | ⊥ | | | | |
| 7 | ⊥ 2 | ⊥ | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
| 8 | ⊥ 3 | ⊥ | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
| 9 | ⊥ 4 | ⊥ | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
| 10 | ⊥ 5 | ⊥ | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
| 11 | ⊥ 6 | ⊥ | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
| 12 | ⊥ 7 | ⊥ | | ✓ | | ⊥ | ⊥ | ⊥ | ⊥ | ⊥ | | | | |
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CAJ 10-03-02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 42077213
Reagent: Fortified Lot #: CR2261
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: CK2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 171 Page # 083

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: — NA —

Supervisor Review: _____ Date: _____

Run Date: 4-Oct-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 | |
| | Level 3 | |
| | Level 4 | |
| | Case narrative | |

Re-calibration Only

| | 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: | |

Primary Reviewer: RDC 10/22/02

Secondary Reviewer: EQ 10/22/02

Supervisor Review: mdk 10/23/02

√
NA

Parameter: 8310-$H_2O$ SOP #: CXHPLC1 Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAF
Date/Time Extracted: 10/16/02 @ 0940 Date TV/KD: 10-16-02
Spike/Surrogate Analyst: DP Witness: [illegible]
Surrogate #: CS500 42-21 Earliest Hold Date: out
Spike #: A = CS500 42-19 Spike #: B = —

Extraction Work Group WG 127373
Analytical Work Group WG 127725

Extract Relinquished By: CAF
Extract Received By & Date: HW 10/16/02

| | Sample ID | Test Code | pH | | | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | <2 | N | >12 | | | | | | A | BN | N | |
| 1 | Blank | | | ✓ | | 1000mL | 100µL | | 1mL | T | | | | WG 127373-01 |
| 2 | LCS | | | ✓ | | ↓ | ↓ | 500µL | ↓ | ↓ | | | | WG ↓ -02 |
| 3 | LCS DUP | | | ✓ | | ↓ | ↓ | ↓ | ↓ | ↓ | | | | WG ↓ -03 |
| 4 | 09-516-04 | 8310 | | ✓ | | 940mL | ↓ | | ↓ | ↓ | | | | RE-EXT out hold |
| 5 | 09-517-02 | ↓ | | ✓ | | 970mL | ↓ | | ↓ | ↓ | | | | ↓ |
| 6 | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | |
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CAF 10-16-02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: X328 23
Reagent: Fortified Lot #: CR 2271
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: CR 2211

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 3665A | | N/A | — |
| Sulfur 3660B | | | |

Peer Reviewed By: Cheryl Flowers Date: 10-16-02

Extraction Notes For Volume # _____ Page # _____

General Comments: NONE

Extraction Anomalies: NONE

Concentration Anomalies: NONE

Clean-Up Anomalies: — NA —

Supervisor Review: _____ Date: _____

Semi-Volatile 8310 Checklist

Run Date: 5-Oct-02

Analyst: RDC

Instrument: HPLC4

| Workorders: | Due Date: | Priority: |
|---|---|---|
| 09-516 | 10/8/2002 | |
| 09-517 | 10/8/2002 | |

MDLs - SOIL AND WATER

| | | 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 | √ |
| 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: | |

L0209516-04 AND L0209517-02 water extracts sent for re-extract due to surr. and LCS recovery.

WG126623 / WG126624

Primary Reviewer: RDC 10/22/02

Secondary Reviewer: ECZ 10/22/02

Supervisor Review: mll 10/23/02

√
NA

# Semi-Volatile 8310 Checklist

Run Date: 14-Oct-02

Analyst: RDC

Instrument: HPLC4

(dil'n.)

| Workorders: | Due Date: | Priority: |
|---|---|---|
| 10-079 | 10/10/2002 | |
| 09-516 | 10/8/2002 | |

| | | 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 | √ |
| 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: | |

L0210079-15 had low surr. recovery. There was QNS for re-extraction.

Primary Reviewer: RDC 10/22/02

Secondary Reviewer: EC 10/23/02

Supervisor Review: mdc 10/23/02

√
NA

# Semi-Volatile 8310 Checklist

Run Date: 16-Oct-02

Analyst: RDC

Instrument: HPLC4

(dil'n.)

| Workorders: | Due Date: | Priority: |
|---|---|---|
| 09-517 RE 00 H | 10/8/2002 | |
| 09-516 | 10/8/2002 | |
| 09-516 RE 00 H | 10/8/2002 | |

| | | 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: | |

Re-extractions not uploaded. Both samples had surrogate recoveries <LCL. LCS failed fourteen analytes.

Primary Reviewer: RDC 10/22/02

Secondary Reviewer: ECZ 10/23/02

Supervisor Review: [illegible] 10/23/02

√
NA

**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 DATA

**Login Number:** L0209516

✓ **Analysis benchsheet**

✓ **Calculation spreadsheet**

**Example calculation:**

[(WT3 - WT1)/(WT2 - WT1)] * 100 = % solids

100 - (% solids) = % moisture

where: WT1 = Weight (grams) of empty container
WT2 = Weight (grams) of container and wet sample
WT3 = Weight (grams) of container and dry sample
100 = factor to get units as percent weight

Checked By: dlh Date: 10/2/02

# PERCENT SOLIDS

Workgroup: 126288 Approval:
ADT (on): Imm 9/30/02 @ 1600 ADT (off): Imm 10/1/02 @ 940

| Sample 419 | Empty Pan WT 1 | WET WT 2 | DRY WT 3A | DRY WT 3B | DRY WT 3C |
|---|---|---|---|---|---|
| 09-422-08 | 1.27 | 22.23 | 18.78 | | |
| 09 | 1.26 | 22.63 | 19.53 | | |
| 09-452-01 | 1.28 | 9.97 | 2.95 | | |
| 09-542-01 | 1.28 | 26.03 | 19.52 | 19.52 | |
| 02 | 1.29 | 17.80 | 13.38 | 13.40 | |
| 03 | 1.29 | 26.58 | 21.49 | 21.49 | |
| 04 | 1.29 | 31.73 | 30.71 | 30.70 | |
| 05 | 1.29 | 36.44 | 35.95 | 35.94 | |
| 06 | 1.30 | 24.00 | 22.32 | 22.33 | |
| 07 | 1.31 | 28.86 | 25.92 | 25.93 | |
| 08 | 1.29 | 31.73 | 29.44 | 29.45 | |
| 09 | 1.29 | 15.05 | 11.85 | 11.87 | |
| 10 | 1.29 | 20.87 | 20.18 | 20.19 | |
| 11 | 1.28 | 29.14 | 28.71 | 28.71 | |
| 12 | 1.30 | 28.12 | 27.46 | 27.44 | |
| 13 | 1.30 | 20.61 | 14.84 | 14.86 | |
| 14 | 1.30 | 23.62 | 22.73 | 22.75 | |
| 15 | 1.30 | 17.41 | 16.68 | 16.69 | |
| 16 | 1.29 | 20.02 | 18.57 | 18.60 | |
| 17 | 1.30 | 26.84 | 25.81 | 25.81 | |
| Duplicate 09-542-14 | 1.30 | 19.24 | 18.52 | 18.52 | |

USE

21420
21940
10.1.02
Imm

Workgroup: 126335 Approval: JLM 9/10/2/02
ADT (on): Imm 10/1/02 @ 1040 ADT (off): JLM 9/10/2/0925/02

| Sample | Empty Pan WT 1 | WET WT 2 | DRY WT 3A | DRY WT 3B | DRY WT 3C |
|---|---|---|---|---|---|
| 10-005-01 | 1.26 | 26.21 | 22.17 ✓ | | |
| 02 | 1.26 | 20.21 | 17.15 ✓ | | |
| 09-528-01 | 1.27 | 25.87 | 25.95 ✓ | Sample all Rock | |
| 09-505-01 | 1.26 | 29.95 | 25.62 ✓ | | |
| 09-542-18 | 1.26 | 24.75 | 23.49 ✓ | | |
| 19 | 1.27 | 38.23 | 37.77 ✓ | | |
| 20 | 1.26 | 28.13 | 27.61 ✓ | | |
| 09-516-01 | 1.27 | 31.43 | 25.98 ✓ | | |
| 02 | 1.26 | 21.56 | 18.65 ✓ | | |
| 03 | 1.26 | 32.97 | 29.16 ✓ | | |
| 09-517-01 | 1.26 | 19.56 | 18.29 ✓ | | |
| 09-545-01 | 1.27 | 30.16 | 22.39 ✓ | | |
| Duplicate 10-005-02 | 1.27 | 22.01 | 18.08 | | |

KEMRON ENVIRONMENTAL SERVICES
PERCENT SOLID REPORT

Workgroup (AAB#): WG126335
Method: D2216-90

Run Date: 10/01/2002
Run Time: 10:40
Analyst: TMM

| SAMPLE NUMBER | Pan WT. | Int WT. | Fnl WT. | % Solid | UNITS |
|---|---|---|---|---|---|
| L0209505-01 | 1.260 | 29.95 | 25.62 | 84.91 | % |
| L0209516-01 | 1.270 | 31.43 | 25.98 | 81.93 | % |
| L0209516-02 | 1.260 | 21.56 | 18.65 | 85.67 | % |
| L0209516-03 | 1.260 | 32.97 | 29.16 | 87.98 | % |
| L0209517-01 | 1.260 | 19.56 | 18.29 | 93.06 | % |
| L0209528-01 | 1.270 | 25.87 | 25.87 | 100.0 | % |
| L0209542-18 | 1.260 | 24.75 | 23.49 | 94.64 | % |
| L0209542-19 | 1.270 | 38.23 | 37.77 | 98.76 | % |
| L0209542-20 | 1.260 | 28.13 | 27.61 | 98.06 | % |
| L0209545-01 | 1.270 | 30.16 | 22.39 | 73.10 | % |
| L0210005-01 | 1.260 | 26.21 | 22.17 | 83.81 | % |
| L0210005-02 | 1.260 | 20.71 | 17.15 | 81.70 | % |
| WG126335-01 | 1.260 | 20.71 | 17.15 | 81.70 | % |
| WG126335-02 | 1.270 | 22.01 | 18.08 | 81.05 | % |

KEMRON FORMS - Modified 03/05/2002
Version 1.2
Report generated 10/02/2002 09:33

# Groundwater Analytical Reports

**KEMRON REPORT L0209310**

**PREPARED FOR CCI**

**WORK ID: NAS CECIL FIELD/BDG 46**


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# 1.0 Summary Report

# 1.1 Laboratory Report

**Cover Page**
**Laboratory Narrative**
**Laboratory Results**

KEMRON
ENVIRONMENTAL SERVICES

109 Starlite Park ■ Marietta, OH 45750 ■ Telephone (740) 373-4071 ■ FAX (740) 373-4835

Please find enclosed the analytical results for the samples you submitted to Kemron Environmental Services.

Review and compilation of your report was completed by Kemron's Sales and Service Team 1. If you have questions, comments or require further assistance please contact one of our team members at 800-373-4071. We can also be reached at the e-mail addresses listed below.

Stephanie Tepe – Team Chemist/Data Specialist
stepe@kemron-lab.com

Debbie Tornes – Customer Service/Invoicing Specialist
dtornes@kemron-lab.com

Cindy Arnold – Team Leader
carnold@kemron-lab.com

This report was reviewed by: Stephanie L Tepe Date: 10/17/02

**KEMRON ENVIRONMENTAL SERVICES**
**REPORT NARRATIVE**

**L0209310**

**CHAIN OF CUSTODY:**

The chain of custody number was 163151-062.

**SHIPMENT CONDITIONS:**

The chain of custody forms were received sealed in a cooler. The cooler temperatures were 1, 1, 1, 1, 1 and 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 Hyse DATE: 9/18/02

**REPORT NARRATIVE**
**GC VOLATILE ORGANICS - BETX**

**KEMRON Login No: L0209310**

**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 03. The dilution analysis of fraction 10 was selected for MS/MSD analyses

**SAMPLES**

**Surrogates:** All acceptance criteria were met.
**Samples:** Fraction 10 required a dilution analysis to obtain results within the calibrated range of the instrument.

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: 9/24/02

Rev. 6/00

**REPORT NARRATIVE**
**PAH HPLC**

**KEMRON Login No.: L0209310**

**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** : For mid-run and ending CCVs analyzed with the initial extraction batch of this sample delivery group, pyrene %D, as measured by the confirming fluorescence detector, was outside of the limits. There was no pyrene to confirm by this detector.

**BATCH QA/QC**

**Method Blank**: All acceptance criteria were met.
**Laboratory Control Samples**: All acceptance criteria were met.
**Matrix Spikes**: The MS yielded percent recoveries for anthracene and pyrene that were outside of advisory limits.

**SAMPLES**

**Surrogates**: Sample fractions 02 yielded a percent recovery for the surrogate that was below the advisory limits. This sample was re-extracted out of holding time and yielded a percent recovery for the surrogate that was below the advisory limit. Surrogate failure may be attributed to sample matrix effects.
**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: Eric C Zimm DATE: 10/10/02

Rev. 7/14/00

**REPORT NARRATIVE**
**GC PETROLEUM RANGE ORGANICS**

**KEMRON Report No.: L0209310**

**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 03 was chosen by the client for MS/MSD analysis. All acceptance criteria were met

**SAMPLES**

**Samples:** The re-extract of sample 01 was not analyzed due to excessive instrument downtime. The first set of data was reported. All other acceptance criteria were met.
**Surrogates**: Sample 01 yielded a % recovery for o-terphenyl that was below the advisory limit. Sample 01 was re-extracted out of hold. All other 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: 10/17/02

Rev. 7/14/00

# REPORT NARRATIVE
# COMMON ANIONS

**KEMRON Report No.: L0209310**

**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: dwn DATE: 9/30/02

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 # : **WG125576**

Contract # : **Bill Canelos**

Prime Contractor : **CCI**

| Field sample ID | | Lab Sample ID |
|---|---|---|
| 062-CEF46-2S-Q3-02-20 | | L0209310-01 |
| 062-CEF46-7I-Q3-02-20 | | L0209310-02 |
| 062-CEF46-9I-Q3-02-20 | RS01 | L0209310-03 |
| 062-CEF46-9I-Q3-02-20 | MS01 | L0209310-04 |
| 062-CEF46-9I-Q3-02-20 | SD01 | L0209310-05 |
| 062-CEF46-12I-Q3-02-20 | | L0209310-06 |
| 062-CEF46-13I-Q3-02-20 | | L0209310-07 |
| 062-CEF46-14D-Q3-02-20 | | L0209310-08 |
| 062-CEF46-15I-Q3-02-20 | | L0209310-09 |
| 062-46DUP-Q3-02-20 | | L0209310-10 |

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 E. Vandenberg

Name: **David E. Vandenberg**

Date: **18-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-2S-Q3-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 20:14

Concentration Units: ug/L File ID: 5G14762

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 100 | 1 | |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 112 | 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-Q3-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 20:49

Concentration Units: ug/L File ID: 5G14763

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 10.0 | 20.0 | 432 | 20 | |
| Ethylbenzene | 10.0 | 20.0 | 86.6 | 20 | |
| Methyl tert-butyl ether | 10.0 | 20.0 | 3640 | 20 | |
| Toluene | 10.0 | 20.0 | 90.2 | 20 | |
| Xylenes, Total | 10.0 | 20.0 | 484 | 20 | |

| 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 21:23

Concentration Units: ug/L File ID: 5G14764

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 21:58

Concentration Units: ug/L File ID: 5G14765

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 18.4 | 1 | |
| Ethylbenzene | 0.500 | 1.00 | 18.7 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 19.1 | 1 | |
| Toluene | 0.500 | 1.00 | 18.3 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 55.4 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 22:32

Concentration Units: ug/L File ID: 5G14766

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 19.2 | 1 | |
| Ethylbenzene | 0.500 | 1.00 | 19.7 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 18.1 | 1 | |
| Toluene | 0.500 | 1.00 | 19.2 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 58.0 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-12I-Q3-02-20 Lab Sample ID: L0209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 23:07

Concentration Units: ug/L File ID: 5G14767

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-13I-Q3-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 23:42

Concentration Units: ug/L File ID: 5G14768

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 174 | 1 | |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-14D-Q3-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 00:16

Concentration Units: ug/L File ID: 5G14769

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15I-Q3-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 00:51

Concentration Units: ug/L File ID: 5G14770

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 102 | 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 01:25

Concentration Units: ug/L File ID: 5G14771

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 406 | 1 | I |
| Ethylbenzene | 0.500 | 1.00 | 75.7 | 1 | |
| Methyl tert-butyl ether | 0.500 | 1.00 | 3160 | 1 | I |
| Toluene | 0.500 | 1.00 | 78.4 | 1 | |
| Xylenes, Total | 0.500 | 1.00 | 442 | 1 | I |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 124 | 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 : **8021B**

AAB # : **WG125606**

Lab Name : **Kemron Environmental Services**

Contract # : **Bill Canelos**

Base/Command : **NAS Cecil Field Jacksonville (**

Prime Contractor : **CCI**

| Field sample ID | Lab Sample ID |
|---|---|
| 062-46DUP-Q3-02-20 | L0209310-10 |

Comments:

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

Suffix Matches parent to QC

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Signature: David E. Vandenberg

Name: **David E. Vandenberg**

Date: **18-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 14:12

Concentration Units: ug/L File ID: 5G14784

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 10.0 | 20.0 | 430 | 20 | |
| Ethylbenzene | 10.0 | 20.0 | 70.2 | 20 | |
| Methyl tert-butyl ether | 10.0 | 20.0 | 4120 | 20 | |
| Toluene | 10.0 | 20.0 | 75.6 | 20 | |
| Xylenes, Total | 10.0 | 20.0 | 449 | 20 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 107 | 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 : **8021B**

AAB # : **WG125576**

Lab Name : **Kemron Environmental Services**

Contract # : **Bill Canelos**

Base/Command : **NAS Cecil Field Jacksonville (**

Prime Contractor : **CCI**

| **Field sample ID** | |
|---|---|
| 062-46EQB-Q3-02-20 | L0209310-11 |
| 062-46TB1-Q3-02-20 | L0209310-12 |

Comments:

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

Suffix Matches parent to QC

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Signature: David E. Vandenberg

Name: **David E. Vandenberg**

Date: **18-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46EQB-Q3-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 02:34

Concentration Units: ug/L File ID: 5G14773

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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 # : WG125576

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46TB1-Q3-02-20 Lab Sample ID: L0209310-12 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 03:09

Concentration Units: ug/L File ID: 5G14774

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 102 | 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 : **8015 MOD**

Lab Name : **Kemron Environmental Services**

Base/Command : **NAS Cecil Field Jacksonville (**

AAB # : **WG125690**

Contract # : **Bill Canelos**

Prime Contractor : **CCI**

| Field sample ID | | Lab Sample ID |
|---|---|---|
| 062-CEF46-2S-Q3-02-20 | | L0209310-01 |
| 062-CEF46-7I-Q3-02-20 | | L0209310-02 |
| 062-CEF46-9I-Q3-02-20 | RS01 | L0209310-03 |
| 062-CEF46-9I-Q3-02-20 | MS01 | L0209310-04 |
| 062-CEF46-9I-Q3-02-20 | SD01 | L0209310-05 |
| 062-CEF46-12I-Q3-02-20 | | L0209310-06 |
| 062-CEF46-13I-Q3-02-20 | | L0209310-07 |
| 062-CEF46-14D-Q3-02-20 | | L0209310-08 |
| 062-CEF46-15I-Q3-02-20 | | L0209310-09 |
| 062-46DUP-Q3-02-20 | | L0209310-10 |

Comments:

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

Suffix Matches parent to QC

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Signature: David E. Vandenberg

Name: **David E. Vandenberg**

Date: **18-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA PACKAGE**

Analytical Method : **8015 MOD**

Lab Name : **Kemron Environmental Services**

Base/Command : **NAS Cecil Field Jacksonville (**

AAB # : **WG125690**

Contract # : **Bill Canelos**

Prime Contractor : **CCI**

**Field sample ID**

062-46EQB-Q3-02-20 L0209310-11

Comments:

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

Suffix Matches parent to QC

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Signature: David E. Vandenberg

Name: **David E. Vandenberg**

Date: **18-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-2S-Q3-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 20:12

Concentration Units: ug/L File ID: 2G22235

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 256 | 513 | 488 | 1 | J |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 41.4 | 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 SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-Q3-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 20:27

Concentration Units: ug/L File ID: 2G22236

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 260 | 521 | 950 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.2 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 20:42

Concentration Units: ug/L File ID: 2G22237

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 256 | 513 | 623 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.5 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 20:57

Concentration Units: ug/L File ID: 2G22238

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 256 | 513 | 3370 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 84.1 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 21:12

Concentration Units: ug/L File ID: 2G22239

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 3180 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 79.2 | 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 # : WG125690

Lab Name : Kemron Environmental Services  Contract#: Bill Canelos

Field Sample ID: 062-CEF46-12I-03-02-20  Lab Sample ID: L0209310-06  Matrix: Water

% Solids: 0  Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02  Date Extracted: 19-SEP-02  Date Analyzed: 30-SEP-02 21:28

Concentration Units: ug/L  File ID: 2G22240

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 564 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 53.4 | 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 SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-13I-Q3-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 21:43

Concentration Units: ug/L File ID: 2G22241

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 258 | 515 | 745 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 79.4 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-14D-Q3-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 22:29

Concentration Units: ug/L File ID: 2G22244

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 554 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.0 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15I-Q3-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 22:44

Concentration Units: ug/L File ID: 2G22245

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 668 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.2 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 22:59

Concentration Units: ug/L File ID: 2G22246

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 646 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 56.0 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46EQB-Q3-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 23:15

Concentration Units: ug/L File ID: 2G22247

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 263 | 526 | 964 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 55.7 | 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 # : **WG125710**

Contract # : **Bill Canelos**

Prime Contractor : **CCI**

| Field sample ID | | Lab Sample ID |
|---|---|---|
| 062-CEF46-2S-Q3-02-20 | | L0209310-01 |
| 062-CEF46-7I-Q3-02-20 | | L0209310-02 |
| 062-CEF46-9I-Q3-02-20 | RS01 | L0209310-03 |
| 062-CEF46-9I-Q3-02-20 | MS01 | L0209310-04 |
| 062-CEF46-9I-Q3-02-20 | SD01 | L0209310-05 |
| 062-CEF46-12I-Q3-02-20 | | L0209310-06 |
| 062-CEF46-13I-Q3-02-20 | | L0209310-07 |
| 062-CEF46-14D-Q3-02-20 | | L0209310-08 |
| 062-CEF46-15I-Q3-02-20 | | L0209310-09 |
| 062-46DUP-Q3-02-20 | | L0209310-10 |

Comments:

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

Suffix Matches parent to QC

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Signature: David E. Vandenberg

Name: **David E. Vandenberg**

Date: **18-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA PACKAGE**

Analytical Method : **8310**

Lab Name : **Kemron Environmental Services**

Base/Command : **NAS Cecil Field Jacksonville (**

AAB # : **WG125710**

Contract # : **Bill Canelos**

Prime Contractor : **CCI**

**Field sample ID**

062-46EQB-Q3-02-20 L0209310-11

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 E. Vandenberg

Name: **David E. Vandenberg**

Date: **18-OCT-02**

Title: **Laboratory Director**

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-2S-Q3-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 06:05

Concentration Units: ug/L File ID: 4L003594.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 | 0.366 | 1.0 | 0.366 | 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 | 0.0740 | 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\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-2S-Q3-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 06:05

Concentration Units: % Recovery File ID: 4L003594.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 40.1 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-03-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:01

Concentration Units: ug/L File ID: 4L003595.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.373 | 1.0 | 0.373 | 1 | U |
| 2-Methylnaphthalene | 0.346 | 1.0 | 0.560 | 1 | J |
| Acenaphthene | 0.428 | 1.0 | 0.428 | 1 | U |
| Acenaphthylene | 0.362 | 1.0 | 0.362 | 1 | U |
| Anthracene | 0.294 | 1.0 | 0.294 | 1 | U |
| Benzo(a)anthracene | 0.0309 | 0.21 | 0.0309 | 1 | U |
| Benzo(a)pyrene | 0.0546 | 0.21 | 0.0546 | 1 | U |
| Benzo(b)fluoranthene | 0.0351 | 0.21 | 0.0351 | 1 | U |
| Benzo(g,h,i)perylene | 0.0515 | 0.21 | 0.0515 | 1 | U |
| Benzo(k)fluoranthene | 0.0742 | 0.21 | 0.0742 | 1 | U |
| Chrysene | 0.0247 | 0.21 | 0.0247 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0794 | 0.21 | 0.0794 | 1 | U |
| Fluoranthene | 0.0515 | 0.21 | 0.0515 | 1 | U |
| Fluorene | 0.576 | 1.0 | 0.576 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0825 | 0.21 | 0.0825 | 1 | U |
| Naphthalene | 0.370 | 1.0 | 9.20 | 1 | |
| Phenanthrene | 0.296 | 1.0 | 0.296 | 1 | U |
| Pyrene | 0.0701 | 0.21 | 0.0701 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-Q3-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:01

Concentration Units: % Recovery File ID: 4L003595.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 27.3 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-03-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:01

Concentration Units: ug/L File ID: 4L003595.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.373 | 1.0 | 0.373 | 1 | U |
| 2-Methylnaphthalene | 0.346 | 1.0 | 1.40 | 1 | |
| Acenaphthene | 0.428 | 1.0 | 0.428 | 1 | U |
| Acenaphthylene | 0.362 | 1.0 | 0.362 | 1 | U |
| Anthracene | 0.294 | 1.0 | 0.294 | 1 | U |
| Benzo(a)anthracene | 0.0309 | 0.21 | 0.0309 | 1 | U |
| Benzo(a)pyrene | 0.0546 | 0.21 | 0.0546 | 1 | U |
| Benzo(b)fluoranthene | 0.0351 | 0.21 | 0.0351 | 1 | U |
| Benzo(g,h,i)perylene | 0.0515 | 0.21 | 0.0515 | 1 | U |
| Benzo(k)fluoranthene | 0.0742 | 0.21 | 0.0742 | 1 | U |
| Chrysene | 0.0247 | 0.21 | 0.0247 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0794 | 0.21 | 0.0794 | 1 | U |
| Fluoranthene | 0.0515 | 0.21 | 0.0515 | 1 | U |
| Fluorene | 0.576 | 1.0 | 0.576 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0825 | 0.21 | 0.0825 | 1 | U |
| Naphthalene | 0.370 | 1.0 | 9.80 | 1 | |
| Phenanthrene | 0.296 | 1.0 | 0.296 | 1 | U |
| Pyrene | 0.0701 | 0.21 | 0.0701 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-Q3-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:01

Concentration Units: % Recovery File ID: 4L003595.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 28.5 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:58

Concentration Units: ug/L File ID: 4L003596.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |

Comments:

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



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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:58

Concentration Units: % Recovery File ID: 4L003596.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 52.2 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-03-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:58

Concentration Units: ug/L File ID: 4L003596.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-03-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 07:58

Concentration Units: % Recovery File ID: 4L003596.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 50.6 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-03-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 08:55

Concentration Units: ug/L File ID: 4L003597.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.377 | 1.0 | 14.0 | 1 | |
| 2-Methylnaphthalene | 0.350 | 1.0 | 14.0 | 1 | |
| Acenaphthene | 0.432 | 1.0 | 15.0 | 1 | |
| Acenaphthylene | 0.366 | 1.0 | 0.366 | 1 | U |
| Anthracene | 0.297 | 1.0 | 23.0 | 1 | |
| Benzo(a)anthracene | 0.0313 | 0.21 | 2.50 | 1 | |
| Benzo(a)pyrene | 0.0552 | 0.21 | 1.90 | 1 | |
| Benzo(b)fluoranthene | 0.0354 | 0.21 | 2.50 | 1 | |
| Benzo(g,h,i)perylene | 0.0521 | 0.21 | 1.30 | 1 | |
| Benzo(k)fluoranthene | 0.0750 | 0.21 | 0.900 | 1 | |
| Chrysene | 0.0250 | 0.21 | 2.00 | 1 | |
| Dibenzo(a,h)anthracene | 0.0802 | 0.21 | 1.40 | 1 | |
| Fluoranthene | 0.0521 | 0.21 | 2.80 | 1 | |
| Fluorene | 0.582 | 1.0 | 18.0 | 1 | |
| Indeno(1,2,3-cd)pyrene | 0.0833 | 0.21 | 1.70 | 1 | |
| Naphthalene | 0.374 | 1.0 | 13.0 | 1 | |
| Phenanthrene | 0.299 | 1.0 | 22.0 | 1 | |
| Pyrene | 0.0708 | 0.21 | 2.40 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 08:55

Concentration Units: % Recovery File ID: 4L003597.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 53.3 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 08:55

Concentration Units: ug/L File ID: 4L003597.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.377 | 1.0 | 14.0 | 1 | |
| 2-Methylnaphthalene | 0.350 | 1.0 | 15.0 | 1 | |
| Acenaphthene | 0.432 | 1.0 | 15.0 | 1 | |
| Acenaphthylene | 0.366 | 1.0 | 15.0 | 1 | |
| Anthracene | 0.297 | 1.0 | 24.0 | 1 | |
| Benzo(a)anthracene | 0.0313 | 0.21 | 2.60 | 1 | |
| Benzo(a)pyrene | 0.0552 | 0.21 | 2.00 | 1 | |
| Benzo(b)fluoranthene | 0.0354 | 0.21 | 2.50 | 1 | |
| Benzo(g,h,i)perylene | 0.0521 | 0.21 | 1.60 | 1 | |
| Benzo(k)fluoranthene | 0.0750 | 0.21 | 0.900 | 1 | |
| Chrysene | 0.0250 | 0.21 | 2.70 | 1 | |
| Dibenzo(a,h)anthracene | 0.0802 | 0.21 | 1.40 | 1 | |
| Fluoranthene | 0.0521 | 0.21 | 2.90 | 1 | |
| Fluorene | 0.582 | 1.0 | 19.0 | 1 | |
| Indeno(1,2,3-cd)pyrene | 0.0833 | 0.21 | 1.70 | 1 | |
| Naphthalene | 0.374 | 1.0 | 14.0 | 1 | |
| Phenanthrene | 0.299 | 1.0 | 23.0 | 1 | |
| Pyrene | 0.0708 | 0.21 | 2.90 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 08:55

Concentration Units: % Recovery File ID: 4L003597.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 53.4 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 09:51

Concentration Units: ug/L File ID: 4L003598.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 14.0 | 1 | |
| 2-Methylnaphthalene | 0.336 | 1.0 | 15.0 | 1 | |
| Acenaphthene | 0.415 | 1.0 | 16.0 | 1 | |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 26.0 | 1 | |
| Benzo(a)anthracene | 0.0300 | 0.20 | 2.50 | 1 | |
| Benzo(a)pyrene | 0.0530 | 0.20 | 1.80 | 1 | |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 2.40 | 1 | |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 1.10 | 1 | |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.800 | 1 | |
| Chrysene | 0.0240 | 0.20 | 1.90 | 1 | |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 1.10 | 1 | |
| Fluoranthene | 0.0500 | 0.20 | 3.00 | 1 | |
| Fluorene | 0.559 | 1.0 | 20.0 | 1 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 1.40 | 1 | |
| Naphthalene | 0.359 | 1.0 | 13.0 | 1 | |
| Phenanthrene | 0.287 | 1.0 | 24.0 | 1 | |
| Pyrene | 0.0680 | 0.20 | 2.50 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 09:51

Concentration Units: % Recovery File ID: 4L003598.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 56.8 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 09:51

Concentration Units: ug/L File ID: 4L003598.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 15.0 | 1 | |
| 2-Methylnaphthalene | 0.336 | 1.0 | 15.0 | 1 | |
| Acenaphthene | 0.415 | 1.0 | 17.0 | 1 | |
| Acenaphthylene | 0.351 | 1.0 | 16.0 | 1 | |
| Anthracene | 0.285 | 1.0 | 26.0 | 1 | |
| Benzo(a)anthracene | 0.0300 | 0.20 | 2.70 | 1 | |
| Benzo(a)pyrene | 0.0530 | 0.20 | 2.10 | 1 | |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 2.50 | 1 | |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 1.50 | 1 | |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.780 | 1 | |
| Chrysene | 0.0240 | 0.20 | 2.50 | 1 | |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 1.10 | 1 | |
| Fluoranthene | 0.0500 | 0.20 | 3.00 | 1 | |
| Fluorene | 0.559 | 1.0 | 20.0 | 1 | |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 1.50 | 1 | |
| Naphthalene | 0.359 | 1.0 | 14.0 | 1 | |
| Phenanthrene | 0.287 | 1.0 | 26.0 | 1 | |
| Pyrene | 0.0680 | 0.20 | 3.00 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-03-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 09:51

Concentration Units: % Recovery File ID: 4L003598.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 57.9 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-12I-Q3-02-20 Lab Sample ID: L0209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 10:48

Concentration Units: ug/L File ID: 4L003599.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.381 | 1.1 | 0.381 | 1 | U |
| 2-Methylnaphthalene | 0.354 | 1.1 | 0.354 | 1 | U |
| Acenaphthene | 0.437 | 1.1 | 0.437 | 1 | U |
| Acenaphthylene | 0.369 | 1.1 | 0.369 | 1 | U |
| Anthracene | 0.300 | 1.1 | 0.300 | 1 | U |
| Benzo(a)anthracene | 0.0316 | 0.21 | 0.0316 | 1 | U |
| Benzo(a)pyrene | 0.0558 | 0.21 | 0.0558 | 1 | U |
| Benzo(b)fluoranthene | 0.0358 | 0.21 | 0.0358 | 1 | U |
| Benzo(g,h,i)perylene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Benzo(k)fluoranthene | 0.0758 | 0.21 | 0.0758 | 1 | U |
| Chrysene | 0.0253 | 0.21 | 0.0253 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0811 | 0.21 | 0.0811 | 1 | U |
| Fluoranthene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Fluorene | 0.588 | 1.1 | 0.588 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0842 | 0.21 | 0.0842 | 1 | U |
| Naphthalene | 0.378 | 1.1 | 0.378 | 1 | U |
| Phenanthrene | 0.302 | 1.1 | 0.302 | 1 | U |
| Pyrene | 0.0716 | 0.21 | 0.0716 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-12I-Q3-02-20 Lab Sample ID: L0209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 10:48

Concentration Units: % Recovery File ID: 4L003599.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 59.1 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-13I-Q3-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 11:44

Concentration Units: ug/L File ID: 4L003600.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 | 0.366 | 1.0 | 0.366 | 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 | 0.0770 | 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\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-13I-Q3-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 11:44

Concentration Units: % Recovery File ID: 4L003600.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 79.1 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-14D-Q3-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 13:38

Concentration Units: ug/L File ID: 4L003602.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 | 0.366 | 1.0 | 0.366 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-14D-Q3-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 13:38

Concentration Units: % Recovery File ID: 4L003602.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 67.8 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15I-Q3-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 14:34

Concentration Units: ug/L File ID:4L003603.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.381 | 1.1 | 0.381 | 1 | U |
| 2-Methylnaphthalene | 0.354 | 1.1 | 0.354 | 1 | U |
| Acenaphthene | 0.437 | 1.1 | 0.437 | 1 | U |
| Acenaphthylene | 0.369 | 1.1 | 0.369 | 1 | U |
| Anthracene | 0.300 | 1.1 | 0.300 | 1 | U |
| Benzo(a)anthracene | 0.0316 | 0.21 | 0.0316 | 1 | U |
| Benzo(a)pyrene | 0.0558 | 0.21 | 0.0558 | 1 | U |
| Benzo(b)fluoranthene | 0.0358 | 0.21 | 0.0358 | 1 | U |
| Benzo(g,h,i)perylene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Benzo(k)fluoranthene | 0.0758 | 0.21 | 0.0758 | 1 | U |
| Chrysene | 0.0253 | 0.21 | 0.0253 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0811 | 0.21 | 0.0811 | 1 | U |
| Fluoranthene | 0.0526 | 0.21 | 0.0526 | 1 | U |
| Fluorene | 0.588 | 1.1 | 0.588 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0842 | 0.21 | 0.0842 | 1 | U |
| Naphthalene | 0.378 | 1.1 | 0.378 | 1 | U |
| Phenanthrene | 0.302 | 1.1 | 0.302 | 1 | U |
| Pyrene | 0.0716 | 0.21 | 0.0716 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15I-Q3-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 14:34

Concentration Units: % Recovery File ID: 4L003603.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 77.7 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 15:31

Concentration Units: ug/L File ID: 4L003604.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.580 | 1 | J |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 9.20 | 1 | |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 15:31

Concentration Units: % Recovery File ID: 4L003604.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 63.8 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 15:31

Concentration Units: ug/L File ID: 4L003604.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 1.20 | 1 | |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 9.80 | 1 | |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 15:31

Concentration Units: % Recovery File ID: 4L003604.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 64.5 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46EQB-Q3-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 16:28

Concentration Units: ug/L File ID: 4L003605.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.393 | 1.1 | 0.393 | 1 | U |
| 2-Methylnaphthalene | 0.365 | 1.1 | 0.365 | 1 | U |
| Acenaphthene | 0.451 | 1.1 | 0.451 | 1 | U |
| Acenaphthylene | 0.382 | 1.1 | 0.382 | 1 | U |
| Anthracene | 0.310 | 1.1 | 0.310 | 1 | U |
| Benzo(a)anthracene | 0.0326 | 0.22 | 0.0326 | 1 | U |
| Benzo(a)pyrene | 0.0576 | 0.22 | 0.0576 | 1 | U |
| Benzo(b)fluoranthene | 0.0370 | 0.22 | 0.0370 | 1 | U |
| Benzo(g,h,i)perylene | 0.0543 | 0.22 | 0.210 | 1 | J |
| Benzo(k)fluoranthene | 0.0783 | 0.22 | 0.0783 | 1 | U |
| Chrysene | 0.0261 | 0.22 | 0.0261 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0837 | 0.22 | 0.0837 | 1 | U |
| Fluoranthene | 0.0543 | 0.22 | 0.0543 | 1 | U |
| Fluorene | 0.608 | 1.1 | 0.608 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0870 | 0.22 | 0.0870 | 1 | U |
| Naphthalene | 0.390 | 1.1 | 0.390 | 1 | U |
| Phenanthrene | 0.312 | 1.1 | 0.312 | 1 | U |
| Pyrene | 0.0739 | 0.22 | 0.0739 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46EQB-Q3-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 18-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 16:28

Concentration Units: % Recovery File ID: 4L003605.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 74.8 | 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 : 9056

Lab Name : Kemron Environmental Services

Base/Command : NAS Cecil Field Jacksonville (

AAB # : WG125591

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | | Lab Sample ID |
|---|---|---|
| 062-CEF46-2S-Q3-02-20 | | L0209310-01 |
| 062-CEF46-7I-Q3-02-20 | | L0209310-02 |
| 062-CEF46-9I-Q3-02-20 | RS01 | L0209310-03 |
| 062-CEF46-9I-Q3-02-20 | MS01 | L0209310-04 |
| 062-CEF46-9I-Q3-02-20 | SD01 | L0209310-05 |
| 062-CEF46-12I-Q3-02-20 | | L0209310-06 |
| 062-CEF46-13I-Q3-02-20 | | L0209310-07 |
| 062-CEF46-14D-Q3-02-20 | | L0209310-08 |
| 062-CEF46-15I-Q3-02-20 | | L0209310-09 |
| 062-46DUP-Q3-02-20 | | L0209310-10 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 18-OCT-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA PACKAGE

Analytical Method : 9056

Lab Name : Kemron Environmental Services

Base/Command : NAS Cecil Field Jacksonville (

AAB # : WG125591

Contract # : Bill Canelos

Prime Contractor : CCI

**Field sample ID**

062-46EQB-Q3-02-20 L0209310-11

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 E. Vandenberg

Name: David E. Vandenberg

Date: 18-OCT-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-2S-Q3-02-20 Lab Sample ID: L0209310-01 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 15:18

Concentration Units: mg/L File ID: 091802.13

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.290 | 1 | J |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-7I-Q3-02-20 Lab Sample ID: L0209310-02 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 18:40

Concentration Units: mg/L File ID: 091802.29

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-03 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 15:41

Concentration Units: mg/L File ID: 091802.15

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-04 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 15:53

Concentration Units: mg/L File ID: 091802.16

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 4.10 | 1 | |
| Nitrite | 0.0610 | 0.40 | 3.70 | 1 | |
| Phosphate | 0.163 | 1.0 | 8.40 | 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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-9I-Q3-02-20 Lab Sample ID: L0209310-05 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 16:04

Concentration Units: mg/L File ID: 091802.17

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 4.10 | 1 | |
| Nitrite | 0.0610 | 0.40 | 3.60 | 1 | |
| Phosphate | 0.163 | 1.0 | 8.10 | 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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-12I-Q3-02-20 Lab Sample ID: L0209310-06 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 16:16

Concentration Units: mg/L File ID: 091802.18

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.110 | 1 | J |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-13I-Q3-02-20 Lab Sample ID: L0209310-07 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 18:28

Concentration Units: mg/L File ID: 091802.28

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-14D-Q3-02-20 Lab Sample ID: L0209310-08 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 16:27

Concentration Units: mg/L File ID: 091802.19

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.360 | 1 | J |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-15I-Q3-02-20 Lab Sample ID: L0209310-09 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 16:39

Concentration Units: mg/L File ID: 091802.20

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46DUP-Q3-02-20 Lab Sample ID: L0209310-10 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 17:19

Concentration Units: mg/L File ID: 091802.22

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.460 | 1 | J |

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 # : WG125591

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46EQB-Q3-02-20 Lab Sample ID: L0209310-11 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 18-SEP-02

Date Received: 18-SEP-02 Date Extracted: Date Analyzed: 18-SEP-02 17:31

Concentration Units: mg/L File ID: 091802.23

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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

Page 1 of 1

# 1.2 Attachments

**Kemron Environmental Services**
**Analyst Listing**
Wednesday, October 16 2002

AJF - AMANDA J. FICKIESEN
ALT - ANN L. THAYER
ARS - ANGELINA R. SCOTT
BRF - BRENT F. FOOS
BRG - BRENDA R. GREGORY
CAF - CHERYL A. FLOWERS
CAK - CHERYL A. KOELSCH
CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD
CLK - CARL L. KING
CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEVENS
CSH - CHRIS S. HILL
DAD - DAVE A. DAULEY
DAH - DON A. HUNTER
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
DOV - DENISE O. VANDENBERG
DP - DEANNA L. PIERSON
DRB - DOUG R. BARNETT
DSM - DAVID S. MOSSOR
DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON
HV - HEMA VILASAGAR
JAL - JOHN A. LENT
JJG - JAKE J. GREUEY
JKW - JANE K. WARDEN
JLM - JOY L. MULLINS
JLS - JANICE L. SCHIMMEL
JMM - JARROD M. MARTIN
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
RPM - RYAN P. MCALLISTER
RWC - ROD W. CAMPBELL
SH - SHAUNA M. HYDE
SJK - SINDY J. KINNEY
SLP - SHERI L. PFALZGRAF
SLT - STEPHANIE L. TEPE
TJH - TIM J. HOEFLICH
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
VKL - VICKY K. LAUER

KEMRON FORMS: JUL-25-02
Printed: OCT-16-02 12:16:49

# KEMRON Environmental Services, Inc
# List of Valid Qualifiers
# August 5, 2002

## *Standard Qualifiers*

These are KEMRON's Standard Report Qualifiers

| | |
|---|---|
| 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 | Semi-quantitative result, out of instrument calibration range |
| J | Present below nominal reporting limit |
| L | Sample reporting limits elevated due to matrix interference |
| 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 |
| NS | Not spiked |
| P | Concentration >40% difference between The two GC columns |
| QNS | Quantity not sufficient to perform analysis |
| 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 o f control limits |
| X | Exceeds regulatory limit |
| 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 semi-quantitative 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) |

H:\DATA\COMMON\Qualifier List 08-05-02.doc

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
**163151-062** page _1_ of _1_

| 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<br>Building 46 | 163151 | Teressa Davis<br>Kemron Environmental Services | Bill Canelos<br>J.A Jones Env. Services | 6219 Authority Road, Jacksonville, FL 32221<br>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 46 Quarterly GW Sampling Event | 0062 | 3868 | Christelle Newsome<br>CH2M Hill Constuctors, Inc. | 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346<br>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<br>Fax:904-777-4262 | Phone: 740-373-4071<br>Fax: 740-373-4835 | | |

ANALYSES REQUIRED (Include Method Numbers)

| ITEM | SAMPLE IDENTIFIER | SAMPLE DESCRIPTION/LOCATION | MATRIX | DATE COLLECTED | TIME COLLECTED | ~~PKG~~ DATA LEVEL | TAT (calendar days) | BTEX by 8021B | Naphthalene & 15 Method 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-CEF46-2S-Q3-02-20 | CEF-46-2S | W | 09/17/02 | 15:05 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 2 | 062-CEF46-7I-Q3-02-20 | CEF-46-7I | W | 09/17/02 | 14:05 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 3 | 062-CEF46-9I-Q3-02-20 | CEF-46-9I | W | 09/17/02 | 13:20 | III/C | 14 | 6 | 6 | 6 | 3 | | | | Grab | MS/MSD | |
| 4 | 062-CEF46-12I-Q3-02-20 | CEF-46-12I | W | 09/17/02 | 10:45 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 5 | 062-CEF46-13I-Q3-02-20 | CEF-46-13I | W | 09/17/02 | 11:15 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 6 | 062-CEF46-14D-Q3-02-20 | CEF-46-14D | W | 09/17/02 | 11:55 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 7 | 062-CEF46-15I-Q3-02-20 | CEF-46-15I | W | 09/17/02 | 10:15 | III/C | 14 | 6 | 2 | 2 | 1 | | | | Grab | | |
| 8 | 062-46DUP-Q3-02-20 | Duplicate | W | 09/17/02 | NA | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 9 | 062-46EQB-Q3-02-20 | Equipment Blank | W | 09/17/02 | 12:50 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 10 | 062-46TB1-Q3-02-20 | Trip Blank No. 1 | W | NA | NA | III/C | 14 | 2 | | | | | | | Grab | Prepared by Lab | |
| 11 | NA | Temperature Blank | W | NA | NA | III/C | 14 | | | | | 6 | | | Grab | Prepared by Lab | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: |
|---|---|
| Randy Dumaop / Mark Yarbrough<br>J.A. Jones Environmental Services | Federal Express Track #791934090038, 792749784160, 791934090174, 791934090200, 792105721377, 792105721399.(6 Coolers) |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| R. Dumaop | 9/17/02 | 18:00 | Federal Express | 9/17/02 | 18:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | SHAUNA HYDE | 9-18-02 | 0957 |

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: 9-310 Client: CCI # of Samples: 12 Due Date: 9-30-02 Page:

| Sample # | Analysis | Reason | Removed By ADT | Removed From | Moved To | Reliq. by | Ret'd By ADT | Ret'd To | Rec'd By | Reason |
|---|---|---|---|---|---|---|---|---|---|---|
| 1-11(A) | 9056 | Analysis | JWR 09/18/02 @1200 | Log In | Wet Lab | SMH | JWR 09/27/02 @1655 | Archive 2 | JKW | Archive |
| 1-12 | BTME | ANAL | CSH 9/18/02 @1200 | V-1 | ORG4 | SMH | JWR 09/30/02 1205 | Archive 2 | JKW | Archive |
| 1+11A | FL-PRO | Ext | MR 9/19/02 0705 | walk-in | SHS | DEL | 09-19-02 DEL 2400 | crusher | RM | disposal |
| 1+11A | 8310 | Ext | MR 9/19/02 1000 | walk-in | SHS | SMH | 09-19-02 DEL 2400 | crusher | RM | disposal |
| 02B | 8310 | Re-ext | MR 9/26/02 1348 | walk-in | SHS | DRG | 9-26-02 DEL 2400 | crusher | [illegible] | disposal |
| 01B | FL-PRO | Re-ext | MR 10/3/02 0705 | walk-in | SHS | CEG | 10-3-02 DEL 2136 | crusher | [illegible] | disposal |

KEMRON Environmental Services

# SAMPLES RECEIPT FORM

Marietta Laboratory

| CLIENT: | DATE: | SHIPPED BY: |
|---|---|---|
| CCI<br>BRG Other SMH | 957<br>9-18-02 | (✓) FED-EX ( ) AIRBORNE<br>( ) UPS ( ) EMERY<br>( ) RPS ( ) US MAIL<br>( ) KEMRON ( ) CLIENT |

| | | |
|---|---|---|
| COOLER ID: KL 1127 | COOLER ID: KL 620 | COOLER ID: KL1031 |
| INDEX # : 7919 3409 0200 | INDEX # : 7921 0572 1399 | INDEX # : 7927 4978 4160 |
| 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) 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<br>SALVAGEBLE (✓) YES ( ) NO | SAMPLE INTACT (✓) YES ( ) NO<br>SALVAGEBLE ( ) YES ( ) NO | SAMPLE INTACT (✓) YES ( ) NO<br>SALVAGEBLE ( ) YES ( ) NO |
| SAMPLE TYPE:<br>WATER (✓) SOIL ( ) OTHER ( ) | SAMPLE TYPE:<br>WATER (✓) SOIL ( ) OTHER ( ) | SAMPLE TYPE:<br>WATER (✓) SOIL ( ) OTHER ( ) |
| LABELS: INTACT (✓) YES ( ) NO<br>LEGIBLE (✓) YES ( ) NO<br>MATCH COC (✓) YES ( ) NO | LABELS: INTACT (✓) YES ( ) NO<br>LEGIBLE (✓) YES ( ) NO<br>MATCH COC (✓) YES ( ) NO | LABELS: INTACT (✓) YES ( ) NO<br>LEGIBLE (✓) YES ( ) NO<br>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 | LOG-IN COMMENTS | LOG-IN COMMENTS |
| 1045<br>1015 | DUP<br>1405 | 1320<br>1250 |

TSR COMMENTS

| CONTACT: | DATE: | TIME: |
|---|---|---|
| | | |

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

Revised 05/29/02

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

| CLIENT: | DATE: | SHIPPED BY: |
|---|---|---|
| CCI<br>BRG Other SMH | 9-18-02 957 | (X) FED-EX ( ) AIRBORNE<br>( ) UPS ( ) EMERY<br>( ) RPS ( ) US MAIL<br>( ) KEMRON ( ) CLIENT |

| | | |
|---|---|---|
| COOLER ID: KL 1113 | COOLER ID: KL1008 | COOLER ID: KL 748 |
| INDEX # : 7919 3409 0038 | INDEX # : 7919 3409 0174 | INDEX # : 7921 0572 1377 |
| 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) 1 °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<br>SALVAGEBLE (✓) YES ( ) NO | SAMPLE INTACT (✓) YES ( ) NO<br>SALVAGEBLE ( ) YES ( ) NO | SAMPLE INTACT (✓) YES ( ) NO<br>SALVAGEBLE ( ) YES ( ) NO |
| SAMPLE TYPE:<br>WATER (✓) SOIL ( ) OTHER ( ) | SAMPLE TYPE:<br>WATER (✓) SOIL ( ) OTHER ( ) | SAMPLE TYPE:<br>WATER (✓) SOIL ( ) OTHER ( ) |
| LABELS: INTACT (✓) YES ( ) NO<br>LEGIBLE (✓) YES ( ) NO<br>MATCH COC (✓) YES ( ) NO | LABELS: INTACT (✓) YES ( ) NO<br>LEGIBLE (✓) YES ( ) NO<br>MATCH COC (✓) YES ( ) NO | LABELS: INTACT (✓) YES ( ) NO<br>LEGIBLE (✓) YES ( ) NO<br>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 | LOG-IN COMMENTS | LOG-IN COMMENTS |
| 1505 VOAS | 1115<br>1155 | 1320 MS/MSD |

TSR COMMENTS

| CONTACT: | DATE: | TIME: |
|---|---|---|
| | | |

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

Revised 05/29/02

**CRF#4**

**Sample Receipt Form #2**

Client: CCI Project: _____

Date Received: 9/18/02

_____ Cooler temperature > than 6 degrees Celcius

Reason _____

_____ Samples received not on chain of custody

_____ Samples on chain of custody not received

_____ Information on sample containers different from chain of custody

_____ Sample containers received broken, leaking or not sealed (List sample ID)

_____ pH out (List sample ID, which container, pH prior to adjusting, amount of acid, preservative)

_____ Insufficient sample volume

✓ Air bubbles present in Voa vials (List sample ID)

14D, 13I, & TRIP BLK – free air – logged as B bottle

_____ Hold time expired (List sample ID)

**TSR:**

Was client notified regarding information: YES NO

Name of person contacted: _____ Company: _____

TSR: _____ Date: _____

# COOLER RECEIPT FORM

Contractor Cooler _____
MRD Cooler # _____
Number of Coolers 6

PROJECT: CCI LIMS# _____

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

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler opened: 9/18/02 C-of-C Number: 163151-062
by (print) SHAUNA HYDE (sign) Shauna Hyde

1. Did cooler come with a shipping slip (air bill, etc.)? ..... YES NO
   If YES, enter carrier name & air bill number here: Fedex see CRF #3
2. Were custody seals on outside of cooler? ..... YES NO
   How many & where? 1 FRONT, seal date: 9/17/02 seal name: CUSTODY
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 see CRF #3 °C ..... YES NO
10. Have designated person initial here to acknowledge receipt of cooler: SMH (date) 9/18/02

B. **LOG-IN PHASE:** Date samples were logged-in: 9/18/02
by (print) SHAUNA HYDE (sign) Shauna Hyde

11. Describe type of packing in cooler: baggies, bubble wrap
12. Were all bottles sealed in separate plastic bags? ..... VOA only, SV not bagged ..... 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 # B1, 140, Trip ..... 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: L0209310**

**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 03. The dilution analysis of fraction 10 was selected for MS/MSD analyses

**SAMPLES**

**Surrogates:** All acceptance criteria were met.
**Samples:** Fraction 10 required a dilution analysis to obtain results within the calibrated range of the instrument.

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: 9/24/02

Rev. 6/00

# BETX-GC DATA (8021)

**Login Number:** L0209310

**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:** Janice L. Schimmel **Date:** 9/30/02

# 2.1.3.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

# METHOD BLANK SUMMARY

Login Number: L0209310
Blank File ID: 5G14747
Date Analyzed: 09/18/02
Time Analyzed: 10:53
Analyst: CSH

Work Group: WG125576
Blank Sample ID: WG125576-01
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 | WG125576-02 | 5G14748 | 09/18/02 11:27 | 01 |
| 062-CEF46-2S-Q3-02-20 | L0209310-01 | 5G14762 | 09/18/02 20:14 | |
| 062-CEF46-7I-Q3-02-20 | L0209310-02 | 5G14763 | 09/18/02 20:49 | |
| 062-CEF46-9I-Q3-02-20 | L0209310-03 | 5G14764 | 09/18/02 21:23 | |
| 062-CEF46-9I-Q3-02-20 | L0209310-04 | 5G14765 | 09/18/02 21:58 | |
| 062-CEF46-9I-Q3-02-20 | L0209310-05 | 5G14766 | 09/18/02 22:32 | |
| 062-CEF46-12I-Q3-02-20 | L0209310-06 | 5G14767 | 09/18/02 23:07 | |
| 062-CEF46-13I-Q3-02-20 | L0209310-07 | 5G14768 | 09/18/02 23:42 | |
| 062-CEF46-14D-Q3-02-20 | L0209310-08 | 5G14769 | 09/19/02 00:16 | |
| 062-CEF46-15I-Q3-02-20 | L0209310-09 | 5G14770 | 09/19/02 00:51 | |
| 062-46DUP-Q3-02-20 | L0209310-10 | 5G14771 | 09/19/02 01:25 | |
| 062-46EQB-Q3-02-20 | L0209310-11 | 5G14773 | 09/19/02 02:34 | |
| 062-46TB1-Q3-02-20 | L0209310-12 | 5G14774 | 09/19/02 03:09 | |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209310
Run Date: 09/18/2002
Sample ID: WG125576-01
Instrument ID: HP5
Run Time: 10:53
Method: 8021B
File ID: 5G14747
Analyst: CSH
Matrix: Water
Workgroup (AAB#): WG125576
Units: ug/L
Contract #:
Cal ID: HP5-20-FEB-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| MTBE | 0.500 | 1.00 | 0.500 | 1 | ND |
| Benzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Total xylenes | 0.500 | 1.00 | 0.500 | 1 | ND |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| TFT | 103 | 70 - 130 | PASS |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209310
Run Date: 09/18/2002
Sample ID: WG125576-02
Instrument ID: HP5
Run Time: 11:27
Method: 8021B
File ID: 5G14748
Analyst: CSH
Matrix: Water
Workgroup (AAB#): WG125576
Units: ug/L
Contract #:
Cal ID: HP5-20-FEB-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| MTBE | 20.0 | 18.4 | 92.2 | 41 - 161 | |
| Benzene | 20.0 | 18.2 | 90.8 | 80 - 122 | |
| Toluene | 20.0 | 18.2 | 90.9 | 80 - 124 | |
| Ethylbenzene | 20.0 | 18.5 | 92.3 | 80 - 125 | |
| Total xylenes | 60.0 | 54.7 | 91.2 | 80 - 121 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| TFT | 105 | 70 - 130 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0209310 | Cal ID: HP5-20-FEB-2002 | Worknum: WG125576
Instrument ID: HP5 | Contract #: | Method: 8021B
Parent ID: L0209310-03 | File ID: 5G14764 | Dil: 1 | Matrix: Water
Sample ID: L0209310-04 MS | File ID: 5G14765 | Dil: 1 | Units: ug/L
Sample ID: L0209310-05 MSD | File ID: 5G14766 | 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 | 18.4 | 92.1 | 20.0 | 19.2 | 96.2 | 4.35 | 80 - 122 | 24 | |
| Ethylbenzene | ND | 20.0 | 18.7 | 93.6 | 20.0 | 19.7 | 98.5 | 5.16 | 80 - 125 | 25 | |
| Methyl tert-butyl ether | ND | 20.0 | 19.1 | 95.4 | 20.0 | 18.1 | 90.3 | 5.49 | 41 - 161 | 73 | |
| Toluene | ND | 20.0 | 18.3 | 91.6 | 20.0 | 19.2 | 95.8 | 4.49 | 80 - 124 | 26 | |
| Xylenes, Total | ND | 60.0 | 55.4 | 92.3 | 60.0 | 58.0 | 96.7 | 4.60 | 80 - 121 | 24 | |

* FAILS %REC LIMIT

# FAILS RPD LIMIT

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

Login Number: L0209310

AAB#: WG125576

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| 062-46DUP-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 14 | 2.06 | 09/19/02 | 14 | 2.06 | |
| 062-46EQB-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 14 | 1.57 | 09/19/02 | 14 | 1.57 | |
| 062-46TB1-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 14 | 2.13 | 09/19/02 | 14 | 2.13 | |
| 062-CEF46-12I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 14 | 1.52 | 09/18/02 | 14 | 1.52 | |
| 062-CEF46-13I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 14 | 1.52 | 09/18/02 | 14 | 1.52 | |
| 062-CEF46-14D-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 14 | 1.51 | 09/19/02 | 14 | 1.51 | |
| 062-CEF46-15I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 14 | 1.61 | 09/19/02 | 14 | 1.61 | |
| 062-CEF46-2S-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 14 | 1.21 | 09/18/02 | 14 | 1.21 | |
| 062-CEF46-7I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 14 | 1.28 | 09/18/02 | 14 | 1.28 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 14 | 1.34 | 09/18/02 | 14 | 1.34 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 14 | 1.36 | 09/18/02 | 14 | 1.36 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 14 | 1.38 | 09/18/02 | 14 | 1.38 | |

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

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209310
Instrument Id: HP5
Workgroup (AAB#): WG125576

Method: 8021
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209310-01 | 1.00 | | 112 |
| L0209310-02 | 20.0 | | 106 |
| L0209310-03 | 1.00 | | 104 |
| L0209310-04 | 1.00 | | 105 |
| L0209310-05 | 1.00 | | 105 |
| L0209310-06 | 1.00 | | 104 |
| L0209310-07 | 1.00 | | 105 |
| L0209310-08 | 1.00 | | 103 |
| L0209310-09 | 1.00 | | 102 |
| L0209310-10 | 1.00 | | 124 |
| L0209310-11 | 1.00 | | 103 |
| L0209310-12 | 1.00 | | 102 |
| WG125576-01 | 1.00 | 01 | 103 |
| WG125576-02 | 1.00 | 01 | 105 |

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

Underline = Result out of surrogate limits

DL = surrogate diluted out

Method: 8021W.M
Title: METHOD 8021B - Water - 02/20/02
Last Calibration: Wed Feb 20 13:38:18 2002

Calibration Files

| Compound | 1<br>SG12234.D | 10<br>SG12235.D | 20<br>SG12236.D | 50<br>SG12237.D | 100<br>SG12238.D | 200<br>SG12239.D | 300<br>SG12240.D | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | 12539.098 | 11196.949 | 11243.150 | 11041.255 | 10933.684 | 9845.119 | 10773.245 | 11081.800 | 7.192 | |
| Benzene | 62790.330 | 47015.533 | 60310.422 | 60394.203 | 62248.899 | 55692.162 | 60796.018 | 58463.900 | 9.482 | |
| TFT | 11675.944 | 16647.005 | 18691.041 | 16931.193 | 18308.322 | 18431.867 | 17514.953 | 16885.800 | 14.359 | |
| Toluene | 57450.429 | 41830.870 | 54992.322 | 55224.813 | 57150.005 | 51457.407 | 56493.530 | 53514.200 | 10.332 | LR* |
| Chlorobenzene | 51107.594 | 47796.569 | 57648.045 | 58702.207 | 60282.238 | 53862.815 | 58927.160 | 55475.200 | 8.416 | |
| Ethylbenzene | 44734.021 | 33822.898 | 47197.088 | 47781.820 | 49450.708 | 44065.886 | 48876.353 | 45132.700 | 11.903 | LR* |
| m-,p-Xylene | 54877.067 | 41916.389 | 56810.621 | 56708.147 | 57983.908 | 51196.233 | 56259.916 | 53678.900 | 10.487 | LR* |
| o-Xylene | 46024.604 | 38803.321 | 48912.004 | 49234.646 | 50426.567 | 45138.795 | 49785.014 | 46903.600 | 8.690 | |
| BFB | 40807.196 | 48040.267 | 50130.380 | 49818.364 | 51211.872 | 50893.985 | 46902.798 | 48257.800 | 7.520 | |
| 1,3-Dichlorobenzene | 43022.355 | 39773.416 | 46613.595 | 47301.443 | 48695.412 | 43962.076 | 48263.141 | 45375.900 | 7.171 | |
| 1,4-Dichlorobenzene | 50593.879 | 45110.732 | 50592.251 | 50273.527 | 50626.153 | 45302.288 | 49211.494 | 48815.800 | 5.152 | |
| 1,2-Dichlorobenzene | 38039.156 | 36942.905 | 40744.634 | 40929.219 | 41461.798 | 37452.005 | 40820.717 | 39484.300 | 4.855 | |
| BCB | 42403.048 | 46209.846 | 48055.779 | 48169.399 | 49155.647 | 48910.071 | 45036.779 | 46848.700 | 5.245 | |

Wed Feb 20 13:38:50 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D
Acq On : 20 Feb 2002 14:36
Sample : WG113244-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-90-(28,39)
IntFile : autoint1.e

Vial: 12
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Feb 20 13:38:18 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 | 18.883 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.634 | -3.2 | 100 | 0.00 |
| 3 | S | TFT | 30.000 | 33.780 | -12.6 | 102 | 0.00 |
| 4 | TM | Toluene | 20.000 | 21.185 | -5.9 | 101 | 0.01 |
| 5 | TM | Chlorobenzene | 20.000 | 20.732 | -3.7 | 100 | 0.02 |
| 6 | TM | Ethylbenzene | 20.000 | 21.461 | -7.3 | 102 | 0.02 |
| 7 | TM | m-,p-Xylene | 40.000 | 41.777 | -4.4 | 100 | 0.01 |
| 8 | TM | o-Xylene | 20.000 | 20.473 | -2.4 | 98 | 0.00 |
| 9 | S | BFB | 30.000 | 32.137 | -7.1 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 21.006 | -5.0 | 102 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 21.101 | -5.5 | 102 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 21.435 | -7.2 | 104 | 0.02 |
| 13 | S | BCB | 30.000 | 32.070 | -6.9 | 104 | 0.02 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G12243.D 8021W.M Thu Feb 21 07:53:32 2002

Data File : C:\HPCHEM\2\DATA\091802\5G14746.D
Acq On : 18 Sep 2002 9:49
Sample : WG125536-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

Vial: 2
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 18.437 | 7.8 | 91 | -0.01 |
| 2 | TM | Benzene | 20.000 | 17.507 | 12.5 | 85 | -0.03 |
| 3 | S | TFT | 30.000 | 30.758 | -2.5 | 93 | -0.04 |
| 4 | TM | Toluene | 20.000 | 18.140 | 9.3 | 86 | -0.06 |
| 5 | TM | Chlorobenzene | 20.000 | 18.219 | 8.9 | 88 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 18.341 | 8.3 | 86 | -0.05 |
| 7 | TM | m-,p-Xylene | 40.000 | 35.462 | 11.3 | 84 | -0.05 |
| 8 | TM | o-Xylene | 20.000 | 17.857 | 10.7 | 86 | -0.04 |
| 9 | S | BFB | 30.000 | 27.628 | 7.9 | 89 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 17.938 | 10.3 | 87 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 18.492 | 7.5 | 89 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 18.809 | 6.0 | 91 | -0.03 |
| 13 | S | BCB | 30.000 | 26.702 | 11.0 | 87 | -0.03 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14746.D 8021W.M Wed Sep 18 10:50:14 2002

Data File : C:\HPCHEM\2\DATA\091802\5G14761.D
Acq On : 18 Sep 2002 19:39
Sample : WG125536-02 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 19.186 | 4.1 | 95 | 0.00 |
| 2 | TM | Benzene | 20.000 | 18.442 | 7.8 | 89 | -0.02 |
| 3 | S | TFT | 30.000 | 31.830 | -6.1 | 96 | -0.03 |
| 4 | TM | Toluene | 20.000 | 18.466 | 7.7 | 90 | -0.04 |
| 5 | TM | Chlorobenzene | 20.000 | 18.681 | 6.6 | 90 | -0.04 |
| 6 | TM | Ethylbenzene | 20.000 | 18.838 | 5.8 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 40.000 | 37.237 | 6.9 | 88 | -0.02 |
| 8 | TM | o-Xylene | 20.000 | 18.472 | 7.6 | 89 | -0.02 |
| 9 | S | BFB | 30.000 | 28.509 | 5.0 | 91 | -0.02 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.232 | 8.8 | 89 | -0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 18.671 | 6.6 | 90 | -0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 18.801 | 6.0 | 91 | -0.02 |
| 13 | S | BCB | 30.000 | 26.953 | 10.2 | 88 | -0.03 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14761.D 8021W.M Thu Sep 19 08:53:42 2002

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\091802\5G14772.D
Acq On : 19 Sep 2002 2:00
Sample : WG125536-03 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

Vial: 20
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 19.278 | 3.6 | 95 | -0.01 |
| 2 | TM | Benzene | 20.000 | 19.962 | 0.2 | 97 | -0.03 |
| 3 | S | TFT | 30.000 | 31.216 | -4.1 | 94 | -0.03 |
| 4 | TM | Toluene | 20.000 | 19.658 | 1.7 | 96 | -0.05 |
| 5 | TM | Chlorobenzene | 20.000 | 19.374 | 3.1 | 93 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 20.096 | -0.5 | 96 | -0.06 |
| 7 | TM | m-,p-Xylene | 40.000 | 39.491 | 1.3 | 93 | -0.06 |
| 8 | TM | o-Xylene | 20.000 | 19.727 | 1.4 | 95 | -0.05 |
| 9 | S | BFB | 30.000 | 27.995 | 6.7 | 90 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.407 | 3.0 | 94 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.250 | 3.8 | 93 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.739 | 1.3 | 96 | -0.04 |
| 13 | S | BCB | 30.000 | 26.840 | 10.5 | 87 | -0.04 |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14775.D
Acq On : 19 Sep 2002 3:44
Sample : WG125536-04 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

Vial: 23
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 18.873 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 19.664 | 1.7 | 95 | -0.02 |
| 3 | S | TFT | 30.000 | 30.921 | -3.1 | 93 | -0.03 |
| 4 | TM | Toluene | 20.000 | 19.542 | 2.3 | 95 | -0.06 |
| 5 | TM | Chlorobenzene | 20.000 | 19.625 | 1.9 | 94 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 20.308 | -1.5 | 97 | -0.06 |
| 7 | TM | m-,p-Xylene | 40.000 | 39.892 | 0.3 | 94 | -0.06 |
| 8 | TM | o-Xylene | 20.000 | 19.613 | 1.9 | 94 | -0.05 |
| 9 | S | BFB | 30.000 | 27.970 | 6.8 | 90 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.144 | 4.3 | 93 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.426 | 2.9 | 94 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.512 | 2.4 | 95 | -0.04 |
| 13 | S | BCB | 30.000 | 26.630 | 11.2 | 87 | -0.03 |

WG113234
1 278

ANALYST: CE

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g12231.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12 |
| 2 | 2 | 5g12232.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12: |
| 3 | 2 | 5g12233.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 4 | 3 | 5g12234.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 5 | 4 | 5g12235.d | 1. | WG113244-02 STD 2 10PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 6 | 5 | 5g12236.d | 1. | WG113244-03 STD 3 20PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 7 | 6 | 5g12237.d | 1. | WG113244-04 STD 4 50PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13: |
| 8 | 7 | 5g12238.d | 1. | WG113244-05 STD 5 100PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13: |
| 9 | 8 | 5g12239.d | 1. | WG113244-06 STD 6 200PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13: |
| 10 | 9 | 5g12240.d | 1. | WG113244-07 STD 7 300PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13:: |
| 11 | 10 | 5g12241.d | 1. | RINSE | 1,1 S-89-49,90-39 | 20 Feb 102 13:: |
| 12 | 11 | 5g12242.d | 1. | RINSE | 1,1 S-90-39 | 20 Feb 102 12:: |
| 13 | 12 | 5g12243.d | 1. | WG113244-08 ALT SOURCE 20PPB 5ML | 1,1 S-90-39 | 20 Feb 102 12:: |
| 14 | 1 | 5g12244.d | 1. | WG113278-01 STD 1 90PPB 5ML | 1,1 S-90-(28,39) | 20 Feb 102 12:: |
| 15 | 2 | 5g12245.d | 1. | WG113278-02 STD 2 360PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 16 | 3 | 5g12246.d | 1. | WG113278-03 STD 3 900PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 17 | 4 | 5g12247.d | 1. | WG113278-04 STD 4 1800PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 18 | 5 | 5g12248.d | 1. | WG113278-05 STD 5 3600PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 19 | 6 | 5g12249.d | 1. | WG113278-06 STD 6 7200PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 20 | 7 | 5g12250.d | 1. | RINSE | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 21 | 8 | 5g12251.d | 1. | RINSE | 1,1 S-90-42 | 20 Feb 102 12::1 |
| 22 | 9 | 5g12252.d | 1. | WG113278-07 ALT SOURCE 900PPB 5ML | 1,1 S-90-42 | 20 Feb 102 12::4 |
| | | | | | 1,1 S-90-(08,42) | 20 Feb 102 12::1 |

WG 125576

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14745.d | 1. | WG125536-01 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 18 Sep 102 12::0 |
| 2 | 2 | 5g14746.d | 1. | WG125536-01 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 12::4 |
| 3 | 3 | 5g14747.d | 1. | WG125537-01 WATER BLANK 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 13::5 |
| 4 | 4 | 5g14748.d | 1. | WG125537-02 WATER LCS 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 13::2 |
| 5 | 5 | 5g14749.d | 1. | L0209284-01 A 5ML 00 pH=5 ✓ | 17,5 S-99-16 TCLP EXT 09/17/02 @1430 | 18 Sep 102 13::1 |
| 6 | 6 | 5g14750.d | 1. | WG125537-03 L0209284-02 A 5ML 00 pH=5 ✓ | 17,5 S-99-16 TCLP EXT 09/17/02 @1430 | 18 Sep 102 13::4 |
| 7 | 7 | 5g14751.d | 1. | WG125537-04 L0209284-02 MS A 5ML 00 pH= ✓ | 17,5 S-(98-29,99-16) TCLP EXT 09/17/02 @1430 | 18 Sep 102 12::2 |
| 8 | 8 | 5g14752.d | 1. | WG125537-05 L0209284-02 MSD A 5ML 00 pH ✓ | 17,5 S-(98-29,99-16) TCLP EXT 09/17/02 @1430 | 18 Sep 102 12::5 |
| 9 | 9 | 5g14753.d | 1. | L0209311-01 A 5ML ✓ | 1,1 S-99-16 pH<2 | 18 Sep 102 12::3 |
| 10 | 6 | 5g14754.d | 1. | L0209313-01 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 12::0 |
| 11 | 7 | 5g14755.d | 1. | L0209315-01 A 5ML 20X RR@200X | 1,20 S-99-16 | 18 Sep 102 12::3 |
| 12 | 8 | 5g14756.d | 1. | RINSE 5ML c/o | 1,20 S-99-16 | 18 Sep 102 12::2 |
| 13 | 9 | 5g14757.d | 1. | RINSE 5ML ✓ | 1,20 S-99-16 | 18 Sep 102 12::0 |
| 14 | 10 | 5g14758.d | 1. | L0209315-02 A 5ML 20X RR@200 X | 1,20 S-99-16 | 18 Sep 102 12::4 |
| 15 | 7 | 5g14759.d | 1. | RINSE 5ML c/o | 1,20 S-99-16 | 18 Sep 102 12::3 |
| 16 | 8 | 5g14760.d | 1. | RINSE 5ML ✓ | 1,20 S-99-16 | 18 Sep 102 12::0 |
| 17 | 9 | 5g14761.d | 1. | WG125536-02 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 12::3 |
| 18 | 10 | 5g14762.d | 1. | L0209310-01 A 5ML ✓ | 1,1 S-99-16 pH<2 | 18 Sep 102 12::1 |
| 19 | 11 | 5g14763.d | 1. | L0209310-02 A 5ML 20X ✓ | 1,20 S-99-16 | 18 Sep 102 12::4 |
| 20 | 12 | 5g14764.d | 1. | WG125576-03 L0209310-03 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 12::2 |
| 21 | 13 | 5g14765.d | 1. | WG125576-04 L0209310-04 MS A 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 12::5 |
| 22 | 14 | 5g14766.d | 1. | WG125576-05 L0209310-05 MSD A 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 13::3 |
| 23 | 15 | 5g14767.d | 1. | L0209310-06 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 13::0 |
| 24 | 16 | 5g14768.d | 1. | L0209310-07 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 13::4 |
| 25 | 17 | 5g14769.d | 1. | L0209310-08 A 5ML ✓ | 1,1 S-99-16 | 19 Sep 102 13::1 |
| 26 | 18 | 5g14770.d | 1. | L0209310-09 A 5ML ✓ | 1,1 S-99-16 | 19 Sep 102 13::5 |
| 27 | 19 | 5g14771.d | 1. | L0209310-10 A 5ML RR@20X | 1,1 S-99-16 | 19 Sep 102 12::2 |
| 28 | 20 | 5g14772.d | 1. | WG125536-03 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 19 Sep 102 12::0 |
| 29 | 21 | 5g14773.d | 1. | L0209310-11 A 5ML ✓ | 1,1 S-99-16 pH<2 | 19 Sep 102 12::3 |
| 30 | 22 | 5g14774.d | 1. | L0209310-12 A 5ML ✓ | 1,1 S-99-16 | 19 Sep 102 12::0 |
| 31 | 23 | 5g14775.d | 1. | WG125536-04 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 19 Sep 102 12::4 |

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0209310
Blank File ID: 5G14777
Date Analyzed: 09/19/02
Time Analyzed: 09:44
Analyst: CSH

Work Group: WG125606
Blank Sample ID: WG125606-01
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 | WG125606-02 | 5G14778 | 09/19/02 10:19 | |
| 062-46DUP-Q3-02-20 | L0209310-10 | 5G14784 | 09/19/02 14:12 | D1 |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209310 Run Date: 09/19/2002 Sample ID: WG125606-01
Instrument ID: HP5 Run Time: 09:44 Method: 8021B
File ID: 5G14777 Analyst: CSH Matrix: Water
Workgroup (AAB#): WG125606 Units: ug/L
Contract #: Cal ID: HP5-20-FEB-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| MTBE | 0.500 | 1.00 | 0.500 | 1 | ND |
| Benzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Total xylenes | 0.500 | 1.00 | 0.500 | 1 | ND |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| TFT | 103 | 70 - 130 | PASS |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 09/10/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209310
Run Date: 09/19/2002
Sample ID: WG125606-02
Instrument ID: HP5
Run Time: 10:19
Method: 8021B
File ID: 5G14778
Analyst: CSH
Matrix: Water
Workgroup (AAB#): WG125606
Units: ug/L
Contract #:
Cal ID: HP5-20-FEB-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| MTBE | 20.0 | 18.6 | 93.2 | 41 - 161 | |
| Benzene | 20.0 | 18.8 | 93.8 | 80 - 122 | |
| Toluene | 20.0 | 18.7 | 93.6 | 80 - 124 | |
| Ethylbenzene | 20.0 | 19.3 | 96.6 | 80 - 125 | |
| Total xylenes | 60.0 | 57.0 | 95.0 | 80 - 121 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| TFT | 104 | 70 - 130 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 09/10/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG125606

Login Number: L0209310

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| 062-46DUP-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 14 | 2.59 | 09/19/02 | 14 | 2.59 | |

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

KEMRON FORMS - Modified 09/12/2002
Version 1.2
Report generated

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209310
Instrument Id: HP5
Workgroup (AAB#): WG125606

Method: 8021
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209310-10 | 20.0 | D1 | 107 |
| WG125606-01 | 1.00 | | 103 |
| WG125606-02 | 1.00 | | 104 |

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

Underline = Result out of surrogate limits

DL = surrogate diluted out

Method: 8021W.M
Title: METHOD 8021B - Water - 02/20/02
Last Calibration: Wed Feb 20 13:38:18 2002

Calibration Files

| Compound | 1<br>SG12234.D | 10<br>SG12235.D | 20<br>SG12236.D | 50<br>SG12237.D | 100<br>SG12238.D | 200<br>SG12239.D | 300<br>SG12240.D | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | 12539.098 | 11196.949 | 11243.150 | 11041.255 | 10933.684 | 9845.119 | 10773.245 | 11081.800 | 7.192 | |
| Benzene | 62790.330 | 47015.533 | 60310.422 | 60394.203 | 62248.899 | 55692.162 | 60796.018 | 58463.900 | 9.482 | |
| TFT | 11675.944 | 16647.005 | 18691.041 | 16931.193 | 18308.322 | 18431.867 | 17514.953 | 16885.800 | 14.359 | |
| Toluene | 57450.429 | 41830.870 | 54992.322 | 55224.813 | 57150.005 | 51457.407 | 56493.530 | 53514.200 | 10.332 | LR= |
| Chlorobenzene | 51107.594 | 47796.569 | 57648.045 | 58702.207 | 60282.238 | 53862.815 | 58927.160 | 55475.200 | 8.416 | |
| Ethylbenzene | 44734.021 | 33822.898 | 47197.088 | 47781.820 | 49450.708 | 44065.886 | 48876.353 | 45132.700 | 11.903 | LR= |
| m-,p-Xylene | 54877.067 | 41916.389 | 56810.621 | 56708.147 | 57983.908 | 51196.233 | 56259.916 | 53678.900 | 10.487 | LR= |
| o-Xylene | 46024.604 | 38803.321 | 48912.004 | 49234.646 | 50426.567 | 45138.795 | 49785.014 | 46903.600 | 8.690 | |
| BFB | 40807.196 | 48040.267 | 50130.380 | 49818.364 | 51211.872 | 50893.985 | 46902.798 | 48257.800 | 7.520 | |
| 1,3-Dichlorobenzene | 43022.355 | 39773.416 | 46613.595 | 47301.443 | 48695.412 | 43962.076 | 48263.141 | 45375.900 | 7.171 | |
| 1,4-Dichlorobenzene | 50593.879 | 45110.732 | 50592.251 | 50273.527 | 50626.153 | 45302.288 | 49211.494 | 48815.800 | 5.152 | |
| 1,2-Dichlorobenzene | 38039.156 | 36942.905 | 40744.634 | 40929.219 | 41461.798 | 37452.005 | 40820.717 | 39484.300 | 4.855 | |
| BCB | 42403.048 | 46209.846 | 48055.779 | 48169.399 | 49155.647 | 48910.071 | 45036.779 | 46848.700 | 5.245 | |

Wed Feb 20 13:38:50 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D
Acq On : 20 Feb 2002 14:36
Sample : WG113244-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-90-(28,39)
IntFile : autoint1.e

Vial: 12
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Feb 20 13:38:18 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 | 18.883 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.634 | -3.2 | 100 | 0.00 |
| 3 | S | TFT | 30.000 | 33.780 | -12.6 | 102 | 0.00 |
| 4 | TM | Toluene | 20.000 | 21.185 | -5.9 | 101 | 0.01 |
| 5 | TM | Chlorobenzene | 20.000 | 20.732 | -3.7 | 100 | 0.02 |
| 6 | TM | Ethylbenzene | 20.000 | 21.461 | -7.3 | 102 | 0.02 |
| 7 | TM | m-,p-Xylene | 40.000 | 41.777 | -4.4 | 100 | 0.01 |
| 8 | TM | o-Xylene | 20.000 | 20.473 | -2.4 | 98 | 0.00 |
| 9 | S | BFB | 30.000 | 32.137 | -7.1 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 21.006 | -5.0 | 102 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 21.101 | -5.5 | 102 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 21.435 | -7.2 | 104 | 0.02 |
| 13 | S | BCB | 30.000 | 32.070 | -6.9 | 104 | 0.02 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G12243.D 8021W.M Thu Feb 21 07:53:32 2002

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D
Acq On : 19 Sep 2002 8:54
Sample : WG125605-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 18.541 | 7.3 | 91 | 0.00 |
| 2 | TM | Benzene | 20.000 | 18.198 | 9.0 | 88 | -0.02 |
| 3 | S | TFT | 30.000 | 31.396 | -4.7 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 18.450 | 7.8 | 90 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 18.922 | 5.4 | 91 | -0.03 |
| 6 | TM | Ethylbenzene | 20.000 | 18.761 | 6.2 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 40.000 | 37.229 | 6.9 | 88 | -0.03 |
| 8 | TM | o-Xylene | 20.000 | 18.697 | 6.5 | 90 | -0.03 |
| 9 | S | BFB | 30.000 | 28.289 | 5.7 | 91 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.815 | 5.9 | 92 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.521 | 2.4 | 94 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.546 | 2.3 | 95 | -0.03 |
| 13 | S | BCB | 30.000 | 26.939 | 10.2 | 88 | -0.02 |

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

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D
Acq On : 19 Sep 2002 15:56
Sample : WG125605-02 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 18.852 | 5.7 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.346 | -1.7 | 99 | -0.02 |
| 3 | S | TFT | 30.000 | 31.535 | -5.1 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 19.963 | 0.2 | 97 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 20.040 | -0.2 | 96 | -0.04 |
| 6 | TM | Ethylbenzene | 20.000 | 20.653 | -3.3 | 99 | -0.04 |
| 7 | TM | m-,p-Xylene | 40.000 | 40.601 | -1.5 | 96 | -0.05 |
| 8 | TM | o-Xylene | 20.000 | 19.973 | 0.1 | 96 | -0.05 |
| 9 | S | BFB | 30.000 | 28.049 | 6.5 | 90 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.642 | 1.8 | 96 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.036 | -0.2 | 97 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.697 | 1.5 | 95 | -0.04 |
| 13 | S | BCB | 30.000 | 26.418 | 11.9 | 86 | -0.03 |

(#) = Out of Range

WG113234
1 278

ANALYST: CE

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g12231.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12: |
| 2 | 2 | 5g12232.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12: |
| 3 | 2 | 5g12233.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 4 | 3 | 5g12234.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 5 | 4 | 5g12235.d | 1. | WG113244-02 STD 2 10PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 6 | 5 | 5g12236.d | 1. | WG113244-03 STD 3 20PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12: |
| 7 | 6 | 5g12237.d | 1. | WG113244-04 STD 4 50PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13:: |
| 8 | 7 | 5g12238.d | 1. | WG113244-05 STD 5 100PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13:: |
| 9 | 8 | 5g12239.d | 1. | WG113244-06 STD 6 200PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13:: |
| 10 | 9 | 5g12240.d | 1. | WG113244-07 STD 7 300PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13:: |
| 11 | 10 | 5g12241.d | 1. | RINSE | 1,1 S-90-39 | 20 Feb 102 13:: |
| 12 | 11 | 5g12242.d | 1. | RINSE | 1,1 S-90-39 | 20 Feb 102 12:: |
| 13 | 12 | 5g12243.d | 1. | WG113244-08 ALT SOURCE 20PPB 5ML | 1,1 S-90-(28,39) | 20 Feb 102 12:: |
| 14 | 1 | 5g12244.d | 1. | WG113278-01 STD 1 90PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 15 | 2 | 5g12245.d | 1. | WG113278-02 STD 2 360PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 16 | 3 | 5g12246.d | 1. | WG113278-03 STD 3 900PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 17 | 4 | 5g12247.d | 1. | WG113278-04 STD 4 1800PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 18 | 5 | 5g12248.d | 1. | WG113278-05 STD 5 3600PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 19 | 6 | 5g12249.d | 1. | WG113278-06 STD 6 7200PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |
| 20 | 7 | 5g12250.d | 1. | RINSE | 1,1 S-90-42 | 20 Feb 102 12:: |
| 21 | 8 | 5g12251.d | 1. | RINSE | 1,1 S-90-42 | 20 Feb 102 12:: |
| 22 | 9 | 5g12252.d | 1. | WG113278-07 ALT SOURCE 900PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12:: |

Directory: c:\hpchem\2\data\091902

WG125606

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | | Injected |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 5g14776.d | 1. | WG125605-01 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 12::5 |
| 2 | 2 | 5g14777.d | 1. | WG125606-01 WATER BLANK 5ML | 1,1 S-99-16 | | 19 Sep 102 12::4 |
| 3 | 3 | 5g14778.d | 1. | WG125606-02 WATER LCS 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 13::1 |
| 4 | 1 | 5g14779.d | 1. | L0209327-01 A 5ML | 1,1 S-99-16 | pH<2 | 19 Sep 102 13::1 |
| 5 | 2 | 5g14780.d | 1. | L0209327-02 A 5ML RR HIGHSSS | 1,1 S-99-16 | | 19 Sep 102 13::5 |
| 6 | 3 | 5g14781.d | 1. | L0209327-03 A 5ML | 1,1 S-99-16 | | 19 Sep 102 13::2 |
| 7 | 4 | 5g14782.d | 1. | L0209315-01 B 5ML 200X | 1,100 S-99-16 | | 19 Sep 102 12::0 |
| 8 | 5 | 5g14783.d | 1. | L0209315-02 B 5ML 200X | 1,100 S-99-16 | | 19 Sep 102 12::3 |
| 9 | 6 | 5g14784.d | 1. | WG125606-03 L0209310-10 B 5ML 20X | 1,20 S-99-16 | | 19 Sep 102 12::1 |
| 10 | 7 | 5g14785.d | 1. | WG125606-04 L0209310-10 MS B 5ML 20X | 1,20 S-(98-29,99-16) | | 19 Sep 102 12::4 |
| 11 | 8 | 5g14786.d | 1. | WG125606-05 L0209310-10 MSD B 5ML 20X | 1,20 S-(98-29,99-16) | | 19 Sep 102 12::2 |
| 12 | 9 | 5g14787.d | 1. | WG125605-02 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 12::5 |
| 13 | 10 | 5g14788.d | 1. | L0209327-02 B 5ML | 1,1 S-99-16,RE | pH<2 | 19 Sep 102 12::4 |
| 14 | 11 | 5g14789.d | 1. | L0209337-01 A 5ML 100X | 1,100 S-99-16 | | 19 Sep 102 12::1 |
| 15 | 12 | 5g14790.d | 1. | L0209337-02 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::5 |
| 16 | 13 | 5g14791.d | 1. | L0209337-03 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::2 |
| 17 | 14 | 5g14792.d | 1. | L0209337-04 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::5 |
| 18 | 15 | 5g14793.d | 1. | L0209337-05 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::3 |
| 19 | 15 | 5g14794.d | 1. | L0209337-06 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::0 |
| 20 | 17 | 5g14795.d | 1. | L0209337-07 A 5ML 10X | 1,10 S-99-16 | | 19 Sep 102 12::4 |
| 21 | 18 | 5g14796.d | 1. | L0209337-08 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::1 |
| 22 | 19 | 5g14797.d | 1. | WG125605-03 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 12::5 |

# VOA - GC

**Date:** 9/18/02 **Analyst:** CSH **Method:** (8021) 8015 602

**Instrument:** HP5 **Work Group:** WG 125537
125576

| | 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 | NA |
| | |
| Excel Spreadsheets/FORMS | ✓ |
| Case Narrative | ✓ |
| Narrative Summary | ✓ |
| Results Reporting / Data Qualifiers | ✓ |
| Client Data Package Assembly | ✓ |
| Check for Completeness | ✓ |

Primary Reviewers Initials & Date Checked: CSH 9/19/02

Secondary Reviewers Initials & Date Checked: GAS 9/19/02

_____ • 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:** 9/19/02 **Analyst:** CSH **Method:** (8021) 8015 602

**Instrument:** HP5 **Work Group:** WG/25606

| | 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 9/20/02

Secondary Reviewers Initials & Date Checked: QJS 9/20/02

_____ • 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: _____

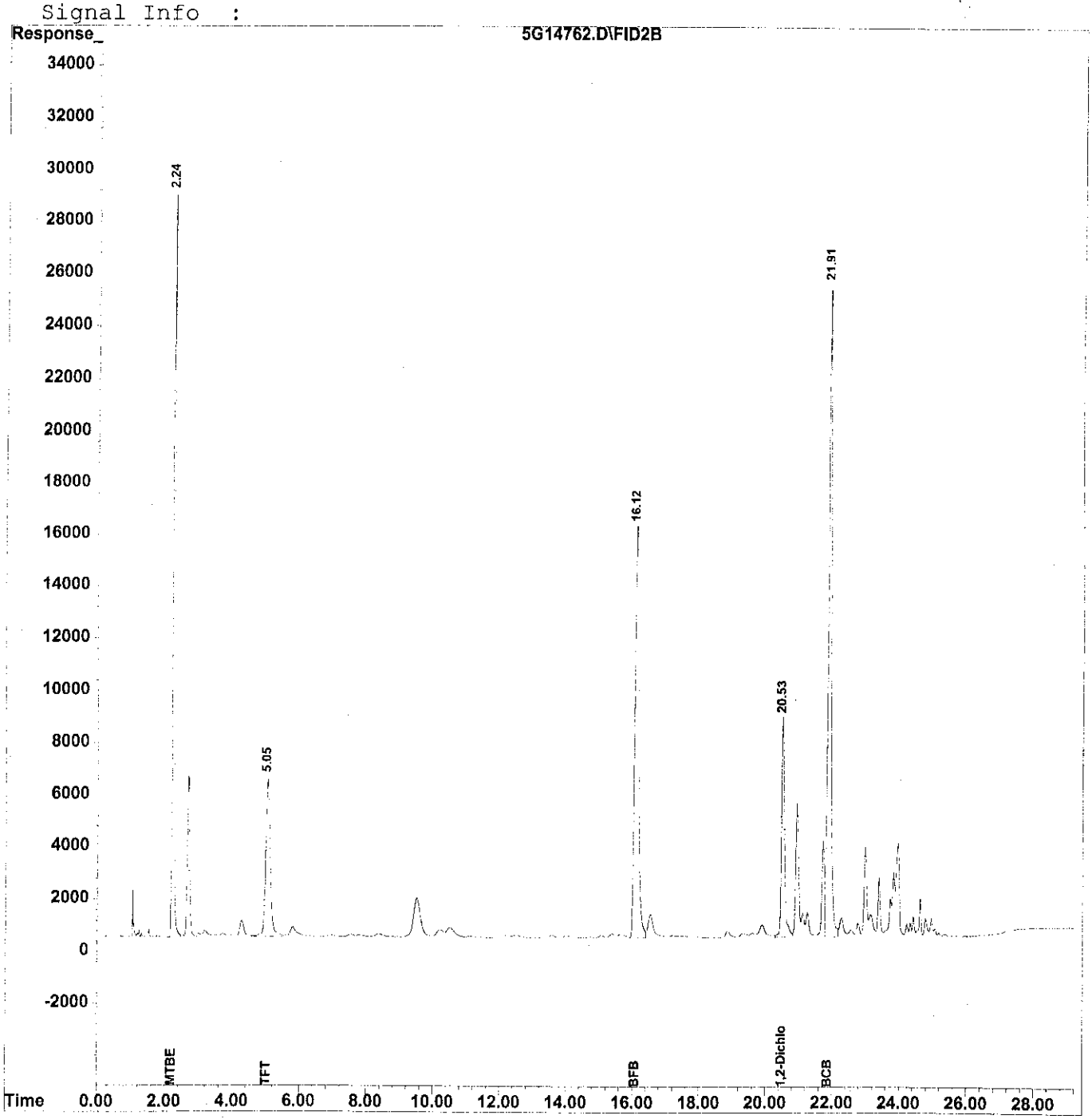
✓ = Checked & OK
NA = Not Applicable

# 2.1.3.2 Sample Data

Data File : C:\HPCHEM\2\DATA\091802\5G14762.D  Vial: 10
Acq On : 18 Sep 2002 20:14  Operator: CSH
Sample : L0209310-01 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 20:43 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14762.D
Acq On : 18 Sep 2002 20:14
Sample : L0209310-01 A 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 18 20:43 2002 Quant Results File: 8021W.RES

Vial: 10
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 567122 | 33.5858 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 111.95% |
| 9) S BFB | 16.12 | 1331887 | 27.5994 ug/L |
| Spiked Amount 30.000 | | Recovery = | 92.00% |
| 13) S BCB | 21.91 | 1595423 | 34.0548 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 113.52% |
| Target Compounds | | | |
| 1) TM MTBE | 2.24 | 1108670 | 100.0444 ug/L |
| 2) TM Benzene | 3.71 | 17931 | <MDL ug/L |
| 4) TM Toluene | 7.81 | 9866 | <MDL ug/L |
| 5) TM Chlorobenzene | 12.51 | 16322 | <MDL ug/L |
| 6) TM Ethylbenzene | 13.59 | 15518 | <MDL ug/L |
| 7) TM m-,p-Xylene | 14.05 | 13075 | <MDL ug/L |
| 8) TM o-Xylene | 15.08 | 9666 | <MDL ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.62 | 16118 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.62 | 16118 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.53 | 545747 | ~~13.8219 ug/L~~ |

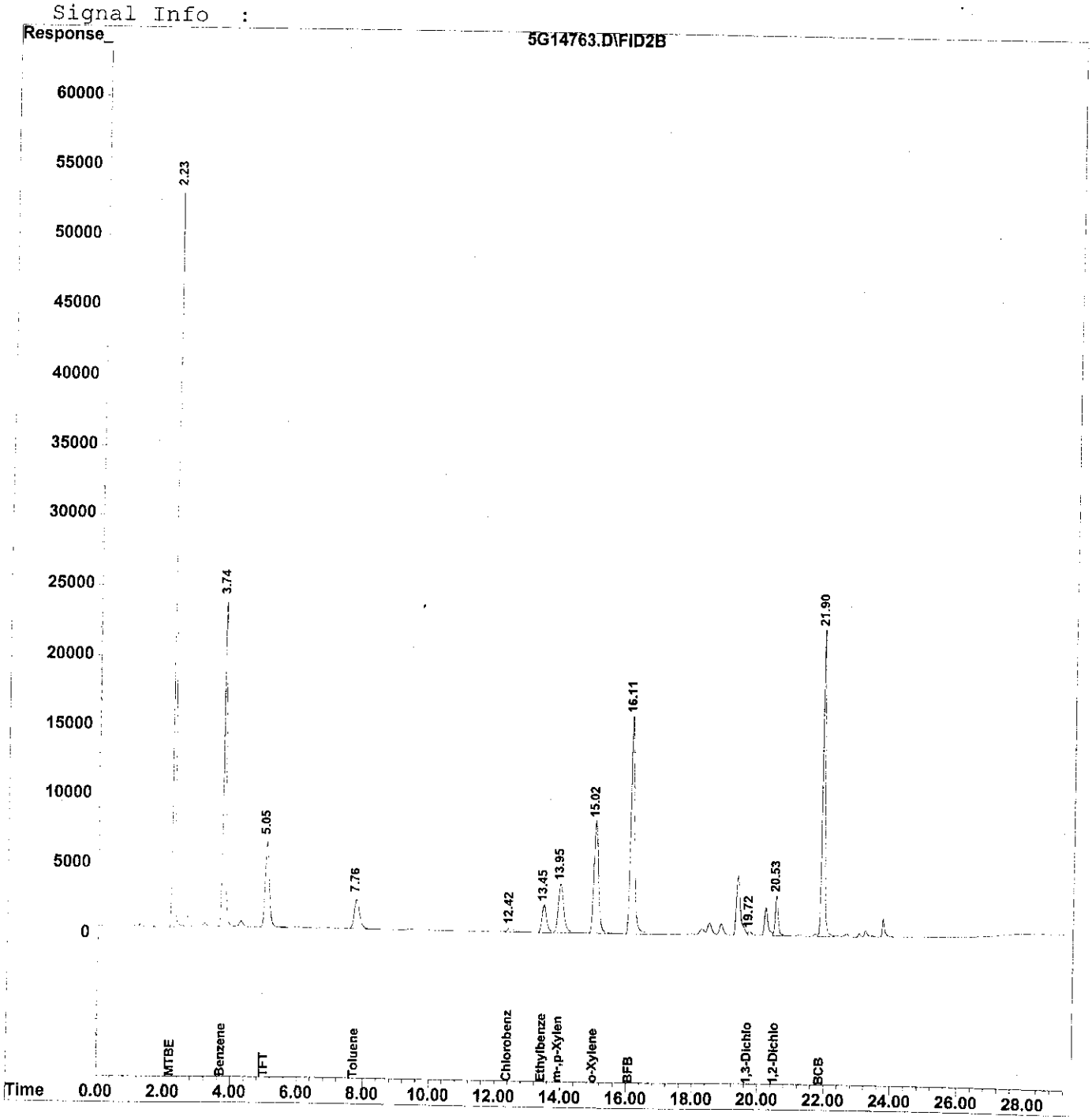
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\091802\5G14763.D
Acq On : 18 Sep 2002 20:49
Sample : L0209310-02 A 5ML 20X
Misc : 1,20 S-99-16
IntFile : autoint1.e
Quant Time: Sep 18 21:18 2002 Quant Results File: 8021W.RES

Vial: 11
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\091802\5G14763.D
Acq On : 18 Sep 2002 20:49
Sample : L0209310-02 A 5ML 20X
Misc : 1,20 S-99-16
IntFile : autoint1.e
Quant Time: Sep 18 21:18 2002 Quant Results File: 8021W.RES

Vial: 11
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

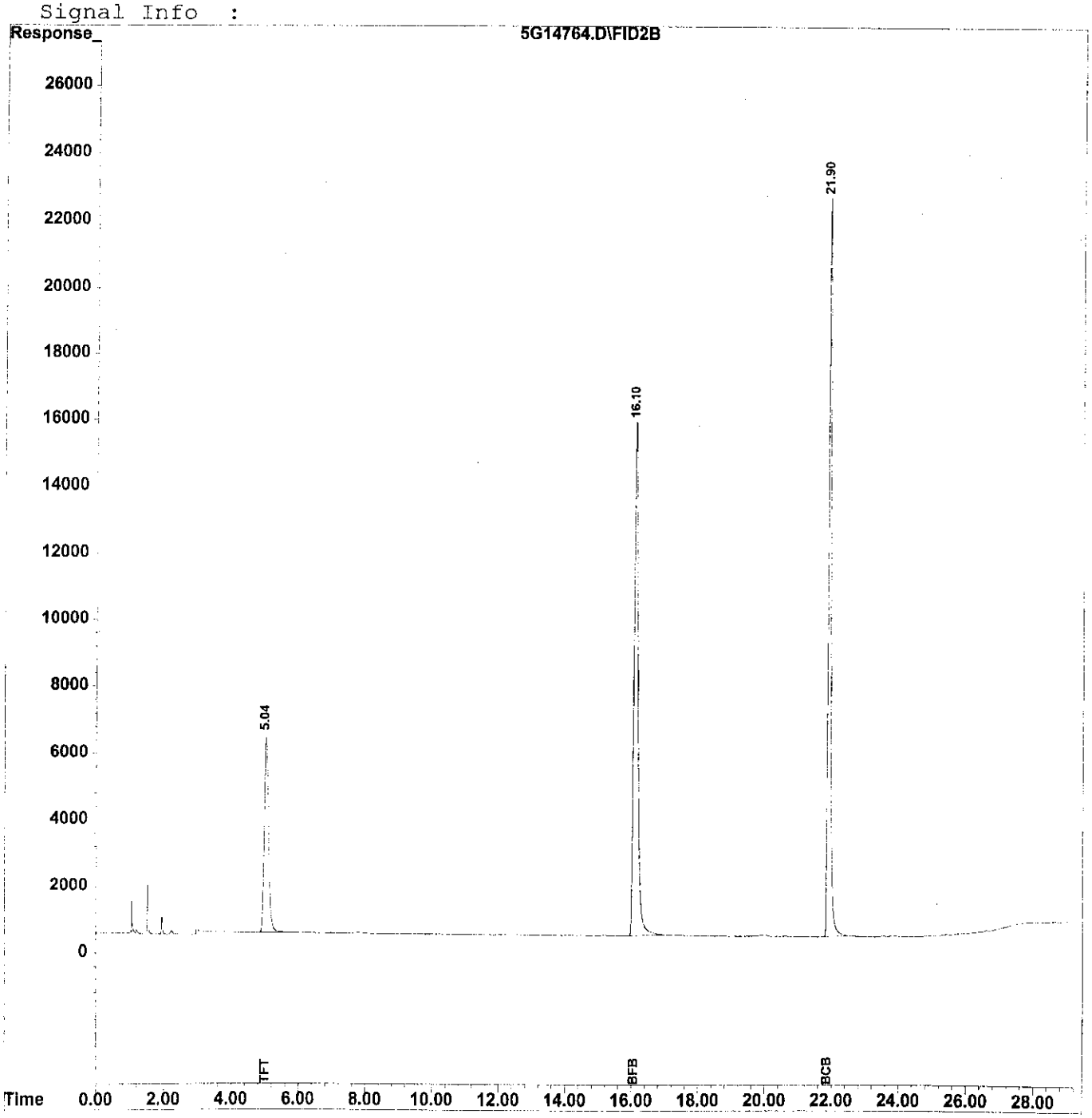
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 535442 | 31.7097 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 105.70% |
| 9) S BFB | 16.12 | 1345015 | 27.8714 ug/L |
| Spiked Amount 30.000 | | Recovery = | 92.90% |
| 13) S BCB | 21.91 | 1218310 | 26.0052 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 86.68% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 2019136 | 182.2031 ug/L |
| 2) TM Benzene | 3.74 | 1262303 | 21.5911 ug/L |
| 4) TM Toluene | 7.76 | 241482 | 4.5125 ug/L |
| 5) TM Chlorobenzene | 12.42 | 39354 | ~~0.7094 ug/L~~ |
| 6) TM Ethylbenzene | 13.46 | 195521 | 4.3321 ug/L |
| 7) TM m-,p-Xylene | 13.96 | 401331 | 7.4765 ug/L |
| 8) TM o-Xylene | 15.02 | 784903 | 16.7344 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.72 | 23541 | ~~0.5188 ug/L~~ |
| 11) TM 1,4-Dichlorobenzene | 19.72 | 23541 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.53 | 185348 | ~~4.6942 ug/L~~ |

(f)=RT Delta > 1/2 Window

Data File : C:\HPCHEM\2\DATA\091802\5G14764.D  Vial: 12
Acq On : 18 Sep 2002 21:23  Operator: CSH
Sample : WG125576-03 L0209310-03 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 21:52 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14764.D  Vial: 12
Acq On : 18 Sep 2002 21:23  Operator: CSH
Sample : WG125576-03 L0209310-03 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 21:52 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|
| System Monitoring Compounds | | | | |
| 3) S TFT | 5.04 | 526082 | 31.1554 | ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = 103.85% | | |
| 9) S BFB | 16.11 | 1329720 | 27.5545 | ug/L |
| Spiked Amount 30.000 | | Recovery = 91.85% | | |
| 13) S BCB | 21.91 | 1230759 | 26.2710 | ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = 87.57% | | |
| Target Compounds | | | | |
| 1) TM MTBE | 2.24 | 4312 | <MDL | 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 o-Xylene | 0.00 | 0 | N.D. | ug/L |
| 10) TM 1,3-Dichlorobenzene | 20.02f | 6399 | <MDL | ug/L |
| 11) TM 1,4-Dichlorobenzene | 20.02f | 6399 | <MDL | ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.02f | 6399 | <MDL | ug/L |

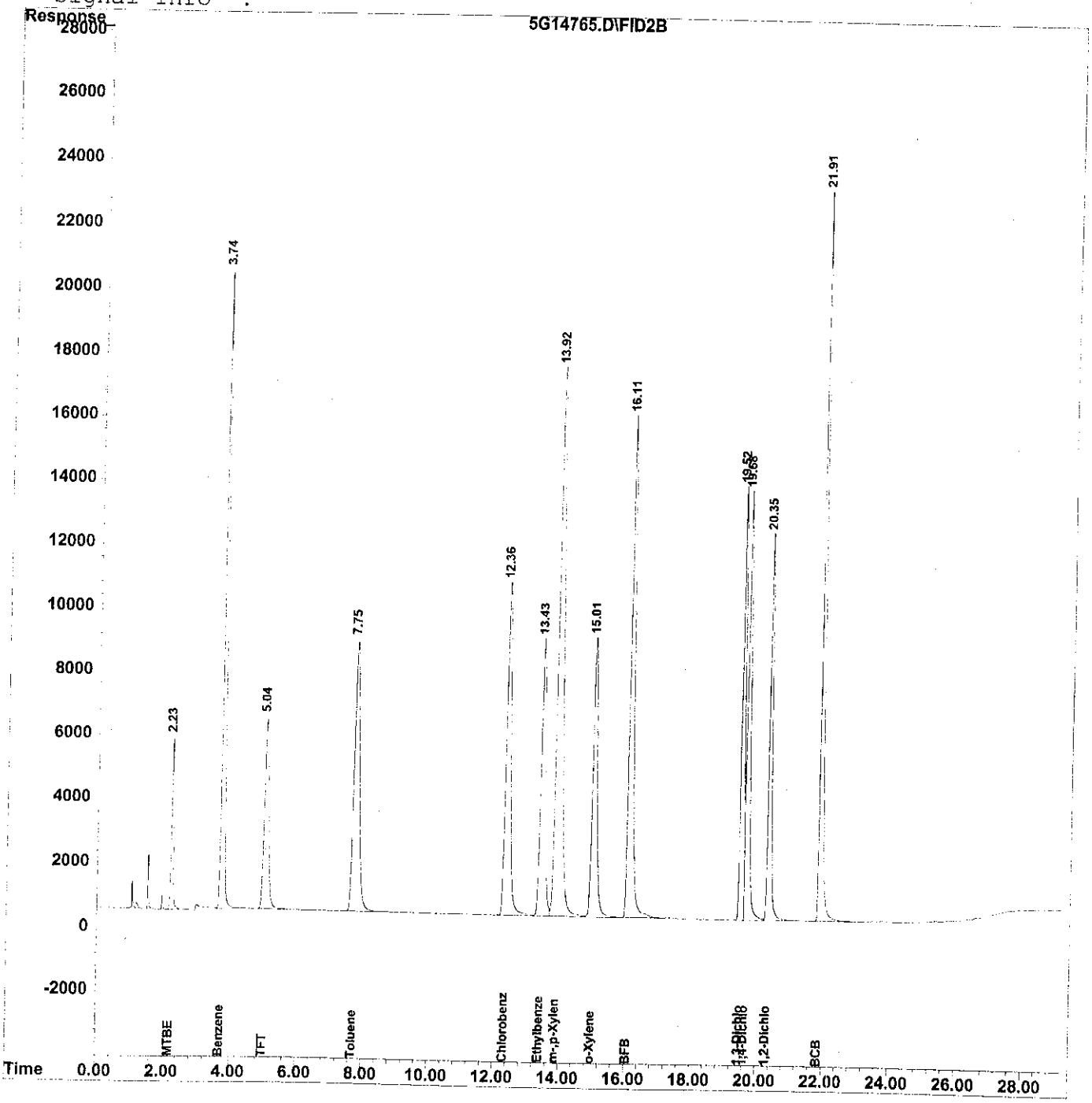
(f)=RT Delta > 1/2 Window  (m)=manual int.

Data File : C:\HPCHEM\2\DATA\091802\5G14765.D
Acq On : 18 Sep 2002 21:58
Sample : WG125576-04 L0209310-04 MS A 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e
Quant Time: Sep 18 22:27 2002 Quant Results File: 8021W.RES

Vial: 13
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14765.D 8021W.M Wed Sep 18 22:27:34 2002

Page 2

Data File : C:\HPCHEM\2\DATA\091802\5G14765.D  Vial: 13
Acq On : 18 Sep 2002 21:58  Operator: CSH
Sample : WG125576-04 L0209310-04 MS A 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 22:27 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

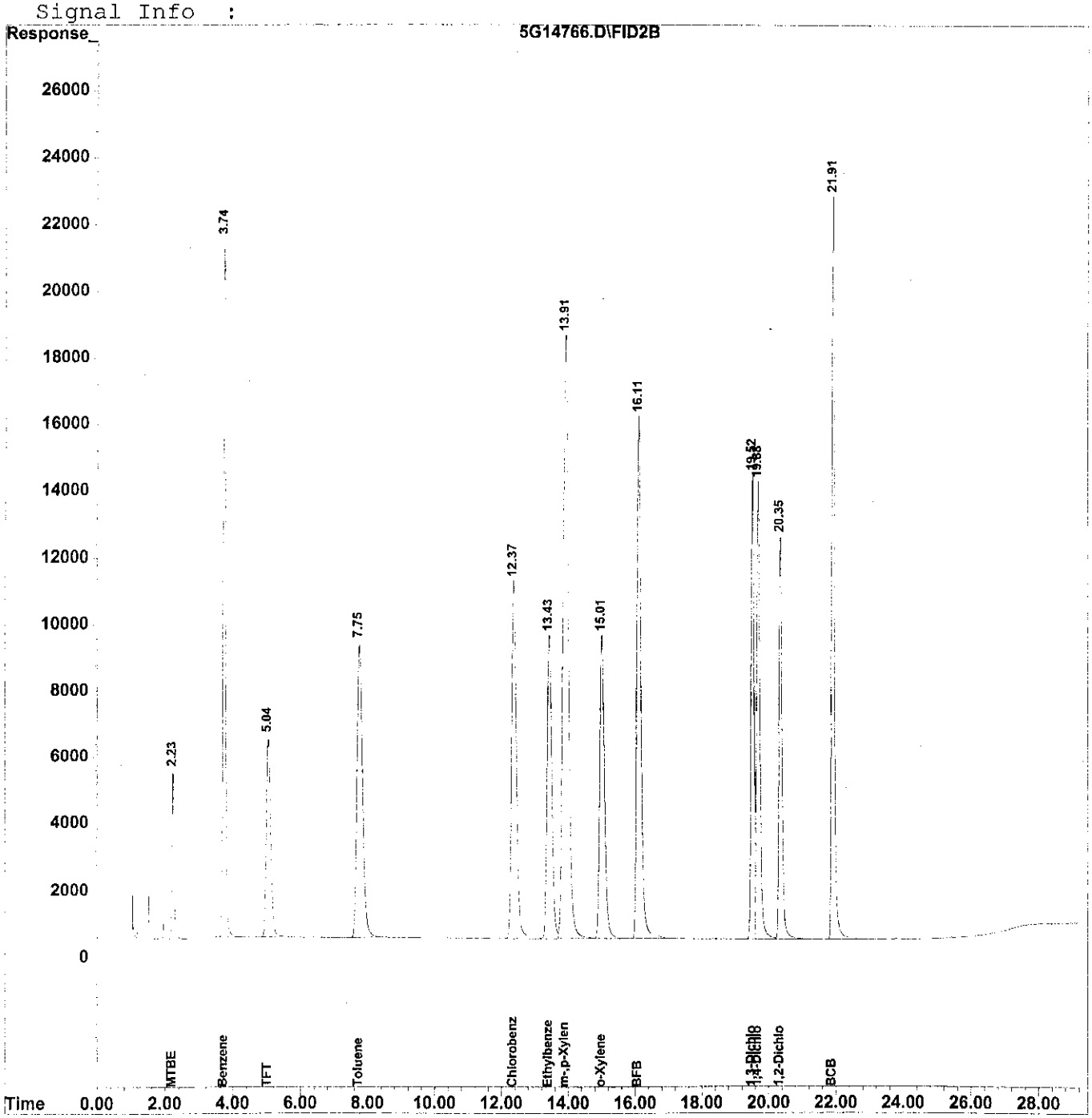
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 530708 | 31.4293 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 104.76% | | | |
| 9) S BFB | 16.11 | 1353631 | 28.0500 ug/L |
| Spiked Amount 30.000 Recovery = 93.50% | | | |
| 13) S BCB | 21.91 | 1256011 | 26.8100 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 89.37% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 211395 | 19.0759 ug/L |
| 2) TM Benzene | 3.74 | 1076713 | 18.4167 ug/L |
| 4) TM Toluene | 7.76 | 980326 | 18.3190 ug/L |
| 5) TM Chlorobenzene | 12.37 | 1040248 | 18.7516 ug/L |
| 6) TM Ethylbenzene | 13.44 | 844792 | 18.7180 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 1980456 | 36.8945 ug/L |
| 8) TM o-Xylene | 15.01 | 867516 | 18.4957 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 834985 | 18.4015 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 922958 | 18.9070 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 748964 | 18.9686 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14766.D  Vial: 14
Acq On : 18 Sep 2002 22:32  Operator: CSH
Sample : WG125576-05 L0209310-05 MSD A 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 23:02 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14766.D  Vial: 14
Acq On : 18 Sep 2002 22:32  Operator: CSH
Sample : WG125576-05 L0209310-05 MSD A 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 23:02 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 529806 | 31.3759 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 104.59% |
| 9) S BFB | 16.11 | 1355653 | 28.0919 ug/L |
| Spiked Amount 30.000 | | Recovery = | 93.64% |
| 13) S BCB | 21.91 | 1233764 | 26.3351 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 87.78% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 200103 | 18.0569 ug/L |
| 2) TM Benzene | 3.74 | 1124581 | 19.2355 ug/L |
| 4) TM Toluene | 7.76 | 1025333 | 19.1600 ug/L |
| 5) TM Chlorobenzene | 12.37 | 1074222 | 19.3640 ug/L |
| 6) TM Ethylbenzene | 13.43 | 889498 | 19.7085 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2080386 | 38.7561 ug/L |
| 8) TM o-Xylene | 15.01 | 902408 | 19.2396 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 852350 | 18.7842 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 937429 | 19.2034 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 748813 | 18.9648 ug/L |

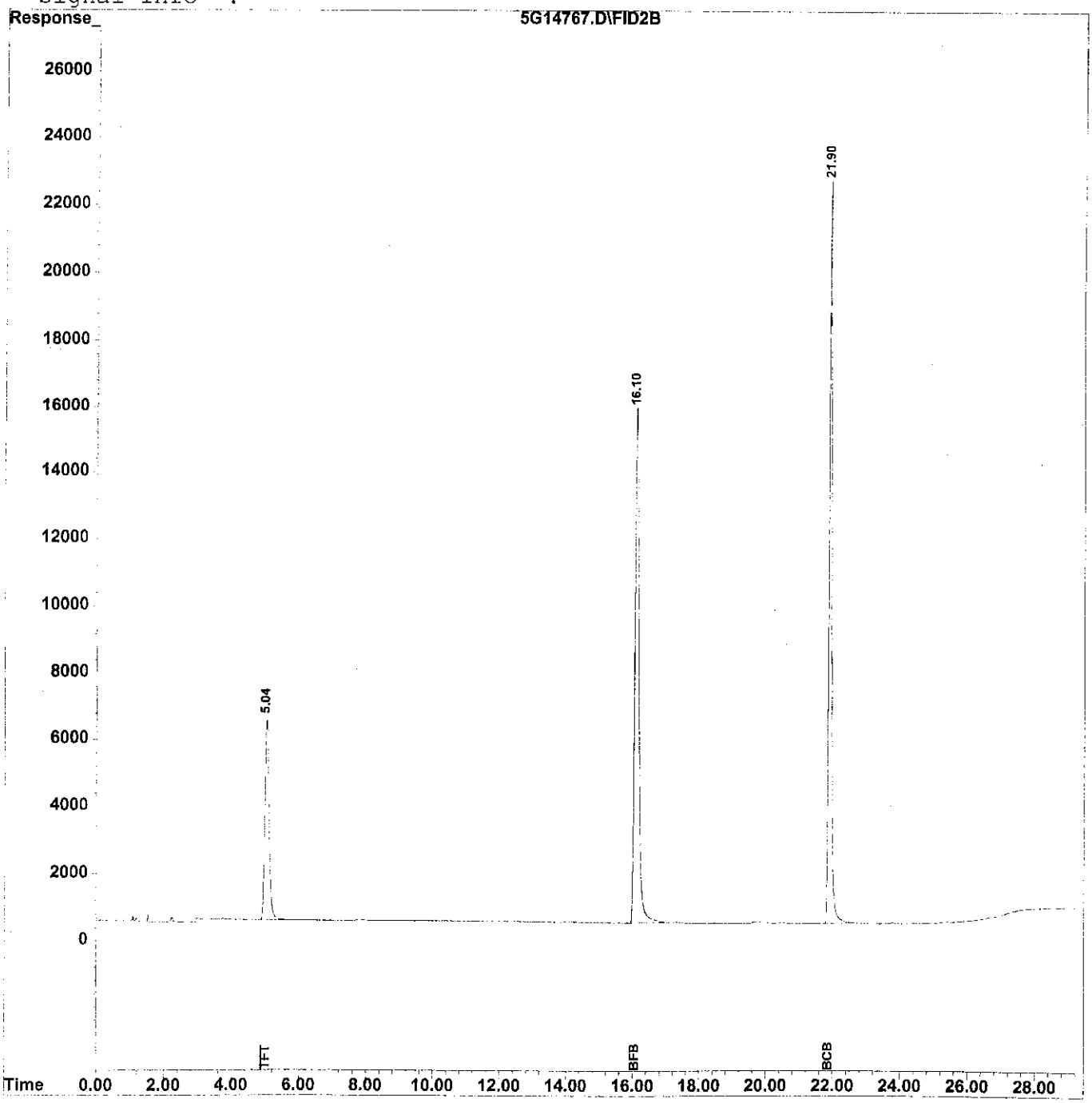
(f)=RT Delta > 1/2 Window  (m)=manual int

Quantitation Report

Data File : C:\HPCHEM\2\DATA\091802\5G14767.D  Vial: 15
Acq On : 18 Sep 2002 23:07  Operator: CSH
Sample : L0209310-06 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 23:36 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14767.D
Acq On : 18 Sep 2002 23:07
Sample : L0209310-06 A 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 18 23:36 2002 Quant Results File: 8021W.RES

Vial: 15
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

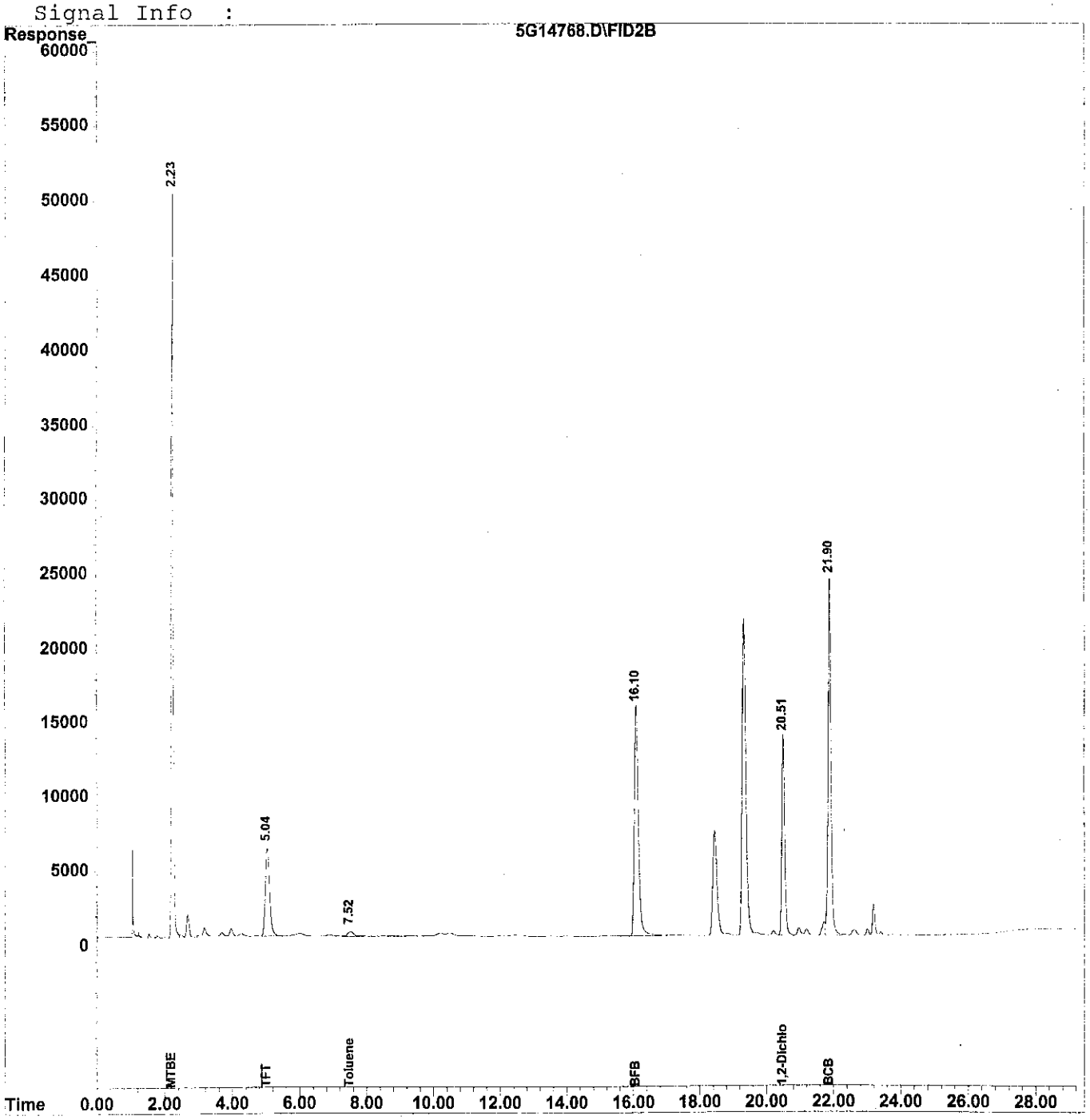
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.04 | 525169 | 31.1013 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 103.67% |
| 9) S BFB | 16.11 | 1321046 | 27.3747 ug/L |
| Spiked Amount 30.000 | | Recovery = | 91.25% |
| 13) S BCB | 21.90 | 1220321 | 26.0482 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 86.83% |
| **Target Compounds** | | | |
| 1) TM MTBE | 2.24 | 5092 | <MDL 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.67 | -93 | N.D. ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.67 | -93 | N.D. ug/L |
| 12) 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\091802\5G14768.D  Vial: 16
Acq On : 18 Sep 2002 23:42  Operator: CSH
Sample : L0209310-07 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 0:11 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14768.D Vial: 16
Acq On : 18 Sep 2002 23:42 Operator: CSH
Sample : L0209310-07 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 0:11 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

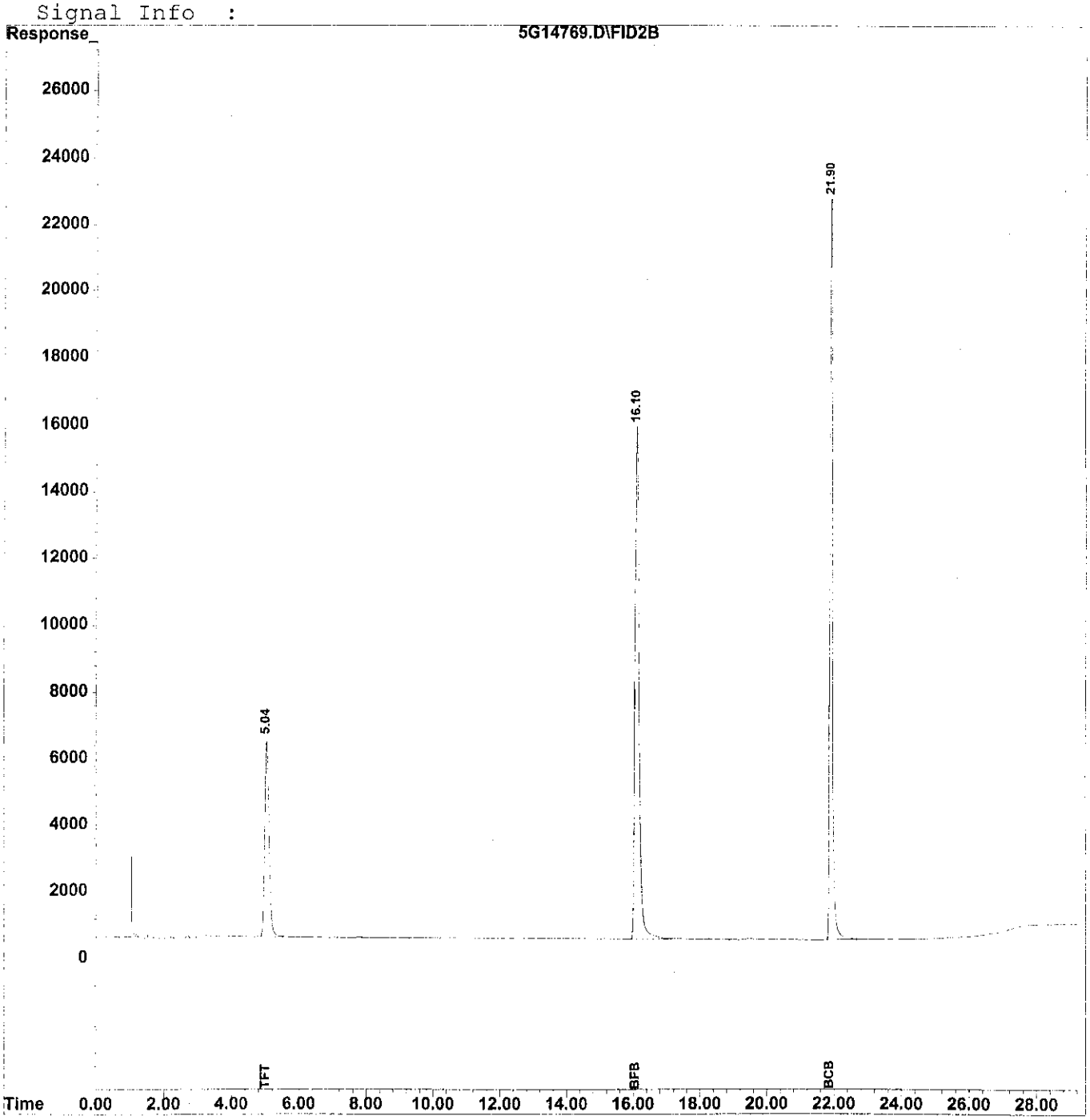
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 530809 | 31.4353 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 104.78% |
| 9) S BFB | 16.10 | 1325133 | 27.4594 ug/L |
| Spiked Amount 30.000 | | Recovery = | 91.53% |
| 13) S BCB | 21.90 | 1428145 | 30.4842 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 101.61% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 1930699 | 174.2228 ug/L |
| 2) TM Benzene | 3.69 | 15025 | <MDL ug/L |
| 4) TM Toluene | 7.52f | 39401 | ~~0.7363 ug/L~~ |
| 5) TM Chlorobenzene | 12.43 | 3428 | <MDL ug/L |
| 6) TM Ethylbenzene | 0.00 | 0 | N.D. ug/L |
| 7) TM m-,p-Xylene | 14.01 | 6593 | <MDL ug/L |
| 8) TM o-Xylene | 15.08 | 2350 | <MDL ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.71 | 19601 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.71 | 19601 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.52 | 807193 | ~~20.4434 ug/L~~ |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14769.D  Vial: 17
Acq On : 19 Sep 2002 00:16  Operator: CSH
Sample : L0209310-08 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 0:46 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\091802\5G14769.D Vial: 17
Acq On : 19 Sep 2002 00:16 Operator: CSH
Sample : L0209310-08 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 0:46 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

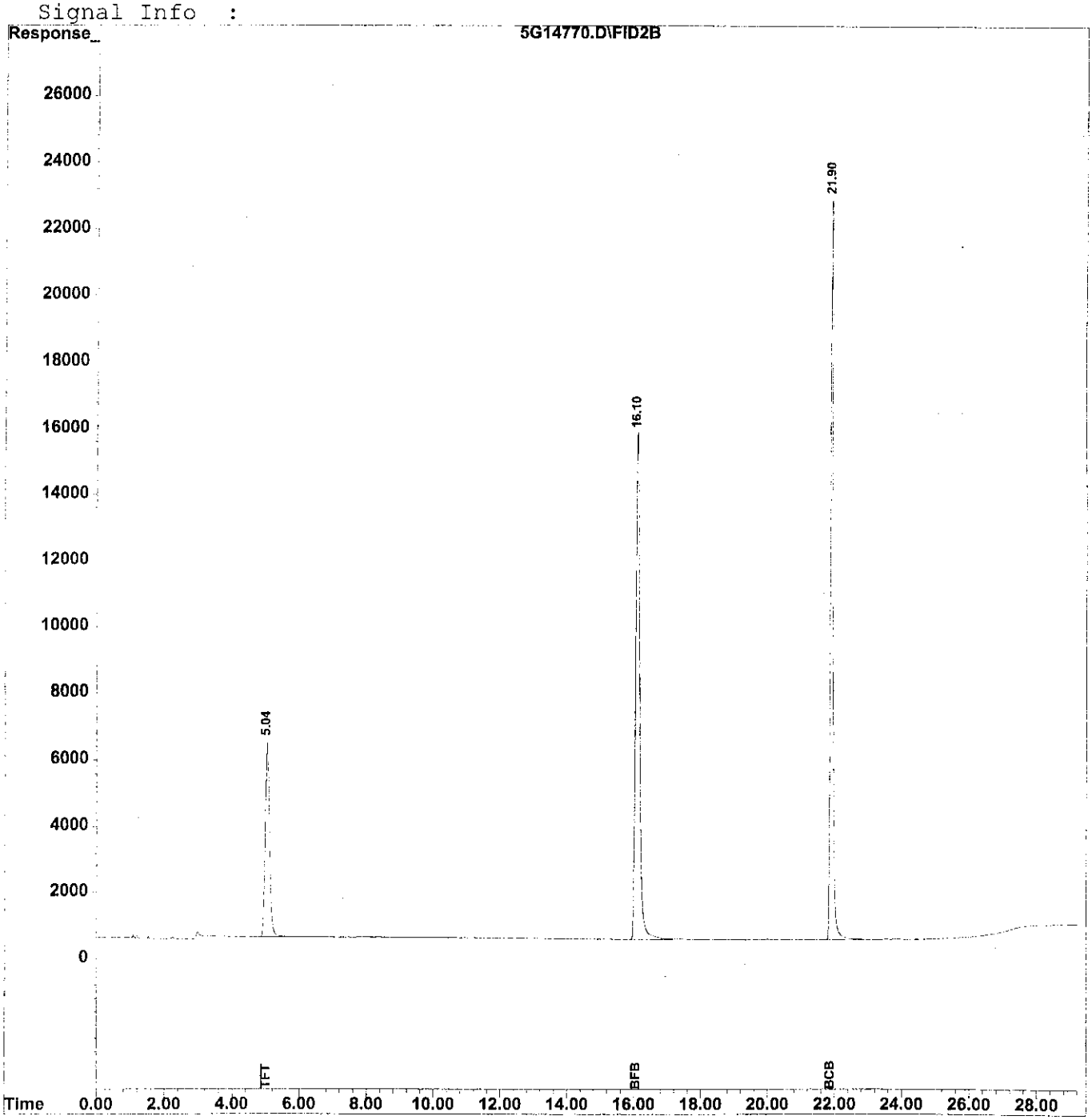
Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|
| System Monitoring Compounds | | | | |
| 3) S TFT | 5.04 | 522477 | 30.9419 | ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = 103.14% ✓ | | |
| 9) S BFB | 16.10 | 1322865 | 27.4124 | ug/L |
| Spiked Amount 30.000 | | Recovery = 91.37% | | |
| 13) S BCB | 21.90 | 1228751 | 26.2281 | ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = 87.43% | | |
| Target Compounds | | | | |
| 1) TM MTBE | 2.23 | 3928 | <MDL | 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 o-Xylene | 0.00 | 0 | N.D. | ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.47 | 1376 | <MDL | ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.47f | 1376 | <MDL | ug/L |
| 12) TM 1,2-Dichlorobenzene | 0.00 | 0 | N.D. | ug/L |

Data File : C:\HPCHEM\2\DATA\091802\5G14770.D  Vial: 18
Acq On : 19 Sep 2002 00:51  Operator: CSH
Sample : L0209310-09 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 1:20 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14770.D Vial: 18
Acq On : 19 Sep 2002 00:51 Operator: CSH
Sample : L0209310-09 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 1:20 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

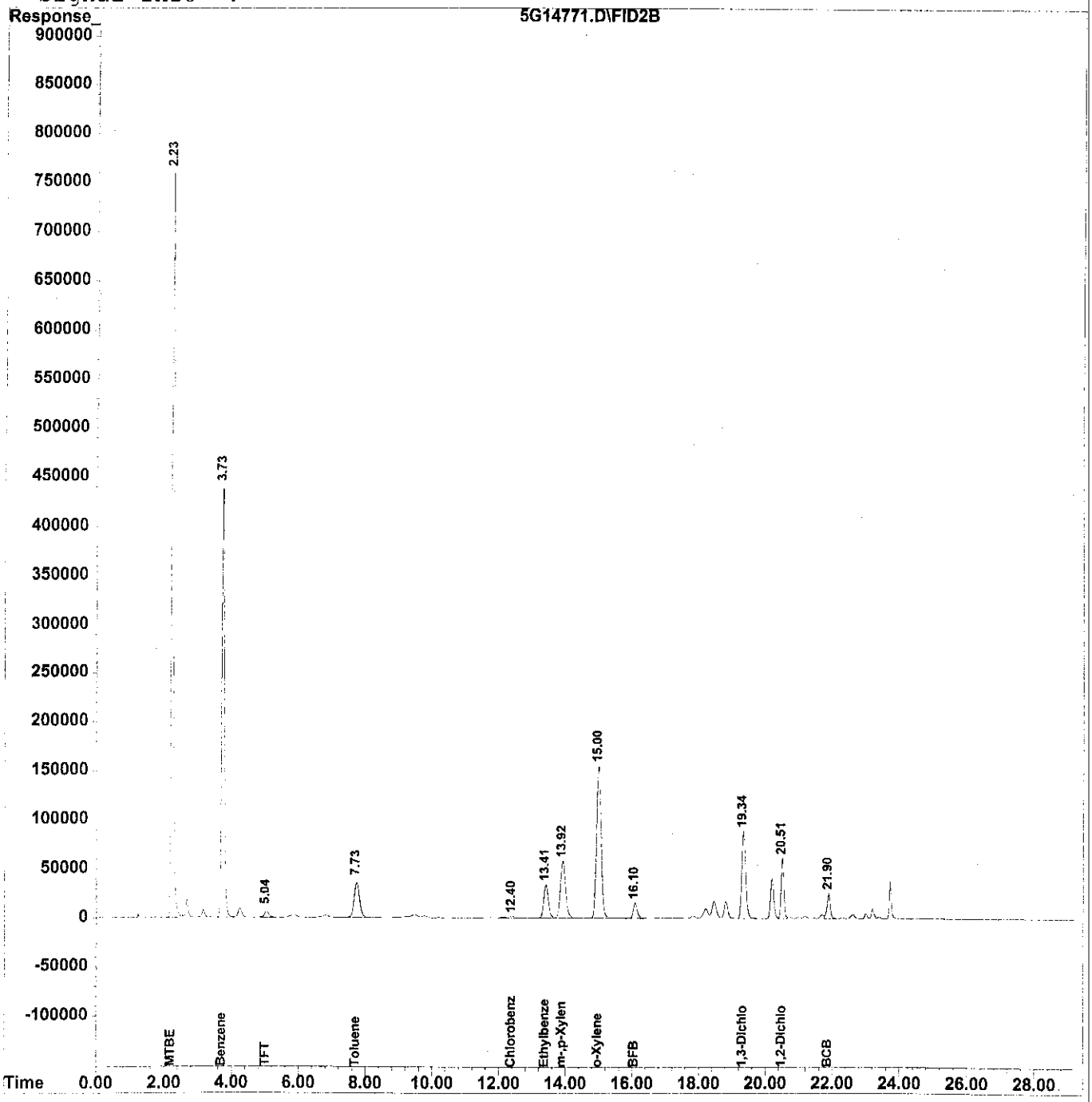
Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|
| System Monitoring Compounds | | | | |
| 3) S TFT | 5.04 | 518859 | 30.7276 | ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 102.43% | | | | |
| 9) S BFB | 16.11 | 1325077 | 27.4583 | ug/L |
| Spiked Amount 30.000 Recovery = 91.53% | | | | |
| 13) S BCB | 21.91 | 1239353 | 26.4544 | ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 88.18% | | | | |
| Target Compounds | | | | |
| 1) TM MTBE | 2.24 | 2259 | <MDL | 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 o-Xylene | 0.00 | 0 | N.D. | ug/L |
| 10) TM 1,3-Dichlorobenzene | 0.00 | 0 | N.D. | ug/L |
| 11) TM 1,4-Dichlorobenzene | 0.00 | 0 | N.D. | ug/L |
| 12) TM 1,2-Dichlorobenzene | 0.00 | 0 | N.D. | ug/L |

Data File : C:\HPCHEM\2\DATA\091802\5G14771.D  Vial: 19
Acq On : 19 Sep 2002 1:25  Operator: CSH
Sample : L0209310-10 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 1:55 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14771.D  Vial: 19
Acq On : 19 Sep 2002 1:25  Operator: CSH
Sample : L0209310-10 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 1:55 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

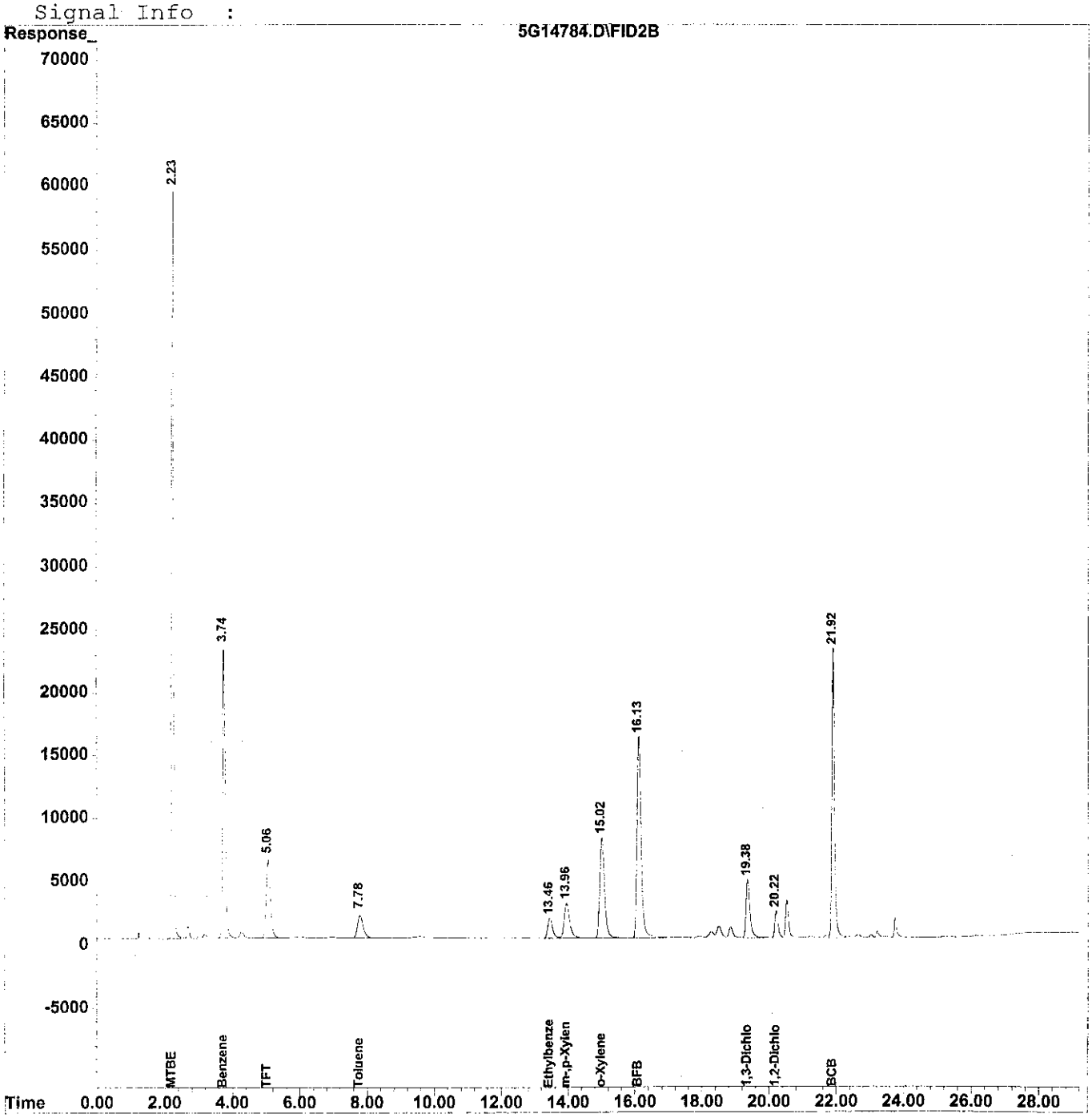
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 630237 | 37.3236 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 124.41% |
| 9) S BFB | 16.10 | 1350708 | 27.9894 ug/L |
| Spiked Amount 30.000 | | Recovery = | 93.30% |
| 13) S BCB | 21.90 | 1758834 | 37.5429 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 125.14% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 34973564 | 3155.9502 ug/L I RR@20X |
| 2) TM Benzene | 3.73 | 23748230 | 406.2030 ug/L I |
| 4) TM Toluene | 7.74 | 4195457 | ~~78.3990 ug/L~~ |
| 5) TM Chlorobenzene | 12.40 | 433697 | ~~7.8178 ug/L~~ |
| 6) TM Ethylbenzene | 13.42 | 3417499 | ~~75.7212 ug/L~~ |
| 7) TM m-,p-Xylene | 13.92 | 6419936 | ~~119.5989 ug/L~~ |
| 8) TM o-Xylene | 15.00 | 15105238 | 322.0488 ug/L I |
| 10) TM 1,3-Dichlorobenzene | 19.35 | 7275048 | ~~160.3284 ug/L~~ |
| 11) TM 1,4-Dichlorobenzene | 19.91 | 14592 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.51 | 3614367 | ~~91.5392 ug/L~~ |

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

```
Data File : C:\HPCHEM\2\DATA\091902\5G14784.D            Vial: 6
Acq On    : 19 Sep 2002  14:12                        Operator: CSH
Sample    : WG125606-03 L0209310-10 B 5ML 20X         Inst    : HP5
Misc      : 1,20 S-99-16                              Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 19 14:41 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 02/20/02
Last Update  : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

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



Data File : C:\HPCHEM\2\DATA\091902\5G14784.D Vial: 6
Acq On : 19 Sep 2002 14:12 Operator: CSH
Sample : WG125606-03 L0209310-10 B 5ML 20X Inst : HP5
Misc : 1,20 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 14:41 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 540237 | 31.9936 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 106.65% |
| 9) S BFB | 16.13 | 1382842 | 28.6553 ug/L |
| Spiked Amount 30.000 | | Recovery = | 95.52% |
| 13) S BCB | 21.92 | 1260828 | 26.9128 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 89.71% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 2284656 | 206.1632 ug/L |
| 2) TM Benzene | 3.74 | 1257490 | 21.5088 ug/L |
| 4) TM Toluene | 7.79 | 202274 | 3.7798 ug/L |
| 5) TM Chlorobenzene | 12.54 | 7386 | <MDL ug/L |
| 6) TM Ethylbenzene | 13.46 | 158332 | 3.5082 ug/L |
| 7) TM m-,p-Xylene | 13.96 | 316425 | 5.8948 ug/L |
| 8) TM o-Xylene | 15.02 | 775567 | 16.5353 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.38 | 365811 | 8.0618 ug/L |
| 11) TM 1,4-Dichlorobenzene | 20.00f | 5656 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.23 | 145954 | 3.6965 ug/L |

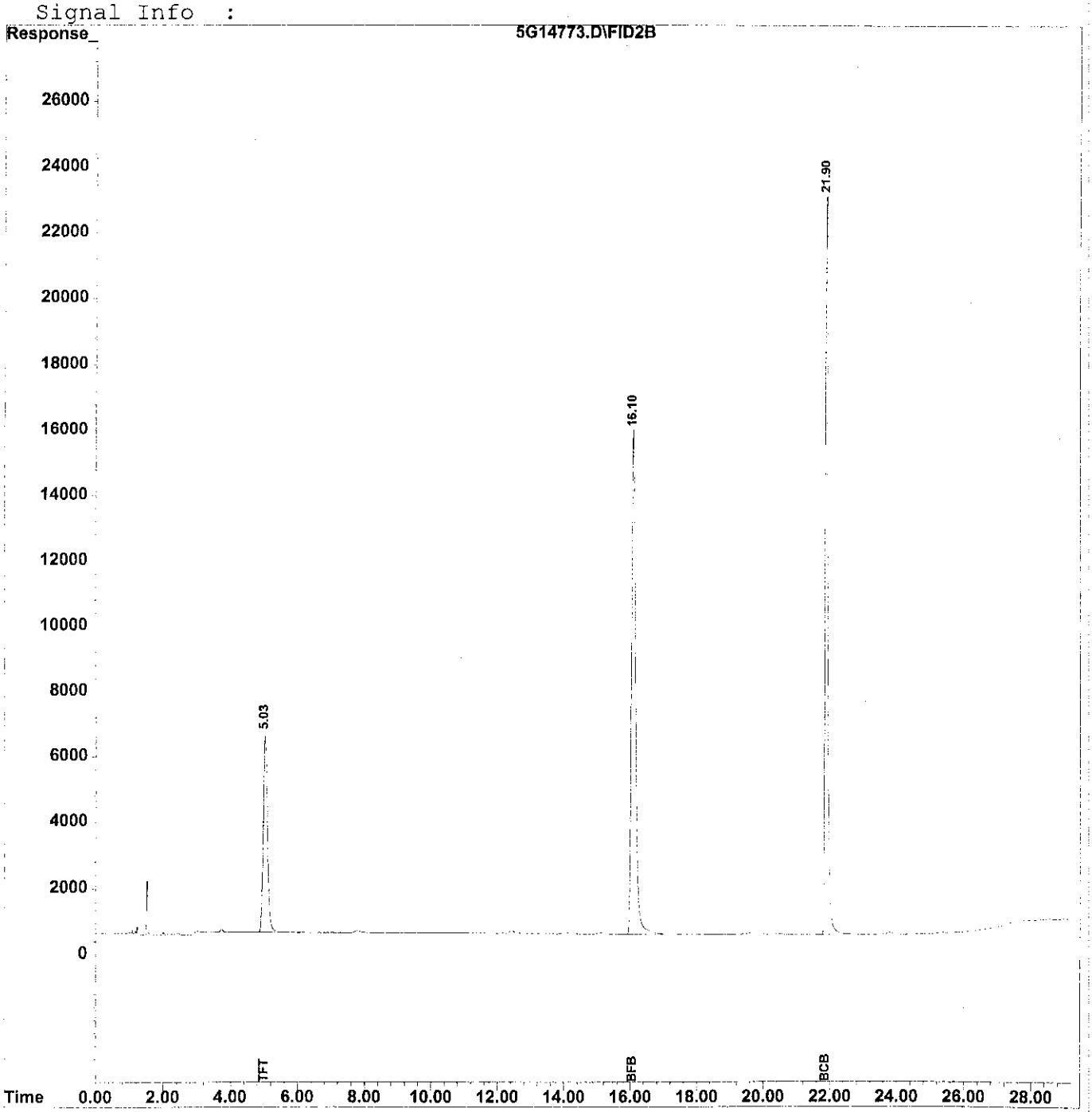
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\091802\5G14773.D  Vial: 21
Acq On : 19 Sep 2002 2:34  Operator: CSH
Sample : L0209310-11 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 3:04 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14773.D Vial: 21
Acq On : 19 Sep 2002 2:34 Operator: CSH
Sample : L0209310-11 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 3:04 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

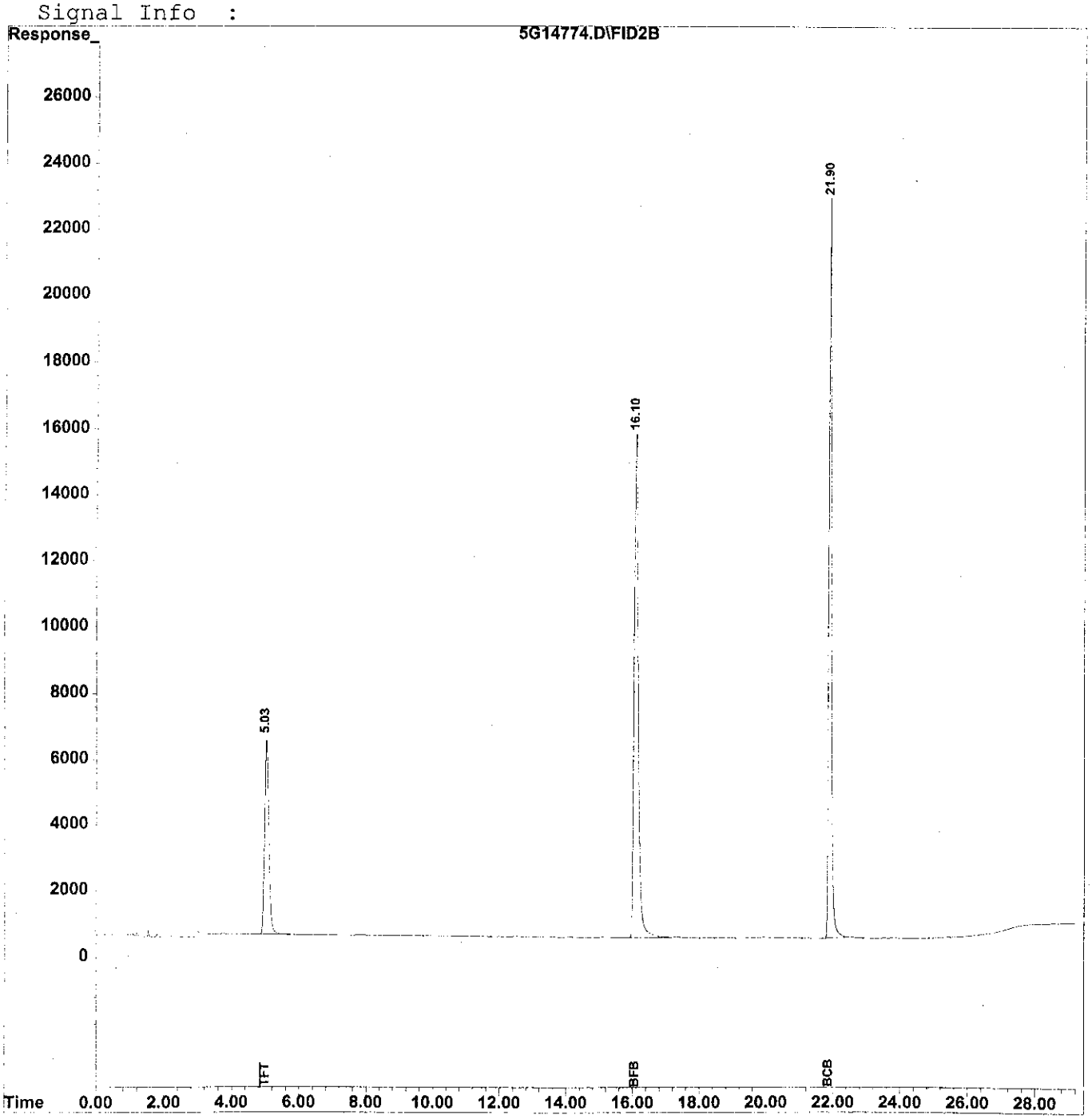
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 522505 | 30.9435 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 103.15% | | | |
| 9) S BFB | 16.10 | 1321239 | 27.3787 ug/L |
| Spiked Amount 30.000 Recovery = 91.26% | | | |
| 13) S BCB | 21.90 | 1231698 | 26.2910 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 87.64% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 3036 | <MDL ug/L |
| 2) TM Benzene | 3.73 | 4273 | <MDL ug/L |
| 4) TM Toluene | 7.79 | 6742 | <MDL ug/L |
| 5) TM Chlorobenzene | 12.45 | 9962 | <MDL ug/L |
| 6) TM Ethylbenzene | 0.00 | 0 | N.D. ug/L |
| 7) TM m-,p-Xylene | 14.02 | 2907 | <MDL ug/L |
| 8) TM o-Xylene | 15.10 | 5545 | <MDL ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.62 | 1407 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.62 | 1407 | <MDL ug/L |
| 12) 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\091802\5G14774.D  Vial: 22
Acq On : 19 Sep 2002 3:09  Operator: CSH
Sample : L0209310-12 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 3:39 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14774.D  Vial: 22
Acq On : 19 Sep 2002 3:09  Operator: CSH
Sample : L0209310-12 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 3:39 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 516845 | 30.6083 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 102.03% |
| 9) S BFB | 16.10 | 1325429 | 27.4656 ug/L |
| Spiked Amount 30.000 | | Recovery = | 91.55% |
| 13) S BCB | 21.90 | 1233481 | 26.3291 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 87.76% |
| Target Compounds | | | |
| 1) TM MTBE | 1.80f | 2293 | <MDL 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 11) TM 1,4-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 12) TM 1,2-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |

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

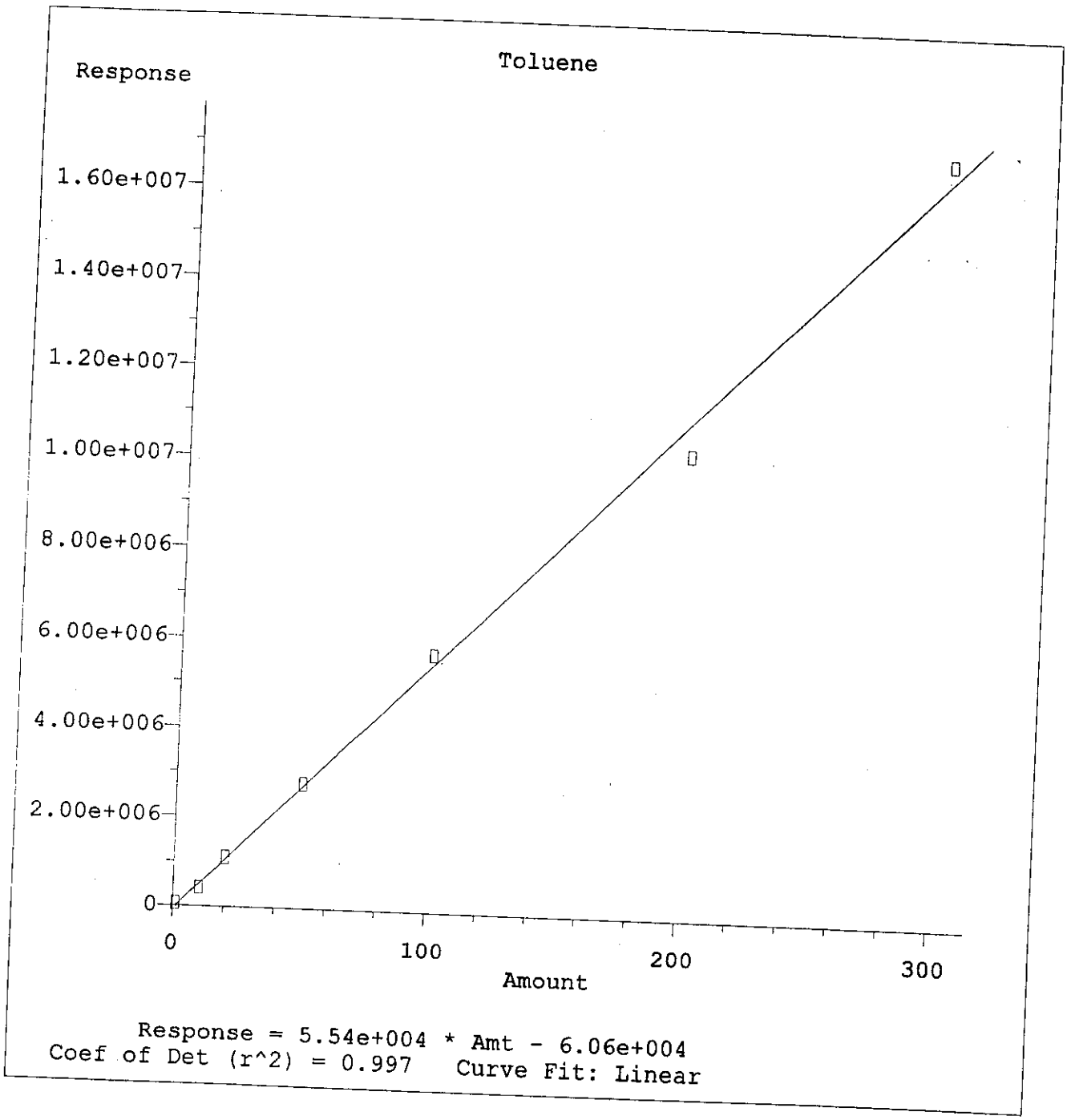
# 2.1.3.3 Standards Data

Calibration Table Report
Method: 8021W.M
Title: METHOD 8021B - Water - 02/20/02
Last Calibration: Wed Feb 20 13:38:18 2002

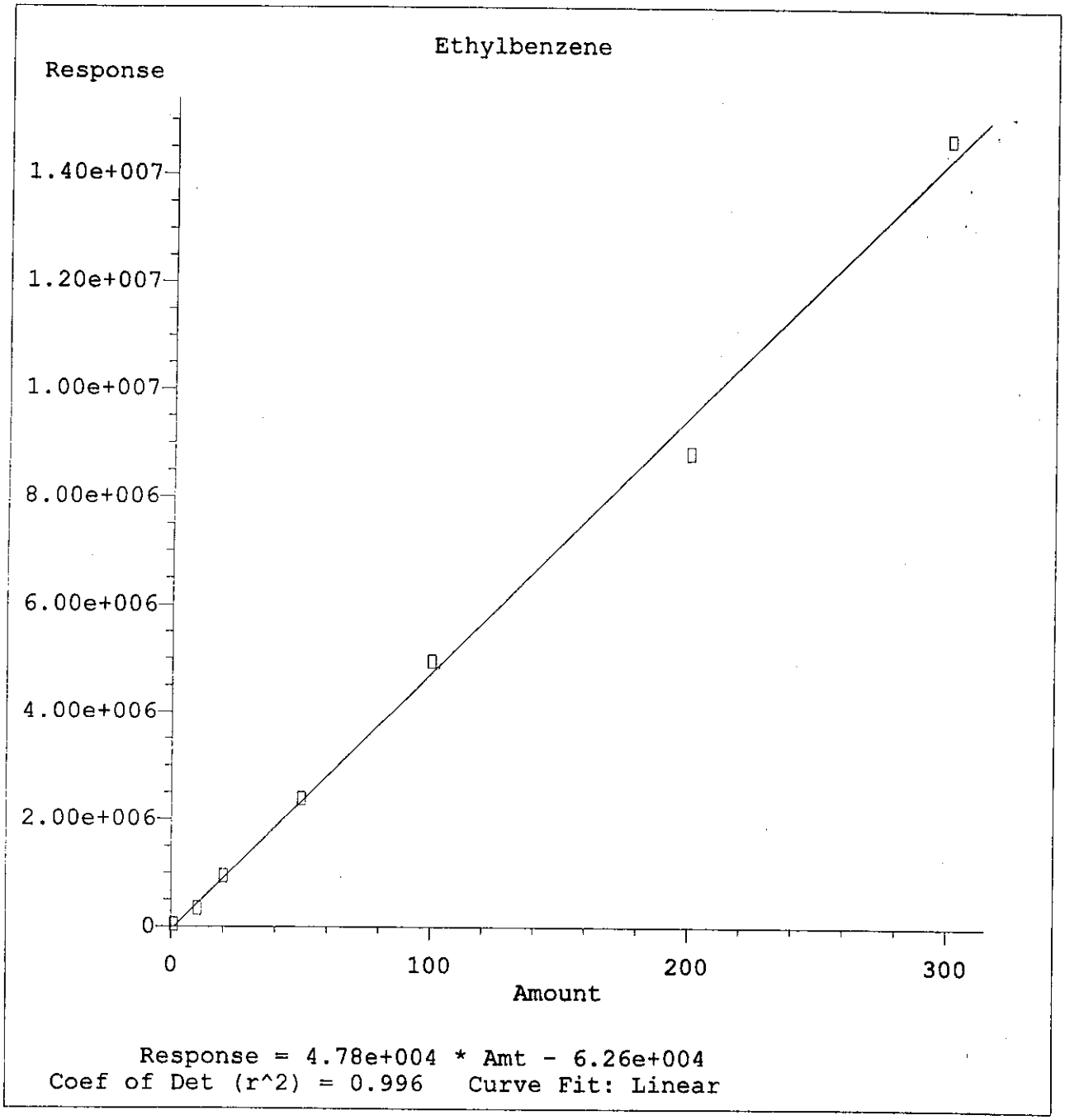
Calibration Files

| Compound | 1<br>SG12234.D | 10<br>SG12235.D | 20<br>SG12236.D | 50<br>SG12237.D | 100<br>SG12238.D | 200<br>SG12239.D | 300<br>SG12240.D | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | 12539.098 | 11196.949 | 11243.150 | 11041.255 | 10933.684 | 9845.119 | 10773.245 | 11081.800 | 7.192 | |
| Benzene | 62790.330 | 47015.533 | 60310.422 | 60394.203 | 62248.899 | 55692.162 | 60796.018 | 58463.900 | 9.482 | |
| TFT | 11675.944 | 16647.005 | 18691.041 | 16931.193 | 18308.322 | 18431.867 | 17514.953 | 16885.800 | 14.359 | |
| Toluene | 57450.429 | 41830.870 | 54992.322 | 55224.813 | 57150.005 | 51457.407 | 56493.530 | 53514.200 | 10.332 | LR=0. |
| Chlorobenzene | 51107.594 | 47796.569 | 57648.045 | 58702.207 | 60282.238 | 53862.815 | 58927.160 | 55475.200 | 8.416 | |
| Ethylbenzene | 44734.021 | 33822.898 | 47197.088 | 47781.820 | 49450.708 | 44065.886 | 48876.353 | 45132.700 | 11.903 | LR=0. |
| m-,p-Xylene | 54877.067 | 41916.389 | 56810.621 | 56708.147 | 57983.908 | 51196.233 | 56259.916 | 53678.900 | 10.487 | LR=0. |
| o-Xylene | 46024.604 | 38803.321 | 48912.004 | 49234.646 | 50426.567 | 45138.795 | 49785.014 | 46903.600 | 8.690 | |
| BFB | 40807.196 | 48040.267 | 50130.380 | 49818.364 | 51211.872 | 50893.985 | 46902.798 | 48257.800 | 7.520 | |
| 1,3-Dichlorobenzene | 43022.355 | 39773.416 | 46613.595 | 47301.443 | 48695.412 | 43962.076 | 48263.141 | 45375.900 | 7.171 | |
| 1,4-Dichlorobenzene | 50593.879 | 45110.732 | 50592.251 | 50273.527 | 50626.153 | 45302.288 | 49211.494 | 48815.800 | 5.152 | |
| 1,2-Dichlorobenzene | 38039.156 | 36942.905 | 40744.634 | 40929.219 | 41461.798 | 37452.005 | 40820.717 | 39484.300 | 4.855 | |
| BCB | 42403.048 | 46209.846 | 48055.779 | 48169.399 | 49155.647 | 48910.071 | 45036.779 | 46848.700 | 5.245 | |

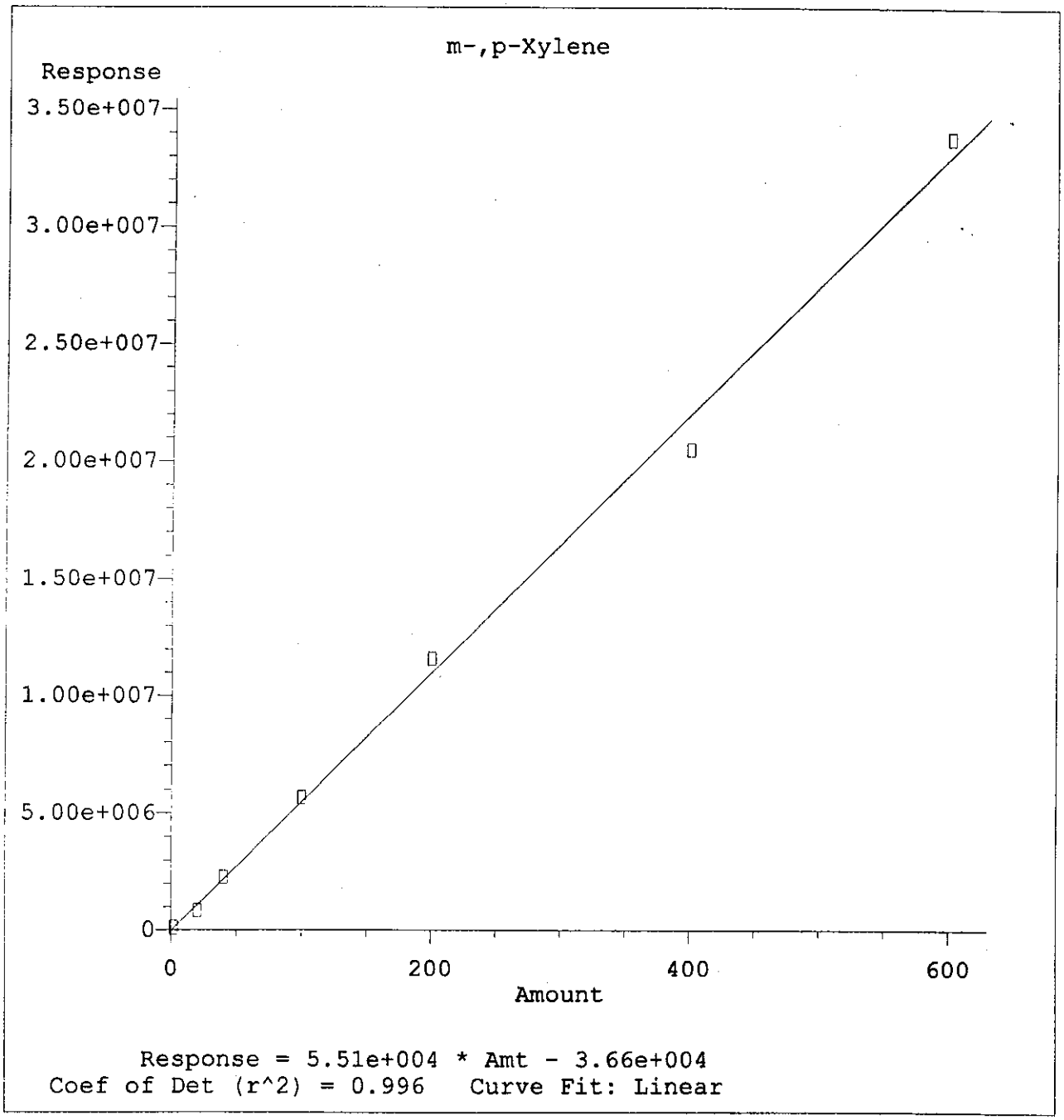
Wed Feb 20 13:38:50 2002




Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Thu Feb 21 07:37:12 2002




Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Thu Feb 21 07:37:12 2002




Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Thu Feb 21 07:37:12 2002

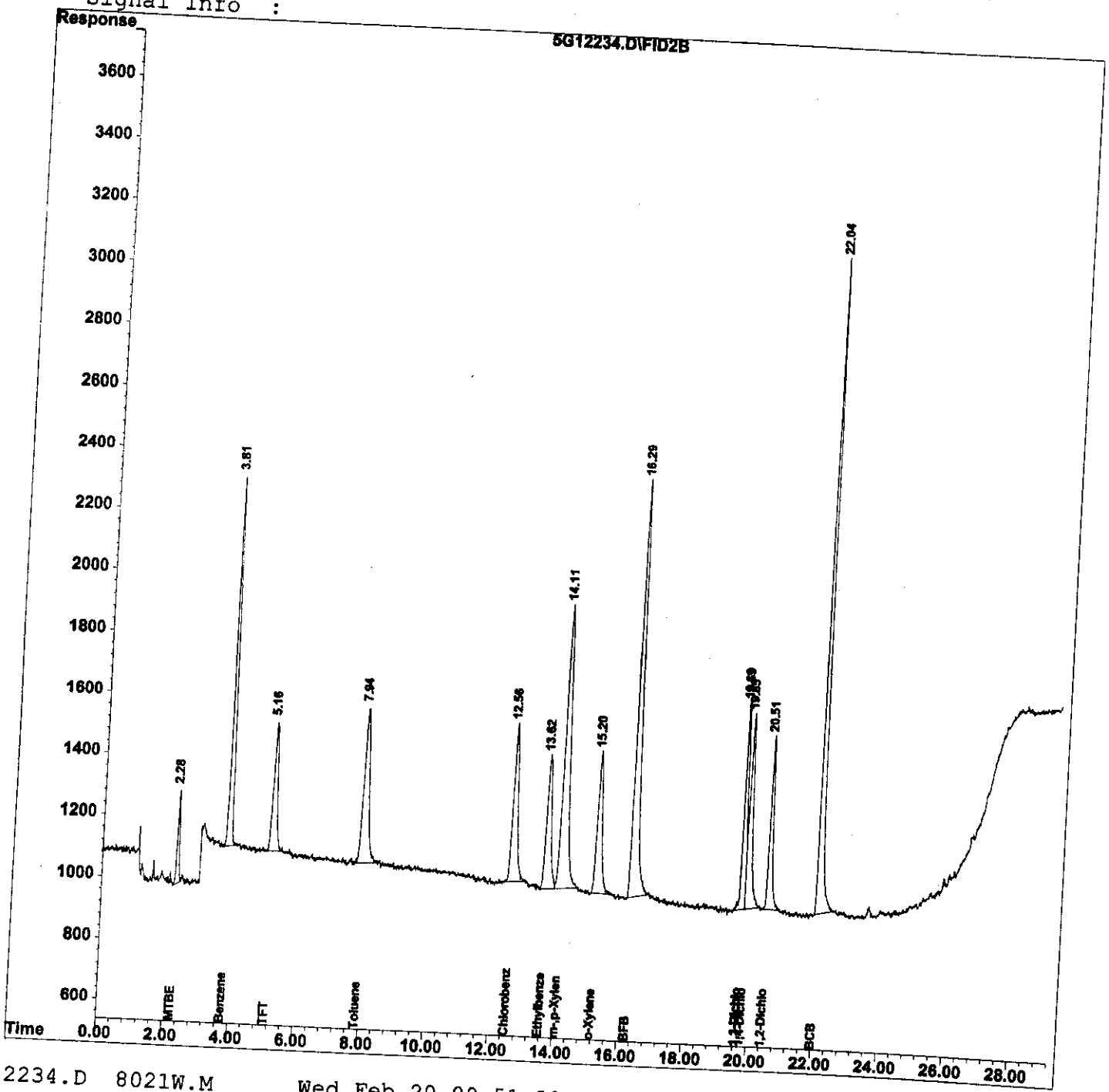
Data File : C:\HPCHEM\2\DATA\022002\5G12234.D
Acq On : 20 Feb 2002 9:22
Sample : WG113244-01 STD 1 1PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 9:51 2002

Vial: 3
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12234.D 8021W.M Wed Feb 20 09:51:22 2002

Page 2

Data File : C:\HPCHEM\2\DATA\022002\5G12234.D
Acq On : 20 Feb 2002 9:22 Vial: 3
Sample : WG113244-01 STD 1 1PPB 5ML Operator: CBN
Misc : 1,1 S-89-49,90-39 Inst : HP5
IntFile : autoint1.e Multiplr: 1.00
Quant Time: Feb 20 9:51 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.16 | 35028 | 1.7272 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 5.76%# |
| 9) S BFB | 16.29 | 122422 | 2.2088 ug/L |
| Spiked Amount 30.000 | | Recovery = | 7.36% |
| 13) S BCB | 22.04 | 127209 | 2.3923 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 7.97%# |
| Target Compounds | | | |
| 1) TM MTBE | 2.28 | 12539 | 1.0376 ug/L |
| 2) TM Benzene | 3.82 | 62790 | 0.8887 ug/L |
| 4) TM Toluene | 7.94 | 57450 | 0.5403 ug/L |
| 5) TM Chlorobenzene | 12.56 | 51108 | 0.7568 ug/L |
| 6) TM Ethylbenzene | 13.62 | 44734 | 0.8046 ug/L |
| 7) TM m-,p-Xylene | 14.11 | 109754 | 1.6329 ug/L |
| 8) TM o-Xylene | 15.20 | 46025 | 0.7916 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.69 | 43022 | 0.7747 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.86 | 50594 | 0.8634 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.51 | 38039 | 0.7869 ug/L |

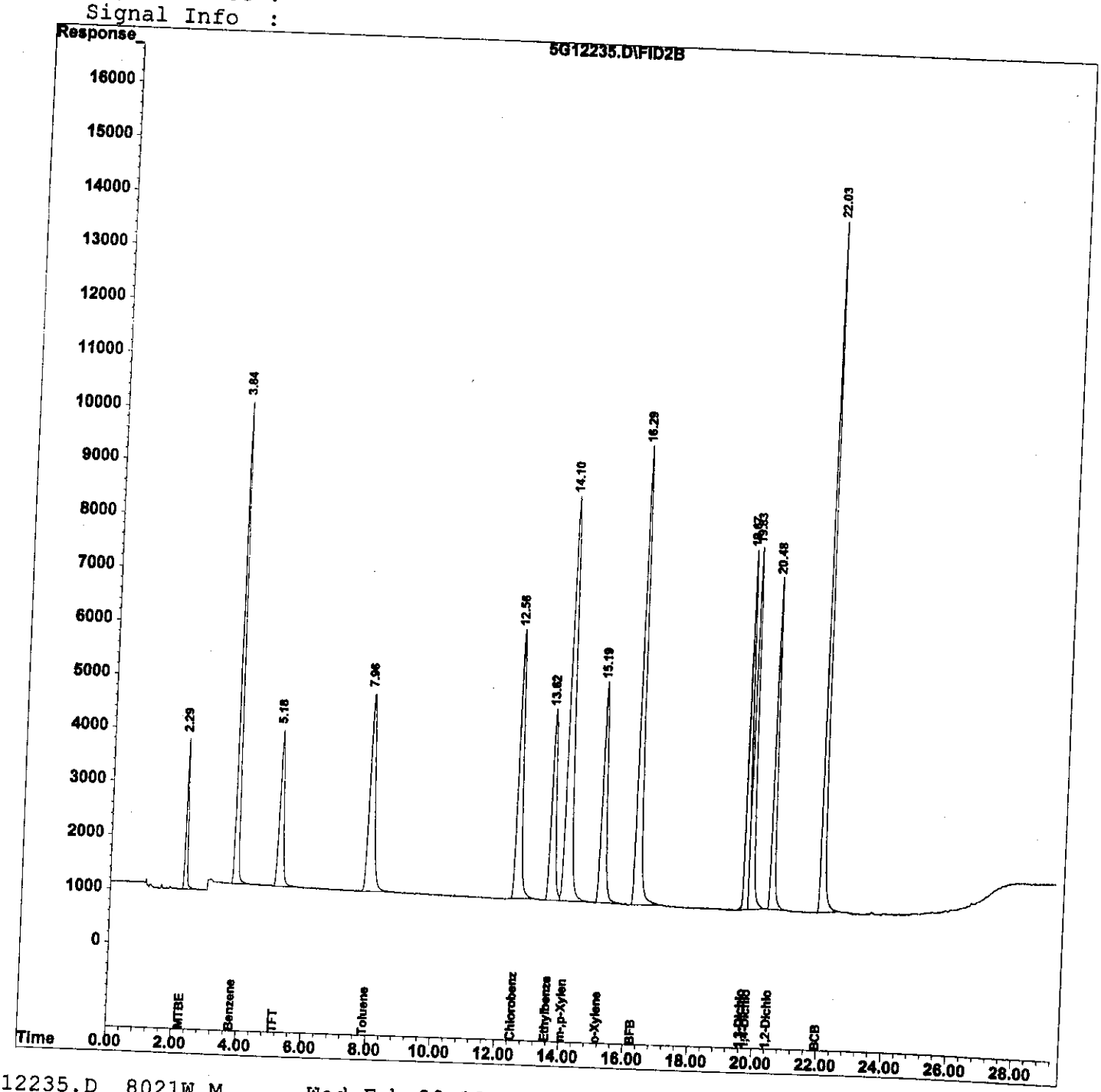
(f)=RT Delta > 1/2 Window
5G12234.D 8021W.M Wed Feb 20 09:51:22 2002 (m)=manual int.

Data File : C:\HPCHEM\2\DATA\022002\5G12235.D
Acq On : 20 Feb 2002 9:56
Sample : WG113244-02 STD 2 10PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 10:26 2002 Quant Results File: 8021W.RES

Vial: 4
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12235.D 8021W.M Wed Feb 20 10:26:17 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12235.D
Acq On : 20 Feb 2002 9:56
Sample : WG113244-02 STD 2 10PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 10:26 2002 Quant Results File: 8021W.RES

Vial: 4
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 249705 | 12.3125 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 41.04%# |
| 9) S BFB | 16.29 | 720604 | 13.0018 ug/L |
| Spiked Amount 30.000 | | Recovery = | 43.34% |
| 13) S BCB | 22.03 | 693148 | 13.0351 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 43.45% |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 111969 | 9.2658 ug/L |
| 2) TM Benzene | 3.84 | 470155 | 6.6547 ug/L |
| 4) TM Toluene | 7.96 | 418309 | 6.3797 ug/L |
| 5) TM Chlorobenzene | 12.56 | 477966 | 7.0781 ug/L |
| 6) TM Ethylbenzene | 13.62 | 338229 | 6.0834 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 838328 | 12.4722 ug/L |
| 8) TM o-Xylene | 15.19 | 388033 | 6.6739 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.67 | 397734 | 7.1620 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.83 | 451107 | 7.6985 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.49 | 369429 | 7.6418 ug/L |

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

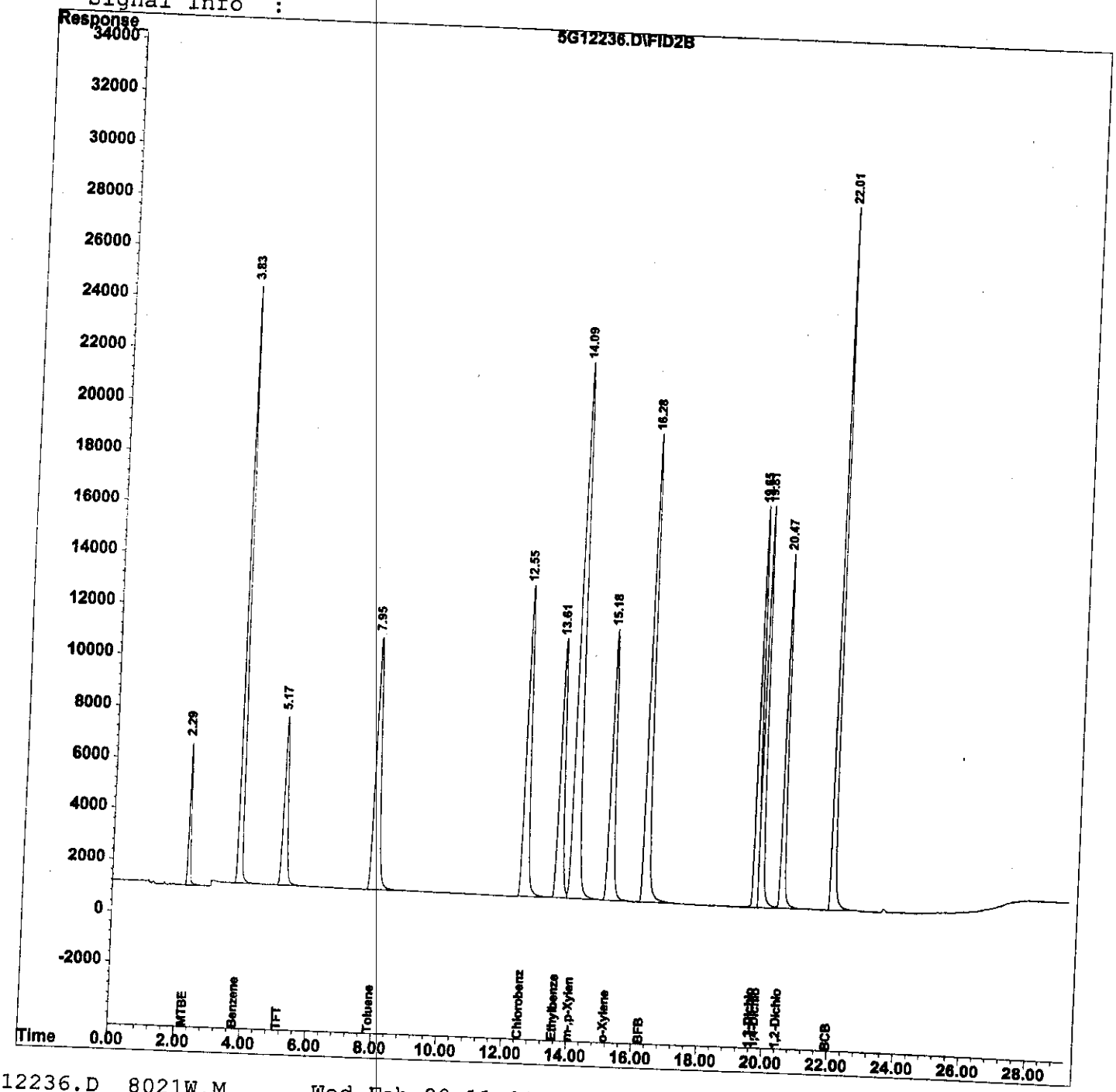
Data File : C:\HPCHEM\2\DATA\022002\5G12236.D
Acq On : 20 Feb 2002 10:31
Sample : WG113244-03 STD 3 20PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 11:01 2002

Vial: 5
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12236.D 8021W.M Wed Feb 20 11:01:09 2002

(Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12236.D
Acq On : 20 Feb 2002 10:31
Sample : WG113244-03 STD 3 20PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 11:01 2002

Vial: 5
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.17 | 560731 | 27.6487 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 92.16% |
| 9) S BFB | 16.28 | 1503911 | 27.1350 ug/L |
| Spiked Amount 30.000 | | Recovery = | 90.45% |
| 13) S BCB | 22.01 | 1441673 | 27.1117 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 90.37% |
| **Target Compounds** | | | |
| 1) TM MTBE | 2.29 | 224863 | 18.6081 ug/L |
| 2) TM Benzene | 3.83 | 1206208 | 17.0729 ug/L |
| 4) TM Toluene | 7.95 | 1099846 | 17.4083 ug/L |
| 5) TM Chlorobenzene | 12.55 | 1152961 | 17.0740 ug/L |
| 6) TM Ethylbenzene | 13.61 | 943942 | 16.9778 ug/L |
| 7) TM m-,p-Xylene | 14.09 | 2272425 | 33.8079 ug/L |
| 8) TM o-Xylene | 15.18 | 978240 | 16.8250 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 932272 | 16.7874 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 1011845 | 17.2680 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 814893 | 16.8565 ug/L |

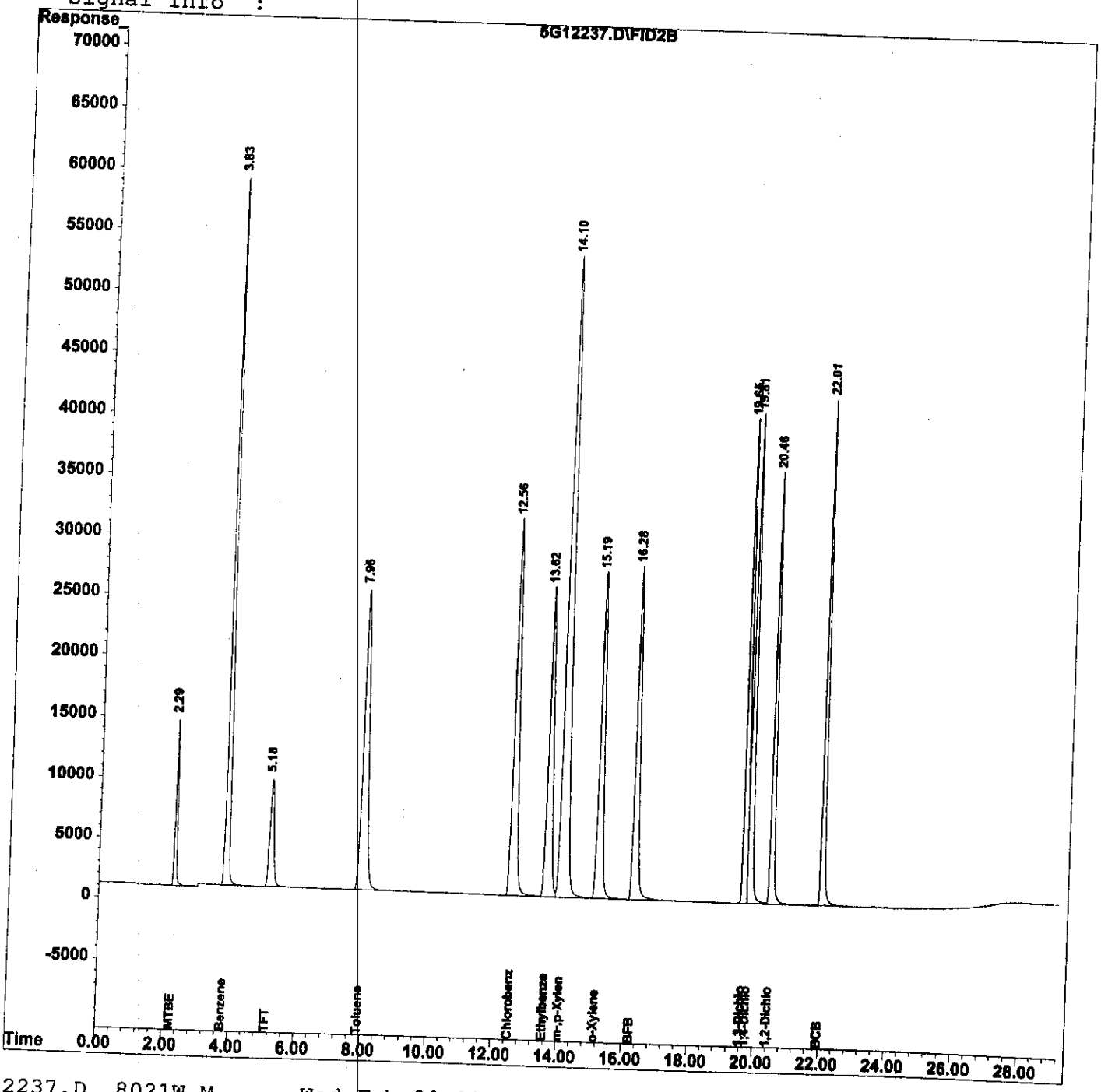
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\022002\5G12237.D
Acq On : 20 Feb 2002 11:06
Sample : WG113244-04 STD 4 50PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 11:36 2002 Quant Results File: 8021W.RES

Vial: 6
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12237.D 8021W.M Wed Feb 20 11:36:04 2002

(Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12237.D
Acq On : 20 Feb 2002 11:06
Sample : WG113244-04 STD 4 50PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 11:36 2002 Quant Results File: 8021W.RES

Vial: 6
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.18 | 761904 | 37.5682 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = 125.23% | |
| 9) S BFB | 16.28 | 2241826 | 40.4492 ug/L |
| Spiked Amount 30.000 | | Recovery = 134.83% | |
| 13) S BCB | 22.01 | 2167623 | 40.7637 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = 135.88% | |
| **Target Compounds** | | | |
| 1) TM MTBE | 2.29 | 552063 | 45.6849 ug/L |
| 2) TM Benzene | 3.83 | 3019710 | 42.7415 ug/L |
| 4) TM Toluene | 7.96 | 2761241 | 44.2929 ug/L |
| 5) TM Chlorobenzene | 12.56 | 2935110 | 43.4655 ug/L |
| 6) TM Ethylbenzene | 13.62 | 2389091 | 42.9704 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 5670815 | 84.3672 ug/L |
| 8) TM o-Xylene | 15.19 | 2461732 | 42.3400 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 2365072 | 42.5879 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 2513676 | 42.8981 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 2046461 | 42.3321 ug/L |

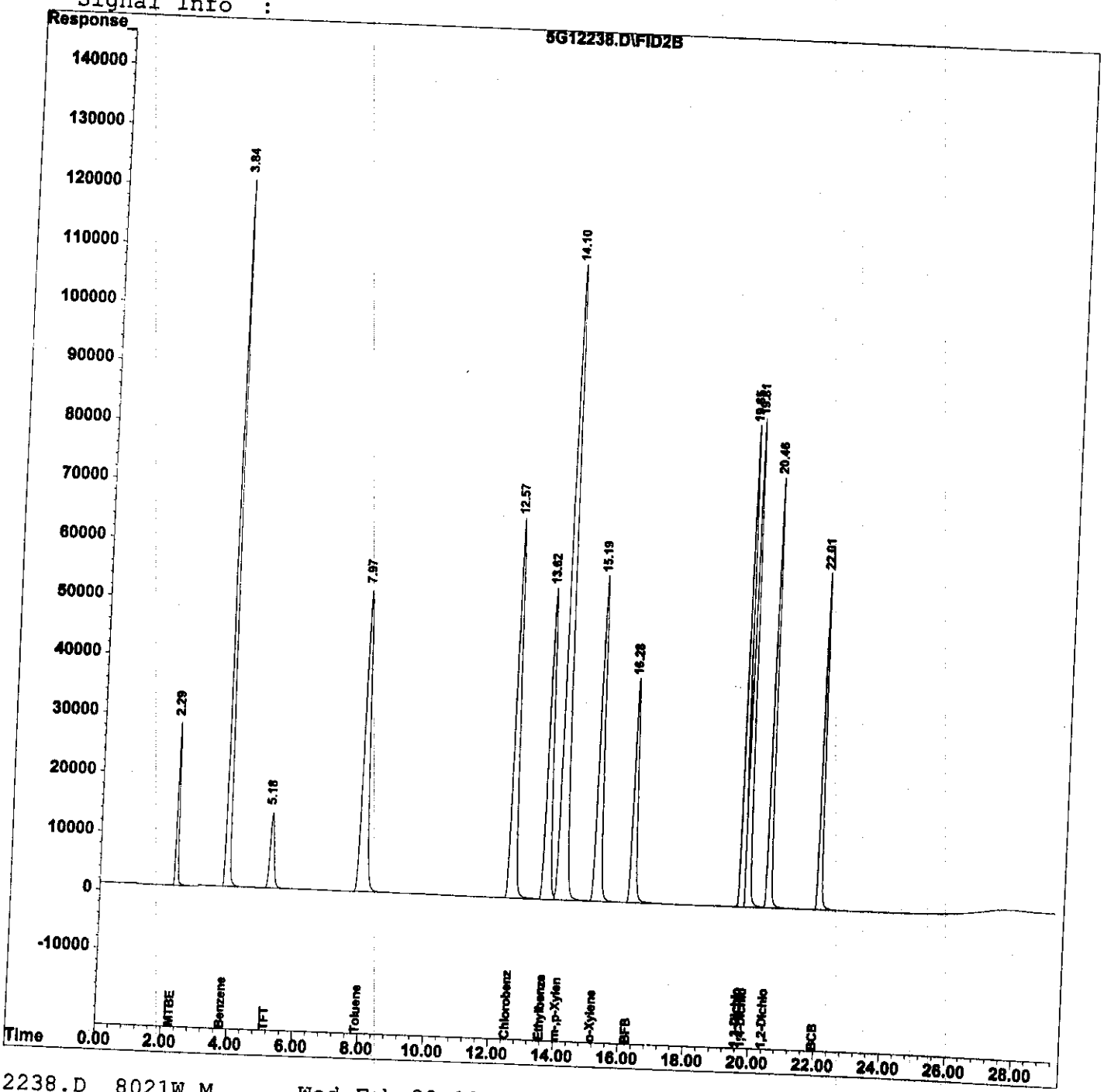
(f)=RT Delta > 1/2 Window
(m)=manual int

Data File : C:\HPCHEM\2\DATA\022002\5G12238.D
Acq On : 20 Feb 2002 11:41
Sample : WG113244-05 STD 5 100PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 12:11 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12238.D 8021W.M Wed Feb 20 12:11:03 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12238.D
Acq On : 20 Feb 2002 11:41
Sample : WG113244-05 STD 5 100PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 12:11 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 1098499 | 54.1651 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 180.55%# |
| 9) S BFB | 16.28 | 3072712 | 55.4408 ug/L |
| Spiked Amount 30.000 | | Recovery = | 184.80% |
| 13) S BCB | 22.01 | 2949339 | 55.4644 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 184.88%# |
| Target Compounds | | | |
| 1) TM MTBE | 2.30 | 1093368 | 90.4797 ug/L |
| 2) TM Benzene | 3.84 | 6224890 | 88.1083 ug/L |
| 4) TM Toluene | 7.97 | 5715001 | 92.0904 ug/L |
| 5) TM Chlorobenzene | 12.57 | 6028224 | 89.2708 ug/L |
| 6) TM Ethylbenzene | 13.63 | 4945071 | 88.9425 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 11596782 | 172.5304 ug/L |
| 8) TM o-Xylene | 15.19 | 5042657 | 86.7301 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 4869541 | 87.6859 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 5062615 | 86.3979 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 4146180 | 85.7659 ug/L |

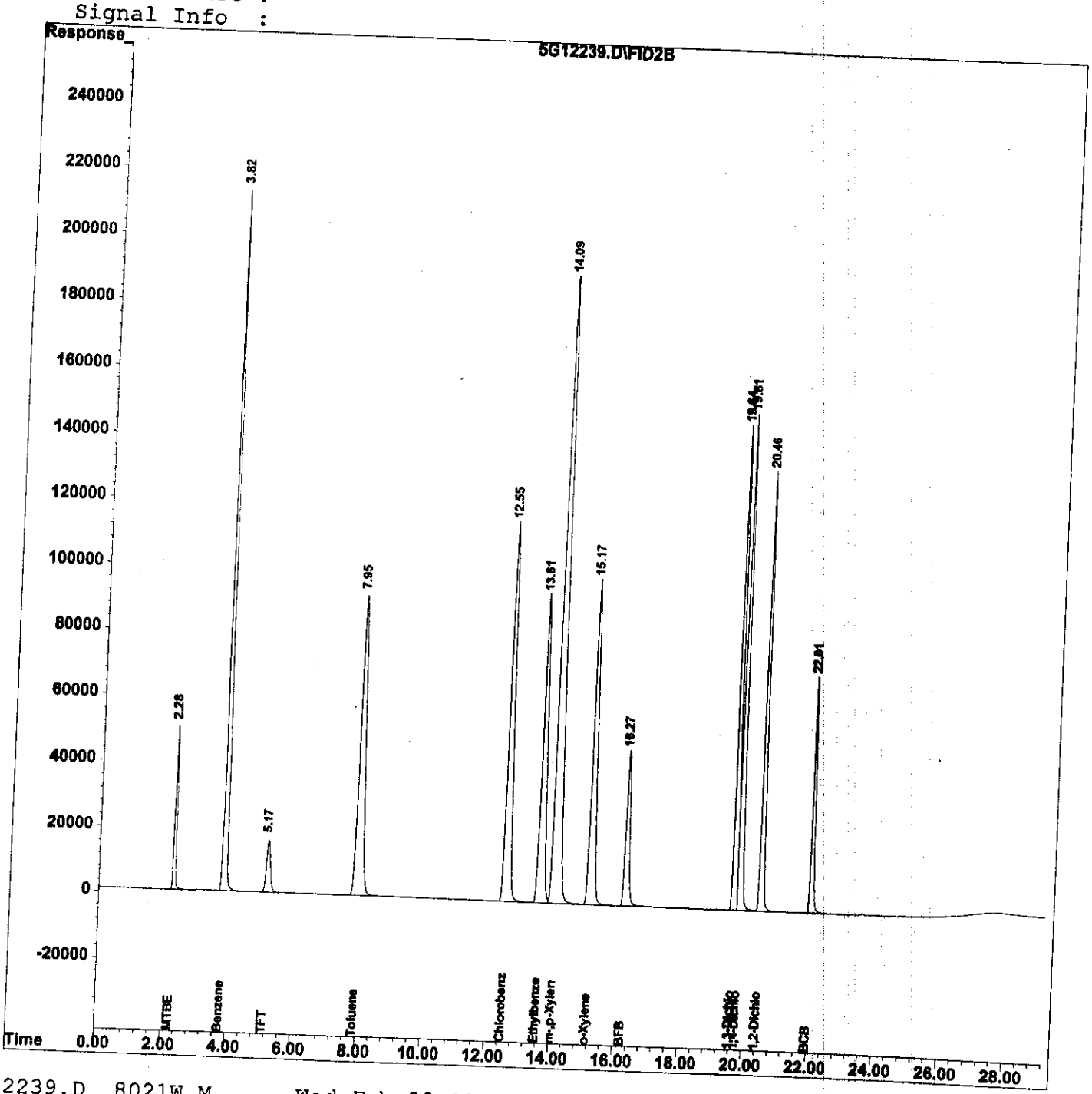
(f)=RT Delta > 1/2 Window
(m)=manual int.

Data File : C:\HPCHEM\2\DATA\022002\5G12239.D
Acq On : 20 Feb 2002 12:16
Sample : WG113244-06 STD 6 200PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 12:46 2002 Quant Results File: 8021W.RES

Vial: 8
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12239.D 8021W.M Wed Feb 20 12:46:00 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12239.D
Acq On : 20 Feb 2002 12:16
Sample : WG113244-06 STD 6 200PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 12:46 2002 Quant Results File: 8021W.RES

Vial: 8
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.17 | 1382390 | 68.1633 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 227.21%# |
| 9) S BFB | 16.27 | 3817049 | 68.8708 ug/L |
| Spiked Amount 30.000 | | Recovery = | 229.57% |
| 13) S BCB | 22.01 | 3668255 | 68.9841 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 229.95%# |
| Target Compounds | | | |
| 1) TM MTBE | 2.28 | 1969024 | 162.9429 ug/L |
| 2) TM Benzene | 3.82 | 11138432 | 157.6555 ug/L |
| 4) TM Toluene | 7.95 | 10291481 | 166.1468 ug/L |
| 5) TM Chlorobenzene | 12.55 | 10772563 | 159.5289 ug/L |
| 6) TM Ethylbenzene | 13.61 | 8813177 | 158.5146 ug/L |
| 7) TM m-,p-Xylene | 14.09 | 20478493 | 304.6675 ug/L |
| 8) TM o-Xylene | 15.17 | 9027759 | 155.2710 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.64 | 8792415 | 158.3251 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 9060458 | 154.6246 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.46 | 7490401 | 154.9428 ug/L |

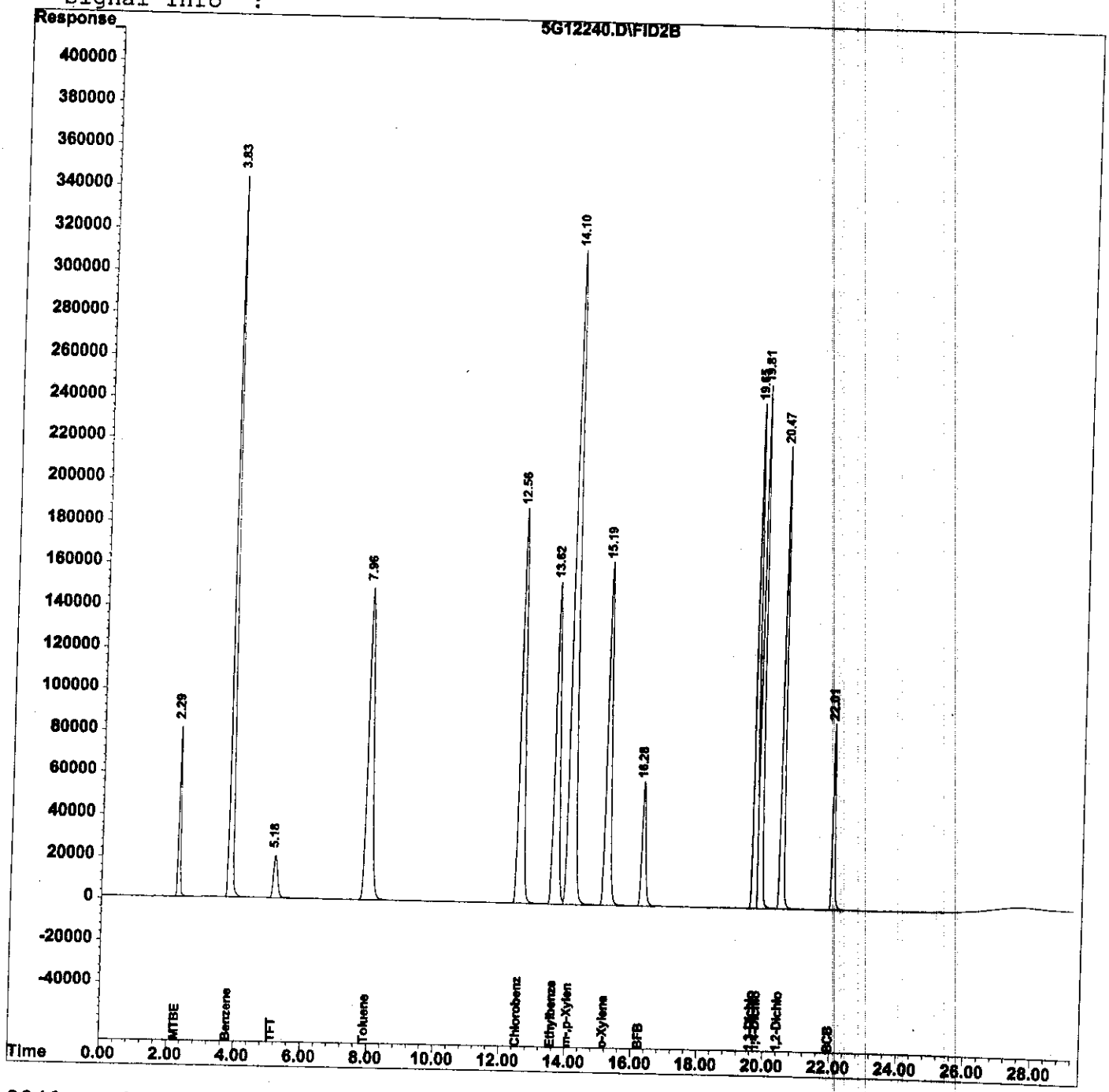
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\2\DATA\022002\5G12240.D
Acq On : 20 Feb 2002 12:51
Sample : WG113244-07 STD 7 300PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 13:20 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12240.D 8021W.M Wed Feb 20 13:20:53 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12240.D
Acq On : 20 Feb 2002 12:51
Sample : WG113244-07 STD 7 300PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 13:20 2002 Quant Results File: 8021W.RES

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

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 1751495 | 86.3632 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 287.88%# |
| 9) S BFB | 16.28 | 4690280 | 84.6265 ug/L |
| Spiked Amount 30.000 | | Recovery = | 282.09% |
| 13) S BCB | 22.01 | 4503678 | 84.6948 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 282.32%# |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 3231974 | 267.4560 ug/L |
| 2) TM Benzene | 3.83 | 18238806 | 258.1555 ug/L |
| 4) TM Toluene | 7.96 | 16948059 | 273.8631 ug/L |
| 5) TM Chlorobenzene | 12.56 | 17678148 | 261.7924 ug/L |
| 6) TM Ethylbenzene | 13.62 | 14662906 | 263.7283 ug/L |
| 7) TM m-,p-Xylene | 14.11 | 33755949 | 502.2021 ug/L |
| 8) TM o-Xylene | 15.19 | 14935504 | 256.8799 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 14478942 | 260.7224 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.82 | 14763448 | 251.9511 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 12246215 | 253.3193 ug/L |

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

Calibration Report

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D
Acq On : 20 Feb 2002 14:36
Sample : WG113244-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-90-(28,39)
IntFile : autoint1.e

Vial: 12
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Feb 20 13:38:18 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 | 11.082 | 10.463 E3 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 58.464 | 60.318 E3 | -3.2 | 100 | 0.00 |
| 3 | S | TFT | 16.886 | 19.013 E3 | -12.6 | 102 | 0.00 |
| 4 | TM | Toluene | 53.514 | 55.634 E3 | -4.0 | 101 | 0.01 |
| 5 | TM | Chlorobenzene | 55.475 | 57.505 E3 | -3.7 | 100 | 0.02 |
| 6 | TM | Ethylbenzene | 45.133 | 48.198 E3 | -6.8 | 102 | 0.02 |
| 7 | TM | m-,p-Xylene | 53.679 | 56.581 E3 | -5.4 | 100 | 0.01 |
| 8 | TM | o-Xylene | 46.904 | 48.014 E3 | -2.4 | 98 | 0.00 |
| 9 | S | BFB | 48.258 | 51.695 E3 | -7.1 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 47.659 E3 | -5.0 | 102 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 51.504 E3 | -5.5 | 102 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 42.318 E3 | -7.2 | 104 | 0.02 |
| 13 | S | BCB | 46.849 | 50.081 E3 | -6.9 | 104 | 0.02 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G12243.D 8021W.M Thu Feb 21 07:53:31 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D
Acq On : 20 Feb 2002 14:36
Sample : WG113244-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-90-(28,39)
IntFile : autoint1.e

Vial: 12
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Feb 20 13:38:18 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 | 18.883 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.634 | -3.2 | 100 | 0.00 |
| 3 | S | TFT | 30.000 | 33.780 | -12.6 | 102 | 0.00 |
| 4 | TM | Toluene | 20.000 | 21.185 | -5.9 | 101 | 0.01 |
| 5 | TM | Chlorobenzene | 20.000 | 20.732 | -3.7 | 100 | 0.02 |
| 6 | TM | Ethylbenzene | 20.000 | 21.461 | -7.3 | 102 | 0.02 |
| 7 | TM | m-,p-Xylene | 40.000 | 41.777 | -4.4 | 100 | 0.01 |
| 8 | TM | o-Xylene | 20.000 | 20.473 | -2.4 | 98 | 0.00 |
| 9 | S | BFB | 30.000 | 32.137 | -7.1 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 21.006 | -5.0 | 102 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 21.101 | -5.5 | 102 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 21.435 | -7.2 | 104 | 0.02 |
| 13 | S | BCB | 30.000 | 32.070 | -6.9 | 104 | 0.02 |

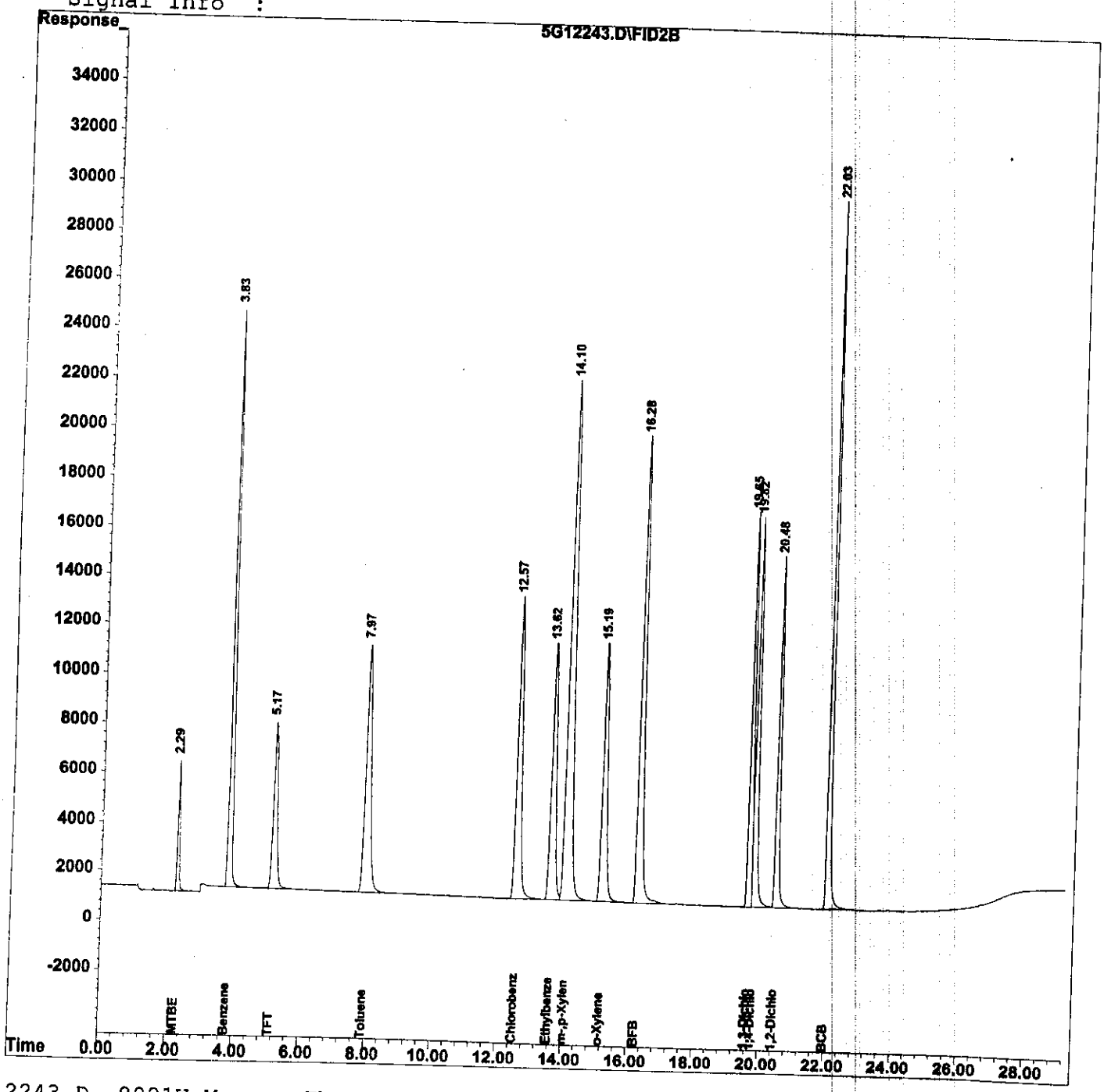
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G12243.D 8021W.M Thu Feb 21 07:53:32 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D
Acq On : 20 Feb 2002 14:36
Sample : WG113244-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-90-(28,39)
IntFile : autoint1.e
Quant Time: Feb 21 7:53 2002 Quant Results File: 8021W.RES

Vial: 12
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Thu Feb 21 07:37:12 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G12243.D 8021W.M Thu Feb 21 07:53:25 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D
Acq On : 20 Feb 2002 14:36
Sample : WG113244-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-90-(28,39)
IntFile : autoint1.e
Quant Time: Feb 21 7:53 2002 Quant Results File: 8021W.RES

Vial: 12
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Thu Feb 21 07:37:12 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 570396 | 33.7797 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 112.60% |
| 9) S BFB | 16.28 | 1550865 | 32.1371 ug/L |
| Spiked Amount 30.000 | | Recovery = | 107.12% |
| 13) S BCB | 22.04 | 1502441 | 32.0701 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 106.90% |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 209259 | 18.8832 ug/L |
| 2) TM Benzene | 3.83 | 1206355 | 20.6342 ug/L |
| 4) TM Toluene | 7.97 | 1112678 | 21.1851 ug/L |
| 5) TM Chlorobenzene | 12.57 | 1150106 | 20.7319 ug/L |
| 6) TM Ethylbenzene | 13.63 | 963955 | 21.4608 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 2263226 | 41.7771 ug/L |
| 8) TM o-Xylene | 15.19 | 960278 | 20.4735 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.66 | 953171 | 21.0061 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.82 | 1030076 | 21.1013 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.48 | 846365 | 21.4355 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14746.D
Acq On : 18 Sep 2002 9:49
Sample : WG125536-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

Vial: 2
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.216 E3 | 7.8 | 91 | -0.01 |
| 2 | TM | Benzene | 58.464 | 51.177 E3 | 12.5 | 85 | -0.03 |
| 3 | S | TFT | 16.886 | 17.313 E3 | -2.5 | 93 | -0.04 |
| 4 | TM | Toluene | 53.514 | 47.203 E3 | 11.8 | 86 | -0.06 |
| 5 | TM | Chlorobenzene | 55.475 | 50.536 E3 | 8.9 | 88 | -0.06 |
| 6 | TM | Ethylbenzene | 45.133 | 40.737 E3 | 9.7 | 86 | -0.05 |
| 7 | TM | m-,p-Xylene | 53.679 | 47.889 E3 | 10.8 | 84 | -0.05 |
| 8 | TM | o-Xylene | 46.904 | 41.877 E3 | 10.7 | 86 | -0.04 |
| 9 | S | BFB | 48.258 | 44.442 E3 | 7.9 | 89 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 40.699 E3 | 10.3 | 87 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 45.135 E3 | 7.5 | 89 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 37.133 E3 | 6.0 | 91 | -0.03 |
| 13 | S | BCB | 46.849 | 41.698 E3 | 11.0 | 87 | -0.03 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14746.D 8021W.M Wed Sep 18 10:50:16 2002

Acq On : 18 Sep 2002 9:49
Sample : WG125536-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

Vial: 2
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 18.437 | 7.8 | 91 | -0.01 |
| 2 | TM | Benzene | 20.000 | 17.507 | 12.5 | 85 | -0.03 |
| 3 | S | TFT | 30.000 | 30.758 | -2.5 | 93 | -0.04 |
| 4 | TM | Toluene | 20.000 | 18.140 | 9.3 | 86 | -0.06 |
| 5 | TM | Chlorobenzene | 20.000 | 18.219 | 8.9 | 88 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 18.341 | 8.3 | 86 | -0.05 |
| 7 | TM | m-,p-Xylene | 40.000 | 35.462 | 11.3 | 84 | -0.05 |
| 8 | TM | o-Xylene | 20.000 | 17.857 | 10.7 | 86 | -0.04 |
| 9 | S | BFB | 30.000 | 27.628 | 7.9 | 89 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 17.938 | 10.3 | 87 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 18.492 | 7.5 | 89 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 18.809 | 6.0 | 91 | -0.03 |
| 13 | S | BCB | 30.000 | 26.702 | 11.0 | 87 | -0.03 |

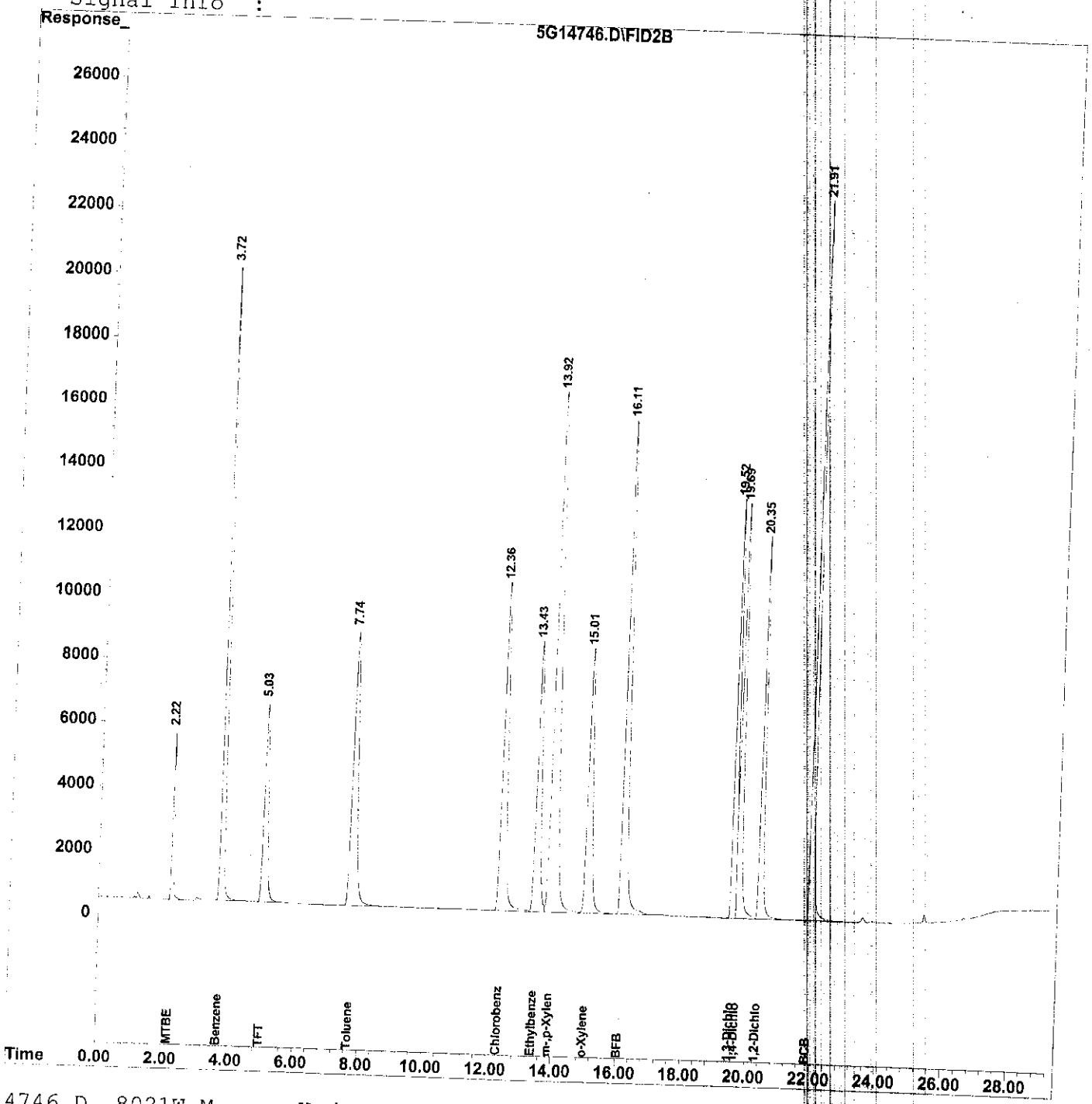
(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14746.D 8021W.M Wed Sep 18 10:50:14 2002

Acq On : 18 Sep 2002 9:49
Sample : WG125536-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e
Quant Time: Sep 18 10:18 2002 Quant Results File: 8021W.RES

Vial: 2
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:19:04 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14746.D 8021W.M Wed Sep 18 10:18:55 2002

Page 2

Data : C:\HPCHEM\2\DATA\091802\5G14746.D
Acq On : 18 Sep 2002 9:49
Sample : WG125536-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e
Quant Time: Sep 18 10:18 2002 Quant Results File: 8021W.RES

Vial: 2
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:19:04 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.03 | 519377 | 30.7583 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 102.53% |
| 9) S BFB | 16.11 | 1333252 | 27.6277 ug/L |
| Spiked Amount 30.000 | | Recovery = | 92.09% |
| 13) S BCB | 21.91 | 1250955 | 26.7020 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 89.01% |
| **Target Compounds** | | | |
| 1) TM MTBE | 2.22 | 204311 | 18.4366 ug/L |
| 2) TM Benzene | 3.73 | 1023543 | 17.5073 ug/L |
| 4) TM Toluene | 7.74 | 944061 | 18.1405 ug/L |
| 5) TM Chlorobenzene | 12.36 | 1010713 | 18.2192 ug/L |
| 6) TM Ethylbenzene | 13.43 | 814737 | 18.3413 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 1915554 | 35.4616 ug/L |
| 8) TM o-Xylene | 15.01 | 837544 | 17.8567 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 813971 | 17.9384 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 902695 | 18.4919 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 742660 | 18.8090 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14761.D
Acq On : 18 Sep 2002 19:39
Sample : WG125536-02 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.630 E3 | 4.1 | 95 | 0.00 |
| 2 | TM | Benzene | 58.464 | 53.910 E3 | 7.8 | 89 | -0.02 |
| 3 | S | TFT | 16.886 | 17.916 E3 | -6.1 | 96 | -0.03 |
| 4 | TM | Toluene | 53.514 | 49.409 E3 | 7.7 | 90 | -0.04 |
| 5 | TM | Chlorobenzene | 55.475 | 51.816 E3 | 6.6 | 90 | -0.04 |
| 6 | TM | Ethylbenzene | 45.133 | 42.512 E3 | 5.8 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 53.679 | 49.971 E3 | 6.9 | 88 | -0.02 |
| 8 | TM | o-Xylene | 46.904 | 43.321 E3 | 7.6 | 89 | -0.02 |
| 9 | S | BFB | 48.258 | 45.860 E3 | 5.0 | 91 | -0.02 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 41.365 E3 | 8.8 | 89 | -0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 45.572 E3 | 6.6 | 90 | -0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 37.117 E3 | 6.0 | 91 | -0.02 |
| 13 | S | BCB | 46.849 | 42.091 E3 | 10.2 | 88 | -0.03 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14761.D 8021W.M Thu Sep 19 08:53:40 2002

Data File : C:\HPCHEM\2\DATA\091802\5G14761.D
Acq On : 18 Sep 2002 19:39
Sample : WG125536-02 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

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

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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%

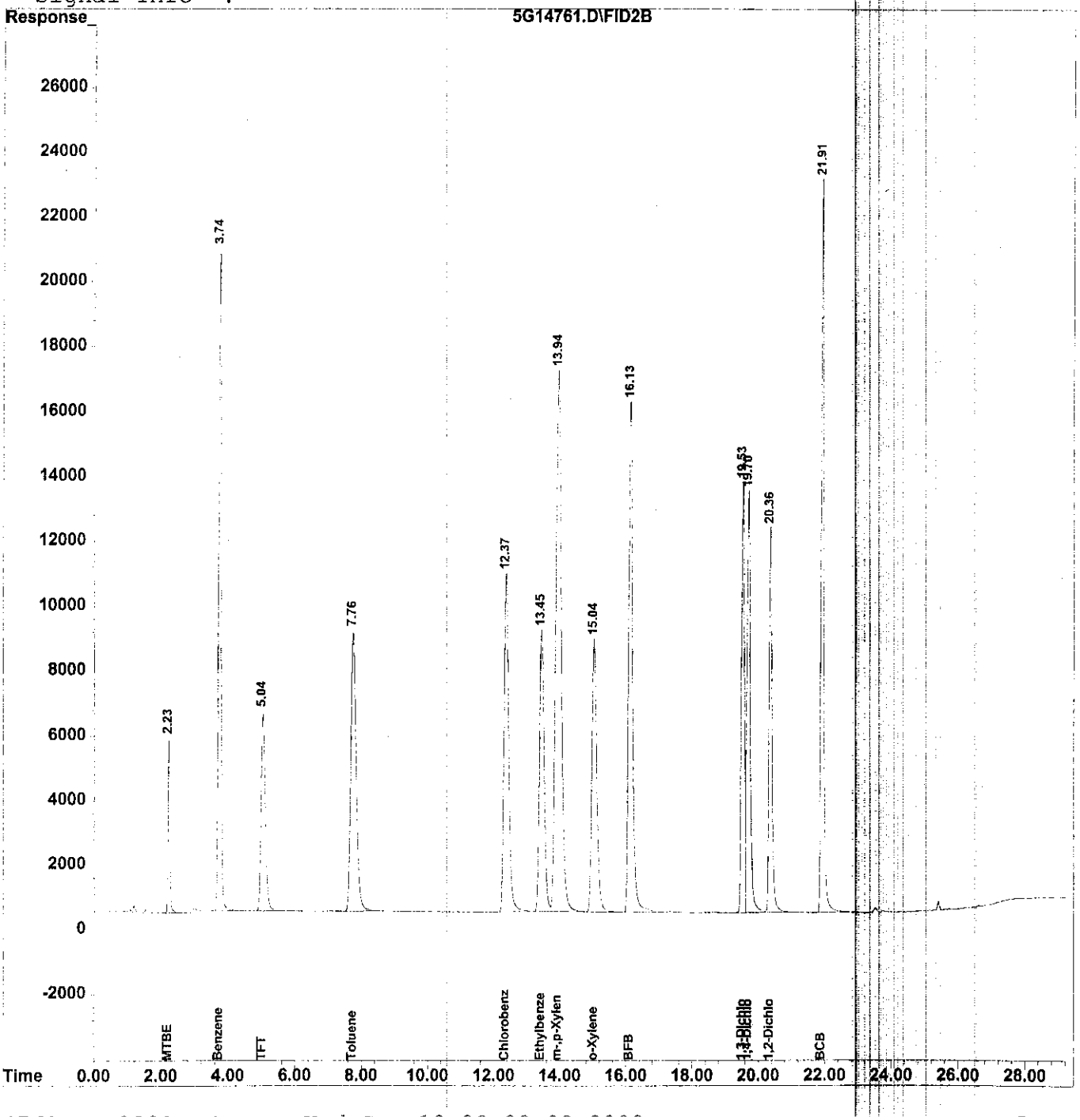
| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 19.186 | 4.1 | 95 | 0.00 |
| 2 | TM | Benzene | 20.000 | 18.442 | 7.8 | 89 | -0.02 |
| 3 | S | TFT | 30.000 | 31.830 | -6.1 | 96 | -0.03 |
| 4 | TM | Toluene | 20.000 | 18.466 | 7.7 | 90 | -0.04 |
| 5 | TM | Chlorobenzene | 20.000 | 18.681 | 6.6 | 90 | -0.04 |
| 6 | TM | Ethylbenzene | 20.000 | 18.838 | 5.8 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 40.000 | 37.237 | 6.9 | 88 | -0.02 |
| 8 | TM | o-Xylene | 20.000 | 18.472 | 7.6 | 89 | -0.02 |
| 9 | S | BFB | 30.000 | 28.509 | 5.0 | 91 | -0.02 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.232 | 8.8 | 89 | -0.02 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 18.671 | 6.6 | 90 | -0.02 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 18.801 | 6.0 | 91 | -0.02 |
| 13 | S | BCB | 30.000 | 26.953 | 10.2 | 88 | -0.03 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14761.D 8021W.M Thu Sep 19 08:53:42 2002

Data File : C:\HPCHEM\2\DATA\091802\5G14761.D Vial: 9
Acq On : 18 Sep 2002 19:39 Operator: CSH
Sample : WG125536-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 18 20:09 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\2\DATA\091802\5G14761.D                Vial: 9
Acq On    : 18 Sep 2002  19:39                            Operator: CSH
Sample    : WG125536-02 8021 STD 20PPB 5ML                Inst    : HP5
Misc      : 1,1 S-(98-29,99-16)                           Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 18 20:09 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 02/20/02
Last Update  : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

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

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 537469 | 31.8297 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 106.10% |
| 9) S BFB | 16.13 | 1375788 | 28.5091 ug/L |
| Spiked Amount 30.000 | | Recovery = | 95.03% |
| 13) S BCB | 21.92 | 1262716 | 26.9531 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 89.84% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 212610 | 19.1855 ug/L |
| 2) TM Benzene | 3.74 | 1078210 | 18.4423 ug/L |
| 4) TM Toluene | 7.76 | 988177 | 18.4657 ug/L |
| 5) TM Chlorobenzene | 12.37 | 1036329 | 18.6809 ug/L |
| 6) TM Ethylbenzene | 13.45 | 850230 | 18.8385 ug/L |
| 7) TM m-,p-Xylene | 13.94 | 1998829 | 37.2368 ug/L |
| 8) TM o-Xylene | 15.04 | 866418 | 18.4723 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 827292 | 18.2320 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 911445 | 18.6711 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 742340 | 18.8009 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14772.D  Vial: 20
Acq On : 19 Sep 2002 2:00  Operator: CSH
Sample : WG125536-03 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.682 E3 | 3.6 | 95 | -0.01 |
| 2 | TM | Benzene | 58.464 | 58.351 E3 | 0.2 | 97 | -0.03 |
| 3 | S | TFT | 16.886 | 17.570 E3 | -4.1 | 94 | -0.03 |
| 4 | TM | Toluene | 53.514 | 52.600 E3 | 1.7 | 96 | -0.05 |
| 5 | TM | Chlorobenzene | 55.475 | 53.738 E3 | 3.1 | 93 | -0.06 |
| 6 | TM | Ethylbenzene | 45.133 | 45.350 E3 | -0.5 | 96 | -0.06 |
| 7 | TM | m-,p-Xylene | 53.679 | 52.995 E3 | 1.3 | 93 | -0.06 |
| 8 | TM | o-Xylene | 46.904 | 46.263 E3 | 1.4 | 95 | -0.05 |
| 9 | S | BFB | 48.258 | 45.032 E3 | 6.7 | 90 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 44.032 E3 | 3.0 | 94 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 46.986 E3 | 3.7 | 93 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 38.970 E3 | 1.3 | 96 | -0.04 |
| 13 | S | BCB | 46.849 | 41.914 E3 | 10.5 | 87 | -0.04 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
5G14772.D 8021W.M  Thu Sep 19 08:53:57 2002

Data File : C:\HPCHEM\2\DATA\091802\5G14772.D Vial: 20
Acq On : 19 Sep 2002 2:00 Operator: CSH
Sample : WG125536-03 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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%

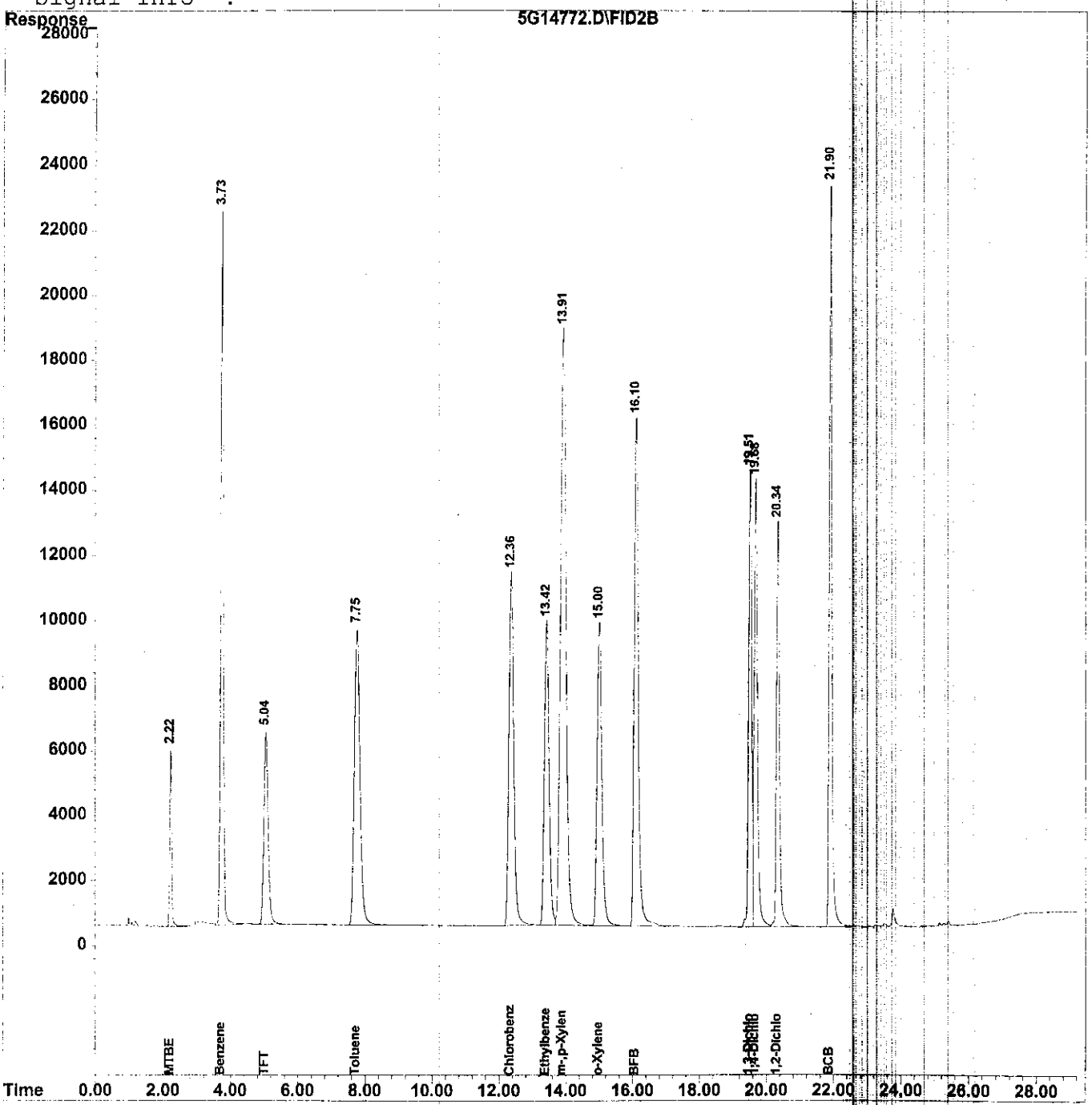
| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 19.278 | 3.6 | 95 | -0.01 |
| 2 | TM | Benzene | 20.000 | 19.962 | 0.2 | 97 | -0.03 |
| 3 | S | TFT | 30.000 | 31.216 | -4.1 | 94 | -0.03 |
| 4 | TM | Toluene | 20.000 | 19.658 | 1.7 | 96 | -0.05 |
| 5 | TM | Chlorobenzene | 20.000 | 19.374 | 3.1 | 93 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 20.096 | -0.5 | 96 | -0.06 |
| 7 | TM | m-,p-Xylene | 40.000 | 39.491 | 1.3 | 93 | -0.06 |
| 8 | TM | o-Xylene | 20.000 | 19.727 | 1.4 | 95 | -0.05 |
| 9 | S | BFB | 30.000 | 27.995 | 6.7 | 90 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.407 | 3.0 | 94 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.250 | 3.8 | 93 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.739 | 1.3 | 96 | -0.04 |
| 13 | S | BCB | 30.000 | 26.840 | 10.5 | 87 | -0.04 |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14772.D Vial: 20
Acq On : 19 Sep 2002 2:00 Operator: CSH
Sample : WG125536-03 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 2:29 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\091802\5G14772.D Vial: 20
Acq On : 19 Sep 2002 2:00 Operator: CSH
Sample : WG125536-03 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 2:29 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 527100 | 31.2157 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 104.05% | | | |
| 9) S BFB | 16.10 | 1350957 | 27.9946 ug/L |
| Spiked Amount 30.000 Recovery = 93.32% | | | |
| 13) S BCB | 21.90 | 1257421 | 26.8401 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 89.47% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 213631 | 19.2777 ug/L |
| 2) TM Benzene | 3.73 | 1167029 | 19.9615 ug/L |
| 4) TM Toluene | 7.75 | 1051994 | 19.6582 ug/L |
| 5) TM Chlorobenzene | 12.35 | 1074753 | 19.3736 ug/L |
| 6) TM Ethylbenzene | 13.42 | 906996 | 20.0962 ug/L |
| 7) TM m-,p-Xylene | 13.91 | 2119816 | 39.4907 ug/L |
| 8) TM o-Xylene | 15.00 | 925251 | 19.7267 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.51 | 880630 | 19.4074 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.68 | 939723 | 19.2504 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.34 | 779398 | 19.7394 ug/L |

Data File : C:\HPCHEM\2\DATA\091802\5G14775.D  Vial: 23
Acq On : 19 Sep 2002 3:44  Operator: CSH
Sample : WG125536-04 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.457 E3 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 58.464 | 57.482 E3 | 1.7 | 95 | -0.02 |
| 3 | S | TFT | 16.886 | 17.404 E3 | -3.1 | 93 | -0.03 |
| 4 | TM | Toluene | 53.514 | 52.288 E3 | 2.3 | 95 | -0.06 |
| 5 | TM | Chlorobenzene | 55.475 | 54.434 E3 | 1.9 | 94 | -0.06 |
| 6 | TM | Ethylbenzene | 45.133 | 45.828 E3 | -1.5 | 97 | -0.06 |
| 7 | TM | m-,p-Xylene | 53.679 | 53.533 E3 | 0.3 | 94 | -0.06 |
| 8 | TM | o-Xylene | 46.904 | 45.995 E3 | 1.9 | 94 | -0.05 |
| 9 | S | BFB | 48.258 | 44.993 E3 | 6.8 | 90 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 43.433 E3 | 4.3 | 93 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 47.415 E3 | 2.9 | 94 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 38.521 E3 | 2.4 | 95 | -0.04 |
| 13 | S | BCB | 46.849 | 41.585 E3 | 11.2 | 87 | -0.03 |

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

Data File : C:\HPCHEM\2\DATA\091802\5G14775.D Vial: 23
Acq On : 19 Sep 2002 3:44 Operator: CSH
Sample : WG125536-04 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multipl: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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%

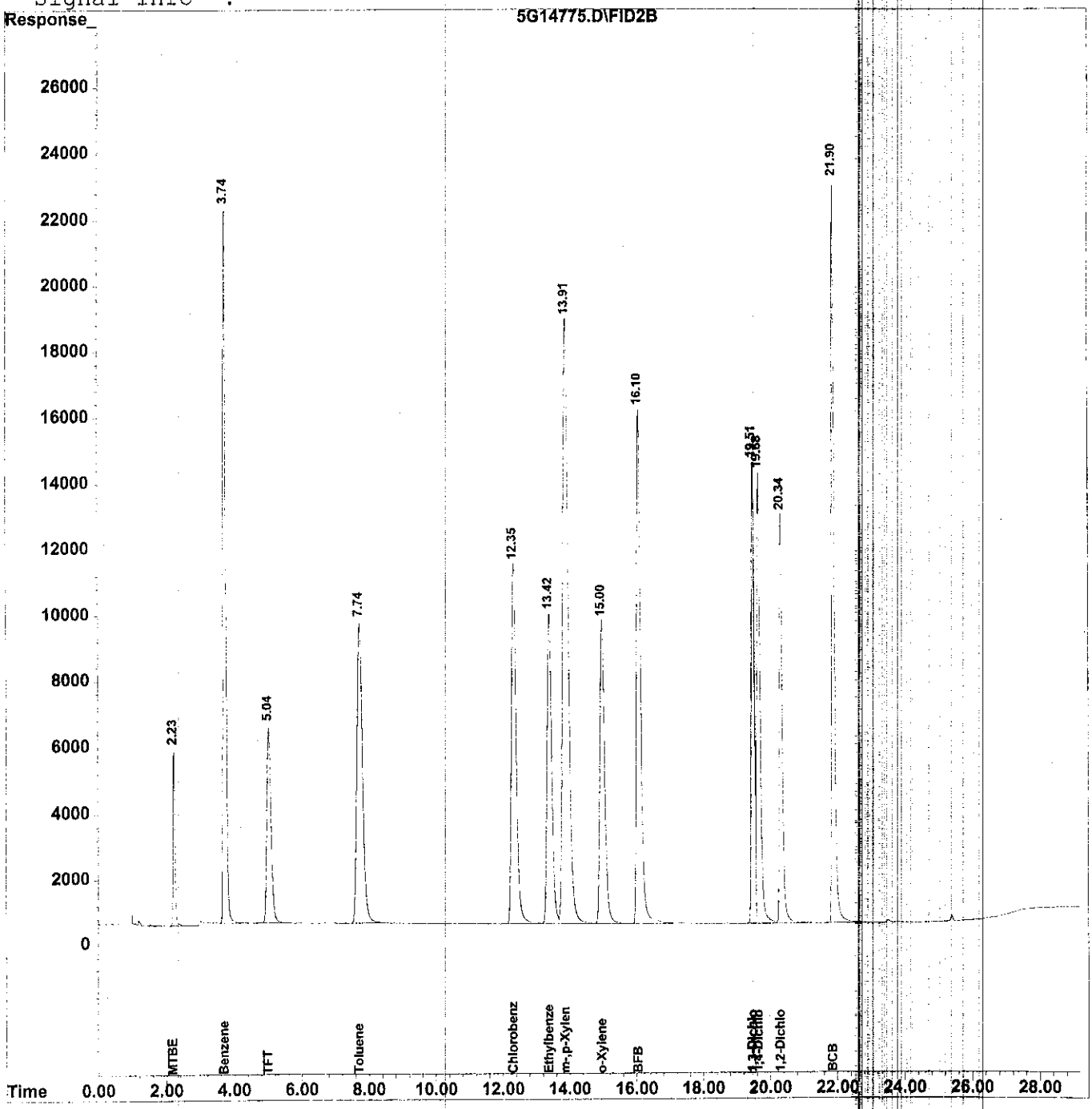
| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 18.873 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 19.664 | 1.7 | 95 | -0.02 |
| 3 | S | TFT | 30.000 | 30.921 | -3.1 | 93 | -0.03 |
| 4 | TM | Toluene | 20.000 | 19.542 | 2.3 | 95 | -0.06 |
| 5 | TM | Chlorobenzene | 20.000 | 19.625 | 1.9 | 94 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 20.308 | -1.5 | 97 | -0.06 |
| 7 | TM | m-,p-Xylene | 40.000 | 39.892 | 0.3 | 94 | -0.06 |
| 8 | TM | o-Xylene | 20.000 | 19.613 | 1.9 | 94 | -0.05 |
| 9 | S | BFB | 30.000 | 27.970 | 6.8 | 90 | -0.05 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.144 | 4.3 | 93 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.426 | 2.9 | 94 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.512 | 2.4 | 95 | -0.04 |
| 13 | S | BCB | 30.000 | 26.630 | 11.2 | 87 | -0.03 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14775.D 8021W.M Thu Sep 19 08:54:08 2002 Page 1

Data File : C:\HPCHEM\2\DATA\091802\5G14775.D Vial: 23
Acq On : 19 Sep 2002 3:44 Operator: CSH
Sample : WG125536-04 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 4:13 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091802\5G14775.D Vial: 23
Acq On : 19 Sep 2002 3:44 Operator: CSH
Sample : WG125536-04 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 4:13 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 522123 | 30.9209 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 103.07% | | | |
| 9) S BFB | 16.10 | 1349793 | 27.9704 ug/L |
| Spiked Amount 30.000 Recovery = 93.23% | | | |
| 13) S BCB | 21.91 | 1247561 | 26.6296 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 88.77% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 209143 | 18.8727 ug/L |
| 2) TM Benzene | 3.74 | 1149642 | 19.6641 ug/L |
| 4) TM Toluene | 7.74 | 1045761 | 19.5418 ug/L |
| 5) TM Chlorobenzene | 12.35 | 1088680 | 19.6246 ug/L |
| 6) TM Ethylbenzene | 13.42 | 916552 | 20.3079 ug/L |
| 7) TM m-,p-Xylene | 13.91 | 2141334 | 39.8915 ug/L |
| 8) TM o-Xylene | 15.00 | 919900 | 19.6126 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.51 | 868659 | 19.1436 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.68 | 948302 | 19.4261 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 770423 | 19.5121 ug/L |

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D Vial: 1
Acq On : 19 Sep 2002 8:54 Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.273 E3 | 7.3 | 91 | 0.00 |
| 2 | TM | Benzene | 58.464 | 53.197 E3 | 9.0 | 88 | -0.02 |
| 3 | S | TFT | 16.886 | 17.672 E3 | -4.7 | 98 | -0.02 |
| 4 | TM | Toluene | 53.514 | 49.367 E3 | 7.7 | 90 | -0.03 |
| 5 | TM | Chlorobenzene | 55.475 | 52.486 E3 | 5.4 | 91 | -0.03 |
| 6 | TM | Ethylbenzene | 45.133 | 42.336 E3 | 6.2 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 53.679 | 49.960 E3 | 6.9 | 88 | -0.03 |
| 8 | TM | o-Xylene | 46.904 | 43.847 E3 | 6.5 | 90 | -0.03 |
| 9 | S | BFB | 48.258 | 45.506 E3 | 5.7 | 91 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 42.688 E3 | 5.9 | 92 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 47.648 E3 | 2.4 | 94 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 38.587 E3 | 2.3 | 96 | -0.03 |
| 13 | S | BCB | 46.849 | 42.069 E3 | 10.2 | 88 | -0.02 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5G14776.D 8021W.M Thu Sep 19 12:11:07 2002 Page 1

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D Vial: 1
Acq On : 19 Sep 2002 8:54 Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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%

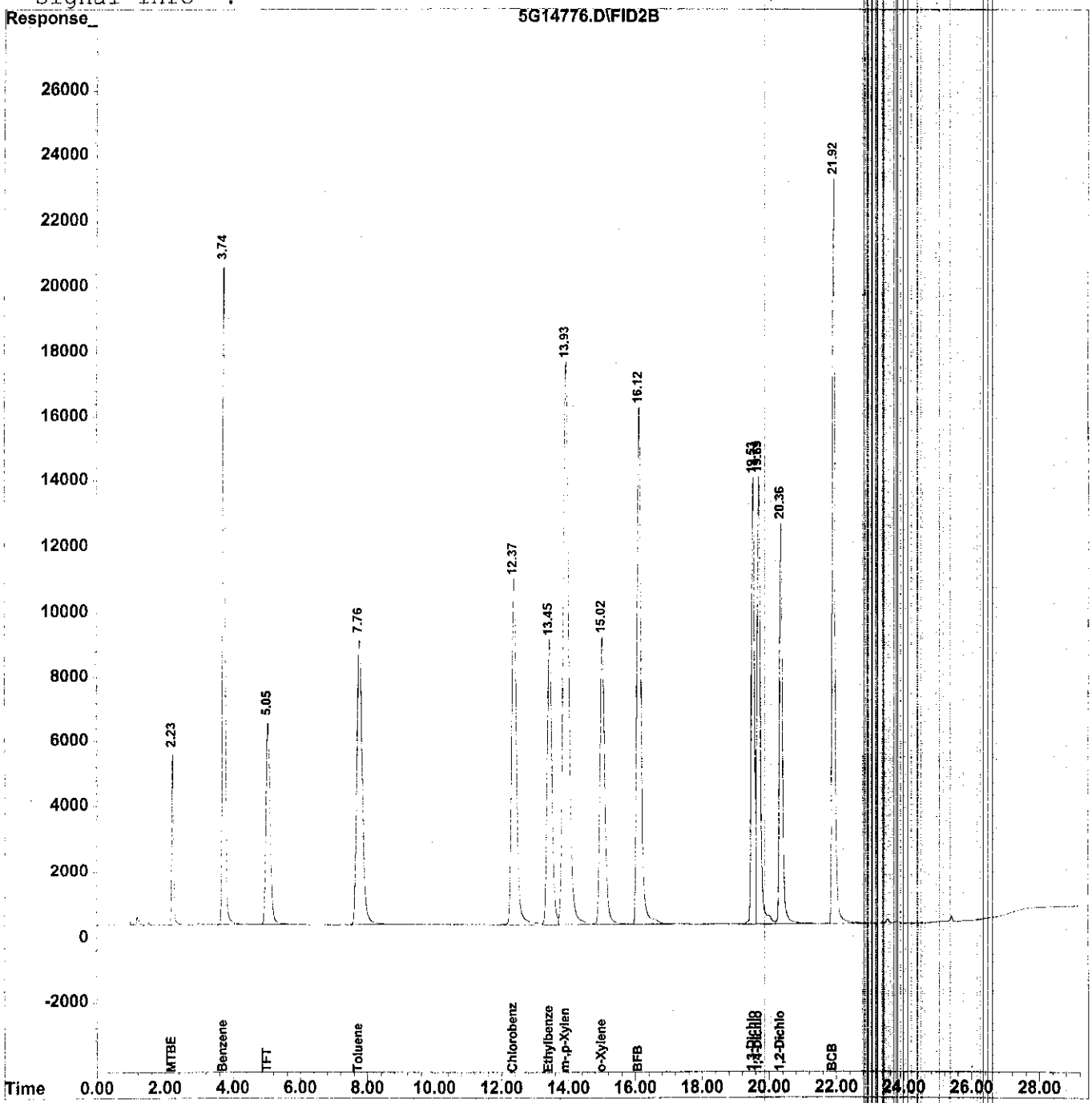
| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 18.541 | 7.3 | 91 | 0.00 |
| 2 | TM | Benzene | 20.000 | 18.198 | 9.0 | 88 | -0.02 |
| 3 | S | TFT | 30.000 | 31.396 | -4.7 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 18.450 | 7.8 | 90 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 18.922 | 5.4 | 91 | -0.03 |
| 6 | TM | Ethylbenzene | 20.000 | 18.761 | 6.2 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 40.000 | 37.229 | 6.9 | 88 | -0.03 |
| 8 | TM | o-Xylene | 20.000 | 18.697 | 6.5 | 90 | -0.03 |
| 9 | S | BFB | 30.000 | 28.289 | 5.7 | 91 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.815 | 5.9 | 92 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.521 | 2.4 | 94 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.546 | 2.3 | 95 | -0.03 |
| 13 | S | BCB | 30.000 | 26.939 | 10.2 | 88 | -0.02 |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D Vial: 1
Acq On : 19 Sep 2002 8:54 Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 9:23 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14776.D Vial: 1
Acq On : 19 Sep 2002 8:54 Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 9:23 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 530151 | 31.3963 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 104.65% | | | |
| 9) S BFB | 16.12 | 1365188 | 28.2895 ug/L |
| Spiked Amount 30.000 Recovery = 94.30% | | | |
| 13) S BCB | 21.92 | 1262078 | 26.9395 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 89.80% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 205466 | 18.5409 ug/L |
| 2) TM Benzene | 3.74 | 1063949 | 18.1984 ug/L |
| 4) TM Toluene | 7.76 | 987343 | 18.4501 ug/L |
| 5) TM Chlorobenzene | 12.38 | 1049724 | 18.9224 ug/L |
| 6) TM Ethylbenzene | 13.45 | 846722 | 18.7607 ug/L |
| 7) TM m-,p-Xylene | 13.93 | 1998404 | 37.2289 ug/L |
| 8) TM o-Xylene | 15.03 | 876939 | 18.6966 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 853760 | 18.8153 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 952951 | 19.5214 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 771747 | 19.5456 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D  Vial: 9
Acq On : 19 Sep 2002 15:56  Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.446 E3 | 5.7 | 93 | 0.00 |
| 2 | TM | Benzene | 58.464 | 59.474 E3 | -1.7 | 99 | -0.02 |
| 3 | S | TFT | 16.886 | 17.750 E3 | -5.1 | 95 | -0.02 |
| 4 | TM | Toluene | 53.514 | 53.414 E3 | 0.2 | 97 | -0.03 |
| 5 | TM | Chlorobenzene | 55.475 | 55.588 E3 | -0.2 | 96 | -0.04 |
| 6 | TM | Ethylbenzene | 45.133 | 46.607 E3 | -3.3 | 99 | -0.04 |
| 7 | TM | m-,p-Xylene | 53.679 | 54.485 E3 | -1.5 | 96 | -0.05 |
| 8 | TM | o-Xylene | 46.904 | 46.840 E3 | 0.1 | 96 | -0.05 |
| 9 | S | BFB | 48.258 | 45.119 E3 | 6.5 | 90 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 44.563 E3 | 1.8 | 96 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 48.904 E3 | -0.2 | 97 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 38.886 E3 | 1.5 | 95 | -0.04 |
| 13 | S | BCB | 46.849 | 41.255 E3 | 11.9 | 86 | -0.03 |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D  Vial: 9
Acq On : 19 Sep 2002 15:56  Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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%

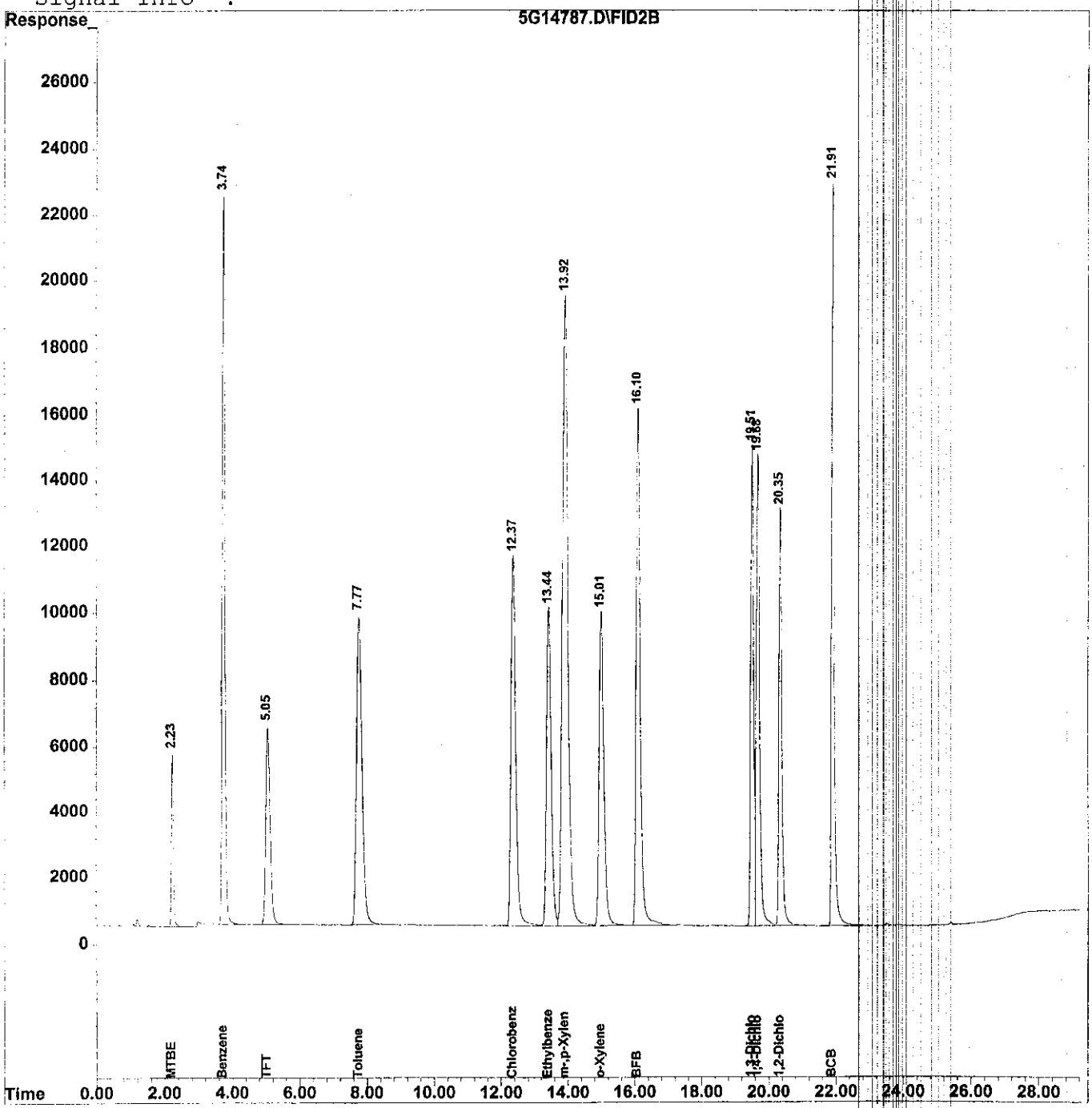
| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 18.852 | 5.7 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.346 | -1.7 | 99 | -0.02 |
| 3 | S | TFT | 30.000 | 31.535 | -5.1 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 19.963 | 0.2 | 97 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 20.040 | -0.2 | 96 | -0.04 |
| 6 | TM | Ethylbenzene | 20.000 | 20.653 | -3.3 | 99 | -0.04 |
| 7 | TM | m-,p-Xylene | 40.000 | 40.601 | -1.5 | 96 | -0.05 |
| 8 | TM | o-Xylene | 20.000 | 19.973 | 0.1 | 96 | -0.05 |
| 9 | S | BFB | 30.000 | 28.049 | 6.5 | 90 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.642 | 1.8 | 96 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.036 | -0.2 | 97 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.697 | 1.5 | 95 | -0.04 |
| 13 | S | BCB | 30.000 | 26.418 | 11.9 | 86 | -0.03 |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D Vial: 9
Acq On : 19 Sep 2002 15:56 Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 16:25 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14787.D Vial: 9
Acq On : 19 Sep 2002 15:56 Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 16:25 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 532500 | 31.5355 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 105.12% | | | |
| 9) S BFB | 16.11 | 1353578 | 28.0489 ug/L |
| Spiked Amount 30.000 Recovery = 93.50% | | | |
| 13) S BCB | 21.91 | 1237652 | 26.4181 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 88.06% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 208916 | 18.8522 ug/L |
| 2) TM Benzene | 3.74 | 1189487 | 20.3456 ug/L |
| 4) TM Toluene | 7.77 | 1068289 | 19.9627 ug/L |
| 5) TM Chlorobenzene | 12.37 | 1111751 | 20.0405 ug/L |
| 6) TM Ethylbenzene | 13.44 | 932138 | 20.6533 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2179394 | 40.6006 ug/L |
| 8) TM o-Xylene | 15.01 | 936810 | 19.9731 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 891256 | 19.6416 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.68 | 978086 | 20.0363 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 777711 | 19.6967 ug/L |

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

**Date of Analysis:** 18-Sep-02
**Filename:** 5G14746
**Sub Directory:** 091802
**Instrument:** HP5
**Matrix:** WATER

| Analyte Name | STD RT | From RT | To RT |
|---|---|---|---|
| methyl-tert-butyl-ether | 2.224 | **2.201** | **2.247** |
| benzene | 3.726 | **3.696** | **3.756** |
| 1,1,1-trifluorotoluene (SS) | 5.032 | **4.988** | **5.076** |
| toluene | 7.739 | **7.671** | **7.807** |
| chlorobenzene | 12.357 | **12.280** | **12.434** |
| ethylbenzene | 13.427 | **13.341** | **13.513** |
| m+p-xylene | 13.919 | **13.816** | **14.022** |
| o-xylene | 15.014 | **14.911** | **15.117** |
| bromofluorobenzene (SS) | 16.108 | **16.022** | **16.194** |
| 1,3-dichlorobenzene | 19.524 | **19.459** | **19.589** |
| 1,4-dichlorobenzene | 19.692 | **19.628** | **19.756** |
| 1,2-dichlorobenzene | 20.354 | **20.297** | **20.411** |
| bromochlorobenzene (SS) | 21.913 | **21.860** | **21.966** |

**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** |

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

**Date of Analysis:** 19-Sep-02
**Filename:** 5G14776
**Sub Directory:** 091902
**Instrument:** HP5
**Matrix:** WATER

| Analyte Name | STD RT | From RT | To RT |
|---|---|---|---|
| methyl-tert-butyl-ether | 2.231 | **2.208** | **2.254** |
| benzene | 3.740 | **3.710** | **3.770** |
| 1,1,1-trifluorotoluene (SS) | 5.048 | **5.004** | **5.092** |
| toluene | 7.765 | **7.697** | **7.833** |
| chlorobenzene | 12.378 | **12.301** | **12.455** |
| ethylbenzene | 13.445 | **13.359** | **13.531** |
| m+p-xylene | 13.939 | **13.836** | **14.042** |
| o-xylene | 15.026 | **14.923** | **15.129** |
| bromofluorobenzene (SS) | 16.119 | **16.033** | **16.205** |
| 1,3-dichlorobenzene | 19.528 | **19.463** | **19.593** |
| 1,4-dichlorobenzene | 19.696 | **19.632** | **19.760** |
| 1,2-dichlorobenzene | 20.358 | **20.301** | **20.415** |
| bromochlorobenzene (SS) | 21.918 | **21.865** | **21.971** |

| | | | |
|---|---|---|---|
| **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** |

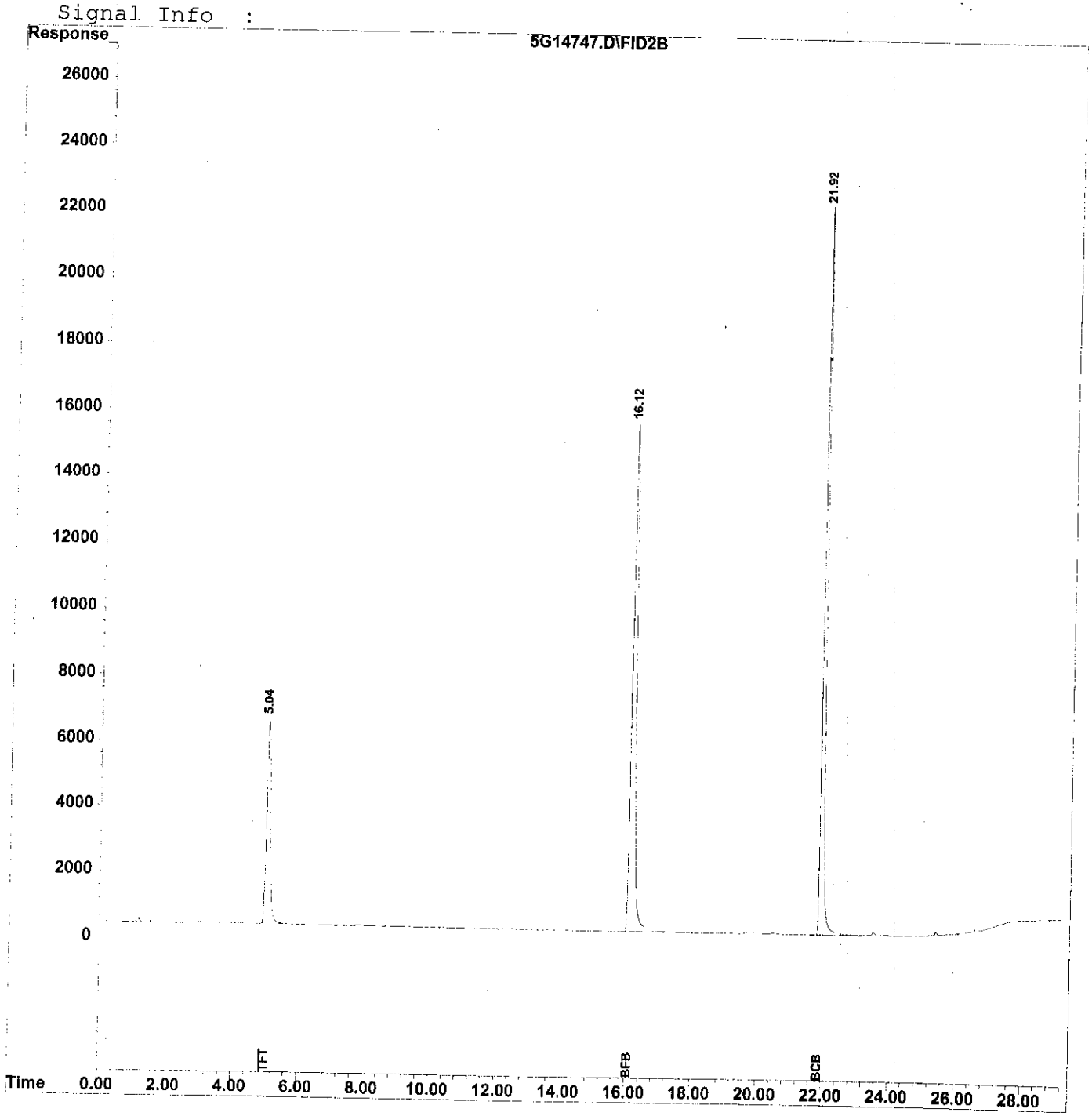
# 2.1.3.4 Raw Data

Data File : C:\HPCHEM\2\DATA\091802\5G14747.D
Acq On : 18 Sep 2002 10:53
Sample : WG125537-01 WATER BLANK 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 18 11:22 2002 Quant Results File: 8021W.RES

Vial: 3
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data : C:\HPCHEM\2\DATA\091802\5G14747.D
Acq On : 18 Sep 2002 10:53
Sample : WG125537-01 WATER BLANK 5ML
Misc : 1,1 S-99-16
IntFile : autoint1.e
Quant Time: Sep 18 11:22 2002 Quant Results File: 8021W.RES

Vial: 3
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

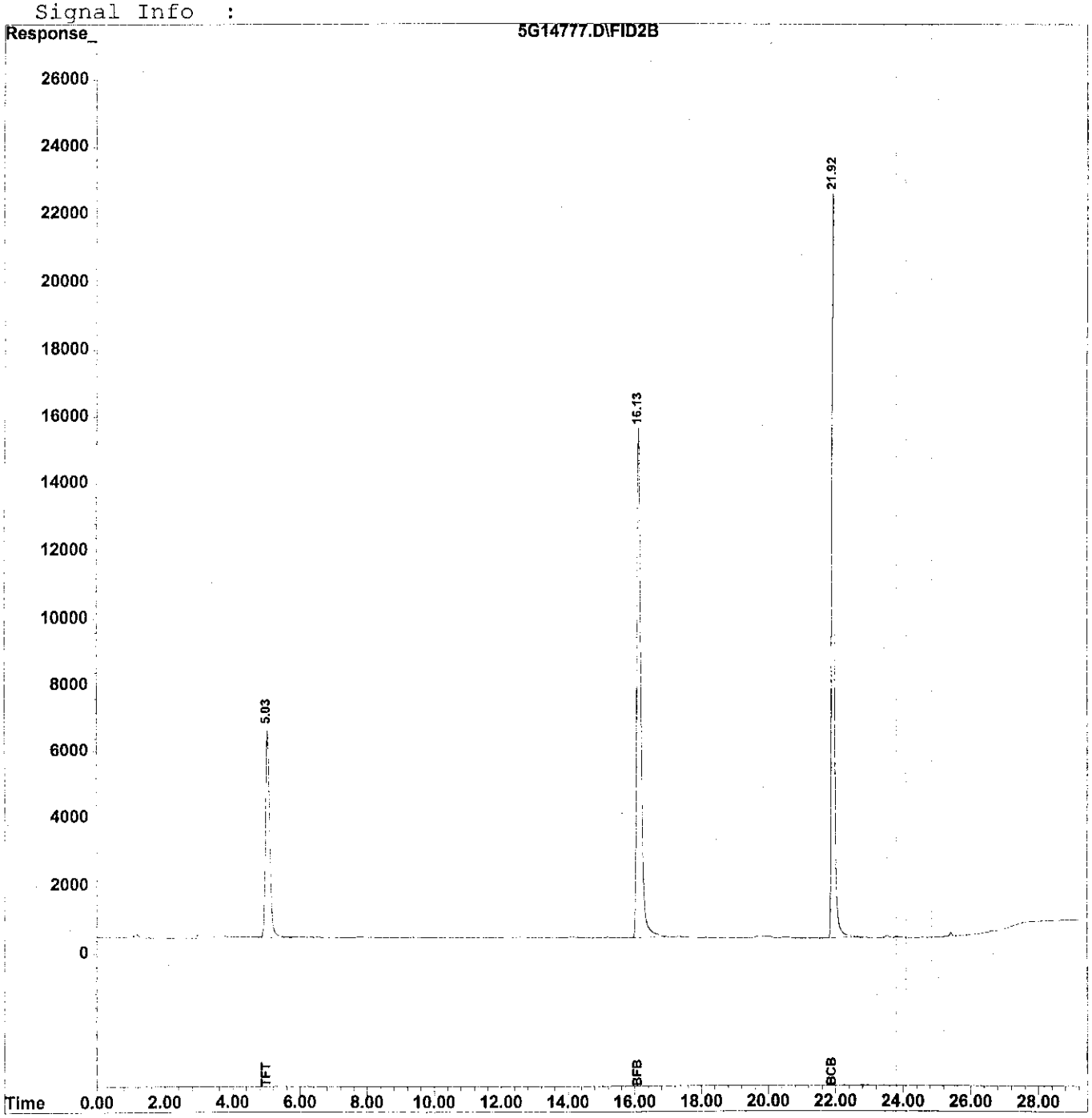
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 3) S TFT | 5.04 | 522491 | 30.9427 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 103.14% |
| 9) S BFB | 16.12 | 1353369 | 28.0445 ug/L |
| Spiked Amount 30.000 | | Recovery = | 93.48% |
| 13) S BCB | 21.92 | 1247487 | 26.6280 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 88.76% |
| **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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.67 | 4445 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.67 | 4445 | <MDL ug/L |
| 12) 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\091902\5G14777.D  Vial: 2
Acq On : 19 Sep 2002 9:44  Operator: CSH
Sample : WG125606-01 WATER BLANK 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 10:14 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14777.D Vial: 2
Acq On : 19 Sep 2002 9:44 Operator: CSH
Sample : WG125606-01 WATER BLANK 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 10:14 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 523781 | 31.0191 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 103.40% | | | |
| 9) S BFB | 16.13 | 1327027 | 27.4987 ug/L |
| Spiked Amount 30.000 Recovery = 91.66% | | | |
| 13) S BCB | 21.92 | 1246942 | 26.6164 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 88.72% | | | |
| 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.67 | 994 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.67 | 994 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |

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

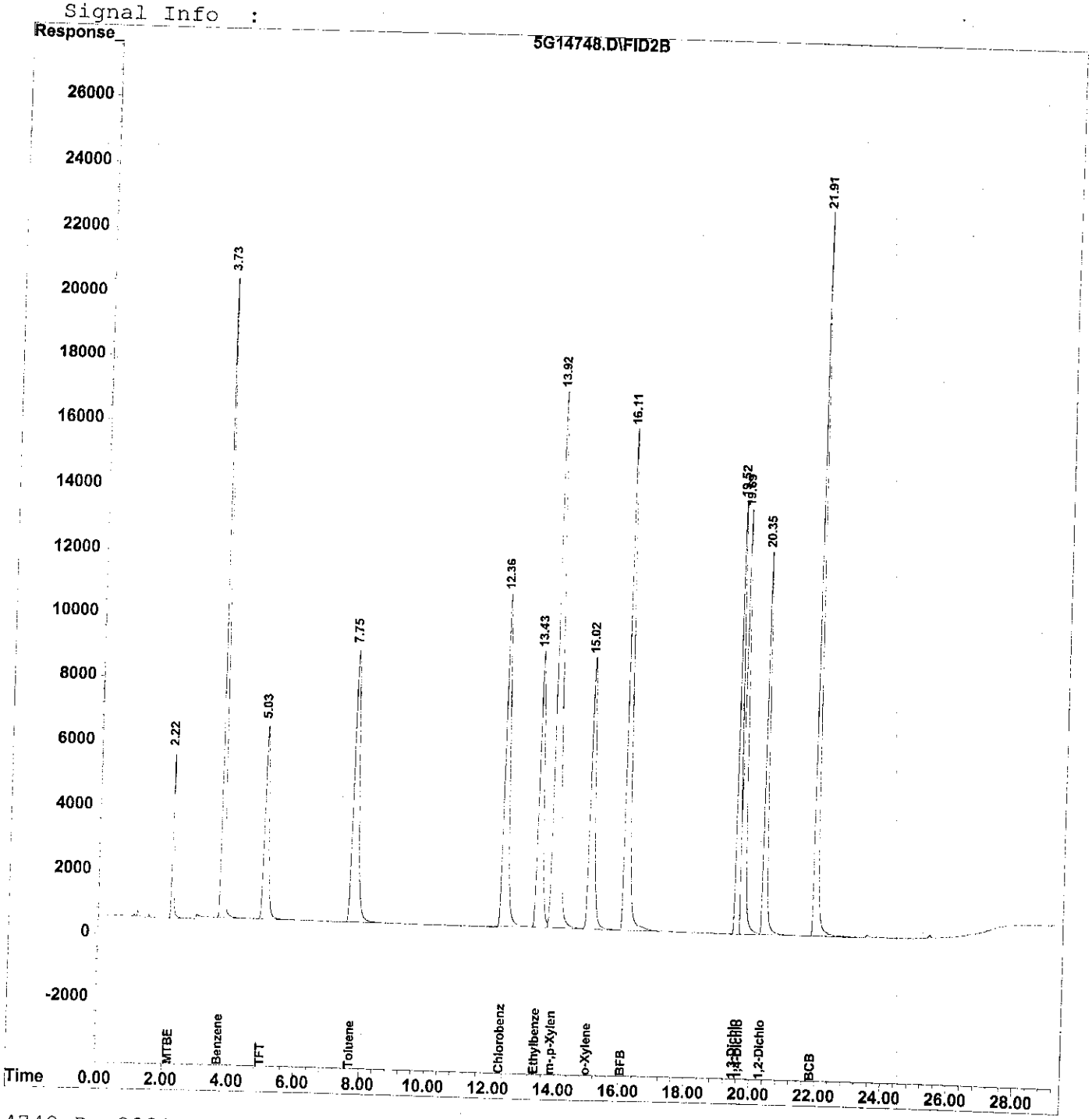
HPCHEM\2\DATA\091802\5G14748.D

Acq On : 18 Sep 2002 11:27
Sample : WG125537-02 WATER LCS 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e
Quant Time: Sep 18 11:57 2002 Quant Results File: 8021W.RES

Vial: 4
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :




5G14748.D 8021W.M Wed Sep 18 11:57:05 2002

Data File : C:\HPCHEM\2\DATA\091802\5G14748.D
Acq On : 18 Sep 2002 11:27
Sample : WG125537-02 WATER LCS 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e
Quant Time: Sep 18 11:57 2002 Quant Results File: 8021W.RES

Vial: 4
Operator: CSH
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

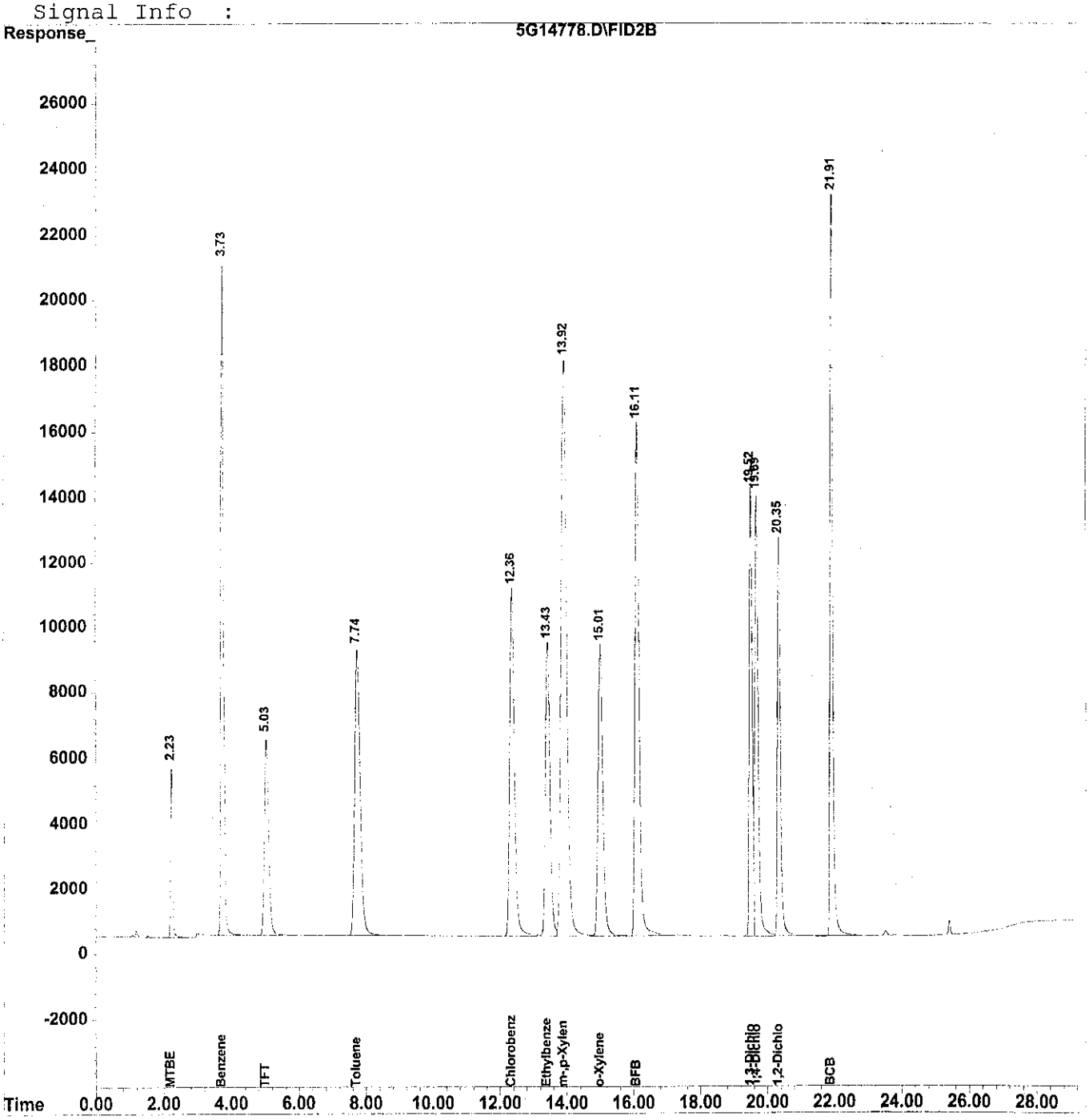
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 531654 | 31.4853 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 104.95% |
| 9) S BFB | 16.11 | 1352429 | 28.0251 ug/L |
| Spiked Amount 30.000 | | Recovery = | 93.42% |
| 13) S BCB | 21.92 | 1263980 | 26.9801 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 89.93% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 204392 | 18.4439 ug/L |
| 2) TM Benzene | 3.73 | 1061678 | 18.1595 ug/L |
| 4) TM Toluene | 7.74 | 972700 | 18.1765 ug/L |
| 5) TM Chlorobenzene | 12.36 | 1020473 | 18.3951 ug/L |
| 6) TM Ethylbenzene | 13.43 | 833154 | 18.4601 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 1959560 | 36.5052 ug/L |
| 8) TM o-Xylene | 15.02 | 853441 | 18.1957 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 837674 | 18.4608 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 924970 | 18.9482 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 751301 | 19.0278 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14778.D  Vial: 3
Acq On : 19 Sep 2002 10:19  Operator: CSH
Sample : WG125606-02 WATER LCS 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 10:48 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\2\DATA\091902\5G14778.D            Vial: 3
Acq On    : 19 Sep 2002  10:19                       Operator: CSH
Sample    : WG125606-02 WATER LCS 20PPB 5ML          Inst    : HP5
Misc      : 1,1 S-(98-29,99-16)                      Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 19 10:48 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 02/20/02
Last Update  : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

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

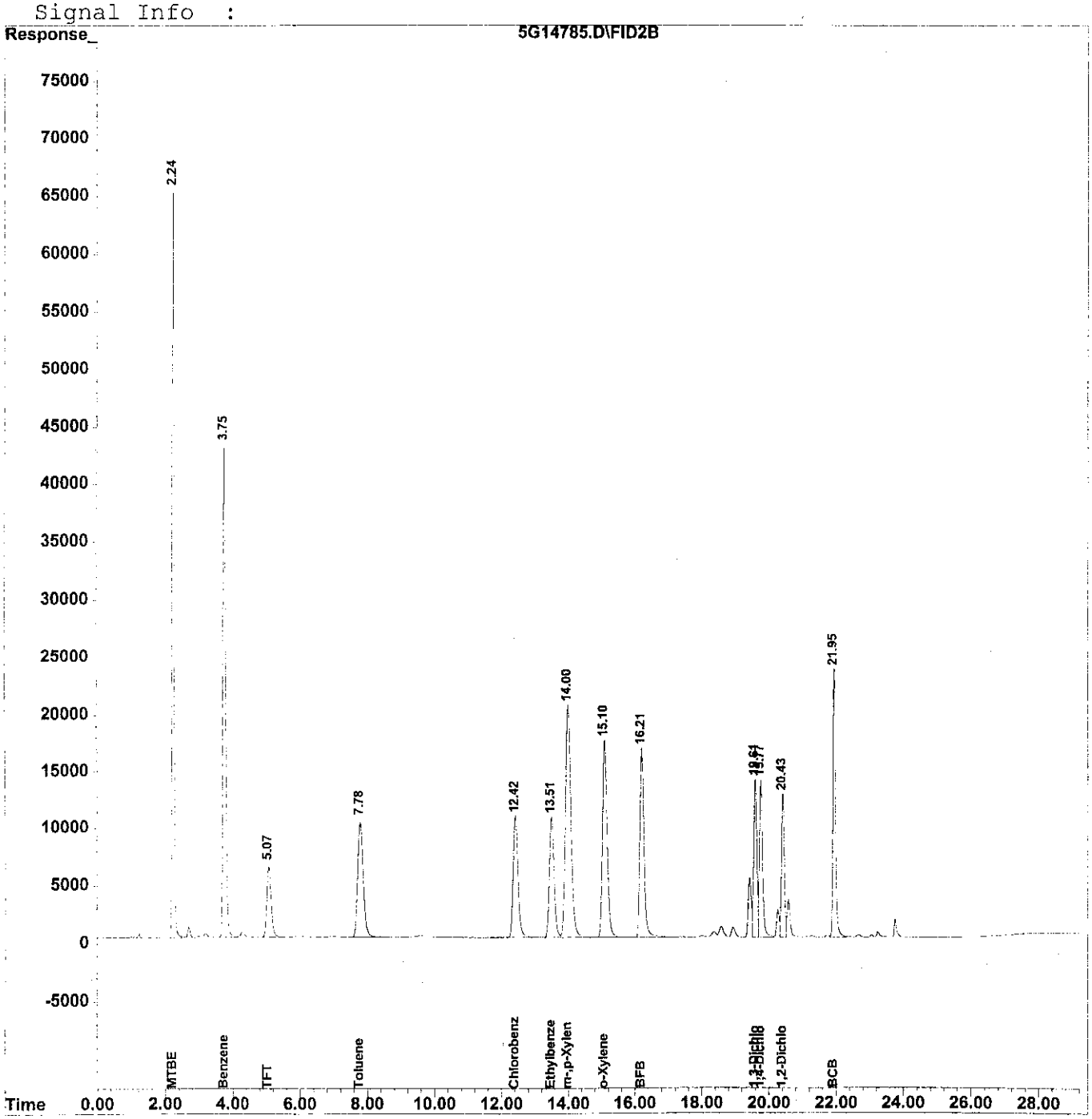
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 525794 | 31.1383 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 103.79% |
| 9) S BFB | 16.11 | 1357954 | 28.1396 ug/L |
| Spiked Amount 30.000 | | Recovery = | 93.80% |
| 13) S BCB | 21.91 | 1260491 | 26.9056 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 89.69% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 206528 | 18.6367 ug/L |
| 2) TM Benzene | 3.73 | 1096926 | 18.7624 ug/L |
| 4) TM Toluene | 7.74 | 1001950 | 18.7231 ug/L |
| 5) TM Chlorobenzene | 12.36 | 1061439 | 19.1336 ug/L |
| 6) TM Ethylbenzene | 13.43 | 872043 | 19.3218 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2045721 | 38.1103 ug/L |
| 8) TM o-Xylene | 15.01 | 885572 | 18.8807 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 852595 | 18.7896 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 942760 | 19.3126 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 763806 | 19.3445 ug/L |

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

```
Data File : C:\HPCHEM\2\DATA\091902\5G14785.D            Vial: 7
Acq On    : 19 Sep 2002  14:46                        Operator: CSH
Sample    : WG125606-04 L0209310-10 MS B 5ML 20X      Inst    : HP5
Misc      : 1,20 S-(98-29,99-16)                      Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 19 15:16 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 02/20/02
Last Update  : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

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



Data File : C:\HPCHEM\2\DATA\091902\5G14785.D Vial: 7
Acq On : 19 Sep 2002 14:46 Operator: CSH
Sample : WG125606-04 L0209310-10 MS B 5ML 20X Inst : HP5
Misc : 1,20 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 15:16 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

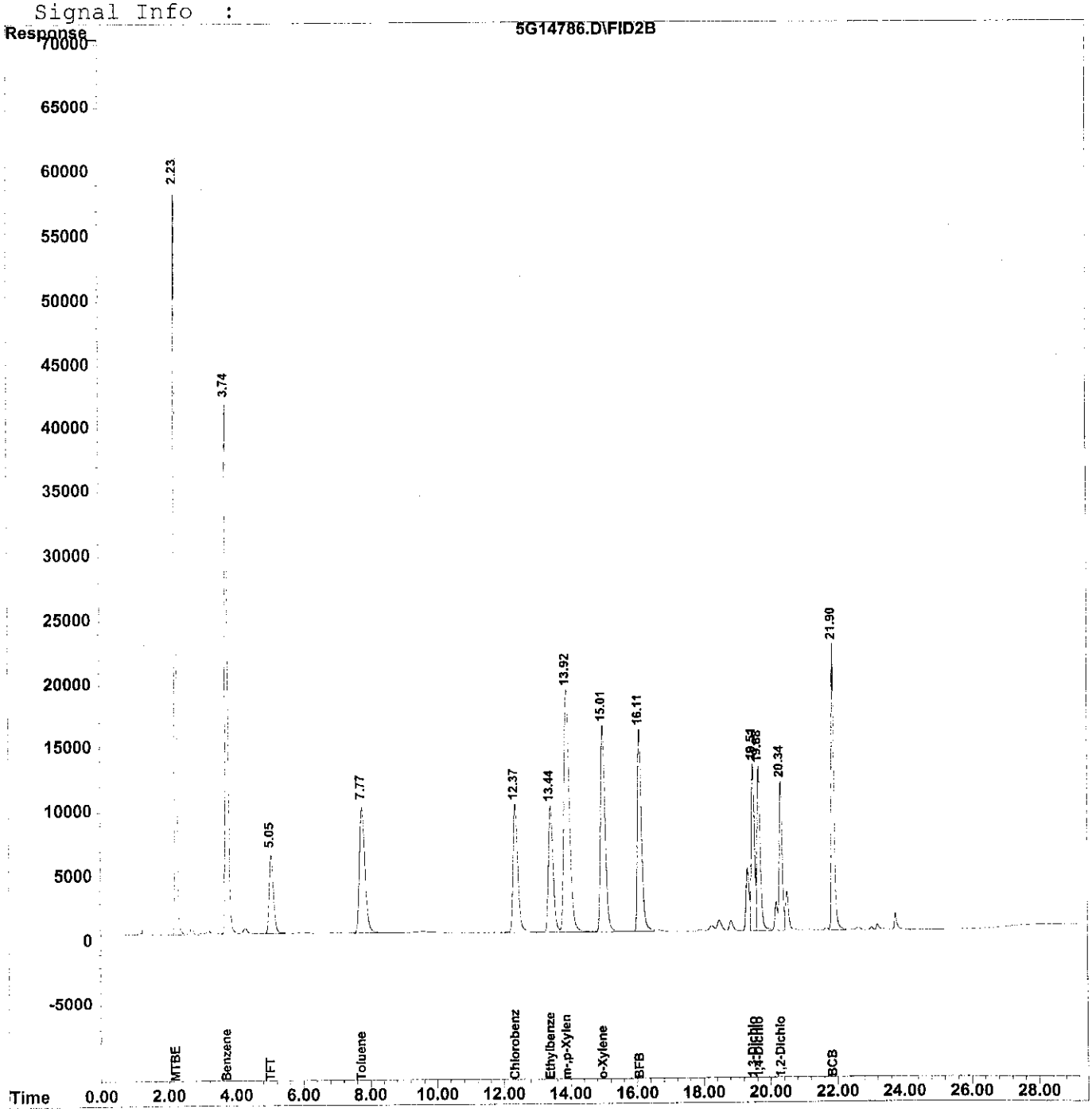
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.07 | 541179 | 32.0495 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 106.83% | | | |
| 9) S BFB | 16.21 | 1431634 | 29.6664 ug/L |
| Spiked Amount 30.000 Recovery = 98.89% | | | |
| 13) S BCB | 21.95 | 1262329 | 26.9448 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 89.82% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.24 | 2505704 | 226.1101 ug/L |
| 2) TM Benzene | 3.75 | 2316704 | 39.6262 ug/L |
| 4) TM Toluene | 7.78 | 1151863 | 21.5244 ug/L |
| 5) TM Chlorobenzene | 12.42 | 1070622 | 19.2991 ug/L |
| 6) TM Ethylbenzene | 13.51 | 1023021 | 22.6670 ug/L |
| 7) TM m-,p-Xylene | 14.00 | 2333795 | 43.4769 ug/L |
| 8) TM o-Xylene | 15.10 | 1677162 | 35.7577 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.61 | 872634 | 19.2312 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.78 | 908262 | 18.6059 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.43 | 733332 | 18.5727 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14786.D  Vial: 8
Acq On : 19 Sep 2002 15:21  Operator: CSH
Sample : WG125606-05 L0209310-10 MSD B 5ML 20X  Inst : HP5
Misc : 1,20 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 15:50 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14786.D Vial: 8
Acq On : 19 Sep 2002 15:21 Operator: CSH
Sample : WG125606-05 L0209310-10 MSD B 5ML 20X Inst : HP5
Misc : 1,20 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 15:50 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 540614 | 32.0160 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 106.72% | | | |
| 9) S BFB | 16.11 | 1339892 | 27.7653 ug/L |
| Spiked Amount 30.000 Recovery = 92.55% | | | |
| 13) S BCB | 21.90 | 1236589 | 26.3954 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 87.98% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 2241442 | 202.2637 ug/L |
| 2) TM Benzene | 3.74 | 2246391 | 38.4235 ug/L |
| 4) TM Toluene | 7.77 | 1127318 | 21.0658 ug/L |
| 5) TM Chlorobenzene | 12.37 | 997563 | 17.9821 ug/L |
| 6) TM Ethylbenzene | 13.44 | 951532 | 21.0830 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2174859 | 40.5161 ug/L |
| 8) TM o-Xylene | 15.01 | 1570456 | 33.4827 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.51 | 838399 | 18.4767 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.68 | 871019 | 17.8430 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.34 | 700373 | 17.7380 ug/L |

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

c:\hpchem\2\data\022002

WG113234
⊥ 278

ANALYST: CBN

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g12231.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12::0 |
| 2 | 2 | 5g12232.d | 1. | WG113234-01 8021 STD 20PPB 5ML ⊥ | 1,1 S-90-(28,15) | 20 Feb 102 12::5 |
| 3 | 2 | 5g12233.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12::4 |
| 4 | 3 | 5g12234.d | 1. | WG113244-01 STD 1 1PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 12::2 |
| 5 | 4 | 5g12235.d | 1. | WG113244-02 STD 2 10PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 12::5 |
| 6 | 5 | 5g12236.d | 1. | WG113244-03 STD 3 20PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::3 |
| 7 | 6 | 5g12237.d | 1. | WG113244-04 STD 4 50PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::0 |
| 8 | 7 | 5g12238.d | 1. | WG113244-05 STD 5 100PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::4 |
| 9 | 8 | 5g12239.d | 1. | WG113244-06 STD 6 200PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::1 |
| 10 | 9 | 5g12240.d | 1. | WG113244-07 STD 7 300PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::5 |
| 11 | 10 | 5g12241.d | 1. | RINSE ✓ | 1,1 S-90-39 | 20 Feb 102 12::2 |
| 12 | 11 | 5g12242.d | 1. | RINSE ✓ | 1,1 S-90-39 | 20 Feb 102 12::0 |
| 13 | 12 | 5g12243.d | 1. | WG113244-08 ALT SOURCE 20PPB 5ML ✓ | 1,1 S-90-(28,39) | 20 Feb 102 12::3 |
| 14 | 1 | 5g12244.d | 1. | WG113278-01 STD 1 90PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::4 |
| 15 | 2 | 5g12245.d | 1. | WG113278-02 STD 2 360PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::1 |
| 16 | 3 | 5g12246.d | 1. | WG113278-03 STD 3 900PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::5 |
| 17 | 4 | 5g12247.d | 1. | WG113278-04 STD 4 1800PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::2 |
| 18 | 5 | 5g12248.d | 1. | WG113278-05 STD 5 3600PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::0 |
| 19 | 6 | 5g12249.d | 1. | WG113278-06 STD 6 7200PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::3 |
| 20 | 7 | 5g12250.d | 1. | RINSE ✓ | 1,1 S-90-42 | 20 Feb 102 12::1 |
| 21 | 8 | 5g12251.d | 1. | RINSE ✓ | 1,1 S-90-42 | 20 Feb 102 12::4 |
| 22 | 9 | 5g12252.d | 1. | WG113278-07 ALT SOURCE 900PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::1 |

WG 125576

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14745.d | 1. | WG125536-01 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 18 Sep 102 12::0 |
| 2 | 2 | 5g14746.d | 1. | WG125536-01 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 12::4 |
| 3 | 3 | 5g14747.d | 1. | WG125537-01 WATER BLANK 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 13::5 |
| 4 | 4 | 5g14748.d | 1. | WG125537-02 WATER LCS 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 13::2 |
| 5 | 5 | 5g14749.d | 1. | L0209284-01 A 5ML 00 pH=5 ✓ | 17,5 S-99-16 TCLP EXT 09/17/02 @1430 | 18 Sep 102 13::1 |
| 6 | 6 | 5g14750.d | 1. | WG125537-03 L0209284-02 A 5ML 00 pH=5 ✓ | 17,5 S-99-16 TCLP EXT 09/17/02 @1430 | 18 Sep 102 13::4 |
| 7 | 7 | 5g14751.d | 1. | WG125537-04 L0209284-02 MS A 5ML 00 pH= ✓ | 17,5 S-(98-29,99-16) TCLP EXT 09/17/02 @1430 | 18 Sep 102 12::2 |
| 8 | 8 | 5g14752.d | 1. | WG125537-05 L0209284-02 MSD A 5ML 00 pH ✓ | 17,5 S-(98-29,99-16) TCLP EXT 09/17/02 @1430 | 18 Sep 102 12::5 |
| 9 | 9 | 5g14753.d | 1. | L0209311-01 A 5ML ✓ | 1,1 S-99-16 pH<2 | 18 Sep 102 12::3 |
| 10 | 6 | 5g14754.d | 1. | L0209313-01 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 12::0 |
| 11 | 7 | 5g14755.d | 1. | L0209315-01 A 5ML 20X RR@200X | 1,20 S-99-16 | 18 Sep 102 12::3 |
| 12 | 8 | 5g14756.d | 1. | RINSE 5ML c/o | 1,20 S-99-16 | 18 Sep 102 12::2 |
| 13 | 9 | 5g14757.d | 1. | RINSE 5ML ✓ | 1,20 S-99-16 | 18 Sep 102 12::0 |
| 14 | 10 | 5g14758.d | 1. | L0209315-02 A 5ML 20X RR@200 X | 1,20 S-99-16 | 18 Sep 102 12::4 |
| 15 | 7 | 5g14759.d | 1. | RINSE 5ML c/o | 1,20 S-99-16 | 18 Sep 102 12::3 |
| 16 | 8 | 5g14760.d | 1. | RINSE 5ML ✓ | 1,20 S-99-16 | 18 Sep 102 12::0 |
| 17 | 9 | 5g14761.d | 1. | WG125536-02 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 12::3 |
| 18 | 10 | 5g14762.d | 1. | L0209310-01 A 5ML ✓ | 1,1 S-99-16 pH<2 | 18 Sep 102 12::1 |
| 19 | 11 | 5g14763.d | 1. | L0209310-02 A 5ML 20X ✓ | 1,20 S-99-16 | 18 Sep 102 12::4 |
| 20 | 12 | 5g14764.d | 1. | WG125576-03 L0209310-03 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 12::2 |
| 21 | 13 | 5g14765.d | 1. | WG125576-04 L0209310-04 MS A 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 12::5 |
| 22 | 14 | 5g14766.d | 1. | WG125576-05 L0209310-05 MSD A 5ML ✓ | 1,1 S-(98-29,99-16) | 18 Sep 102 13::3 |
| 23 | 15 | 5g14767.d | 1. | L0209310-06 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 13::0 |
| 24 | 16 | 5g14768.d | 1. | L0209310-07 A 5ML ✓ | 1,1 S-99-16 | 18 Sep 102 13::4 |
| 25 | 17 | 5g14769.d | 1. | L0209310-08 A 5ML ✓ | 1,1 S-99-16 | 19 Sep 102 13::1 |
| 26 | 18 | 5g14770.d | 1. | L0209310-09 A 5ML ✓ | 1,1 S-99-16 | 19 Sep 102 13::5 |
| 27 | 19 | 5g14771.d | 1. | L0209310-10 A 5ML RR@20X | 1,1 S-99-16 | 19 Sep 102 12::2 |
| 28 | 20 | 5g14772.d | 1. | WG125536-03 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 19 Sep 102 12::0 |
| 29 | 21 | 5g14773.d | 1. | L0209310-11 A 5ML ✓ | 1,1 S-99-16 pH<2 | 19 Sep 102 12::3 |
| 30 | 22 | 5g14774.d | 1. | L0209310-12 A 5ML ✓ | 1,1 S-99-16 | 19 Sep 102 12::0 |
| 31 | 23 | 5g14775.d | 1. | WG125536-04 8021 STD 20PPB 5ML ✓ | 1,1 S-(98-29,99-16) | 19 Sep 102 12::4 |

Directory: c:\hpchem\2\data\091902

WG125606

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | | Injected |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 5g14776.d | 1. | WG125605-01 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 12::5 |
| 2 | 2 | 5g14777.d | 1. | WG125606-01 WATER BLANK 5ML | 1,1 S-99-16 | | 19 Sep 102 12::4 |
| 3 | 3 | 5g14778.d | 1. | WG125606-02 WATER LCS 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 13::1 |
| 4 | 1 | 5g14779.d | 1. | L0209327-01 A 5ML | 1,1 S-99-16 | pH<2 | 19 Sep 102 13::1 |
| 5 | 2 | 5g14780.d | 1. | L0209327-02 A 5ML RR HIGHSSS | 1,1 S-99-16 | | 19 Sep 102 13::5 |
| 6 | 3 | 5g14781.d | 1. | L0209327-03 A 5ML | 1,1 S-99-16 | | 19 Sep 102 13::2 |
| 7 | 4 | 5g14782.d | 1. | L0209315-01 B 5ML 200X | 1,100 S-99-16 | | 19 Sep 102 12::0 |
| 8 | 5 | 5g14783.d | 1. | L0209315-02 B 5ML 200X | 1,100 S-99-16 | | 19 Sep 102 12::3 |
| 9 | 6 | 5g14784.d | 1. | WG125606-03 L0209310-10 B 5ML 20X | 1,20 S-99-16 | | 19 Sep 102 12::1 |
| 10 | 7 | 5g14785.d | 1. | WG125606-04 L0209310-10 MS B 5ML 20X | 1,20 S-(98-29,99-16) | | 19 Sep 102 12::4 |
| 11 | 8 | 5g14786.d | 1. | WG125606-05 L0209310-10 MSD B 5ML 20X | 1,20 S-(98-29,99-16) | | 19 Sep 102 12::2 |
| 12 | 9 | 5g14787.d | 1. | WG125605-02 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 12::5 |
| 13 | 10 | 5g14788.d | 1. | L0209327-02 B 5ML | 1,1 S-99-16,RE | pH<2 | 19 Sep 102 12::4 |
| 14 | 11 | 5g14789.d | 1. | L0209337-01 A 5ML 100X | 1,100 S-99-16 | | 19 Sep 102 12::1 |
| 15 | 12 | 5g14790.d | 1. | L0209337-02 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::5 |
| 16 | 13 | 5g14791.d | 1. | L0209337-03 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::2 |
| 17 | 14 | 5g14792.d | 1. | L0209337-04 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::5 |
| 18 | 15 | 5g14793.d | 1. | L0209337-05 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::3 |
| 19 | 15 | 5g14794.d | 1. | L0209337-06 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::0 |
| 20 | 17 | 5g14795.d | 1. | L0209337-07 A 5ML 10X | 1,10 S-99-16 | | 19 Sep 102 12::4 |
| 21 | 18 | 5g14796.d | 1. | L0209337-08 A 5ML | 1,1 S-99-16 | | 19 Sep 102 12::1 |
| 22 | 19 | 5g14797.d | 1. | WG125605-03 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | | 19 Sep 102 12::5 |

# 2.2 Semivolatiles

# 2.2.6 PRO QC Data (8015)

**REPORT NARRATIVE**
**GC PETROLEUM RANGE ORGANICS**

**KEMRON Report No.: L0209310**

**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 03 was chosen by the client for MS/MSD analysis. All acceptance criteria were met

**SAMPLES**

**Samples:** The re-extract of sample 01 was not analyzed due to excessive instrument downtime. The first set of data was reported. All other acceptance criteria were met.
**Surrogates**: Sample 01 yielded a % recovery for o-terphenyl that was below the advisory limit. Sample 01 was re-extracted out of hold. All other 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: [signature] DATE: 10/2/02

Rev. 7/14/00

## TRPH – GC DATA (FLA-PRO)

**Login Number** L0209310

### 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: CUK Date: 10/17/02

# 2.2.6.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0209310
Blank File ID: 2G22233
Date Analyzed: 09/30/02
Time Analyzed: 19:41
Analyst: CLK

Work Group: WG125690
Blank Sample ID: WG125593-02
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 | WG125593-03 | 2G22234 | 09/30/02 19:56 | |
| 062-CEF46-2S-Q3-02-20 | L0209310-01 | 2G22235 | 09/30/02 20:12 | 01 |
| 062-CEF46-7I-Q3-02-20 | L0209310-02 | 2G22236 | 09/30/02 20:27 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-03 | 2G22237 | 09/30/02 20:42 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-04 | 2G22238 | 09/30/02 20:57 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-05 | 2G22239 | 09/30/02 21:12 | 01 |
| 062-CEF46-12I-Q3-02-20 | L0209310-06 | 2G22240 | 09/30/02 21:28 | 01 |
| 062-CEF46-13I-Q3-02-20 | L0209310-07 | 2G22241 | 09/30/02 21:43 | 01 |
| 062-CEF46-14D-Q3-02-20 | L0209310-08 | 2G22244 | 09/30/02 22:29 | 01 |
| 062-CEF46-15I-Q3-02-20 | L0209310-09 | 2G22245 | 09/30/02 22:44 | 01 |
| 062-46DUP-Q3-02-20 | L0209310-10 | 2G22246 | 09/30/02 22:59 | 01 |
| 062-46EQB-Q3-02-20 | L0209310-11 | 2G22247 | 09/30/02 23:15 | 01 |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209310 Run Date: 09/30/2002 Sample ID: WG125593-02
Instrument ID: HP2 Run Time: 19:41 Method: 8015 MOD
File ID: 2G22233 Analyst: CLK Matrix: Water
Workgroup (AAB#): WG125690 Units: ug/L
Contract #: Cal ID: HP2-30-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 279 | 1 | J |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 61.5 | 49 - 174 | PASS |

* Analyte detected above RDL

KEMRON FORMS - Modified 10/15/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209310
Instrument ID: HP2
File ID: 2G22234
Workgroup (AAB#): WG125690
Contract #:

Run Date: 09/30/2002
Run Time: 19:56
Analyst: CLK

Sample ID: WG125593-03
Method: 8015 MOD
Matrix: Water
Units: ug/L
Cal ID: HP2-30-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 3400 | 2750 | 80.9 | 50 - 150 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.7 | 49 - 174 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/15/2002
Version 1.3

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0209310
Instrument ID: HP2
Parent ID: L0209310-03
Sample ID: L0209310-04 MS
Sample ID: L0209310-05 MSD

Cal ID: HP2-30-SEP-2002
Contract #:
File ID: 2G22237 Dil: 1
File ID: 2G22238 Dil: 1
File ID: 2G22239 Dil: 1

Worknum: WG125690
Method: 8015 MOD
Matrix: Water
Units: ug/L

| Analyte | Parent | MS Spiked | MS Found | MS %Rec | MSD Spiked | MSD Found | MSD %Rec | %RPD | %Rec Limits | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TRPH-Florida PRO | 623 | 3490 | 3370 | 78.6 | 3400 | 3180 | 75.3 | 5.61 | 50 - 120 | 20 | |

* FAILS %REC LIMIT

# FAILS RPD LIMIT

KEMRON FORMS - Modified 10/15/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:8015 MOD

AAB#:WG125690

Login Number:L0209310

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| 062-46DUP-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 2.35 | 09/30/02 | 40 | 11.6 | |
| 062-46EQB-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.82 | 09/30/02 | 40 | 11.6 | |
| 062-CEF46-12I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.91 | 09/30/02 | 40 | 11.5 | |
| 062-CEF46-13I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.89 | 09/30/02 | 40 | 11.6 | |
| 062-CEF46-14D-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.86 | 09/30/02 | 40 | 11.6 | |
| 062-CEF46-15I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.93 | 09/30/02 | 40 | 11.6 | |
| 062-CEF46-2S-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.73 | 09/30/02 | 40 | 11.5 | |
| 062-CEF46-7I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.77 | 09/30/02 | 40 | 11.5 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.80 | 09/30/02 | 40 | 11.5 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.80 | 09/30/02 | 40 | 11.5 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.80 | 09/30/02 | 40 | 11.5 | |

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

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209310
Instrument Id: HP2
Workgroup (AAB#): WG125690

Method: FLA-PRO
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209310-01 | 1.00 | 01 | 41.4 |
| L0209310-02 | 1.00 | 01 | 54.2 |
| L0209310-03 | 1.00 | 01 | 54.5 |
| L0209310-04 | 1.00 | 01 | 84.1 |
| L0209310-05 | 1.00 | 01 | 79.2 |
| L0209310-06 | 1.00 | 01 | 53.4 |
| L0209310-07 | 1.00 | 01 | 79.4 |
| L0209310-08 | 1.00 | 01 | 54.0 |
| L0209310-09 | 1.00 | 01 | 74.2 |
| L0209310-10 | 1.00 | 01 | 56.0 |
| L0209310-11 | 1.00 | 01 | 55.7 |
| WG125593-02 | 1.00 | | 61.5 |
| WG125593-03 | 1.00 | | 74.7 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - o-Terphenyl | 49 | - | 174 |

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 10/08/2002
Version 1.2

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:55:15 2002

Calibration Files

| | | | | | |
|---|---|---|---|---|---|
| 5 | =2G22221.D | 50 | =2G22220.D | 100 | =2G22219.D |
| 200 | =2G22218.D | 400 | =2G22217.D | 600 | =2G22216.D |

| | | Compound | 5 | 50 | 100 | 200 | 400 | 600 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | H | Petroleum Range | 2.271 | 1.856 | 1.875 | 1.941 | 1.906 | 1.977 | 1.971 | E4 | 7.79 |
| 2) | s | O-Terphenyl | 2.418 | 1.883 | 1.915 | 1.952 | 1.890 | 1.970 | 2.005 | E4 | 10.25 |
| 3) | s | n-Nonatriacontane | | | | | | | 0.000 | 0 | -1.00 |

(#) = Out of Range

# ALTERNATE SOURCE CALIBRATION REPORT

Login Number: L0209310
File ID: 2G22222
ALT ID: WG126333-07
Units: mg/L

Instrument ID: HP2
Run Date: 09/30/2002
Run Time: 16:39
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| n-Nonatriacontane | | 200 | | 0 | | |
| Petroleum Range | | 3400 | 2930 | 17000 | 13.8 | |

KEMRON FORMS - Modified 10/15/2002
Version 1.2

Login Number: L0209310
File ID: 2G22232
CCV ID: WG126333-08
Units: mg/L

Instrument ID: HP2
Run Date: 09/30/2002
Run Time: 19:20
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| n-Nonatriacontane | | 200 | | 0 | | |
| Petroleum Range | | 3400 | 3360 | 19500 | 1.2 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2

Login Number: L0209310
File ID: 2G22243
CCV ID: WG126333-09
Units: mg/L

Instrument ID: HP2
Run Date: 09/30/2002
Run Time: 22:13
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| n-Nonatriacontane | | 200 | | 0 | | |
| Petroleum Range | | 3400 | 3310 | 19200 | 2.6 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2

CONTINUING CALIBRATION REPORT

Login Number: L0209310
File ID: 2G22254
CCV ID: WG126333-10
Units: mg/L

Instrument ID: HP2
Run Date: 10/01/2002
Run Time: 01:02
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| n-Nonatriacontane | 200 | | 0 | | |
| Petroleum Range | 3400 | 3220 | 18600 | 5.3 | |

* Exceeds %D Limit

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 2g22195.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 13::1 |
| 2 | 2 | 2g22196.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::2 |
| 3 | 3 | 2g22197.d | 1. | CC 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::3 |
| 4 | 4 | 2g22198.d | 1. | CC 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::2 |
| 5 | 2 | 2g22199.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::3 |
| 6 | 5 | 2g22200.d | 1. | WG126331-01 10000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 7 | 6 | 2g22201.d | 1. | WG126331-02 5000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::0 |
| 8 | 7 | 2g22202.d | 1. | WG126331-03 2500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::1 |
| 9 | 8 | 2g22203.d | 1. | WG126331-04 1000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::2 |
| 10 | 9 | 2g22204.d | 1. | RR 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::3 |
| 11 | 10 | 2g22205.d | 1. | ✓ WG126331-06 100ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 12 | 9 | 2g22206.d | 1. | RR 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::5 |
| 13 | 11 | 2g22207.d | 1. | ✓ WG126331-05 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 12::0 |
| 14 | 12 | 2g22208.d | 1. | ✓ WG126331-07 1000ppm ALT SOURCE DRO STD | 1,1 SOS60-11 | 30 Sep 102 12::2 |
| 15 | 13 | 2g22209.d | 1. | DRO SURR ESS0042-29 | 1,1 | 30 Sep 102 12::3 |
| 16 | 14 | 2g22210.d | 10. | L0209424-09 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::4 |
| 17 | 15 | 2g22211.d | 100. | L0209424-13 Soil DRO 100X | 7,100 SOIL | 30 Sep 102 12::5 |
| 18 | 16 | 2g22212.d | 10. | L0209424-14 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::0 |
| 19 | 1 | 2g22213.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::1 |
| 20 | 8 | 2g22214.d | 1. | ✓ WG126331-08 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 12::2 |
| 21 | 2 | 2g22215.d | 1. | ✓ WIN DEF STD PRO | 1,1 SOS60-20 | 30 Sep 102 12::4 |
| 22 | 17 | 2g22216.d | 1. | WG126333-01 600ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| 23 | 18 | 2g22217.d | 1. | WG126333-02 400ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 24 | 19 | 2g22218.d | 1. | WG126333-03 200ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::3 |
| 25 | 20 | 2g22219.d | 1. | WG126333-04 100ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::4 |
| 26 | 21 | 2g22220.d | 1. | WG126333-05 50ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| 2 | 22 | 2g22221.d | 1. | WG126333-06 5ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 28 | 23 | 2g22222.d | 1. | WG126333-07 200ppm ALT SOURCE PRO STD | 1,1 SOS61-36 | 30 Sep 102 12::3 |
| 29 | 24 | 2g22223.d | 1. | ✓ WG125345-01 BLK 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::0 |
| 30 | 25 | 2g22224.d | 1. | WG125345-02 LCS 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::1 |
| 31 | 26 | 2g22225.d | 1. | WG125345-03 LCS DUP 9/16 V190P1037,1 SOIL | | 30 Sep 102 12::3 |
| 32 | 27 | 2g22226.d | 1. | WG125774-01 BLK 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::4 |
| 33 | 28 | 2g22227.d | 1. | WG125774-02 LCS 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::0 |
| 34 | 29 | 2g22228.d | 1. | WG125774-03 LCS DUP 9/23 V190P1417,1 SOIL | | 30 Sep 102 12::1 |
| 35 | 30 | 2g22229.d | 1. | RE L0209260-01 Soil PRO | 7,1 SOIL | 30 Sep 102 12::3 |
| 36 | 31 | 2g22230.d | 1. | ✓ L0209260-01 Soil PRO RE | 7,1,RE SOIL | 30 Sep 102 12::4 |
| 37 | 1 | 2g22231.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::0 |
| 38 | 19 | 2g22232.d | 1. | ✓ WG126333-08 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 12::2 |
| 39 | 32 | 2g22233.d | 1. | ✓ WG125593-02 BLK 9/19 V191P11 | 1,1 | 30 Sep 102 12::4 |
| 40 | 33 | 2g22234.d | 1. | ✓ WG125593-03 LCS 9/19 V191P11 | 1,1 | 30 Sep 102 12::5 |
| 41 | 34 | 2g22235.d | 1. | RE L0209310-01 Water PRO | 1,1 | 30 Sep 102 12::1 |
| 42 | 35 | 2g22236.d | 1. | ✓ L0209310-02 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 43 | 36 | 2g22237.d | 1. | WG125593-01 L0209310-03 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 44 | 37 | 2g22238.d | 1. | WG125593-04 L0209310-04 Water PRO MS | 1,1 | 30 Sep 102 12::5 |
| 45 | 38 | 2g22239.d | 1. | WG125593-05 L0209310-05 Water PRO MSD | 1,1 | 30 Sep 102 12::1 |
| 46 | 39 | 2g22240.d | 1. | L0209310-06 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 47 | 40 | 2g22241.d | 1. | L0209310-07 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 48 | 1 | 2g22242.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::5 |
| 49 | 19 | 2g22243.d | 1. | ✓ WG126333-09 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 13::1 |
| 5 | 41 | 2g22244.d | 1. | L0209310-08 Water PRO | 1,1 | 30 Sep 102 13::2 |
| 51 | 42 | 2g22245.d | 1. | L0209310-09 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 52 | 43 | 2g22246.d | 1. | L0209310-10 Water PRO | 1,1 | 30 Sep 102 13::5 |
| 53 | 44 | 2g22247.d | 1. | L0209310-11 Water PRO | 1,1 | 30 Sep 102 13::1 |

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 5 | 45 | 2g22248.d | 1. | PR10 L0209337-01 Water PRO | 1,1 | 30 Sep 102 13::3 |
| 55 | 46 | 2g22249.d | 1. | ✓ L0209337-02 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 56 | 47 | 2g22250.d | 1. | L0209337-03 Water PRO | 1,1 | 1 Oct 102 13::0 |
| 57 | 48 | 2g22251.d | 1. | L0209337-04 Water PRO | 1,1 | 1 Oct 102 13::1 |
| 58 | 49 | 2g22252.d | 1. | L0209337-05 Water PRO | 1,1 | 1 Oct 102 13::3 |
| 59 | 1 | 2g22253.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 13::4 |
| 60 | 19 | 2g22254.d | 1. | ✓ WG126333-10 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::0 |
| 61 | 50 | 2g22255.d | 1. | ✓ L0209337-06 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 62 | 51 | 2g22256.d | 1. | ✓ L0209337-07 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 63 | 52 | 2g22257.d | 1. | ✓ WG125523-02 BLK 9/18 V191P3 | 1,1 | 1 Oct 102 12::4 |
| 64 | 53 | 2g22258.d | 1. | ✓ WG125523-03 LCS 9/18 V191P3 | 1,1 | 1 Oct 102 12::0 |
| 65 | 54 | 2g22259.d | 1. | RE L0209285-01 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 66 | 55 | 2g22260.d | 1. | L0209285-02 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 67 | 56 | 2g22261.d | 1. | L0209285-03 Water PRO | 1,1 | 1 Oct 102 12::5 |
| 68 | 57 | 2g22262.d | 1. | L0209285-07 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 69 | 58 | 2g22263.d | 1. | L0209285-08 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 70 | 1 | 2g22264.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::3 |
| 71 | 19 | 2g22265.d | 1. | ✓ WG126333-11 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::5 |
| 72 | 59 | 2g22266.d | 1. | RE L0209285-09 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 73 | 60 | 2g22267.d | 1. | WG125523-01 L0209285-04 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 74 | 61 | 2g22268.d | 1. | WG125523-04 L0209285-05 Water PRO MS | 1,1 | 1 Oct 102 12::3 |
| 75 | 62 | 2g22269.d | 1. | WG125523-05 L0209285-06 Water PRO MSD | 1,1 | 1 Oct 102 12::5 |
| 76 | 63 | 2g22270.d | 1. | WG125776-02 BLK 9/23 V191P31 | 1,1 | 1 Oct 102 12::0 |
| 77 | 64 | 2g22271.d | 1. | WG125776-03 LCS 9/23 V191P31 | 1,1 | 1 Oct 102 12::2 |
| 7[illegible] | 65 | 2g22272.d | 1. | L0209285-01 Water PRO RE | 1,1,RE | 1 Oct 102 12::3 |

CLK
10/1/02
[illegible]

# Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 9/30/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 093002
Analyst Initials CLK

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. # 3 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**

L0209424-09 10X, SS DL
-10 100X
-11 10X
W6125345-01 BLK 9/16 V190P103, took hit >RL, o-Terphenyl high
-02 LCS, o-Terphenyl high
-03 LCS DUP
L0209260-01, o-Terphenyl high, Needed RE due to BLK
-01 RE, o-Terphenyl high
L0209310-01, o-Terphenyl low, Needs RE
L0209337-01, Needs 10X
W6125523-02 BLK 9/18 V191P3
L0209285-01, Needed RE due to BLK
-02
-03
-07
-08

Reviewed By: [illegible]

Volume 191
Page 11

Parameter: FLA-PRO WL SOP #: EXPRO Revision #: 3
Extraction Analyst(s): RCK TV/KD Analyst(s): CAF, DR
Date/Time Extracted: 9/19/02 @ 0830 Date TV/KD: 9-19-02
Spike/Surrogate Analyst: CAF Witness: RCK
Surrogate #: ESS0041-38 Earliest Hold Date: 9/24
Spike #: A = ESS0041-41 Spike #: B = —

Extraction Work Group WG 125593
Analytical Work Group WG 126690

Extract Relinquished By: RCK
Extract Received By & Date: CAF 9/20/02

| | 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 | | ✓ | | | 1000 mL | 1 mL | | 1 mL | T | | | | WG 125593-02 |
| 2 | LCS | | ✓ | | | ↓ | ↓ | 1 mL | ↓ | ↓ | | | | WG -03 |
| 3 | 09-310-01 | FLA-PRO | ✓ | | | 975 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 4 | -02 | ↓ | ✓ | | | 960 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 5 | -03 | ↓ | ✓ | | | 975 mL | ↓ | ↓ | ↓ | ↓ | | | | WG 125593-01 |
| 6 | -04 MS | ↓ | ✓ | | | ↓ | ↓ | 1 mL | ↓ | ↓ | | | | * -04 |
| 7 | -05 MSD | ↓ | ✓ | | | 1000 mL | ↓ | ↓ | ↓ | ↓ | | | | * -05 |
| 8 | -06 | ↓ | ✓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | | | | |
| 9 | -07 | ↓ | ✓ | | | 970 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 10 | -08 | ↓ | ✓ | | | 1000 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 11 | -09 | ↓ | ✓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | | | | |
| 12 | -10 | ↓ | ✓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | | | | |
| 13 | -11 | ↓ | ✓ | | | 950 mL | ↓ | ↓ | 1 mL | T | | | | |
| 14 | 09-337-01 | FLA-PRO | ✓ | | | 958 mL | 1 mL | ↓ | ↓ | ↓ | | | | |
| 15 | -02 | ↓ | ✓ | | | 910 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 16 | -03 | ↓ | ✓ | | | 910 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 17 | -04 | ↓ | ✓ | | | 960 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 18 | -05 | ↓ | ✓ | | | 980 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 19 | -06 | ↓ | ✓ | | | 1000 mL | ↓ | ↓ | ↓ | ↓ | | | | |
| 20 | -07 | ↓ | ✓ | | | 930 mL | ↓ | ↓ | ↓ | ↓ | | | | X |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

9/20

DR 09/19/02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: 1:1 HCl Lot #: EL2199
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: EL2211

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

Extraction Notes For Volume # 191 Page # 11

General Comments: * MS, MSD of 09-310-03

Extraction Anomalies: * Used (B) Bottle of SX 09-337-07 due to loss of SX during concentration stage.

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

# 2.2.6.2 Sample Data

Data File : C:\HPCHEM\1\DATA\093002\2G22235.D
Acq On : 30 Sep 2002 20:12
Sample : L0209310-01 Water PRO
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:25 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 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.85 | 165784 | 8.270 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 41.35%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 9368638 | 475.351 ppb F |

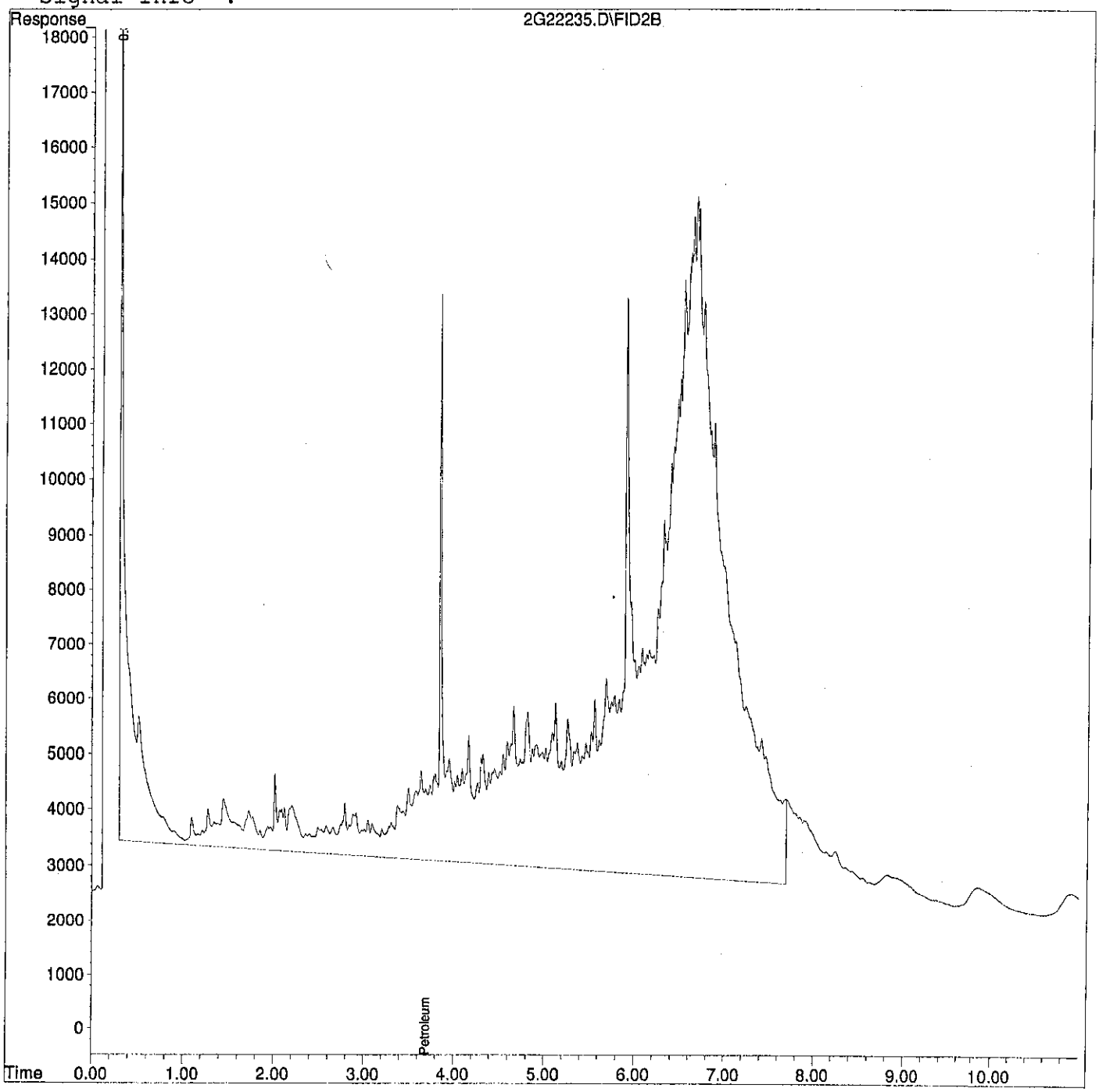
Needs PE

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

Data File : C:\HPCHEM\1\DATA\093002\2G22235.D  Vial: 34
Acq On : 30 Sep 2002 20:12  Operator: CLK
Sample : L0209310-01 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:25 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22236.D  Vial: 35
Acq On : 30 Sep 2002 20:27  Operator: CLK
Sample : L0209310-02 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:25 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.85 | 217375 | 10.843 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 54.22% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 17973803 | 911.964 ppb |

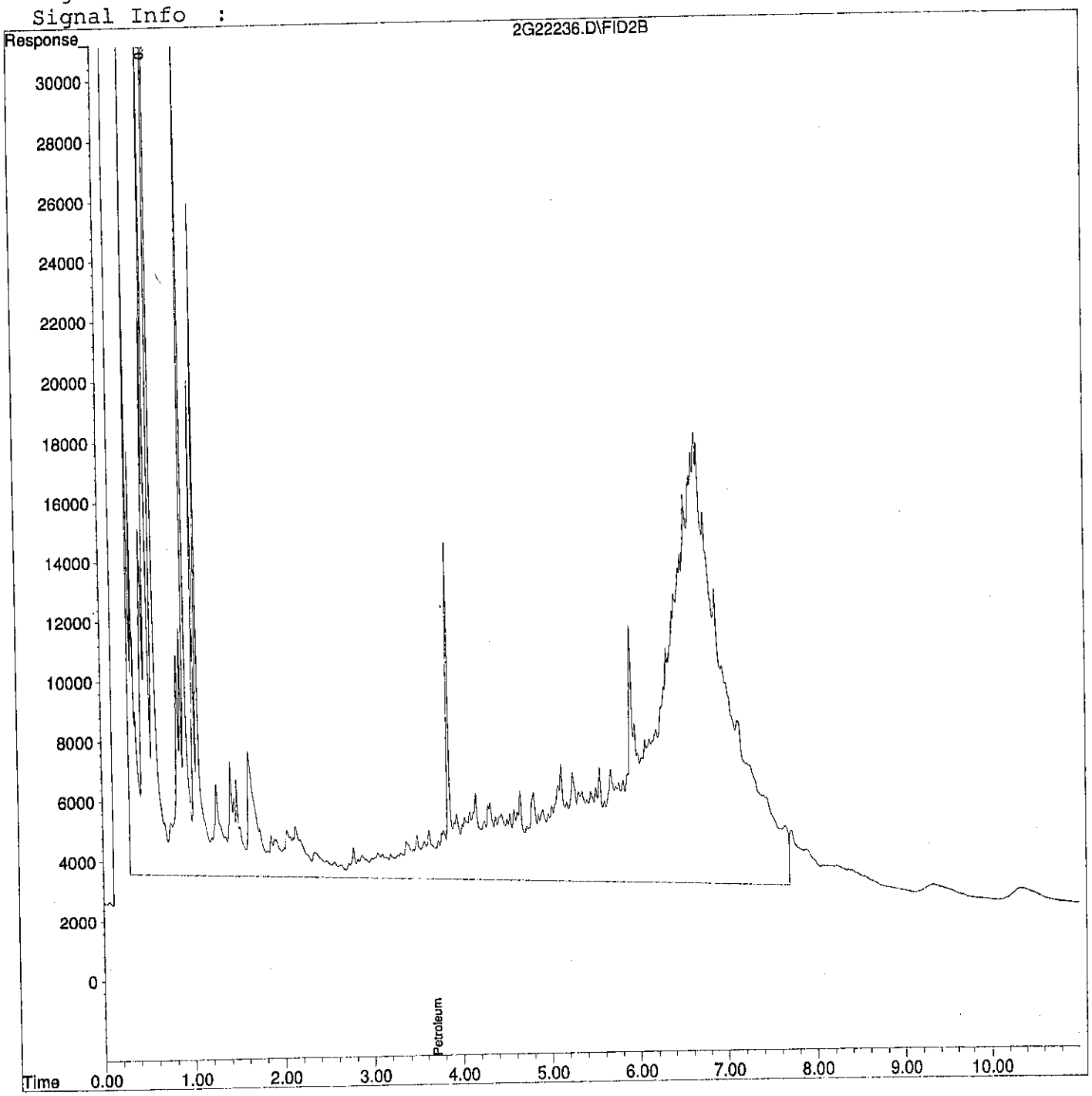
(f)=RT Delta > 1/2 Window  (m)=manual int.

Data File : C:\HPCHEM\1\DATA\093002\2G22236.D
Acq On : 30 Sep 2002 20:27
Sample : L0209310-02 Water PRO
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:25 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 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22237.D Vial: 36
Acq On : 30 Sep 2002 20:42 Operator: CLK
Sample : WG125593-01 L0209310-03 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:27 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.86 | 218529 | 10.901 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 54.51% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 11980581 | 607.877 ppb |

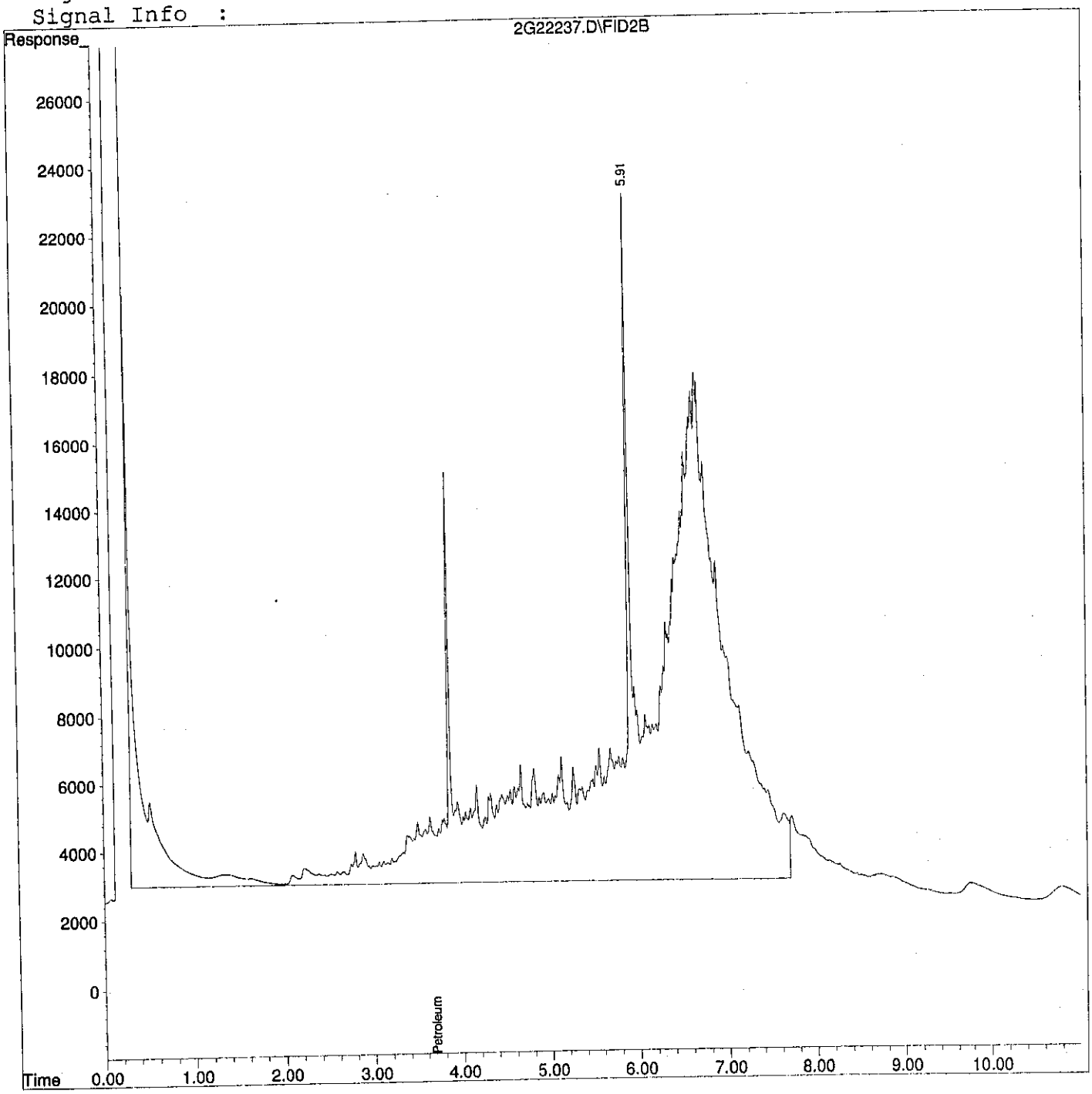
(f)=RT Delta > 1/2 Window (m)=manual int.
2G22237.D FLASHPRO.M Tue Oct 01 13:28:01 2002 HP2

Data File : C:\HPCHEM\1\DATA\093002\2G22237.D
Acq On : 30 Sep 2002 20:42
Sample : WG125593-01 L0209310-03 Water PRO
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:27 2002 Quant Results File: FLASHPRO.RES

Vial: 50
Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22238.D
Acq On : 30 Sep 2002 20:57
Sample : WG125593-04 L0209310-04 Water PRO MS
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:28 2002 Quant Results File: FLASHPRO.RES

Vial: 37
Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

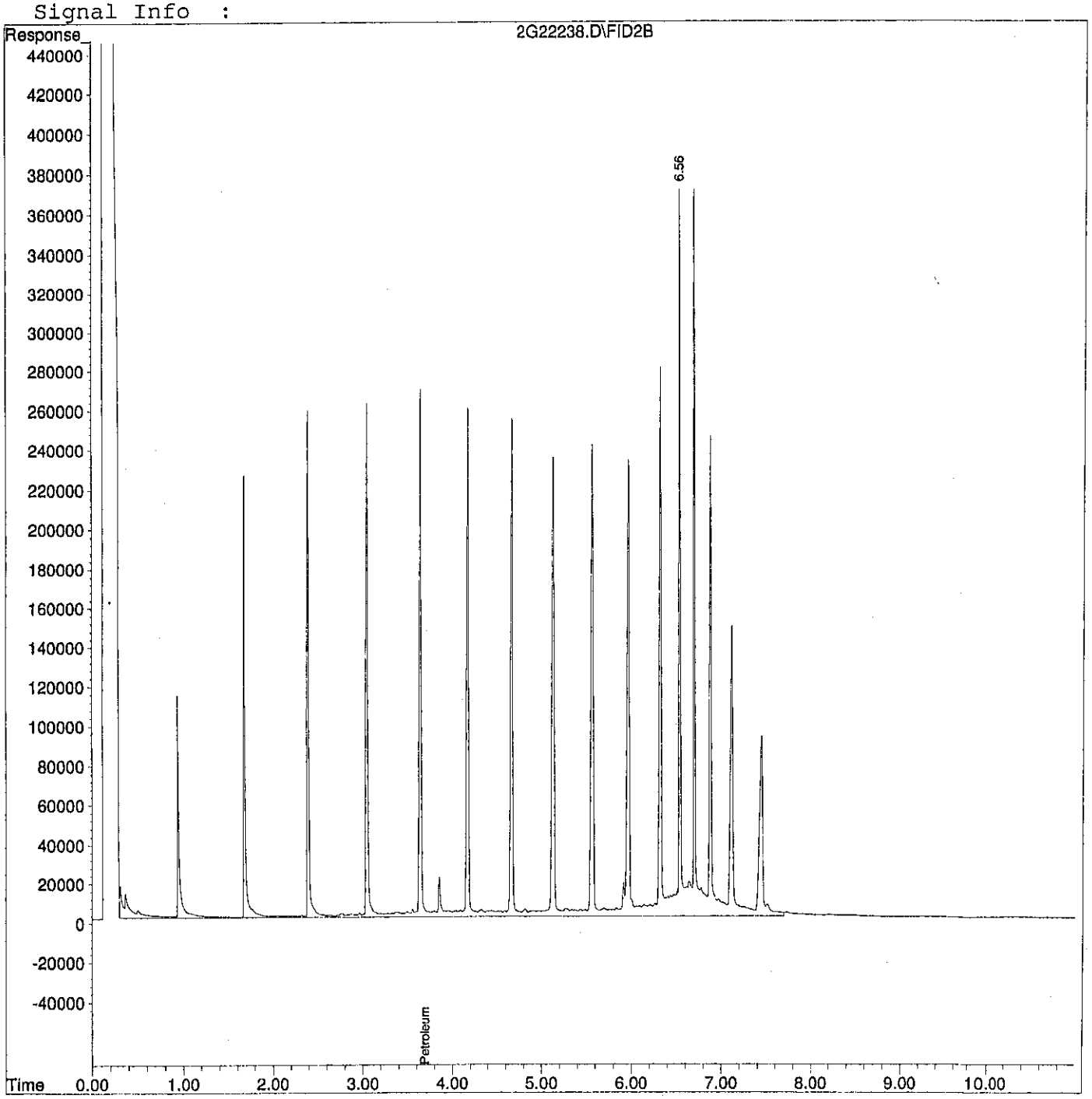
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.85 | 336928 | 16.806 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 84.03% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 64672821 | 3281.401 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22238.D  Vial: 37
Acq On : 30 Sep 2002 20:57  Operator: CLK
Sample : WG125593-04 L0209310-04 Water PRO MS  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:28 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22239.D Vial: 38
Acq On : 30 Sep 2002 21:12 Operator: CLK
Sample : WG125593-05 L0209310-05 Water PRO MSD Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:28 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

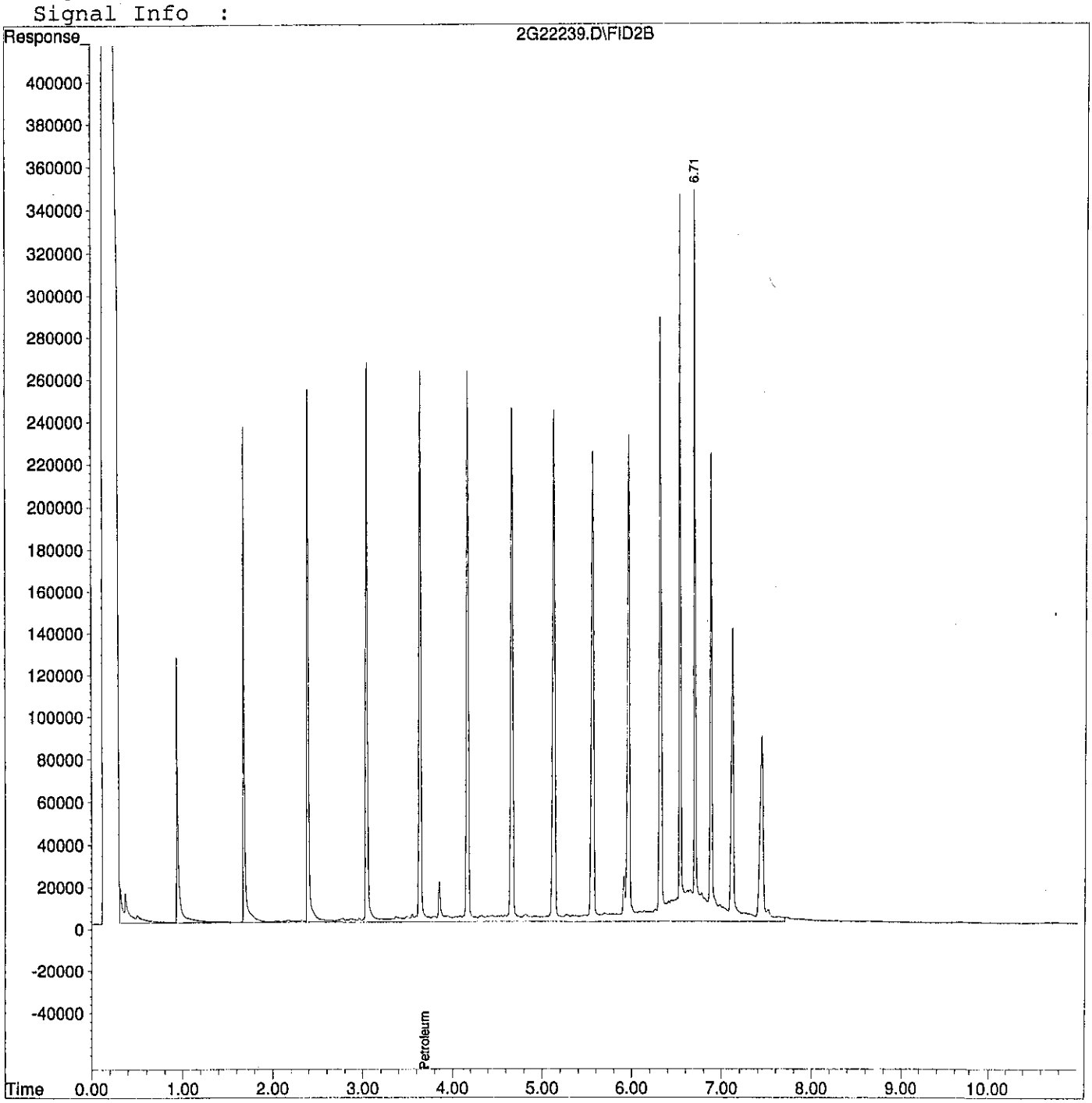
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.85 | 317472 | 15.836 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 79.18% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 62714204 | 3182.024 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22239.D  Vial: 38
Acq On : 30 Sep 2002 21:12  Operator: CLK
Sample : WG125593-05 L0209310-05 Water PRO MSD  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:28 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\1\DATA\093002\2G22240.D            Vial: 39
Acq On    : 30 Sep 2002  21:28                        Operator: CLK
Sample    : L0209310-06 Water PRO                     Inst    : HP2
Misc      : 1,1                                       Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Oct  1 13:28 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Tue Oct 01 12:54:37 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                    3.86         214022   10.676 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =   53.38%
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70       11125056  564.469 ppb
```

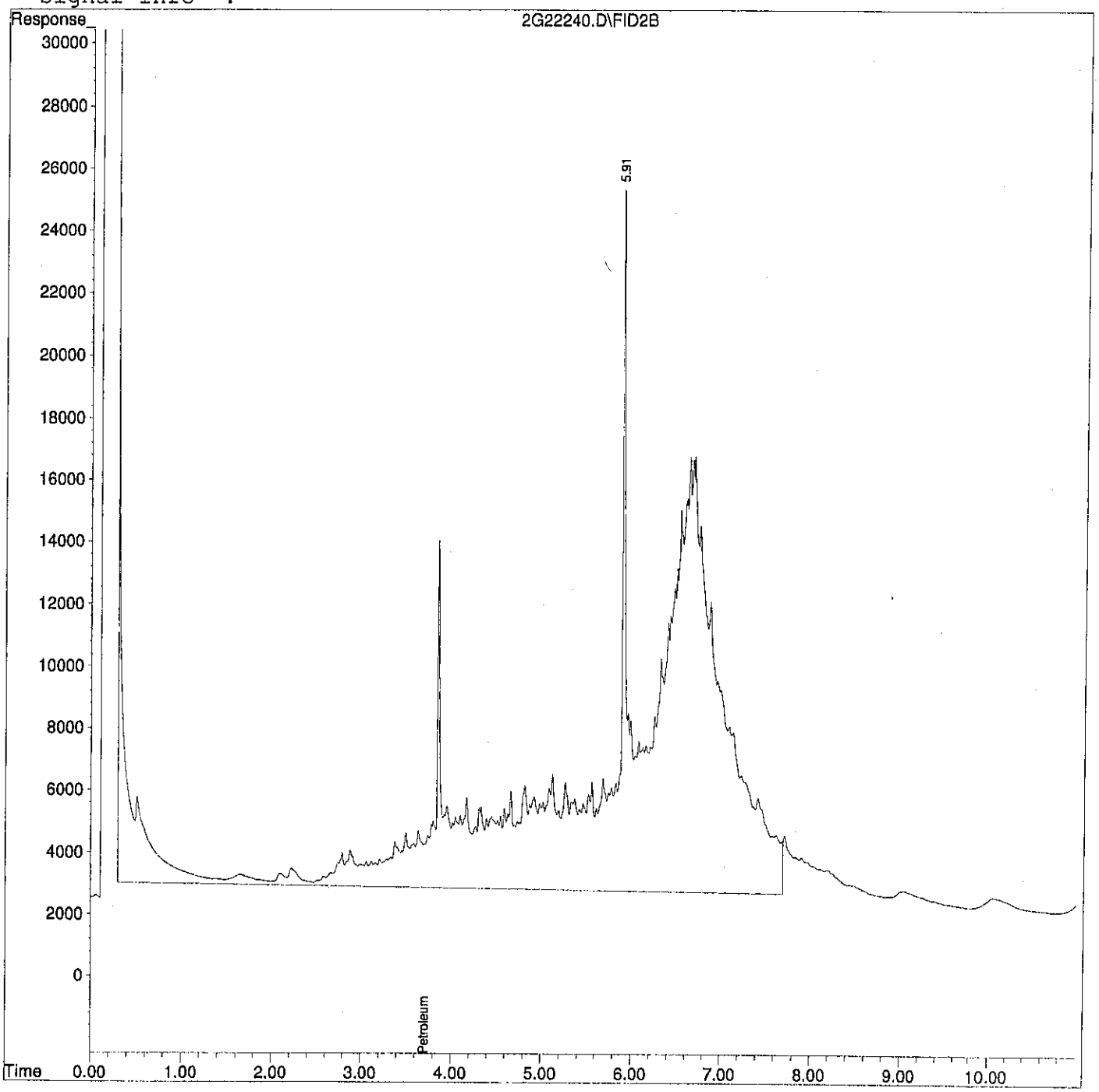
---

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

Data File : C:\HPCHEM\1\DATA\093002\2G22240.D  Vial: 39
Acq On : 30 Sep 2002 21:28  Operator: CLK
Sample : L0209310-06 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:28 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22241.D  Vial: 40
Acq On : 30 Sep 2002 21:43  Operator: CLK
Sample : L0209310-07 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:29 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.85 | 318389 | 15.882 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 79.41% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 14246321 | 722.837 ppb |

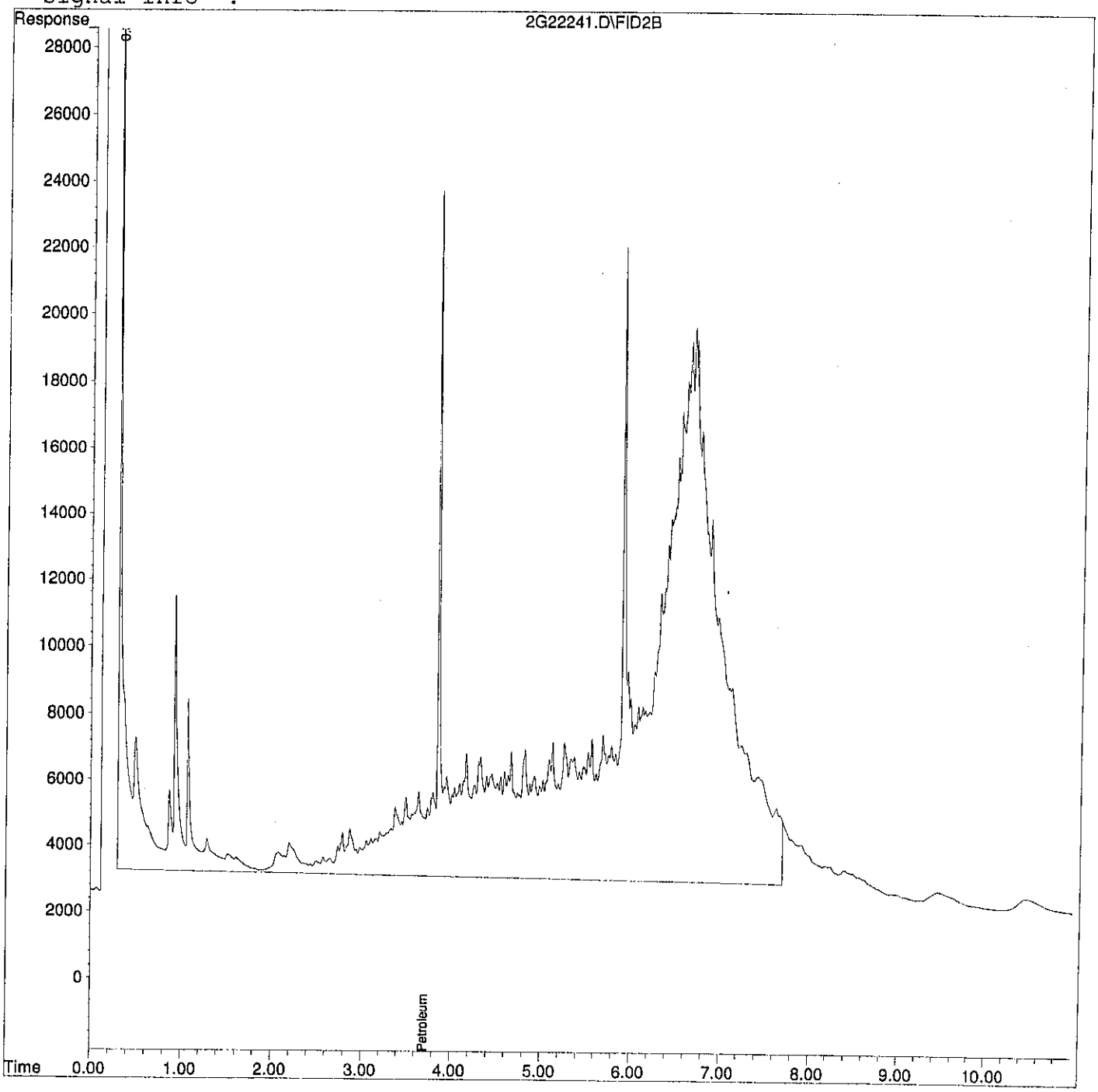
(f)=RT Delta > 1/2 Window  (m)=manual int.

Data File : C:\HPCHEM\1\DATA\093002\2G22241.D
Acq On : 30 Sep 2002 21:43
Sample : L0209310-07 Water PRO
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:29 2002 Quant Results File: FLASHPRO.RES

Vial: 40
Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\1\DATA\093002\2G22244.D            Vial: 41
Acq On    : 30 Sep 2002  22:29                        Operator: CLK
Sample    : L0209310-08 Water PRO                     Inst    : HP2
Misc      : 1,1                                       Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Oct  1 13:50 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Tue Oct 01 12:54:37 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                    3.86         216386   10.794 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =   53.97%
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70       10917608  553.943 ppb
```

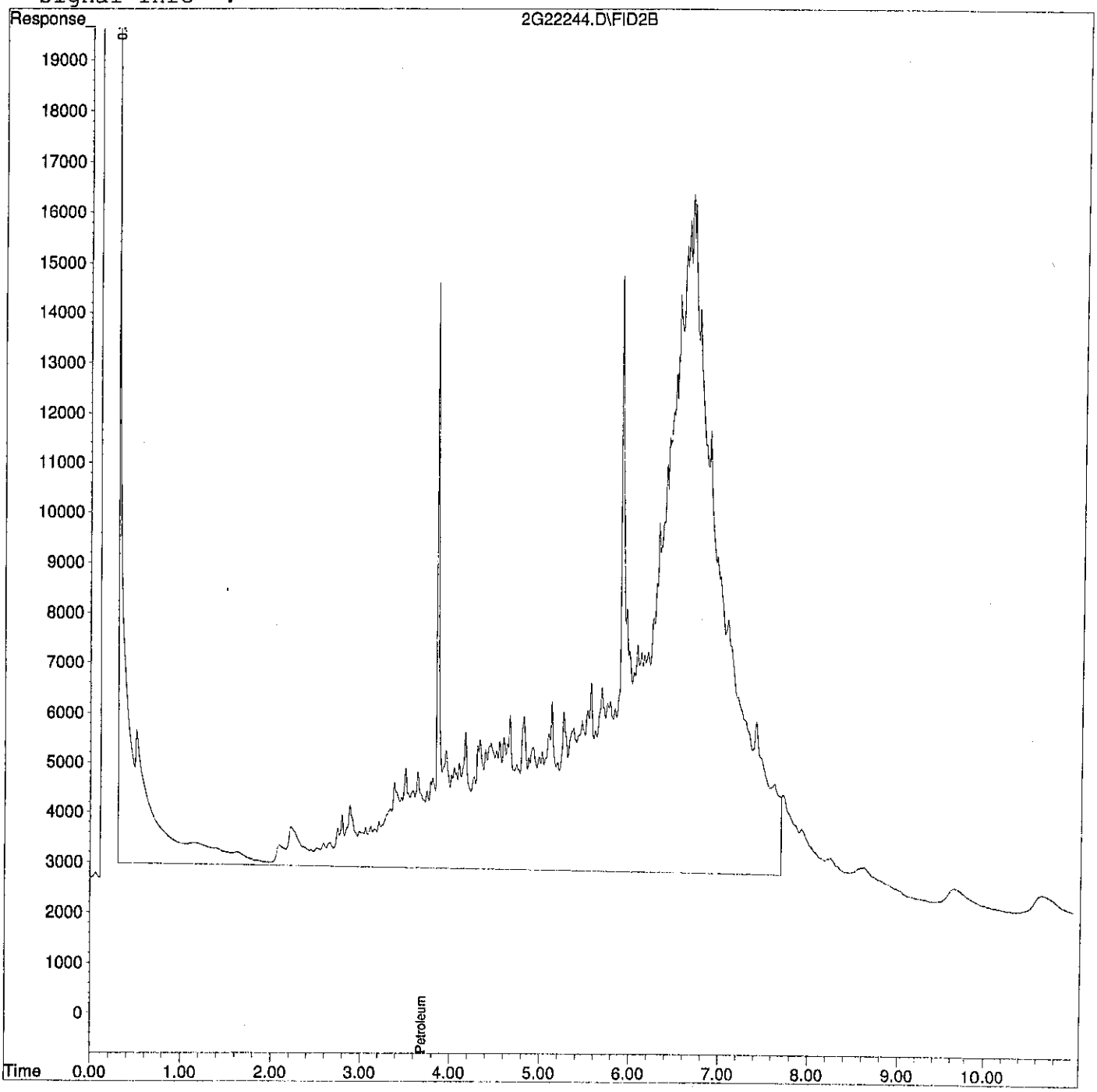
---

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

Data File : C:\HPCHEM\1\DATA\093002\2G22244.D  Vial: 41
Acq On : 30 Sep 2002 22:29  Operator: CLK
Sample : L0209310-08 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:50 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22245.D  Vial: 42
Acq On : 30 Sep 2002 22:44  Operator: CLK
Sample : L0209310-09 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:50 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

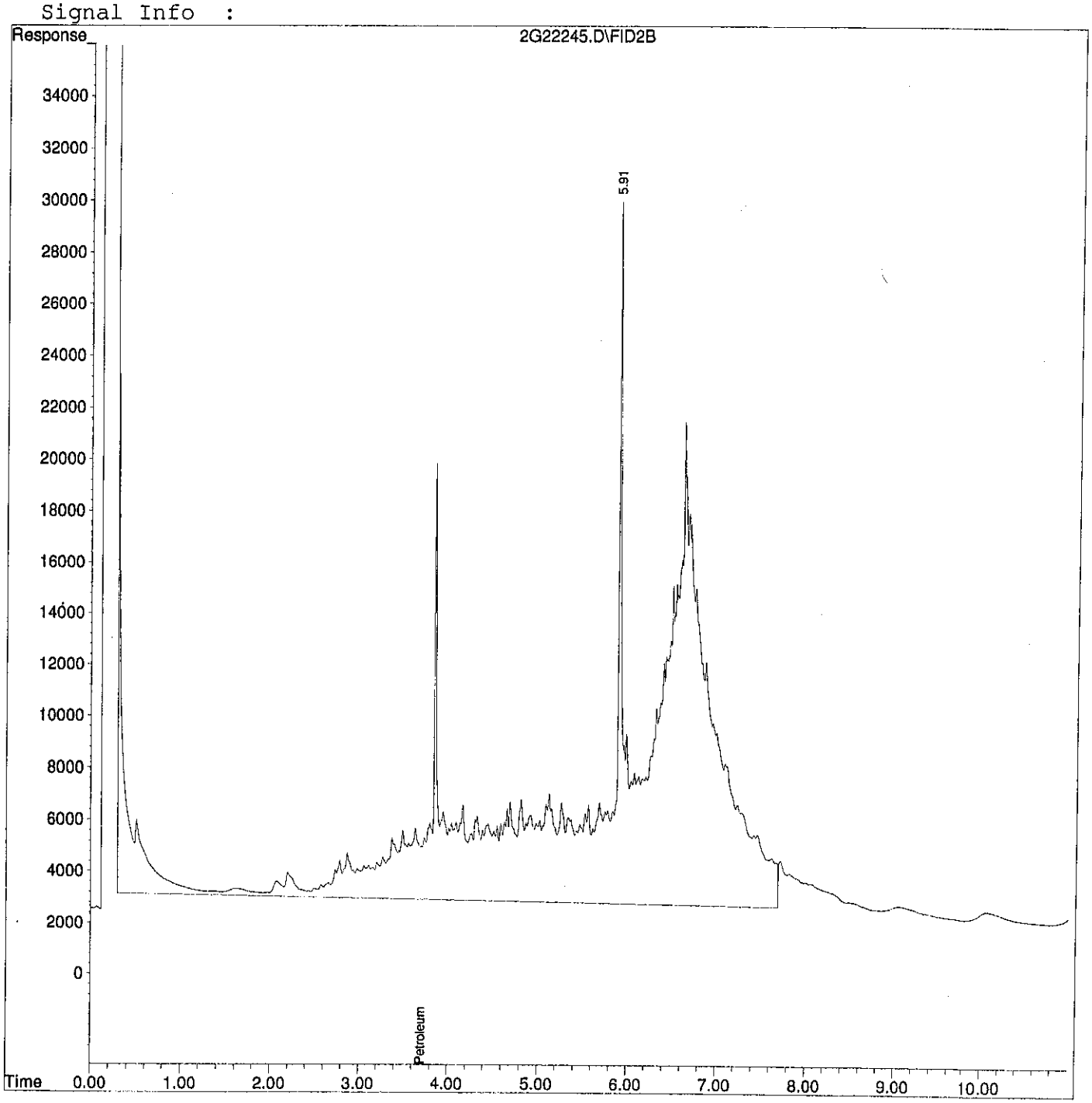
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.85 | 297537 | 14.842 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 74.21% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 13170115 | 668.232 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22245.D  Vial: 42
Acq On : 30 Sep 2002 22:44  Operator: CLK
Sample : L0209310-09 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:50 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\1\DATA\093002\2G22246.D            Vial: 43
Acq On    : 30 Sep 2002  22:59                        Operator: CLK
Sample    : L0209310-10 Water PRO                     Inst    : HP2
Misc      : 1,1                                       Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Oct  1 13:51 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Tue Oct 01 12:54:37 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                    3.86         224450   11.196 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =   55.98%
 3) s   n-Nonatriacontane              0.00               0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70       12723989  645.596 ppb
```

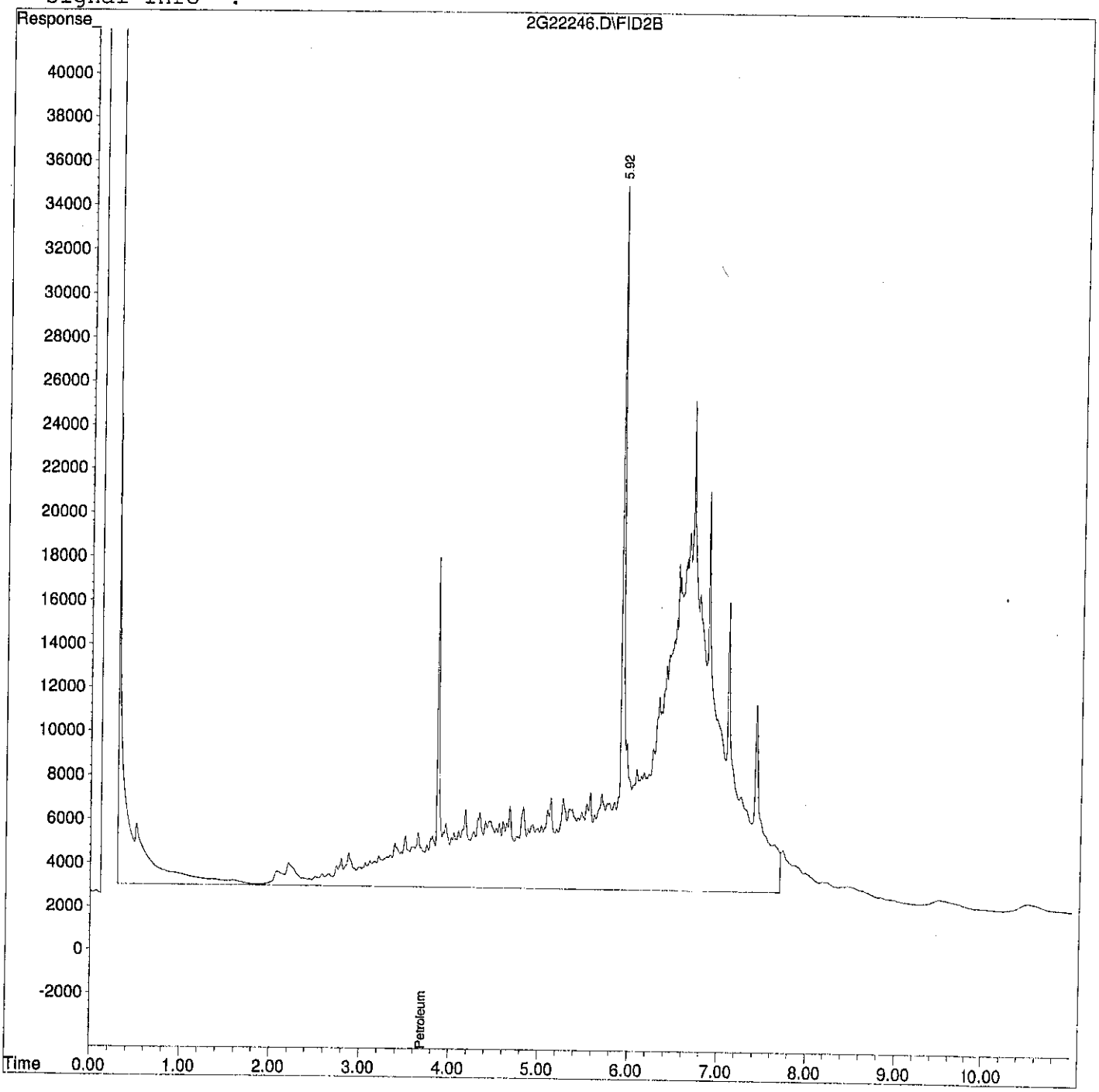
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\093002\2G22246.D
Acq On : 30 Sep 2002 22:59
Sample : L0209310-10 Water PRO
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:51 2002 Quant Results File: FLASHPRO.RES

Vial: 43
Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\1\DATA\093002\2G22247.D            Vial: 44
Acq On    : 30 Sep 2002  23:15                        Operator: CLK
Sample    : L0209310-11 Water PRO                     Inst    : HP2
Misc      : 1,1                                       Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Oct  1 13:51 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Tue Oct 01 12:54:37 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                  3.86         223368   11.142 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =   55.71%
 3) s   n-Nonatriacontane            0.00              0    N.D.  ppm
Spiked Amount   20.000                   Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range              3.70       18046061   915.630 ppb
```

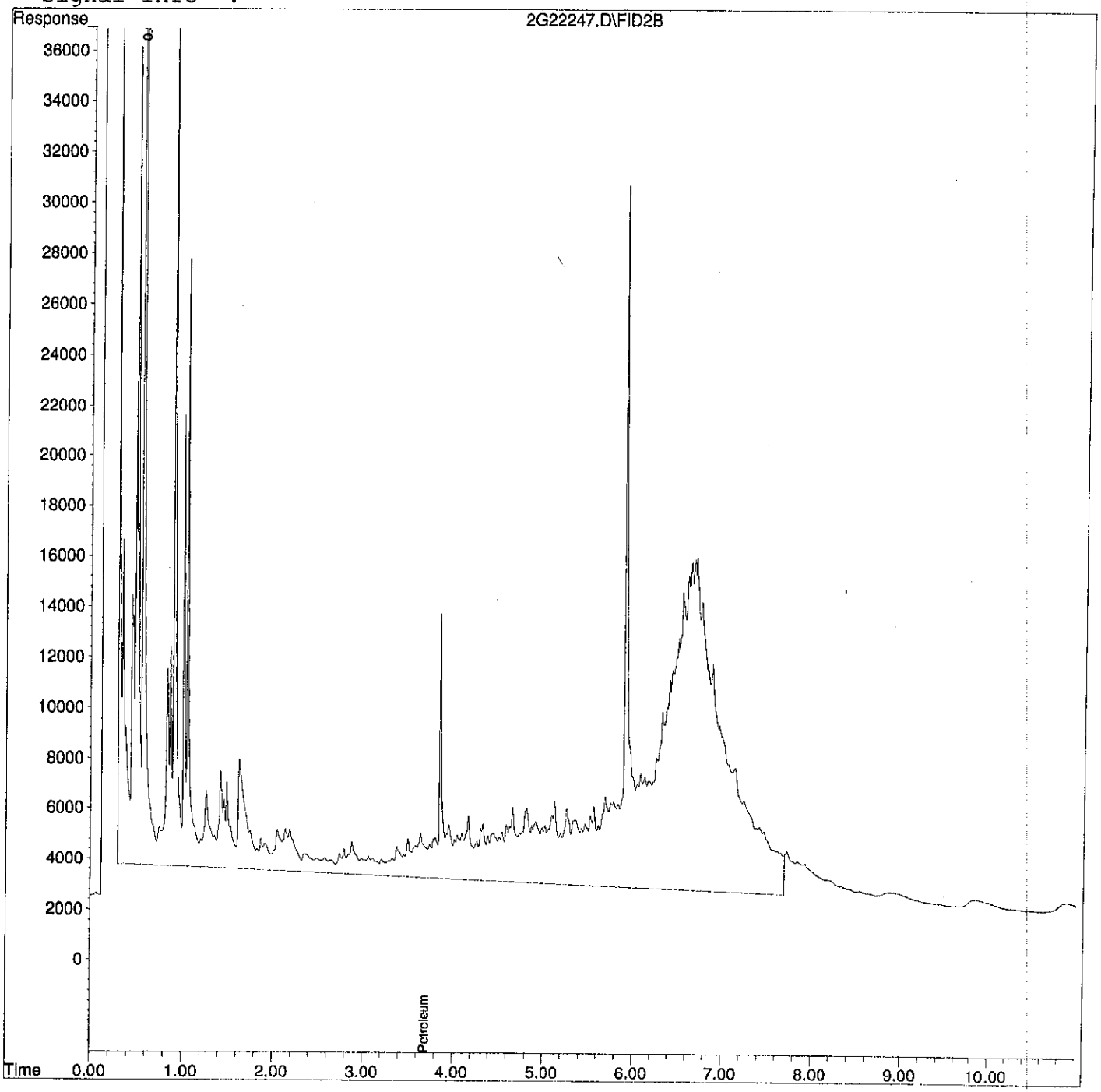
---

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

Data File : C:\HPCHEM\1\DATA\093002\2G22247.D  Vial: 44
Acq On : 30 Sep 2002 23:15  Operator: CLK
Sample : L0209310-11 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:51 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 09/30/02
Last Update : Tue Oct 01 12:55:15 2002

Calibration Files

| | | | | | |
|---|---|---|---|---|---|
| 5 | =2G22221.D | 50 | =2G22220.D | 100 | =2G22219.D |
| 200 | =2G22218.D | 400 | =2G22217.D | 600 | =2G22216.D |

| | | Compound | 5 | 50 | 100 | 200 | 400 | 600 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | H | Petroleum Range | 2.271 | 1.856 | 1.875 | 1.941 | 1.906 | 1.977 | 1.971 | E4 | 7.79 |
| 2) | s | O-Terphenyl | 2.418 | 1.883 | 1.915 | 1.952 | 1.890 | 1.970 | 2.005 | E4 | 10.25 |
| 3) | s | n-Nonatriacontane | | | | | | | 0.000 | 0 | -1.00 |

(#) = Out of Range

Data File : C:\HPCHEM\1\DATA\093002\2G22216.D Vial: 17
Acq On : 30 Sep 2002 15:02 Operator: CLK
Sample : WG126333-01 600ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

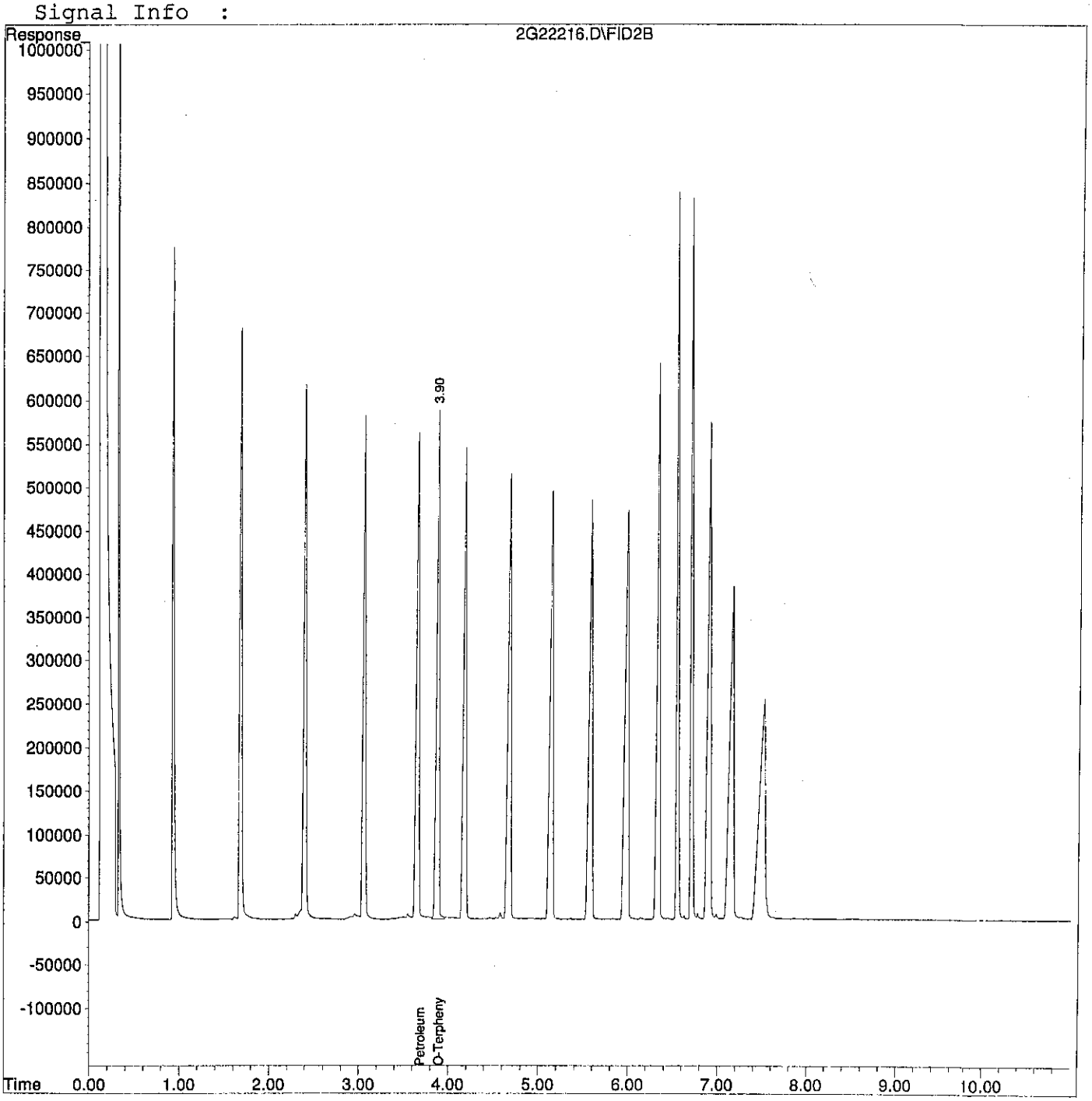
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.90 | 11818581 | 673.014 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery | = 3365.07%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery | = 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 201641724 | 10155.619 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22216.D  Vial: 17
Acq On : 30 Sep 2002 15:02  Operator: CLK
Sample : WG126333-01 600ppm PRO STD  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\1\DATA\093002\2G22217.D            Vial: 18
Acq On    : 30 Sep 2002  15:18                        Operator: CLK
Sample    : WG126333-02 400ppm PRO STD                Inst    : HP2
Misc      : 1,1 SOS61-44                              Multiplr: 1.00
IntFile   : PETRO.E
Quant Time: Oct  1 10:54 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Mon Sep 30 18:50:34 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        7559380  430.472 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    = 2152.36%#
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70      129641209 6529.337 ppb
```

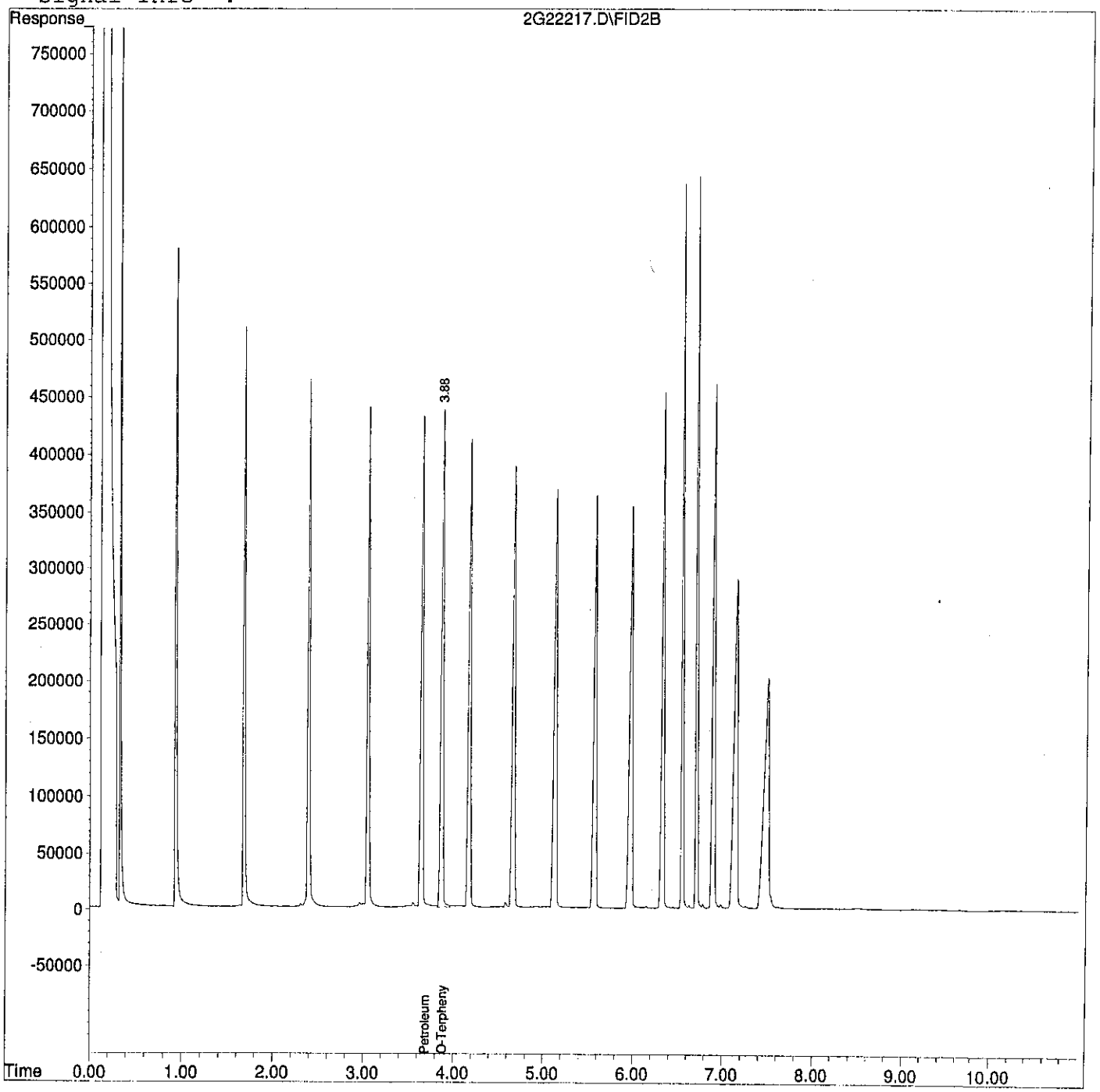
---

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

Data File : C:\HPCHEM\1\DATA\093002\2G22217.D Vial: 18
Acq On : 30 Sep 2002 15:18 Operator: CLK
Sample : WG126333-02 400ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22218.D Vial: 19
Acq On : 30 Sep 2002 15:33 Operator: CLK
Sample : WG126333-03 200ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

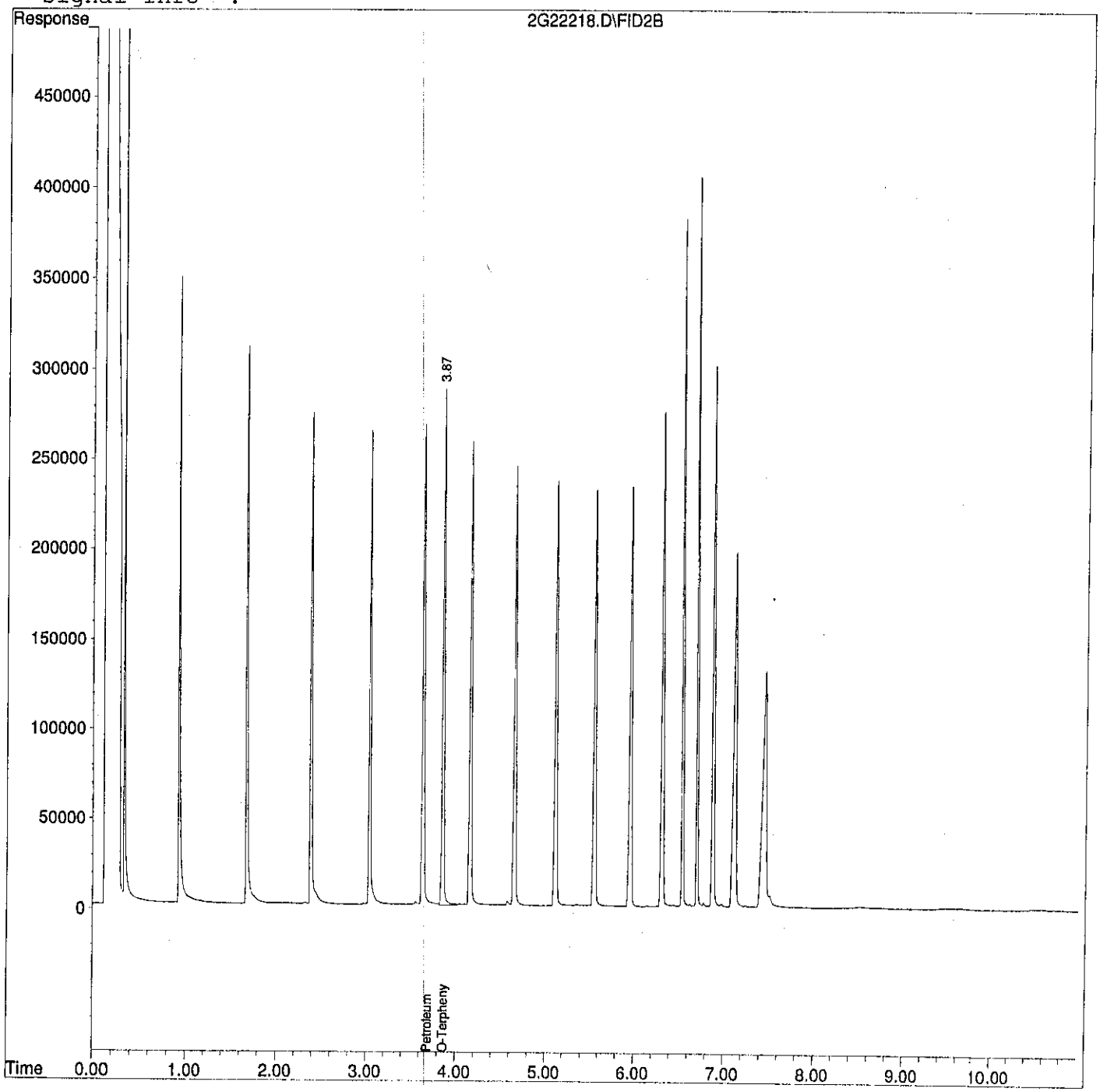
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.87 | 3904228 | 222.328 ppb |
| Spiked Amount 20.000 Range 49 - 174 | Recovery | | = 1111.64%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | Recovery | = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 65978505 | 3322.986 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22218.D Vial: 19
Acq On : 30 Sep 2002 15:33 Operator: CLK
Sample : WG126333-03 200ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22219.D Vial: 20
Acq On : 30 Sep 2002 15:49 Operator: CLK
Sample : WG126333-04 100ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

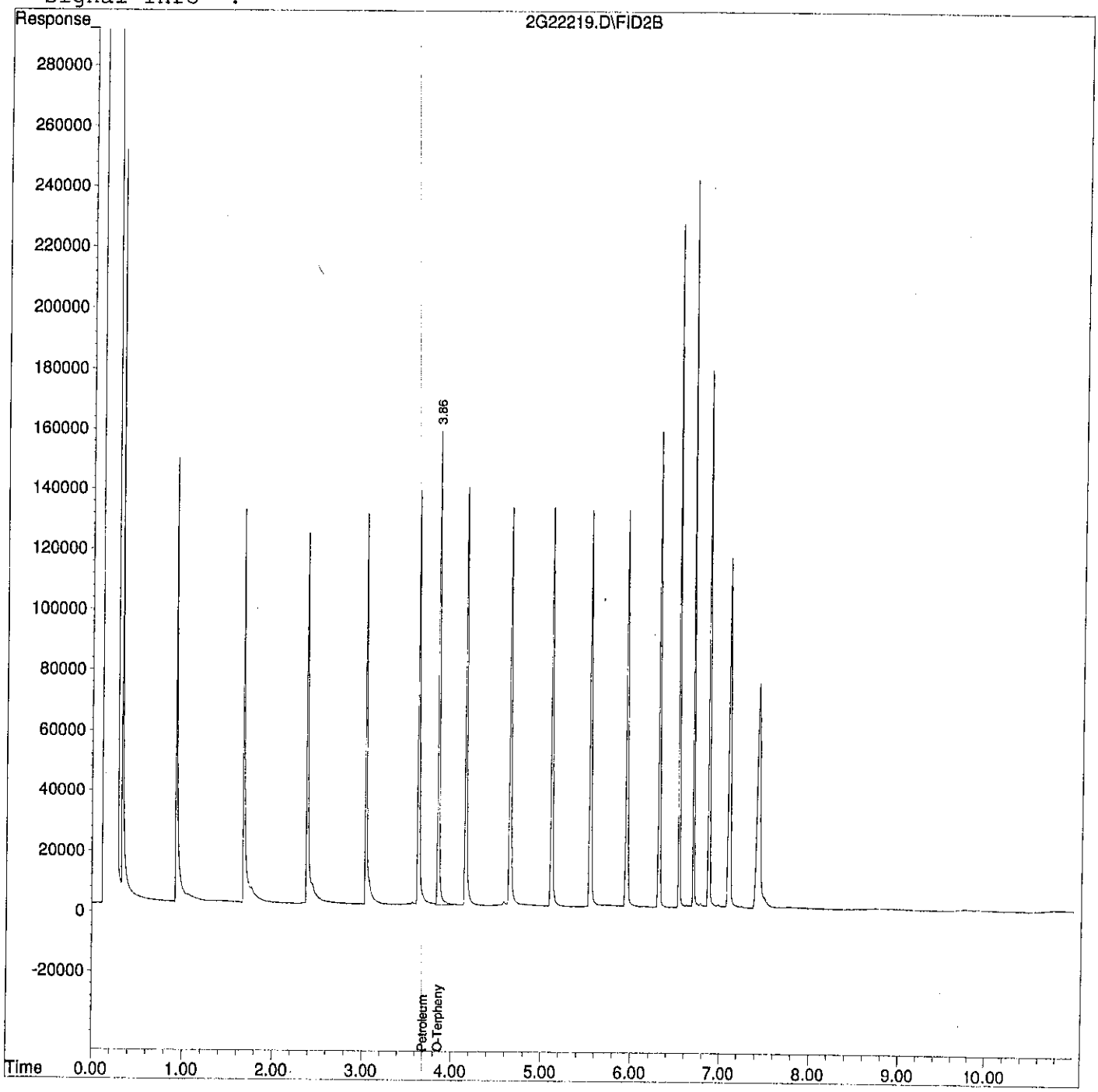
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.86 | 1915063 | 109.054 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 545.27%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 31868794 | 1605.061 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22219.D Vial: 20
Acq On : 30 Sep 2002 15:49 Operator: CLK
Sample : WG126333-04 100ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22220.D Vial: 21
Acq On : 30 Sep 2002 16:04 Operator: CLK
Sample : WG126333-05 50ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

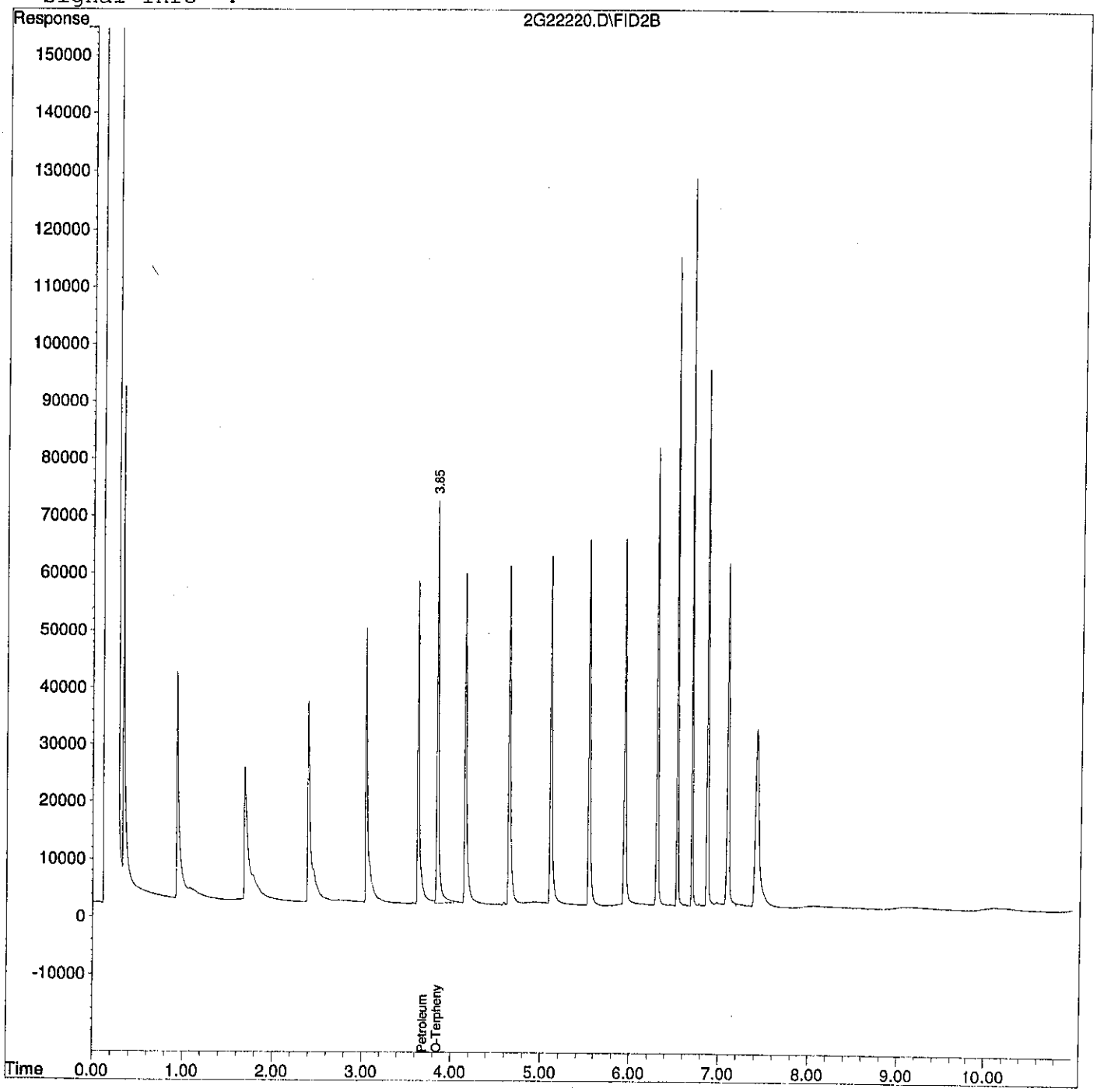
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.85 | 941680 | 53.624 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 268.12%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 15773532 | 794.429 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22220.D Vial: 21
Acq On : 30 Sep 2002 16:04 Operator: CLK
Sample : WG126333-05 50ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22221.D  Vial: 22
Acq On : 30 Sep 2002 16:19  Operator: CLK
Sample : WG126333-06 5ppm PRO STD  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 12:52 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:51:53 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

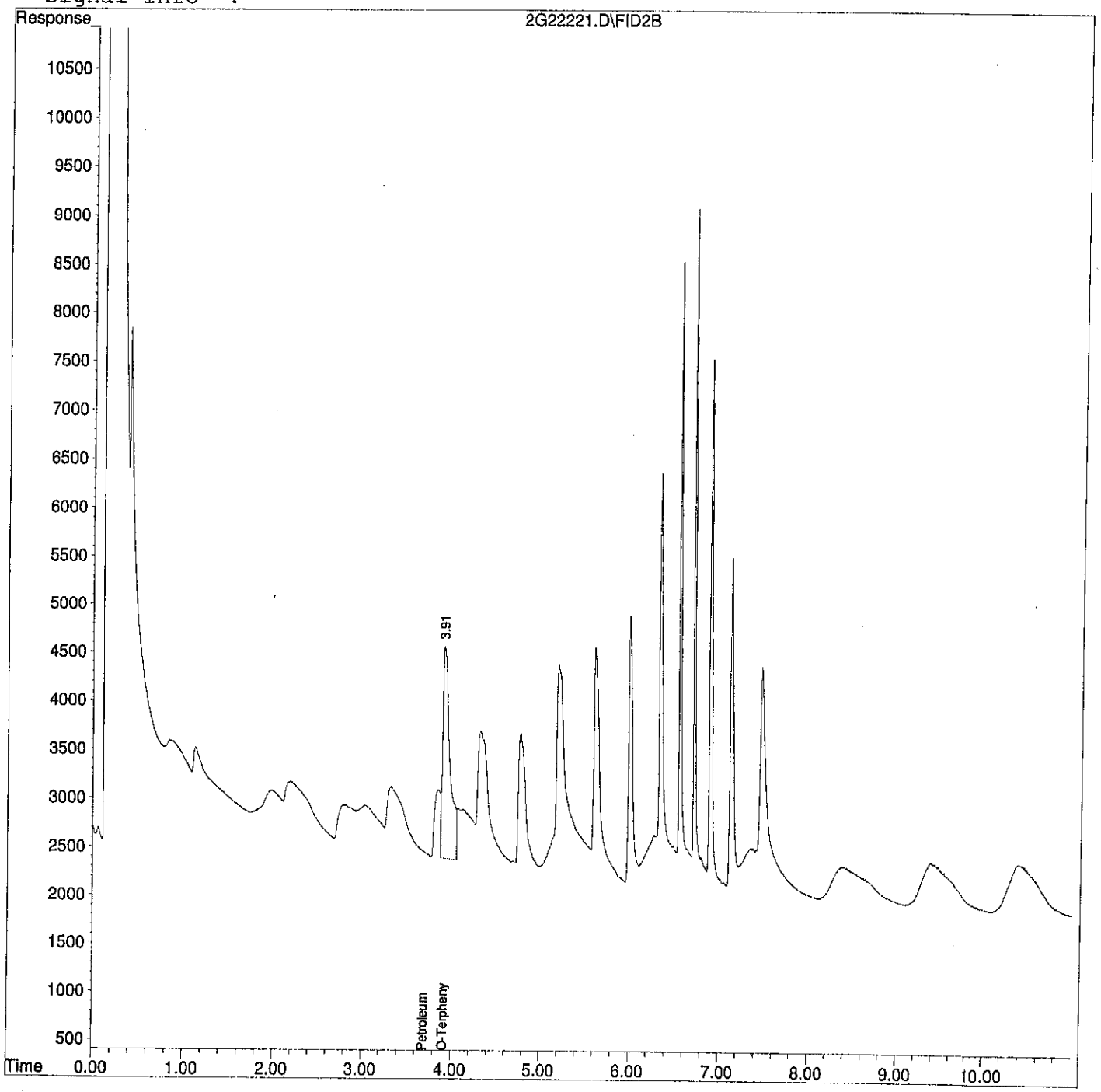
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.91 | 120918 | 6.886 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 34.43%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 1930422 | 97.225 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22221.D Vial: 22
Acq On : 30 Sep 2002 16:19 Operator: CLK
Sample : WG126333-06 5ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 12:52 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:51:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22222.D  Vial: 23
Acq On : 30 Sep 2002 16:39  Operator: CLK
Sample : WG126333-07 200ppm ALT SOURCE PRO STD  Inst : HP2
Misc : 1,1 SOS61-36  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:55:15 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 | 2925.883 | 13.9 | 87 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 0.860 | 99.6# | 0 | 0.05 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
2G22222.D FLASHPRO.M  Tue Oct 01 12:57:29 2002  HP2  Page 1

Data File : C:\HPCHEM\1\DATA\093002\2G22222.D  Vial: 23
Acq On : 30 Sep 2002 16:39  Operator: CLK
Sample : WG126333-07 200ppm ALT SOURCE PRO STD  Inst : HP2
Misc : 1,1 SOS61-36  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:55:15 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
2G22222.D FLASHPRO.M  Tue Oct 01 12:57:29 2002  HP2  Page 277

Data File : C:\HPCHEM\1\DATA\093002\2G22222.D  Vial: 23
Acq On : 30 Sep 2002 16:39  Operator: CLK
Sample : WG126333-07 200ppm ALT SOURCE PRO STD  Inst : HP2
Misc : 1,1 SOS61-36  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 12:57 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

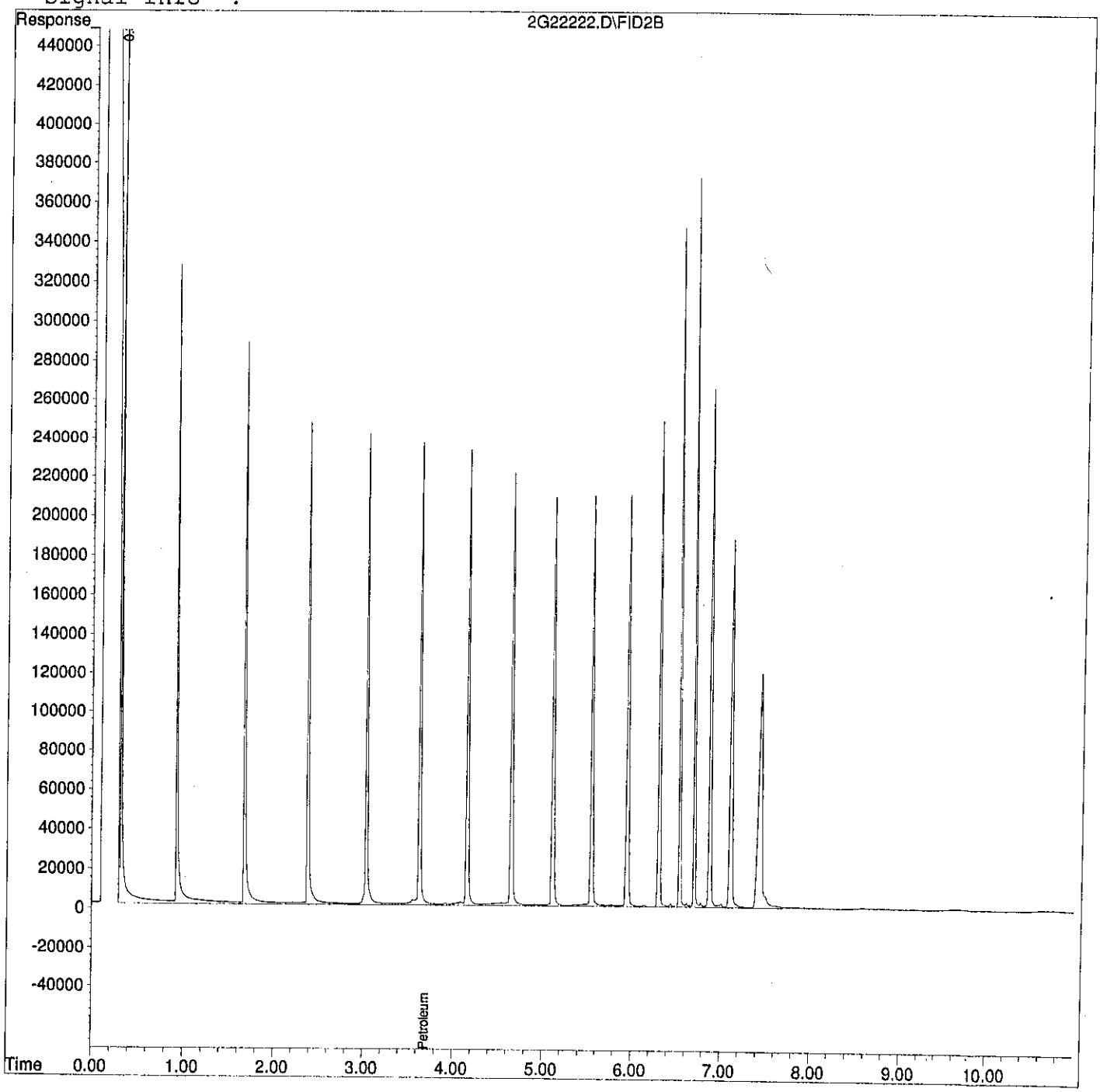
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.92 | 17233 | 0.860 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 4.30%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 57665950 | 2925.883 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22222.D  Vial: 23
Acq On : 30 Sep 2002 16:39  Operator: CLK
Sample : WG126333-07 200ppm ALT SOURCE PRO STD  Inst : HP2
Misc : 1,1 SOS61-36  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 12:57 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22232.D  Vial: 19
Acq On : 30 Sep 2002 19:20  Operator: CLK
Sample : WG126333-08 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3357.543 | 1.2 | 100 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 195.272 | 2.4 | 100 | 0.00 |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22232.D
Acq On : 30 Sep 2002 19:20
Sample : WG126333-08 200ppm PRO CCV
Misc : 1,1 SOS61-44
IntFile : PETRO.E

Vial: 19
Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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\093002\2G22232.D  Vial: 19
Acq On : 30 Sep 2002 19:20  Operator: CLK
Sample : WG126333-08 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:06 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

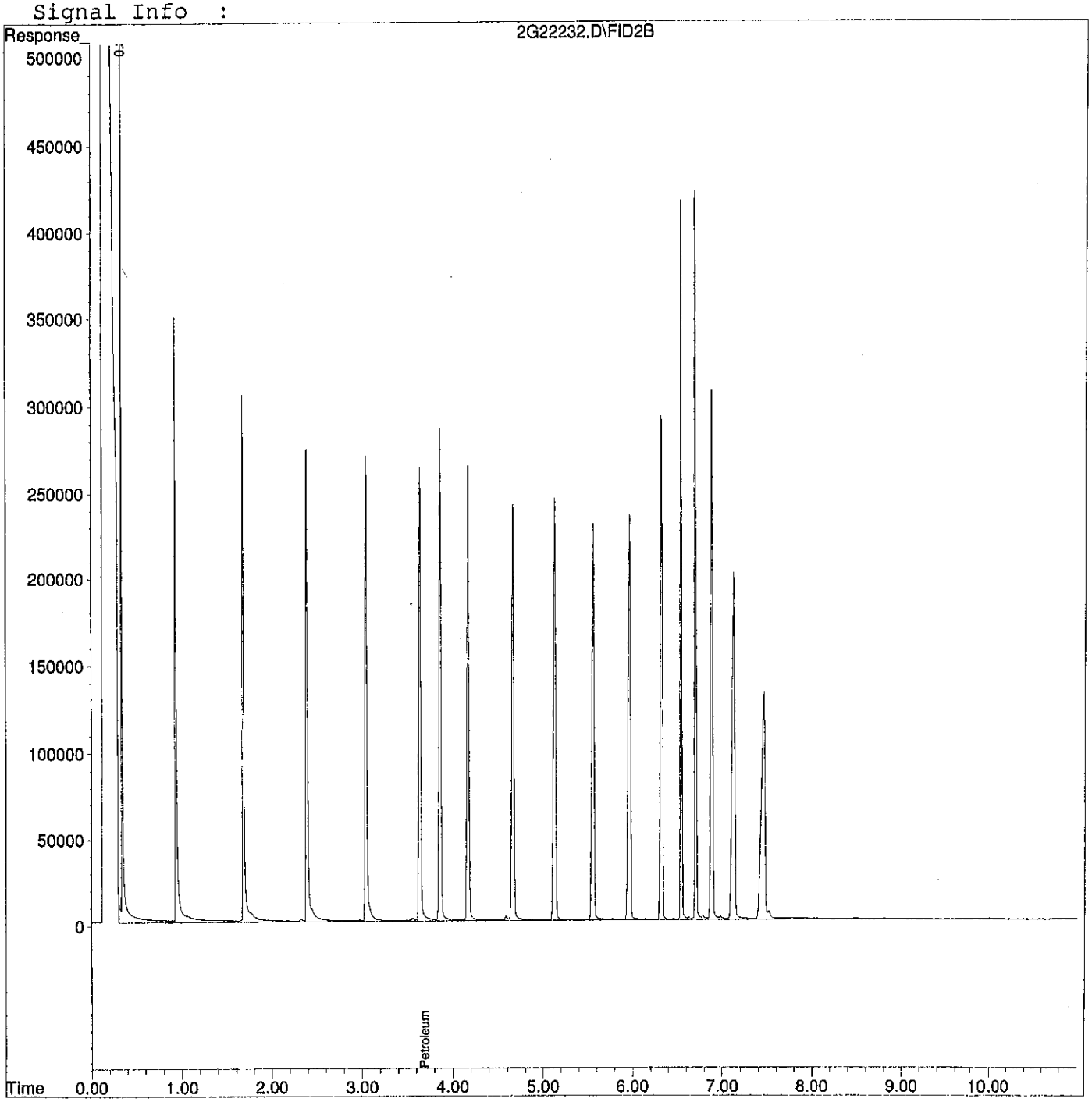
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.87 | 3914720 | 195.272 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery | = 976.36%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery | = 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 66173479 | 3357.543 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22232.D  Vial: 19
Acq On : 30 Sep 2002 19:20  Operator: CLK
Sample : WG126333-08 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:06 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22243.D  Vial: 19
Acq On : 30 Sep 2002 22:13  Operator: CLK
Sample : WG126333-09 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3310.669 | 2.6 | 99 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 194.028 | 3.0 | 100 | 0.00 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
2G22243.D FLASHPRO.M  Tue Oct 01 13:29:33 2002  HP2  Page 1

Data File : C:\HPCHEM\1\DATA\093002\2G22243.D  Vial: 19
Acq On : 30 Sep 2002 22:13  Operator: CLK
Sample : WG126333-09 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 |

Data File : C:\HPCHEM\1\DATA\093002\2G22243.D Vial: 19
Acq On : 30 Sep 2002 22:13 Operator: CLK
Sample : WG126333-09 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:29 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

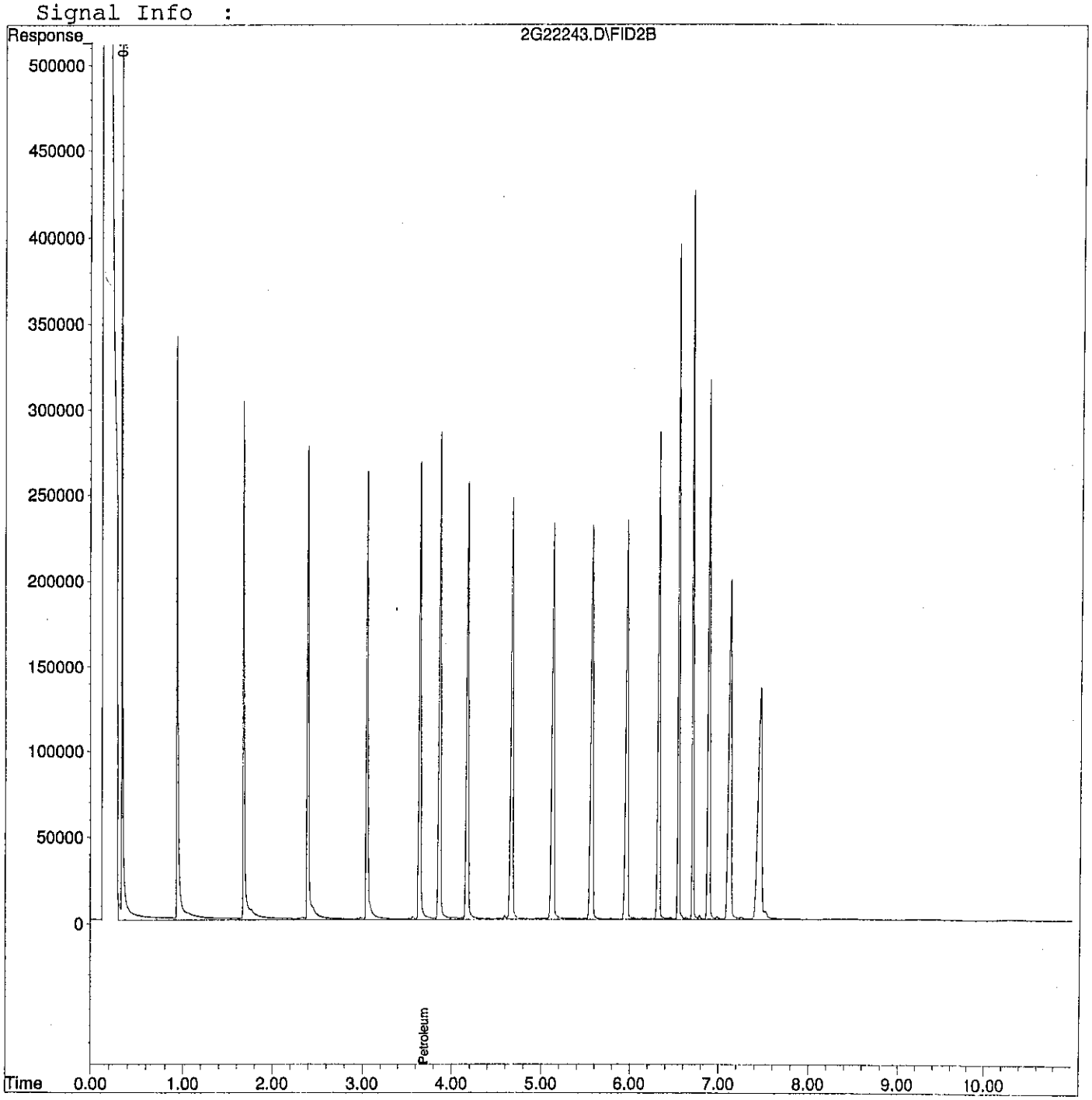
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.87 | 3889770 | 194.028 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery | = 970.14%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery | = 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 65249648 | 3310.669 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22243.D  Vial: 19
Acq On : 30 Sep 2002 22:13  Operator: CLK
Sample : WG126333-09 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:29 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22254.D  Vial: 19
Acq On : 1 Oct 2002 1:02  Operator: CLK
Sample : WG126333-10 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3215.695 | 5.4 | 96 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 187.480 | 6.3 | 96 | 0.00 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
2G22254.D FLASHPRO.M  Tue Oct 01 13:53:52 2002  HP2

Data File : C:\HPCHEM\1\DATA\093002\2G22254.D
Acq On : 1 Oct 2002 1:02
Sample : WG126333-10 200ppm PRO CCV
Misc : 1,1 SOS61-44
IntFile : PETRO.E

Vial: 19
Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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\093002\2G22254.D Vial: 19
Acq On : 1 Oct 2002 1:02 Operator: CLK
Sample : WG126333-10 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

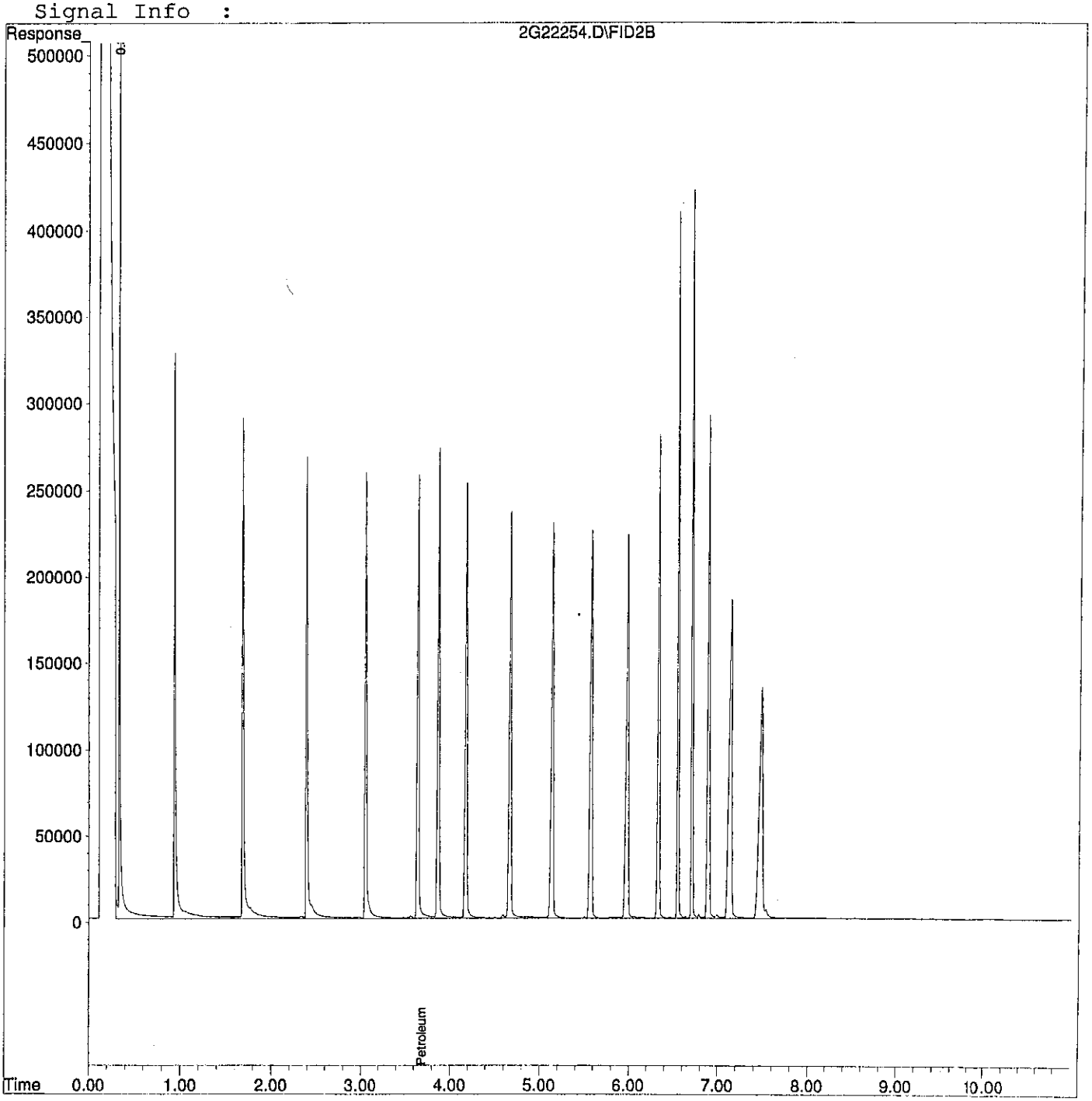
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.88 | 3758503 | 187.480 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 937.40%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 63377823 | 3215.695 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22254.D Vial: 19
Acq On : 1 Oct 2002 1:02 Operator: CLK
Sample : WG126333-10 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

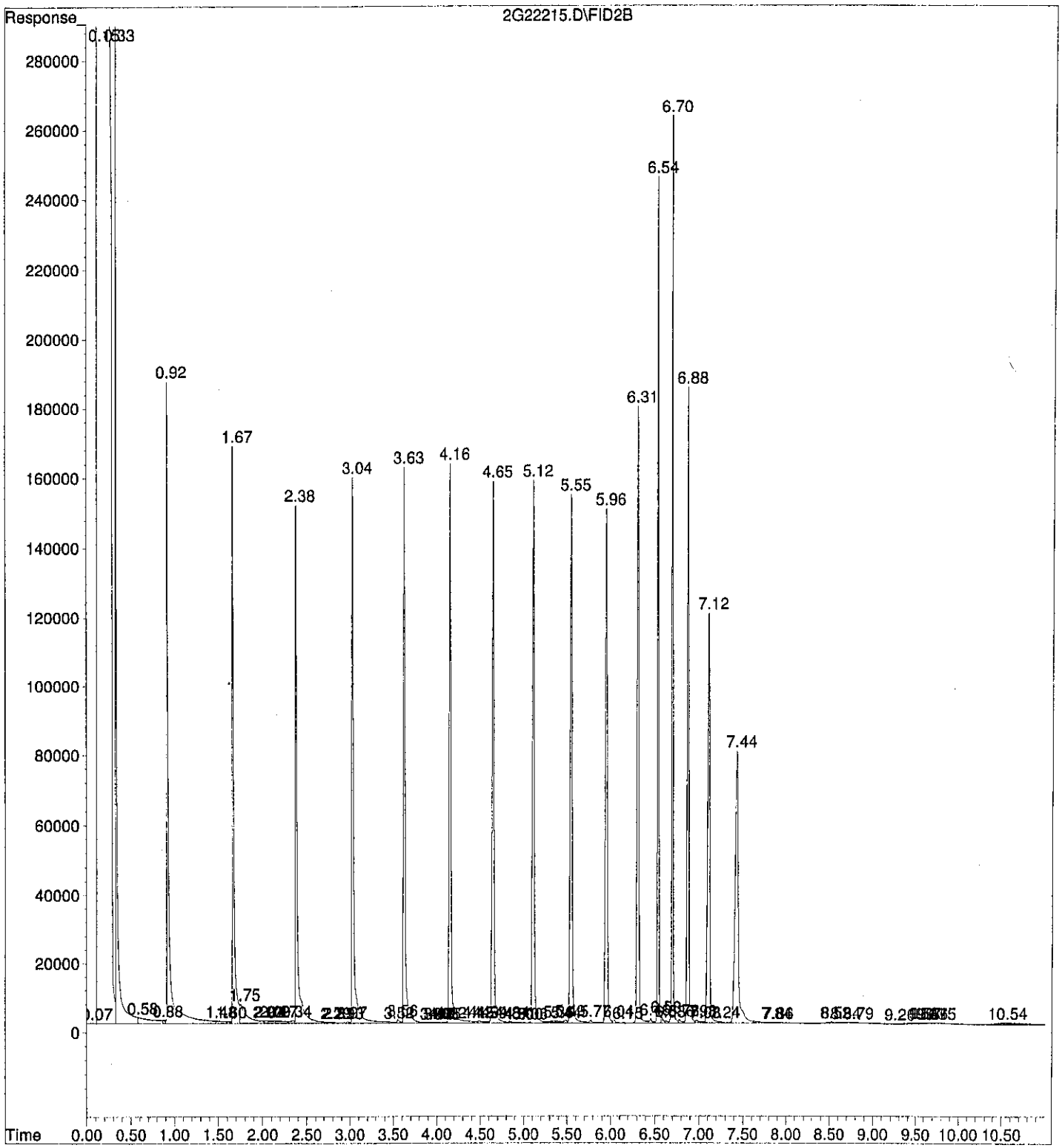
Instrument ID: HP-2

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\093002\2G22215.D
Operator : CLK
Acquired : 30 Sep 2002 14:47 using AcqMethod FLASHPRO.M
Instrument : HP2
Sample Name: WIN DEF STD PRO
Misc Info : 1,1 SOS60-20
Vial Number: 2



# 2.2.6.4 Raw QC Data

Data File : C:\HPCHEM\1\DATA\093002\2G22233.D
Acq On : 30 Sep 2002 19:41
Sample : WG125593-02 BLK 9/19 V191P11
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:22 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 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.86 | 246321 | 12.287 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 61.44% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 5501336 | 279.129 ppb F |

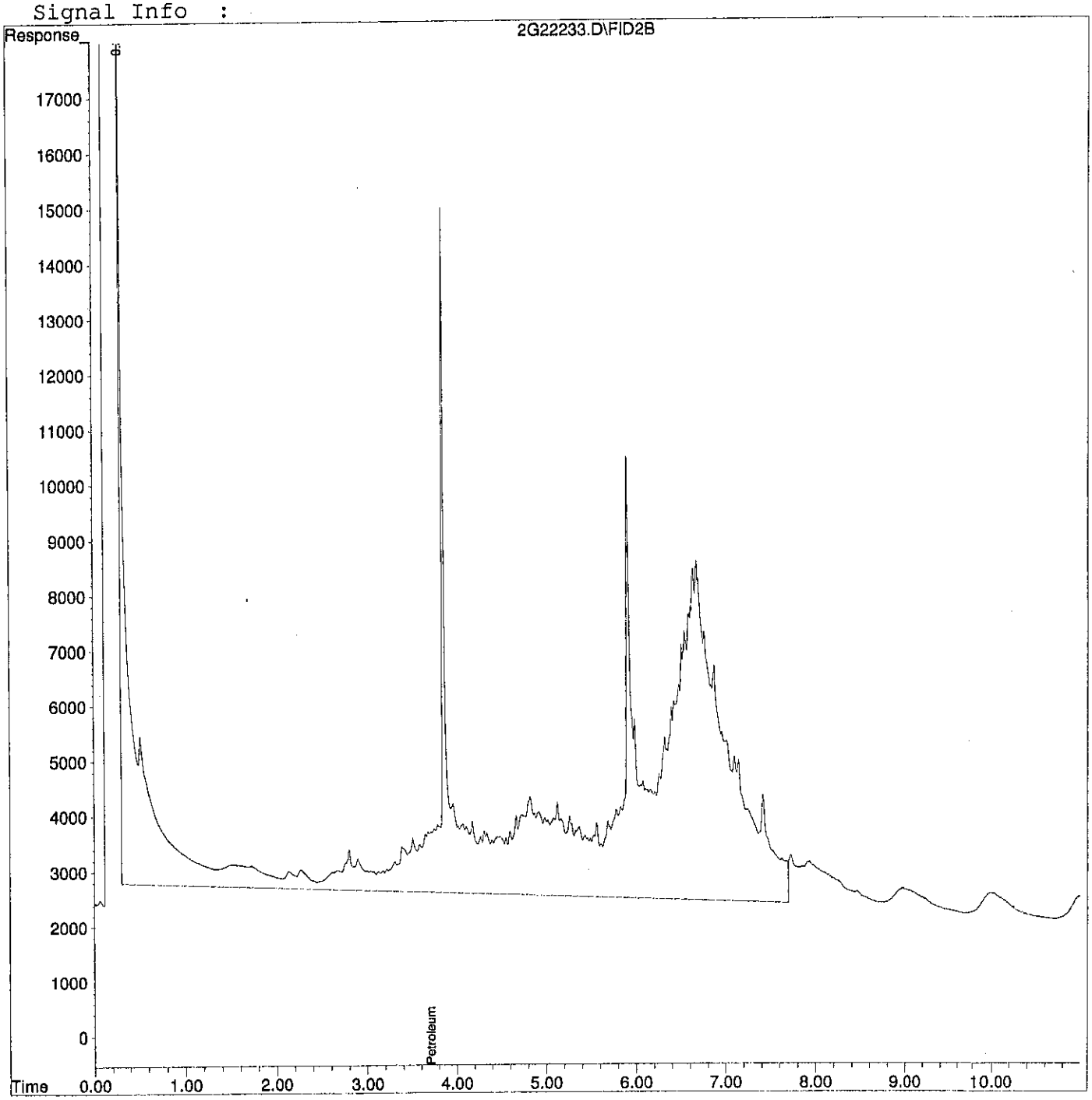
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\093002\2G22233.D
Acq On : 30 Sep 2002 19:41
Sample : WG125593-02 BLK 9/19 V191P11
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:22 2002 Quant Results File: FLASHPRO.RES

Vial: 32
Operator: CLK
Inst : HP2
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22234.D
Acq On : 30 Sep 2002 19:56
Sample : WG125593-03 LCS 9/19 V191P11
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:22 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 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.85 | 299609 | 14.945 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 74.72% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 54241005 | 2752.107 ppb |

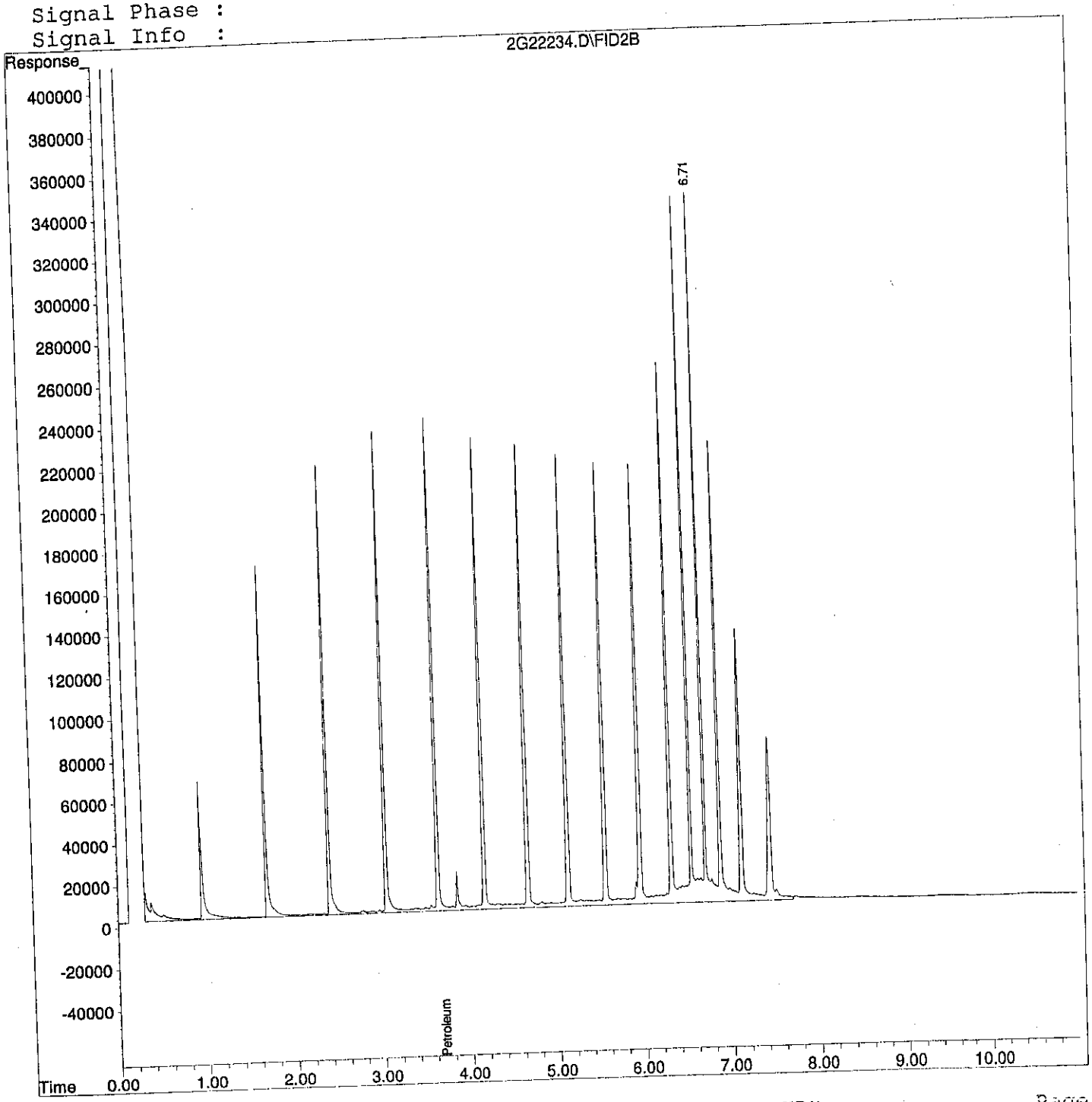
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File : C:\HPCHEM\1\DATA\093002\2G22234.D
Acq On : 30 Sep 2002 19:56
Sample : WG125593-03 LCS 9/19 V191P11
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:22 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 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 2g22195.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 13::1 |
| 2 | 2 | 2g22196.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::2 |
| 3 | 3 | 2g22197.d | 1. | CC 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::3 |
| 4 | 4 | 2g22198.d | 1. | CC 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::2 |
| 5 | 2 | 2g22199.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::3 |
| 6 | 5 | 2g22200.d | 1. | WG126331-01 10000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 7 | 6 | 2g22201.d | 1. | WG126331-02 5000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::0 |
| 8 | 7 | 2g22202.d | 1. | WG126331-03 2500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::1 |
| 9 | 8 | 2g22203.d | 1. | WG126331-04 1000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::2 |
| 10 | 9 | 2g22204.d | 1. | RP 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::3 |
| 11 | 10 | 2g22205.d | 1. | ✓ WG126331-06 100ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 12 | 9 | 2g22206.d | 1. | RP 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::5 |
| 13 | 11 | 2g22207.d | 1. | ✓ WG126331-05 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 12::0 |
| 14 | 12 | 2g22208.d | 1. | ✓ WG126331-07 1000ppm ALT SOURCE DRO STD | 1,1 SOS60-11 | 30 Sep 102 12::2 |
| 15 | 13 | 2g22209.d | 1. | DRO SURR ESS0042-29 | 1,1 | 30 Sep 102 12::3 |
| 16 | 14 | 2g22210.d | 10. | L0209424-09 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::4 |
| 17 | 15 | 2g22211.d | 100. | L0209424-13 Soil DRO 100X | 7,100 SOIL | 30 Sep 102 12::5 |
| 18 | 16 | 2g22212.d | 10. | L0209424-14 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::0 |
| 19 | 1 | 2g22213.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::1 |
| 20 | 8 | 2g22214.d | 1. | ✓ WG126331-08 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 12::2 |
| 21 | 2 | 2g22215.d | 1. | ✓ WIN DEF STD PRO | 1,1 SOS60-20 | 30 Sep 102 12::4 |
| 22 | 17 | 2g22216.d | 1. | WG126333-01 600ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| 23 | 18 | 2g22217.d | 1. | WG126333-02 400ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 24 | 19 | 2g22218.d | 1. | WG126333-03 200ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::3 |
| 25 | 20 | 2g22219.d | 1. | WG126333-04 100ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::4 |
| 26 | 21 | 2g22220.d | 1. | WG126333-05 50ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| 2 | 22 | 2g22221.d | 1. | WG126333-06 5ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 28 | 23 | 2g22222.d | 1. | WG126333-07 200ppm ALT SOURCE PRO STD | 1,1 SOS61-36 | 30 Sep 102 12::3 |
| 29 | 24 | 2g22223.d | 1. | ✓ WG125345-01 BLK 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::0 |
| 30 | 25 | 2g22224.d | 1. | WG125345-02 LCS 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::1 |
| 31 | 26 | 2g22225.d | 1. | WG125345-03 LCS DUP 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::3 |
| 32 | 27 | 2g22226.d | 1. | WG125774-01 BLK 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::4 |
| 33 | 28 | 2g22227.d | 1. | WG125774-02 LCS 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::0 |
| 34 | 29 | 2g22228.d | 1. | WG125774-03 LCS DUP 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::1 |
| 35 | 30 | 2g22229.d | 1. | RE L0209260-01 Soil PRO | 7,1 SOIL | 30 Sep 102 12::3 |
| 36 | 31 | 2g22230.d | 1. | ✓ L0209260-01 Soil PRO RE | 7,1,RE SOIL | 30 Sep 102 12::4 |
| 37 | 1 | 2g22231.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::0 |
| 38 | 19 | 2g22232.d | 1. | ✓ WG126333-08 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 12::2 |
| 39 | 32 | 2g22233.d | 1. | ✓ WG125593-02 BLK 9/19 V191P11 | 1,1 | 30 Sep 102 12::4 |
| 40 | 33 | 2g22234.d | 1. | ✓ WG125593-03 LCS 9/19 V191P11 | 1,1 | 30 Sep 102 12::5 |
| 41 | 34 | 2g22235.d | 1. | RE L0209310-01 Water PRO | 1,1 | 30 Sep 102 12::1 |
| 42 | 35 | 2g22236.d | 1. | ✓ L0209310-02 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 43 | 36 | 2g22237.d | 1. | WG125593-01 L0209310-03 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 44 | 37 | 2g22238.d | 1. | WG125593-04 L0209310-04 Water PRO MS | 1,1 | 30 Sep 102 12::5 |
| 45 | 38 | 2g22239.d | 1. | WG125593-05 L0209310-05 Water PRO MSD | 1,1 | 30 Sep 102 12::1 |
| 46 | 39 | 2g22240.d | 1. | L0209310-06 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 47 | 40 | 2g22241.d | 1. | L0209310-07 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 48 | 1 | 2g22242.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::5 |
| 49 | 19 | 2g22243.d | 1. | ✓ WG126333-09 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 13::1 |
| 5 | 41 | 2g22244.d | 1. | L0209310-08 Water PRO | 1,1 | 30 Sep 102 13::2 |
| 51 | 42 | 2g22245.d | 1. | L0209310-09 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 52 | 43 | 2g22246.d | 1. | L0209310-10 Water PRO | 1,1 | 30 Sep 102 13::5 |
| 53 | 44 | 2g22247.d | 1. | L0209310-11 Water PRO | 1,1 | 30 Sep 102 13::1 |

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 5 | 45 | 2g22248.d | 1. | RR10 L0209337-01 Water PRO | 1,1 | 30 Sep 102 13::3 |
| 55 | 46 | 2g22249.d | 1. | ✓ L0209337-02 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 56 | 47 | 2g22250.d | 1. | L0209337-03 Water PRO | 1,1 | 1 Oct 102 13::0 |
| 57 | 48 | 2g22251.d | 1. | L0209337-04 Water PRO | 1,1 | 1 Oct 102 13::1 |
| 58 | 49 | 2g22252.d | 1. | L0209337-05 Water PRO | 1,1 | 1 Oct 102 13::3 |
| 59 | 1 | 2g22253.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 13::4 |
| 60 | 19 | 2g22254.d | 1. | ✓WG126333-10 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::0 |
| 61 | 50 | 2g22255.d | 1. | ✓L0209337-06 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 62 | 51 | 2g22256.d | 1. | ✓L0209337-07 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 63 | 52 | 2g22257.d | 1. | ✓WG125523-02 BLK 9/18 V191P3 | 1,1 | 1 Oct 102 12::4 |
| 64 | 53 | 2g22258.d | 1. | ✓WG125523-03 LCS 9/18 V191P3 | 1,1 | 1 Oct 102 12::0 |
| 65 | 54 | 2g22259.d | 1. | RE L0209285-01 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 66 | 55 | 2g22260.d | 1. | L0209285-02 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 67 | 56 | 2g22261.d | 1. | L0209285-03 Water PRO | 1,1 | 1 Oct 102 12::5 |
| 68 | 57 | 2g22262.d | 1. | L0209285-07 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 69 | 58 | 2g22263.d | 1. | L0209285-08 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 70 | 1 | 2g22264.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::3 |
| 71 | 19 | 2g22265.d | 1. | ✓ WG126333-11 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::5 |
| 72 | 59 | 2g22266.d | 1. | RR L0209285-09 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 73 | 60 | 2g22267.d | 1. | WG125523-01 L0209285-04 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 74 | 61 | 2g22268.d | 1. | WG125523-04 L0209285-05 Water PRO MS | 1,1 | 1 Oct 102 12::3 |
| 75 | 62 | 2g22269.d | 1. | WG125523-05 L0209285-06 Water PRO MSD | 1,1 | 1 Oct 102 12::5 |
| 76 | 63 | 2g22270.d | 1. | WG125776-02 BLK 9/23 V191P31 | 1,1 | 1 Oct 102 12::0 |
| 77 | 64 | 2g22271.d | 1. | WG125776-03 LCS 9/23 V191P31 | 1,1 | 1 Oct 102 12::2 |
| 7[illegible] | 65 | 2g22272.d | 1. | L0209285-01 Water PRO RE | 1,1,RE | 1 Oct 102 12::3 |

CLK
10/1/02
[illegible]

KEMRON ENVIRONMENTAL SERVICES

# Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 9/30/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 093002

Analyst Initials CLK

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. # 3 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**

L0209424-09 10X, SS DL
-10 100X, ⊥
-11 10X, ⊥
W6125345-01 BLK 9/16 V190P103, took hit >RL, O-Terphenyl high
-02 LCS ⊥ ⊥, O-Terphenyl high
-03 LCS DUP ⊥ ⊥
L0209260-01, O-Terphenyl high, Needed RE due to BLK
-01 RE, O-Terphenyl high,
L0209310-01, O-Terphenyl low, Needs RE
L0209337-01, Needs 10X
W6125523-02 BLK 9/18 V191P3
L0209285-01, Needed RE due to BLK
-02
-03
-07
-08

Reviewed By: [signature]

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Volume 191
Page 11

Parameter: FLA-PRO HLO SOP #: EXPRO Revision #: 3
Extraction Analyst(s): RCK TV/KD Analyst(s): CAF, DP
Date/Time Extracted: 9/19/02 0830 Date TV/KD: 9-19-02
Spike/Surrogate Analyst: CAF Witness: RCK
Surrogate #: ESS 0041-38 Earliest Hold Date: 9/24
Spike #: A = ESS0041-41 Spike #: B = —

Extraction Work Group WG 125593
Analytical Work Group WG 126690

Extract Relinquished By: RCK
Extract Received By & Date: CAF 9/20/02

| | 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 | | ✓ | | | 1000 mL | 1 mL | | 1 mL | T | | | | WG125593-02 |
| 2 | LCS | | ✓ | | | ⊥ | ⊥ | 1 mL | ⊥ | ⊥ | | | | WG -03 |
| 3 | 09-310-01 | FLA-PRO | ✓ | | | 975 mL | | | | | | | | |
| 4 | -02 | ⊥ | ✓ | | | 960 mL | | | | | | | | |
| 5 | -03 | | ✓ | | | 975 mL | | | | | | | | WG125593-01 |
| 6 | -04 MS | | ✓ | | | ⊥ | | 1 mL | | | | | | * -04 |
| 7 | -05 MSD | | ✓ | | | 1000 mL | | ⊥ | | | | | | * -05 |
| 8 | -06 | | ✓ | | | ⊥ | | | | | | | | |
| 9 | -07 | | ✓ | | | 970 mL | | | | | | | | |
| 10 | -08 | | ✓ | | | 1000 mL | | | | | | | | |
| 11 | -09 | | ✓ | | | ⊥ | | | | | | | | |
| 12 | -10 | | ✓ | | | ⊥ | | | ⊥ | ⊥ | | | | |
| 13 | -11 | ⊥ | ✓ | | | 950 mL | ⊥ | | 1 mL | T | | | | |
| 14 | 09-337-01 | FLA-PRO | ✓ | | | 950 mL | 1 mL | | | | | | | |
| 15 | -02 | ⊥ | ✓ | | | 910 mL | ⊥ | | ⊥ | ⊥ | | | | |
| 16 | -03 | | ✓ | | | 910 mL | | | | | | | | |
| 17 | -04 | | ✓ | | | 960 mL | | | | | | | | |
| 18 | -05 | | ✓ | | | 980 mL | | | | | | | | |
| 19 | -06 | | ✓ | | | 1000 mL | | | | | | | | |
| 20 | -07 | ⊥ | ✓ | | | 930 mL | ⊥ | | ⊥ | ⊥ | | | | X |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

9/3 (rows 3–4)
9/20 (rows 16–17)

DP 09/19/02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: 1:1 HCl Lot #: EA2199
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: EA 2201

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

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Extraction Notes For Volume # 191 Page # 11

General Comments: * MS, MSD of 09-310-03

Extraction Anomalies: * Used (B) Bottle of SX 09-337-07 due to loss of SX during concentration stage.

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

Run Date: 9/30/02

Analyst: CLK

Instrument: HP2

Method: 8015 (DRO)
(PRO)

| Workorders: | Due Date: | Priority: |
|---|---|---|
| 09-424 | 10/1 | |
| 09-260 | 9/19 | P1 |
| 09-260 (RE) | 9/19 | P1 |
| 09-310 | 9/30 | — |
| 09-337 | 9/26 | — |
| 09-285 | 9/27 | — |

| | | Analyst |
|---|---|---|
| System Performance Check: | Endrin/DDT Breakdown | NA |
| Initial Calibration: | Average RF | ✓ |
| | Linear or quadratic regression | NA |
| | Alt Source Check | ✓ |
| Continuing Calibration: | Continuing Calibration | ✓ |
| | Client Specific Requirements | ✓ |
| | Ending Standards | ✓ |
| | Special Standards | NA |
| Blanks: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| LCS/LCS DUP: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| | Spike Compounds | ✓ |
| | MS/MSD | ✓ |
| Samples: | Quant Reports/Chromatograms | ✓ |
| | Surrogates | ✓ |
| | Dilution runs | CLK ✓ |
| | Check Sample Histories | NA |
| Data Package: | Run logs | ✓ |
| | Bench sheets | ✓ |
| | QC sheets | ✓ |
| | Upload results | ✓ |
| | Seedpak workgroups | ✓ |
| | Level 2 | |
| | Level 3 | |
| | Level 4 copies | |
| | Level x | |
| | Case narratives | |

| | Supervisor |
|---|---|
| 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: | |

√ = Checked & OK

NA = Not Applicable

Comments:

09-310-01, Needs RE
09-337-01, Needs 10X

Primary Reviewer: CLK 10/1/02

Secondary Reviewer: TRC 10/1/02

Supervisor Review: [illegible] 10/1/02

**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)]

| | | Example: |
|---|---|---|
| Where: | 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)]

| | | Example: |
|---|---|---|
| | Ax = Area of the compound being measured | 10000 |
| | Vf = Final volume of sample extract (mL). | 1 |
| Where: | 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.: L0209310**

**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** : For mid-run and ending CCVs analyzed with the initial extraction batch of this sample delivery group, pyrene %D, as measured by the confirming fluorescence detector, was outside of the limits. There was no pyrene to confirm by this detector.

**BATCH QA/QC**

**Method Blank**: All acceptance criteria were met.
**Laboratory Control Samples**: All acceptance criteria were met.
**Matrix Spikes**: The MS yielded percent recoveries for anthracene and pyrene that were outside of advisory limits.

**SAMPLES**

**Surrogates**: Sample fractions 02 yielded a percent recovery for the surrogate that was below the advisory limits. This sample was re-extracted out of holding time and yielded a percent recovery for the surrogate that was below the advisory limit. Surrogate failure may be attributed to sample matrix effects.
**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: Eric Zaun DATE: 10/10/02

Rev. 7/14/00

## PAH HPLC DATA (8310)

**Login Number** L0209310

**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: NRL Date: 10/9/02

# 2.2.7.1 QC Summary

# METHOD BLANK SUMMARY

Login Number: L0209310
Blank File ID: 4L003592.R
Date Analyzed: 09/22/02
Time Analyzed: 04:11
Analyst: "

Work Group: WG125710
Blank Sample ID: WG125616-02
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 | WG125616-03 | 4L003593.R | 09/22/02 05:08 | |
| 062-CEF46-2S-Q3-02-20 | L0209310-01 | 4L003594.R | 09/22/02 06:05 | 01 |
| 062-CEF46-7I-Q3-02-20 | L0209310-02 | 4L003595.R | 09/22/02 07:01 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-03 | 4L003596.R | 09/22/02 07:58 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-04 | 4L003597.R | 09/22/02 08:55 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-05 | 4L003598.R | 09/22/02 09:51 | 01 |
| 062-CEF46-12I-Q3-02-20 | L0209310-06 | 4L003599.R | 09/22/02 10:48 | 01 |
| 062-CEF46-13I-Q3-02-20 | L0209310-07 | 4L003600.R | 09/22/02 11:44 | 01 |
| 062-CEF46-14D-Q3-02-20 | L0209310-08 | 4L003602.R | 09/22/02 13:38 | 01 |
| 062-CEF46-15I-Q3-02-20 | L0209310-09 | 4L003603.R | 09/22/02 14:34 | 01 |
| 062-46DUP-Q3-02-20 | L0209310-10 | 4L003604.R | 09/22/02 15:31 | 01 |
| 062-46EQB-Q3-02-20 | L0209310-11 | 4L003605.R | 09/22/02 16:28 | 01 |

KEMRON FORMS - Modified 07/10/2002
Version 1.1
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0209310
Blank File ID: 4L003592.F
Date Analyzed: 09/22/02
Time Analyzed: 04:11
Analyst: "

Work Group: WG125710
Blank Sample ID: WG125616-02
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 | WG125616-03 | 4L003593.F | 09/22/02 05:08 | CF1 |
| 062-CEF46-7I-Q3-02-20 | L0209310-02 | 4L003595.F | 09/22/02 07:01 | CF01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-03 | 4L003596.F | 09/22/02 07:58 | CF01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-04 | 4L003597.F | 09/22/02 08:55 | CF01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-05 | 4L003598.F | 09/22/02 09:51 | CF01 |
| 062-46DUP-Q3-02-20 | L0209310-10 | 4L003604.F | 09/22/02 15:31 | CF01 |

KEMRON FORMS - Modified 07/10/2002
Version 1.1
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209310
Run Date: 09/22/2002
Sample ID: WG125616-02
Instrument ID: HPLC4
Run Time: 04:11
Method: 8310
File ID: 4L003592.R
Analyst: "
Matrix: Water
Workgroup (AAB#): WG125710
Units: ug/L
Contract #:
Cal ID: HPLC4-20-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0673 | 1 | J |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 44.2 | 40 - 132 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/02/2002
Version 1.2
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209310
Run Date: 09/22/2002
Sample ID: WG125616-02
Instrument ID: HPLC4
Run Time: 04:11
Method: 8310
File ID: 4L003592.F
Analyst: "
Matrix: Water
Workgroup (AAB#): WG125710
Units: ug/L
Contract #:
Cal ID: HPLC4-20-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0565 | 1 | J |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 44.6 | 40 - 132 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/02/2002
Version 1.2
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209310
Instrument ID: HPLC4
File ID: 4L003593.R
Workgroup (AAB#): WG125710
Contract #:

Run Date: 09/22/2002
Run Time: 05:08
Analyst: "

Sample ID: WG125616-03
Method: 8310
Matrix: Water
Units: ug/L
Cal ID: HPLC4-20-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 50.0 | 14.8 | 29.6 | 25 - 78 | |
| Acenaphthylene | 50.0 | 14.6 | 29.1 | 25 - 77 | |
| Anthracene | 50.0 | 26.0 | 52.0 | 47 - 101 | |
| Benzo(a)anthracene | 5.00 | 2.99 | 59.7 | 50 - 115 | |
| Benzo(a)pyrene | 5.00 | 2.47 | 49.3 | 29 - 113 | |
| Benzo(b)fluoranthene | 5.00 | 2.83 | 56.5 | 41 - 110 | |
| Benzo(g,h,i)perylene | 5.00 | 1.76 | 35.2 | 11 - 84 | |
| Benzo(k)fluoranthene | 2.50 | 1.11 | 44.4 | 25 - 107 | |
| Chrysene | 5.00 | 2.58 | 51.7 | 39 - 120 | |
| Dibenzo(a,h)anthracene | 5.00 | 1.80 | 36.0 | 10 - 92 | |
| Fluoranthene | 5.00 | 2.83 | 56.6 | 55 - 104 | |
| Fluorene | 50.0 | 18.7 | 37.5 | 29 - 84 | |
| Indeno(1,2,3-cd)pyrene | 5.00 | 2.05 | 40.9 | 16 - 98 | |
| Naphthalene | 50.0 | 13.3 | 26.6 | 25 - 68 | |
| 2-Methylnaphthalene | 50.0 | 14.1 | 28.3 | 26 - 72 | |
| 1-Methylnaphthalene | 50.0 | 13.7 | 27.4 | 26 - 71 | |
| Phenanthrene | 50.0 | 23.5 | 46.9 | 39 - 95 | |
| Pyrene | 5.00 | 2.81 | 56.1 | 56 - 104 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 44.0 | 40 - 132 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/02/2002
Version 1.3
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209310
Instrument ID: HPLC4
File ID: 4L003593.F
Workgroup (AAB#): WG125710
Contract #:

Run Date: 09/22/2002
Run Time: 05:08
Analyst: "

Sample ID: WG125616-03
Method: 8310
Matrix: Water
Units: ug/L
Cal ID: HPLC4-20-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 50.0 | 14.4 | 28.8 | 25 - 78 | |
| Acenaphthylene | 50.0 | | 0 | 25 - 77 | * |
| Anthracene | 50.0 | 25.7 | 51.5 | 47 - 101 | |
| Benzo(a)anthracene | 5.00 | 2.81 | 56.1 | 50 - 115 | |
| Benzo(a)pyrene | 5.00 | 2.29 | 45.9 | 29 - 113 | |
| Benzo(b)fluoranthene | 5.00 | 2.78 | 55.5 | 41 - 110 | |
| Benzo(g,h,i)perylene | 5.00 | 1.52 | 30.4 | 11 - 84 | |
| Benzo(k)fluoranthene | 2.50 | 1.10 | 43.8 | 25 - 107 | |
| Chrysene | 5.00 | 2.44 | 48.8 | 39 - 120 | |
| Dibenzo(a,h)anthracene | 5.00 | 1.61 | 32.2 | 10 - 92 | |
| Fluoranthene | 5.00 | 2.82 | 56.4 | 55 - 104 | |
| Fluorene | 50.0 | 18.3 | 36.6 | 29 - 84 | |
| Indeno(1,2,3-cd)pyrene | 5.00 | 2.01 | 40.1 | 16 - 98 | |
| Naphthalene | 50.0 | 12.5 | 25.0 | 25 - 68 | |
| 2-Methylnaphthalene | 50.0 | 13.5 | 27.0 | 26 - 72 | |
| 1-Methylnaphthalene | 50.0 | 13.1 | 26.2 | 26 - 71 | |
| Phenanthrene | 50.0 | 22.0 | 44.1 | 39 - 95 | |
| Pyrene | 5.00 | 2.37 | 47.4 | 56 - 104 | * |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 43.7 | 40 - 132 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/02/2002
Version 1.3
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0209310
Instrument ID: HPLC4
Parent ID: L0209310-03
Sample ID: L0209310-04 MS
Sample ID: L0209310-05 MSD

Cal ID: HPLC4-20-SEP-2002
Contract #:
File ID: 4L003596.R Dil: 1
File ID: 4L003597.R Dil: 1
File ID: 4L003598.R Dil: 1

Worknum: WG125710
Method: 8310
Matrix: Water
Units: ug/L

| Analyte | Parent | MS Spiked | MS Found | MS %Rec | MSD Spiked | MSD Found | MSD %Rec | %RPD | %Rec Limits | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | 52.1 | 13.8 | 26.5 | 50.0 | 14.3 | 28.7 | 3.67 | 25 - 68 | 50 | |
| 1-Methylnaphthalene | ND | 52.1 | 14.1 | 27.1 | 50.0 | 15.0 | 30.0 | 5.89 | 26 - 71 | 50 | |
| 2-Methylnaphthalene | ND | 52.1 | 14.6 | 28.1 | 50.0 | 15.2 | 30.4 | 3.94 | 26 - 72 | 50 | |
| Acenaphthylene | ND | 52.1 | 14.9 | 28.7 | 50.0 | 16.4 | 32.8 | 9.17 | 25 - 77 | 50 | |
| Acenaphthene | ND | 52.1 | 15.3 | 29.4 | 50.0 | 16.7 | 33.4 | 8.73 | 25 - 78 | 50 | |
| Fluorene | ND | 52.1 | 18.7 | 35.9 | 50.0 | 20.5 | 40.9 | 9.03 | 29 - 84 | 50 | |
| Phenanthrene | ND | 52.1 | 23.2 | 44.6 | 50.0 | 25.6 | 51.3 | 9.85 | 39 - 95 | 50 | |
| Anthracene | ND | 52.1 | 23.6 | 45.2 | 50.0 | 26.1 | 52.1 | 10.1 | 47 - 101 | 50 | * |
| Fluoranthene | ND | 5.21 | 2.87 | 55.1 | 5.00 | 3.02 | 60.3 | 4.92 | 55 - 104 | 50 | |
| Pyrene | ND | 5.21 | 2.88 | 55.2 | 5.00 | 3.01 | 60.3 | 4.68 | 56 - 104 | 50 | * |
| Benzo(a)anthracene | ND | 5.21 | 2.60 | 50.0 | 5.00 | 2.66 | 53.2 | 2.26 | 50 - 115 | 50 | |
| Chrysene | ND | 5.21 | 2.65 | 50.9 | 5.00 | 2.49 | 49.7 | 6.54 | 39 - 120 | 50 | |
| Benzo(b)fluoranthene | ND | 5.21 | 2.50 | 48.0 | 5.00 | 2.51 | 50.3 | 0.450 | 41 - 110 | 50 | |
| Benzo(k)fluoranthene | ND | 2.60 | 0.899 | 34.5 | 2.50 | 0.777 | 31.1 | 14.4 | 25 - 107 | 50 | |
| Benzo(a)pyrene | ND | 5.21 | 2.05 | 39.3 | 5.00 | 2.11 | 42.2 | 3.11 | 29 - 113 | 50 | |
| Indeno(1,2,3-cd)pyrene | ND | 5.21 | 1.67 | 32.0 | 5.00 | 1.46 | 29.2 | 13.3 | 16 - 98 | 50 | |
| Dibenzo(a,h)anthracene | ND | 5.21 | 1.36 | 26.1 | 5.00 | 1.11 | 22.1 | 20.4 | 10 - 92 | 50 | |
| Benzo(g,h,i)perylene | ND | 5.21 | 1.60 | 30.8 | 5.00 | 1.53 | 30.7 | 4.27 | 11 - 84 | 50 | |

* FAILS %REC LIMIT

# FAILS RPD LIMIT

KEMRON FORMS - Modified 10/02/2002
Version 1.2
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum: L0209310
Instrument ID: HPLC4
Parent ID: L0209310-03
Sample ID: L0209310-04 MS
Sample ID: L0209310-05 MSD

Cal ID: HPLC4-20-SEP-2002
Contract #:
File ID: 4L003596.F Dil: 1
File ID: 4L003597.F Dil: 1
File ID: 4L003598.F Dil: 1

Worknum: WG125710
Method: 8310
Matrix: Water
Units: ug/L

| Analyte | Parent | MS Spiked | MS Found | MS %Rec | MSD Spiked | MSD Found | MSD %Rec | %RPD | %Rec Limits | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | ND | 52.1 | 13.0 | 24.9 | 50.0 | 13.4 | 26.9 | 3.58 | 25 - 68 | 50 | * |
| 1-Methylnaphthalene | ND | 52.1 | 13.5 | 25.9 | 50.0 | 14.3 | 28.6 | 5.73 | 26 - 71 | 50 | * |
| 2-Methylnaphthalene | ND | 52.1 | 14.0 | 26.9 | 50.0 | 14.6 | 29.1 | 3.83 | 26 - 72 | 50 | |
| Acenaphthylene | ND | 52.1 | 0 | 0 | 50.0 | 0 | 0 | 0 | 25 - 77 | 50 | * |
| Acenaphthene | ND | 52.1 | 14.9 | 28.5 | 50.0 | 16.2 | 32.4 | 8.71 | 25 - 78 | 50 | |
| Fluorene | ND | 52.1 | 18.2 | 34.9 | 50.0 | 20.0 | 40.1 | 9.73 | 29 - 84 | 50 | |
| Phenanthrene | ND | 52.1 | 21.8 | 41.9 | 50.0 | 24.1 | 48.2 | 9.97 | 39 - 95 | 50 | |
| Anthracene | ND | 52.1 | 23.3 | 44.7 | 50.0 | 25.7 | 51.5 | 10.1 | 47 - 101 | 50 | * |
| Fluoranthene | ND | 5.21 | 2.84 | 54.5 | 5.00 | 2.98 | 59.7 | 4.95 | 55 - 104 | 50 | * |
| Pyrene | ND | 5.21 | 2.43 | 46.6 | 5.00 | 2.53 | 50.6 | 4.20 | 56 - 104 | 50 | * |
| Benzo(a)anthracene | ND | 5.21 | 2.46 | 47.2 | 5.00 | 2.51 | 50.1 | 1.89 | 50 - 115 | 50 | * |
| Chrysene | ND | 5.21 | 2.03 | 38.9 | 5.00 | 1.94 | 38.8 | 4.45 | 39 - 120 | 50 | * |
| Benzo(b)fluoranthene | ND | 5.21 | 2.46 | 47.2 | 5.00 | 2.45 | 49.0 | 0.361 | 41 - 110 | 50 | |
| Benzo(k)fluoranthene | ND | 2.60 | 0.897 | 34.5 | 2.50 | 0.801 | 32.1 | 11.3 | 25 - 107 | 50 | |
| Benzo(a)pyrene | ND | 5.21 | 1.86 | 35.8 | 5.00 | 1.75 | 35.0 | 6.27 | 29 - 113 | 50 | |
| Indeno(1,2,3-cd)pyrene | ND | 5.21 | 1.65 | 31.7 | 5.00 | 1.41 | 28.3 | 15.5 | 16 - 98 | 50 | |
| Dibenzo(a,h)anthracene | ND | 5.21 | 1.40 | 26.8 | 5.00 | 1.13 | 22.6 | 21.3 | 10 - 92 | 50 | |
| Benzo(g,h,i)perylene | ND | 5.21 | 1.32 | 25.4 | 5.00 | 1.10 | 21.9 | 18.6 | 11 - 84 | 50 | |

* FAILS %REC LIMIT

# FAILS RPD LIMIT

KEMRON FORMS - Modified 10/02/2002
Version 1.2
Report generated 10/09/2002 16:52

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8310

Login Number: L0209310

AAB#: WG125710

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| 062-46DUP-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 2.47 | 09/22/02 | 40 | 3.17 | |
| 062-46EQB-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.94 | 09/22/02 | 40 | 3.21 | |
| 062-CEF46-12I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 2.02 | 09/22/02 | 40 | 2.98 | |
| 062-CEF46-13I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 2.00 | 09/22/02 | 40 | 3.02 | |
| 062-CEF46-14D-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.98 | 09/22/02 | 40 | 3.10 | |
| 062-CEF46-15I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 2.05 | 09/22/02 | 40 | 3.14 | |
| 062-CEF46-2S-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.84 | 09/22/02 | 40 | 2.78 | |
| 062-CEF46-7I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.89 | 09/22/02 | 40 | 2.82 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.92 | 09/22/02 | 40 | 2.86 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.92 | 09/22/02 | 40 | 2.90 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/19/02 | 7 | 1.92 | 09/22/02 | 40 | 2.94 | |

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

KEMRON FORMS - Modified 09/12/2002
Version 1.2
Report generated 10/09/2002 16:52

SURROGATE STANDARDS

Login Number: L0209310
Instrument Id: HPLC4
Workgroup (AAB#): WG125710

Method: 8310
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209310-01 | 1.00 | 01 | 40.1 |
| L0209310-02 | 1.00 | 01 | 28.5 |
| L0209310-02 | 1.00 | CF01 | 27.3 |
| L0209310-03 | 1.00 | 01 | 50.6 |
| L0209310-03 | 1.00 | CF01 | 52.2 |
| L0209310-04 | 1.00 | 01 | 53.4 |
| L0209310-04 | 1.00 | CF01 | 53.3 |
| L0209310-05 | 1.00 | 01 | 57.9 |
| L0209310-05 | 1.00 | CF01 | 56.8 |
| L0209310-06 | 1.00 | 01 | 59.1 |
| L0209310-07 | 1.00 | 01 | 79.1 |
| L0209310-08 | 1.00 | 01 | 67.8 |
| L0209310-09 | 1.00 | 01 | 77.7 |
| L0209310-10 | 1.00 | 01 | 64.5 |
| L0209310-10 | 1.00 | CF01 | 63.8 |
| L0209310-11 | 1.00 | 01 | 74.8 |
| WG125616-02 | 1.00 | CF1 | 44.6 |
| WG125616-02 | 1.00 | | 44.2 |
| WG125616-03 | 1.00 | CF1 | 43.7 |
| WG125616-03 | 1.00 | | 44.0 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - p-terphenyl-d14 | 40 | - | 132 |

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 10/08/2002
Version 1.2
Report generated 10/09/2002 16:52

Calibration Table

==========

HPLC4 8310 CALIBRATION

Calib. Data Modified : 9/21/2002 3:41:57 PM

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=360,100, TT

| RetTime [min] | Sig | Lvl | Amount [ug/L] | Area | Amt/Area | Ref | Grp | Name |
|---|---|---|---|---|---|---|---|---|
| 9.370 | 2 | 1 | 1.00000 | 113.50661 | 8.81006e-3 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 575.15820 | 8.69326e-3 | | | |
| | | 3 | 10.00000 | 1182.50085 | 8.45665e-3 | | | |
| | | 4 | 20.00000 | 2466.37598 | 8.10906e-3 | | | |
| | | 5 | 50.00000 | 5949.45410 | 8.40413e-3 | | | |
| | | 6 | 100.00000 | 1.18503e4 | 8.43861e-3 | | | |
| 9.386 | 1 | 1 | 1.00000 | 36.15768 | 2.76566e-2 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 181.29584 | 2.75792e-2 | | | |
| | | 3 | 10.00000 | 374.62244 | 2.66935e-2 | | | |
| | | 4 | 20.00000 | 783.70270 | 2.55199e-2 | | | |
| | | 5 | 50.00000 | 1921.86047 | 2.60165e-2 | | | |
| | | 6 | 100.00000 | 3962.24902 | 2.52382e-2 | | | |
| 10.990 | 2 | 1 | 1.00000 | 28.32826 | 3.53004e-2 | | | Acenaphthylene #2 |
| | | 2 | 5.00000 | 137.48097 | 3.63687e-2 | | | |
| | | 3 | 10.00000 | 282.83063 | 3.53568e-2 | | | |
| | | 4 | 20.00000 | 588.70093 | 3.39731e-2 | | | |
| | | 5 | 50.00000 | 1437.33740 | 3.47865e-2 | | | |
| | | 6 | 100.00000 | 2944.69458 | 3.39594e-2 | | | |
| 11.936 | 2 | 1 | 1.00000 | 67.43660 | 1.48287e-2 | | | 1-Methylnaphthalene #3 |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000 | 339.69986 | 1.47189e-2 | |
| | | 3 | 10.00000 | 697.62793 | 1.43343e-2 | |
| | | 4 | 20.00000 | 1455.42712 | 1.37417e-2 | |
| | | 5 | 50.00000 | 3540.73169 | 1.41214e-2 | |
| | | 6 | 100.00000 | 7205.42578 | 1.38784e-2 | |
| 11.952 | 1 | 1 | 1.00000 | 41.36844 | 2.41730e-2 | 1-Methylnaphthalene #3 |
| | | 2 | 5.00000 | 208.15732 | 2.40203e-2 | |
| | | 3 | 10.00000 | 426.31619 | 2.34568e-2 | |
| | | 4 | 20.00000 | 890.99243 | 2.24469e-2 | |
| | | 5 | 50.00000 | 2194.00391 | 2.27894e-2 | |
| | | 6 | 100.00000 | 4509.24463 | 2.21767e-2 | |
| 12.511 | 2 | 1 | 1.00000 | 78.89049 | 1.26758e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 394.82016 | 1.26640e-2 | |
| | | 3 | 10.00000 | 811.48065 | 1.23232e-2 | |
| | | 4 | 20.00000 | 1689.06653 | 1.18409e-2 | |
| | | 5 | 50.00000 | 4096.85840 | 1.22045e-2 | |
| | | 6 | 100.00000 | 8267.85547 | 1.20950e-2 | |
| 12.527 | 1 | 1 | 1.00000 | 53.71581 | 1.86165e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 268.35944 | 1.86317e-2 | |
| | | 3 | 10.00000 | 553.23322 | 1.80756e-2 | |
| | | 4 | 20.00000 | 1155.66101 | 1.73061e-2 | |
| | | 5 | 50.00000 | 2823.16040 | 1.77106e-2 | |
| | | 6 | 100.00000 | 5776.03906 | 1.73129e-2 | |
| 12.989 | 2 | 1 | 1.00000 | 41.25003 | 2.42424e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 207.93272 | 2.40462e-2 | |
| | | 3 | 10.00000 | 427.28159 | 2.34038e-2 | |
| | | 4 | 20.00000 | 891.23303 | 2.24408e-2 | |
| | | 5 | 50.00000 | 2174.84375 | 2.29902e-2 | |
| | | 6 | 100.00000 | 4440.60303 | 2.25195e-2 | |
| 13.005 | 1 | 1 | 1.00000 | 67.56156 | 1.48013e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 338.71442 | 1.47617e-2 | |
| | | 3 | 10.00000 | 697.65833 | 1.43337e-2 | |
| | | 4 | 20.00000 | 1456.78040 | 1.37289e-2 | |
| | | 5 | 50.00000 | 3543.34277 | 1.41110e-2 | |
| | | 6 | 100.00000 | 7218.86475 | 1.38526e-2 | |
| 13.645 | 2 | 1 | 1.00000 | 53.42283 | 1.87186e-2 | Fluorene #6 |
| | | 2 | 5.00000 | 271.81696 | 1.83947e-2 | |
| | | 3 | 10.00000 | 558.21259 | 1.79143e-2 | |
| | | 4 | 20.00000 | 1164.00928 | 1.71820e-2 | |
| | | 5 | 50.00000 | 2835.69336 | 1.76324e-2 | |
| | | 6 | 100.00000 | 5779.26465 | 1.73032e-2 | |
| 13.661 | 1 | 1 | 1.00000 | 142.12080 | 7.03627e-3 | Fluorene #6 |
| | | 2 | 5.00000 | 713.18817 | 7.01077e-3 | |
| | | 3 | 10.00000 | 1462.86792 | 6.83589e-3 | |
| | | 4 | 20.00000 | 3039.59375 | 6.57983e-3 | |
| | | 5 | 50.00000 | 7369.04883 | 6.78514e-3 | |
| | | 6 | 100.00000 | 1.48701e4 | 6.72489e-3 | |
| 15.030 | 2 | 1 | 1.00000 | 54.35011 | 1.83992e-2 | Phenanthrene #7 |
| | | 2 | 5.00000 | 271.18774 | 1.84374e-2 | |
| | | 3 | 10.00000 | 557.24799 | 1.79453e-2 | |
| | | 4 | 20.00000 | 1160.96094 | 1.72271e-2 | |
| | | 5 | 50.00000 | 2824.41431 | 1.77028e-2 | |
| | | 6 | 100.00000 | 5771.65283 | 1.73261e-2 | |
| 15.046 | 1 | 1 | 1.00000 | 5.95919 | 1.67808e-1 | Phenanthrene #7 |
| | | 2 | 5.00000 | 26.72914 | 1.87062e-1 | |
| | | 3 | 10.00000 | 55.65540 | 1.79677e-1 | |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 4 | 20.00000 | 116.89686 | 1.71091e-1 | |
| | | 5 | 50.00000 | 289.00418 | 1.73008e-1 | |
| | | 6 | 100.00000 | 601.35211 | 1.66292e-1 | |
| 16.434 | 2 | 1 | 1.00000 | 86.66844 | 1.15382e-2 | Anthracene #8 |
| | | 2 | 5.00000 | 442.03864 | 1.13112e-2 | |
| | | 3 | 10.00000 | 911.06781 | 1.09761e-2 | |
| | | 4 | 20.00000 | 1898.27124 | 1.05359e-2 | |
| | | 5 | 50.00000 | 4625.47705 | 1.08097e-2 | |
| | | 6 | 100.00000 | 9245.92676 | 1.08156e-2 | |
| 16.451 | 1 | 1 | 1.00000 | 3.09896 | 3.22688e-1 | Anthracene #8 |
| | | 2 | 5.00000 | 15.51351 | 3.22300e-1 | |
| | | 3 | 10.00000 | 31.83507 | 3.14119e-1 | |
| | | 4 | 20.00000 | 66.18985 | 3.02161e-1 | |
| | | 5 | 50.00000 | 162.79338 | 3.07138e-1 | |
| | | 6 | 100.00000 | 327.53006 | 3.05315e-1 | |
| 17.814 | 2 | 1 | 1.00000e-1 | 4.45056 | 2.24691e-2 | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 22.06173 | 2.26637e-2 | |
| | | 3 | 1.00000 | 45.92867 | 2.17729e-2 | |
| | | 4 | 2.00000 | 96.07294 | 2.08175e-2 | |
| | | 5 | 5.00000 | 235.31152 | 2.12484e-2 | |
| | | 6 | 10.00000 | 483.72876 | 2.06727e-2 | |
| 17.831 | 1 | 1 | 1.00000e-1 | 3.68034 | 2.71714e-2 | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 18.38673 | 2.71935e-2 | |
| | | 3 | 1.00000 | 37.53587 | 2.66412e-2 | |
| | | 4 | 2.00000 | 78.17149 | 2.55848e-2 | |
| | | 5 | 5.00000 | 192.03598 | 2.60368e-2 | |
| | | 6 | 10.00000 | 394.27036 | 2.53633e-2 | |
| 18.819 | 2 | 1 | 1.00000e-1 | 8.04064 | 1.24368e-2 | Pyrene #10 |
| | | 2 | 5.00000e-1 | 41.80117 | 1.19614e-2 | |
| | | 3 | 1.00000 | 86.62556 | 1.15439e-2 | |
| | | 4 | 2.00000 | 181.36873 | 1.10273e-2 | |
| | | 5 | 5.00000 | 444.82697 | 1.12403e-2 | |
| | | 6 | 10.00000 | 914.12830 | 1.09394e-2 | |
| 18.835 | 1 | 1 | 1.00000e-1 | 2.49880 | 4.00192e-2 | Pyrene #10 |
| | | 2 | 5.00000e-1 | 12.35667 | 4.04640e-2 | |
| | | 3 | 1.00000 | 25.55995 | 3.91237e-2 | |
| | | 4 | 2.00000 | 54.85559 | 3.64594e-2 | |
| | | 5 | 5.00000 | 136.01701 | 3.67601e-2 | |
| | | 6 | 10.00000 | 286.95029 | 3.48492e-2 | |
| 21.166 | 2 | 1 | 1.00000 | 13.68986 | 7.30468e-2 | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 69.45084 | 7.19934e-2 | |
| | | 3 | 10.00000 | 144.49483 | 6.92066e-2 | |
| | | 4 | 20.00000 | 303.50552 | 6.58967e-2 | |
| | | 5 | 50.00000 | 742.32825 | 6.73556e-2 | |
| | | 6 | 100.00000 | 1513.75256 | 6.60610e-2 | |
| 21.184 | 1 | 1 | 1.00000 | 3.44864 | 2.89969e-1 | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 15.59836 | 3.20547e-1 | |
| | | 3 | 10.00000 | 31.67122 | 3.15744e-1 | |
| | | 4 | 20.00000 | 66.96288 | 2.98673e-1 | |
| | | 5 | 50.00000 | 161.49503 | 3.09607e-1 | |
| | | 6 | 100.00000 | 333.88467 | 2.99505e-1 | |
| 22.481 | 2 | 1 | 1.00000e-1 | 4.41380 | 2.26562e-2 | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 21.93929 | 2.27902e-2 | |
| | | 3 | 1.00000 | 44.75309 | 2.23448e-2 | |
| | | 4 | 2.00000 | 94.19716 | 2.12321e-2 | |
| | | 5 | 5.00000 | 231.56067 | 2.15926e-2 | |

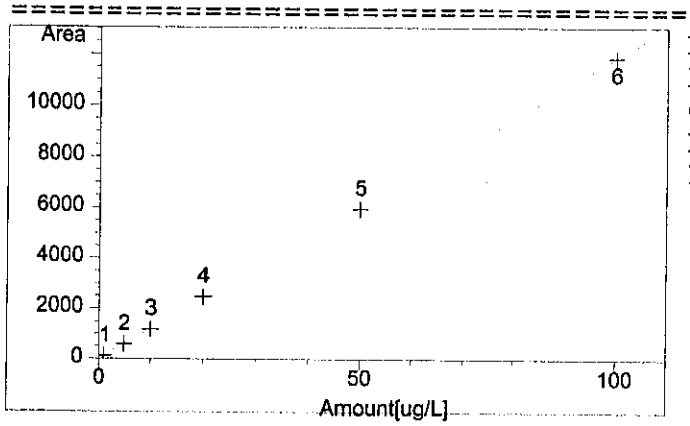
| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 6 | 10.00000 | 477.03839 | 2.09627e-2 | |
| 22.500 | 1 | 1 | 1.00000e-1 | 11.41377 | 8.76135e-3 | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 56.93108 | 8.78255e-3 | |
| | | 3 | 1.00000 | 118.36651 | 8.44834e-3 | |
| | | 4 | 2.00000 | 247.33057 | 8.08634e-3 | |
| | | 5 | 5.00000 | 609.34204 | 8.20557e-3 | |
| | | 6 | 10.00000 | 1266.77136 | 7.89408e-3 | |
| 23.359 | 2 | 1 | 1.00000e-1 | 6.12014 | 1.63395e-2 | Chrysene #13 |
| | | 2 | 5.00000e-1 | 30.40728 | 1.64434e-2 | |
| | | 3 | 1.00000 | 62.44849 | 1.60132e-2 | |
| | | 4 | 2.00000 | 131.21184 | 1.52425e-2 | |
| | | 5 | 5.00000 | 322.17139 | 1.55197e-2 | |
| | | 6 | 10.00000 | 662.99872 | 1.50830e-2 | |
| 23.376 | 1 | 1 | 1.00000e-1 | 2.46762 | 4.05248e-2 | Chrysene #13 |
| | | 2 | 5.00000e-1 | 12.35089 | 4.04829e-2 | |
| | | 3 | 1.00000 | 24.32562 | 4.11089e-2 | |
| | | 4 | 2.00000 | 50.90138 | 3.92917e-2 | |
| | | 5 | 5.00000 | 124.39308 | 4.01952e-2 | |
| | | 6 | 10.00000 | 259.63892 | 3.85150e-2 | |
| 26.093 | 2 | 1 | 1.00000e-1 | 4.46468 | 2.23980e-2 | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 22.81914 | 2.19114e-2 | |
| | | 3 | 1.00000 | 47.48998 | 2.10571e-2 | |
| | | 4 | 2.00000 | 98.69814 | 2.02638e-2 | |
| | | 5 | 5.00000 | 241.35190 | 2.07166e-2 | |
| | | 6 | 10.00000 | 497.49078 | 2.01009e-2 | |
| 26.109 | 1 | 1 | 1.00000e-1 | 5.21623 | 1.91709e-2 | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 27.46255 | 1.82066e-2 | |
| | | 3 | 1.00000 | 56.03418 | 1.78462e-2 | |
| | | 4 | 2.00000 | 117.52394 | 1.70178e-2 | |
| | | 5 | 5.00000 | 288.37061 | 1.73388e-2 | |
| | | 6 | 10.00000 | 597.08154 | 1.67481e-2 | |
| 27.533 | 2 | 1 | 5.00000e-2 | 1.34447 | 3.71893e-2 | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 10.21462 | 2.44747e-2 | |
| | | 3 | 5.00000e-1 | 20.09780 | 2.48783e-2 | |
| | | 4 | 1.00000 | 43.10554 | 2.31989e-2 | |
| | | 5 | 2.50000 | 104.96660 | 2.38171e-2 | |
| | | 6 | 5.00000 | 216.73499 | 2.30696e-2 | |
| 27.542 | 1 | 1 | 5.00000e-2 | 16.02236 | 3.12064e-3 | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 81.89045 | 3.05286e-3 | |
| | | 3 | 5.00000e-1 | 167.50449 | 2.98499e-3 | |
| | | 4 | 1.00000 | 354.43918 | 2.82136e-3 | |
| | | 5 | 2.50000 | 867.17621 | 2.88292e-3 | |
| | | 6 | 5.00000 | 1767.10413 | 2.82949e-3 | |
| 28.623 | 2 | 1 | 1.00000e-1 | 2.62369 | 3.81143e-2 | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 16.64720 | 3.00351e-2 | |
| | | 3 | 1.00000 | 35.49910 | 2.81697e-2 | |
| | | 4 | 2.00000 | 74.54464 | 2.68296e-2 | |
| | | 5 | 5.00000 | 185.12453 | 2.70088e-2 | |
| | | 6 | 10.00000 | 383.82956 | 2.60532e-2 | |
| 28.637 | 1 | 1 | 1.00000e-1 | 18.70416 | 5.34640e-3 | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 94.83067 | 5.27256e-3 | |
| | | 3 | 1.00000 | 196.83517 | 5.08039e-3 | |
| | | 4 | 2.00000 | 416.25037 | 4.80480e-3 | |
| | | 5 | 5.00000 | 1032.61243 | 4.84209e-3 | |
| | | 6 | 10.00000 | 2154.75366 | 4.64090e-3 | |
| 30.497 | 2 | 1 | 1.00000e-1 | 4.03842 | 2.47622e-2 | Dibenz(a,h)anthracene |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000e-1 | 9.72626 | 5.14072e-2 | |
| | | 3 | 1.00000 | 10.95264 | 9.13022e-2 | |
| | | 4 | 2.00000 | 20.66441 | 9.67848e-2 | |
| | | 5 | 5.00000 | 49.22962 | 1.01565e-1 | |
| | | 6 | 10.00000 | 100.69902 | 9.93058e-2 | |
| 30.500 | 1 | 1 | 1.00000e-1 | 2.30826 | 4.33227e-2 | Dibenz(a,h)anthracene |
| | | 2 | 5.00000e-1 | 10.82063 | 4.62080e-2 | |
| | | 3 | 1.00000 | 23.52898 | 4.25008e-2 | |
| | | 4 | 2.00000 | 49.56461 | 4.03514e-2 | |
| | | 5 | 5.00000 | 123.53096 | 4.04757e-2 | |
| | | 6 | 10.00000 | 258.50845 | 3.86835e-2 | |
| 31.297 | 2 | 1 | 1.00000e-1 | 1.20689 | 8.28574e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 7.93134 | 6.30410e-2 | |
| | | 3 | 1.00000 | 17.30395 | 5.77903e-2 | |
| | | 4 | 2.00000 | 35.98459 | 5.55793e-2 | |
| | | 5 | 5.00000 | 89.16454 | 5.60761e-2 | |
| | | 6 | 10.00000 | 182.95050 | 5.46596e-2 | |
| 31.330 | 1 | 1 | 1.00000e-1 | 3.25644 | 3.07083e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 16.79211 | 2.97759e-2 | |
| | | 3 | 1.00000 | 35.19607 | 2.84123e-2 | |
| | | 4 | 2.00000 | 74.49189 | 2.68486e-2 | |
| | | 5 | 5.00000 | 187.63147 | 2.66480e-2 | |
| | | 6 | 10.00000 | 398.71832 | 2.50804e-2 | |
| 32.289 | 2 | 1 | 1.00000e-1 | 4.03389 | 2.47900e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 22.99526 | 2.17436e-2 | |
| | | 3 | 1.00000 | 47.15022 | 2.12088e-2 | |
| | | 4 | 2.00000 | 99.87663 | 2.00247e-2 | |
| | | 5 | 5.00000 | 248.71965 | 2.01030e-2 | |
| | | 6 | 10.00000 | 515.31970 | 1.94054e-2 | |
| 32.292 | 1 | 1 | 1.00000e-1 | 6.42581 | 1.55622e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 32.39291 | 1.54355e-2 | |
| | | 3 | 1.00000 | 65.71149 | 1.52180e-2 | |
| | | 4 | 2.00000 | 137.54715 | 1.45405e-2 | |
| | | 5 | 5.00000 | 337.52823 | 1.48136e-2 | |
| | | 6 | 10.00000 | 696.87433 | 1.43498e-2 | |

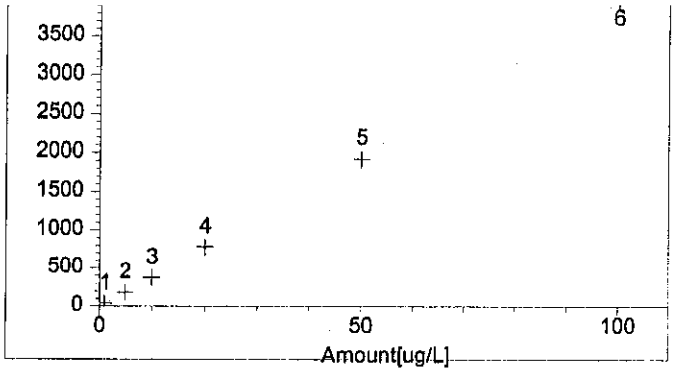
## Peak Sum Table

***No Entries in table***

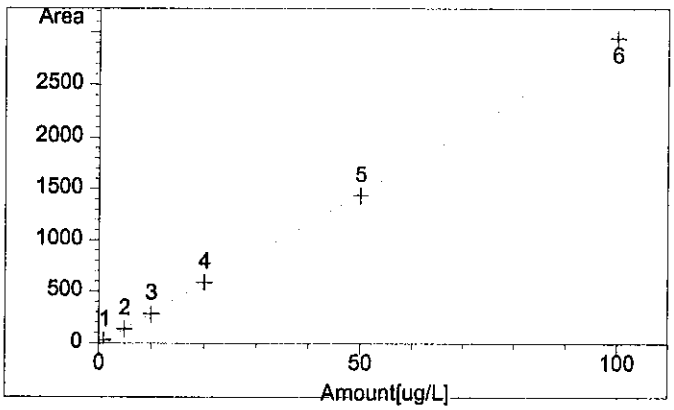
## Calibration Curves



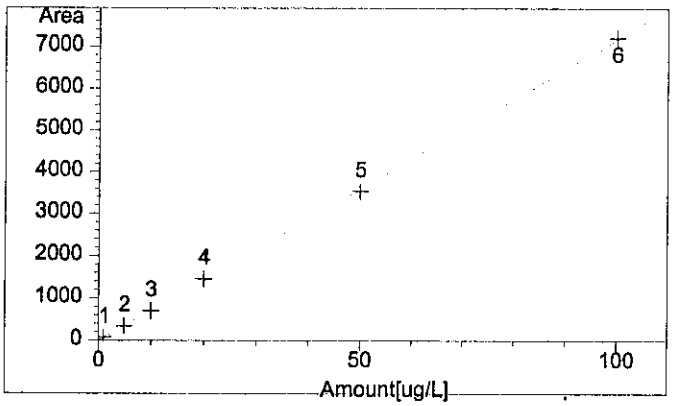

Naphthalene #1 at exp. RT: 9.370
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 42.10085
Formula: y = mx + b
m: 118.56238
b: 12.09798
x: Amount [ug/L]
y: Area



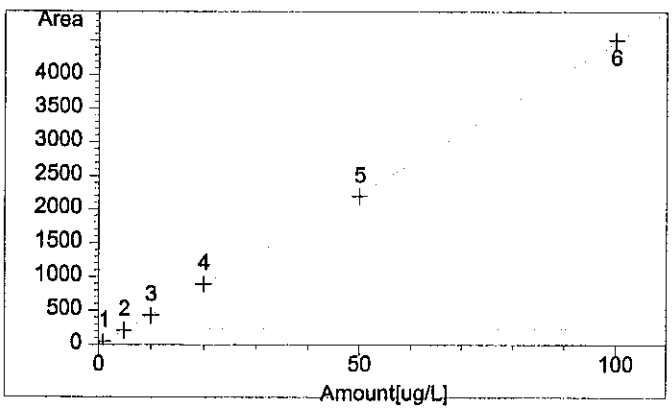

FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99990
Residual Std. Dev.: 22.76520
Formula: y = mx + b
m: 39.55796
b: -13.98462
x: Amount[ug/L]
y: Area



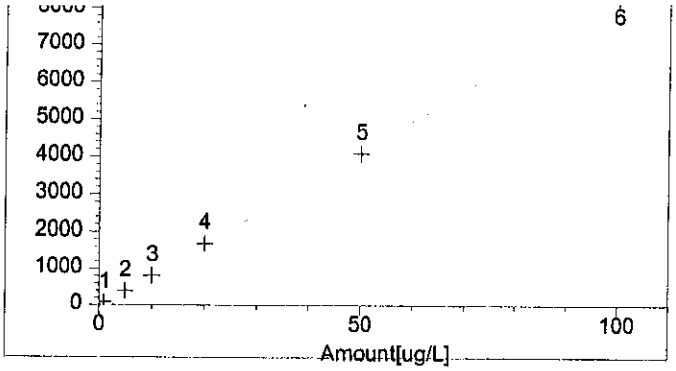

Acenaphthylene #2 at exp. RT: 10.990
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99993
Residual Std. Dev.: 13.87446
Formula: y = mx + b
m: 29.39910
b: -6.97993
x: Amount[ug/L]
y: Area



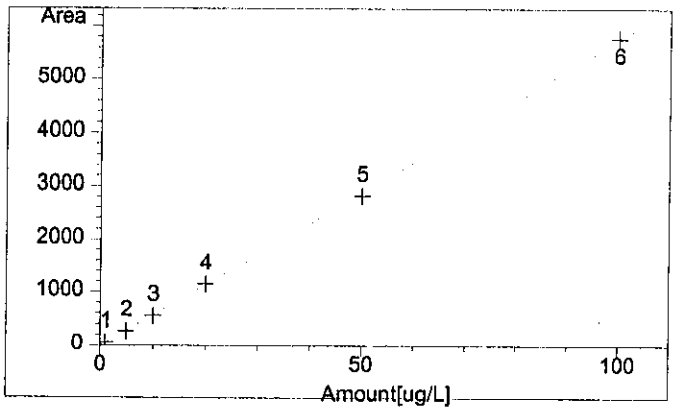

1-Methylnaphthalene #3 at exp. RT: 11.936
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 27.06350
Formula: y = mx + b
m: 71.97944
b: -11.68952
x: Amount[ug/L]
y: Area



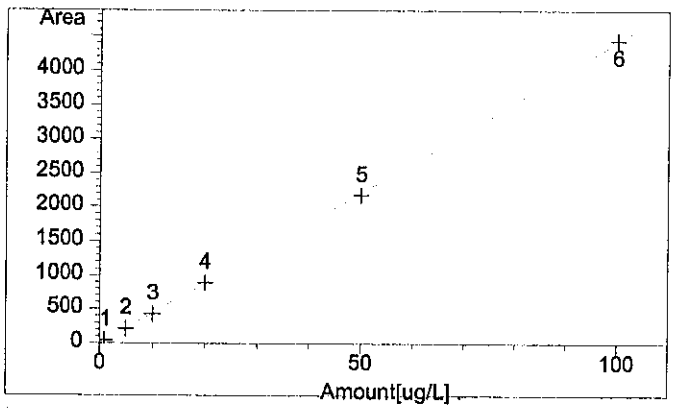

1-Methylnaphthalene #3 at exp. RT: 11.952
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 23.34269
Formula: y = mx + b
m: 45.03399
b: -15.17702
x: Amount[ug/L]
y: Area



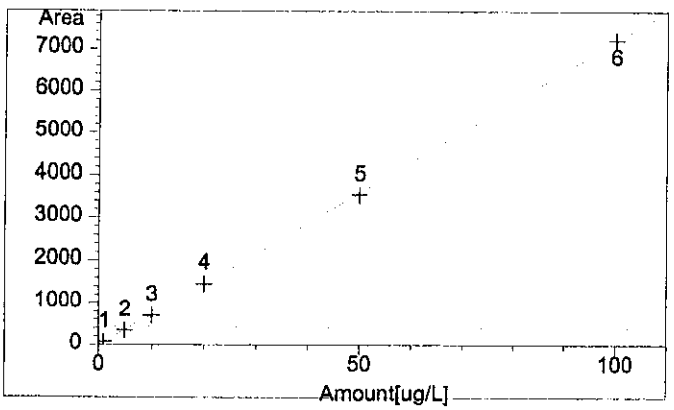

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 24.46395
Formula: y = mx + b
m: 82.63518
b: -4.45318
x: Amount [ug/L]
y: Area



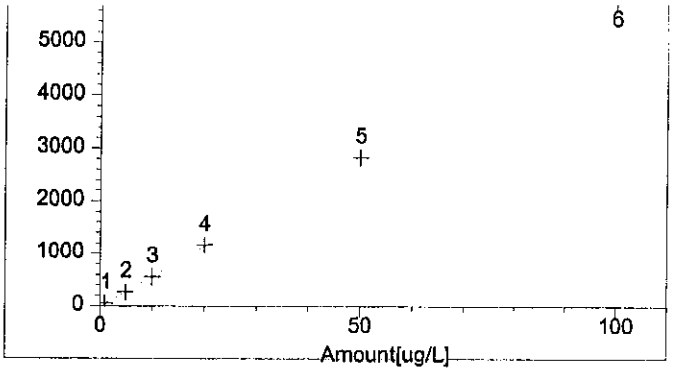

2-Methylnaphthalene #4 at exp. RT: 12.527
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 25.92926
Formula: y = mx + b
m: 57.68935
b: -14.29286
x: Amount [ug/L]
y: Area



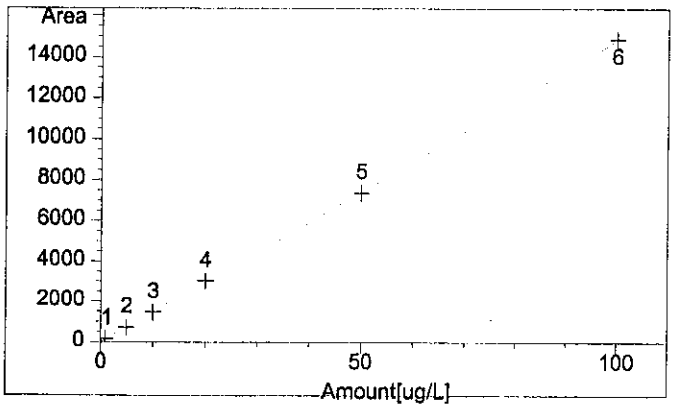

Acenaphthene #5 at exp. RT: 12.989
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 18.49792
Formula: y = mx + b
m: 44.35375
b: -9.52193
x: Amount [ug/L]
y: Area



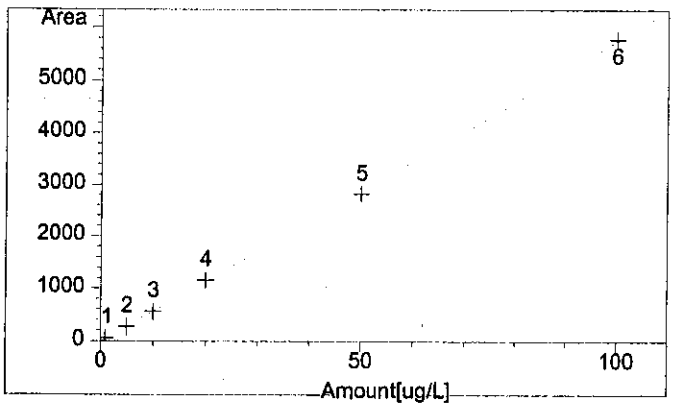

Acenaphthene #5 at exp. RT: 13.005
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 28.42417
Formula: y = mx + b
m: 72.11015
b: -12.79514
x: Amount [ug/L]
y: Area



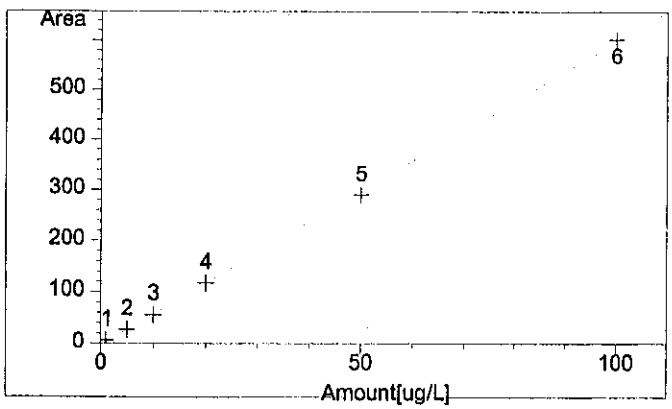

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 22.64515
Formula: y = mx + b
m: 57.72968
b: -10.75723
x: Amount [ug/L]
y: Area



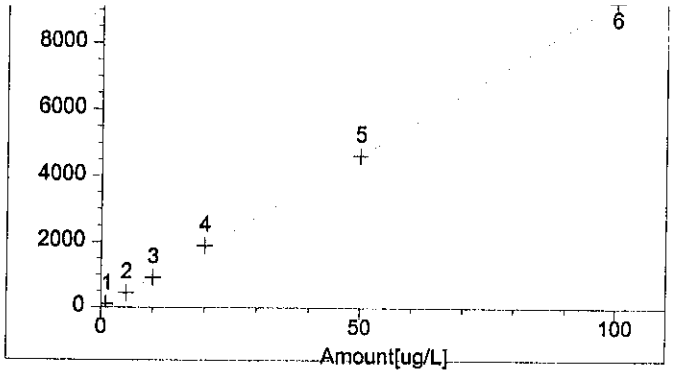

Fluorene #6 at exp. RT: 13.661
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 43.79925
Formula: y = mx + b
m: 148.60784
b: -6.30196
x: Amount [ug/L]
y: Area



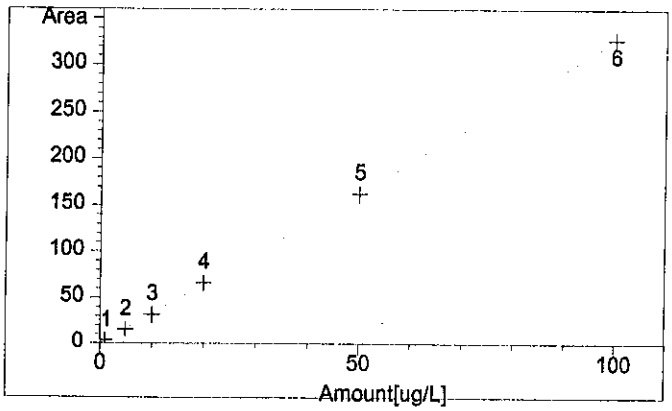

Phenanthrene #7 at exp. RT: 15.030
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99994
Residual Std. Dev.: 25.16007
Formula: y = mx + b
m: 57.63105
b: -11.36587
x: Amount [ug/L]
y: Area



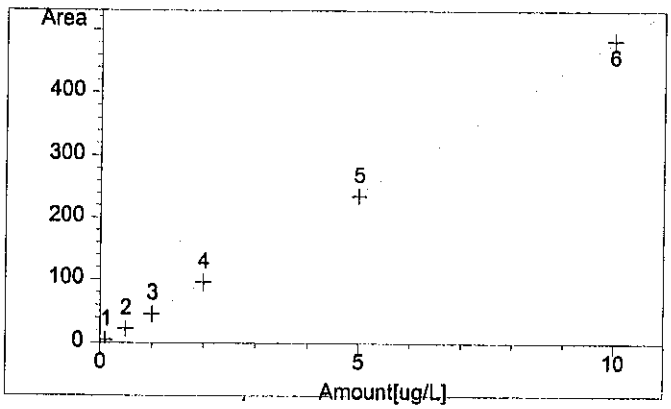

Phenanthrene #7 at exp. RT: 15.046
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99982
Residual Std. Dev.: 4.52698
Formula: y = mx + b
m: 6.00070
b: -2.93332
x: Amount [ug/L]
y: Area



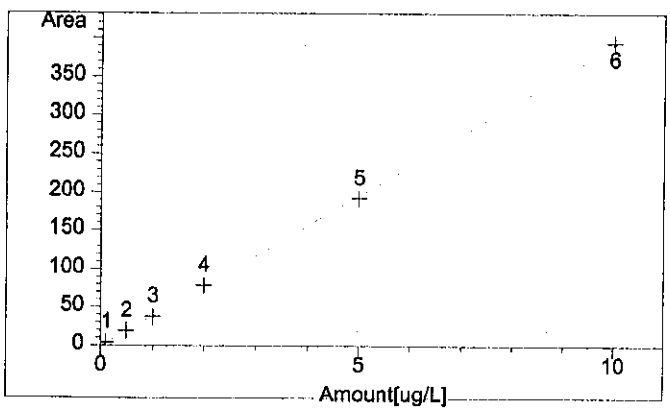

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 24.43398
Formula: y = mx + b
m: 92.52675
b: -7.51211e-2
x: Amount [ug/L]
y: Area



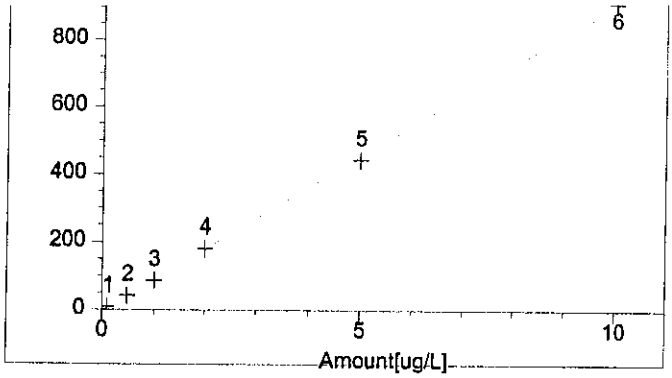

Anthracene #8 at exp. RT: 16.451
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.67749
Formula: y = mx + b
m: 3.27667
b: -3.57142e-1
x: Amount [ug/L]
y: Area



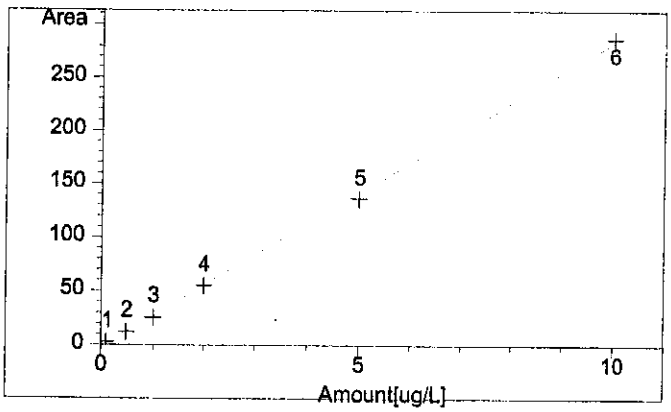

Fluoranthene #9 at exp. RT: 17.814
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 2.54900
Formula: y = mx + b
m: 48.30746
b: -1.56638
x: Amount [ug/L]
y: Area



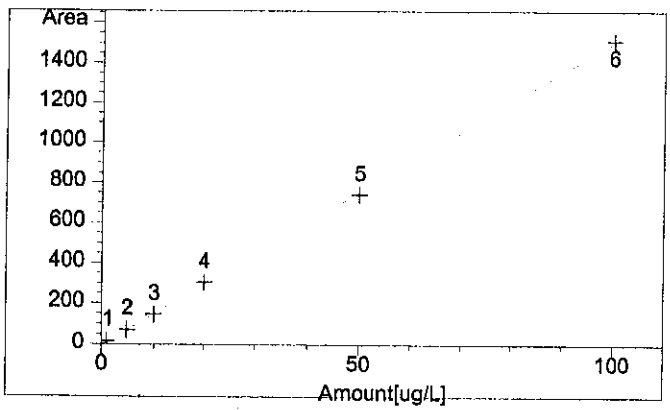

Fluoranthene #9 at exp. RT: 17.831
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 1.96619
Formula: y = mx + b
m: 39.36727
b: -1.16435
x: Amount [ug/L]
y: Area



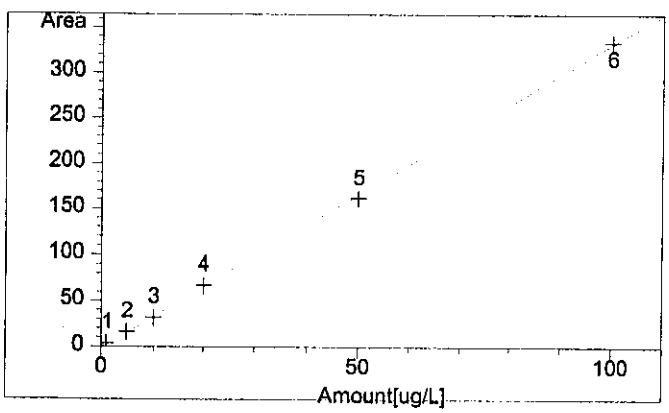

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99992
Residual Std. Dev.: 4.72317
Formula: y = mx + b
m: 91.30718
b: -3.07459
x: Amount [ug/L]
y: Area



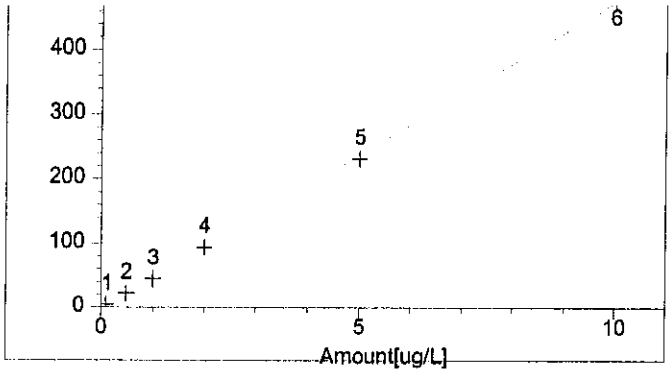

Pyrene #10 at exp. RT: 18.835
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99969
Residual Std. Dev.: 2.87563
Formula: y = mx + b
m: 28.62860
b: -2.03623
x: Amount [ug/L]
y: Area



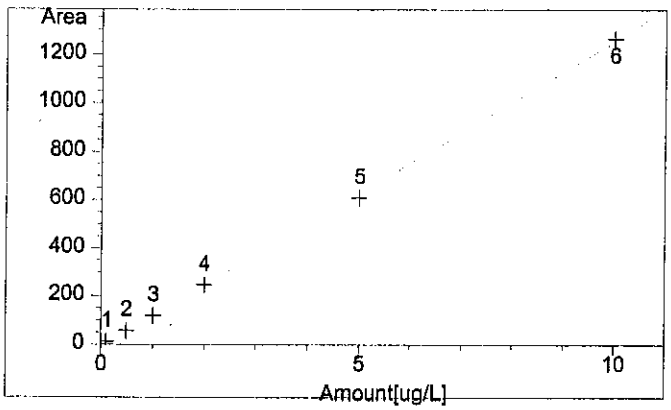

p-Terphenyl d14 #11* at exp. RT: 21.166
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 6.08636
Formula: y = mx + b
m: 15.13008
b: -3.85316
x: Amount [ug/L]
y: Area



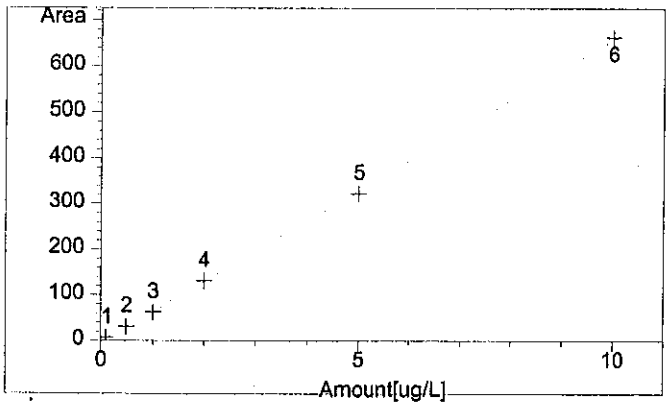

p-Terphenyl d14 #11* at exp. RT: 21.184
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 2.19201
Formula: y = mx + b
m: 3.32901
b: -8.76314e-1
x: Amount [ug/L]
y: Area



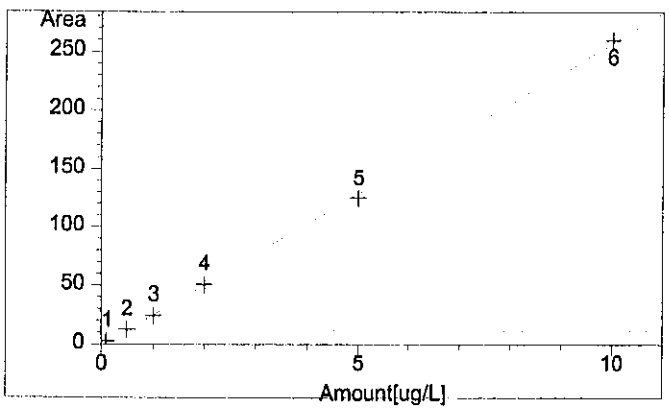

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 2.69756
Formula: y = mx + b
m: 47.63481
b: -1.72930
x: Amount [ug/L]
y: Area



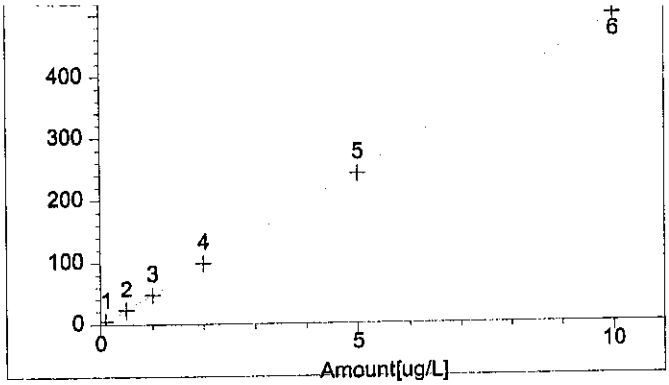

Benzo(a)anthracene #12 at exp. RT: 22.500
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99984
Residual Std. Dev.: 9.13801
Formula: y = mx + b
m: 126.41028
b: -5.86798
x: Amount [ug/L]
y: Area



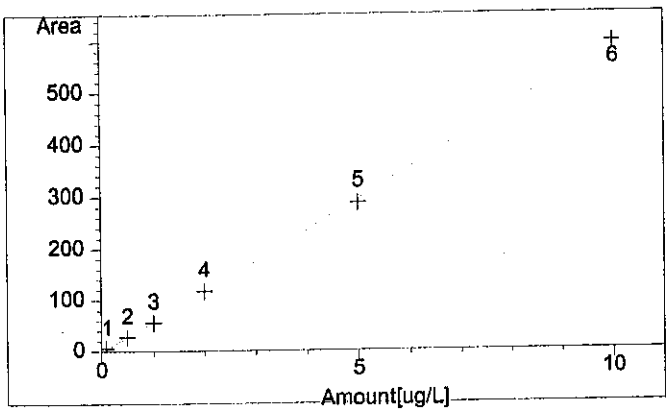

Chrysene #13 at exp. RT: 23.359
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 3.62002
Formula: y = mx + b
m: 66.20908
b: -2.30442
x: Amount [ug/L]
y: Area



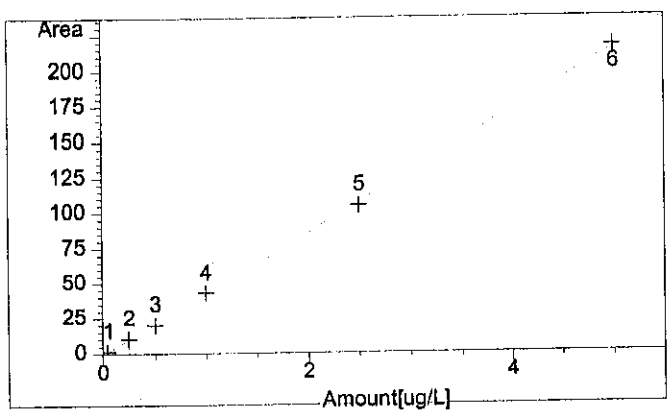

Chrysene #13 at exp. RT: 23.376
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 2.08259
Formula: y = mx + b
m: 25.86946
b: -1.01350
x: Amount [ug/L]
y: Area



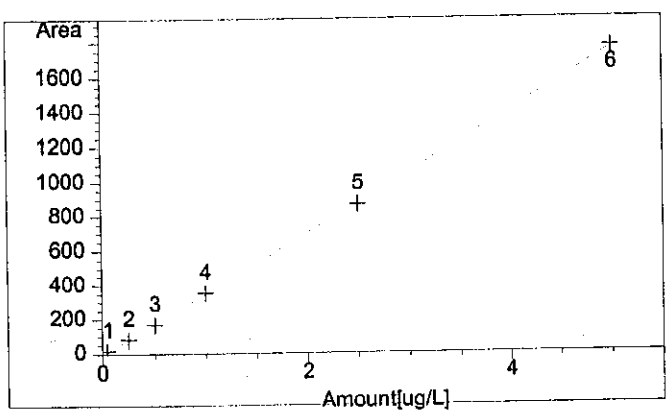

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 2.82913
Formula: y = mx + b
m: 49.65860
b: -1.61933
x: Amount [ug/L]
y: Area



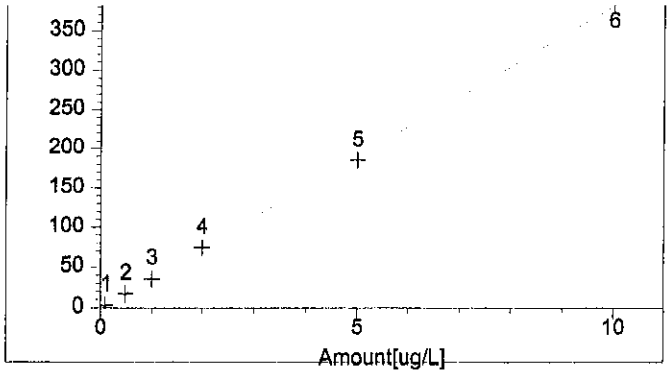

Benzo(b)fluoranthene #14 at exp. RT: 26.1
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 3.86702
Formula: y = mx + b
m: 59.59178
b: -2.38831
x: Amount [ug/L]
y: Area



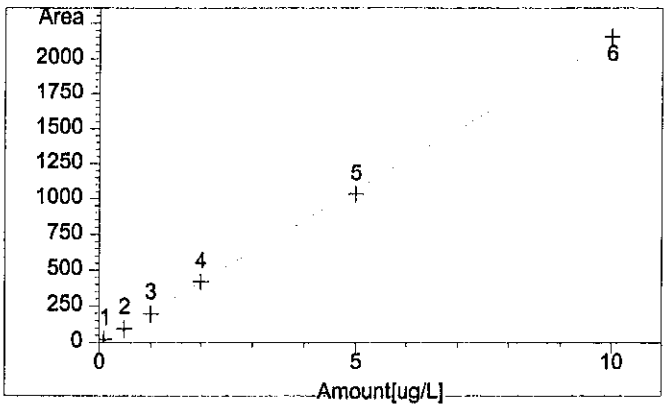

Benzo(k)fluoranthene #15 at exp. RT: 27.1
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99988
Residual Std. Dev.: 1.32598
Formula: y = mx + b
m: 43.30366
b: -8.94286e-1
x: Amount [ug/L]
y: Area



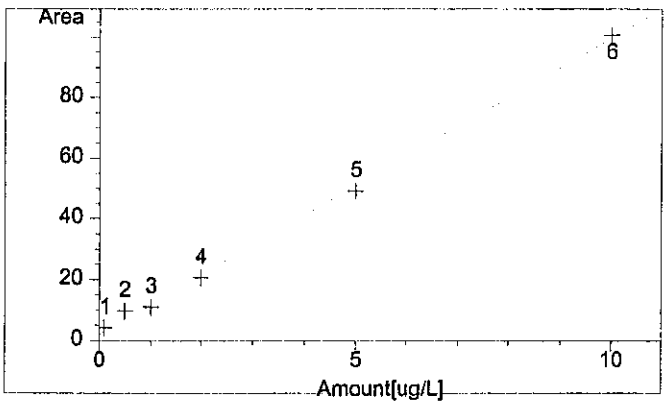

Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 7.00765
Formula: y = mx + b
m: 353.28181
b: -4.48344
x: Amount [ug/L]
y: Area



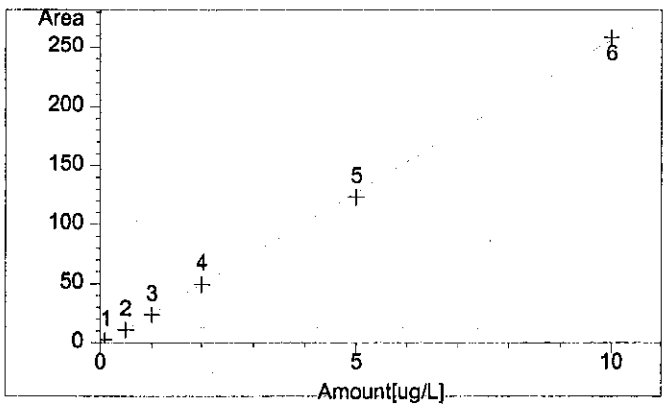

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99986
Residual Std. Dev.: 2.54104
Formula: y = mx + b
m: 38.36965
b: -2.20097
x: Amount [ug/L]
y: Area



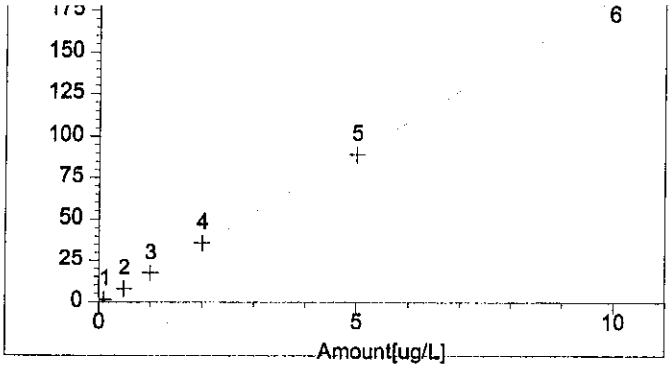

Benzo(a)pyrene #16 at exp. RT: 28.637
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 17.16464
Formula: y = mx + b
m: 215.11398
b: -12.44764
x: Amount [ug/L]
y: Area



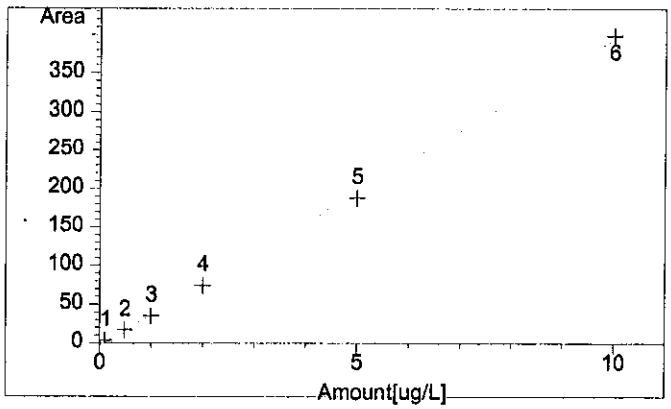

Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99883
Residual Std. Dev.: 1.90720
Formula: y = mx + b
m: 9.79400
b: 1.87742
x: Amount [ug/L]
y: Area



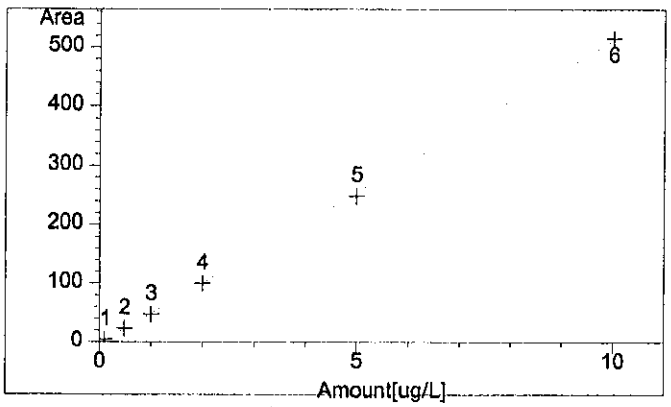

Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99977
Residual Std. Dev.: 2.21658
Formula: y = mx + b
m: 25.81486
b: -1.69923
x: Amount [ug/L]
y: Area



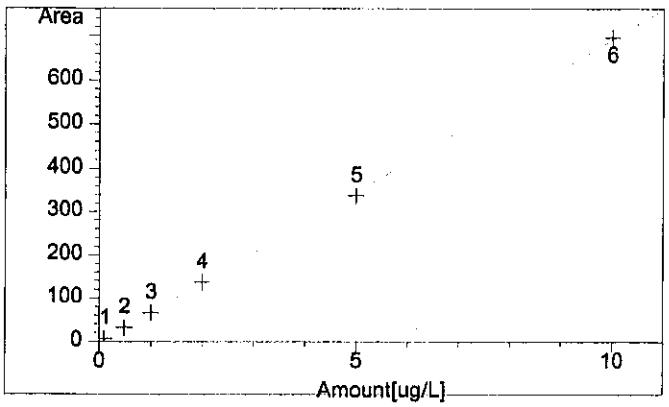

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99993
Residual Std. Dev.: 0.87515
Formula: y = mx + b
m: 18.30547
b: -8.48559e-1
x: Amount [ug/L]
y: Area




Benzo(g,h,i)perylene #18 at exp. RT: 31.3
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99960
Residual Std. Dev.: 4.55128
Formula: y = mx + b
m: 39.77749
b: -3.39643
x: Amount [ug/L]
y: Area




Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99986
Residual Std. Dev.: 3.42563
Formula: y = mx + b
m: 51.49794
b: -2.82376
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: 0.99989
Residual Std. Dev.: 4.18223
Formula: y = mx + b
m: 69.55020
b: -2.45055
x: Amount [ug/L]
y: Area

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Check Standard Report

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Data File C:\HPCHEM\2\DATA\092002A\4L003577.D Sample Name: WG125711-08 ALT
HPLC4 9/21/2002 3:43:44 PM

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

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Injection Date : 9/20/2002 11:11:11 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.385 | 20.0 | 18.926 | -5.4 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.738 | -6.3 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 18.427 | -7.9 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.647 | -1.8 |
| Fluorene #6 | 13.660 | 20.0 | 19.693 | -1.5 |
| Phenanthrene #7 | 15.045 | 20.0 | 18.674 | -6.6 |
| Anthracene #8 | 16.447 | 20.0 | 20.326 | 1.6 |
| Fluoranthene #9 | 17.827 | 2.0 | 1.962 | -1.9 |
| Pyrene #10 | 18.833 | 2.0 | 1.737 | -13.1 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.493 | 2.0 | 1.784 | -10.8 |
| Chrysene #13 | 23.365 | 2.0 | 1.845 | -7.7 |
| Benzo(b)fluoranthene #14 | 26.100 | 2.0 | 1.927 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.532 | 1.0 | 0.868 | -13.2 |
| Benzo(a)pyrene #16 | 28.630 | 2.0 | 1.961 | -1.9 |
| Dibenz(a,h)anthracene #1 | 30.502 | 2.0 | 2.097 | 4.9 |
| Benzo(g,h,i)perylene #18 | 31.334 | 2.0 | 1.841 | -8.0 |
| Indeno(1,2,3-cd)pyrene # | 32.307 | 2.0 | 1.875 | -6.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.366 | 20.0 | 19.710 | -1.4 |
| Acenaphthylene #2 | 10.988 | 20.0 | 18.672 | -6.6 |
| 1-Methylnaphthalene #3 | 11.934 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.508 | 20.0 | 18.839 | -5.8 |
| Acenaphthene #5 | 12.987 | 20.0 | 19.757 | -1.2 |
| Fluorene #6 | 13.641 | 20.0 | 19.490 | -2.6 |
| Phenanthrene #7 | 15.025 | 20.0 | 19.121 | -4.4 |
| Anthracene #8 | 16.428 | 20.0 | 20.325 | 1.6 |
| Fluoranthene #9 | 17.807 | 2.0 | 1.915 | -4.3 |
| Pyrene #10 | 18.812 | 2.0 | 1.887 | -5.7 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.473 | 2.0 | 1.827 | -8.7 |
| Chrysene #13 | 23.346 | 2.0 | 1.899 | -5.1 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.924 | -3.8 |
| Benzo(k)fluoranthene #15 | 27.512 | 1.0 | 0.882 | -11.8 |
| Benzo(a)pyrene #16 | 28.610 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.481 | 2.0 | 2.086 | 4.3 |
| Benzo(g,h,i)perylene #18 | 31.310 | 2.0 | 1.959 | -2.1 |
| Indeno(1,2,3-cd)pyrene # | 32.291 | 2.0 | 1.885 | -5.7 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\092102\4L003590.D Sample Name: WG125769-02 CCV
HPLC4 9/24/2002 11:10:42 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

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Injection Date : 9/22/2002 2:18:29 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.375 | 20.0 | 18.729 | -6.4 |
| 1-Methylnaphthalene #3 | 11.950 | 20.0 | 18.817 | -5.9 |
| 2-Methylnaphthalene #4 | 12.526 | 20.0 | 18.990 | -5.1 |
| Acenaphthene #5 | 13.004 | 20.0 | 19.217 | -3.9 |
| Fluorene #6 | 13.659 | 20.0 | 19.797 | -1.0 |
| Phenanthrene #7 | 15.046 | 20.0 | 18.551 | -7.2 |
| Anthracene #8 | 16.453 | 20.0 | 19.951 | -0.2 |
| Fluoranthene #9 | 17.832 | 2.0 | 1.942 | -2.9 |
| Pyrene #10 | 18.837 | 2.0 | 1.667 | -16.7 # |
| p-Terphenyl d14 #11* | 21.181 | 20.0 | 19.837 | -0.8 |
| Benzo(a)anthracene #12 | 22.499 | 2.0 | 1.849 | -7.5 |
| Chrysene #13 | 23.372 | 2.0 | 1.826 | -8.7 |
| Benzo(b)fluoranthene #14 | 26.101 | 2.0 | 1.926 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.528 | 1.0 | 0.970 | -3.0 |
| Benzo(a)pyrene #16 | 28.622 | 2.0 | 1.863 | -6.9 |
| Dibenz(a,h)anthracene #1 | 30.487 | 2.0 | 1.801 | -10.0 |
| Benzo(g,h,i)perylene #18 | 31.313 | 2.0 | 1.710 | -14.5 |
| Indeno(1,2,3-cd)pyrene # | 32.275 | 2.0 | 1.937 | -3.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.356 | 20.0 | 20.044 | 0.2 |
| Acenaphthylene #2 | 10.984 | 20.0 | 19.651 | -1.7 |
| 1-Methylnaphthalene #3 | 11.931 | 20.0 | 19.763 | -1.2 |
| 2-Methylnaphthalene #4 | 12.507 | 20.0 | 19.866 | -0.7 |
| Acenaphthene #5 | 12.985 | 20.0 | 19.697 | -1.5 |
| Fluorene #6 | 13.640 | 20.0 | 19.705 | -1.5 |
| Phenanthrene #7 | 15.027 | 20.0 | 19.727 | -1.4 |
| Anthracene #8 | 16.433 | 20.0 | 19.956 | -0.2 |
| Fluoranthene #9 | 17.812 | 2.0 | 1.956 | -2.2 |
| Pyrene #10 | 18.816 | 2.0 | 1.960 | -2.0 |
| p-Terphenyl d14 #11* | 21.162 | 20.0 | 19.775 | -1.1 |
| Benzo(a)anthracene #12 | 22.479 | 2.0 | 1.954 | -2.3 |
| Chrysene #13 | 23.353 | 2.0 | 1.951 | -2.4 |
| Benzo(b)fluoranthene #14 | 26.081 | 2.0 | 1.945 | -2.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.601 | 2.0 | 2.004 | 0.2 |
| Dibenz(a,h)anthracene #1 | 30.467 | 2.0 | 1.922 | -3.9 |
| Benzo(g,h,i)perylene #18 | 31.291 | 2.0 | 1.987 | -0.7 |
| Indeno(1,2,3-cd)pyrene # | 32.258 | 2.0 | 1.970 | -1.5 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\092102\4L003601.D Sample Name: WG125769-03 CCV
HPLC4 9/24/2002 11:11:10 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

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Injection Date : 9/22/2002 12:41:38 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.384 | 20.0 | 18.873 | -5.6 |
| 1-Methylnaphthalene #3 | 11.958 | 20.0 | 18.992 | -5.0 |
| 2-Methylnaphthalene #4 | 12.534 | 20.0 | 19.166 | -4.2 |
| Acenaphthene #5 | 13.013 | 20.0 | 19.404 | -3.0 |
| Fluorene #6 | 13.671 | 20.0 | 19.981 | -0.1 |
| Phenanthrene #7 | 15.058 | 20.0 | 18.811 | -5.9 |
| Anthracene #8 | 16.464 | 20.0 | 19.955 | -0.2 |
| Fluoranthene #9 | 17.843 | 2.0 | 1.969 | -1.5 |
| Pyrene #10 | 18.850 | 2.0 | 1.690 | -15.5 # |
| p-Terphenyl d14 #11* | 21.200 | 20.0 | 20.274 | 1.4 |
| Benzo(a)anthracene #12 | 22.518 | 2.0 | 1.879 | -6.1 |
| Chrysene #13 | 23.392 | 2.0 | 1.858 | -7.1 |
| Benzo(b)fluoranthene #14 | 26.129 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.563 | 1.0 | 0.984 | -1.6 |
| Benzo(a)pyrene #16 | 28.657 | 2.0 | 1.881 | -5.9 |
| Dibenz(a,h)anthracene #1 | 30.531 | 2.0 | 1.838 | -8.1 |
| Benzo(g,h,i)perylene #18 | 31.353 | 2.0 | 1.741 | -13.0 |
| Indeno(1,2,3-cd)pyrene # | 32.318 | 2.0 | 1.963 | -1.9 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.364 | 20.0 | 20.208 | 1.0 |
| Acenaphthylene #2 | 10.991 | 20.0 | 19.878 | -0.6 |
| 1-Methylnaphthalene #3 | 11.937 | 20.0 | 19.966 | -0.2 |
| 2-Methylnaphthalene #4 | 12.514 | 20.0 | 20.057 | 0.3 |
| Acenaphthene #5 | 12.993 | 20.0 | 19.923 | -0.4 |
| Fluorene #6 | 13.650 | 20.0 | 19.945 | -0.3 |
| Phenanthrene #7 | 15.037 | 20.0 | 19.995 | 0.0 |
| Anthracene #8 | 16.443 | 20.0 | 20.145 | 0.7 |
| Fluoranthene #9 | 17.822 | 2.0 | 1.986 | -0.7 |
| Pyrene #10 | 18.828 | 2.0 | 1.979 | -1.0 |
| p-Terphenyl d14 #11* | 21.180 | 20.0 | 20.074 | 0.4 |
| Benzo(a)anthracene #12 | 22.497 | 2.0 | 1.981 | -0.9 |
| Chrysene #13 | 23.371 | 2.0 | 2.001 | 0.0 |
| Benzo(b)fluoranthene #14 | 26.107 | 2.0 | 1.982 | -0.9 |
| Benzo(k)fluoranthene #15 | 27.542 | 1.0 | 0.992 | -0.8 |
| Benzo(a)pyrene #16 | 28.636 | 2.0 | 2.012 | 0.6 |
| Dibenz(a,h)anthracene #1 | 30.510 | 2.0 | 1.869 | -6.5 |
| Benzo(g,h,i)perylene #18 | 31.329 | 2.0 | 1.948 | -2.6 |
| Indeno(1,2,3-cd)pyrene # | 32.301 | 2.0 | 1.993 | -0.4 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092102\4L003612.D Sample Name: WG125769-04 CCV
HPLC4 9/24/2002 11:11:37 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/22/2002 11:04:39 PM Seq. Line : 35

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.382 | 20.0 | 18.743 | -6.3 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.861 | -5.7 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 19.047 | -4.8 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.297 | -3.5 |
| Fluorene #6 | 13.661 | 20.0 | 19.973 | -0.1 |
| Phenanthrene #7 | 15.047 | 20.0 | 18.754 | -6.2 |
| Anthracene #8 | 16.452 | 20.0 | 19.826 | -0.9 |
| Fluoranthene #9 | 17.830 | 2.0 | 1.963 | -1.8 |
| Pyrene #10 | 18.835 | 2.0 | 1.663 | -16.8 # |
| p-Terphenyl d14 #11* | 21.179 | 20.0 | 19.881 | -0.6 |
| Benzo(a)anthracene #12 | 22.496 | 2.0 | 1.865 | -6.7 |
| Chrysene #13 | 23.366 | 2.0 | 1.868 | -6.6 |
| Benzo(b)fluoranthene #14 | 26.096 | 2.0 | 1.949 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.524 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.620 | 2.0 | 1.877 | -6.2 |
| Dibenz(a,h)anthracene #1 | 30.486 | 2.0 | 1.820 | -9.0 |
| Benzo(g,h,i)perylene #18 | 31.304 | 2.0 | 1.706 | -14.7 |
| Indeno(1,2,3-cd)pyrene # | 32.267 | 2.0 | 1.948 | -2.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.367 | 20.0 | 20.216 | 1.1 |
| Acenaphthylene #2 | 10.991 | 20.0 | 19.908 | -0.5 |
| 1-Methylnaphthalene #3 | 11.938 | 20.0 | 19.995 | 0.0 |
| 2-Methylnaphthalene #4 | 12.512 | 20.0 | 20.073 | 0.4 |
| Acenaphthene #5 | 12.990 | 20.0 | 19.950 | -0.3 |
| Fluorene #6 | 13.645 | 20.0 | 19.958 | -0.2 |
| Phenanthrene #7 | 15.031 | 20.0 | 19.976 | -0.1 |
| Anthracene #8 | 16.436 | 20.0 | 20.122 | 0.6 |
| Fluoranthene #9 | 17.814 | 2.0 | 1.984 | -0.8 |
| Pyrene #10 | 18.817 | 2.0 | 1.977 | -1.1 |
| p-Terphenyl d14 #11* | 21.163 | 20.0 | 20.067 | 0.3 |
| Benzo(a)anthracene #12 | 22.480 | 2.0 | 1.976 | -1.2 |
| Chrysene #13 | 23.350 | 2.0 | 1.981 | -1.0 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.603 | 2.0 | 2.025 | 1.3 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.798 | -10.1 |
| Benzo(g,h,i)perylene #18 | 31.286 | 2.0 | 1.995 | -0.2 |
| Indeno(1,2,3-cd)pyrene # | 32.253 | 2.0 | 1.968 | -1.6 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003620.D Sample Name: WG126189-01 CCV
HPLC4 9/27/2002 10:20:41 PM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/27/2002 5:26:59 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 | 20.246 | 1.2 |
| 1-Methylnaphthalene #3 | 11.912 | 20.0 | 20.310 | 1.5 |
| 2-Methylnaphthalene #4 | 12.489 | 20.0 | 20.328 | 1.6 |
| Acenaphthene #5 | 12.969 | 20.0 | 20.143 | 0.7 |
| Fluorene #6 | 13.628 | 20.0 | 20.062 | 0.3 |
| Phenanthrene #7 | 15.019 | 20.0 | 20.066 | 0.3 |
| Anthracene #8 | 16.433 | 20.0 | 19.431 | -2.8 |
| Fluoranthene #9 | 17.815 | 2.0 | 1.999 | -0.1 |
| Pyrene #10 | 18.821 | 2.0 | 2.068 | 3.4 |
| p-Terphenyl d14 #11* | 21.184 | 20.0 | 19.561 | -2.2 |
| Benzo(a)anthracene #12 | 22.507 | 2.0 | 1.962 | -1.9 |
| Chrysene #13 | 23.387 | 2.0 | 2.011 | 0.5 |
| Benzo(b)fluoranthene #14 | 26.129 | 2.0 | 2.003 | 0.1 |
| Benzo(k)fluoranthene #15 | 27.577 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.675 | 2.0 | 2.067 | 3.4 |
| Dibenz(a,h)anthracene #1 | 30.560 | 2.0 | 1.999 | 0.0 |
| Benzo(g,h,i)perylene #18 | 31.383 | 2.0 | 2.071 | 3.5 |
| Indeno(1,2,3-cd)pyrene # | 32.361 | 2.0 | 1.908 | -4.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.315 | 20.0 | 20.067 | 0.3 |
| Acenaphthylene #2 | 10.944 | 20.0 | 19.750 | -1.3 |
| 1-Methylnaphthalene #3 | 11.894 | 20.0 | 19.828 | -0.9 |
| 2-Methylnaphthalene #4 | 12.471 | 20.0 | 19.961 | -0.2 |
| Acenaphthene #5 | 12.951 | 20.0 | 19.708 | -1.5 |
| Fluorene #6 | 13.608 | 20.0 | 19.749 | -1.3 |
| Phenanthrene #7 | 15.000 | 20.0 | 19.798 | -1.0 |
| Anthracene #8 | 16.414 | 20.0 | 19.468 | -2.7 |
| Fluoranthene #9 | 17.795 | 2.0 | 1.964 | -1.8 |
| Pyrene #10 | 18.801 | 2.0 | 1.946 | -2.7 |
| p-Terphenyl d14 #11* | 21.165 | 20.0 | 19.904 | -0.5 |
| Benzo(a)anthracene #12 | 22.488 | 2.0 | 1.927 | -3.6 |
| Chrysene #13 | 23.369 | 2.0 | 1.985 | -0.7 |
| Benzo(b)fluoranthene #14 | 26.109 | 2.0 | 1.948 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.558 | 1.0 | 0.988 | -1.2 |
| Benzo(a)pyrene #16 | 28.655 | 2.0 | 1.964 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.540 | 2.0 | 1.813 | -9.3 |
| Benzo(g,h,i)perylene #18 | 31.362 | 2.0 | 1.790 | -10.5 |
| Indeno(1,2,3-cd)pyrene # | 32.347 | 2.0 | 1.899 | -5.0 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003631.D Sample Name: WG126189-02 CCV
HPLC4 9/30/2002 11:08:25 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/28/2002 3:50:10 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.335 | 20.0 | 18.981 | -5.1 |
| 1-Methylnaphthalene #3 | 11.911 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.487 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.966 | 20.0 | 19.432 | -2.8 |
| Fluorene #6 | 13.620 | 20.0 | 19.844 | -0.8 |
| Phenanthrene #7 | 15.006 | 20.0 | 18.905 | -5.5 |
| Anthracene #8 | 16.411 | 20.0 | 19.650 | -1.8 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.959 | -2.1 |
| Pyrene #10 | 18.799 | 2.0 | 1.745 | -12.7 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.340 | -3.3 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.882 | -5.9 |
| Chrysene #13 | 23.344 | 2.0 | 1.870 | -6.5 |
| Benzo(b)fluoranthene #14 | 26.074 | 2.0 | 1.929 | -3.5 |
| Benzo(k)fluoranthene #15 | 27.515 | 1.0 | 0.978 | -2.2 |
| Benzo(a)pyrene #16 | 28.608 | 2.0 | 1.827 | -8.6 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.857 | -7.1 |
| Benzo(g,h,i)perylene #18 | 31.293 | 2.0 | 1.718 | -14.1 |
| Indeno(1,2,3-cd)pyrene # | 32.261 | 2.0 | 1.940 | -3.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.321 | 20.0 | 20.136 | 0.7 |
| Acenaphthylene #2 | 10.949 | 20.0 | 19.790 | -1.1 |
| 1-Methylnaphthalene #3 | 11.897 | 20.0 | 19.889 | -0.6 |
| 2-Methylnaphthalene #4 | 12.473 | 20.0 | 19.994 | 0.0 |
| Acenaphthene #5 | 12.952 | 20.0 | 19.845 | -0.8 |
| Fluorene #6 | 13.606 | 20.0 | 19.820 | -0.9 |
| Phenanthrene #7 | 14.991 | 20.0 | 19.816 | -0.9 |
| Anthracene #8 | 16.397 | 20.0 | 19.851 | -0.7 |
| Fluoranthene #9 | 17.777 | 2.0 | 1.974 | -1.3 |
| Pyrene #10 | 18.783 | 2.0 | 1.981 | -1.0 |
| p-Terphenyl d14 #11* | 21.140 | 20.0 | 19.659 | -1.7 |
| Benzo(a)anthracene #12 | 22.457 | 2.0 | 1.963 | -1.8 |
| Chrysene #13 | 23.330 | 2.0 | 1.971 | -1.5 |
| Benzo(b)fluoranthene #14 | 26.059 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.500 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.593 | 2.0 | 1.949 | -2.6 |
| Dibenz(a,h)anthracene #1 | 30.455 | 2.0 | 1.865 | -6.7 |
| Benzo(g,h,i)perylene #18 | 31.277 | 2.0 | 1.921 | -4.0 |
| Indeno(1,2,3-cd)pyrene # | 32.249 | 2.0 | 1.955 | -2.3 |

# = Failed 15.0% Criteria

==========

Data File C:\HPCHEM\2\DATA\092702\4L003642.D Sample Name: WG126189-03 CCV
HPLC4 9/30/2002 11:17:36 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========
Injection Date : 9/28/2002 2:13:16 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.345 | 20.0 | 18.913 | -5.4 |
| 1-Methylnaphthalene #3 | 11.923 | 20.0 | 19.090 | -4.6 |
| 2-Methylnaphthalene #4 | 12.500 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.979 | 20.0 | 19.497 | -2.5 |
| Fluorene #6 | 13.636 | 20.0 | 20.038 | 0.2 |
| Phenanthrene #7 | 15.022 | 20.0 | 18.872 | -5.6 |
| Anthracene #8 | 16.429 | 20.0 | 20.146 | 0.7 |
| Fluoranthene #9 | 17.809 | 2.0 | 1.969 | -1.6 |
| Pyrene #10 | 18.816 | 2.0 | 1.702 | -14.9 |
| p-Terphenyl d14 #11* | 21.169 | 20.0 | 19.579 | -2.1 |
| Benzo(a)anthracene #12 | 22.487 | 2.0 | 1.876 | -6.2 |
| Chrysene #13 | 23.359 | 2.0 | 1.873 | -6.3 |
| Benzo(b)fluoranthene #14 | 26.085 | 2.0 | 1.925 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.519 | 1.0 | 0.984 | -1.6 |
| Benzo(a)pyrene #16 | 28.612 | 2.0 | 1.836 | -8.2 |
| Dibenz(a,h)anthracene #1 | 30.480 | 2.0 | 1.843 | -7.8 |
| Benzo(g,h,i)perylene #18 | 31.301 | 2.0 | 1.713 | -14.4 |
| Indeno(1,2,3-cd)pyrene # | 32.268 | 2.0 | 1.960 | -2.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 20.277 | 1.4 |
| Acenaphthylene #2 | 10.959 | 20.0 | 20.000 | 0.0 |
| 1-Methylnaphthalene #3 | 11.908 | 20.0 | 20.062 | 0.3 |
| 2-Methylnaphthalene #4 | 12.484 | 20.0 | 20.166 | 0.8 |
| Acenaphthene #5 | 12.963 | 20.0 | 20.055 | 0.3 |
| Fluorene #6 | 13.620 | 20.0 | 20.020 | 0.1 |
| Phenanthrene #7 | 15.006 | 20.0 | 20.070 | 0.3 |
| Anthracene #8 | 16.413 | 20.0 | 20.136 | 0.7 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.980 | -1.0 |
| Pyrene #10 | 18.799 | 2.0 | 1.987 | -0.6 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.911 | -0.4 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.985 | -0.7 |
| Chrysene #13 | 23.344 | 2.0 | 1.990 | -0.5 |
| Benzo(b)fluoranthene #14 | 26.068 | 2.0 | 1.981 | -0.9 |
| Benzo(k)fluoranthene #15 | 27.502 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.596 | 2.0 | 1.963 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.464 | 2.0 | 1.847 | -7.6 |
| Benzo(g,h,i)perylene #18 | 31.283 | 2.0 | 1.993 | -0.4 |
| Indeno(1,2,3-cd)pyrene # | 32.255 | 2.0 | 1.983 | -0.9 |

# = 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 | WG125711-01 STD6 | 8310 | 1 | Sample | | |
| 3 | 3 | WG125711-02 STD6 | 8310 | 1 | Sample | | |
| 4 | 4 | WG125711-03 STD5 | 8310 | 1 | Sample | | |
| 5 | 5 | WG125711-04 STD4 | 8310 | 1 | Sample | | |
| 6 | 6 | WG125711-05 STD3 | 8310 | 1 | Sample | | |
| 7 | 7 | WG125711-06 STD2 | 8310 | 1 | Sample | | |
| 8 | 8 | WG125711-07 STD1 | 8310 | 1 | Sample | | |
| 9 | 9 | WG125711-08 ALT | 8310 | 1 | Sample | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | RJC 9/21/02 |
| No | 1 | 1 | 8310 | 4L003569 | 01:01 ✓ | | accn blk | |
| No | 2 | 2 | 8310 | 4L003570 | 02:01 ✓ | SOS 61-07 | WG125711-01 | ST |
| No | 3 | 3 | 8310 | 4L003571 | 03:01 ✓ | SOS 59-38 | WG125711-02 | ST |
| No | 4 | 4 | 8310 | 4L003572 | 04:01 ✓ | DIL'N OF SOS 61-07/59-38 | WG125711-03 | ST |
| No | 5 | 5 | 8310 | 4L003573 | 05:01 ✓ | | WG125711-04 | ST |
| No | 6 | 6 | 8310 | 4L003574 | 06:01 ✓ | | WG125711-05 | ST |
| No | 7 | 7 | 8310 | 4L003575 | 07:01 ✓ | | WG125711-06 | ST |
| No | 8 | 8 | 8310 | 4L003576 | 08:01 ✓ | | WG125711-07 | ST |
| No | 9 | 9 | 8310 | 4L003577 | 09:01 ✓ | DIL'N OF SOS 60-26/60-27 | WG125711-08 | AL |

RJC 9/21/02

validation

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Sept. 20, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092002 A
Analyst Initials RDE SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

NOTE: ACCN is JT Baker Lot #X32823

Reviewed By: [illegible]

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG125769-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG125546-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG125546-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG125546-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG125546-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG125546-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG125769-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | WG125616-02 WBLK | 8310 | 1 | Sample | | |
| 16 | 16 | WG125616-03 WLCS | 8310 | 1 | Sample | | |
| 17 | 17 | L0209310-01 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 19 | 19 | WG125616-01 WREF | 8310 | 1 | Sample | | |
| 20 | 20 | WG125616-04 WMS | 8310 | 1 | Sample | | |
| 21 | 21 | WG125616-05 WMSD | 8310 | 1 | Sample | | |
| 22 | 22 | L0209310-06 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209310-07 831W | 8310 | 1 | Sample | | |
| 24 | 24 | WG125769-03 CCV | 8310 | 1 | Sample | | |
| 25 | 25 | L0209310-08 831W | 8310 | 1 | Sample | | |
| 26 | 26 | L0209310-09 831W | 8310 | 1 | Sample | | |
| 27 | 27 | L0209310-10 831W | 8310 | 1 | Sample | | |
| 28 | 28 | L0209310-11 831W | 8310 | 1 | Sample | | |
| 29 | 29 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 30 | 30 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 31 | 31 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 32 | 32 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 33 | 33 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 34 | 34 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 35 | 35 | WG125769-04 CCV | 8310 | 1 | Sample | | |
| 36 | 36 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 37 | 35 | WG125769-05 CCV | 8310 | 1 | Sample | | |

| | | | | | | | Sample Name 9/24/02 |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003578 | 01:01 ✓ | | accn blk |
| No | 2 | 2 | 8310 | 4L003579 | 02:01 ✓ | SOS 61-07/59-3 | WG125769-01 CC |
| No | 3 | 3 | 8310 | 4L003580 | 03:01 ✓ | | WG125546-02 WB |
| No | 4 | 4 | 8310 | 4L003581 | 04:01 ✓ | | WG125546-03 WL |
| No | 5 | 5 | 8310 | 4L003582 | 05:01 RE, | SURR. LOW, LCS | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003583 | 06:01 RE, | Same | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003584 | 07:01 RE, | Same | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003585 | 08:01 RE, | LCS low | WG125546-01 WR |
| No | 9 | 9 | 8310 | 4L003586 | 09:01 RE, | SURR + LCS low | WG125546-04 WM |
| No | 10 | 10 | 8310 | 4L003587 | 10:01 RE, | Same | WG125546-05 WM |
| No | 11 | 11 | 8310 | 4L003588 | 11:01 RE, | Same | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003589 | 12:01 RE, | ~~Surr~~ + LCS low | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003590 | 13:01 ✓ | SOS 61-07/59-3 | WG125769-02 CC |
| No | 14 | 14 | 8310 | 4L003591 | 14:01 RE, | LCS low | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003592 | 15:01 ✓ | | WG125616-02 WB |
| No | 16 | 16 | 8310 | 4L003593 | 16:01 ✓ | | WG125616-03 WL |
| No | 17 | 17 | 8310 | 4L003594 | 17:01 ✓ | | L0209310-01 83 |
| No | 18 | 18 | 8310 | 4L003595 | 18:01 RE, | low surr. | L0209310-02 83 |
| No | 19 | 19 | 8310 | 4L003596 | 19:01 ✓ | | WG125616-01 WR |
| No | 20 | 20 | 8310 | 4L003597 | 20:01 ✓ | | WG125616-04 WM |
| No | 21 | 21 | 8310 | 4L003598 | 21:01 ✓ | | WG125616-05 WM |
| No | 22 | 22 | 8310 | 4L003599 | 22:01 ✓ | | L0209310-06 83 |
| No | 23 | 23 | 8310 | 4L003600 | 23:01 ✓ | | L0209310-07 83 |
| No | 24 | 24 | 8310 | 4L003601 | 24:01 ✓ | SOS 61-07/59-3 | WG125769-03 CC |
| No | 25 | 25 | 8310 | 4L003602 | 25:01 ✓ | | L0209310-08 83 |
| No | 26 | 26 | 8310 | 4L003603 | 26:01 ✓ | | L0209310-09 83 |
| No | 27 | 27 | 8310 | 4L003604 | 27:01 ✓ | | L0209310-10 83 |
| No | 28 | 28 | 8310 | 4L003605 | 28:01 ✓ | | L0209310-11 83 |
| No | 29 | 29 | 8310 | 4L003606 | 29:01 RE, | low surr. | L0209337-01 83 |
| No | 30 | 30 | 8310 | 4L003607 | 30:01 RE, | same | L0209337-02 83 |
| No | 31 | 31 | 8310 | 4L003608 | 31:01 RE, | same | L0209337-03 83 |
| No | 32 | 32 | 8310 | 4L003609 | 32:01 RE, | Same | L0209337-04 83 |
| No | 33 | 33 | 8310 | 4L003610 | 33:01 RE, | same | L0209337-05 83 |
| No | 34 | 34 | 8310 | 4L003611 | 34:01 RE, | Same | L0209337-06 83 |
| No | 35 | 35 | 8310 | 4L003612 | 35:01 ✓ | SOS 61-07/59-3 | WG125769-04 CC |
| No | 36 | 36 | 8310 | 4L003613 | 36:01 RE, | low surr. | L0209337-07 83 |
| No | 37 | 35 | 8310 | 4L003614 | 37:01 ✓ | SOS 61-07/59-3 | WG125769-05 CC |

RJC
9/26/02

EQ 10/1/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Sept. 21, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092102
Analyst Initials [illegible] SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: ____

Action Taken: ____

**Comments**

WG 125769-02 (4L003590) — CCV
-03 (4L003601)
-04 (4L003612)
-05 (4L003613)
→ pyrene %D >15% for confirming fl. detector / no pyrene detected by UV requires conf.

SDG L0209225 — all sent for RE due to low LCS + surr. on some in SDG

L0209310-02, L0209337-01 — 07 > sent for RE due to low surr.

Reviewed By: ECZ 10/1/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG126189-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126062-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126062-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG126062-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG126062-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG126062-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG126189-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 16 | 16 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 17 | 17 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 19 | 19 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 20 | 20 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 21 | 21 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 22 | 22 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 24 | 13 | WG126189-03 CCV | 8310 | 1 | Sample | | |

PAC 9/27/02

| Set | Run | Vial | Method | Datafile | Seqfable | Calib:Rf:Rf | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003619 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003620 | 02:01 | SOS 61-07/59-38 | WG126189-01 CC |
| No | 3 | 3 | 8310 | 4L003621 | 03:01 | | WG126062-02 WB |
| No | 4 | 4 | 8310 | 4L003622 | 04:01 | | WG126062-03 WL |
| No | 5 | 5 | 8310 | 4L003623 | 05:01 | | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003624 | 06:01 | | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003625 | 07:01 | | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003626 | 08:01 | | WG126062-01 WR |
| No | 9 | 9 | 8310 | 4L003627 | 09:01 | | WG126062-04 WM |
| No | 10 | 10 | 8310 | 4L003628 | 10:01 | | WG126062-05 WM |
| No | 11 | 11 | 8310 | 4L003629 | 11:01 | | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003630 | 12:01 | | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003631 | 13:01 | SOS 61-07/59-38 | WG126189-02 CC |
| No | 14 | 14 | 8310 | 4L003632 | 14:01 | | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003633 | 15:01 | | L0209310-02 83 |
| No | 16 | 16 | 8310 | 4L003634 | 16:01 | | L0209337-01 83 |
| No | 17 | 17 | 8310 | 4L003635 | 17:01 | | L0209337-02 83 |
| No | 18 | 18 | 8310 | 4L003636 | 18:01 | | L0209337-03 83 |
| No | 19 | 19 | 8310 | 4L003637 | 19:01 | | L0209337-04 83 |
| No | 20 | 20 | 8310 | 4L003638 | 20:01 | | L0209337-05 83 |
| No | 21 | 21 | 8310 | 4L003639 | 21:01 | | L0209337-06 83 |
| No | 22 | 22 | 8310 | 4L003640 | 22:01 | | L0209337-07 83 |
| No | 23 | 23 | 8310 | 4L003641 | 23:01 | | L0209337-01 83 |
| No | 24 | 13 | 8310 | 4L003642 | 24:01 | SOS 61-07/59-38 | WG126189-03 CC |

RJRC 9/30/02

EC2 10/2/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Sept. 27/02 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092702
Analyst Initials RBC SOP # HPLC01 Rev. # 2 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Re-extracts out of hold — not uploaded

Reviewed By: ECZ 10/2/02

Volume 191
Page 15

Parameter: 8310 - H2O SOP #: EXHPLCL Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAF, DP
Date/Time Extracted: 09/19/02 @ 1120 Date TV/KD: 09/19/02
Spike/Surrogate Analyst: DP Witness: CAF
Surrogate #: ESS00 42-21 Earliest Hold Date: 09/24/02
Spike #: A = ESS00 4279 Spike #: B = —

Extraction Work Group WG 125616
Analytical Work Group WG 125710

Extract Relinquished By: DCM
Extract Received By & Date: CAF 9/20/02

| | 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 | | | ✓ | | 1000 mL | 100 µL | | 1 mL | T | | | | WG125616-02 |
| 2 | LCS | | | ✓ | | ↓ | | 500 µL | | | | | | WG ↓ -03 |
| 3 | 09-310-01 | 8310 | | ✓ | | 960 mL | | | | | | | | |
| 4 | -02 | | | ✓ | | 970 mL | | | | | | | | WG125616-01 |
| 5 | -03 | | | ✓ | | 1000 mL | | | | | | | | ↓ -04 ✓ |
| 6 | -04/MS | | | ✓ | | 960 mL | | 500 µL | | | | | | ↓ -05 ✓ |
| 7 | -05/MSD | | | ✓ | | 1000 mL | | ↓ | | | | | | |
| 8 | -06 | | | ✓ | | 950 mL | | | | | | | | |
| 9 | -07 | | | ✓ | | 960 mL | | | | | | | | |
| 10 | -08 | | | ✓ | | 960 mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950 mL | | | | | | | | |
| 12 | -10 | | | ✓ | | 1000 mL | | | | ↓ | | | | |
| 13 | -11 | ↓ | | ✓ | | 920 mL | | | | C | | | | |
| 14 | 09-337-01 | 8310 | | ✓ | | 1000 mL | | | | T | | | | * |
| 15 | -02 | | | ✓ | | 940 mL | | | | | | | | * |
| 16 | -03 | | | ✓ | | 930 mL | | | | | | | | * |
| 17 | -04 | | | ✓ | | 1000 mL | | | | | | | | * |
| 18 | -05 | | | ✓ | | 960 mL | | | | | | | | * |
| 19 | -06 | | | ✓ | | 1000 mL | | | | | | | | * |
| 20 | -07 | ↓ | | ✓ | | 940 mL | ↓ | | ↓ | ↓ | | | | * |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

DP 09/19/02

9/26

9/26

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 41264
Reagent: Fortified Lot #: CR2254
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: CR2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

Extraction Notes For Volume # 191 Page # 015

General Comments: * ~~Extract~~ Sample required pH adjustment (increase) to achieve a pH in the desired neutral range (5-9). Sample changed color when NaOH was added to raise the pH. 1N NaOH → ER 2255

* MS, MSD OE 09-310-03

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: — NA —

Supervisor Review: _____ Date: _____

Semi-Volatile SOP Checklist

Run Date: 20-Sep-02

Analyst: RDC

Instrument: HPLC4

Workorders: Due Date: Priority:

RECALIBRATION....

| | | 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 | |
| | 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: | |

Primary Reviewer: RDC 9/26/02

Secondary Reviewer: [illegible]

Supervisor Review: [illegible]

√

NA

Parameter: 8310 4/20 SOP #: EXHPLC 1 Revision #: 6
Extraction Analyst(s): RCH TV/KD Analyst(s): DDP
Date/Time Extracted: 9/26/02 1400 Date TV/KD: 09/26/02
Spike/Surrogate Analyst: RCH Witness: DDP
Surrogate #: ES00042-21 Earliest Hold Date: OCT
Spike #: A = ES00042-19 Spike #: B = —

Extraction Work Group WG 126062
Analytical Work Group WG 126254

Extract Relinquished By: RCH
Extract Received By & Date: EC 9/27/02

| | 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 | | | ✓ | | 1000mL | 100ul | | 1mL | T | | | | WG 126062-02 |
| 2 | LCS | | | ✓ | | ↓ | ↓ | 500ul | ↓ | ↓ | | | | WG ↓ -03 |
| 3 | 09-285-01 | 8310 | | ✓ | | 940mL | | | | | | | | re-ext oct/hold |
| 4 | -02 | ↓ | | ✓ | | 970mL | | | | | | | | |
| 5 | -03 | | | ✓ | | 915 mL | | | | | | | | |
| 6 | -04 | | | ✓ | | 975mL | | | | | | | | |
| 7 | -05MS | | | ✓ | | 950 mL | | 500ul | | | | | | WG 126062-01 |
| 8 | -06MSD | | | ✓ | | 950mL | | ↓ | | | | | | ↓ -04 |
| 9 | -07 | | | ✓ | | 950mL | | | | | | | | ↓ -05 |
| 10 | -08 | | | ✓ | | 925mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950mL | | | | | | | | |
| 12 | 09-310-02 | | | ✓ | | 1000mL | | | | | | | | |
| 13 | 09-337-01 | | | ✓ | | 970mL | | | | ↓ | | | | * |
| 14 | -02 | | | ✓ | | ↓ | | | | C | | | | |
| 15 | -03 | | | ✓ | | 950mL | | | | T | | | | *⊗ |
| 16 | -04 | | | ✓ | | 960mL | | | | | | | | *⊗ |
| 17 | -05 | | | ✓ | | 930mL | | | | | | | | *⊗ |
| 18 | -06 | | | ✓ | | 970mL | | | | | | | | *⊗ |
| 19 | -07 | ↓ | | | | 960mL | ↓ | | ↓ | ↓ | | | | ↓ |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | DDP | | | | | | |
| 23 | | | | | | | | 09/26/02 | | | | | | |
| 24 | | | | | | | | | | | | | | |

ethylene Chloride Lot #: 420F4
xane Lot #: —
her Lot #: —
ethanol Lot #: —
lvent: CH3CN Lot #: 4/264
agent: Fam. Sol. Lot #: EL 2254
agent: — Lot #: —
agent: — Lot #: —
id: — Lot #: —
risil Lot #: —
ica Gel Lot #: —
Analyst / Date / Time: —
ed $Na_2SO_4$ Lot #: EL2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 191 Page # 51

General Comments: None

Extraction Anomalies: ~~* Extract~~ 8/36 Sample required pH adjustment to achieve a neutral pH (5 to 9). (*) 8 Sample changed color when 10N NaOH (SR2262) was added to adjust ~~the~~ the pH.

Concentration Anomalies: None

Clean-Up Anomalies: N/A

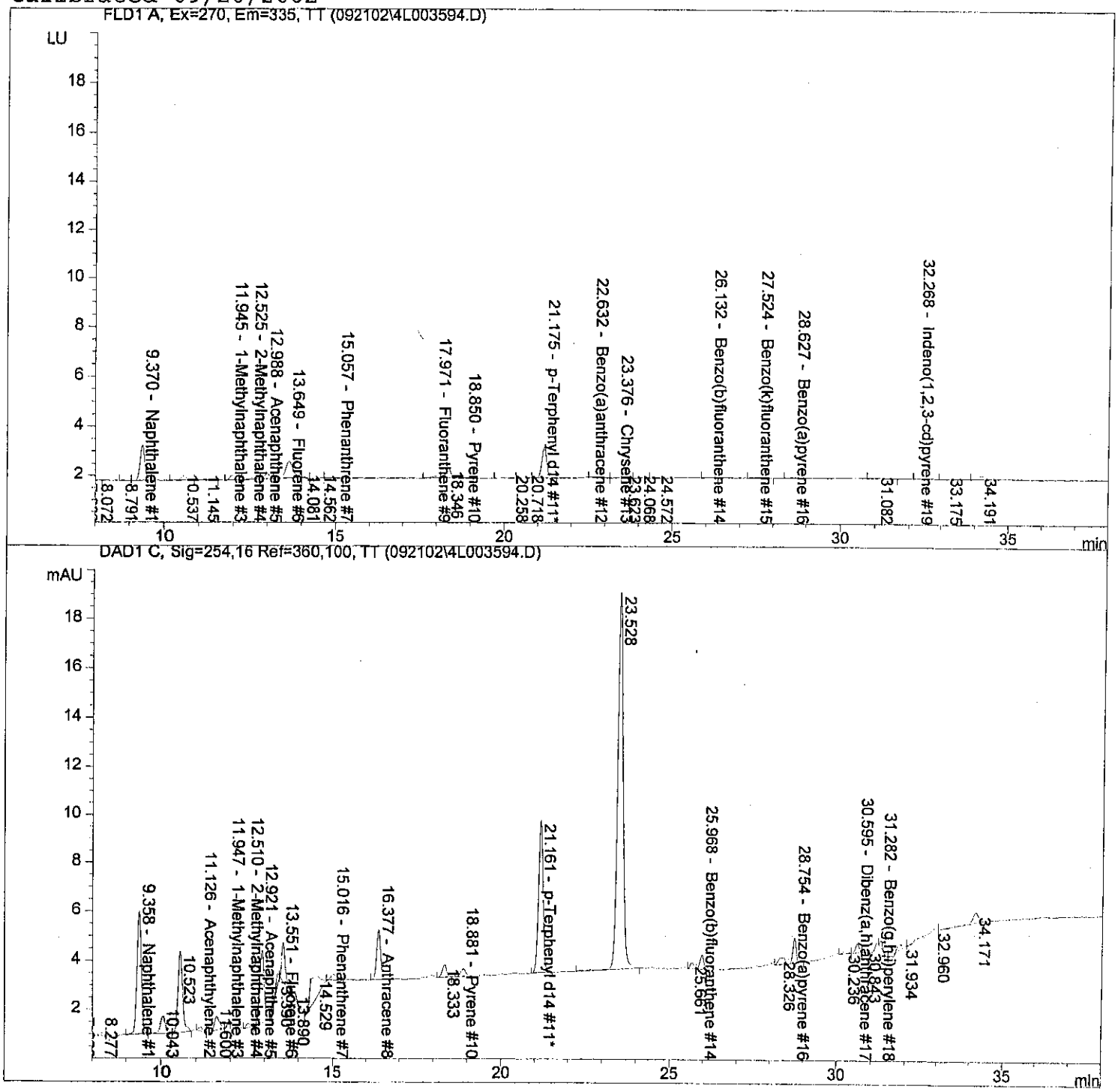
Supervisor Review: _____ Date: _____

# 2.2.7.2 Sample Data

==========

| | | | |
|---|---|---|---|
| Injection Date | : 9/22/2002 6:05:04 AM | Seq. Line | : 17 |
| Sample Name | : L0209310-01 831W | Vial | : 17 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 6:04:35 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.370 | BB | 14.63199 | 4.94403e-2 | 7.23410e-1 | | Naphthalene #1 |
| 11.945 | BB | 1.93083 | 1.96748e-1 | 3.79888e-1 | | 1-Methylnaphthalene #3 |
| 12.525 | BB | 8.95288e-1 | 2.94067e-1 | 2.63275e-1 | | 2-Methylnaphthalene #4 |
| 12.988 | BB | 2.42606 | 8.70065e-2 | 2.11083e-1 | | Acenaphthene #5 |
| 13.649 | BB | 10.63918 | 1.07150e-2 | 1.13999e-1 | | Fluorene #6 |
| 15.057 | BB | 2.28754e-1 | 2.30357 | 5.26952e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.971 | PB | 8.55684e-1 | 5.99667e-2 | 5.13126e-2 | | Fluoranthene #9 |
| 18.850 | BBA | 1.85249e-1 | 4.18876e-1 | 7.75965e-2 | F | Pyrene #10 |
| 21.175 | BB | 12.76383 | 3.21014e-1 | 4.09736 | 41.0% | p-Terphenyl d14 #11* |
| 22.632 | BB | 3.78509e-1 | 1.30550e-1 | 4.94144e-2 | | Benzo(a)anthracene #12 |
| 23.376 | BB | 1.92542e-1 | 2.42131e-1 | 4.66204e-2 | | Chrysene #13 |
| 26.132 | BBA | 1.97250e-1 | 2.19963e-1 | 4.33878e-2 | | Benzo(b)fluoranthene #14 |
| 27.524 | PBA | 3.62002e-1 | 3.78879e-2 | 1.37155e-2 | | Benzo(k)fluoranthene #15 |
| 28.627 | PBA | 1.85093e-1 | 3.17277e-1 | 5.87258e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.268 | BB | 1.79127e-1 | 2.11078e-1 | 3.78098e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.69455

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.358 | BB | 45.94984 | 6.21372e-3 | 2.85519e-1 | Lmol | Naphthalene #1 |
| 11.126 | BB | 1.21919 | 2.28751e-1 | 2.78890e-1 | | Acenaphthylene #2 |
| 11.947 | BB | 7.03247e-1 | 2.44823e-1 | 1.72171e-1 | | 1-Methylnaphthalene #3 |
| 12.510 | BB | 1.57133 | 4.63970e-2 | 7.29048e-2 | | 2-Methylnaphthalene #4 |
| 12.921 | BB | 28.57627 | 3.00586e-2 | 8.58962e-1 | NC | Acenaphthene #5 |
| 13.551 | BB | 13.45973 | 3.11662e-2 | 4.19489e-1 | NC | Fluorene #6 |
| 15.016 | BB | 2.99437 | 8.32147e-2 | 2.49175e-1 | Lmol | Phenanthrene #7 |
| 16.377 | BBA | 17.23645 | 1.08548e-2 | 1.87098e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.881 | PBA | 3.37765 | 2.09214e-2 | 7.06652e-2 | F | Pyrene #10 |
| 21.161 | BBA | 56.76922 | 7.05796e-2 | 4.00675 | 40.1% | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.968 | BBA | 4.44660 | 2.74710e-2 | 1.22153e-1 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.754 | BB | 7.39284 | 3.38214e-2 | 2.50036e-1 | RT | Benzo(a)pyrene #16 |
| 30.595 | BB | 2.62742 | 2.91456e-2 | 7.65778e-2 | NC | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.282 | BB | 9.55139e-1 | 1.03161e-1 | 9.85333e-2 | NL | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 7.14892

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

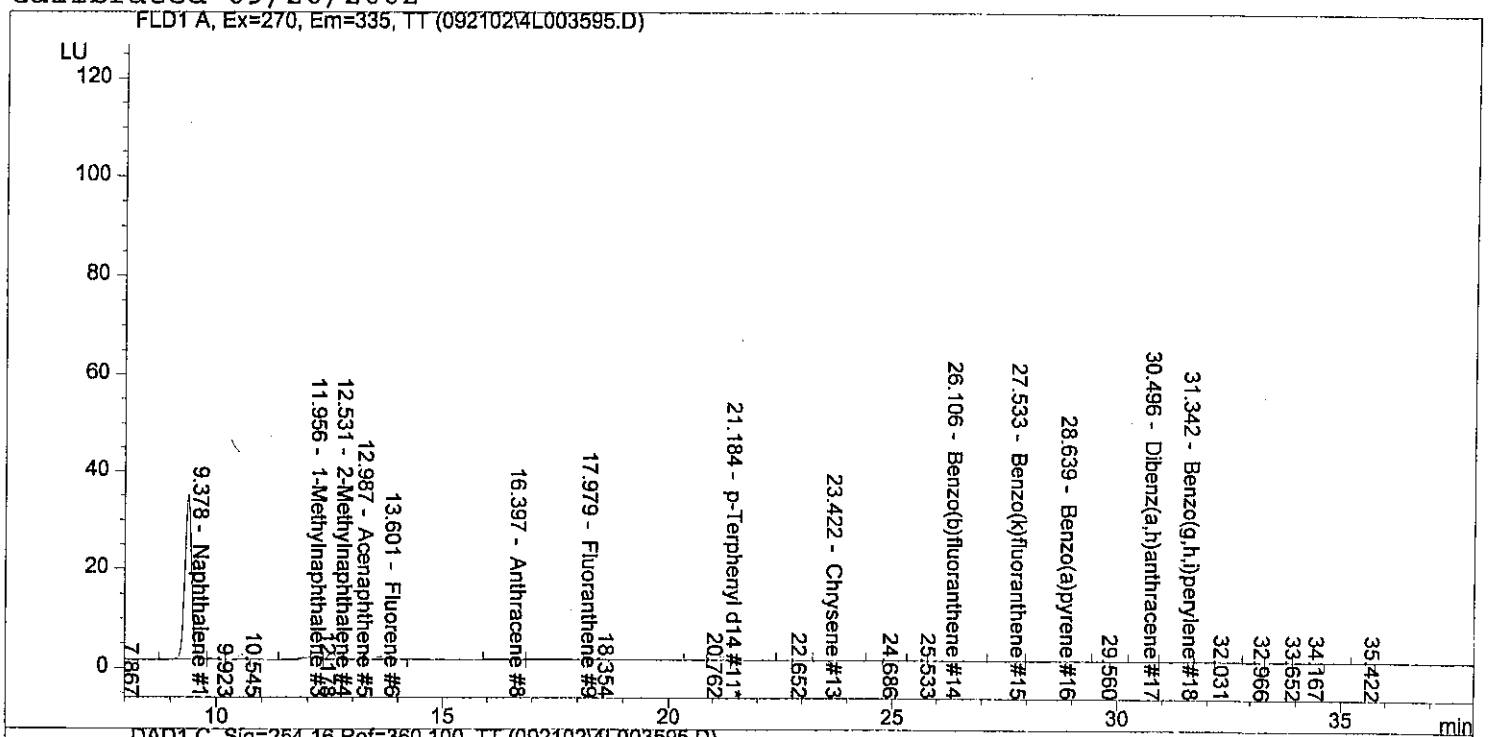
==========

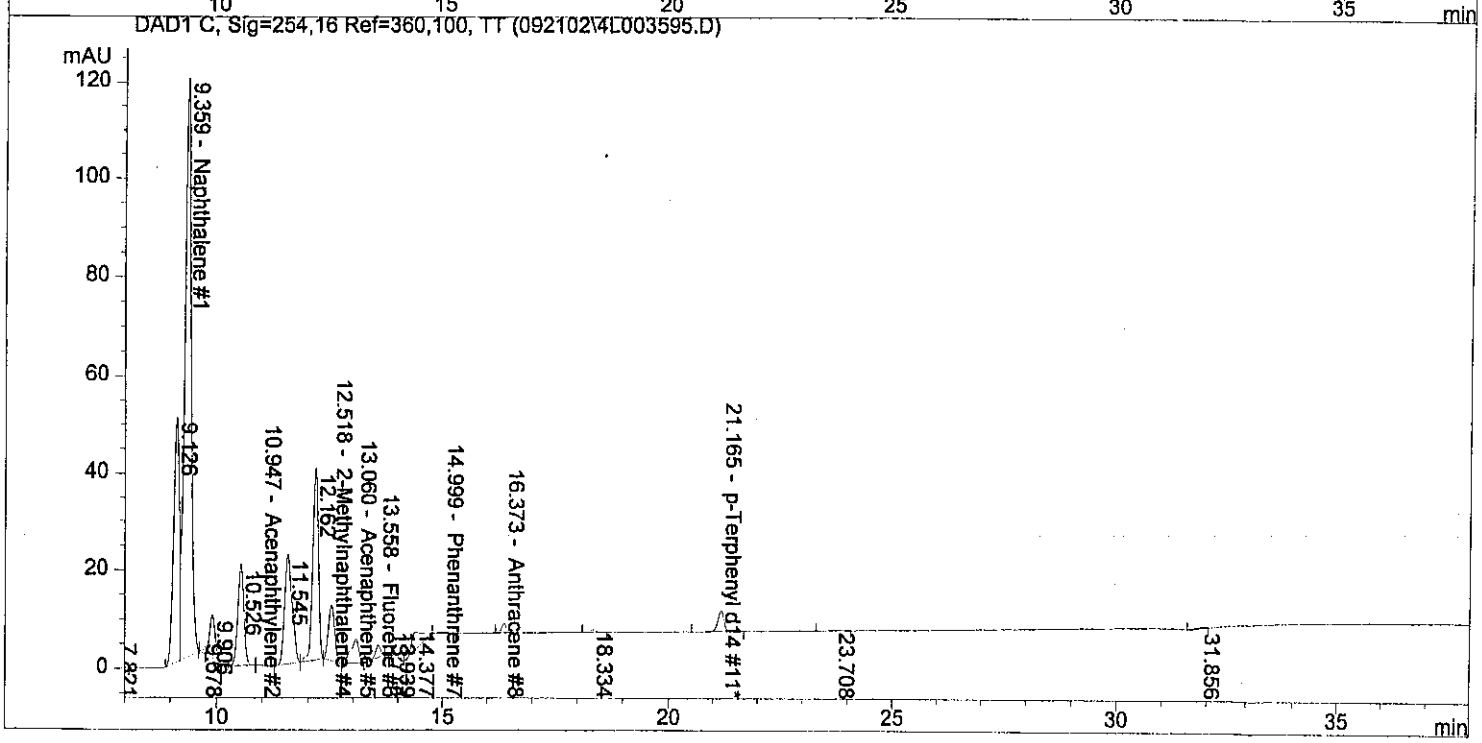
*** End of Report ***

==========

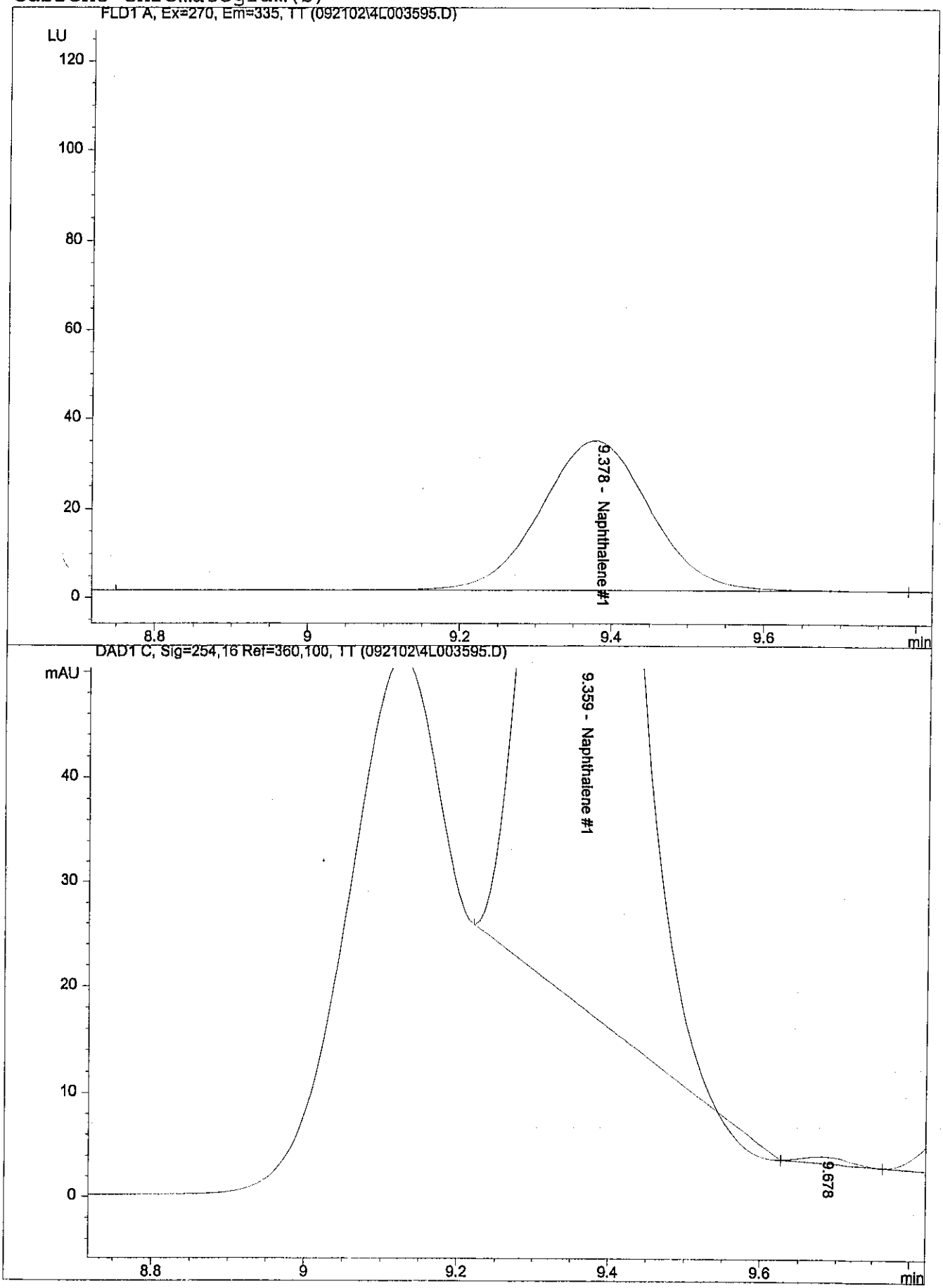
Injection Date : 9/22/2002 7:01:42 AM  Seq. Line : 18
Sample Name : L0209310-02 831W  Vial : 18
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 7:01:14 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002

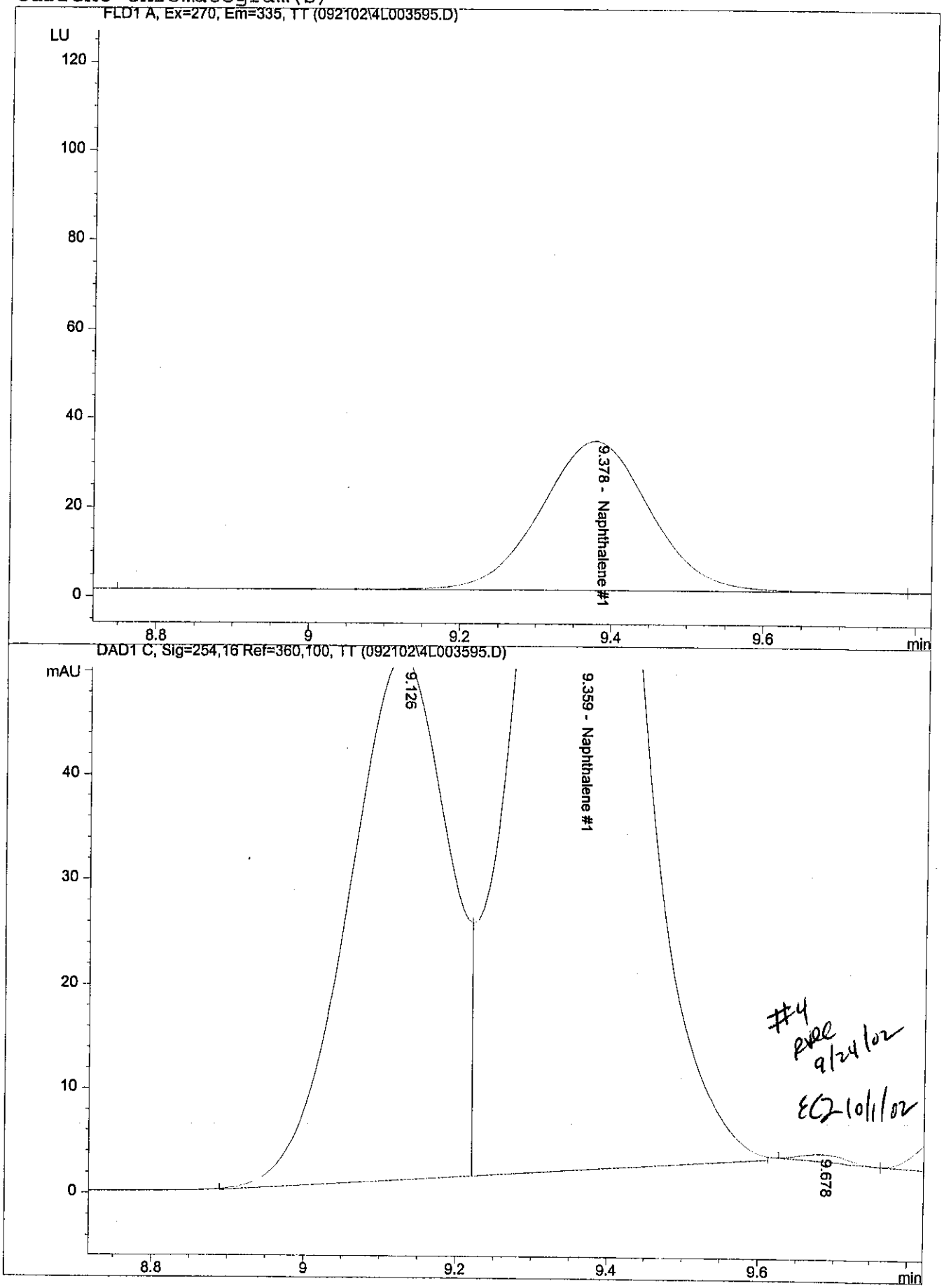


Current Chromatogram(s)



Current Chromatogram(s)




HPLC4 9/24/2002 3:50:08 PM

External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.378 | BB | 337.52737 | 2.63268e-2 | 8.88600 | | Naphthalene #1 |
| 11.956 | PB | 5.56245e-1 | 6.28076e-1 | 3.49364e-1 | | 1-Methylnaphthalene #3 |
| 12.531 | BB | 16.80839 | 3.20742e-2 | 5.39116e-1 | | 2-Methylnaphthalene #4 |
| 12.987 | BB | 1.46129 | 1.35294e-1 | 1.97703e-1 | | Acenaphthene #5 |
| 13.601 | BB | 10.28780 | 1.08512e-2 | 1.11634e-1 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.397 | PB | 3.73801e-1 | 5.96774e-1 | 2.23075e-1 | | Anthracene #8 |
| 17.979 | BB | 9.00433e-1 | 5.82490e-2 | 5.24493e-2 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.184 | BB | 8.20551 | 3.32470e-1 | 2.72809 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.422 | BB | 2.06675e-1 | 2.28216e-1 | 4.71667e-2 | | Chrysene #13 |
| 26.106 | BB | 3.86586e-1 | 1.20452e-1 | 4.65650e-2 | | Benzo(b)fluoranthene #14 |
| 27.533 | BB | 6.71060e-1 | 2.17422e-2 | 1.45903e-2 | | Benzo(k)fluoranthene #15 |
| 28.639 | BB | 3.99176e-1 | 1.49611e-1 | 5.97210e-2 | | Benzo(a)pyrene #16 |
| 30.496 | BB | 4.02114e-1 | 2.02431e-1 | 8.14004e-2 | | Dibenz(a,h)anthracene #17 |
| 31.342 | BB | 3.63641e-1 | 2.59947e-1 | 9.45275e-2 | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 13.43140

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.359 | FM | 1133.86389 | 8.34439e-3 | 9.46140 | | Naphthalene #1 |
| 10.947 | BB | 5.58762e-1 | 4.58918e-1 | 2.56426e-1 | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.518 | BB | 105.58022 | 1.26118e-2 | 1.33156 | | 2-Methylnaphthalene #4 |
| 13.060 | BB | 61.55154 | 2.60338e-2 | 1.60242 | | Acenaphthene #5 |
| 13.558 | BB | 22.02081 | 2.57840e-2 | 5.67785e-1 | | Fluorene #6 |
| 14.999 | BBA | 2.55307 | 9.45990e-2 | 2.41518e-1 | | Phenanthrene #7 |
| 16.373 | BBA | 15.31535 | 1.08607e-2 | 1.66335e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.165 | BBA | 39.24140 | 7.25833e-2 | 2.84827 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 16.47571

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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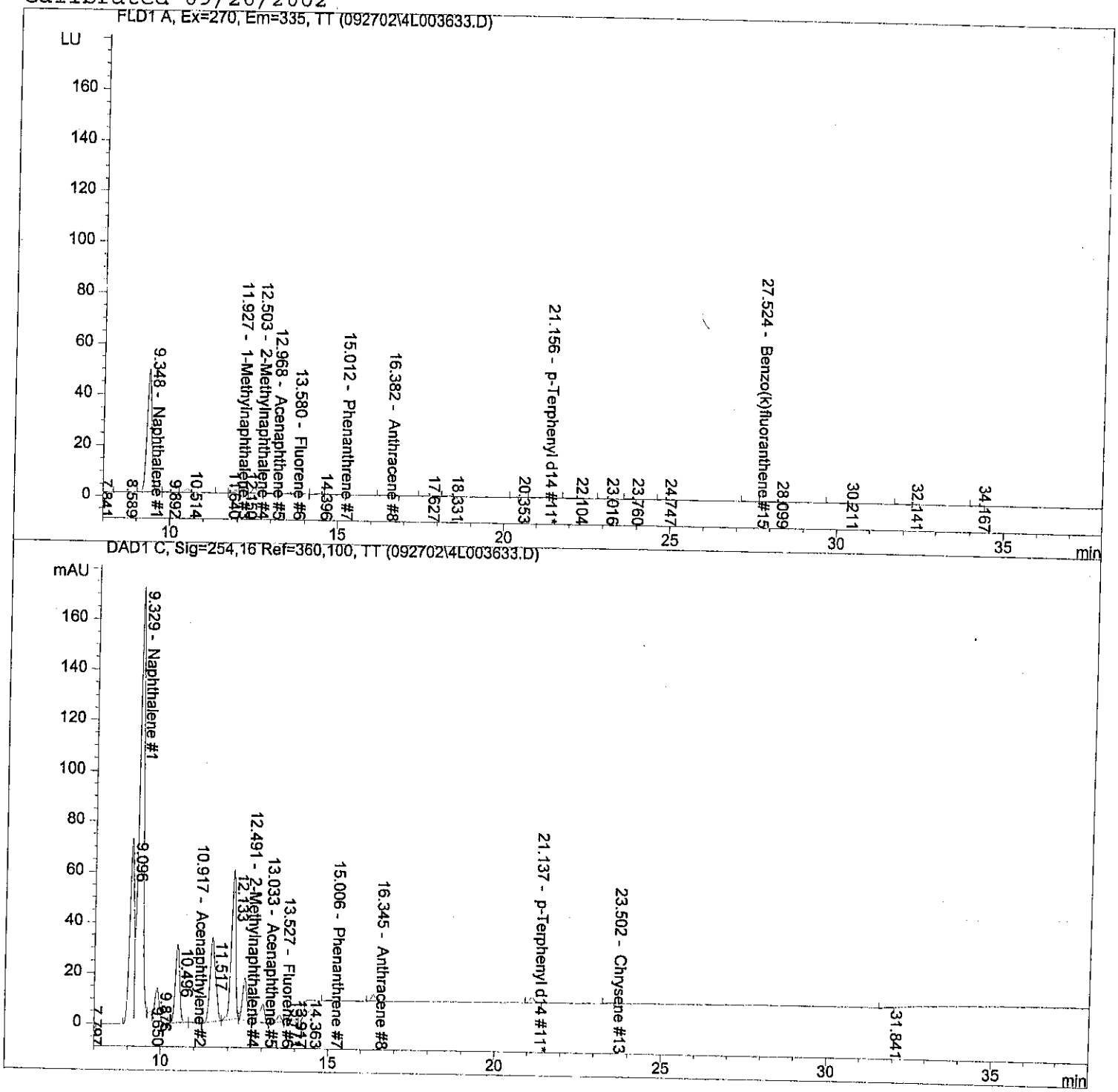
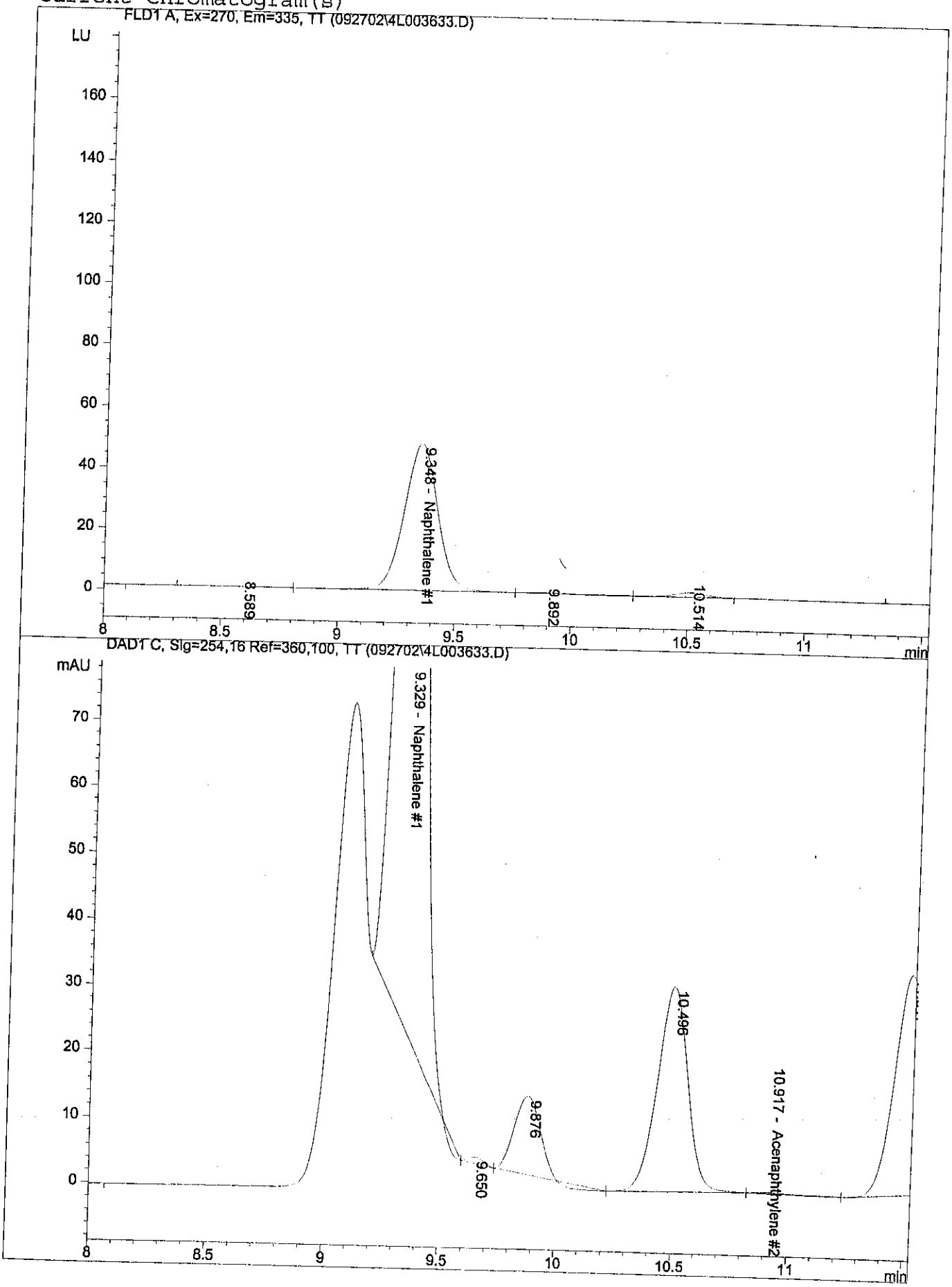
Injection Date : 9/28/2002 5:43:27 AM
Sample Name : L0209310-02 831W
Acq. Operator : RDC

Seq. Line : 15
Vial : 15
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 5:43:39 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002



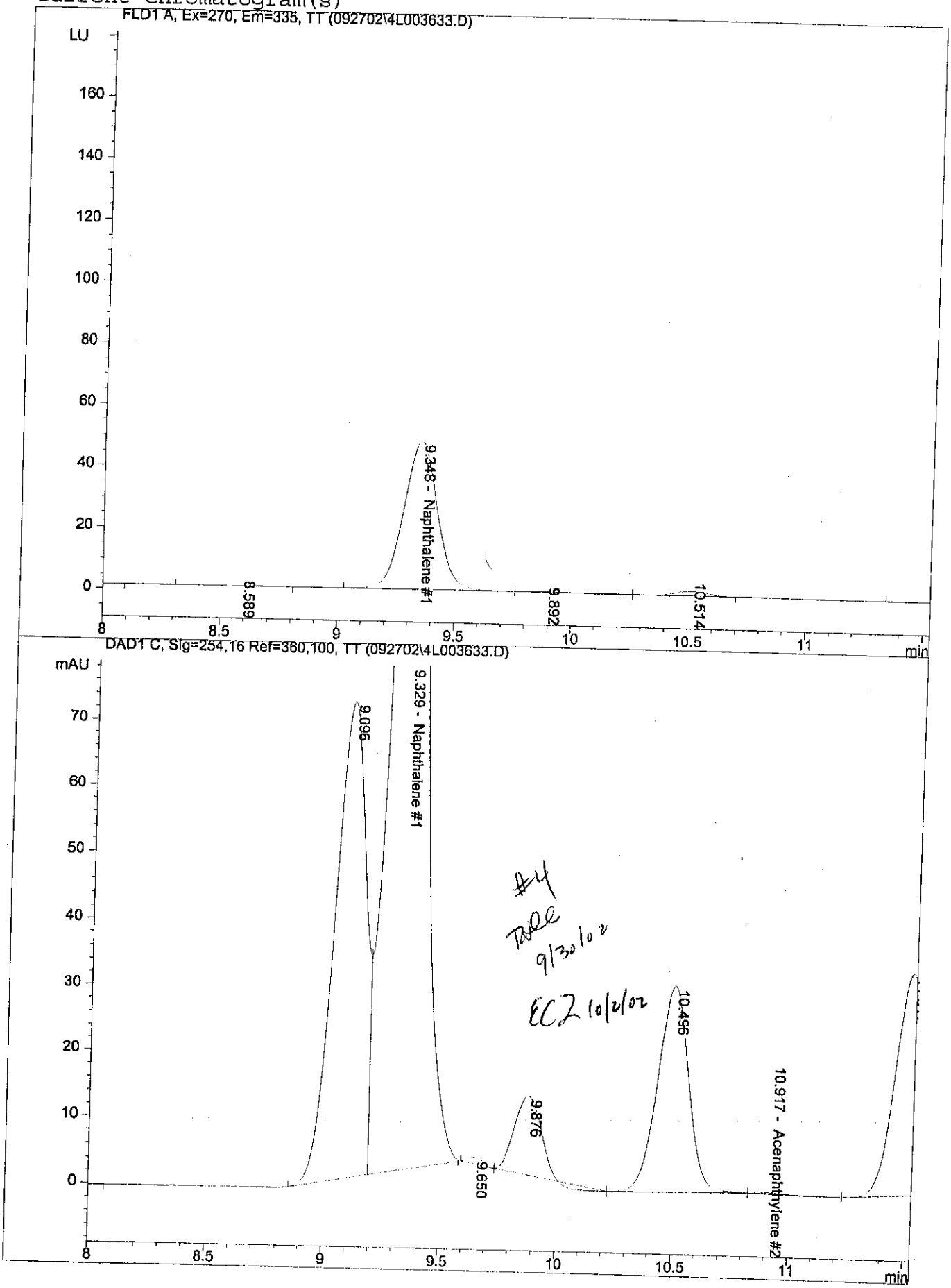
Current Chromatogram(s)




HPLC4 9/30/2002 11:10:40 AM

Page 1 of 1

Current Chromatogram(s)




HPLC4 9/30/2002 11:11:31 AM

External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.348 | FM | 481.92474 | 2.60129e-2 | 12.53627 | | Naphthalene #1 |
| 11.927 | BB | 7.11612 | 6.95645e-2 | 4.95029e-1 | | 1-Methylnaphthalene #3 |
| 12.503 | BB | 24.15130 | 2.75927e-2 | 6.66400e-1 | | 2-Methylnaphthalene #4 |
| 12.968 | BB | 2.46772 | 8.57715e-2 | 2.11660e-1 | | Acenaphthene #5 |
| 13.580 | BBA | 7.29556 | 1.25418e-2 | 9.14994e-2 | | Fluorene #6 |
| 15.012 | BB | 2.19270e-1 | 2.39600 | 5.25371e-1 | | Phenanthrene #7 |
| 16.382 | BBA | 2.40207e-1 | 7.58944e-1 | 1.82303e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.156 | BB | 5.00207 | 3.53015e-1 | 1.76581 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.524 | BB | 1.58219e-1 | 8.30410e-2 | 1.31387e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 16.48748 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.329 | FM | 1593.88892 | 8.37036e-3 | 13.34142 | | Naphthalene #1 |
| 10.917 | BB | 9.85005e-1 | 2.75049e-1 | 2.70924e-1 | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.491 | BB | 156.18021 | 1.24464e-2 | 1.94389 | | 2-Methylnaphthalene #4 |
| 13.033 | BB | 91.79260 | 2.48848e-2 | 2.28424 | | Acenaphthene #5 |
| 13.527 | BB | 28.30055 | 2.39064e-2 | 6.76563e-1 | | Fluorene #6 |
| 15.006 | PB | 1.63585 | 1.37912e-1 | 2.25603e-1 | | Phenanthrene #7 |
| 16.345 | BBA | 22.85766 | 1.08432e-2 | 2.47850e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - 17% | | Pyrene #10 |
| 21.137 | BBA | 21.83389 | 7.77575e-2 | 1.69775 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.502 | PB | 9.87137e-1 | 5.03624e-2 | 4.97146e-2 | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| [min] | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|
| 31.297 | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 20.73795

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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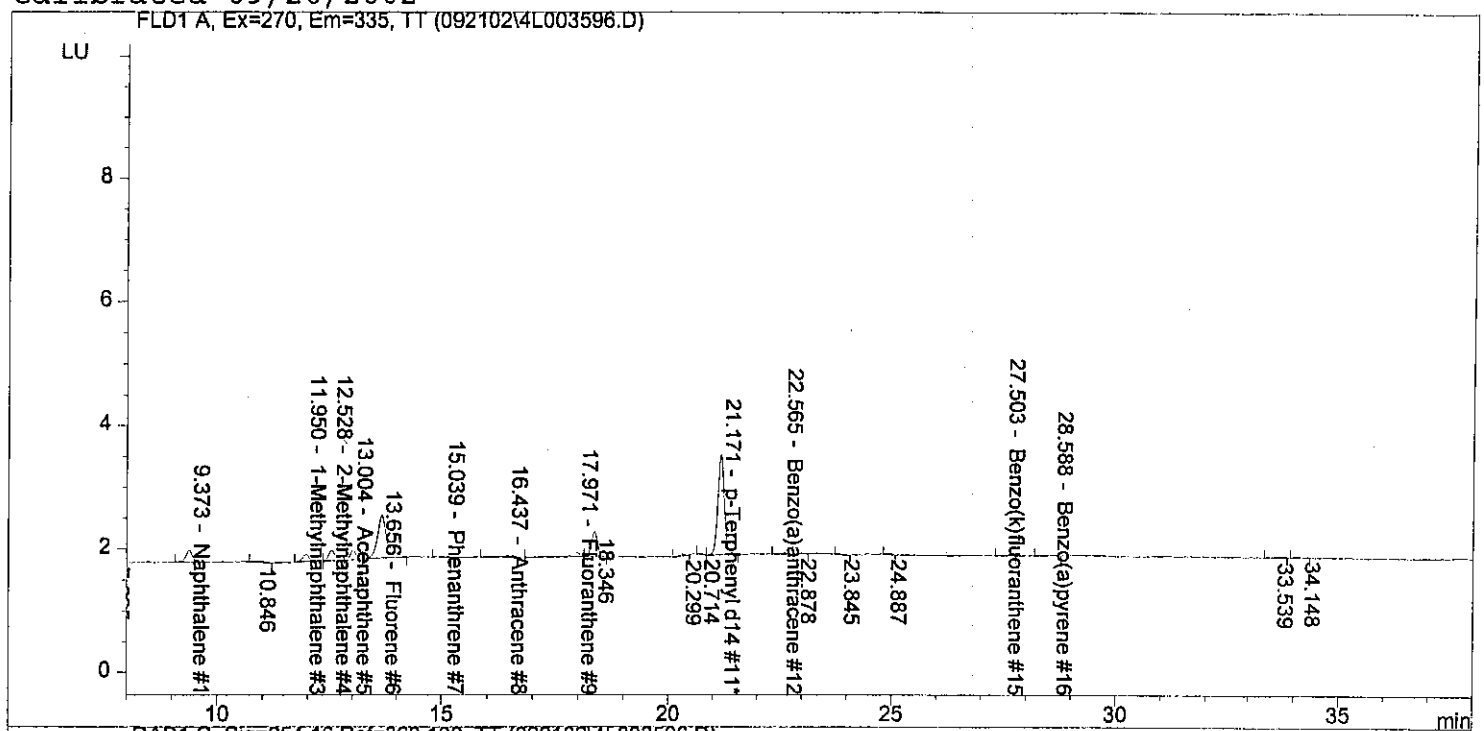
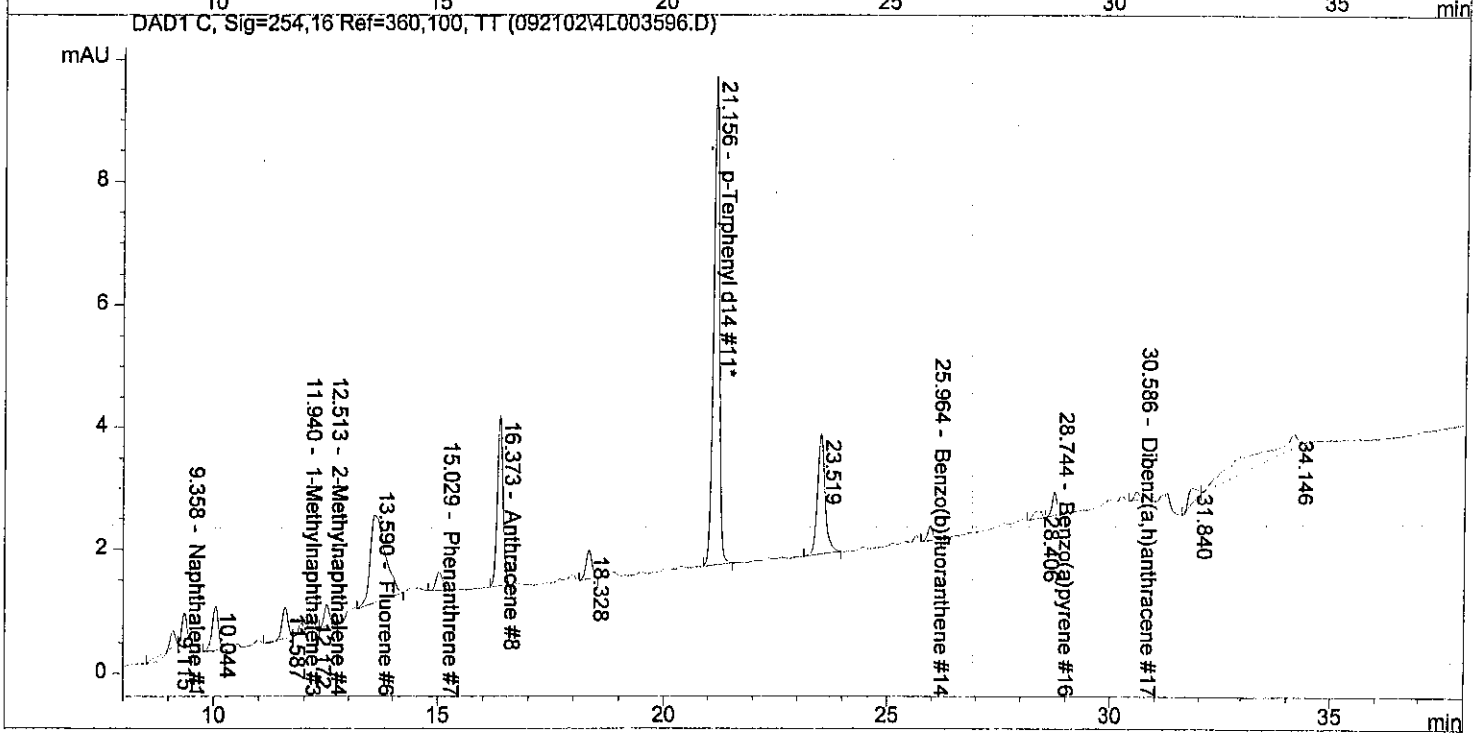
Injection Date : 9/22/2002 7:58:21 AM
Sample Name : WG125616-01 WREF
Acq. Operator : RDC

Seq. Line : 19
Vial : 19
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 7:57:52 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.373 | BBA | 1.99498 | 2.02485e-1 | 4.03954e-1 | | Naphthalene #1 |
| 11.950 | BB | 1.37659 | 2.67023e-1 | 3.67580e-1 | | 1-Methylnaphthalene #3 |
| 12.528 | BB | 1.85720 | 1.50737e-1 | 2.79949e-1 | | 2-Methylnaphthalene #4 |
| 13.004 | BB | 1.48839 | 1.33083e-1 | 1.98079e-1 | | Acenaphthene #5 |
| 13.656 | BB | 10.63300 | 1.07173e-2 | 1.13957e-1 | | Fluorene #6 |
| 15.039 | BB | 2.46056e-1 | 2.15331 | 5.29835e-1 | | Phenanthrene #7 |
| 16.437 | BB | 4.11639e-1 | 5.69971e-1 | 2.34622e-1 | | Anthracene #8 |
| 17.971 | BB | 8.07448e-1 | 6.20316e-2 | 5.00873e-2 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.171 | BB | 16.48707 | 3.16356e-1 | 5.21579 | 52.2% | p-Terphenyl d14 #11* |
| 22.565 | BB | 3.16809e-1 | 1.54435e-1 | 4.89263e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.503 | BB | 1.72762e-1 | 7.62891e-2 | 1.31798e-2 | | Benzo(k)fluoranthene #15 |
| 28.588 | BB | 1.66516e-1 | 3.52155e-1 | 5.86394e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 7.51460

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.358 | BB | 4.42458 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.940 | BB | 8.69180e-1 | 2.00737e-1 | 1.74476e-1 | Lmoc | 1-Methylnaphthalene #3 |
| 12.513 | BBA | 2.98327 | 3.01653e-2 | 8.99913e-2 | ↓ | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.590 | BB | 33.95135 | 2.28105e-2 | 7.74447e-1 | NC | Fluorene #6 |
| 15.029 | BBA | 3.38140 | 7.56761e-2 | 2.55891e-1 | Lmoc | Phenanthrene #7 |
| 16.373 | BBA | 23.63997 | 1.08420e-2 | 2.56305e-1 | ↓ | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.156 | BBA | 72.65974 | 6.95985e-2 | 5.05701 | 50.6% | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.964 | BB | 1.94635 | 3.68916e-2 | 7.18040e-2 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.744 | BBA | 2.69530 | 4.73445e-2 | 1.27608e-1 | RT | Benzo(a)pyrene #16 |
| 30.586 | BB | 1.03611 | 0.00000 | 0.00000 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.80753

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), (Dibenz(a,h)a

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*** End of Report ***

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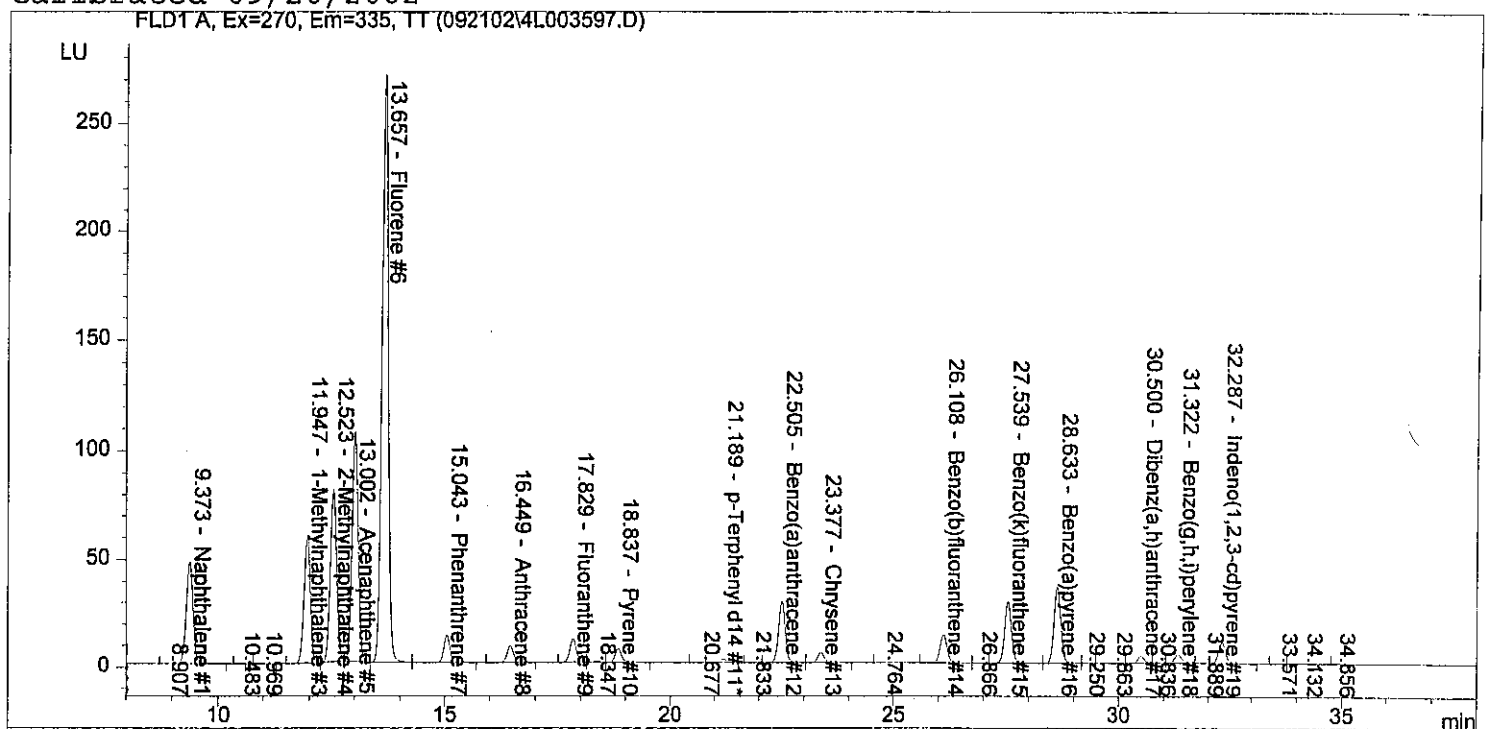
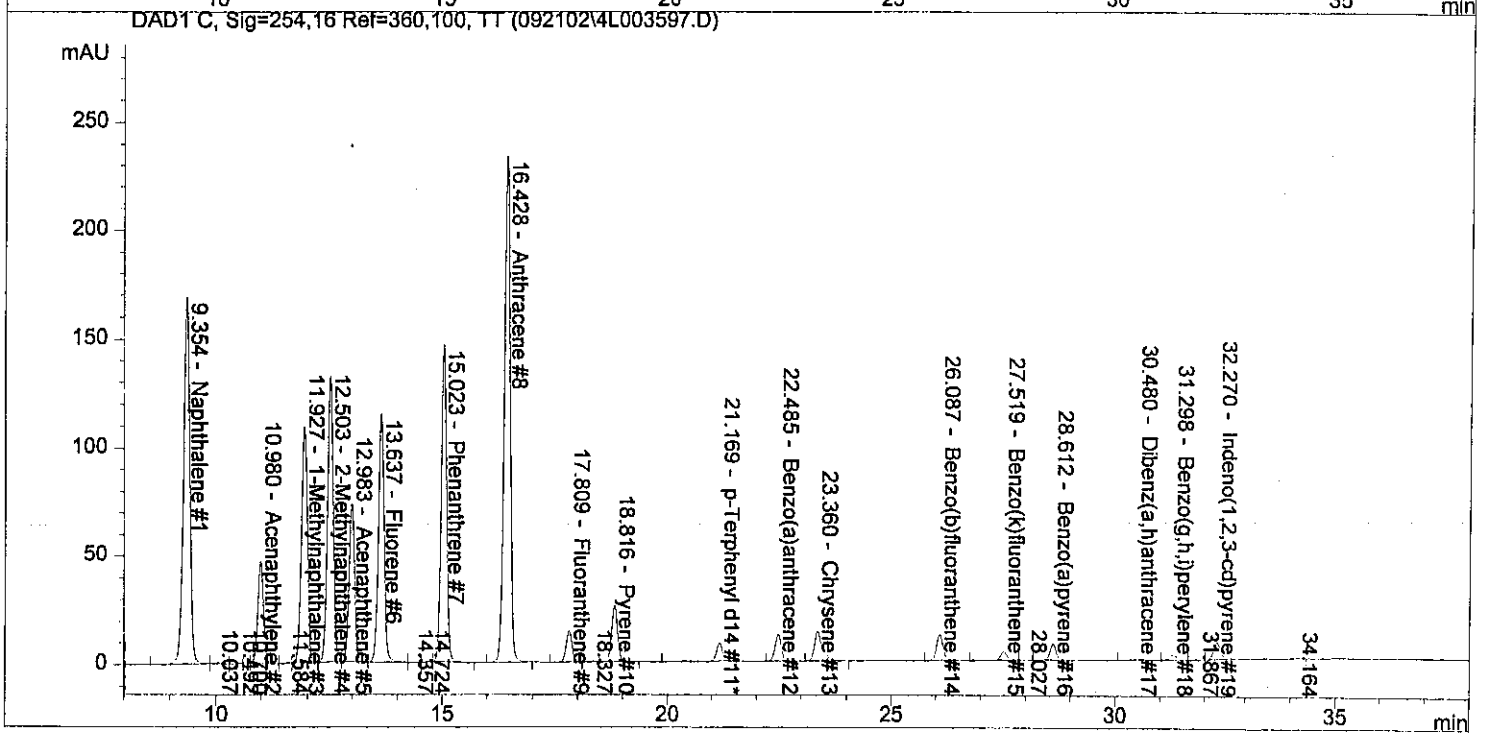
Injection Date : 9/22/2002 8:55:00 AM
Sample Name : WG125616-04 WMS
Acq. Operator : RDC

Seq. Line : 20
Vial : 20
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 8:54:31 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.373 | BB | 478.83087 | 2.60177e-2 | 12.45806 | | Naphthalene #1 |
| 11.947 | BB | 569.09460 | 2.27976e-2 | 12.97401 | | 1-Methylnaphthalene #3 |
| 12.523 | BB | 761.72241 | 1.76595e-2 | 13.45162 | | 2-Methylnaphthalene #4 |
| 13.002 | BB | 1015.38501 | 1.40424e-2 | 14.25847 | | Acenaphthene #5 |
| 13.657 | BB | 2588.69482 | 6.74550e-3 | 17.46205 | | Fluorene #6 |
| 15.043 | BBA | 122.84192 | 1.70627e-1 | 20.96010 | | Phenanthrene #7 |
| 16.449 | BBA | 72.81016 | 3.06685e-1 | 22.32977 | | Anthracene #8 |
| 17.829 | PB | 106.15025 | 2.56804e-2 | 2.72599 | | Fluoranthene #9 |
| 18.837 | BBA | 64.63399 | 3.60305e-2 | 2.32880 | | Pyrene #10 |
| 21.189 | BB | 16.86032 | 3.16003e-1 | 5.32791 63.3% | | p-Terphenyl d14 #11* |
| 22.505 | BB | 292.63956 | 8.06937e-3 | 2.36142 | | Benzo(a)anthracene #12 |
| 23.377 | BB | 49.33706 | 3.94497e-2 | 1.94633 | | Chrysene #13 |
| 26.108 | BB | 138.16150 | 1.70709e-2 | 2.35854 | | Benzo(b)fluoranthene #14 |
| 27.539 | BB | 299.79468 | 2.87293e-3 | 8.61290e-1 | | Benzo(k)fluoranthene #15 |
| 28.633 | BB | 372.62347 | 4.80399e-3 | 1.79008 | | Benzo(a)pyrene #16 |
| 30.500 | BB | 32.89910 | 4.07381e-2 | 1.34025 | | Dibenz(a,h)anthracene #17 |
| 31.322 | BB | 47.06052 | 2.69542e-2 | 1.26848 | | Benzo(g,h,i)perylene #18 |
| 32.287 | BB | 107.75559 | 1.47051e-2 | 1.58456 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 137.78771

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.354 | PB | 1585.26135 | 8.37001e-3 | 13.26866 | | Naphthalene #1 |
| 10.980 | BB | 414.92120 | 3.45869e-2 | 14.35082 | | Acenaphthylene #2 |
| 11.927 | BB | 965.19086 | 1.40611e-2 | 13.57166 | | 1-Methylnaphthalene #3 |
| 12.503 | BB | 1155.21460 | 1.21480e-2 | 14.03358 | | 2-Methylnaphthalene #4 |
| 12.983 | BB | 641.55536 | 2.28806e-2 | 14.67919 | | Acenaphthene #5 |
| 13.637 | BB | 1024.97400 | 1.75039e-2 | 17.94105 | | Fluorene #6 |
| 15.023 | BBA | 1274.23621 | 1.75065e-2 | 22.30746 | | Phenanthrene #7 |
| 16.428 | BB | 2091.95801 | 1.08081e-2 | 22.61004 | | Anthracene #8 |
| 17.809 | BB | 131.61229 | 2.09471e-2 | 2.75690 | | Fluoranthene #9 |
| 18.816 | BBA | 249.00899 | 1.10873e-2 | 2.76083 | | Pyrene #10 |
| 21.169 | PBA | 76.99365 | 6.94012e-2 | 5.34345 53% | | p-Terphenyl d14 #11* |
| 22.485 | PBA | 117.23919 | 2.13027e-2 | 2.49751 | | Benzo(a)anthracene #12 |
| 23.360 | BBA | 166.34090 | 1.53129e-2 | 2.54716 | | Chrysene #13 |
| 26.087 | BBA | 117.66217 | 2.04146e-2 | 2.40203 | | Benzo(b)fluoranthene #14 |
| 27.519 | PBA | 36.45979 | 2.36592e-2 | 8.62608e-1 | | Benzo(k)fluoranthene #15 |
| 28.612 | BBA | 73.22178 | 2.68457e-2 | 1.96569 | | Benzo(a)pyrene #16 |
| 30.480 | BB | 14.65125 | 8.90197e-2 | 1.30425 | | Dibenz(a,h)anthracene #17 |

| Retime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.298 | BB | 27.30081 | 5.63264e-2 | 1.53776 | | Benzo(g,h,i)perylene #18 |
| 32.270 | BB | 79.58957 | 2.01072e-2 | 1.60032 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 158.34096

Results obtained with enhanced integrator!

*** End of Report ***

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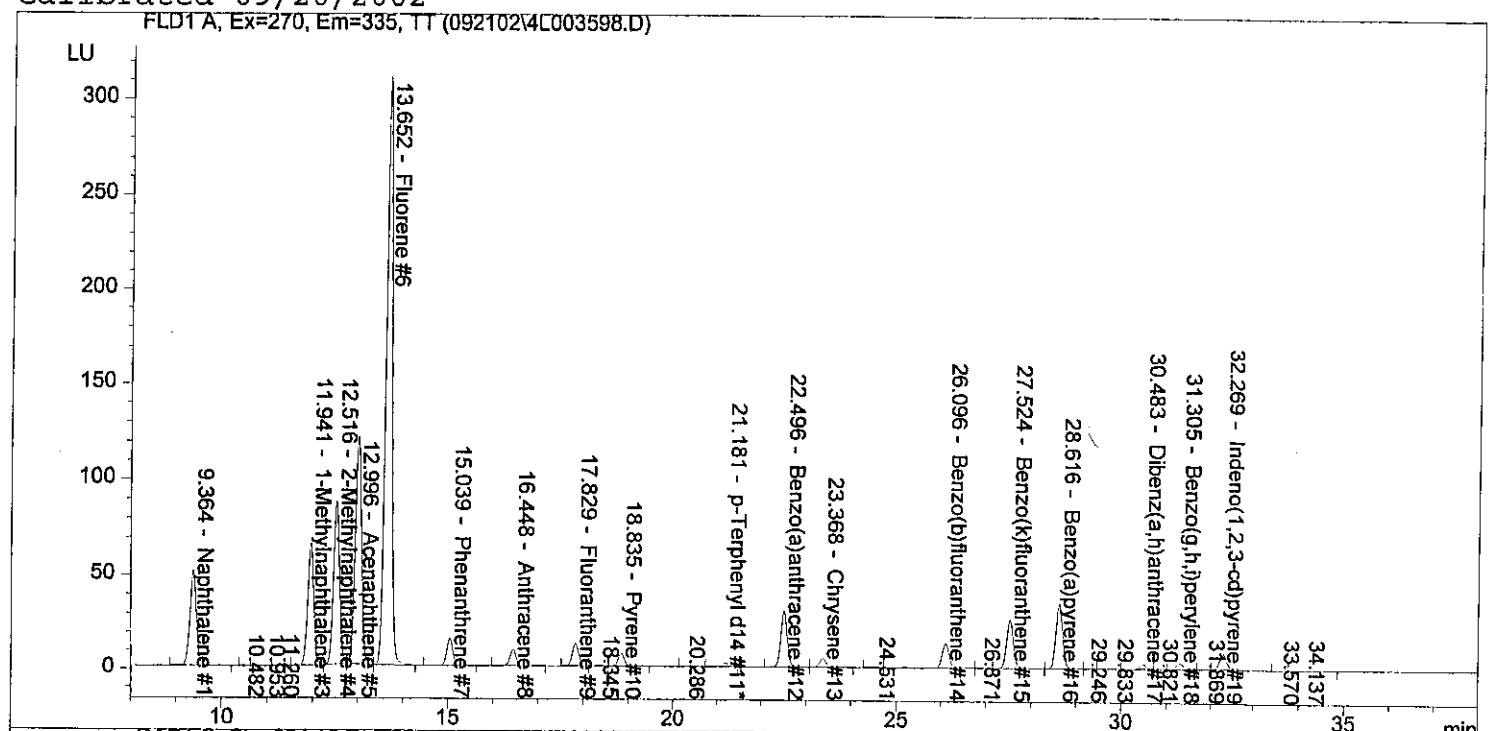
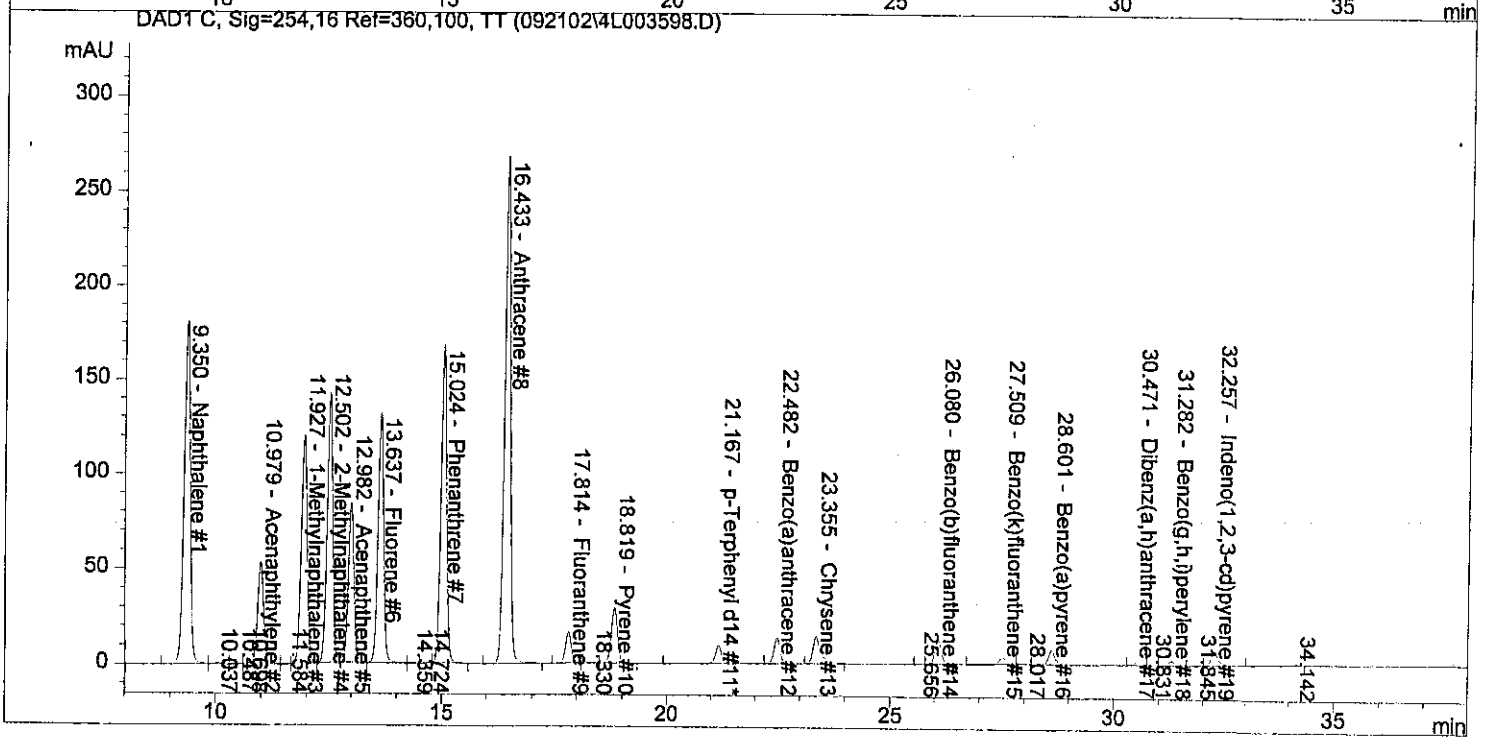
Injection Date : 9/22/2002 9:51:44 AM
Sample Name : WG125616-05 WMSD
Acq. Operator : RDC

Seq. Line : 21
Vial : 21
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 9:51:11 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.364 | BBA | 518.06561 | 2.59618e-2 | 13.44989 | | Naphthalene #1 |
| 11.941 | BB | 629.31140 | 2.27410e-2 | 14.31116 | | 1-Methylnaphthalene #3 |
| 12.516 | BB | 825.61383 | 1.76343e-2 | 14.55913 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 1155.73950 | 1.40212e-2 | 16.20486 | | Acenaphthene #5 |
| 13.652 | BBA | 2973.18506 | 6.74338e-3 | 20.04933 | | Fluorene #6 |
| 15.039 | BBA | 141.82709 | 1.70094e-1 | 24.12392 | | Phenanthrene #7 |
| 16.448 | PBA | 83.97942 | 3.06486e-1 | 25.73849 | | Anthracene #8 |
| 17.829 | PB | 116.29186 | 2.56561e-2 | 2.98360 | | Fluoranthene #9 |
| 18.835 | BBA | 70.39474 | 3.59405e-2 | 2.53002 | | Pyrene #10 |
| 21.181 | BBA | 18.03043 | 3.14990e-1 | 5.67940 | 56.8% | p-Terphenyl d14 #11* |
| 22.496 | BB | 310.99942 | 8.06001e-3 | 2.50666 | | Benzo(a)anthracene #12 |
| 23.368 | BBA | 49.15359 | 3.94527e-2 | 1.93924 | | Chrysene #13 |
| 26.096 | BB | 143.49022 | 1.70601e-2 | 2.44796 | | Benzo(b)fluoranthene #14 |
| 27.524 | BB | 278.60562 | 2.87615e-3 | 8.01312e-1 | | Benzo(k)fluoranthene #15 |
| 28.616 | BB | 364.28818 | 4.80754e-3 | 1.75133 | | Benzo(a)pyrene #16 |
| 30.483 | BB | 27.41486 | 4.11384e-2 | 1.12780 | | Dibenz(a,h)anthracene #17 |
| 31.305 | BB | 40.21375 | 2.72631e-2 | 1.09635 | | Benzo(g,h,i)perylene #18 |
| 32.269 | BBA | 95.84483 | 1.47457e-2 | 1.41330 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 152.71375

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.350 | PB | 1712.11865 | 8.37478e-3 | 14.33862 | | Naphthalene #1 |
| 10.979 | BB | 474.74979 | 3.45147e-2 | 16.38587 | | Acenaphthylene #2 |
| 11.927 | BB | 1067.59802 | 1.40450e-2 | 14.99439 | | 1-Methylnaphthalene #3 |
| 12.502 | BB | 1252.14111 | 1.21444e-2 | 15.20653 | | 2-Methylnaphthalene #4 |
| 12.982 | BB | 730.61945 | 2.28398e-2 | 16.68723 | | Acenaphthene #5 |
| 13.637 | BB | 1170.15674 | 1.74814e-2 | 20.45592 | | Fluorene #6 |
| 15.024 | BB | 1466.47119 | 1.74862e-2 | 25.64307 | | Phenanthrene #7 |
| 16.433 | BBA | 2411.38501 | 1.08080e-2 | 26.06230 | | Anthracene #8 |
| 17.814 | PB | 144.16162 | 2.09257e-2 | 3.01668 | | Fluoranthene #9 |
| 18.819 | BBA | 272.08752 | 1.10758e-2 | 3.01359 | | Pyrene #10 |
| 21.167 | PBA | 83.78942 | 6.91329e-2 | 5.79261 | 57.9% | p-Terphenyl d14 #11* |
| 22.482 | PBA | 125.02290 | 2.12834e-2 | 2.66092 | | Benzo(a)anthracene #12 |
| 23.355 | BBA | 162.24881 | 1.53182e-2 | 2.48536 | | Chrysene #13 |
| 26.080 | BBA | 123.19316 | 2.04022e-2 | 2.51341 | | Benzo(b)fluoranthene #14 |
| 27.509 | PBA | 32.77328 | 2.37229e-2 | 7.77476e-1 | | Benzo(k)fluoranthene #15 |
| 28.601 | BBA | 78.84235 | 2.67898e-2 | 2.11217 | | Benzo(a)pyrene #16 |
| 30.471 | BB | 12.72229 | 8.70360e-2 | 1.10730 | | Dibenz(a,h)anthracene #17 |

| Retime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.282 | BB | 27.24833 | 5.63297e-2 | 1.53489 | | Benzo(g,h,i)perylene #18 |
| 32.257 | BB | 72.32950 | 2.01763e-2 | 1.45935 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 176.24767

Results obtained with enhanced integrator!

*** End of Report ***

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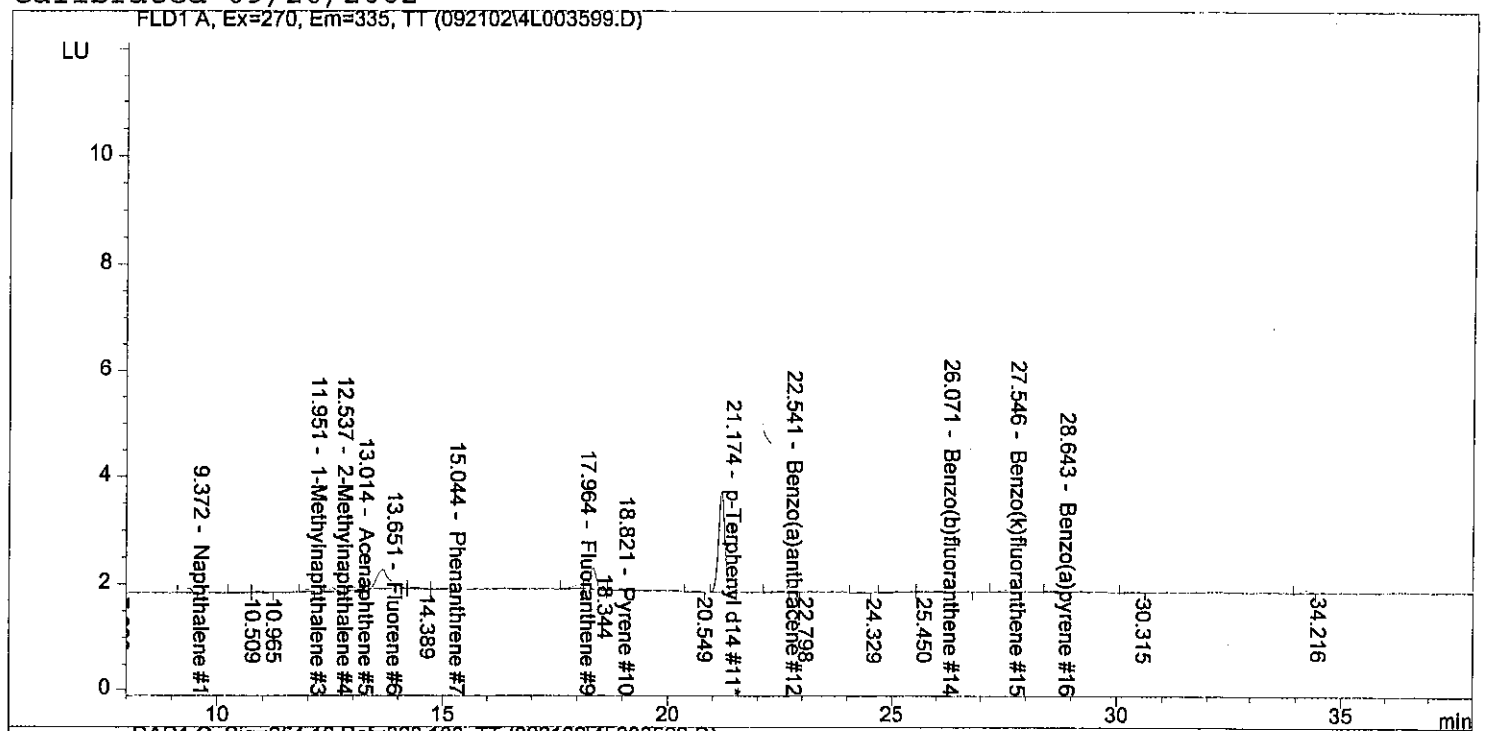
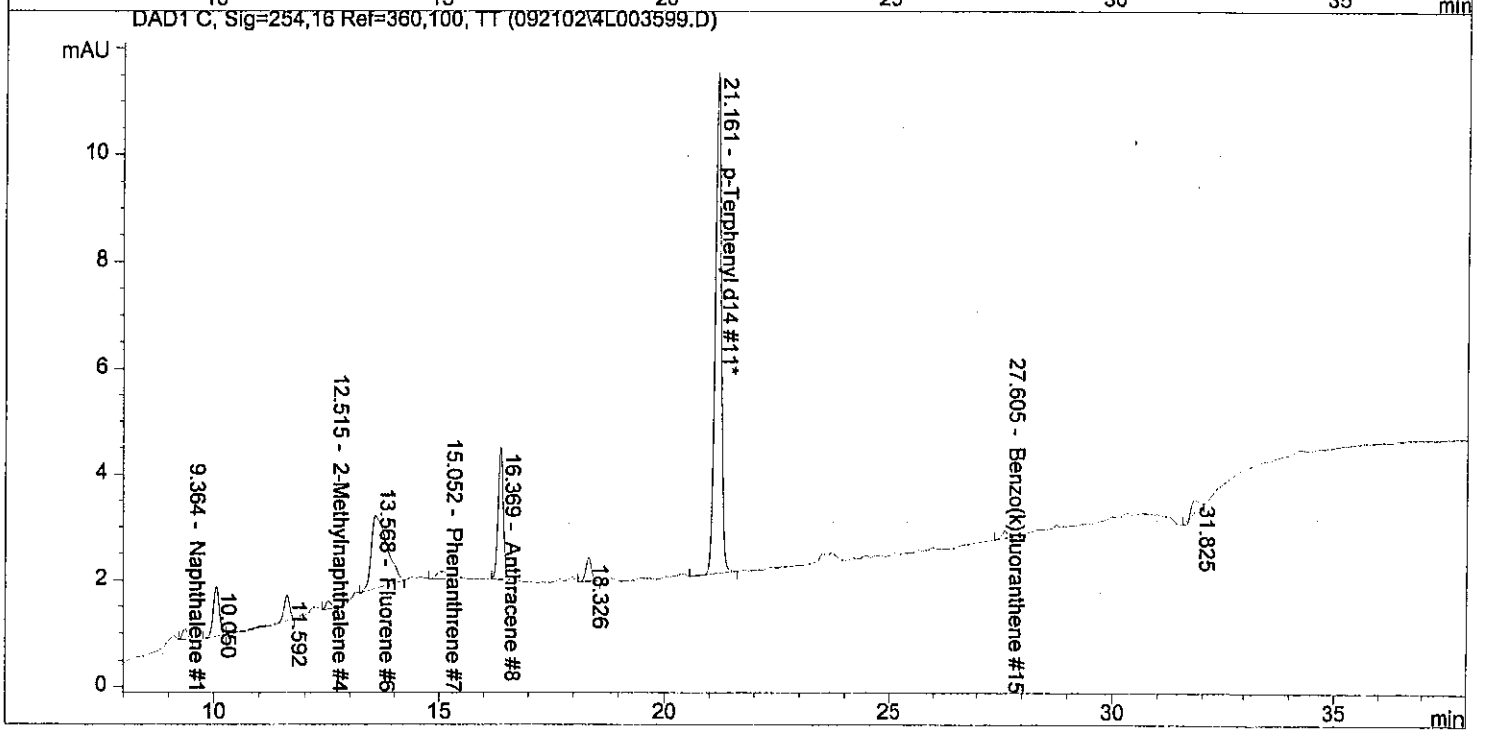
Injection Date : 9/22/2002 10:48:20 AM
Sample Name : L0209310-06 831W
Acq. Operator : RDC

Seq. Line : 22
Vial : 22
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 10:47:53 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.372 | BB | 8.82635e-1 | 4.25810e-1 | 3.75835e-1 | | Naphthalene #1 |
| 11.951 | BB | 4.30491e-1 | 8.05062e-1 | 3.46572e-1 | | 1-Methylnaphthalene #3 |
| 12.537 | BB | 8.02150e-1 | 3.26199e-1 | 2.61660e-1 | | 2-Methylnaphthalene #4 |
| 13.014 | BB | 4.74008e-1 | 3.88205e-1 | 1.84012e-1 | | Acenaphthene #5 |
| 13.651 | BB | 7.11136 | 1.26923e-2 | 9.02599e-2 | | Fluorene #6 |
| 15.044 | BB | 1.60127e-1 | 3.21941 | 5.15515e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.964 | BB | 7.20451e-1 | 6.64548e-2 | 4.78774e-2 | | Fluoranthene #9 |
| 18.821 | BBA | 1.62315e-1 | 4.73126e-1 | 7.67954e-2 | | Pyrene #10 |
| 21.174 | BB | 18.35965 | 3.14728e-1 | 5.77829 | 57.3% | p-Terphenyl d14 #11* |
| 22.541 | BB | 2.65993e-1 | 1.82427e-1 | 4.85243e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.071 | BBA | 3.32849e-1 | 1.37189e-1 | 4.56633e-2 | | Benzo(b)fluoranthene #14 |
| 27.546 | PBA | 3.92806e-1 | 3.51387e-2 | 1.38027e-2 | | Benzo(k)fluoranthene #15 |
| 28.643 | BBA | 2.88922e-1 | 2.04929e-1 | 5.92084e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 7.84402 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.364 | BB | 1.71591 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.515 | BB | 1.39311 | 5.07843e-2 | 7.07482e-2 | cmpl | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.568 | BB | 33.18464 | 2.29373e-2 | 7.61166e-1 | NC | Fluorene #6 |
| 15.052 | BB | 2.20360 | 1.06850e-1 | 2.35454e-1 | cmpl | Phenanthrene #7 |
| 16.369 | BBA | 20.30779 | 1.08477e-2 | 2.20292e-1 | ↓ | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.161 | BBA | 85.57122 | 6.90696e-2 | 5.91037 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | 57.1% | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.605 | BB | 1.16122 | 4.08771e-2 | 4.74673e-2 | NC | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| Retime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 7.24550

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), (Naphthalene

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*** End of Report ***

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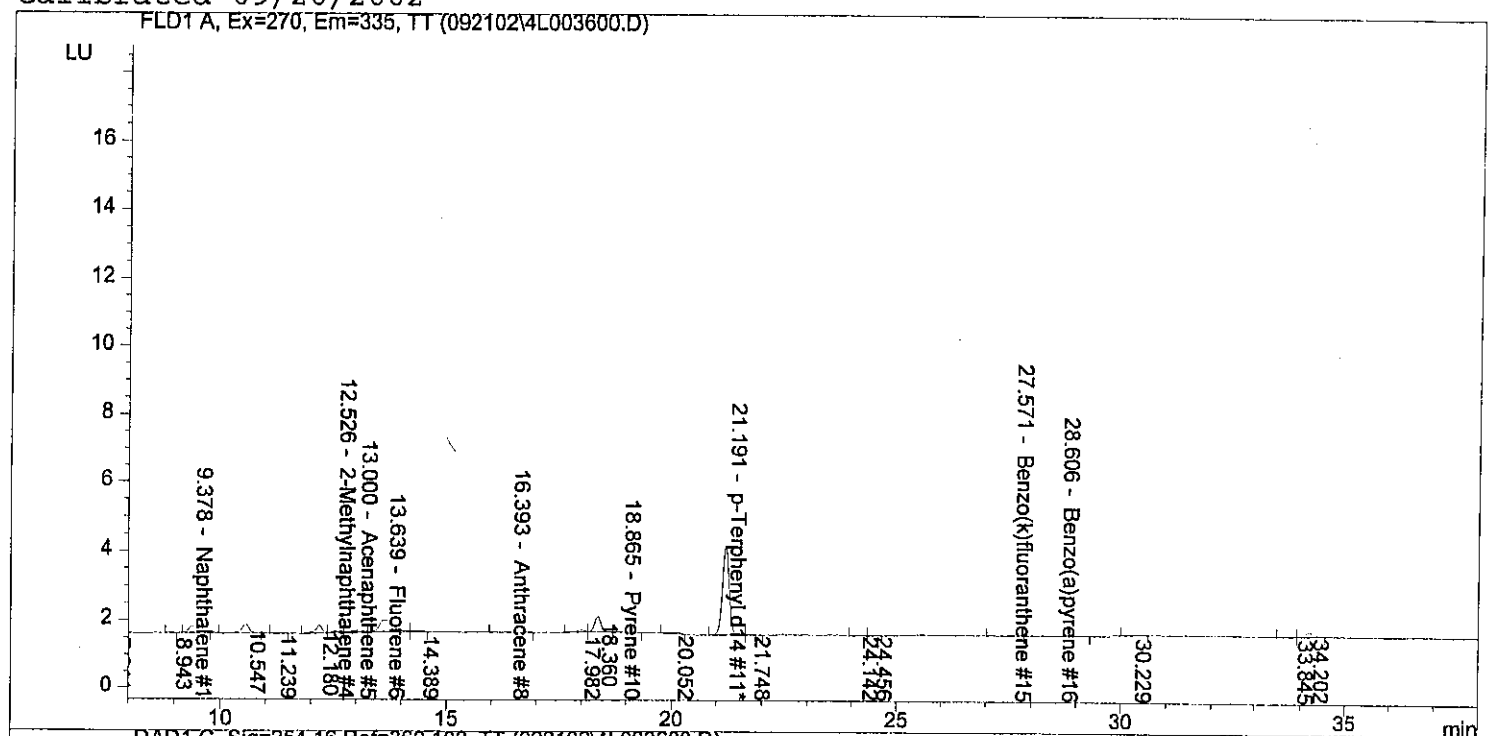
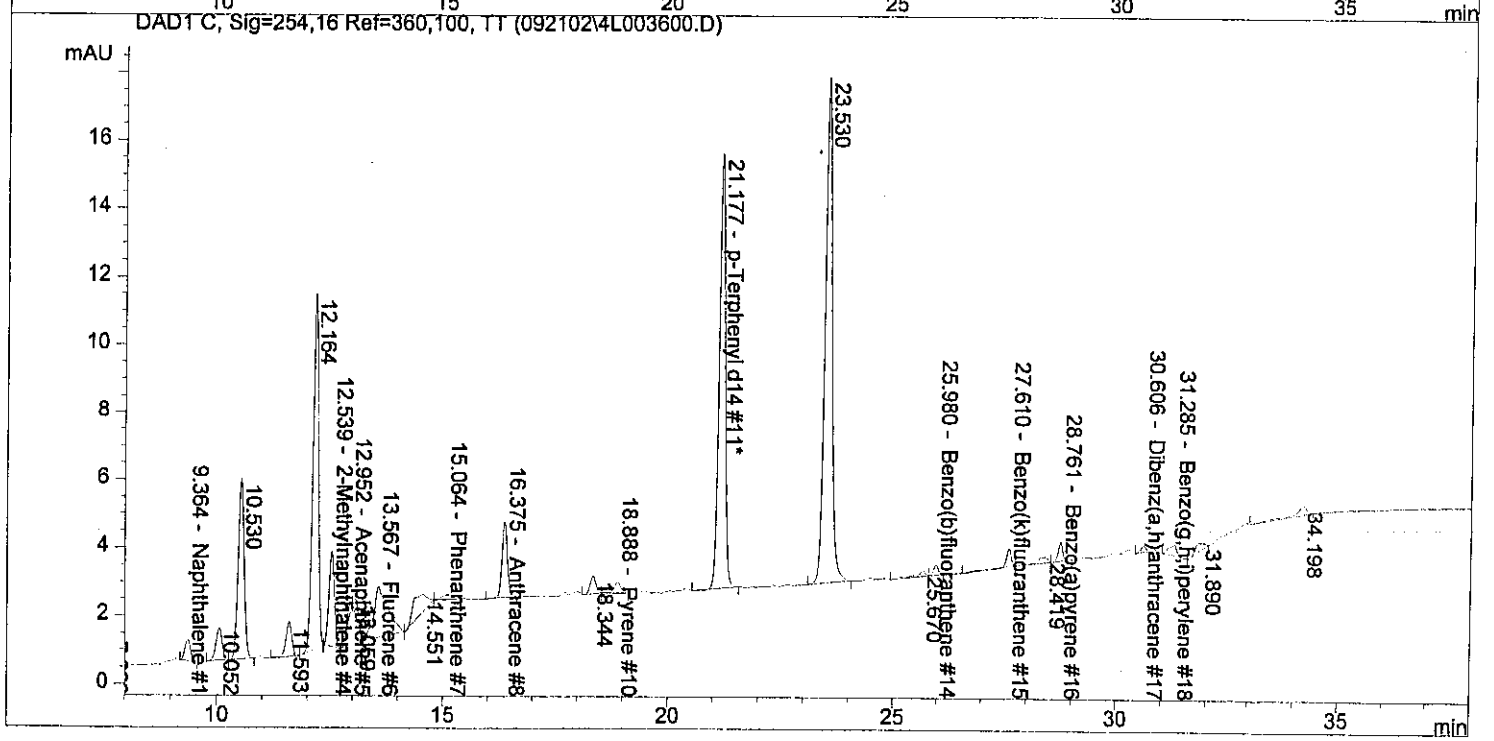
Injection Date : 9/22/2002 11:44:59 AM
Sample Name : L0209310-07 831W
Acq. Operator : RDC

Seq. Line : 23
Vial : 23
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 11:44:31 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.378 | BB | 2.14523 | 1.90074e-1 | 4.07752e-1 | | Naphthalene #1 |
| 11.952 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.526 | BB | 4.31760e-1 | 5.91161e-1 | 2.55240e-1 | | 2-Methylnaphthalene #4 |
| 13.000 | BB | 6.39440e-1 | 2.91359e-1 | 1.86306e-1 | | Acenaphthene #5 |
| 13.639 | BB | 7.35398 | 1.24956e-2 | 9.18925e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.393 | BBA | 2.38209e-1 | 7.62749e-1 | 1.81694e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.865 | BBA | 2.22396e-1 | 3.54746e-1 | 7.88941e-2 | F | Pyrene #10 |
| 21.191 | BB | 25.93176 | 3.10541e-1 | 8.05288 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | 80.5% | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.571 | BB | 2.55477e-1 | 5.25056e-2 | 1.34140e-2 | | Benzo(k)fluoranthene #15 |
| 28.606 | BB | 4.05728e-1 | 1.47270e-1 | 5.97514e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 9.32782 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.364 | BB | 5.44978 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.539 | BB | 24.05828 | 1.43413e-2 | 3.45028e-1 | NC | 2-Methylnaphthalene #4 |
| 12.952 | BB | 8.28696e-1 | 2.81605e-1 | 2.33365e-1 | <MDL | Acenaphthene #5 |
| 13.567 | BB | 32.71699 | 2.30176e-2 | 7.53065e-1 | NC | Fluorene #6 |
| 15.064 | BB | 1.96827 | 1.17550e-1 | 2.31371e-1 | <MDL | Phenanthrene #7 |
| 16.375 | PBA | 18.12471 | 1.08525e-2 | 1.96698e-1 | ↓ | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.888 | BB | 3.70439 | 2.00421e-2 | 7.42437e-2 | F | Pyrene #10 |
| 21.177 | BBA | 115.77977 | 6.82931e-2 | 7.90696 | 79.1% | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.980 | BBA | 2.37997 | 3.38390e-2 | 8.05361e-2 | NC | Benzo(b)fluoranthene #14 |
| 27.610 | BB | 3.84433 | 2.84647e-2 | 1.09428e-1 | NC | Benzo(k)fluoranthene #15 |
| 28.761 | BBA | 4.06485 | 4.01740e-2 | 1.63301e-1 | RT | Benzo(a)pyrene #16 |
| 30.606 | BB | 1.36474 | 0.00000 | 0.00000 | | Dibenz(a,h)anthracene #17 |

1,1

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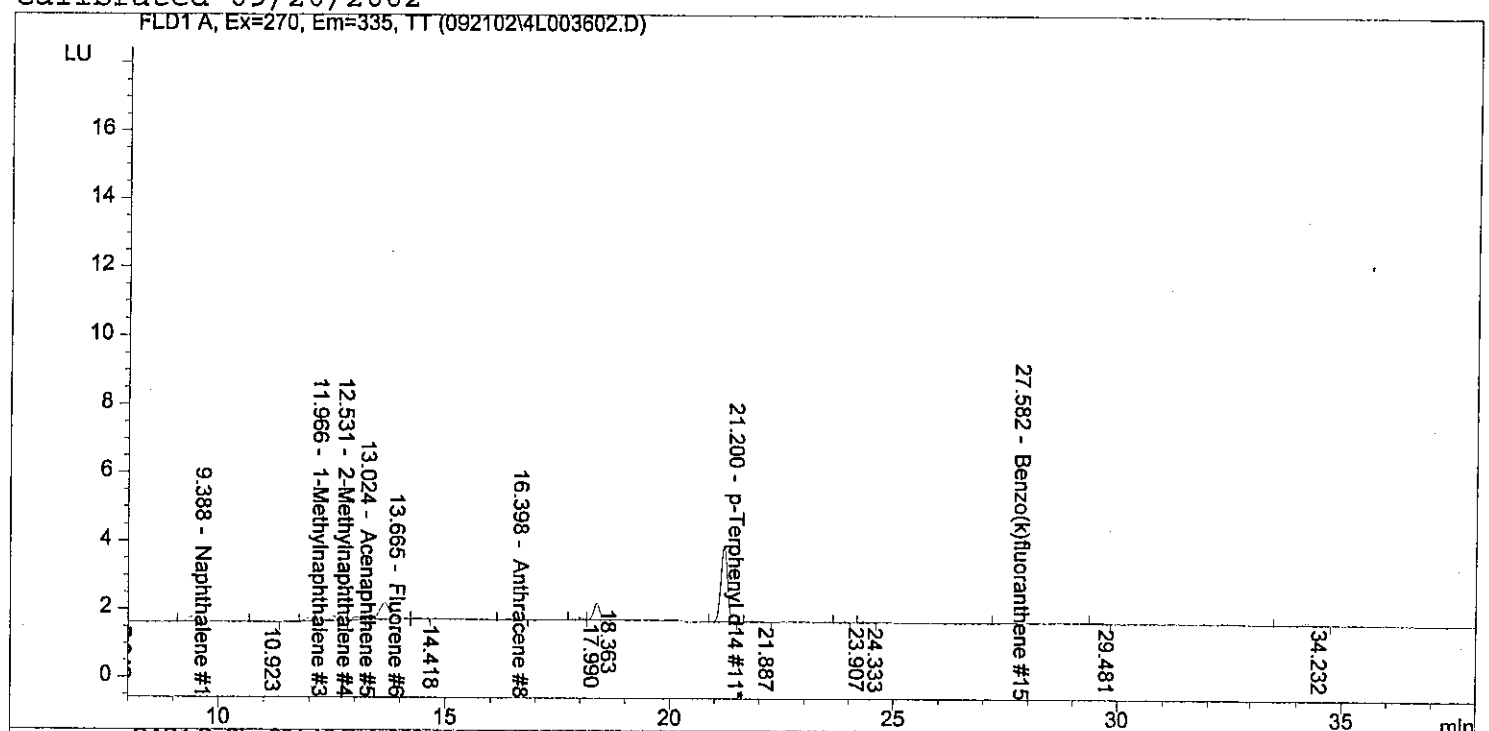
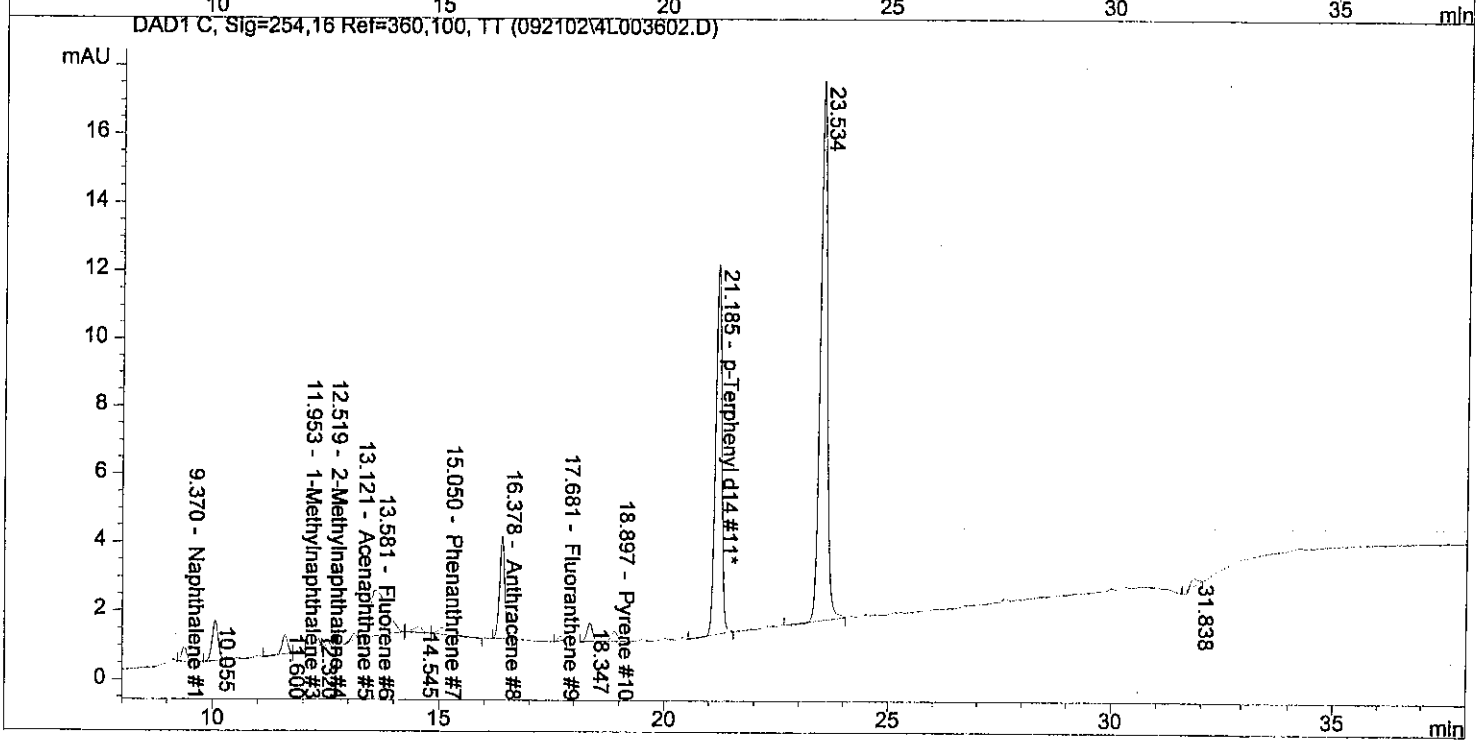
Injection Date : 9/22/2002 1:38:11 PM  Seq. Line : 25
Sample Name : L0209310-08 831W  Vial : 25
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 1:37:50 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | BB | 1.56397 | 2.51321e-1 | 3.93058e-1 | | Naphthalene #1 |
| 11.966 | BB | 7.47049e-1 | 4.73331e-1 | 3.53601e-1 | | 1-Methylnaphthalene #3 |
| 12.531 | BB | 1.58099 | 1.74044e-1 | 2.75161e-1 | | 2-Methylnaphthalene #4 |
| 13.024 | BB | 1.10546 | 1.74379e-1 | 1.92769e-1 | | Acenaphthene #5 |
| 13.665 | BB | 8.43864 | 1.17544e-2 | 9.91913e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.398 | PBA | 2.96507e-1 | 6.72785e-1 | 1.99486e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.200 | BBA | 21.68680 | 3.12528e-1 | 6.77774 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.582 | BBA | 3.35977e-1 | 4.06035e-2 | 1.36418e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 8.30464

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.370 | BB | 3.60305 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.953 | BB | 8.35690e-1 | 2.08224e-1 | 1.74011e-1 | 2mol | 1-Methylnaphthalene #3 |
| 12.519 | BB | 1.50684 | 4.78648e-2 | 7.21244e-2 | | 2-Methylnaphthalene #4 |
| 13.121 | BB | 1.13090 | 2.12378e-1 | 2.40179e-1 | | Acenaphthene #5 |
| 13.581 | BB | 32.46313 | 2.30621e-2 | 7.48668e-1 | NC | Fluorene #6 |
| 15.050 | BBA | 2.84181 | 8.67504e-2 | 2.46528e-1 | 2mol | Phenanthrene #7 |
| 16.378 | BB | 24.08100 | 1.08414e-2 | 2.61072e-1 | | Anthracene #8 |
| 17.681 | PB | 1.07202 | 5.09475e-2 | 5.46168e-2 | NC | Fluoranthene #9 |
| 18.897 | BB | 2.91172 | 2.25167e-2 | 6.55623e-2 | NC | Pyrene #10 |
| 21.185 | BB | 98.69382 | 6.86739e-2 | 6.77769 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | 67.8% | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 8.64045

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), (Naphthalene

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*** End of Report ***

1,1

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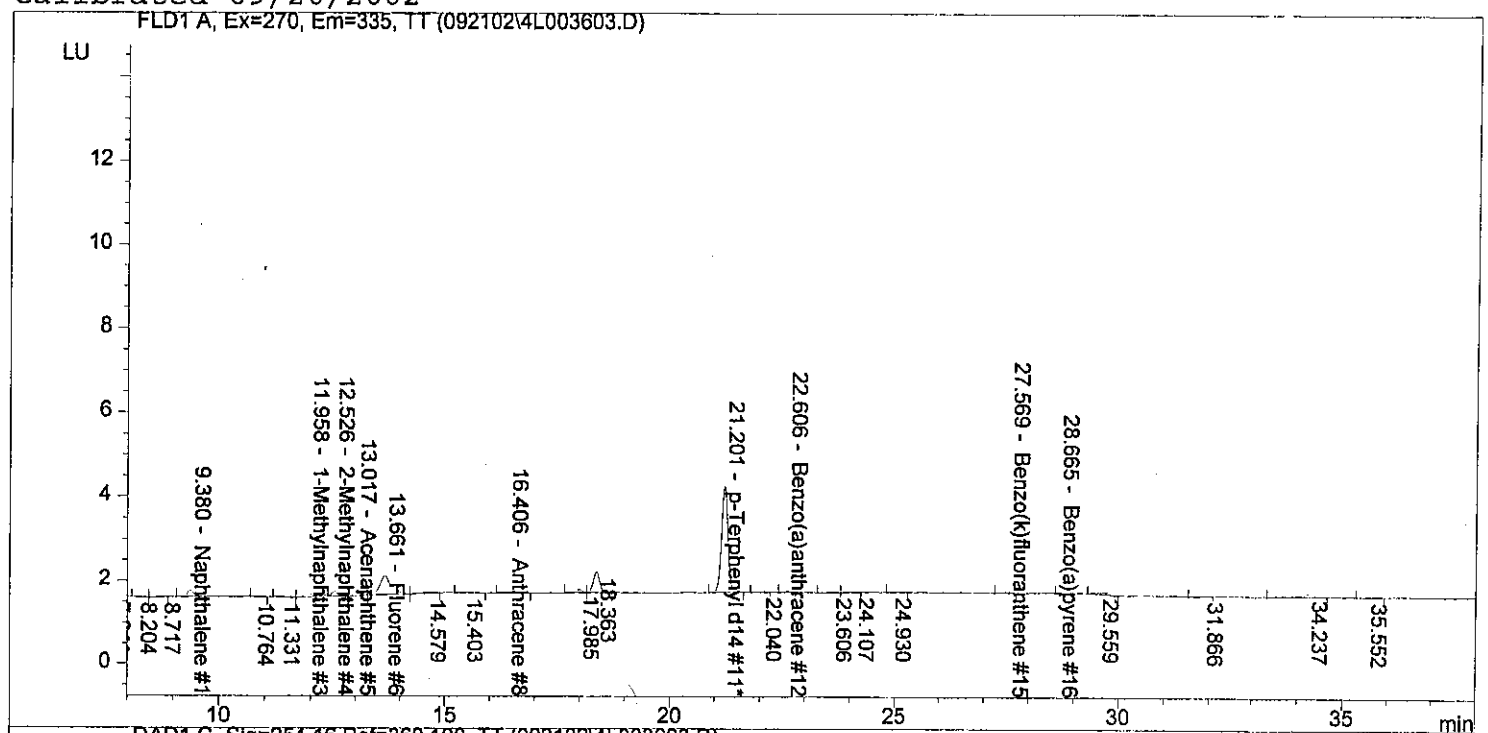
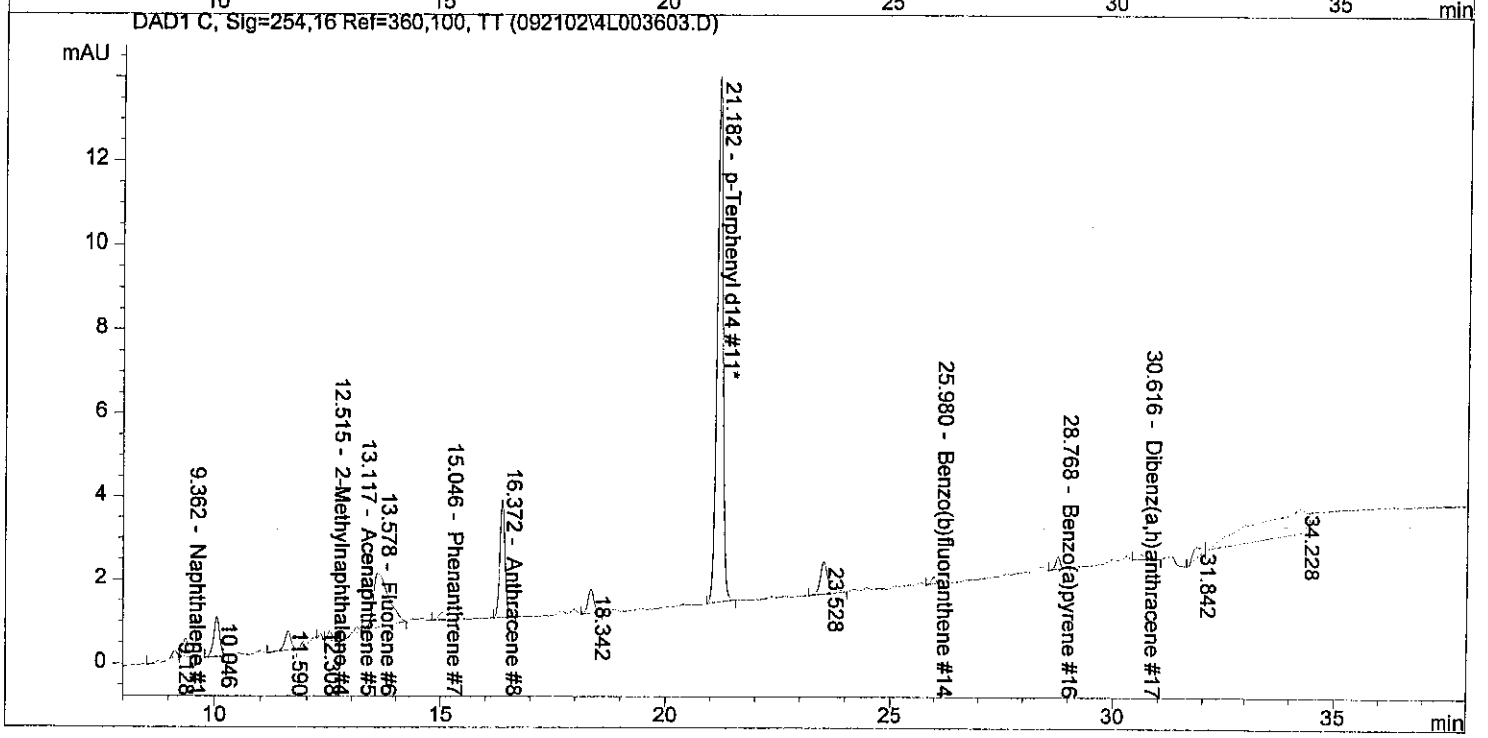
Injection Date : 9/22/2002 2:34:49 PM  Seq. Line : 26
Sample Name : L0209310-09 831W  Vial : 26
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 2:34:23 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 1.67825 | 2.35929e-1 | 3.95947e-1 | | Naphthalene #1 |
| 11.958 | BB | 7.20152e-1 | 4.90180e-1 | 3.53004e-1 | | 1-Methylnaphthalene #3 |
| 12.526 | BB | 1.05358 | 2.52490e-1 | 2.66019e-1 | | 2-Methylnaphthalene #4 |
| 13.017 | BB | 1.16332 | 1.66395e-1 | 1.93571e-1 | | Acenaphthene #5 |
| 13.661 | BB | 8.28801 | 1.18457e-2 | 9.81777e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.406 | BBA | 3.37878e-1 | 6.27776e-1 | 2.12111e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.201 | BB | 25.01891 | 3.10912e-1 | 7.77867 | | p-Terphenyl d14 #11* |
| 22.606 | BB | 2.66553e-1 | 1.82060e-1 | 4.85287e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.569 | BB | 3.29927e-1 | 4.12961e-2 | 1.36247e-2 | | Benzo(k)fluoranthene #15 |
| 28.665 | BBA | 1.95789e-1 | 3.00198e-1 | 5.87755e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 9.41843

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.362 | BB | 3.56401 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.515 | BB | 1.64925 | 4.47767e-2 | 7.38477e-2 | CMOL | 2-Methylnaphthalene #4 |
| 13.117 | BB | 1.24036 | 1.95627e-1 | 2.42647e-1 | ↓ | Acenaphthene #5 |
| 13.578 | BB | 32.05091 | 2.31359e-2 | 7.41527e-1 | NC | Fluorene #6 |
| 15.046 | PB | 2.51825 | 9.56672e-2 | 2.40914e-1 | CMOL | Phenanthrene #7 |
| 16.372 | BBA | 23.24069 | 1.08426e-2 | 2.51990e-1 | ↓ | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.182 | PBA | 113.68141 | 6.83337e-2 | 7.76827 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | 77.7% | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.980 | BBA | 1.30967 | 4.50363e-2 | 5.89829e-2 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.768 | BB | 2.19686 | 5.21733e-2 | 1.14617e-1 | PT | Benzo(a)pyrene #16 |
| 30.616 | BB | 1.79247 | 0.00000 | 0.00000 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 9.49280 | | |

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), (Dibenz(a,h)a

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*** End of Report ***

1,1

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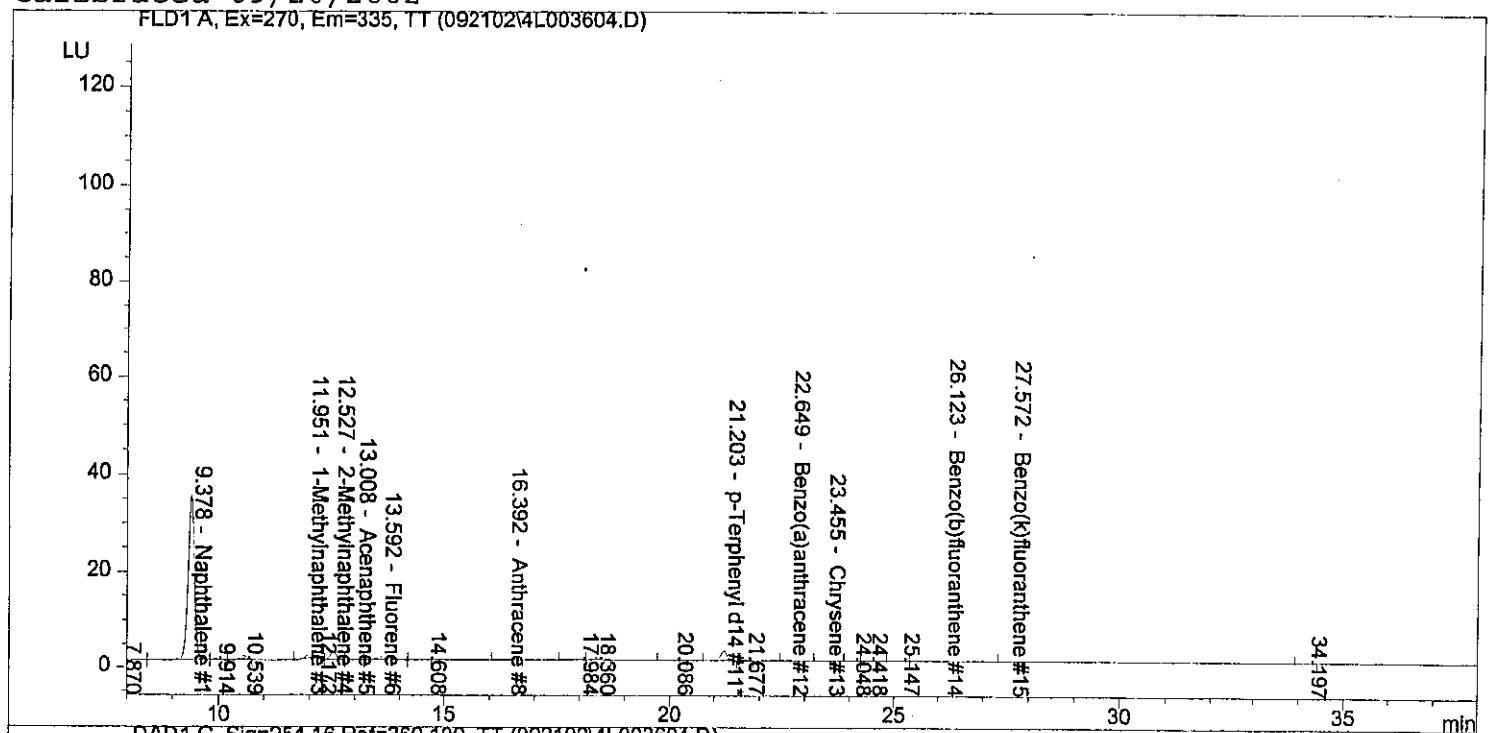
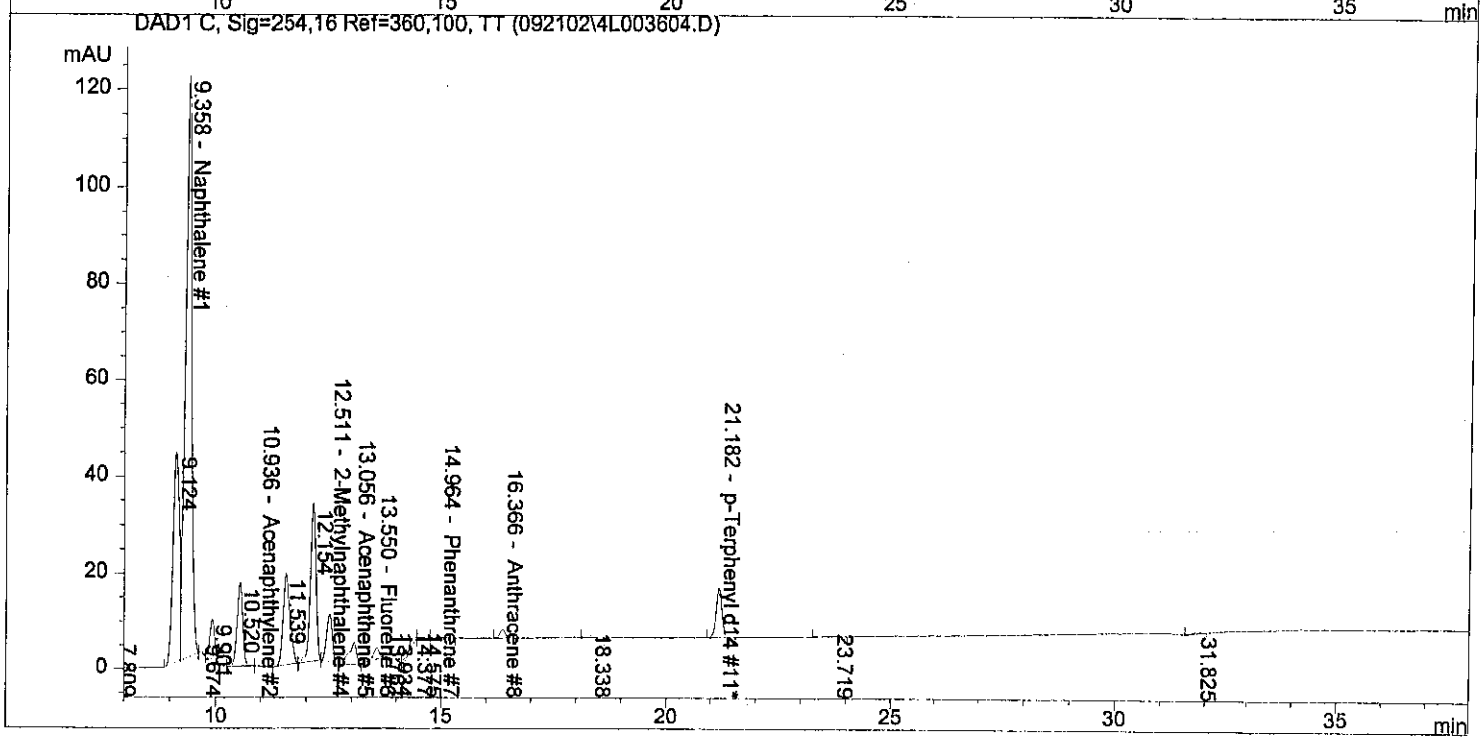
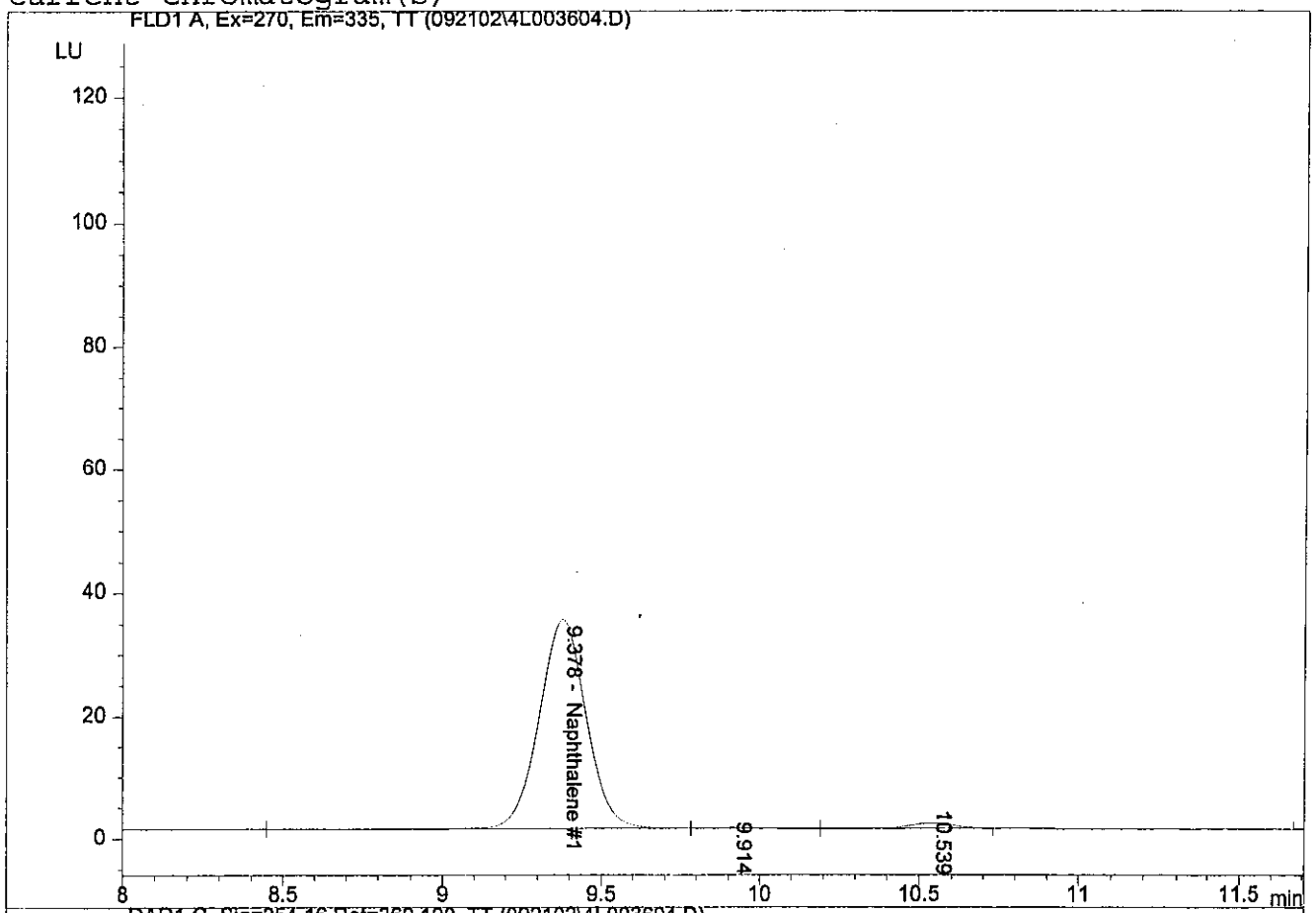
Injection Date : 9/22/2002 3:31:29 PM  Seq. Line : 27
Sample Name : L0209310-10 831W  Vial : 27
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

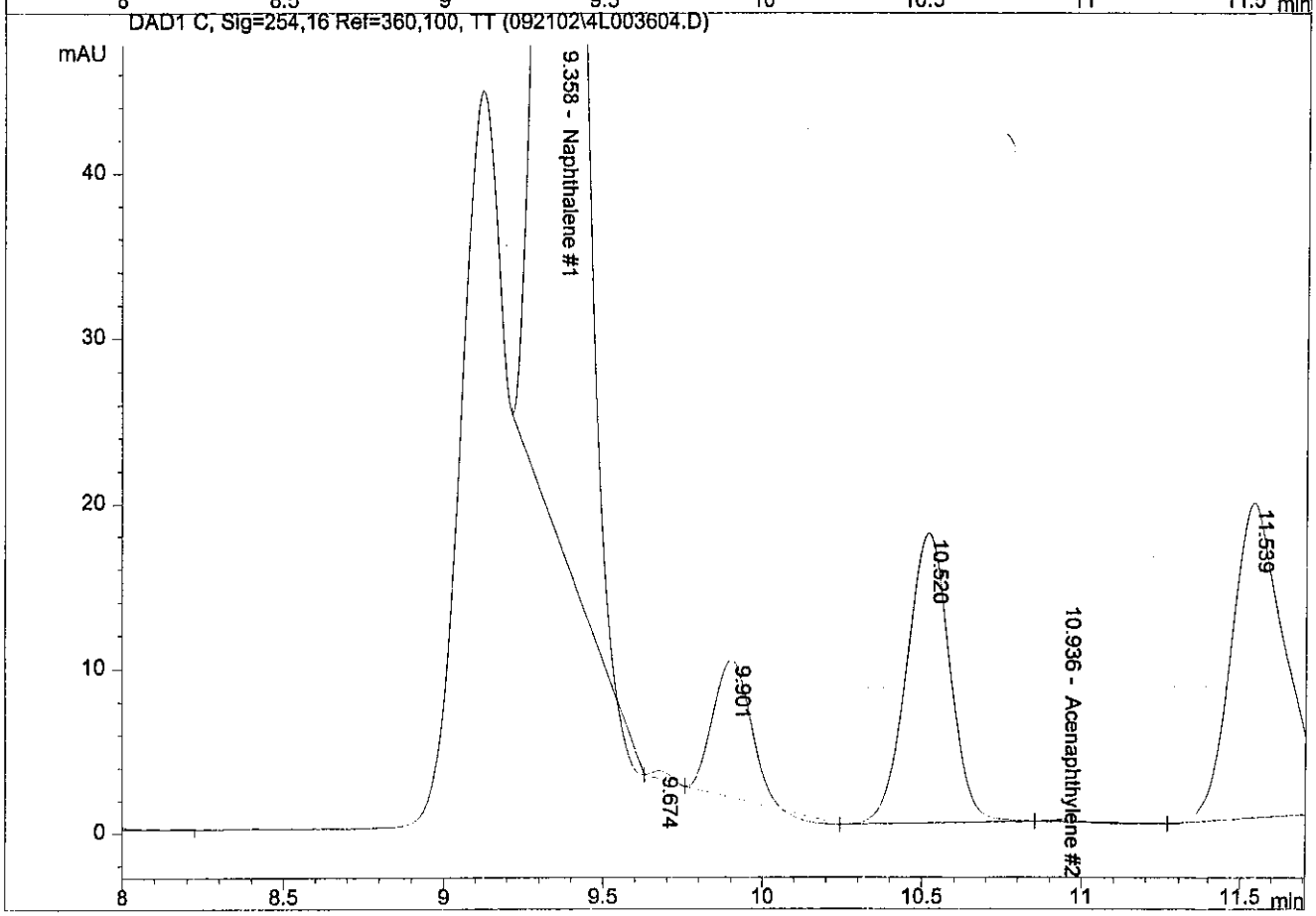
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 3:31:01 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



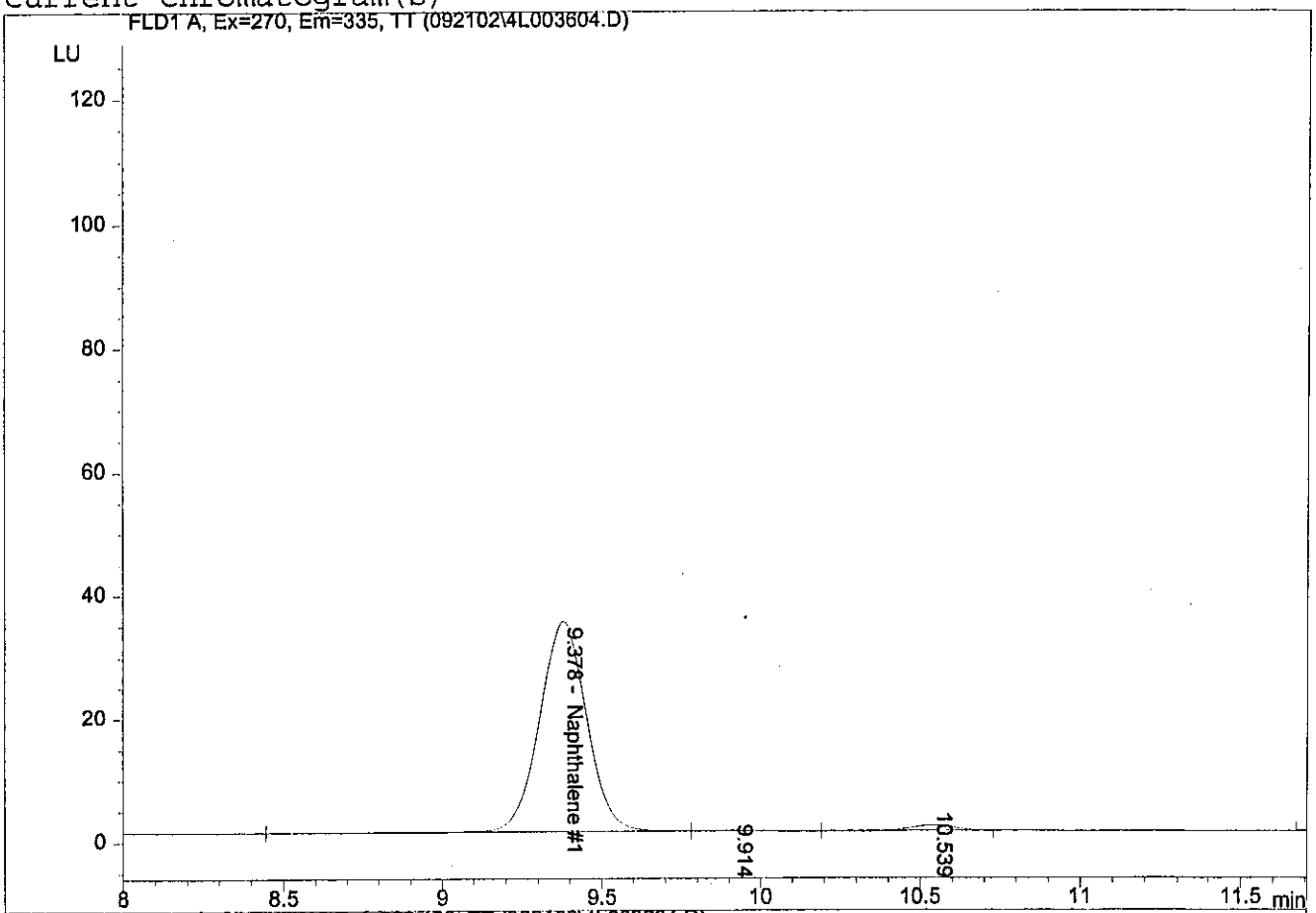



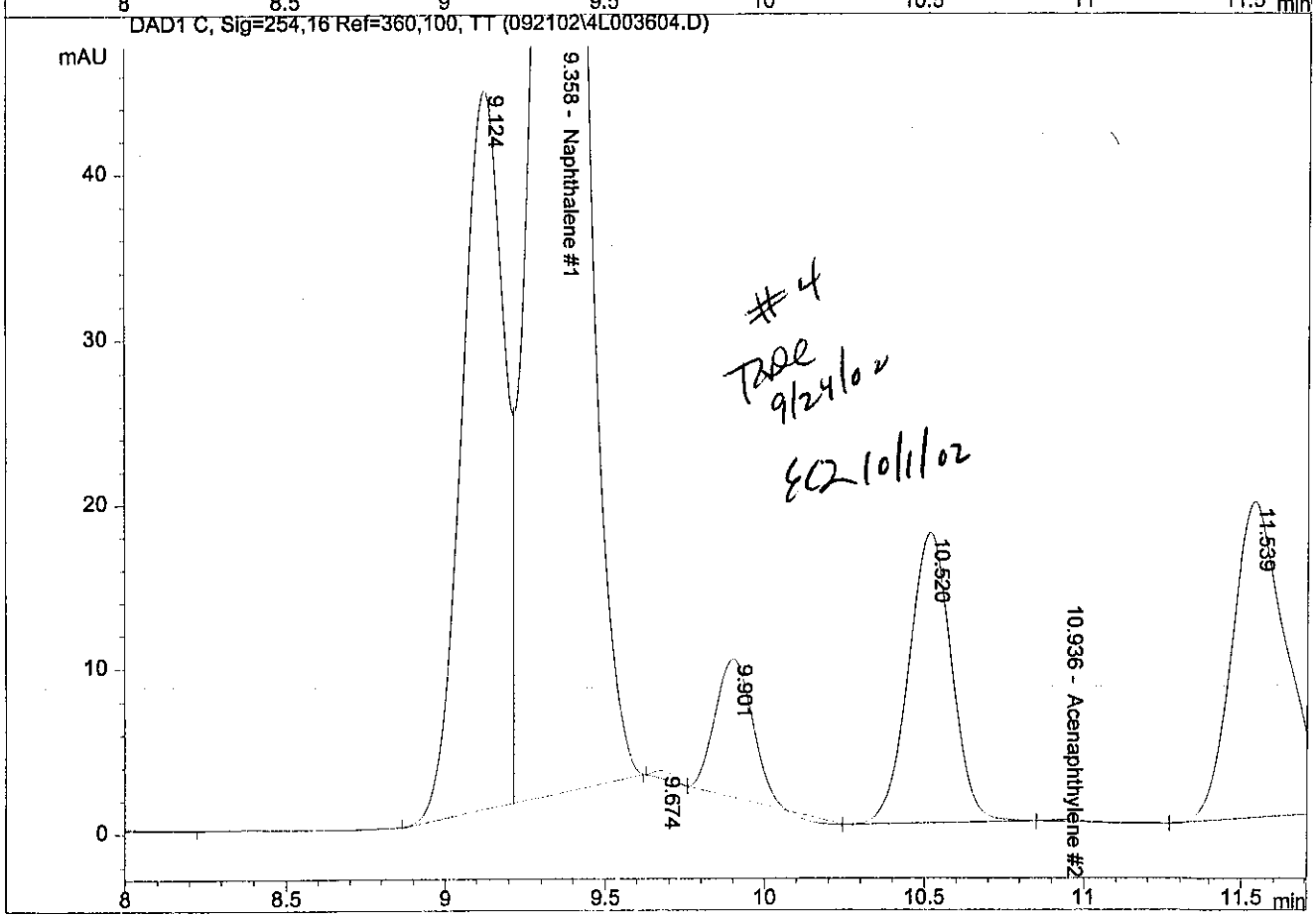
Current Chromatogram(s)



Current Chromatogram(s)



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.378 | BB | 348.33868 | 2.62942e-2 | 9.15930 | C | Naphthalene #1 |
| 11.951 | BB | 5.15939 | 8.75256e-2 | 4.51579e-1 | | 1-Methylnaphthalene #3 |
| 12.527 | BB | 18.88624 | 3.04525e-2 | 5.75134e-1 | F | 2-Methylnaphthalene #4 |
| 13.008 | BB | 1.39195 | 1.41342e-1 | 1.96742e-1 | | Acenaphthene #5 |
| 13.592 | BB | 10.40598 | 1.08043e-2 | 1.12430e-1 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.392 | BB | 2.79996e-1 | 6.94462e-1 | 1.94447e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | 63.8% | Pyrene #10 |
| 21.203 | BBA | 20.37199 | 3.13311e-1 | 6.38278 | | p-Terphenyl d14 #11* |
| 22.649 | BB | 4.38180e-1 | 1.13849e-1 | 4.98864e-2 | | Benzo(a)anthracene #12 |
| 23.455 | BB | 4.39711e-1 | 1.27754e-1 | 5.61748e-2 | | Chrysene #13 |
| 26.123 | BB | 4.97689e-1 | 9.73085e-2 | 4.84294e-2 | | Benzo(b)fluoranthene #14 |
| 27.572 | BBA | 3.40448e-1 | 4.01074e-2 | 1.36545e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 17.24056

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.358 | FM | 1169.29944 | 8.34711e-3 | 9.76028 | ✓ | Naphthalene #1 |
| 10.936 | BB | 3.54798e-1 | 7.03183e-1 | 2.49488e-1 | <mdl | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 94.32338 | 1.26727e-2 | 1.19533 | ✓ | 2-Methylnaphthalene #4 |
| 13.056 | BB | 57.81084 | 2.62595e-2 | 1.51809 | NC | Acenaphthene #5 |
| 13.550 | BB | 22.22291 | 2.57071e-2 | 5.71286e-1 | NC | Fluorene #6 |
| 14.964 | BB | 2.86149 | 8.62732e-2 | 2.46870e-1 | <mdl | Phenanthrene #7 |
| 16.366 | BBA | 15.34227 | 1.08606e-2 | 1.66626e-1 | ✓ | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.182 | BBA | 93.74274 | 6.88102e-2 | 6.45046 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | 64.5% | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 20.15842

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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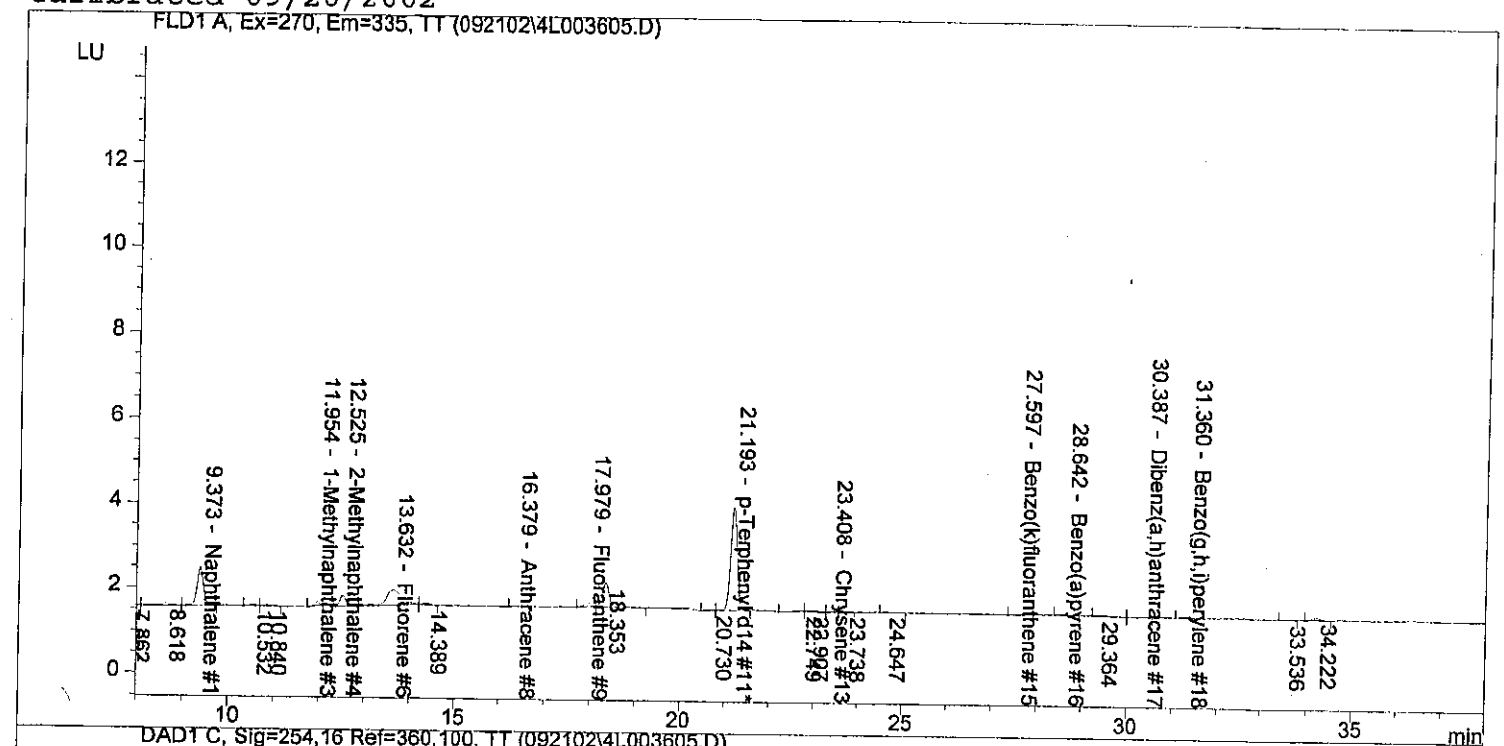
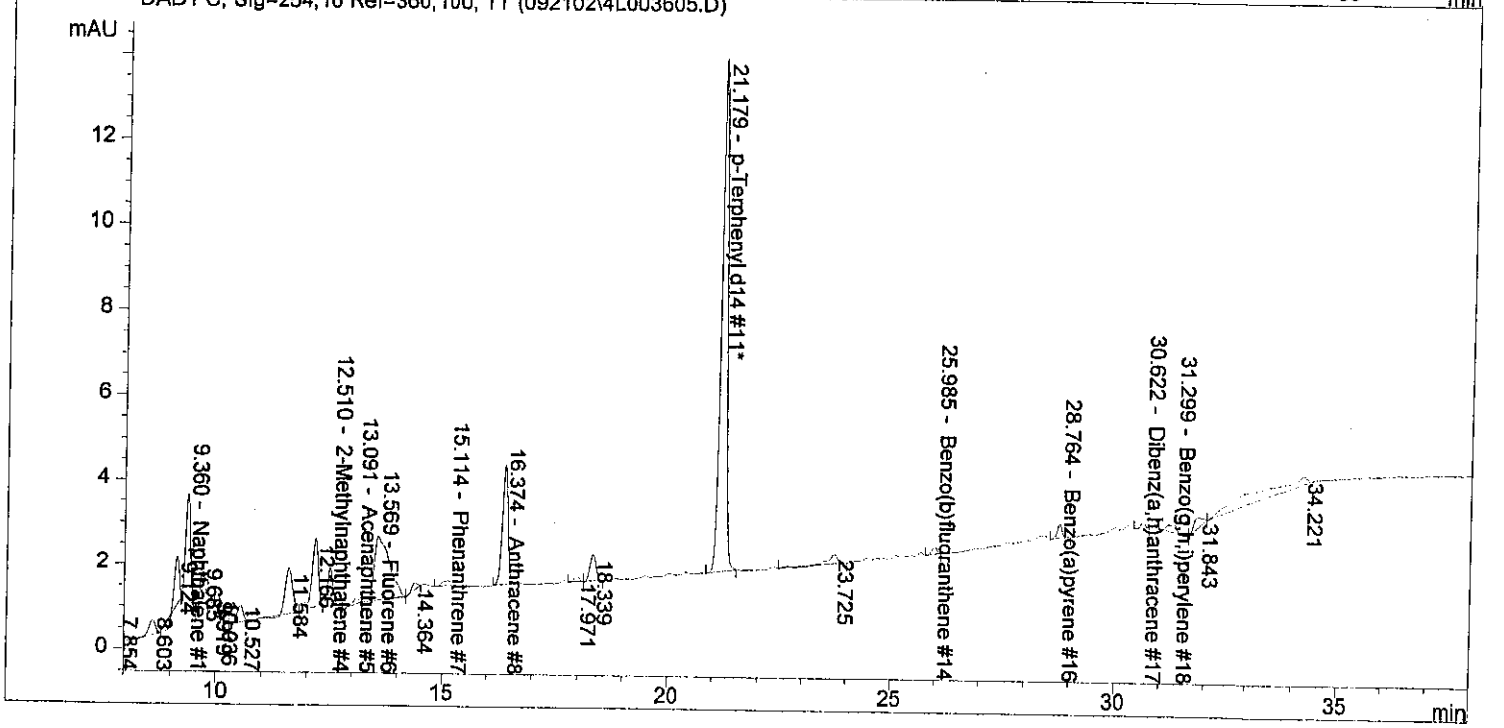
Injection Date : 9/22/2002 4:28:06 PM
Sample Name : L0209310-11 831W
Acq. Operator : RDC

Seq. Line : 28
Vial : 28
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 4:27:41 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.373 | BBA | 9.13350 | 6.39855e-2 | 5.84411e-1 | | Naphthalene #1 |
| 11.954 | BB | 7.50413e-1 | 4.71308e-1 | 3.53676e-1 | | 1-Methylnaphthalene #3 |
| 12.525 | BB | 2.56348 | 1.13982e-1 | 2.92192e-1 | | 2-Methylnaphthalene #4 |
| 13.005 | | - | - | - | | Acenaphthene #5 |
| 13.632 | BB | 8.30461 | 1.18355e-2 | 9.82894e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.379 | PBA | 1.71953e-1 | 9.39053e-1 | 1.61473e-1 | | Anthracene #8 |
| 17.979 | PB | 7.85809e-1 | 6.30403e-2 | 4.95376e-2 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.193 | BB | 24.45677 | 3.11153e-1 | 7.60981 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.408 | BB | 2.13968e-1 | 2.21756e-1 | 4.74486e-2 | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.597 | BB | 2.57833e-1 | 5.20517e-2 | 1.34206e-2 | | Benzo(k)fluoranthene #15 |
| 28.642 | BBA | 1.81753e-1 | 3.23022e-1 | 5.87103e-2 | | Benzo(a)pyrene #16 |
| 30.387 | BB | 2.24230e-1 | 3.32291e-1 | 7.45097e-2 | | Dibenz(a,h)anthracene #17 |
| 31.360 | BB | 4.23948e-1 | 2.26546e-1 | 9.60436e-2 | F | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 9.43952

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.360 | BB | 20.71373 | 3.50823e-3 | 7.26685e-2 | <MDL | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.510 | BB | 8.68789 | 1.83042e-2 | 1.59025e-1 | <MDL | 2-Methylnaphthalene #4 |
| 13.091 | BB | 1.55802 | 1.60338e-1 | 2.49809e-1 | ↓ | Acenaphthene #5 |
| 13.569 | BB | 35.16858 | 2.26205e-2 | 7.95532e-1 | NC | Fluorene #6 |
| 15.114 | BBA | 1.97697 | 1.17110e-1 | 2.31522e-1 | <MDL | Phenanthrene #7 |
| 16.374 | BBA | 23.11560 | 1.08428e-2 | 2.50638e-1 | ↓ | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | 74.7% | Pyrene #10 |
| 21.179 | BBA | 109.28277 | 6.84239e-2 | 7.47755 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.985 | BB | 1.43763 | 4.28201e-2 | 6.15597e-2 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.764 | BB | 2.42803 | 4.96873e-2 | 1.20642e-1 | CT | Benzo(a)pyrene #16 |
| 30.622 | BB | 9.75457e-1 | 0.00000 | 0.00000 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.299 | BB | 2.67503 | 7.19574e-2 | 1.92488e-1 | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 9.61144

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), (Dibenz(a,h)a

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*** End of Report ***

# 2.2.7.3 Standards Data

## Calibration Table

HPLC4 8310 CALIBRATION

Calib. Data Modified : 9/21/2002 3:41:57 PM

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=360,100, TT

| RetTime [min] | Sig | Lvl | Amount [ug/L] | Area | Amt/Area | Ref | Grp | Name |
|---|---|---|---|---|---|---|---|---|
| 9.370 | 2 | 1 | 1.00000 | 113.50661 | 8.81006e-3 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 575.15820 | 8.69326e-3 | | | |
| | | 3 | 10.00000 | 1182.50085 | 8.45665e-3 | | | |
| | | 4 | 20.00000 | 2466.37598 | 8.10906e-3 | | | |
| | | 5 | 50.00000 | 5949.45410 | 8.40413e-3 | | | |
| | | 6 | 100.00000 | 1.18503e4 | 8.43861e-3 | | | |
| 9.386 | 1 | 1 | 1.00000 | 36.15768 | 2.76566e-2 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 181.29584 | 2.75792e-2 | | | |
| | | 3 | 10.00000 | 374.62244 | 2.66935e-2 | | | |
| | | 4 | 20.00000 | 783.70270 | 2.55199e-2 | | | |
| | | 5 | 50.00000 | 1921.86047 | 2.60165e-2 | | | |
| | | 6 | 100.00000 | 3962.24902 | 2.52382e-2 | | | |
| 10.990 | 2 | 1 | 1.00000 | 28.32826 | 3.53004e-2 | | | Acenaphthylene #2 |
| | | 2 | 5.00000 | 137.48097 | 3.63687e-2 | | | |
| | | 3 | 10.00000 | 282.83063 | 3.53568e-2 | | | |
| | | 4 | 20.00000 | 588.70093 | 3.39731e-2 | | | |
| | | 5 | 50.00000 | 1437.33740 | 3.47865e-2 | | | |
| | | 6 | 100.00000 | 2944.69458 | 3.39594e-2 | | | |
| 11.936 | 2 | 1 | 1.00000 | 67.43660 | 1.48287e-2 | | | 1-Methylnaphthalene #3 |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000 | 339.69986 | 1.47189e-2 | |
| | | 3 | 10.00000 | 697.62793 | 1.43343e-2 | |
| | | 4 | 20.00000 | 1455.42712 | 1.37417e-2 | |
| | | 5 | 50.00000 | 3540.73169 | 1.41214e-2 | |
| | | 6 | 100.00000 | 7205.42578 | 1.38784e-2 | |
| 11.952 | 1 | 1 | 1.00000 | 41.36844 | 2.41730e-2 | 1-Methylnaphthalene #3 |
| | | 2 | 5.00000 | 208.15732 | 2.40203e-2 | |
| | | 3 | 10.00000 | 426.31619 | 2.34568e-2 | |
| | | 4 | 20.00000 | 890.99243 | 2.24469e-2 | |
| | | 5 | 50.00000 | 2194.00391 | 2.27894e-2 | |
| | | 6 | 100.00000 | 4509.24463 | 2.21767e-2 | |
| 12.511 | 2 | 1 | 1.00000 | 78.89049 | 1.26758e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 394.82016 | 1.26640e-2 | |
| | | 3 | 10.00000 | 811.48065 | 1.23232e-2 | |
| | | 4 | 20.00000 | 1689.06653 | 1.18409e-2 | |
| | | 5 | 50.00000 | 4096.85840 | 1.22045e-2 | |
| | | 6 | 100.00000 | 8267.85547 | 1.20950e-2 | |
| 12.527 | 1 | 1 | 1.00000 | 53.71581 | 1.86165e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 268.35944 | 1.86317e-2 | |
| | | 3 | 10.00000 | 553.23322 | 1.80756e-2 | |
| | | 4 | 20.00000 | 1155.66101 | 1.73061e-2 | |
| | | 5 | 50.00000 | 2823.16040 | 1.77106e-2 | |
| | | 6 | 100.00000 | 5776.03906 | 1.73129e-2 | |
| 12.989 | 2 | 1 | 1.00000 | 41.25003 | 2.42424e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 207.93272 | 2.40462e-2 | |
| | | 3 | 10.00000 | 427.28159 | 2.34038e-2 | |
| | | 4 | 20.00000 | 891.23303 | 2.24408e-2 | |
| | | 5 | 50.00000 | 2174.84375 | 2.29902e-2 | |
| | | 6 | 100.00000 | 4440.60303 | 2.25195e-2 | |
| 13.005 | 1 | 1 | 1.00000 | 67.56156 | 1.48013e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 338.71442 | 1.47617e-2 | |
| | | 3 | 10.00000 | 697.65833 | 1.43337e-2 | |
| | | 4 | 20.00000 | 1456.78040 | 1.37289e-2 | |
| | | 5 | 50.00000 | 3543.34277 | 1.41110e-2 | |
| | | 6 | 100.00000 | 7218.86475 | 1.38526e-2 | |
| 13.645 | 2 | 1 | 1.00000 | 53.42283 | 1.87186e-2 | Fluorene #6 |
| | | 2 | 5.00000 | 271.81696 | 1.83947e-2 | |
| | | 3 | 10.00000 | 558.21259 | 1.79143e-2 | |
| | | 4 | 20.00000 | 1164.00928 | 1.71820e-2 | |
| | | 5 | 50.00000 | 2835.69336 | 1.76324e-2 | |
| | | 6 | 100.00000 | 5779.26465 | 1.73032e-2 | |
| 13.661 | 1 | 1 | 1.00000 | 142.12080 | 7.03627e-3 | Fluorene #6 |
| | | 2 | 5.00000 | 713.18817 | 7.01077e-3 | |
| | | 3 | 10.00000 | 1462.86792 | 6.83589e-3 | |
| | | 4 | 20.00000 | 3039.59375 | 6.57983e-3 | |
| | | 5 | 50.00000 | 7369.04883 | 6.78514e-3 | |
| | | 6 | 100.00000 | 1.48701e4 | 6.72489e-3 | |
| 15.030 | 2 | 1 | 1.00000 | 54.35011 | 1.83992e-2 | Phenanthrene #7 |
| | | 2 | 5.00000 | 271.18774 | 1.84374e-2 | |
| | | 3 | 10.00000 | 557.24799 | 1.79453e-2 | |
| | | 4 | 20.00000 | 1160.96094 | 1.72271e-2 | |
| | | 5 | 50.00000 | 2824.41431 | 1.77028e-2 | |
| | | 6 | 100.00000 | 5771.65283 | 1.73261e-2 | |
| 15.046 | 1 | 1 | 1.00000 | 5.95919 | 1.67808e-1 | Phenanthrene #7 |
| | | 2 | 5.00000 | 26.72914 | 1.87062e-1 | |
| | | 3 | 10.00000 | 55.65540 | 1.79677e-1 | |

| [min] | Sig | | [ug/L] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 4 | 20.00000 | 116.89686 | 1.71091e-1 | | | |
| | | 5 | 50.00000 | 289.00418 | 1.73008e-1 | | | |
| | | 6 | 100.00000 | 601.35211 | 1.66292e-1 | | | |
| 16.434 | 2 | 1 | 1.00000 | 86.66844 | 1.15382e-2 | | | Anthracene #8 |
| | | 2 | 5.00000 | 442.03864 | 1.13112e-2 | | | |
| | | 3 | 10.00000 | 911.06781 | 1.09761e-2 | | | |
| | | 4 | 20.00000 | 1898.27124 | 1.05359e-2 | | | |
| | | 5 | 50.00000 | 4625.47705 | 1.08097e-2 | | | |
| | | 6 | 100.00000 | 9245.92676 | 1.08156e-2 | | | |
| 16.451 | 1 | 1 | 1.00000 | 3.09896 | 3.22688e-1 | | | Anthracene #8 |
| | | 2 | 5.00000 | 15.51351 | 3.22300e-1 | | | |
| | | 3 | 10.00000 | 31.83507 | 3.14119e-1 | | | |
| | | 4 | 20.00000 | 66.18985 | 3.02161e-1 | | | |
| | | 5 | 50.00000 | 162.79338 | 3.07138e-1 | | | |
| | | 6 | 100.00000 | 327.53006 | 3.05315e-1 | | | |
| 17.814 | 2 | 1 | 1.00000e-1 | 4.45056 | 2.24691e-2 | | | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 22.06173 | 2.26637e-2 | | | |
| | | 3 | 1.00000 | 45.92867 | 2.17729e-2 | | | |
| | | 4 | 2.00000 | 96.07294 | 2.08175e-2 | | | |
| | | 5 | 5.00000 | 235.31152 | 2.12484e-2 | | | |
| | | 6 | 10.00000 | 483.72876 | 2.06727e-2 | | | |
| 17.831 | 1 | 1 | 1.00000e-1 | 3.68034 | 2.71714e-2 | | | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 18.38673 | 2.71935e-2 | | | |
| | | 3 | 1.00000 | 37.53587 | 2.66412e-2 | | | |
| | | 4 | 2.00000 | 78.17149 | 2.55848e-2 | | | |
| | | 5 | 5.00000 | 192.03598 | 2.60368e-2 | | | |
| | | 6 | 10.00000 | 394.27036 | 2.53633e-2 | | | |
| 18.819 | 2 | 1 | 1.00000e-1 | 8.04064 | 1.24368e-2 | | | Pyrene #10 |
| | | 2 | 5.00000e-1 | 41.80117 | 1.19614e-2 | | | |
| | | 3 | 1.00000 | 86.62556 | 1.15439e-2 | | | |
| | | 4 | 2.00000 | 181.36873 | 1.10273e-2 | | | |
| | | 5 | 5.00000 | 444.82697 | 1.12403e-2 | | | |
| | | 6 | 10.00000 | 914.12830 | 1.09394e-2 | | | |
| 18.835 | 1 | 1 | 1.00000e-1 | 2.49880 | 4.00192e-2 | | | Pyrene #10 |
| | | 2 | 5.00000e-1 | 12.35667 | 4.04640e-2 | | | |
| | | 3 | 1.00000 | 25.55995 | 3.91237e-2 | | | |
| | | 4 | 2.00000 | 54.85559 | 3.64594e-2 | | | |
| | | 5 | 5.00000 | 136.01701 | 3.67601e-2 | | | |
| | | 6 | 10.00000 | 286.95029 | 3.48492e-2 | | | |
| 21.166 | 2 | 1 | 1.00000 | 13.68986 | 7.30468e-2 | | | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 69.45084 | 7.19934e-2 | | | |
| | | 3 | 10.00000 | 144.49483 | 6.92066e-2 | | | |
| | | 4 | 20.00000 | 303.50552 | 6.58967e-2 | | | |
| | | 5 | 50.00000 | 742.32825 | 6.73556e-2 | | | |
| | | 6 | 100.00000 | 1513.75256 | 6.60610e-2 | | | |
| 21.184 | 1 | 1 | 1.00000 | 3.44864 | 2.89969e-1 | | | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 15.59836 | 3.20547e-1 | | | |
| | | 3 | 10.00000 | 31.67122 | 3.15744e-1 | | | |
| | | 4 | 20.00000 | 66.96288 | 2.98673e-1 | | | |
| | | 5 | 50.00000 | 161.49503 | 3.09607e-1 | | | |
| | | 6 | 100.00000 | 333.88467 | 2.99505e-1 | | | |
| 22.481 | 2 | 1 | 1.00000e-1 | 4.41380 | 2.26562e-2 | | | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 21.93929 | 2.27902e-2 | | | |
| | | 3 | 1.00000 | 44.75309 | 2.23448e-2 | | | |
| | | 4 | 2.00000 | 94.19716 | 2.12321e-2 | | | |
| | | 5 | 5.00000 | 231.56067 | 2.15926e-2 | | | |

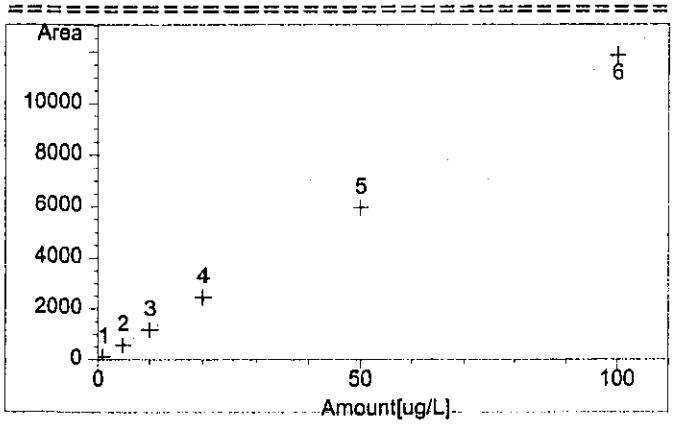
| [min] | Sig | | [ug/L] | | | | |
|---|---|---|---|---|---|---|---|
| | | 6 | 10.00000 | 477.03839 | 2.09627e-2 | | |
| 22.500 | 1 | 1 | 1.00000e-1 | 11.41377 | 8.76135e-3 | | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 56.93108 | 8.78255e-3 | | |
| | | 3 | 1.00000 | 118.36651 | 8.44834e-3 | | |
| | | 4 | 2.00000 | 247.33057 | 8.08634e-3 | | |
| | | 5 | 5.00000 | 609.34204 | 8.20557e-3 | | |
| | | 6 | 10.00000 | 1266.77136 | 7.89408e-3 | | |
| 23.359 | 2 | 1 | 1.00000e-1 | 6.12014 | 1.63395e-2 | | Chrysene #13 |
| | | 2 | 5.00000e-1 | 30.40728 | 1.64434e-2 | | |
| | | 3 | 1.00000 | 62.44849 | 1.60132e-2 | | |
| | | 4 | 2.00000 | 131.21184 | 1.52425e-2 | | |
| | | 5 | 5.00000 | 322.17139 | 1.55197e-2 | | |
| | | 6 | 10.00000 | 662.99872 | 1.50830e-2 | | |
| 23.376 | 1 | 1 | 1.00000e-1 | 2.46762 | 4.05248e-2 | | Chrysene #13 |
| | | 2 | 5.00000e-1 | 12.35089 | 4.04829e-2 | | |
| | | 3 | 1.00000 | 24.32562 | 4.11089e-2 | | |
| | | 4 | 2.00000 | 50.90138 | 3.92917e-2 | | |
| | | 5 | 5.00000 | 124.39308 | 4.01952e-2 | | |
| | | 6 | 10.00000 | 259.63892 | 3.85150e-2 | | |
| 26.093 | 2 | 1 | 1.00000e-1 | 4.46468 | 2.23980e-2 | | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 22.81914 | 2.19114e-2 | | |
| | | 3 | 1.00000 | 47.48998 | 2.10571e-2 | | |
| | | 4 | 2.00000 | 98.69814 | 2.02638e-2 | | |
| | | 5 | 5.00000 | 241.35190 | 2.07166e-2 | | |
| | | 6 | 10.00000 | 497.49078 | 2.01009e-2 | | |
| 26.109 | 1 | 1 | 1.00000e-1 | 5.21623 | 1.91709e-2 | | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 27.46255 | 1.82066e-2 | | |
| | | 3 | 1.00000 | 56.03418 | 1.78462e-2 | | |
| | | 4 | 2.00000 | 117.52394 | 1.70178e-2 | | |
| | | 5 | 5.00000 | 288.37061 | 1.73388e-2 | | |
| | | 6 | 10.00000 | 597.08154 | 1.67481e-2 | | |
| 27.533 | 2 | 1 | 5.00000e-2 | 1.34447 | 3.71893e-2 | | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 10.21462 | 2.44747e-2 | | |
| | | 3 | 5.00000e-1 | 20.09780 | 2.48783e-2 | | |
| | | 4 | 1.00000 | 43.10554 | 2.31989e-2 | | |
| | | 5 | 2.50000 | 104.96660 | 2.38171e-2 | | |
| | | 6 | 5.00000 | 216.73499 | 2.30696e-2 | | |
| 27.542 | 1 | 1 | 5.00000e-2 | 16.02236 | 3.12064e-3 | | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 81.89045 | 3.05286e-3 | | |
| | | 3 | 5.00000e-1 | 167.50449 | 2.98499e-3 | | |
| | | 4 | 1.00000 | 354.43918 | 2.82136e-3 | | |
| | | 5 | 2.50000 | 867.17621 | 2.88292e-3 | | |
| | | 6 | 5.00000 | 1767.10413 | 2.82949e-3 | | |
| 28.623 | 2 | 1 | 1.00000e-1 | 2.62369 | 3.81143e-2 | | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 16.64720 | 3.00351e-2 | | |
| | | 3 | 1.00000 | 35.49910 | 2.81697e-2 | | |
| | | 4 | 2.00000 | 74.54464 | 2.68296e-2 | | |
| | | 5 | 5.00000 | 185.12453 | 2.70088e-2 | | |
| | | 6 | 10.00000 | 383.82956 | 2.60532e-2 | | |
| 28.637 | 1 | 1 | 1.00000e-1 | 18.70416 | 5.34640e-3 | | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 94.83067 | 5.27256e-3 | | |
| | | 3 | 1.00000 | 196.83517 | 5.08039e-3 | | |
| | | 4 | 2.00000 | 416.25037 | 4.80480e-3 | | |
| | | 5 | 5.00000 | 1032.61243 | 4.84209e-3 | | |
| | | 6 | 10.00000 | 2154.75366 | 4.64090e-3 | | |
| 30.497 | 2 | 1 | 1.00000e-1 | 4.03842 | 2.47622e-2 | | Dibenz(a,h)anthracene |

| [min] | Sig | | [ug/L] | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 2 | 5.00000e-1 | 9.72626 | 5.14072e-2 | | | |
| | | 3 | 1.00000 | 10.95264 | 9.13022e-2 | | | |
| | | 4 | 2.00000 | 20.66441 | 9.67848e-2 | | | |
| | | 5 | 5.00000 | 49.22962 | 1.01565e-1 | | | |
| | | 6 | 10.00000 | 100.69902 | 9.93058e-2 | | | |
| 30.500 | 1 | 1 | 1.00000e-1 | 2.30826 | 4.33227e-2 | | | Dibenz(a,h)anthracene |
| | | 2 | 5.00000e-1 | 10.82063 | 4.62080e-2 | | | |
| | | 3 | 1.00000 | 23.52898 | 4.25008e-2 | | | |
| | | 4 | 2.00000 | 49.56461 | 4.03514e-2 | | | |
| | | 5 | 5.00000 | 123.53096 | 4.04757e-2 | | | |
| | | 6 | 10.00000 | 258.50845 | 3.86835e-2 | | | |
| 31.297 | 2 | 1 | 1.00000e-1 | 1.20689 | 8.28574e-2 | | | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 7.93134 | 6.30410e-2 | | | |
| | | 3 | 1.00000 | 17.30395 | 5.77903e-2 | | | |
| | | 4 | 2.00000 | 35.98459 | 5.55793e-2 | | | |
| | | 5 | 5.00000 | 89.16454 | 5.60761e-2 | | | |
| | | 6 | 10.00000 | 182.95050 | 5.46596e-2 | | | |
| 31.330 | 1 | 1 | 1.00000e-1 | 3.25644 | 3.07083e-2 | | | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 16.79211 | 2.97759e-2 | | | |
| | | 3 | 1.00000 | 35.19607 | 2.84123e-2 | | | |
| | | 4 | 2.00000 | 74.49189 | 2.68486e-2 | | | |
| | | 5 | 5.00000 | 187.63147 | 2.66480e-2 | | | |
| | | 6 | 10.00000 | 398.71832 | 2.50804e-2 | | | |
| 32.289 | 2 | 1 | 1.00000e-1 | 4.03389 | 2.47900e-2 | | | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 22.99526 | 2.17436e-2 | | | |
| | | 3 | 1.00000 | 47.15022 | 2.12088e-2 | | | |
| | | 4 | 2.00000 | 99.87663 | 2.00247e-2 | | | |
| | | 5 | 5.00000 | 248.71965 | 2.01030e-2 | | | |
| | | 6 | 10.00000 | 515.31970 | 1.94054e-2 | | | |
| 32.292 | 1 | 1 | 1.00000e-1 | 6.42581 | 1.55622e-2 | | | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 32.39291 | 1.54355e-2 | | | |
| | | 3 | 1.00000 | 65.71149 | 1.52180e-2 | | | |
| | | 4 | 2.00000 | 137.54715 | 1.45405e-2 | | | |
| | | 5 | 5.00000 | 337.52823 | 1.48136e-2 | | | |
| | | 6 | 10.00000 | 696.87433 | 1.43498e-2 | | | |

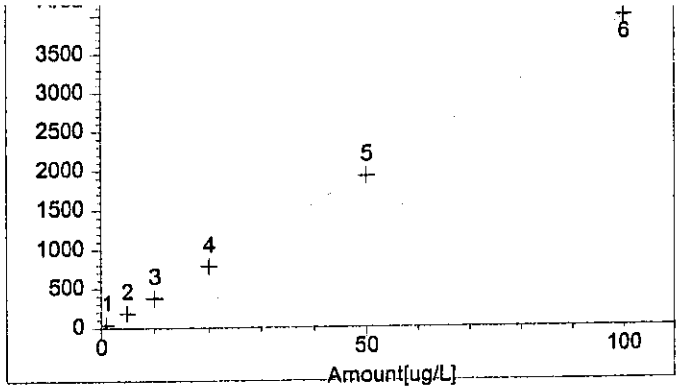
## Peak Sum Table

***No Entries in table***

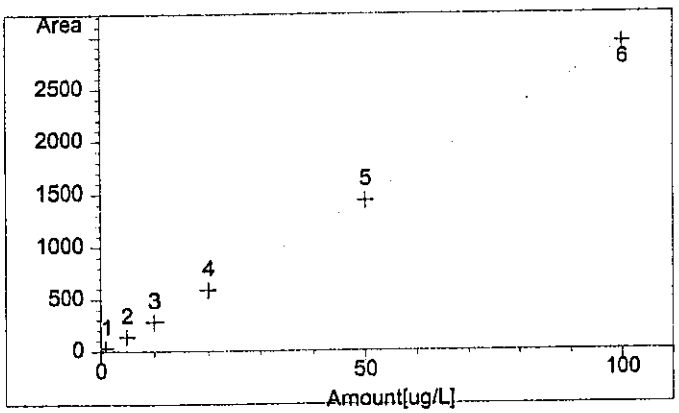
## Calibration Curves



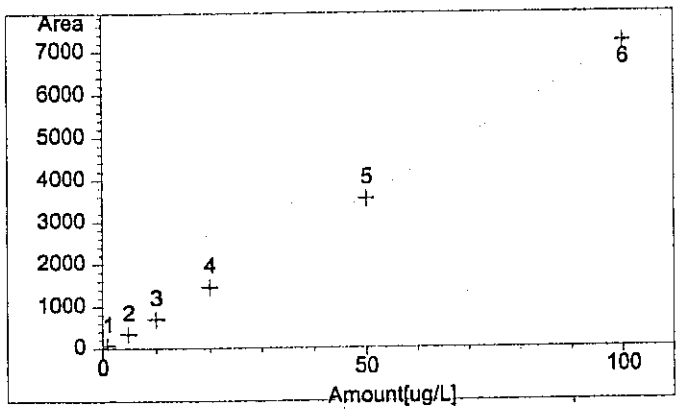

Naphthalene #1 at exp. RT: 9.370
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 42.10085
Formula: y = mx + b
m: 118.56238
b: 12.09798
x: Amount [ug/L]
y: Area



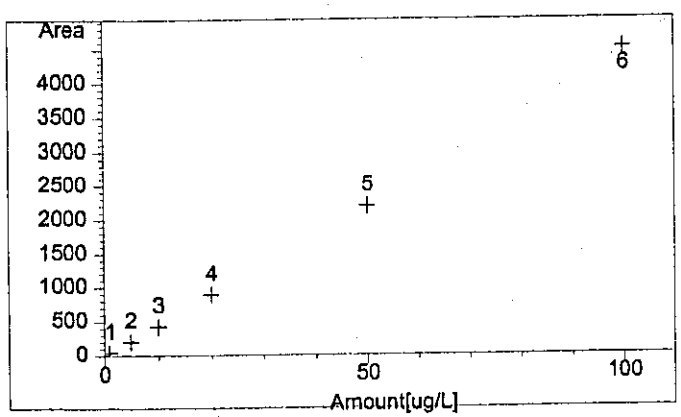

FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99990
Residual Std. Dev.: 22.76520
Formula: y = mx + b
m: 39.55796
b: -13.98462
x: Amount [ug/L]
y: Area



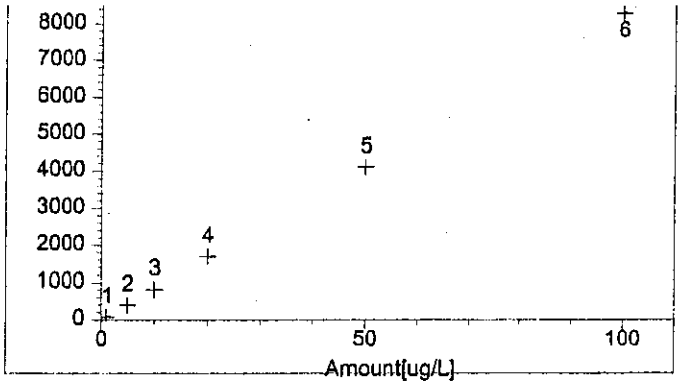

Acenaphthylene #2 at exp. RT: 10.990
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99993
Residual Std. Dev.: 13.87446
Formula: y = mx + b
m: 29.39910
b: -6.97993
x: Amount [ug/L]
y: Area



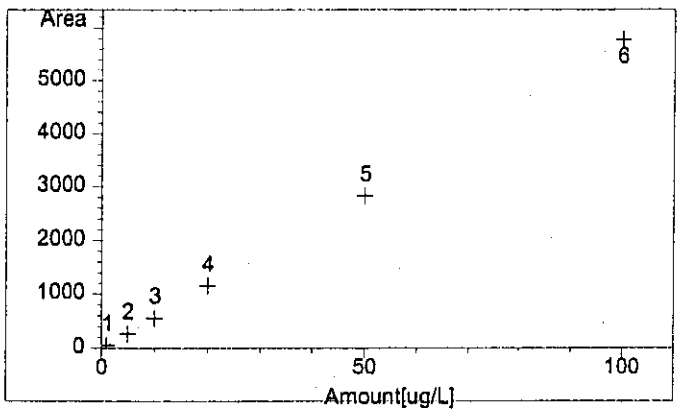

1-Methylnaphthalene #3 at exp. RT: 11.936
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 27.06350
Formula: y = mx + b
m: 71.97944
b: -11.68952
x: Amount [ug/L]
y: Area



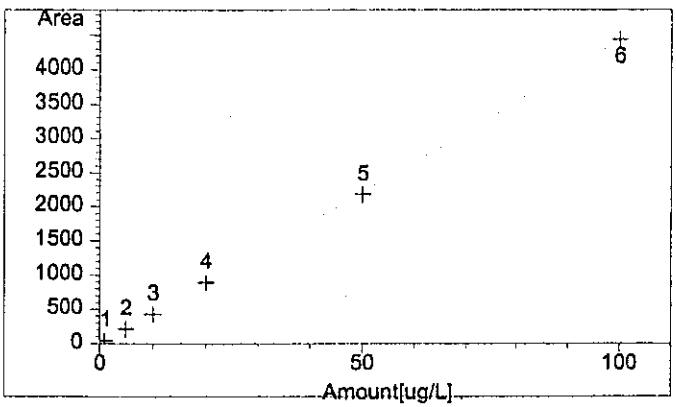

1-Methylnaphthalene #3 at exp. RT: 11.952
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 23.34269
Formula: y = mx + b
m: 45.03399
b: -15.17702
x: Amount [ug/L]
y: Area



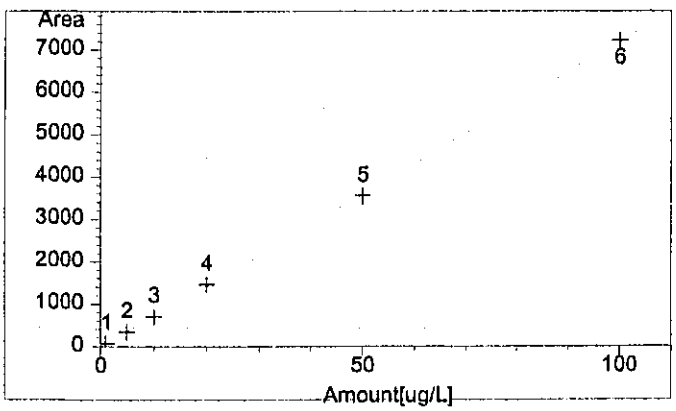

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 24.46395
Formula: y = mx + b
m: 82.63518
b: -4.45318
x: Amount [ug/L]
y: Area



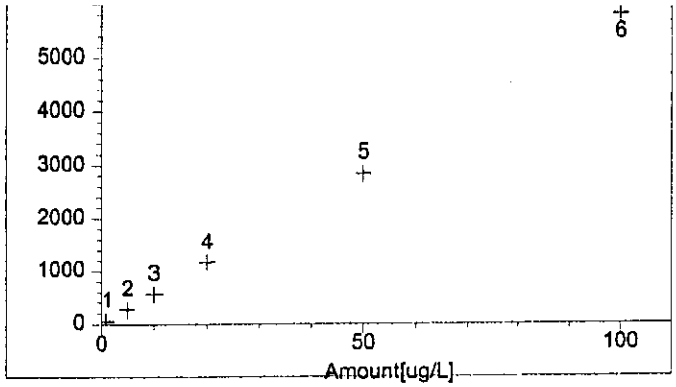

2-Methylnaphthalene #4 at exp. RT: 12.527
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 25.92926
Formula: y = mx + b
m: 57.68935
b: -14.29286
x: Amount [ug/L]
y: Area



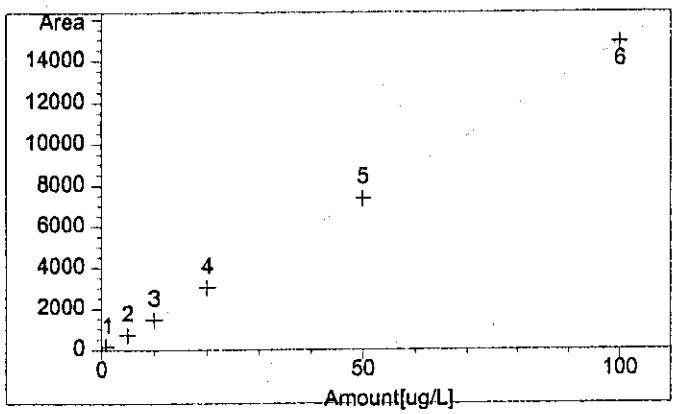

Acenaphthene #5 at exp. RT: 12.989
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 18.49792
Formula: y = mx + b
m: 44.35375
b: -9.52193
x: Amount [ug/L]
y: Area



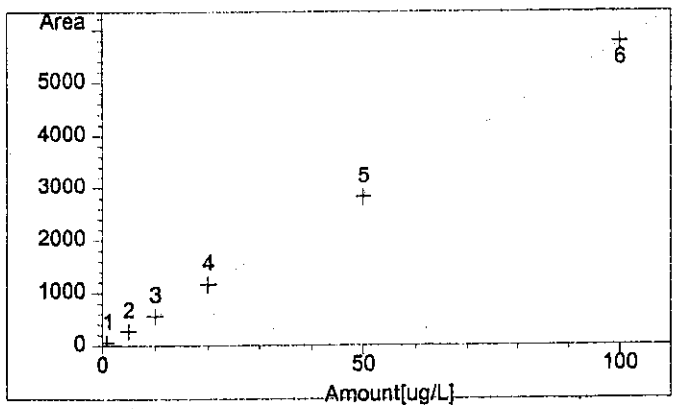

Acenaphthene #5 at exp. RT: 13.005
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 28.42417
Formula: y = mx + b
m: 72.11015
b: -12.79514
x: Amount [ug/L]
y: Area



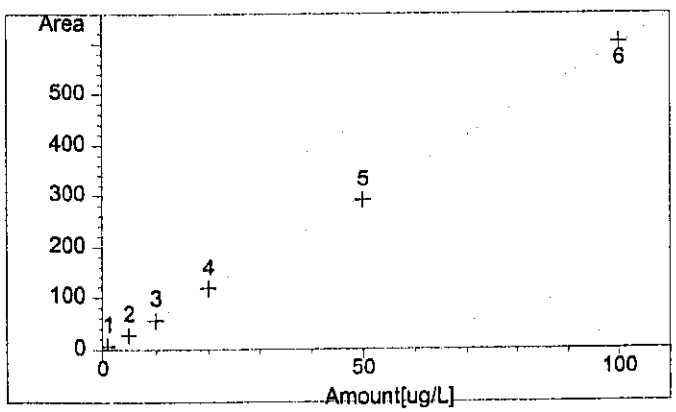

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 22.64515
Formula: y = mx + b
m: 57.72968
b: -10.75723
x: Amount [ug/L]
y: Area



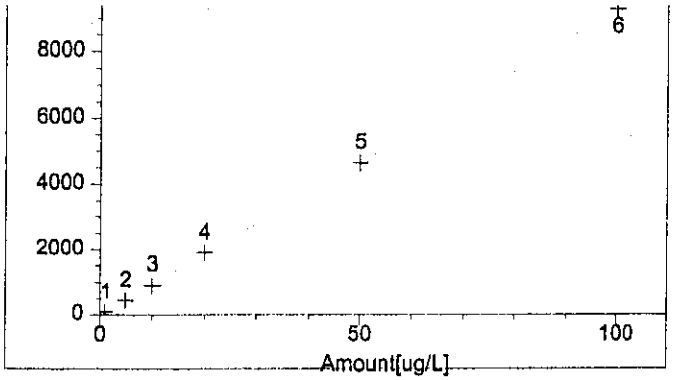

Fluorene #6 at exp. RT: 13.661
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 43.79925
Formula: y = mx + b
m: 148.60784
b: -6.30196
x: Amount [ug/L]
y: Area



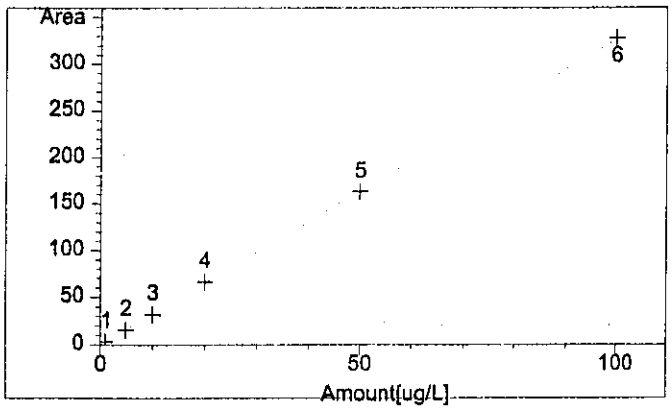

Phenanthrene #7 at exp. RT: 15.030
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99994
Residual Std. Dev.: 25.16007
Formula: y = mx + b
m: 57.63105
b: -11.36587
x: Amount [ug/L]
y: Area



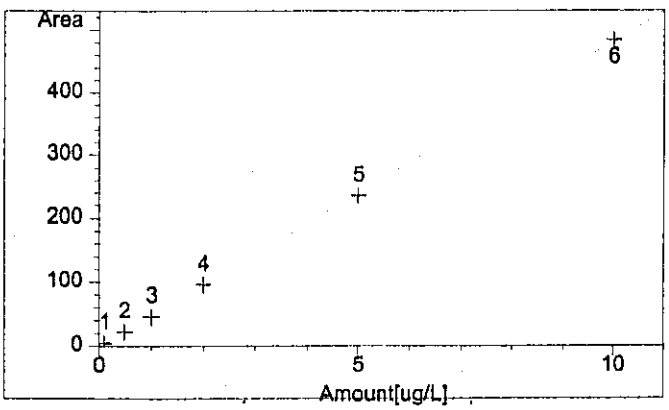

Phenanthrene #7 at exp. RT: 15.046
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99982
Residual Std. Dev.: 4.52698
Formula: y = mx + b
m: 6.00070
b: -2.93332
x: Amount [ug/L]
y: Area



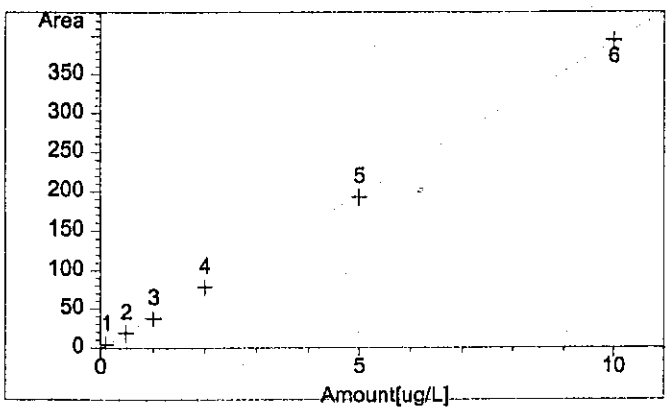

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 24.43398
Formula: y = mx + b
m: 92.52675
b: -7.51211e-2
x: Amount [ug/L]
y: Area



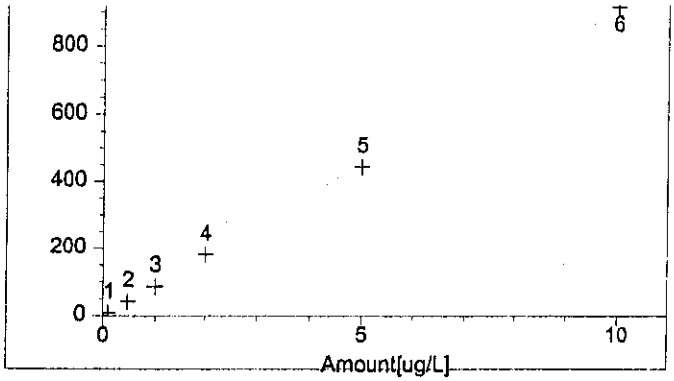

Anthracene #8 at exp. RT: 16.451
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.67749
Formula: y = mx + b
m: 3.27667
b: -3.57142e-1
x: Amount [ug/L]
y: Area



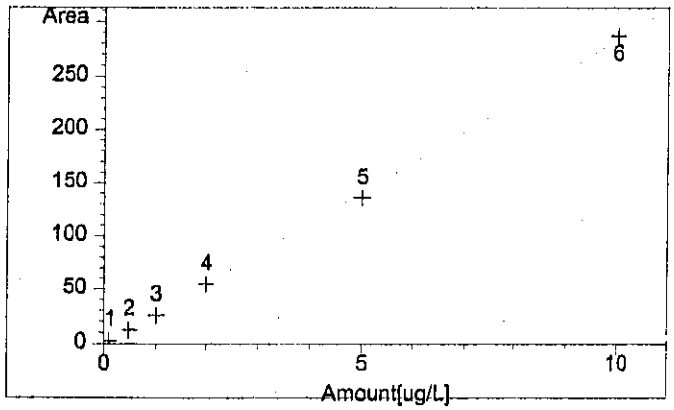

Fluoranthene #9 at exp. RT: 17.814
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 2.54900
Formula: y = mx + b
m: 48.30746
b: -1.56638
x: Amount [ug/L]
y: Area



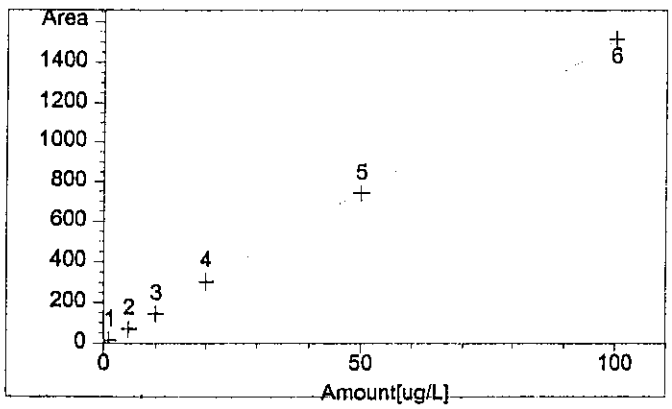

Fluoranthene #9 at exp. RT: 17.831
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 1.96619
Formula: y = mx + b
m: 39.36727
b: -1.16435
x: Amount [ug/L]
y: Area



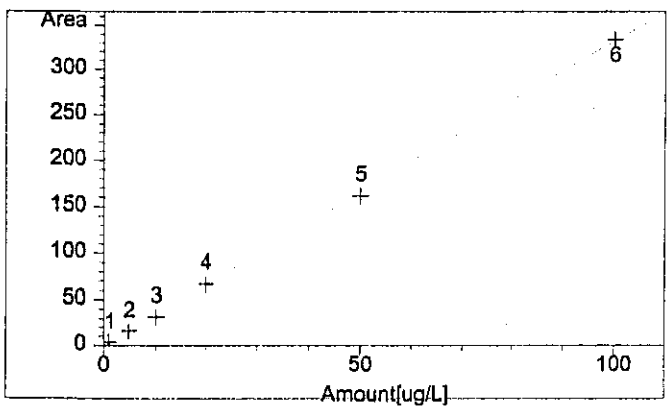

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99992
Residual Std. Dev.: 4.72317
Formula: y = mx + b
m: 91.30718
b: -3.07459
x: Amount [ug/L]
y: Area



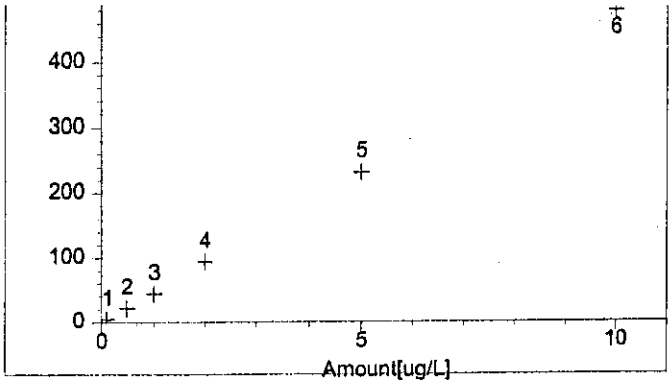

Pyrene #10 at exp. RT: 18.835
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99969
Residual Std. Dev.: 2.87563
Formula: y = mx + b
m: 28.62860
b: -2.03623
x: Amount [ug/L]
y: Area



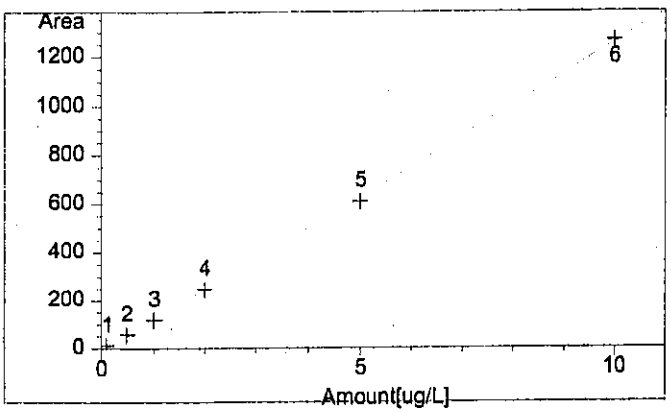

p-Terphenyl d14 #11* at exp. RT: 21.166
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 6.08636
Formula: y = mx + b
m: 15.13008
b: -3.85316
x: Amount [ug/L]
y: Area



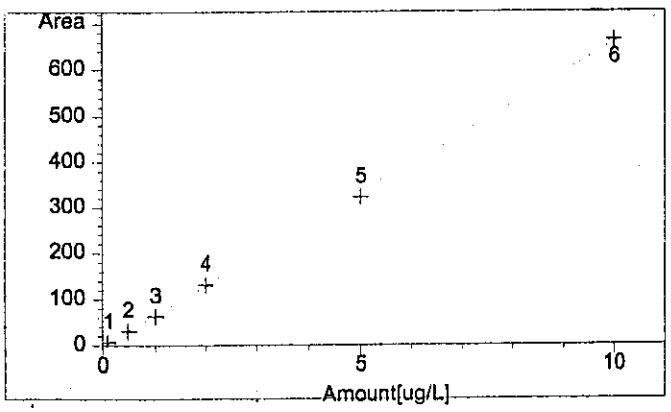

p-Terphenyl d14 #11* at exp. RT: 21.184
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 2.19201
Formula: y = mx + b
m: 3.32901
b: -8.76314e-1
x: Amount [ug/L]
y: Area



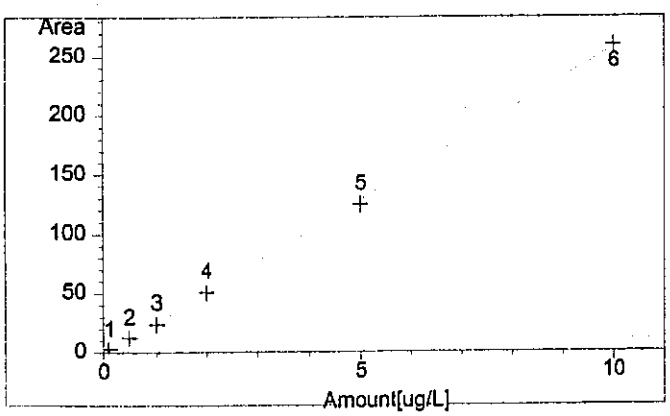

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 2.69756
Formula: y = mx + b
m: 47.63481
b: -1.72930
x: Amount [ug/L]
y: Area



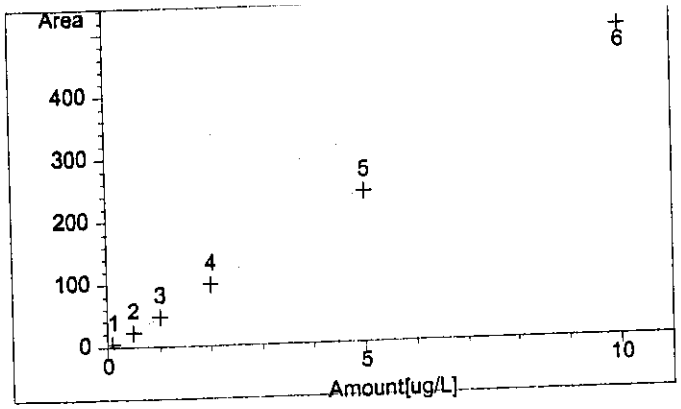

Benzo(a)anthracene #12 at exp. RT: 22.500
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99984
Residual Std. Dev.: 9.13801
Formula: y = mx + b
m: 126.41028
b: -5.86798
x: Amount [ug/L]
y: Area



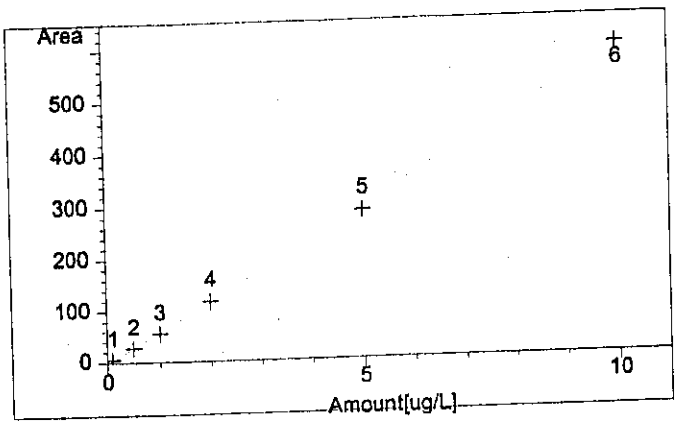

Chrysene #13 at exp. RT: 23.359
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 3.62002
Formula: y = mx + b
m: 66.20908
b: -2.30442
x: Amount [ug/L]
y: Area



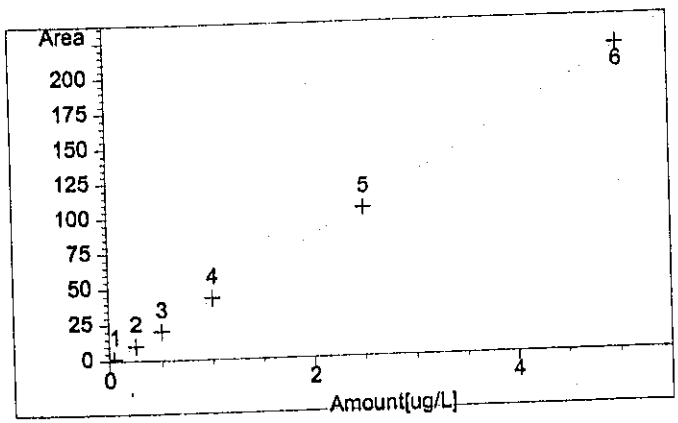

Chrysene #13 at exp. RT: 23.376
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 2.08259
Formula: y = mx + b
m: 25.86946
b: -1.01350
x: Amount [ug/L]
y: Area



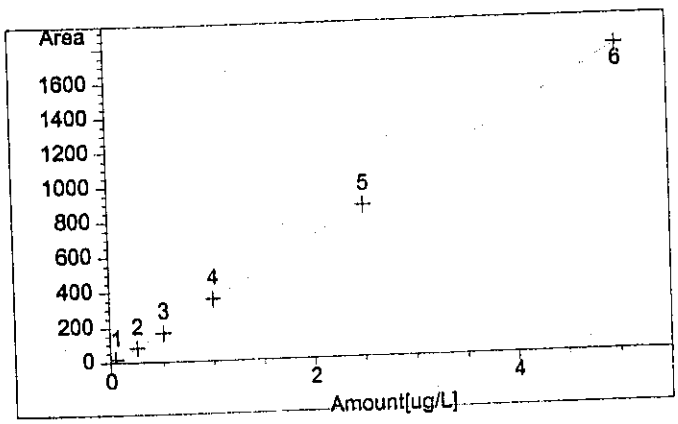

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 2.82913
Formula: y = mx + b
m: 49.65860
b: -1.61933
x: Amount [ug/L]
y: Area



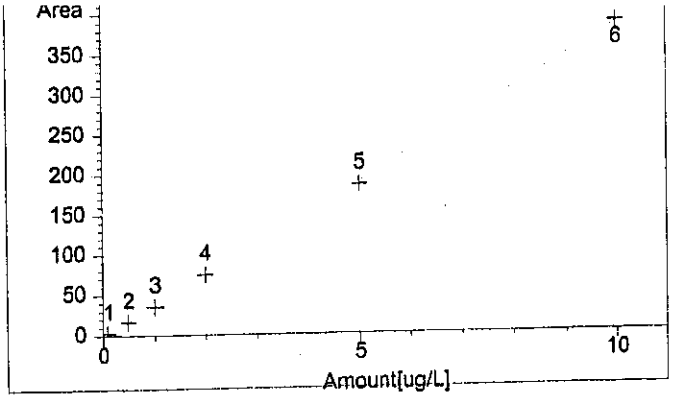

Benzo(b)fluoranthene #14 at exp. RT: 26.1
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 3.86702
Formula: y = mx + b
m: 59.59178
b: -2.38831
x: Amount [ug/L]
y: Area



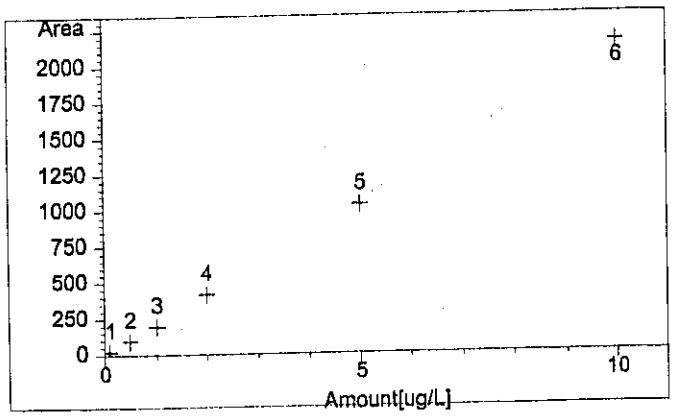

Benzo(k)fluoranthene #15 at exp. RT: 27.
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99988
Residual Std. Dev.: 1.32598
Formula: y = mx + b
m: 43.30366
b: -8.94286e-1
x: Amount [ug/L]
y: Area



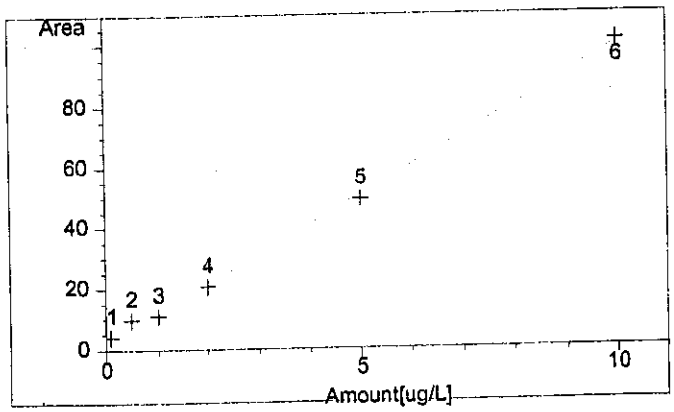

Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 7.00765
Formula: y = mx + b
m: 353.28181
b: -4.48344
x: Amount [ug/L]
y: Area



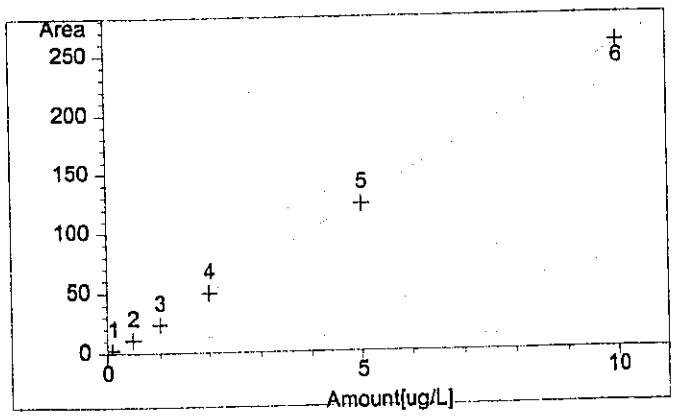

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99986
Residual Std. Dev.: 2.54104
Formula: y = mx + b
m: 38.36965
b: -2.20097
x: Amount [ug/L]
y: Area



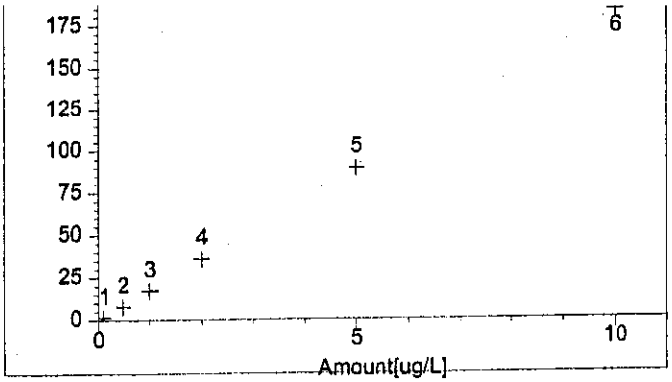

Benzo(a)pyrene #16 at exp. RT: 28.637
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 17.16464
Formula: y = mx + b
m: 215.11398
b: -12.44764
x: Amount [ug/L]
y: Area



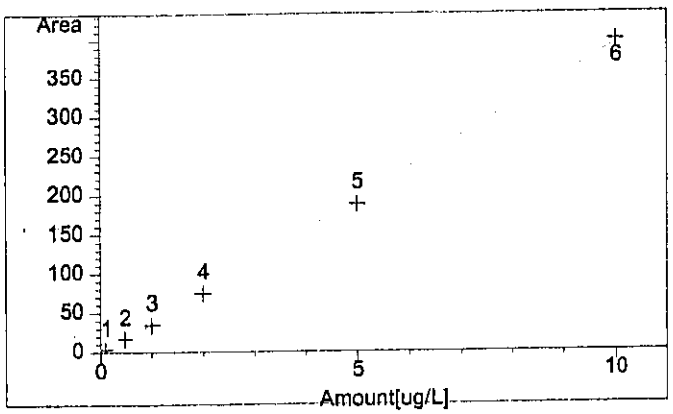

Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99883
Residual Std. Dev.: 1.90720
Formula: y = mx + b
m: 9.79400
b: 1.87742
x: Amount [ug/L]
y: Area



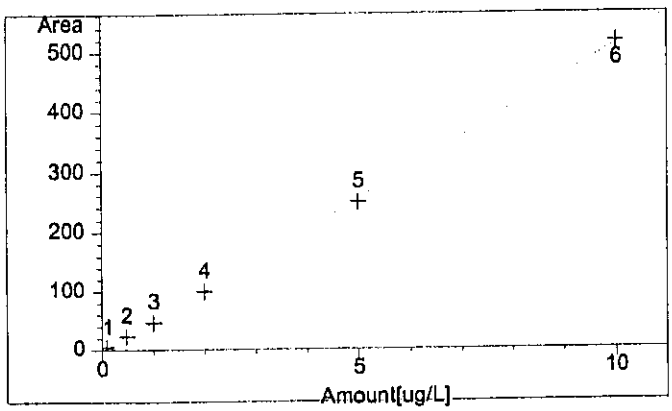

Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99977
Residual Std. Dev.: 2.21658
Formula: y = mx + b
m: 25.81486
b: -1.69923
x: Amount [ug/L]
y: Area



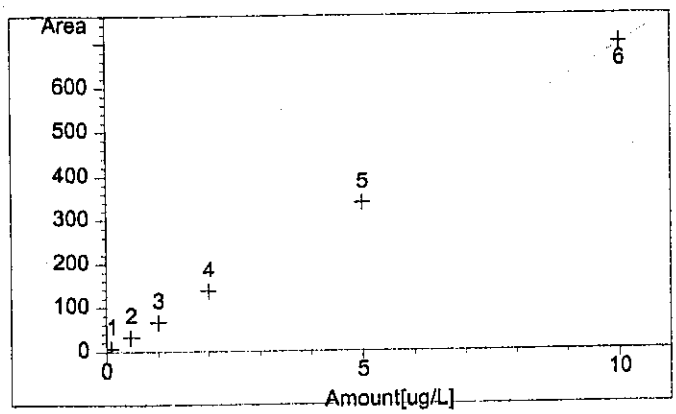

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99993
Residual Std. Dev.: 0.87515
Formula: y = mx + b
m: 18.30547
b: -8.48559e-1
x: Amount [ug/L]
y: Area




Benzo(g,h,i)perylene #18 at exp. RT: 31.3
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99960
Residual Std. Dev.: 4.55128
Formula: y = mx + b
m: 39.77749
b: -3.39643
x: Amount [ug/L]
y: Area




Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99986
Residual Std. Dev.: 3.42563
Formula: y = mx + b
m: 51.49794
b: -2.82376
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: 0.99989
Residual Std. Dev.: 4.18223
Formula: y = mx + b
m: 69.55020
b: -2.45055
x: Amount [ug/L]
y: Area

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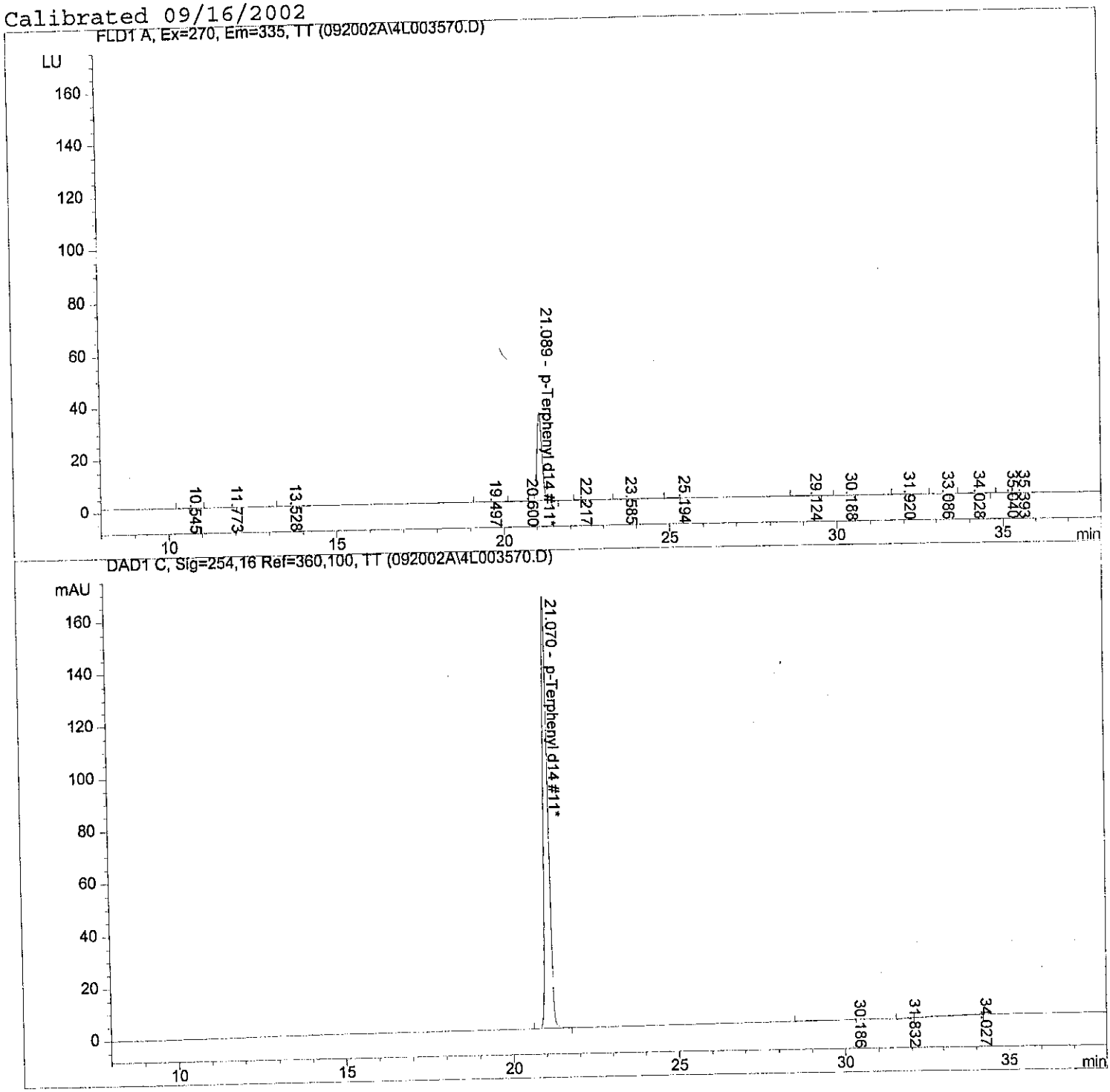
Injection Date : 9/20/2002 4:34:39 PM
Sample Name : WG125711-01 STD6
Acq. Operator : RDC

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:34:17 PM
(modified after loading)

Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:34:12 PM
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 |
|---|---|---|---|---|---|---|
| 9.420 | | - | - | - | | Naphthalene #1 |
| 11.995 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.571 | | - | - | - | | 2-Methylnaphthalene #4 |
| 13.049 | | - | - | - | | Acenaphthene #5 |
| 13.704 | | - | - | - | | Fluorene #6 |
| 15.090 | | - | - | - | | Phenanthrene #7 |
| 16.496 | | - | - | - | | Anthracene #8 |
| 17.880 | | - | - | - | | Fluoranthene #9 |
| 18.884 | | - | - | - | | Pyrene #10 |
| 21.089 | BB | 333.88467 | 3.01192e-1 | 100.56345 | | p-Terphenyl d14 #11* |
| 22.545 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.414 | | - | - | - | | Chrysene #13 |
| 26.127 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.550 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.655 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.523 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.320 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.249 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 100.56345 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.402 | | - | - | - | | Naphthalene #1 |
| 11.028 | | - | - | - | | Acenaphthylene #2 |
| 11.977 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.553 | | - | - | - | | 2-Methylnaphthalene #4 |
| 13.031 | | - | - | - | | Acenaphthene #5 |
| 13.685 | | - | - | - | | Fluorene #6 |
| 15.072 | | - | - | - | | Phenanthrene #7 |
| 16.478 | | - | - | - | | Anthracene #8 |
| 17.861 | | - | - | - | | Fluoranthene #9 |
| 18.865 | | - | - | - | | Pyrene #10 |
| 21.070 | PBA | 1513.75256 | 6.63492e-2 | 100.43631 | | p-Terphenyl d14 #11* |
| 22.526 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.396 | | - | - | - | | Chrysene #13 |
| 26.108 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.531 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.635 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.504 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | [mAU*s] | | [ug/L] | | |
| 31.301 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.231 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 100.43631 | | |

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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*** End of Report ***

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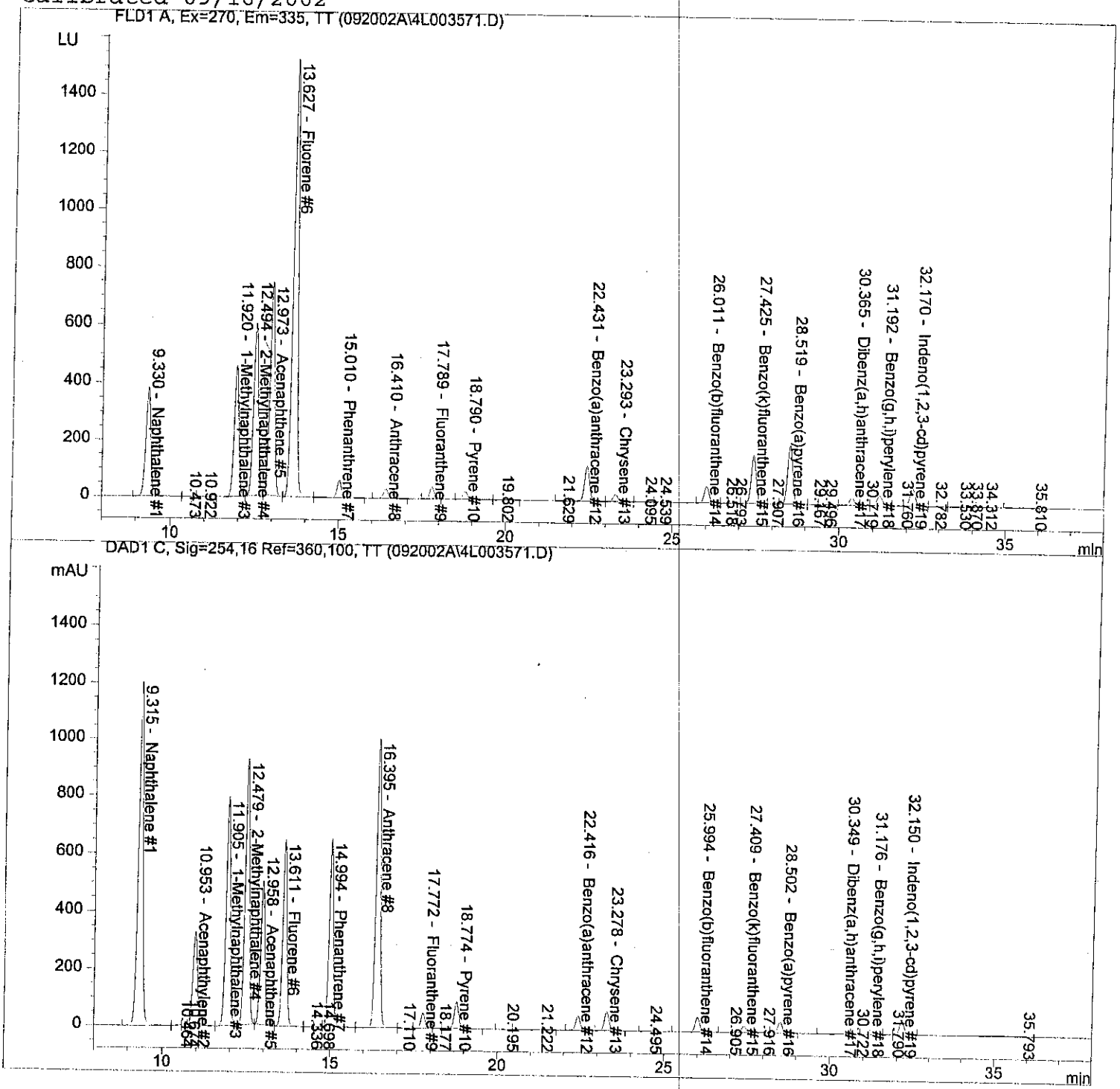
Injection Date : 9/20/2002 5:31:18 PM
Sample Name : WG125711-02 STD6
Acq. Operator : RDC

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:36:32 PM
(modified after loading)

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 8 µl

Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:36:28 PM
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 | 3962.24902 | 2.55945e-2 | 101.41160 | | Naphthalene #1 |
| 11.920 | BB | 4509.24463 | 2.24599e-2 | 101.27716 | | 1-Methylnaphthalene #3 |
| 12.494 | BB | 5776.03906 | 1.74998e-2 | 101.07977 | | 2-Methylnaphthalene #4 |
| 12.973 | BB | 7218.86475 | 1.39628e-2 | 100.79530 | | Acenaphthene #5 |
| 13.627 | BB | 1.48701e4 | 6.73212e-3 | 100.10741 | | Fluorene #6 |
| 15.010 | BBA | 601.35211 | 1.68802e-1 | 101.50969 | | Phenanthrene #7 |
| 16.410 | BBA | 327.53006 | 3.04758e-1 | 99.81745 | | Anthracene #8 |
| 17.789 | PB | 394.27036 | 2.55326e-2 | 10.06673 | | Fluoranthene #9 |
| 18.790 | BB | 286.95029 | 3.61241e-2 | 10.36583 | | Pyrene #10 |
| 21.089 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.431 | BB | 1266.77136 | 8.01478e-3 | 10.15289 | | Benzo(a)anthracene #12 |
| 23.293 | BB | 259.63892 | 3.91455e-2 | 10.16369 | | Chrysene #13 |
| 26.011 | BB | 597.08154 | 1.69085e-2 | 10.09576 | | Benzo(b)fluoranthene #14 |
| 27.425 | BB | 1767.10413 | 2.84201e-3 | 5.02213 | | Benzo(k)fluoranthene #15 |
| 28.519 | BB | 2154.75366 | 4.70524e-3 | 10.13862 | | Benzo(a)pyrene #16 |
| 30.365 | BB | 258.50845 | 3.94349e-2 | 10.19426 | | Dibenz(a,h)anthracene #17 |
| 31.192 | BB | 398.71832 | 2.59222e-2 | 10.33567 | | Benzo(g,h,i)perylene #18 |
| 32.170 | BB | 696.87433 | 1.44112e-2 | 10.04277 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 802.57673 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.315 | BB | 1.18503e4 | 8.42545e-3 | 99.84407 | | Naphthalene #1 |
| 10.953 | BB | 2944.69458 | 3.40843e-2 | 100.36780 | | Acenaphthylene #2 |
| 11.905 | BB | 7205.42578 | 1.39141e-2 | 100.25704 | | 1-Methylnaphthalene #3 |
| 12.479 | BB | 8267.85547 | 1.21070e-2 | 100.09901 | | 2-Methylnaphthalene #4 |
| 12.958 | BB | 4440.60303 | 2.25901e-2 | 100.31371 | | Acenaphthene #5 |
| 13.611 | BB | 5779.26465 | 1.73560e-2 | 100.30500 | | Fluorene #6 |
| 14.994 | BB | 5771.65283 | 1.73758e-2 | 100.28709 | | Phenanthrene #7 |
| 16.395 | BB | 9245.92676 | 1.07884e-2 | 99.74905 | | Anthracene #8 |
| 17.772 | BB | 483.72876 | 2.07689e-2 | 10.04652 | | Fluoranthene #9 |
| 18.774 | BBA | 914.12830 | 1.09739e-2 | 10.03157 | | Pyrene #10 |
| 21.070 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.416 | BBA | 477.03839 | 2.10514e-2 | 10.04233 | | Benzo(a)anthracene #12 |
| 23.278 | BBA | 662.99872 | 1.51539e-2 | 10.04704 | | Chrysene #13 |
| 25.994 | PBA | 497.49078 | 2.01897e-2 | 10.04420 | | Benzo(b)fluoranthene #14 |
| 27.409 | BB | 216.73499 | 2.31886e-2 | 5.02578 | | Benzo(k)fluoranthene #15 |
| 28.502 | BB | 383.82956 | 2.60557e-2 | 10.00094 | | Benzo(a)pyrene #16 |
| 30.349 | BB | 100.69902 | 1.00574e-1 | 10.12772 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.176 | BB | 182.95050 | 5.47525e-2 | 10.01699 | | Benzo(g,h,i)perylene #18 |
| 32.150 | BBA | 515.31970 | 1.94906e-2 | 10.04390 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 896.64975 | | |

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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*** End of Report ***

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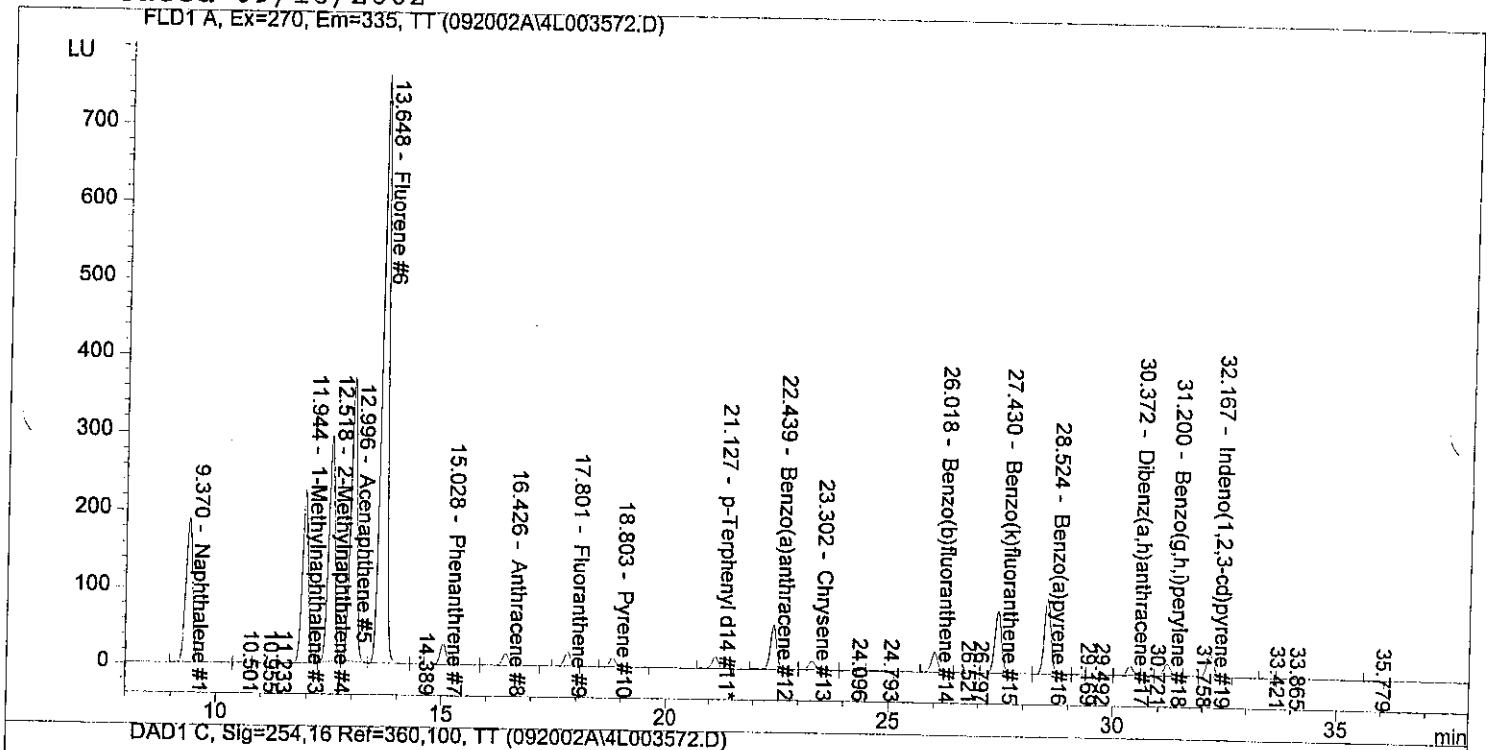
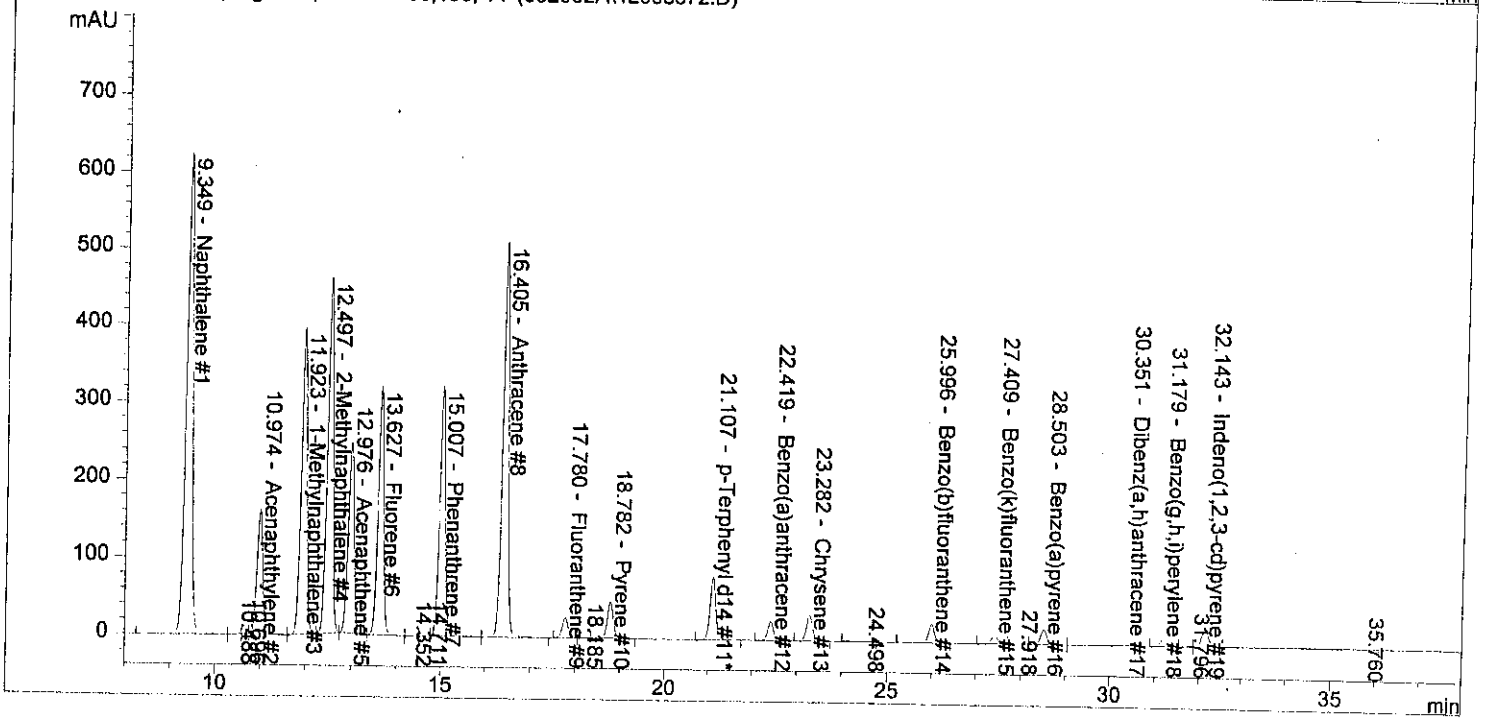
Injection Date : 9/20/2002 6:27:58 PM
Sample Name : WG125711-03 STD5
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 6:52:48 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:37:24 PM
(modified after loading)
Calibrated 09/16/2002



Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:37:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.370 | PB | 1921.86047 | 2.55698e-2 | 49.14151 | | Naphthalene #1 |
| 11.944 | BB | 2194.00391 | 2.24412e-2 | 49.23609 | | 1-Methylnaphthalene #3 |
| 12.518 | BB | 2823.16040 | 1.74840e-2 | 49.36007 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 3543.34277 | 1.39585e-2 | 49.45973 | | Acenaphthene #5 |
| 13.648 | BB | 7369.04883 | 6.74173e-3 | 49.68014 | | Fluorene #6 |
| 15.028 | BB | 289.00418 | 1.68945e-1 | 48.82568 | | Phenanthrene #7 |
| 16.426 | BBA | 162.79338 | 3.05677e-1 | 49.76214 | | Anthracene #8 |
| 17.801 | PB | 192.03598 | 2.55369e-2 | 4.90400 | | Fluoranthene #9 |
| 18.803 | BBA | 136.01701 | 3.58527e-2 | 4.87658 | | Pyrene #10 |
| 21.127 | PB | 161.49503 | 3.02750e-1 | 48.89261 | | p-Terphenyl d14 #11* |
| 22.439 | BB | 609.34204 | 8.01885e-3 | 4.88622 | | Benzo(a)anthracene #12 |
| 23.302 | BB | 124.39308 | 3.91583e-2 | 4.87102 | | Chrysene #13 |
| 26.018 | BB | 288.37061 | 1.69649e-2 | 4.89216 | | Benzo(b)fluoranthene #14 |
| 27.430 | BB | 867.17621 | 2.84980e-3 | 2.47128 | | Benzo(k)fluoranthene #15 |
| 28.524 | BB | 1032.61243 | 4.71755e-3 | 4.87140 | | Benzo(a)pyrene #16 |
| 30.372 | BB | 123.53096 | 3.94402e-2 | 4.87208 | | Dibenz(a,h)anthracene #17 |
| 31.200 | BB | 187.63147 | 2.57947e-2 | 4.83990 | | Benzo(g,h,i)perylene #18 |
| 32.167 | BB | 337.52823 | 1.44893e-2 | 4.89056 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 440.73317

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.349 | PB | 5949.45410 | 8.42716e-3 | 50.13699 | | Naphthalene #1 |
| 10.974 | BB | 1437.33740 | 3.42055e-2 | 49.16489 | | Acenaphthylene #2 |
| 11.923 | BB | 3540.73169 | 1.39514e-2 | 49.39822 | | 1-Methylnaphthalene #3 |
| 12.497 | BB | 4096.85840 | 1.21250e-2 | 49.67444 | | 2-Methylnaphthalene #4 |
| 12.976 | BB | 2174.84375 | 2.26608e-2 | 49.28364 | | Acenaphthene #5 |
| 13.627 | BB | 2835.69336 | 1.74042e-2 | 49.35301 | | Fluorene #6 |
| 15.007 | BB | 2824.41431 | 1.74341e-2 | 49.24108 | | Phenanthrene #7 |
| 16.405 | BBA | 4625.47705 | 1.08074e-2 | 49.98934 | | Anthracene #8 |
| 17.780 | BB | 235.31152 | 2.08573e-2 | 4.90797 | | Fluoranthene #9 |
| 18.782 | BBA | 444.82697 | 1.10331e-2 | 4.90780 | | Pyrene #10 |
| 21.107 | BBA | 742.32825 | 6.65827e-2 | 49.42620 | | p-Terphenyl d14 #11* |
| 22.419 | BBA | 231.56067 | 2.11516e-2 | 4.89788 | | Benzo(a)anthracene #12 |
| 23.282 | BBA | 322.17139 | 1.52249e-2 | 4.90503 | | Chrysene #13 |
| 25.996 | PBA | 241.35190 | 2.02995e-2 | 4.89931 | | Benzo(b)fluoranthene #14 |
| 27.409 | BB | 104.96660 | 2.32641e-2 | 2.44196 | | Benzo(k)fluoranthene #15 |
| 28.503 | BB | 185.12453 | 2.63143e-2 | 4.87141 | | Benzo(a)pyrene #16 |
| 30.351 | BB | 49.22962 | 9.71795e-2 | 4.78411 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.179 | BB | 89.16454 | 5.50699e-2 | 4.91028 | | Benzo(g,h,i)perylene #18 |
| 32.143 | BB | 248.71965 | 1.96407e-2 | 4.88503 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 492.07859 | | |

Results obtained with enhanced integrator!

*** End of Report ***

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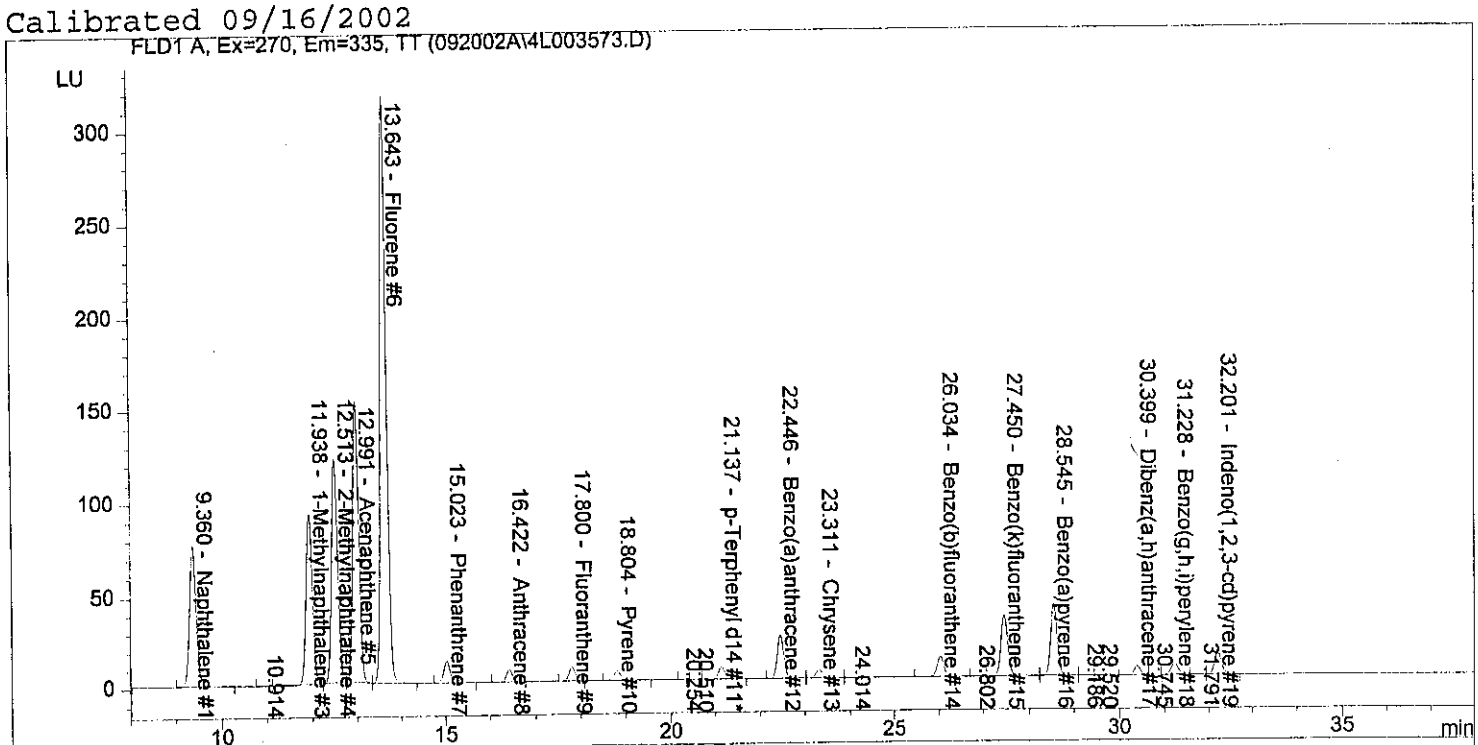
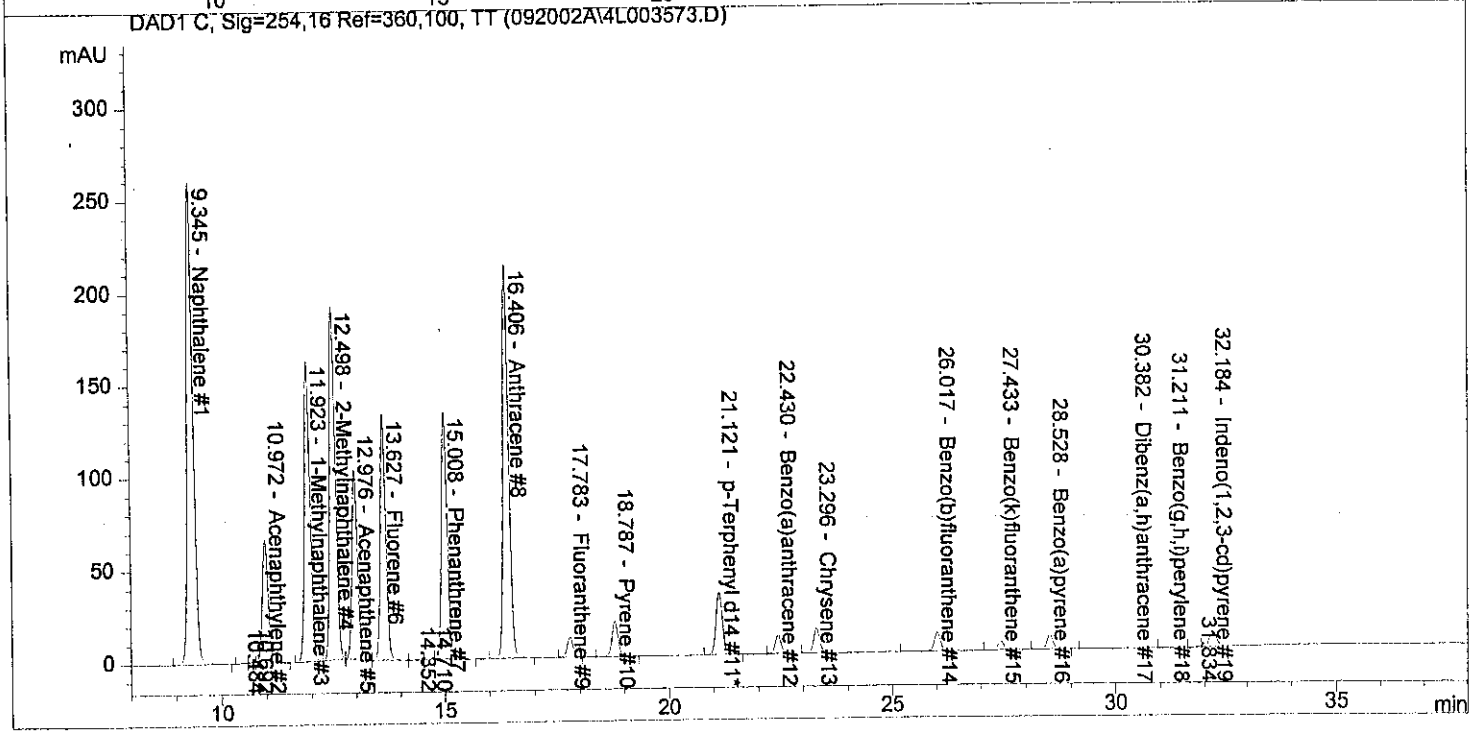
Injection Date : 9/20/2002 7:24:36 PM
Sample Name : WG125711-04 STD4
Acq. Operator : RDC

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 7:23:57 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:38:06 PM
(modified after loading)

Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:38:03 PM
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 | BBA | 783.70270 | 2.58288e-2 | 20.24208 | | Naphthalene #1 |
| 11.938 | BB | 890.99243 | 2.26626e-2 | 20.19220 | | 1-Methylnaphthalene #3 |
| 12.513 | BB | 1155.66101 | 1.76013e-2 | 20.34109 | | 2-Methylnaphthalene #4 |
| 12.991 | BB | 1456.78040 | 1.40178e-2 | 20.42083 | | Acenaphthene #5 |
| 13.643 | BBA | 3039.59375 | 6.73982e-3 | 20.48632 | | Fluorene #6 |
| 15.023 | BBA | 116.89686 | 1.71196e-1 | 20.01226 | | Phenanthrene #7 |
| 16.422 | BBA | 66.18985 | 3.06109e-1 | 20.26128 | | Anthracene #8 |
| 17.800 | PB | 78.17149 | 2.57240e-2 | 2.01088 | | Fluoranthene #9 |
| 18.804 | BBA | 54.85559 | 3.66865e-2 | 2.01246 | | Pyrene #10 |
| 21.137 | BB | 66.96288 | 3.04531e-1 | 20.39226 | | p-Terphenyl d14 #11* |
| 22.446 | BB | 247.33057 | 8.12807e-3 | 2.01032 | | Benzo(a)anthracene #12 |
| 23.311 | BB | 50.90138 | 3.96364e-2 | 2.01755 | | Chrysene #13 |
| 26.034 | BB | 117.52394 | 1.71551e-2 | 2.01614 | | Benzo(b)fluoranthene #14 |
| 27.450 | BB | 354.43918 | 2.86588e-3 | 1.01578 | | Benzo(k)fluoranthene #15 |
| 28.545 | BB | 416.25037 | 4.79130e-3 | 1.99438 | | Benzo(a)pyrene #16 |
| 30.399 | BB | 49.56461 | 4.01537e-2 | 1.99020 | | Dibenz(a,h)anthracene #17 |
| 31.228 | BB | 74.49189 | 2.64865e-2 | 1.97303 | | Benzo(g,h,i)perylene #18 |
| 32.201 | BB | 137.54715 | 1.46296e-2 | 2.01226 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 181.40131 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.345 | PBA | 2466.37598 | 8.38872e-3 | 20.68973 | | Naphthalene #1 |
| 10.972 | BBA | 588.70093 | 3.43944e-2 | 20.24799 | | Acenaphthylene #2 |
| 11.923 | PB | 1455.42712 | 1.39932e-2 | 20.36608 | | 1-Methylnaphthalene #3 |
| 12.498 | BB | 1689.06653 | 1.21232e-2 | 20.47690 | | 2-Methylnaphthalene #4 |
| 12.976 | BB | 891.23303 | 2.27605e-2 | 20.28489 | | Acenaphthene #5 |
| 13.627 | BB | 1164.00928 | 1.74694e-2 | 20.33453 | | Fluorene #6 |
| 15.008 | BBA | 1160.96094 | 1.74983e-2 | 20.31487 | | Phenanthrene #7 |
| 16.406 | PBA | 1898.27124 | 1.07814e-2 | 20.46599 | | Anthracene #8 |
| 17.783 | PB | 96.07294 | 2.10154e-2 | 2.01901 | | Fluoranthene #9 |
| 18.787 | BBA | 181.36873 | 1.11283e-2 | 2.01832 | | Pyrene #10 |
| 21.121 | PBA | 303.50552 | 6.70109e-2 | 20.33818 | | p-Terphenyl d14 #11* |
| 22.430 | BBA | 94.19716 | 2.13331e-2 | 2.00952 | | Benzo(a)anthracene #12 |
| 23.296 | BBA | 131.21184 | 1.53545e-2 | 2.01469 | | Chrysene #13 |
| 26.017 | PBA | 98.69814 | 2.04860e-2 | 2.02193 | | Benzo(b)fluoranthene #14 |
| 27.433 | BB | 43.10554 | 2.33887e-2 | 1.00818 | | Benzo(k)fluoranthene #15 |
| 28.528 | BBA | 74.54464 | 2.66811e-2 | 1.98893 | | Benzo(a)pyrene #16 |
| 30.382 | BB | 20.66441 | 9.04372e-2 | 1.86883 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.211 | BB | 35.98459 | 5.55109e-2 | 1.99754 | | Benzo(g,h,i)perylene #18 |
| 32.184 | BB | 99.87663 | 1.99387e-2 | 1.99141 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 202.45751

Results obtained with enhanced integrator!

*** End of Report ***

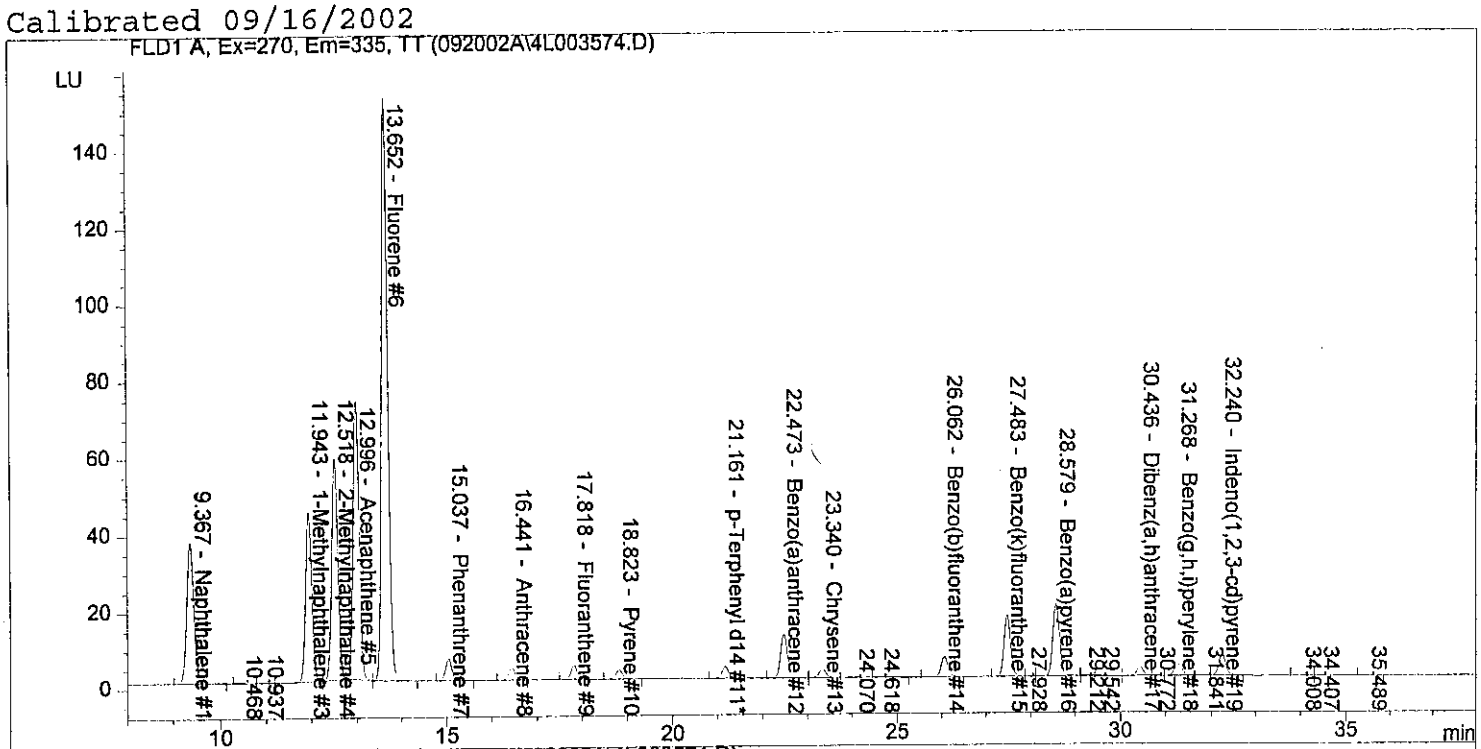
==========

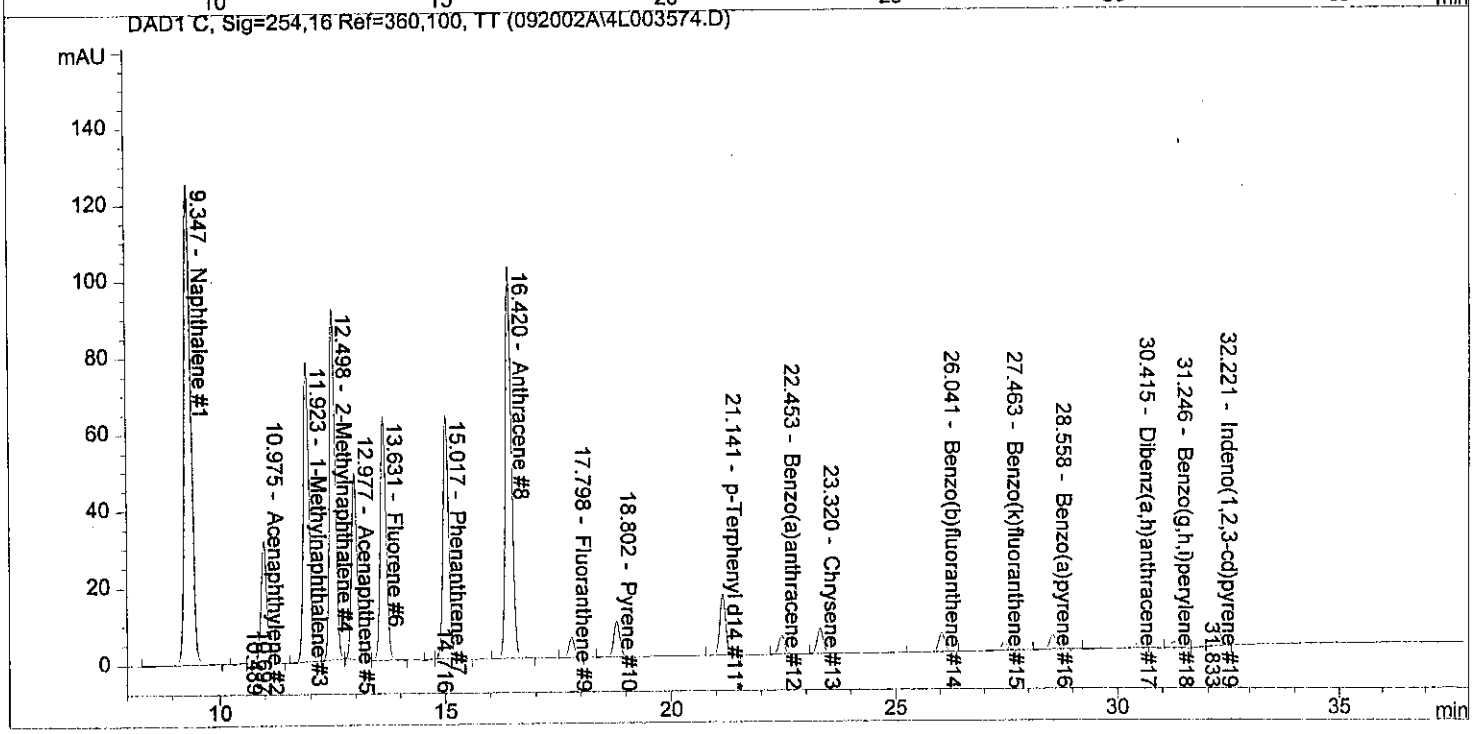
Injection Date : 9/20/2002 8:21:15 PM
Sample Name : WG125711-05 STD3
Acq. Operator : RDC

Seq. Line : 6
Vial : 6
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 8:20:36 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:38:57 PM
(modified after loading)

Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:38:54 PM
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 |
|---|---|---|---|---|---|---|
| 9.367 | BB | 374.62244 | 2.62820e-2 | 9.84581 | | Naphthalene #1 |
| 11.943 | BB | 426.31619 | 2.30538e-2 | 9.82819 | | 1-Methylnaphthalene #3 |
| 12.518 | BB | 553.23322 | 1.78142e-2 | 9.85541 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 697.65833 | 1.41348e-2 | 9.86128 | | Acenaphthene #5 |
| 13.652 | BBA | 1462.86792 | 6.75125e-3 | 9.87618 | | Fluorene #6 |
| 15.037 | BBA | 55.65540 | 1.75480e-1 | 9.76643 | | Phenanthrene #7 |
| 16.441 | PBA | 31.83507 | 3.07540e-1 | 9.79055 | | Anthracene #8 |
| 17.818 | BB | 37.53587 | 2.61954e-2 | 9.83267e-1 | | Fluoranthene #9 |
| 18.823 | BBA | 25.55995 | 3.80850e-2 | 9.73451e-1 | | Pyrene #10 |
| 21.161 | BB | 31.67122 | 3.08813e-1 | 9.78050 | | p-Terphenyl d14 #11* |
| 22.473 | BB | 118.36651 | 8.32061e-3 | 9.84882e-1 | | Benzo(a)anthracene #12 |
| 23.340 | BB | 24.32562 | 4.06214e-2 | 9.88140e-1 | | Chrysene #13 |
| 26.062 | BBA | 56.03418 | 1.75198e-2 | 9.81709e-1 | | Benzo(b)fluoranthene #14 |
| 27.483 | PB | 167.50449 | 2.90620e-3 | 4.86802e-1 | | Benzo(k)fluoranthene #15 |
| 28.579 | BB | 196.83517 | 4.93888e-3 | 9.72145e-1 | | Benzo(a)pyrene #16 |
| 30.436 | BB | 23.52898 | 4.14829e-2 | 9.76050e-1 | | Dibenz(a,h)anthracene #17 |
| 31.268 | BB | 35.19607 | 2.76908e-2 | 9.74608e-1 | | Benzo(g,h,i)perylene #18 |
| 32.240 | BB | 65.71149 | 1.49194e-2 | 9.80374e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 87.90579

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.347 | PBA | 1182.50085 | 8.34292e-3 | 9.86551 | | Naphthalene #1 |
| 10.975 | BBA | 282.83063 | 3.48306e-2 | 9.85117 | | Acenaphthylene #2 |
| 11.923 | PB | 697.62793 | 1.41092e-2 | 9.84296 | | 1-Methylnaphthalene #3 |
| 12.498 | BB | 811.48065 | 1.21518e-2 | 9.86095 | | 2-Methylnaphthalene #4 |
| 12.977 | BB | 427.28159 | 2.30106e-2 | 9.83200 | | Acenaphthene #5 |
| 13.631 | BBA | 558.21259 | 1.76370e-2 | 9.84518 | | Fluorene #6 |
| 15.017 | BBA | 557.24799 | 1.76660e-2 | 9.84432 | | Phenanthrene #7 |
| 16.420 | PBA | 911.06781 | 1.07743e-2 | 9.81609 | | Anthracene #8 |
| 17.798 | PB | 45.92867 | 2.13622e-2 | 9.81136e-1 | | Fluoranthene #9 |
| 18.802 | BBA | 86.62556 | 1.13291e-2 | 9.81386e-1 | | Pyrene #10 |
| 21.141 | PBA | 144.49483 | 6.78088e-2 | 9.79802 | | p-Terphenyl d14 #11* |
| 22.453 | PBA | 44.75309 | 2.17662e-2 | 9.74105e-1 | | Benzo(a)anthracene #12 |
| 23.320 | BBA | 62.44849 | 1.56473e-2 | 9.77150e-1 | | Chrysene #13 |
| 26.041 | PBA | 47.48998 | 2.07801e-2 | 9.86845e-1 | | Benzo(b)fluoranthene #14 |
| 27.463 | BBA | 20.09780 | 2.38100e-2 | 4.78528e-1 | | Benzo(k)fluoranthene #15 |
| 28.558 | BBA | 35.49910 | 2.74628e-2 | 9.74905e-1 | | Benzo(a)pyrene #16 |
| 30.415 | BBA | 10.95264 | 8.43966e-2 | 9.24366e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.246 | BB | 17.30395 | 5.64213e-2 | 9.76311e-1 | | Benzo(g,h,i)perylene #18 |
| 32.221 | BB | 47.15022 | 2.05689e-2 | 9.69826e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 97.78075

Results obtained with enhanced integrator!

*** End of Report ***

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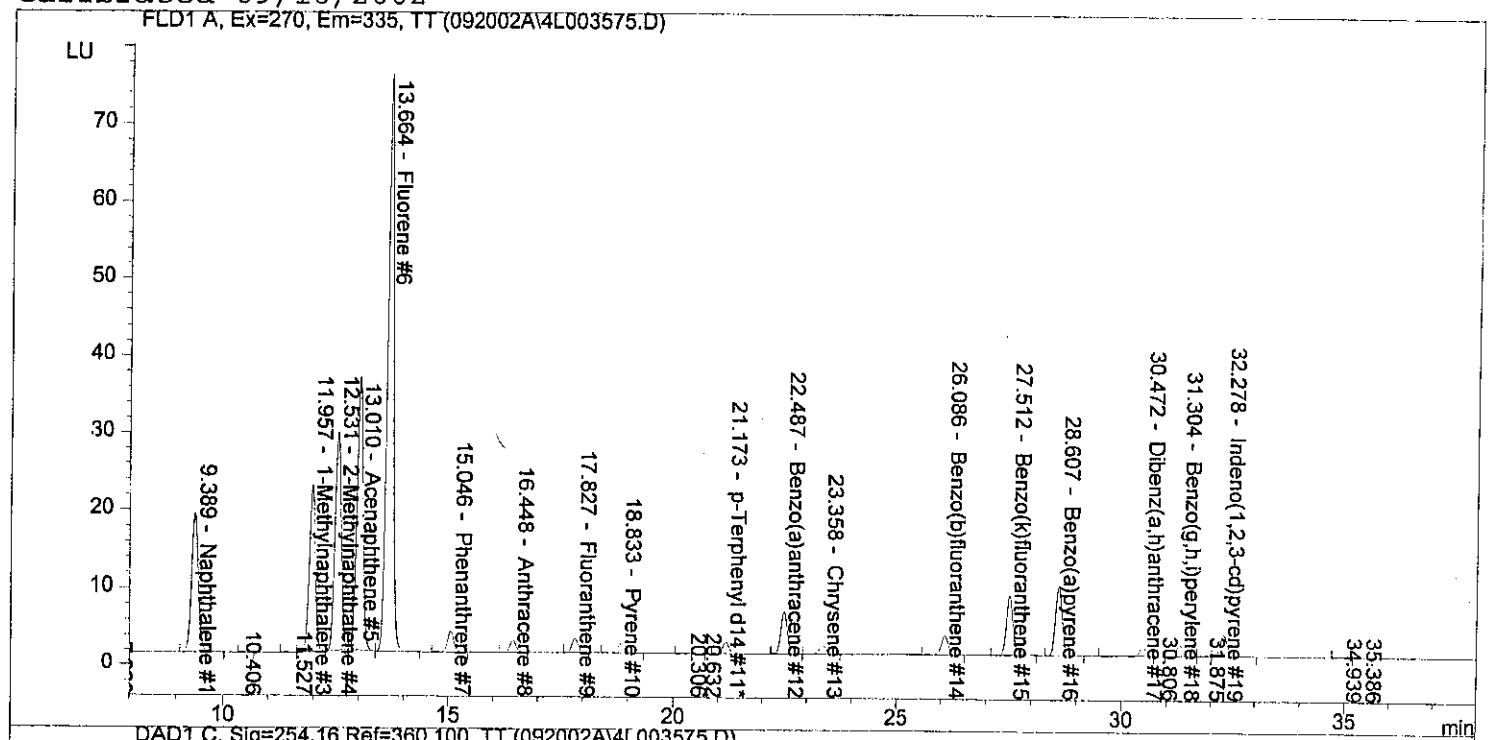
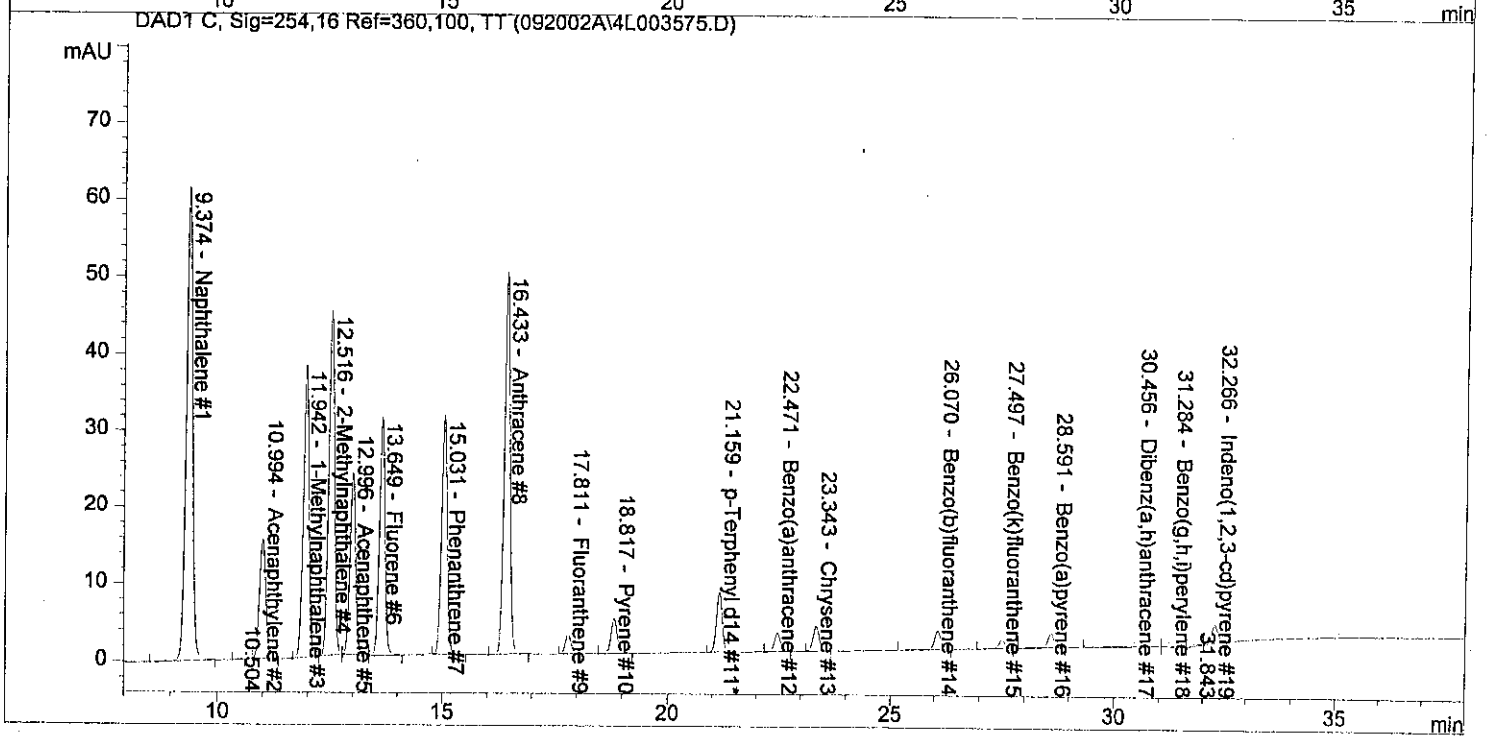
| | | | |
|---|---|---|---|
| Injection Date | : 9/20/2002 9:17:54 PM | Seq. Line | : 7 |
| Sample Name | : WG125711-06 STD2 | Vial | : 7 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 9:17:15 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:40:02 PM
(modified after loading)
Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:39:57 PM
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 | BB | 181.29584 | 2.72735e-2 | 4.94456 | | Naphthalene #1 |
| 11.957 | BB | 208.15732 | 2.38580e-2 | 4.96621 | | 1-Methylnaphthalene #3 |
| 12.531 | BB | 268.35944 | 1.82886e-2 | 4.90792 | | 2-Methylnaphthalene #4 |
| 13.010 | BB | 338.71442 | 1.44060e-2 | 4.87953 | | Acenaphthene #5 |
| 13.664 | BBA | 713.18817 | 6.79019e-3 | 4.84268 | | Fluorene #6 |
| 15.046 | PBA | 26.72914 | 1.84772e-1 | 4.93879 | | Phenanthrene #7 |
| 16.448 | BB | 15.51351 | 3.11813e-1 | 4.83731 | | Anthracene #8 |
| 17.827 | BB | 18.38673 | 2.70296e-2 | 4.96986e-1 | | Fluoranthene #9 |
| 18.833 | BBA | 12.35667 | 4.08645e-2 | 5.04949e-1 | | Pyrene #10 |
| 21.173 | BB | 15.59836 | 3.17279e-1 | 4.94903 | | p-Terphenyl d14 #11* |
| 22.487 | BB | 56.93108 | 8.73342e-3 | 4.97203e-1 | | Benzo(a)anthracene #12 |
| 23.358 | BB | 12.35089 | 4.19724e-2 | 5.18396e-1 | | Chrysene #13 |
| 26.086 | BBA | 27.46255 | 1.82416e-2 | 5.00962e-1 | | Benzo(b)fluoranthene #14 |
| 27.512 | BBA | 81.89045 | 2.98589e-3 | 2.44516e-1 | | Benzo(k)fluoranthene #15 |
| 28.607 | PBA | 94.83067 | 5.25798e-3 | 4.98618e-1 | | Benzo(a)pyrene #16 |
| 30.472 | PB | 10.82063 | 4.48692e-2 | 4.85513e-1 | | Dibenz(a,h)anthracene #17 |
| 31.304 | BB | 16.79211 | 3.02670e-2 | 5.08246e-1 | | Benzo(g,h,i)perylene #18 |
| 32.278 | BBA | 32.39291 | 1.54693e-2 | 5.01096e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 44.02253

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.374 | PBA | 575.15820 | 8.25842e-3 | 4.74990 | | Naphthalene #1 |
| 10.994 | BBA | 137.48097 | 3.58358e-2 | 4.92674 | | Acenaphthylene #2 |
| 11.942 | PB | 339.69986 | 1.43758e-2 | 4.88346 | | 1-Methylnaphthalene #3 |
| 12.516 | BB | 394.82016 | 1.22443e-2 | 4.83428 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 207.93272 | 2.35786e-2 | 4.90277 | | Acenaphthene #5 |
| 13.649 | BBA | 271.81696 | 1.80166e-2 | 4.89722 | | Fluorene #6 |
| 15.031 | BBA | 271.18774 | 1.80540e-2 | 4.89602 | | Phenanthrene #7 |
| 16.433 | PBA | 442.03864 | 1.08016e-2 | 4.77470 | | Anthracene #8 |
| 17.811 | BBA | 22.06173 | 2.22019e-2 | 4.89811e-1 | | Fluoranthene #9 |
| 18.817 | PBA | 41.80117 | 1.17603e-2 | 4.91593e-1 | | Pyrene #10 |
| 21.159 | BBA | 69.45084 | 6.98266e-2 | 4.84952 | | p-Terphenyl d14 #11* |
| 22.471 | BBA | 21.93929 | 2.26293e-2 | 4.96471e-1 | | Benzo(a)anthracene #12 |
| 23.343 | BBA | 30.40728 | 1.62715e-2 | 4.94773e-1 | | Chrysene #13 |
| 26.070 | PBA | 22.81914 | 2.14967e-2 | 4.90536e-1 | | Benzo(b)fluoranthene #14 |
| 27.497 | BBA | 10.21462 | 2.46435e-2 | 2.51724e-1 | | Benzo(k)fluoranthene #15 |
| 28.591 | BBA | 16.64720 | 2.94709e-2 | 4.90608e-1 | | Benzo(a)pyrene #16 |
| 30.456 | PB | 9.72626 | 8.41912e-2 | 8.18865e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.284 | BB | 7.93134 | 5.87829e-2 | 4.66227e-1 | | Benzo(g,h,i)perylene #18 |
| 32.266 | BB | 22.99526 | 2.18271e-2 | 5.01920e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 48.70713

Results obtained with enhanced integrator!

*** End of Report ***

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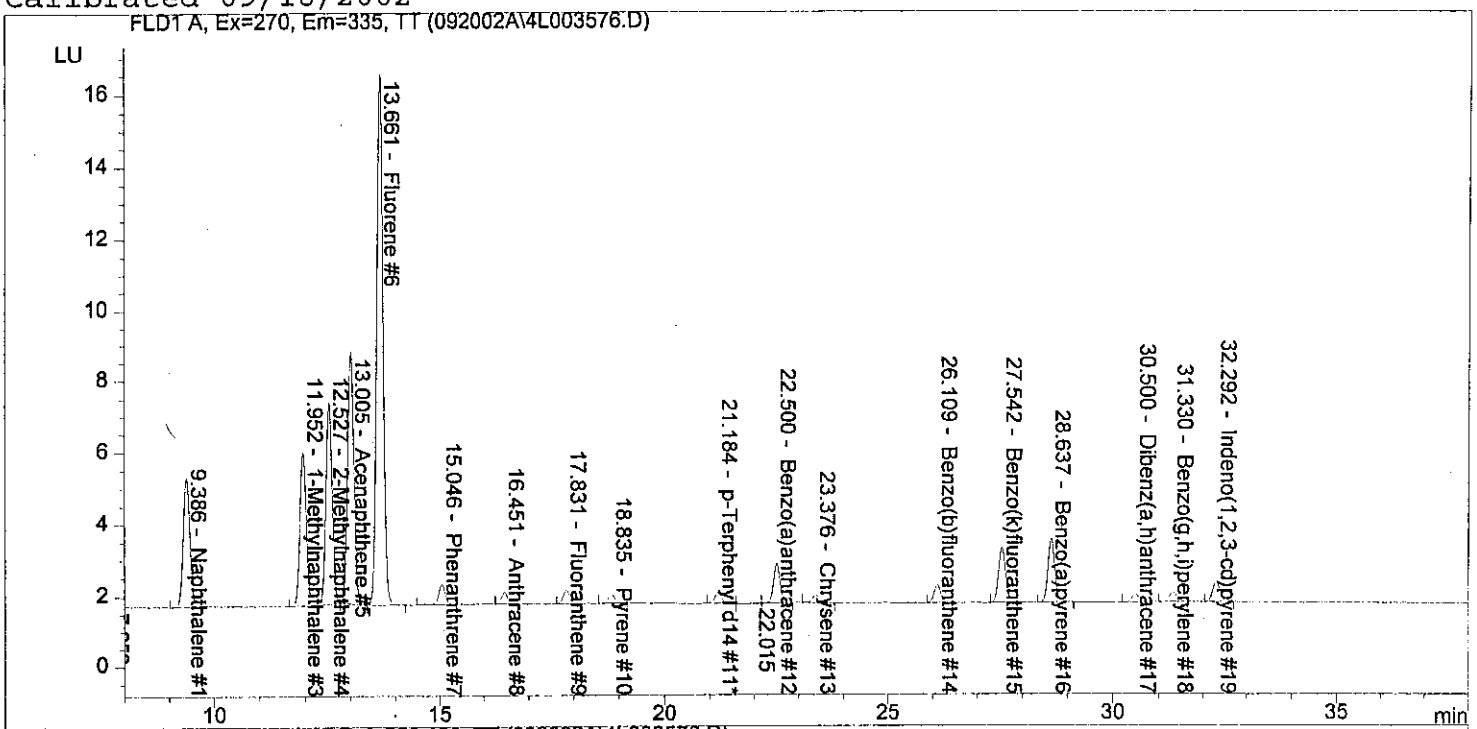
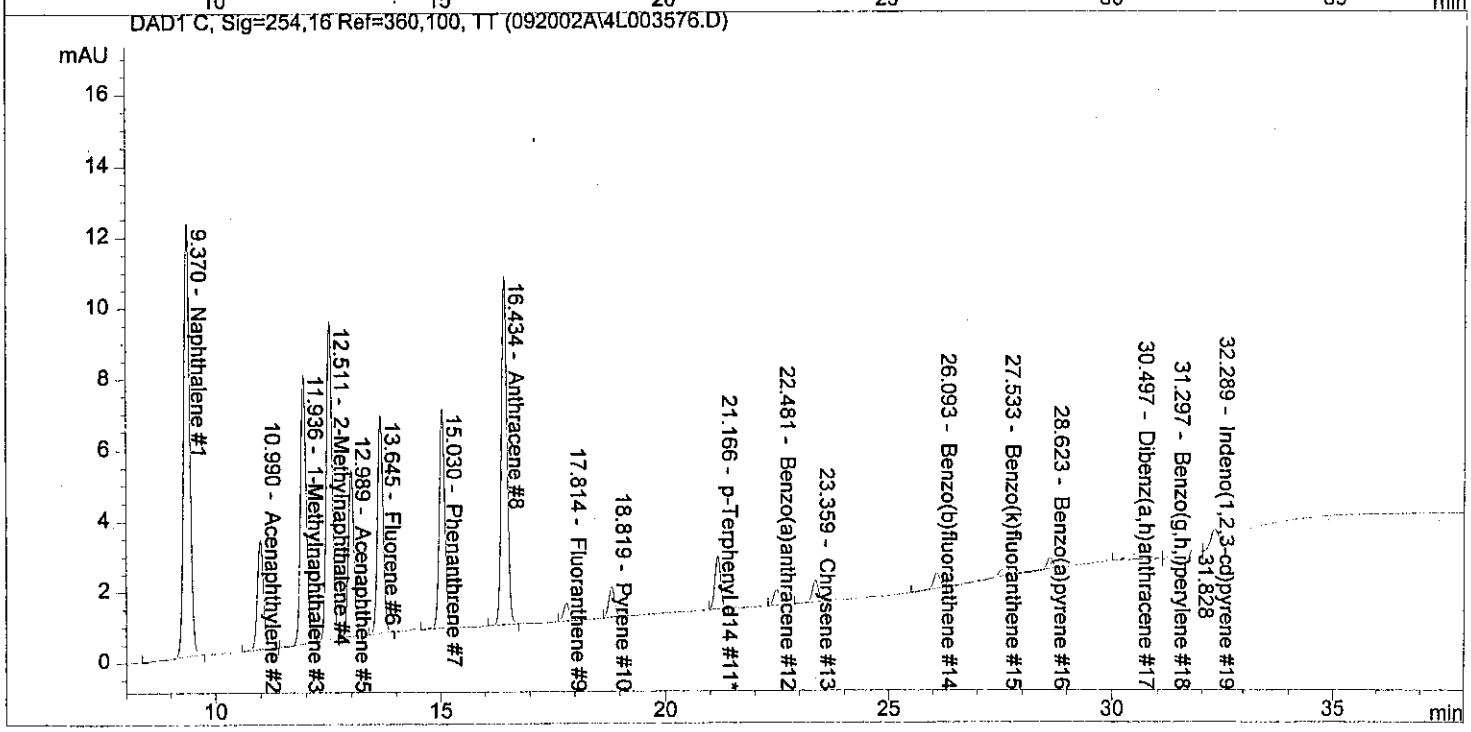
| | | | |
|---|---|---|---|
| Injection Date | : 9/20/2002 10:14:31 PM | Seq. Line | : 8 |
| Sample Name | : WG125711-07 STD1 | Vial | : 8 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 10:13:55 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:40:34 PM
(modified after loading)
Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:40:30 PM
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 |
|---|---|---|---|---|---|---|
| 9.386 | BB | 36.15768 | 3.50566e-2 | 1.26757 | | Naphthalene #1 |
| 11.952 | PB | 41.36844 | 3.03521e-2 | 1.25562 | | 1-Methylnaphthalene #3 |
| 12.527 | BB | 53.71581 | 2.19466e-2 | 1.17888 | | 2-Methylnaphthalene #4 |
| 13.005 | BB | 67.56156 | 1.64940e-2 | 1.11436 | | Acenaphthene #5 |
| 13.661 | BBA | 142.12080 | 7.02750e-3 | 9.98755e-1 | | Fluorene #6 |
| 15.046 | BBA | 5.95919 | 2.48677e-1 | 1.48191 | | Phenanthrene #7 |
| 16.451 | BBA | 3.09896 | 3.40359e-1 | 1.05476 | | Anthracene #8 |
| 17.831 | BBA | 3.68034 | 3.34382e-2 | 1.23064e-1 | | Fluoranthene #9 |
| 18.835 | BBA | 2.49880 | 6.33941e-2 | 1.58409e-1 | | Pyrene #10 |
| 21.184 | BB | 3.44864 | 3.76720e-1 | 1.29917 | | p-Terphenyl d14 #11* |
| 22.500 | BB | 11.41377 | 1.19778e-2 | 1.36712e-1 | | Benzo(a)anthracene #12 |
| 23.376 | BB | 2.46762 | 5.45322e-2 | 1.34565e-1 | | Chrysene #13 |
| 26.109 | BBA | 5.21623 | 2.44641e-2 | 1.27611e-1 | | Benzo(b)fluoranthene #14 |
| 27.542 | PBA | 16.02236 | 3.62267e-3 | 5.80437e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | PBA | 18.70416 | 7.74241e-3 | 1.44815e-1 | | Benzo(a)pyrene #16 |
| 30.500 | BB | 2.30826 | 6.72539e-2 | 1.55240e-1 | | Dibenz(a,h)anthracene #17 |
| 31.330 | BBA | 3.25644 | 5.13604e-2 | 1.67252e-1 | | Benzo(g,h,i)perylene #18 |
| 32.292 | BBA | 6.42581 | 1.98613e-2 | 1.27625e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 10.98436

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.370 | PB | 113.50661 | 7.53541e-3 | 8.55319e-1 | | Naphthalene #1 |
| 10.990 | BBA | 28.32826 | 4.23957e-2 | 1.20100 | | Acenaphthylene #2 |
| 11.936 | BB | 67.43660 | 1.63011e-2 | 1.09929 | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 78.89049 | 1.27845e-2 | 1.00857 | | 2-Methylnaphthalene #4 |
| 12.989 | BBA | 41.25003 | 2.77504e-2 | 1.14471 | | Acenaphthene #5 |
| 13.645 | PBA | 53.42283 | 2.08101e-2 | 1.11173 | | Fluorene #6 |
| 15.030 | BBA | 54.35011 | 2.09804e-2 | 1.14029 | | Phenanthrene #7 |
| 16.434 | PBA | 86.66844 | 1.08171e-2 | 9.37497e-1 | | Anthracene #8 |
| 17.814 | BBA | 4.45056 | 2.79864e-2 | 1.24555e-1 | | Fluoranthene #9 |
| 18.819 | BBA | 8.04064 | 1.51399e-2 | 1.21734e-1 | | Pyrene #10 |
| 21.166 | BBA | 13.68986 | 8.46963e-2 | 1.15948 | | p-Terphenyl d14 #11* |
| 22.481 | BBA | 4.41380 | 2.92180e-2 | 1.28962e-1 | | Benzo(a)anthracene #12 |
| 23.359 | BBA | 6.12014 | 2.07907e-2 | 1.27242e-1 | | Chrysene #13 |
| 26.093 | PB | 4.46468 | 2.74413e-2 | 1.22517e-1 | | Benzo(b)fluoranthene #14 |
| 27.533 | BB | 1.34447 | 3.84531e-2 | 5.16991e-2 | | Benzo(k)fluoranthene #15 |
| 28.623 | BB | 2.62369 | 4.79255e-2 | 1.25741e-1 | | Benzo(a)pyrene #16 |
| 30.497 | BB | 4.03842 | 5.46366e-2 | 2.20645e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | BB | 1.20689 | 9.30374e-2 | 1.12286e-1 | | Benzo(g,h,i)perylene #18 |
| 32.289 | BB | 4.03389 | 3.30112e-2 | 1.33164e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 10.92643

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

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Data File C:\HPCHEM\2\DATA\092002A\4L003577.D Sample Name: WG125711-08 ALT HPLC4 9/21/2002 3:43:44 PM

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

==========

Injection Date : 9/20/2002 11:11:11 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.385 | 20.0 | 18.926 | -5.4 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.738 | -6.3 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 18.427 | -7.9 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.647 | -1.8 |
| Fluorene #6 | 13.660 | 20.0 | 19.693 | -1.5 |
| Phenanthrene #7 | 15.045 | 20.0 | 18.674 | -6.6 |
| Anthracene #8 | 16.447 | 20.0 | 20.326 | 1.6 |
| Fluoranthene #9 | 17.827 | 2.0 | 1.962 | -1.9 |
| Pyrene #10 | 18.833 | 2.0 | 1.737 | -13.1 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.493 | 2.0 | 1.784 | -10.8 |
| Chrysene #13 | 23.365 | 2.0 | 1.845 | -7.7 |
| Benzo(b)fluoranthene #14 | 26.100 | 2.0 | 1.927 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.532 | 1.0 | 0.868 | -13.2 |
| Benzo(a)pyrene #16 | 28.630 | 2.0 | 1.961 | -1.9 |
| Dibenz(a,h)anthracene #1 | 30.502 | 2.0 | 2.097 | 4.9 |
| Benzo(g,h,i)perylene #18 | 31.334 | 2.0 | 1.841 | -8.0 |
| Indeno(1,2,3-cd)pyrene # | 32.307 | 2.0 | 1.875 | -6.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.366 | 20.0 | 19.710 | -1.4 |
| Acenaphthylene #2 | 10.988 | 20.0 | 18.672 | -6.6 |
| 1-Methylnaphthalene #3 | 11.934 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.508 | 20.0 | 18.839 | -5.8 |
| Acenaphthene #5 | 12.987 | 20.0 | 19.757 | -1.2 |
| Fluorene #6 | 13.641 | 20.0 | 19.490 | -2.6 |
| Phenanthrene #7 | 15.025 | 20.0 | 19.121 | -4.4 |
| Anthracene #8 | 16.428 | 20.0 | 20.325 | 1.6 |
| Fluoranthene #9 | 17.807 | 2.0 | 1.915 | -4.3 |
| Pyrene #10 | 18.812 | 2.0 | 1.887 | -5.7 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.473 | 2.0 | 1.827 | -8.7 |
| Chrysene #13 | 23.346 | 2.0 | 1.899 | -5.1 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.924 | -3.8 |
| Benzo(k)fluoranthene #15 | 27.512 | 1.0 | 0.882 | -11.8 |
| Benzo(a)pyrene #16 | 28.610 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.481 | 2.0 | 2.086 | 4.3 |
| Benzo(g,h,i)perylene #18 | 31.310 | 2.0 | 1.959 | -2.1 |
| Indeno(1,2,3-cd)pyrene # | 32.291 | 2.0 | 1.885 | -5.7 |

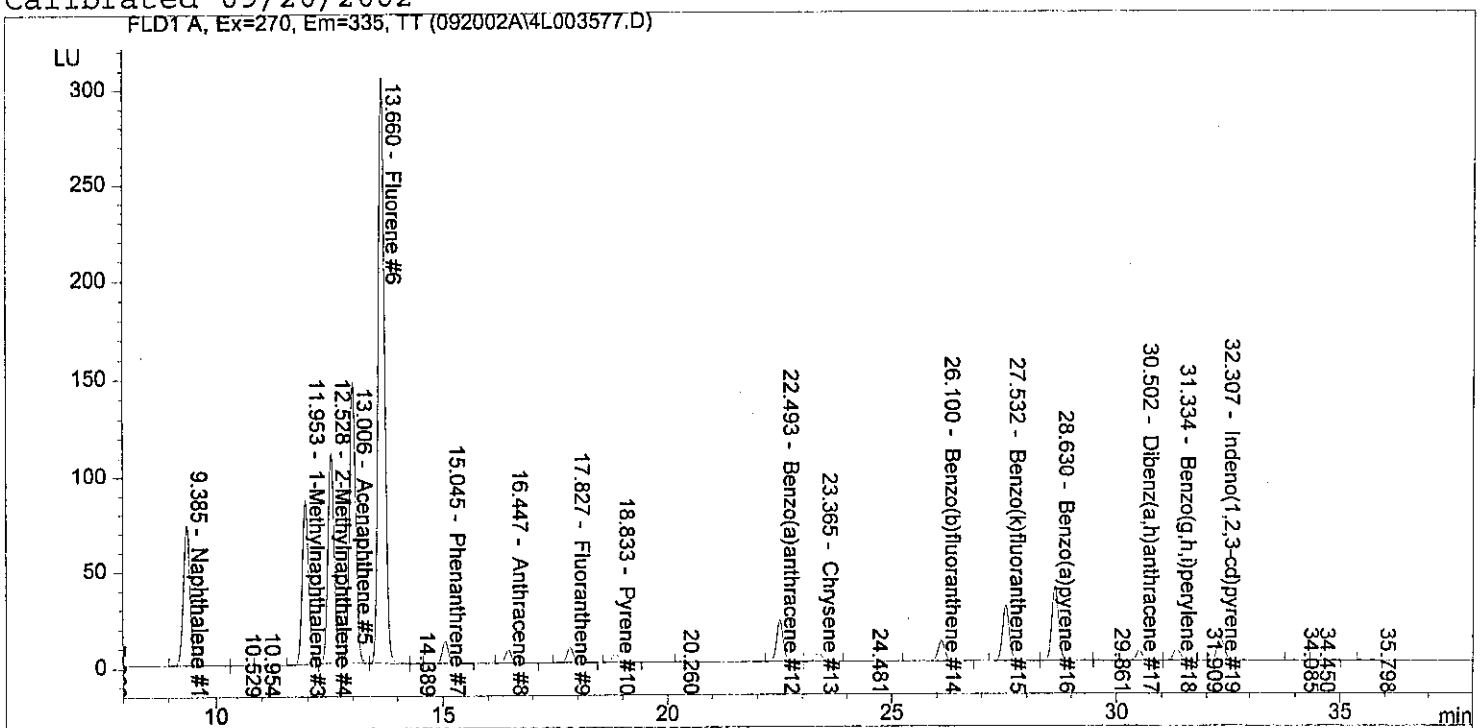
# = Failed 15.0% Criteria

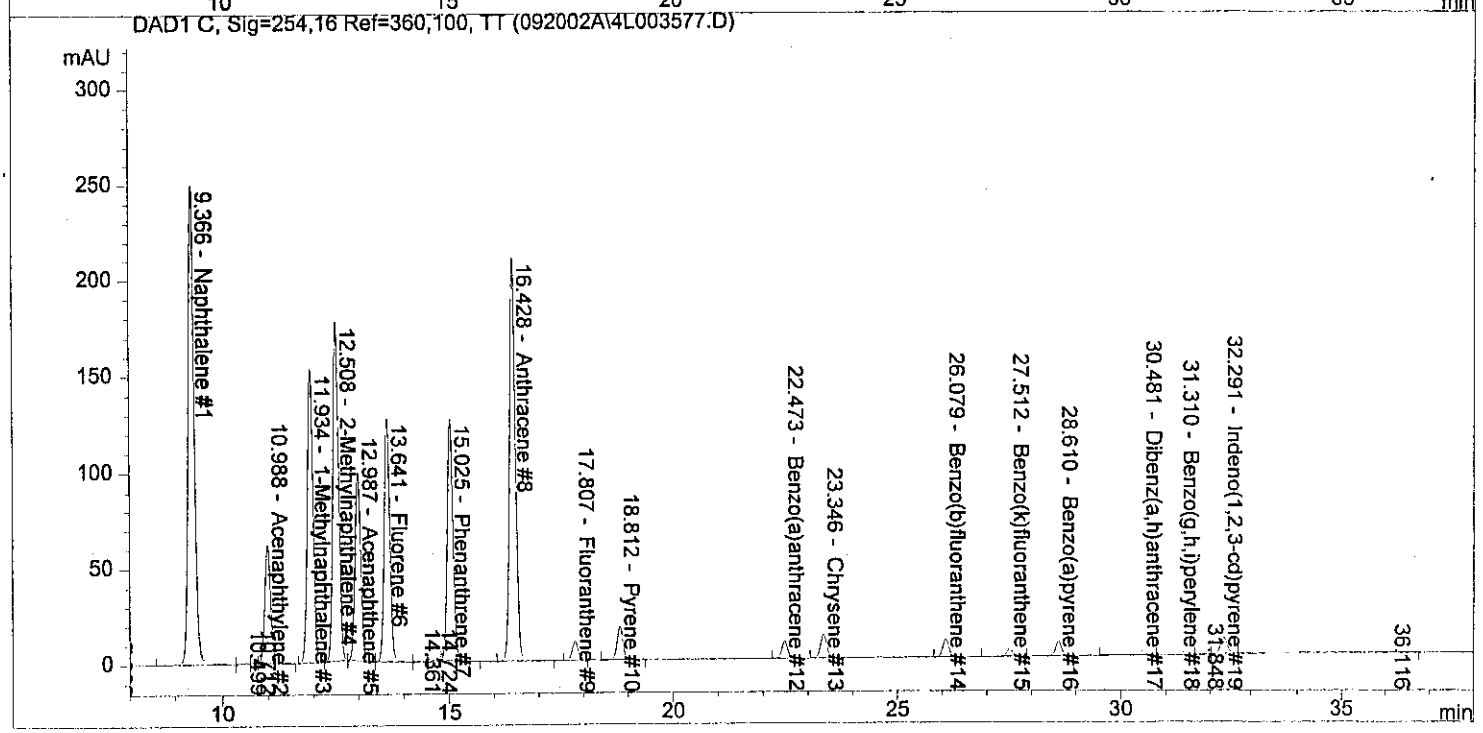
==========

Injection Date : 9/20/2002 11:11:11 PM
Sample Name : WG125711-08 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 : 9/20/2002 11:10:33 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.385 | BB | 734.67871 | 2.57606e-2 | 18.92573 | | Naphthalene #1 |
| 11.953 | BB | 828.67181 | 2.26121e-2 | 18.73804 | | 1-Methylnaphthalene #3 |
| 12.528 | BB | 1048.75305 | 1.75705e-2 | 18.42707 | | 2-Methylnaphthalene #4 |
| 13.006 | BB | 1403.95764 | 1.39941e-2 | 19.64706 | | Acenaphthene #5 |
| 13.660 | BB | 2920.24219 | 6.74364e-3 | 19.69307 | | Fluorene #6 |
| 15.045 | BBA | 109.12592 | 1.71127e-1 | 18.67436 | | Phenanthrene #7 |
| 16.447 | PBA | 66.24543 | 3.06833e-1 | 20.32629 | | Anthracene #8 |
| 17.827 | BBA | 76.07307 | 2.57906e-2 | 1.96197 | | Fluoranthene #9 |
| 18.833 | BBA | 47.70423 | 3.64211e-2 | 1.73744 | | Pyrene #10 |
| 21.184 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.493 | BB | 219.61440 | 8.12212e-3 | 1.78373 | | Benzo(a)anthracene #12 |
| 23.365 | BBA | 46.72252 | 3.94941e-2 | 1.84527 | | Chrysene #13 |
| 26.100 | BBA | 112.43198 | 1.71373e-2 | 1.92678 | | Benzo(b)fluoranthene #14 |
| 27.532 | BB | 301.98886 | 2.87263e-3 | 8.67501e-1 | | Benzo(k)fluoranthene #15 |
| 28.630 | BB | 409.46246 | 4.79002e-3 | 1.96133 | | Benzo(a)pyrene #16 |
| 30.502 | BB | 52.44392 | 3.99925e-2 | 2.09736 | | Dibenz(a,h)anthracene #17 |
| 31.334 | BB | 69.82450 | 2.63627e-2 | 1.84076 | | Benzo(g,h,i)perylene #18 |
| 32.307 | BB | 127.98020 | 1.46534e-2 | 1.87535 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 152.32913 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.366 | BB | 2349.01074 | 8.39094e-3 | 19.71041 | | Naphthalene #1 |
| 10.988 | BBA | 541.96777 | 3.44527e-2 | 18.67226 | | Acenaphthylene #2 |
| 11.934 | PB | 1364.93091 | 1.40118e-2 | 19.12519 | | 1-Methylnaphthalene #3 |
| 12.508 | BB | 1552.33252 | 1.21361e-2 | 18.83926 | | 2-Methylnaphthalene #4 |
| 12.987 | BB | 866.78979 | 2.27937e-2 | 19.75733 | | Acenaphthene #5 |
| 13.641 | BB | 1114.37952 | 1.74893e-2 | 19.48975 | | Fluorene #6 |
| 15.025 | BBA | 1090.59619 | 1.75326e-2 | 19.12098 | | Phenanthrene #7 |
| 16.428 | PBA | 1880.51184 | 1.08081e-2 | 20.32479 | | Anthracene #8 |
| 17.807 | PB | 90.93193 | 2.10573e-2 | 1.91478 | | Fluoranthene #9 |
| 18.812 | BBA | 169.21359 | 1.11510e-2 | 1.88691 | | Pyrene #10 |
| 21.166 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.473 | BBA | 85.29520 | 2.14187e-2 | 1.82691 | | Benzo(a)anthracene #12 |
| 23.346 | PBA | 123.40289 | 1.53857e-2 | 1.89864 | | Chrysene #13 |
| 26.079 | BBA | 93.91748 | 2.04847e-2 | 1.92387 | | Benzo(b)fluoranthene #14 |
| 27.512 | BBA | 37.30951 | 2.36463e-2 | 8.82230e-1 | | Benzo(k)fluoranthene #15 |
| 28.610 | BBA | 74.55620 | 2.68316e-2 | 2.00047 | | Benzo(a)pyrene #16 |
| 30.481 | PB | 22.30759 | 9.35102e-2 | 2.08599 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.310 | BB | 35.01012 | 5.59525e-2 | 1.95891 | | Benzo(g,h,i)perylene #18 |
| 32.291 | BB | 94.25724 | 2.00000e-2 | 1.88514 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.30381

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\092102\4L003590.D Sample Name: WG125769-02 CCV
HPLC4 9/24/2002 11:10:42 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/22/2002 2:18:29 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.375 | 20.0 | 18.729 | -6.4 |
| 1-Methylnaphthalene #3 | 11.950 | 20.0 | 18.817 | -5.9 |
| 2-Methylnaphthalene #4 | 12.526 | 20.0 | 18.990 | -5.1 |
| Acenaphthene #5 | 13.004 | 20.0 | 19.217 | -3.9 |
| Fluorene #6 | 13.659 | 20.0 | 19.797 | -1.0 |
| Phenanthrene #7 | 15.046 | 20.0 | 18.551 | -7.2 |
| Anthracene #8 | 16.453 | 20.0 | 19.951 | -0.2 |
| Fluoranthene #9 | 17.832 | 2.0 | 1.942 | -2.9 |
| Pyrene #10 | 18.837 | 2.0 | 1.667 | -16.7 # |
| p-Terphenyl d14 #11* | 21.181 | 20.0 | 19.837 | -0.8 |
| Benzo(a)anthracene #12 | 22.499 | 2.0 | 1.849 | -7.5 |
| Chrysene #13 | 23.372 | 2.0 | 1.826 | -8.7 |
| Benzo(b)fluoranthene #14 | 26.101 | 2.0 | 1.926 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.528 | 1.0 | 0.970 | -3.0 |
| Benzo(a)pyrene #16 | 28.622 | 2.0 | 1.863 | -6.9 |
| Dibenz(a,h)anthracene #1 | 30.487 | 2.0 | 1.801 | -10.0 |
| Benzo(g,h,i)perylene #18 | 31.313 | 2.0 | 1.710 | -14.5 |
| Indeno(1,2,3-cd)pyrene # | 32.275 | 2.0 | 1.937 | -3.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

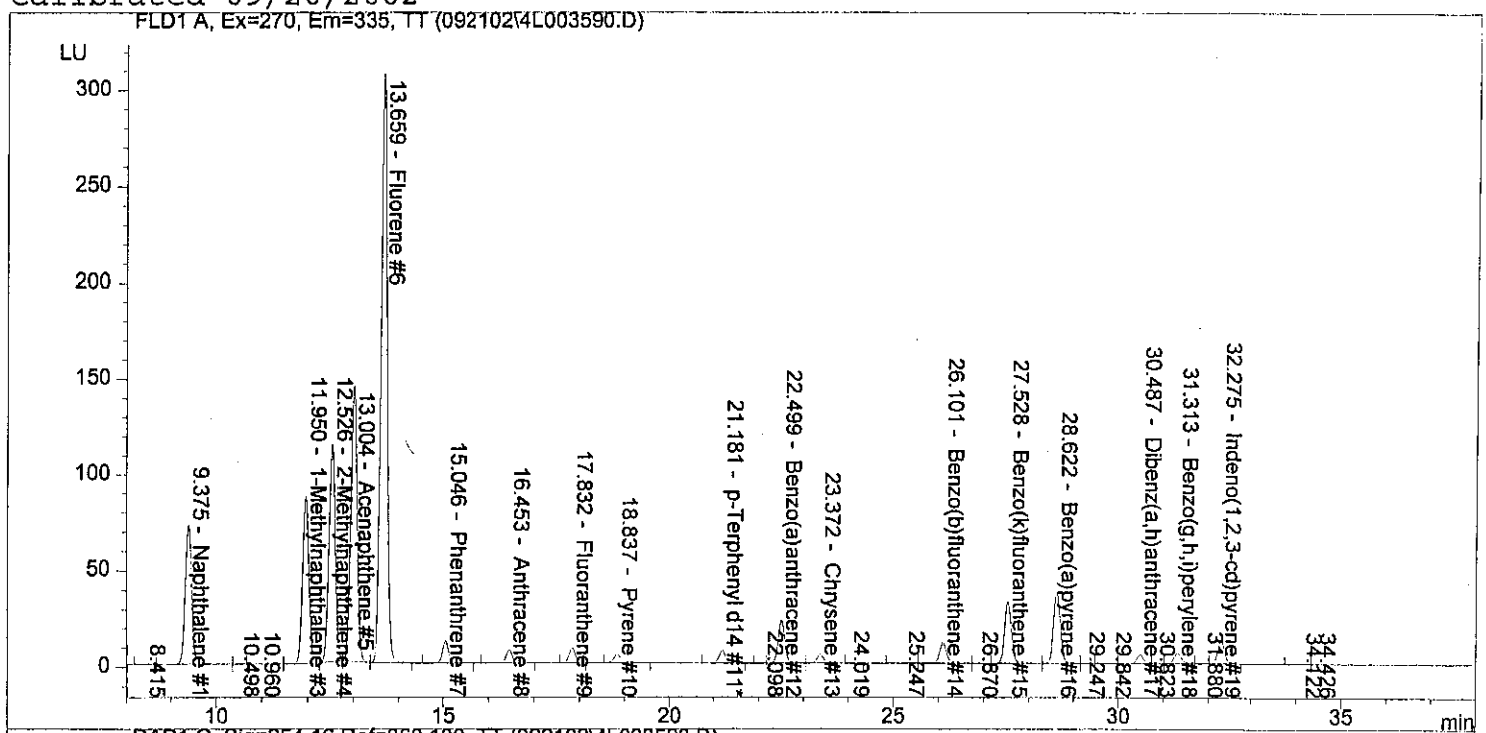
| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.356 | 20.0 | 20.044 | 0.2 |
| Acenaphthylene #2 | 10.984 | 20.0 | 19.651 | -1.7 |
| 1-Methylnaphthalene #3 | 11.931 | 20.0 | 19.763 | -1.2 |
| 2-Methylnaphthalene #4 | 12.507 | 20.0 | 19.866 | -0.7 |
| Acenaphthene #5 | 12.985 | 20.0 | 19.697 | -1.5 |
| Fluorene #6 | 13.640 | 20.0 | 19.705 | -1.5 |
| Phenanthrene #7 | 15.027 | 20.0 | 19.727 | -1.4 |
| Anthracene #8 | 16.433 | 20.0 | 19.956 | -0.2 |
| Fluoranthene #9 | 17.812 | 2.0 | 1.956 | -2.2 |
| Pyrene #10 | 18.816 | 2.0 | 1.960 | -2.0 |
| p-Terphenyl d14 #11* | 21.162 | 20.0 | 19.775 | -1.1 |
| Benzo(a)anthracene #12 | 22.479 | 2.0 | 1.954 | -2.3 |
| Chrysene #13 | 23.353 | 2.0 | 1.951 | -2.4 |
| Benzo(b)fluoranthene #14 | 26.081 | 2.0 | 1.945 | -2.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.601 | 2.0 | 2.004 | 0.2 |
| Dibenz(a,h)anthracene #1 | 30.467 | 2.0 | 1.922 | -3.9 |
| Benzo(g,h,i)perylene #18 | 31.291 | 2.0 | 1.987 | -0.7 |
| Indeno(1,2,3-cd)pyrene # | 32.258 | 2.0 | 1.970 | -1.5 |

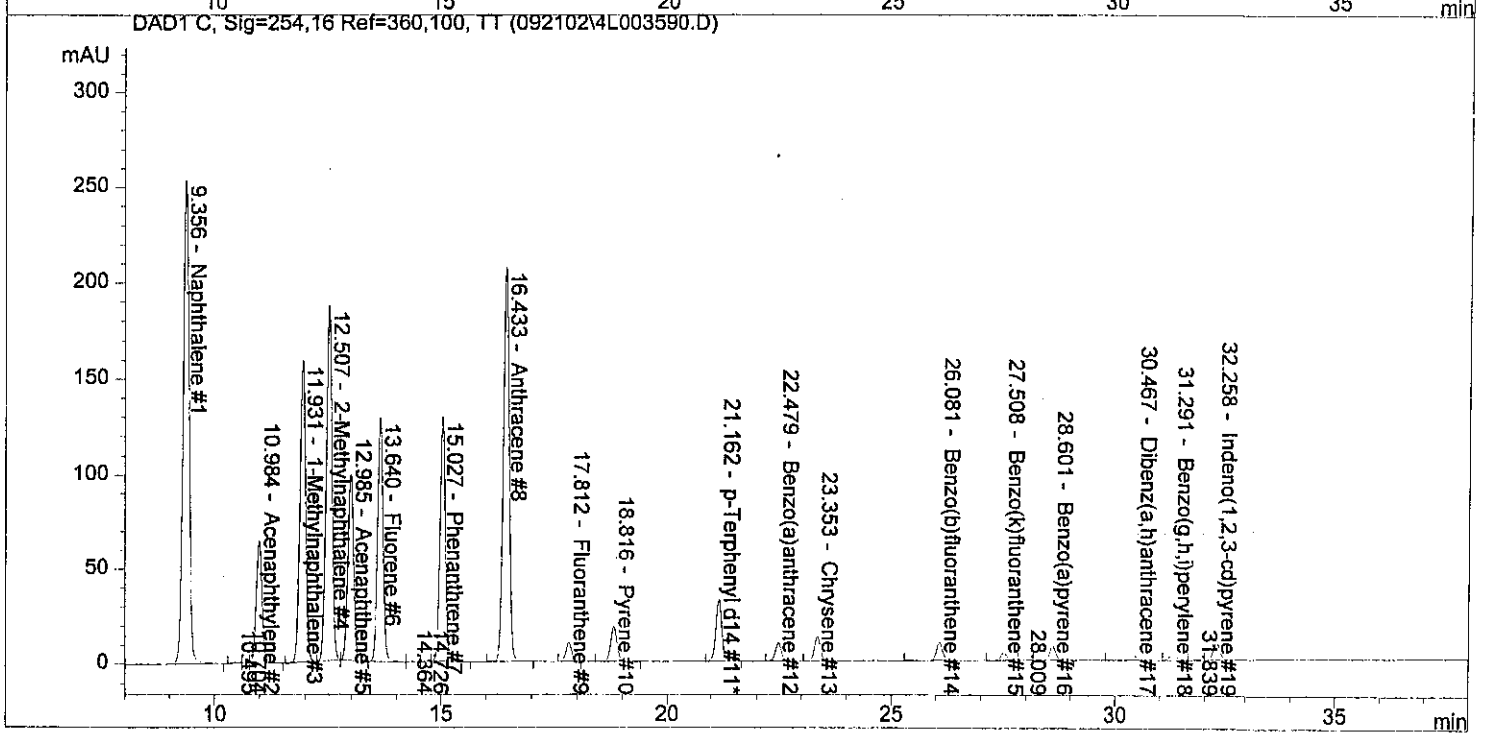
# = Failed 15.0% Criteria

==========

Injection Date : 9/22/2002 2:18:29 AM  Seq. Line : 13
Sample Name : WG125769-02 CCV  Vial : 13
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 2:18:03 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 | 726.89435 | 2.57657e-2 | 18.72895 | | Naphthalene #1 |
| 11.950 | BB | 832.21014 | 2.26104e-2 | 18.81661 | | 1-Methylnaphthalene #3 |
| 12.526 | BB | 1081.21484 | 1.75634e-2 | 18.98977 | | 2-Methylnaphthalene #4 |
| 13.004 | BB | 1372.93994 | 1.39969e-2 | 19.21692 | | Acenaphthene #5 |
| 13.659 | BBA | 2935.72485 | 6.74357e-3 | 19.79725 | | Fluorene #6 |
| 15.046 | BBA | 108.38628 | 1.71157e-1 | 18.55110 | | Phenanthrene #7 |
| 16.453 | BBA | 65.01572 | 3.06864e-1 | 19.95100 | | Anthracene #8 |
| 17.832 | PB | 75.27028 | 2.57948e-2 | 1.94158 | | Fluoranthene #9 |
| 18.837 | BBA | 45.67979 | 3.64872e-2 | 1.66673 | | Pyrene #10 |
| 21.181 | BB | 65.15961 | 3.04430e-1 | 19.83653 | | p-Terphenyl d14 #11* |
| 22.499 | BB | 227.90266 | 8.11443e-3 | 1.84930 | | Benzo(a)anthracene #12 |
| 23.372 | BB | 46.22641 | 3.95031e-2 | 1.82609 | | Chrysene #13 |
| 26.101 | BB | 112.41154 | 1.71374e-2 | 1.92644 | | Benzo(b)fluoranthene #14 |
| 27.528 | BB | 338.25815 | 2.86812e-3 | 9.70165e-1 | | Benzo(k)fluoranthene #15 |
| 28.622 | BB | 388.25470 | 4.79774e-3 | 1.86274 | | Benzo(a)pyrene #16 |
| 30.487 | BB | 44.78107 | 4.02073e-2 | 1.80052 | | Dibenz(a,h)anthracene #17 |
| 31.313 | BB | 64.63656 | 2.64609e-2 | 1.71034 | | Benzo(g,h,i)perylene #18 |
| 32.275 | BB | 132.28900 | 1.46444e-2 | 1.93730 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 171.37934 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.356 | BB | 2388.52271 | 8.39166e-3 | 20.04367 | | Naphthalene #1 |
| 10.984 | BBA | 570.73981 | 3.44306e-2 | 19.65093 | | Acenaphthylene #2 |
| 11.931 | PB | 1410.81836 | 1.40080e-2 | 19.76270 | | 1-Methylnaphthalene #3 |
| 12.507 | BB | 1637.14282 | 1.21343e-2 | 19.86558 | | 2-Methylnaphthalene #4 |
| 12.985 | BB | 864.11200 | 2.27944e-2 | 19.69696 | | Acenaphthene #5 |
| 13.640 | BB | 1126.81482 | 1.74875e-2 | 19.70515 | | Fluorene #6 |
| 15.027 | BBA | 1125.52759 | 1.75270e-2 | 19.72710 | | Phenanthrene #7 |
| 16.433 | PBA | 1846.42847 | 1.08081e-2 | 19.95643 | | Anthracene #8 |
| 17.812 | PB | 92.91072 | 2.10497e-2 | 1.95575 | | Fluoranthene #9 |
| 18.816 | BBA | 175.86914 | 1.11435e-2 | 1.95980 | | Pyrene #10 |
| 21.162 | BBA | 295.33920 | 6.69558e-2 | 19.77468 | | p-Terphenyl d14 #11* |
| 22.479 | PBA | 91.32729 | 2.13906e-2 | 1.95354 | | Benzo(a)anthracene #12 |
| 23.353 | BBA | 126.87782 | 1.53780e-2 | 1.95113 | | Chrysene #13 |
| 26.081 | BBA | 94.95538 | 2.04809e-2 | 1.94477 | | Benzo(b)fluoranthene #14 |
| 27.508 | BB | 41.54102 | 2.35899e-2 | 9.79947e-1 | | Benzo(k)fluoranthene #15 |
| 28.601 | BBA | 74.70504 | 2.68301e-2 | 2.00434 | | Benzo(a)pyrene #16 |
| 30.467 | BBA | 20.70541 | 9.28453e-2 | 1.92240 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.291 | BB | 35.51602 | 5.59337e-2 | 1.98654 | | Benzo(g,h,i)perylene #18 |
| 32.258 | BB | 98.62656 | 1.99742e-2 | 1.96999 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 196.81140

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092102\4L003601.D Sample Name: WG125769-03 CCV
HPLC4 9/24/2002 11:11:10 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========
Injection Date : 9/22/2002 12:41:38 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.384 | 20.0 | 18.873 | -5.6 |
| 1-Methylnaphthalene #3 | 11.958 | 20.0 | 18.992 | -5.0 |
| 2-Methylnaphthalene #4 | 12.534 | 20.0 | 19.166 | -4.2 |
| Acenaphthene #5 | 13.013 | 20.0 | 19.404 | -3.0 |
| Fluorene #6 | 13.671 | 20.0 | 19.981 | -0.1 |
| Phenanthrene #7 | 15.058 | 20.0 | 18.811 | -5.9 |
| Anthracene #8 | 16.464 | 20.0 | 19.955 | -0.2 |
| Fluoranthene #9 | 17.843 | 2.0 | 1.969 | -1.5 |
| Pyrene #10 | 18.850 | 2.0 | 1.690 | -15.5 # |
| p-Terphenyl d14 #11* | 21.200 | 20.0 | 20.274 | 1.4 |
| Benzo(a)anthracene #12 | 22.518 | 2.0 | 1.879 | -6.1 |
| Chrysene #13 | 23.392 | 2.0 | 1.858 | -7.1 |
| Benzo(b)fluoranthene #14 | 26.129 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.563 | 1.0 | 0.984 | -1.6 |
| Benzo(a)pyrene #16 | 28.657 | 2.0 | 1.881 | -5.9 |
| Dibenz(a,h)anthracene #1 | 30.531 | 2.0 | 1.838 | -8.1 |
| Benzo(g,h,i)perylene #18 | 31.353 | 2.0 | 1.741 | -13.0 |
| Indeno(1,2,3-cd)pyrene # | 32.318 | 2.0 | 1.963 | -1.9 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.364 | 20.0 | 20.208 | 1.0 |
| Acenaphthylene #2 | 10.991 | 20.0 | 19.878 | -0.6 |
| 1-Methylnaphthalene #3 | 11.937 | 20.0 | 19.966 | -0.2 |
| 2-Methylnaphthalene #4 | 12.514 | 20.0 | 20.057 | 0.3 |
| Acenaphthene #5 | 12.993 | 20.0 | 19.923 | -0.4 |
| Fluorene #6 | 13.650 | 20.0 | 19.945 | -0.3 |
| Phenanthrene #7 | 15.037 | 20.0 | 19.995 | 0.0 |
| Anthracene #8 | 16.443 | 20.0 | 20.145 | 0.7 |
| Fluoranthene #9 | 17.822 | 2.0 | 1.986 | -0.7 |
| Pyrene #10 | 18.828 | 2.0 | 1.979 | -1.0 |
| p-Terphenyl d14 #11* | 21.180 | 20.0 | 20.074 | 0.4 |
| Benzo(a)anthracene #12 | 22.497 | 2.0 | 1.981 | -0.9 |
| Chrysene #13 | 23.371 | 2.0 | 2.001 | 0.0 |
| Benzo(b)fluoranthene #14 | 26.107 | 2.0 | 1.982 | -0.9 |
| Benzo(k)fluoranthene #15 | 27.542 | 1.0 | 0.992 | -0.8 |
| Benzo(a)pyrene #16 | 28.636 | 2.0 | 2.012 | 0.6 |
| Dibenz(a,h)anthracene #1 | 30.510 | 2.0 | 1.869 | -6.5 |
| Benzo(g,h,i)perylene #18 | 31.329 | 2.0 | 1.948 | -2.6 |
| Indeno(1,2,3-cd)pyrene # | 32.301 | 2.0 | 1.993 | -0.4 |

# = Failed 15.0% Criteria

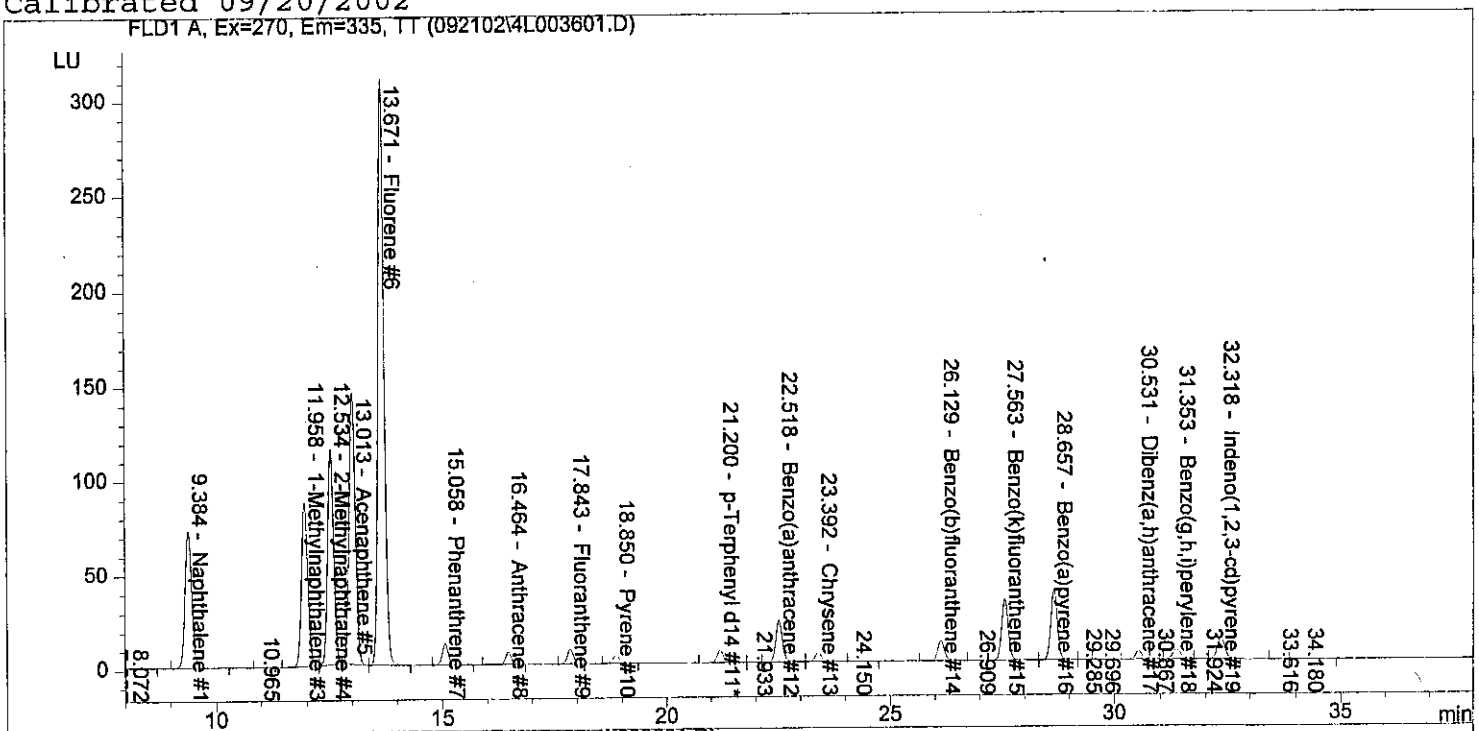
1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

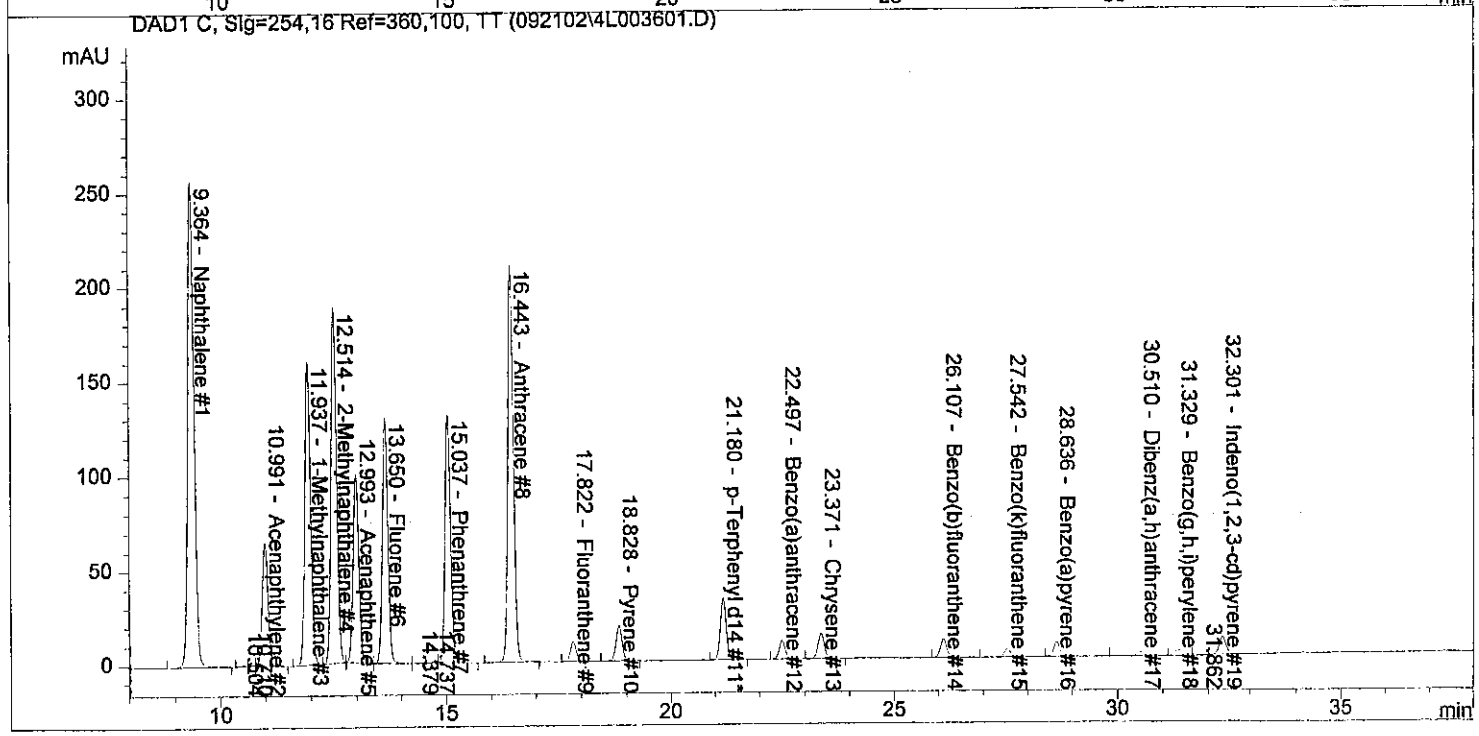
==========

Injection Date : 9/22/2002 12:41:38 PM
Sample Name : WG125769-03 CCV
Acq. Operator : RDC

Seq. Line : 24
Vial : 24
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 12:41:10 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.384 | BBA | 732.59131 | 2.57619e-2 | 18.87296 | | Naphthalene #1 |
| 11.958 | BB | 840.12274 | 2.26066e-2 | 18.99232 | | 1-Methylnaphthalene #3 |
| 12.534 | BB | 1091.38330 | 1.75612e-2 | 19.16604 | | 2-Methylnaphthalene #4 |
| 13.013 | BB | 1386.40076 | 1.39957e-2 | 19.40359 | | Acenaphthene #5 |
| 13.671 | BBA | 2963.04614 | 6.74343e-3 | 19.98110 | | Fluorene #6 |
| 15.058 | PBA | 109.94791 | 1.71093e-1 | 18.81135 | | Phenanthrene #7 |
| 16.464 | PBA | 65.02962 | 3.06864e-1 | 19.95524 | | Anthracene #8 |
| 17.843 | PB | 76.36357 | 2.57891e-2 | 1.96935 | | Fluoranthene #9 |
| 18.850 | BBA | 46.33798 | 3.64650e-2 | 1.68972 | | Pyrene #10 |
| 21.200 | BB | 66.61433 | 3.04342e-1 | 20.27352 | | p-Terphenyl d14 #11* |
| 22.518 | BB | 231.63725 | 8.11115e-3 | 1.87884 | | Benzo(a)anthracene #12 |
| 23.392 | BB | 47.06443 | 3.94880e-2 | 1.85848 | | Chrysene #13 |
| 26.129 | PBA | 113.06359 | 1.71353e-2 | 1.93738 | | Benzo(b)fluoranthene #14 |
| 27.563 | BB | 343.00012 | 2.86760e-3 | 9.83587e-1 | | Benzo(k)fluoranthene #15 |
| 28.657 | BB | 392.25299 | 4.79622e-3 | 1.88133 | | Benzo(a)pyrene #16 |
| 30.531 | BB | 45.74602 | 4.01763e-2 | 1.83790 | | Dibenz(a,h)anthracene #17 |
| 31.353 | BB | 65.84914 | 2.64365e-2 | 1.74082 | | Benzo(g,h,i)perylene #18 |
| 32.318 | BB | 134.04689 | 1.46410e-2 | 1.96257 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.19610

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.364 | BBA | 2408.04541 | 8.39200e-3 | 20.20833 | | Naphthalene #1 |
| 10.991 | BBA | 577.40924 | 3.44258e-2 | 19.87779 | | Acenaphthylene #2 |
| 11.937 | PB | 1425.43237 | 1.40068e-2 | 19.96573 | | 1-Methylnaphthalene #3 |
| 12.514 | BB | 1652.99573 | 1.21340e-2 | 20.05742 | | 2-Methylnaphthalene #4 |
| 12.993 | BB | 874.14990 | 2.27916e-2 | 19.92327 | | Acenaphthene #5 |
| 13.650 | BB | 1140.68591 | 1.74855e-2 | 19.94543 | | Fluorene #6 |
| 15.037 | BBA | 1140.94824 | 1.75246e-2 | 19.99468 | | Phenanthrene #7 |
| 16.443 | PBA | 1863.85791 | 1.08081e-2 | 20.14480 | | Anthracene #8 |
| 17.822 | PB | 94.38750 | 2.10443e-2 | 1.98632 | | Fluoranthene #9 |
| 18.828 | BBA | 177.64403 | 1.11416e-2 | 1.97924 | | Pyrene #10 |
| 21.180 | PBA | 299.86734 | 6.69428e-2 | 20.07396 | | p-Terphenyl d14 #11* |
| 22.497 | PBA | 92.65591 | 2.13849e-2 | 1.98143 | | Benzo(a)anthracene #12 |
| 23.371 | BBA | 130.15163 | 1.53711e-2 | 2.00057 | | Chrysene #13 |
| 26.107 | BBA | 96.79314 | 2.04744e-2 | 1.98178 | | Benzo(b)fluoranthene #14 |
| 27.542 | BBA | 42.07884 | 2.35835e-2 | 9.92367e-1 | | Benzo(k)fluoranthene #15 |
| 28.636 | BBA | 74.98653 | 2.68272e-2 | 2.01168 | | Benzo(a)pyrene #16 |
| 30.510 | PBA | 20.18690 | 9.26075e-2 | 1.86946 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.329 | PB | 34.80948 | 5.59602e-2 | 1.94794 | | Benzo(g,h,i)perylene #18 |
| 32.301 | BB | 99.80739 | 1.99676e-2 | 1.99292 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 198.93512

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092102\4L003612.D Sample Name: WG125769-04 CCV
HPLC4 9/24/2002 11:11:37 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/22/2002 11:04:39 PM Seq. Line : 35

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.382 | 20.0 | 18.743 | -6.3 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.861 | -5.7 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 19.047 | -4.8 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.297 | -3.5 |
| Fluorene #6 | 13.661 | 20.0 | 19.973 | -0.1 |
| Phenanthrene #7 | 15.047 | 20.0 | 18.754 | -6.2 |
| Anthracene #8 | 16.452 | 20.0 | 19.826 | -0.9 |
| Fluoranthene #9 | 17.830 | 2.0 | 1.963 | -1.8 |
| Pyrene #10 | 18.835 | 2.0 | 1.663 | -16.8 # |
| p-Terphenyl d14 #11* | 21.179 | 20.0 | 19.881 | -0.6 |
| Benzo(a)anthracene #12 | 22.496 | 2.0 | 1.865 | -6.7 |
| Chrysene #13 | 23.366 | 2.0 | 1.868 | -6.6 |
| Benzo(b)fluoranthene #14 | 26.096 | 2.0 | 1.949 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.524 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.620 | 2.0 | 1.877 | -6.2 |
| Dibenz(a,h)anthracene #1 | 30.486 | 2.0 | 1.820 | -9.0 |
| Benzo(g,h,i)perylene #18 | 31.304 | 2.0 | 1.706 | -14.7 |
| Indeno(1,2,3-cd)pyrene # | 32.267 | 2.0 | 1.948 | -2.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

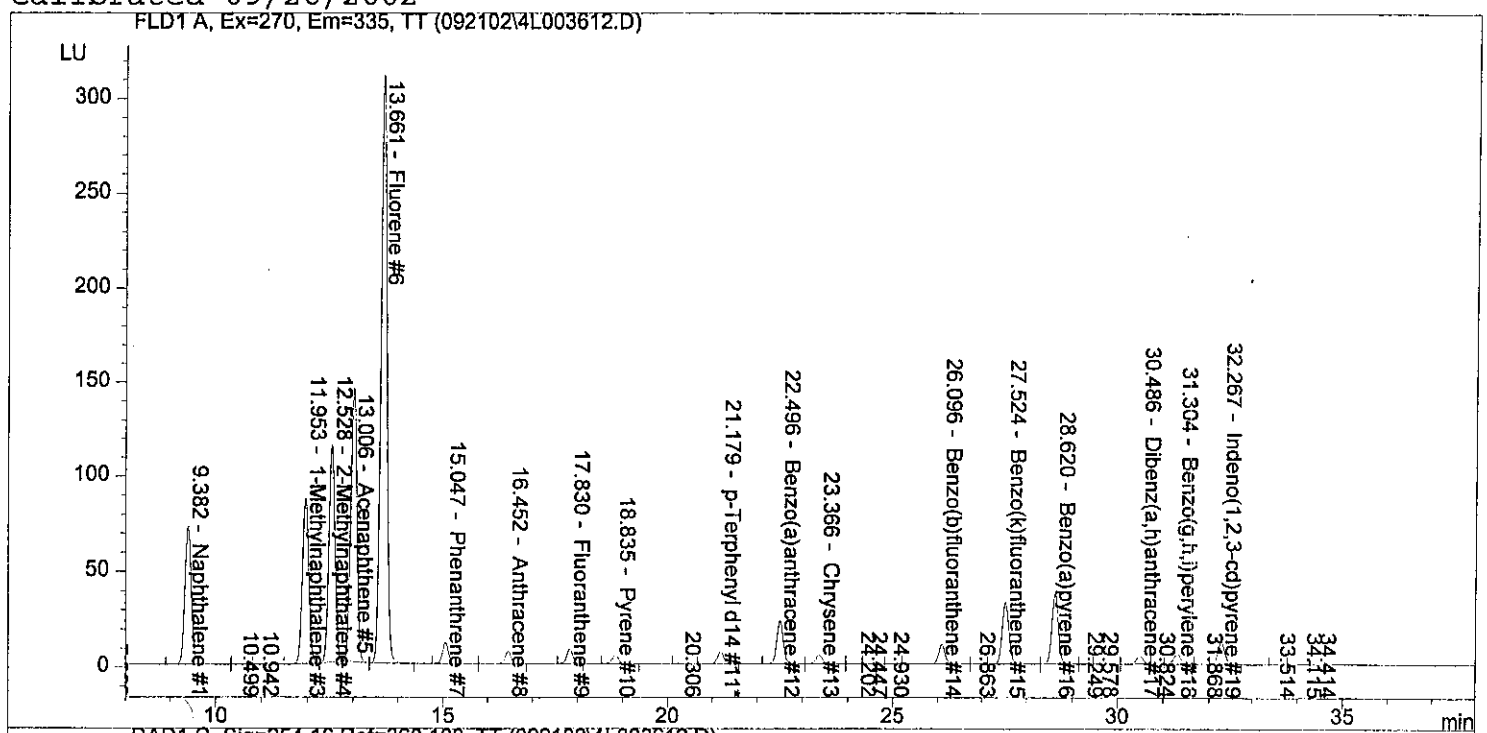
| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.367 | 20.0 | 20.216 | 1.1 |
| Acenaphthylene #2 | 10.991 | 20.0 | 19.908 | -0.5 |
| 1-Methylnaphthalene #3 | 11.938 | 20.0 | 19.995 | 0.0 |
| 2-Methylnaphthalene #4 | 12.512 | 20.0 | 20.073 | 0.4 |
| Acenaphthene #5 | 12.990 | 20.0 | 19.950 | -0.3 |
| Fluorene #6 | 13.645 | 20.0 | 19.958 | -0.2 |
| Phenanthrene #7 | 15.031 | 20.0 | 19.976 | -0.1 |
| Anthracene #8 | 16.436 | 20.0 | 20.122 | 0.6 |
| Fluoranthene #9 | 17.814 | 2.0 | 1.984 | -0.8 |
| Pyrene #10 | 18.817 | 2.0 | 1.977 | -1.1 |
| p-Terphenyl d14 #11* | 21.163 | 20.0 | 20.067 | 0.3 |
| Benzo(a)anthracene #12 | 22.480 | 2.0 | 1.976 | -1.2 |
| Chrysene #13 | 23.350 | 2.0 | 1.981 | -1.0 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.603 | 2.0 | 2.025 | 1.3 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.798 | -10.1 |
| Benzo(g,h,i)perylene #18 | 31.286 | 2.0 | 1.995 | -0.2 |
| Indeno(1,2,3-cd)pyrene # | 32.253 | 2.0 | 1.968 | -1.6 |

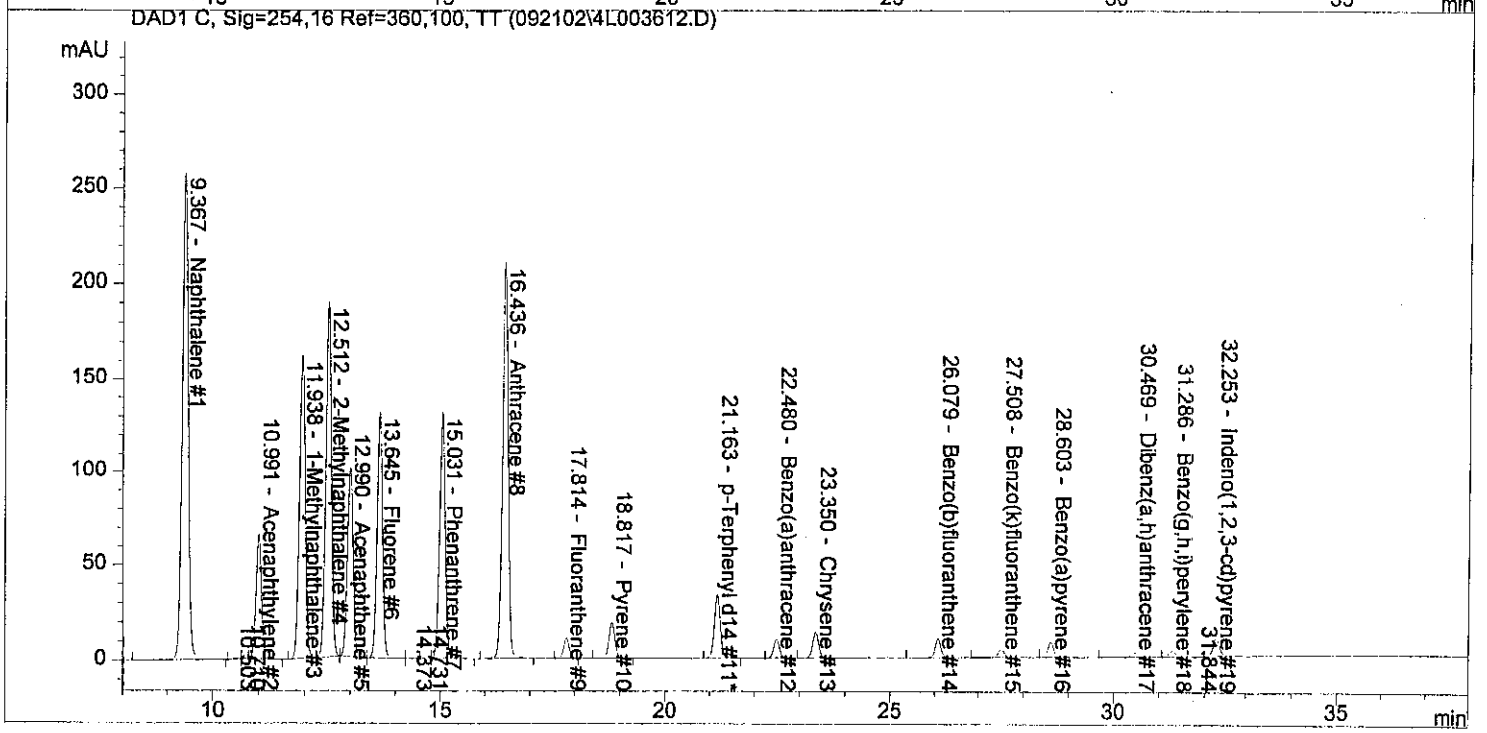
# = Failed 15.0% Criteria

==========

Injection Date : 9/22/2002 11:04:39 PM  Seq. Line : 35
Sample Name : WG125769-04 CCV  Vial : 35
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 11:04:11 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.382 | BB | 727.46289 | 2.57653e-2 | 18.74332 | | Naphthalene #1 |
| 11.953 | PB | 834.22382 | 2.26094e-2 | 18.86133 | | 1-Methylnaphthalene #3 |
| 12.528 | BB | 1084.51404 | 1.75627e-2 | 19.04696 | | 2-Methylnaphthalene #4 |
| 13.006 | BB | 1378.71204 | 1.39964e-2 | 19.29697 | | Acenaphthene #5 |
| 13.661 | BBA | 2961.87817 | 6.74344e-3 | 19.97324 | | Fluorene #6 |
| 15.047 | PB | 109.60204 | 1.71107e-1 | 18.75371 | | Phenanthrene #7 |
| 16.452 | BBA | 64.60617 | 3.06875e-1 | 19.82601 | | Anthracene #8 |
| 17.830 | PB | 76.12203 | 2.57904e-2 | 1.96321 | | Fluoranthene #9 |
| 18.835 | BBA | 45.58105 | 3.64905e-2 | 1.66328 | | Pyrene #10 |
| 21.179 | BB | 65.30884 | 3.04421e-1 | 19.88136 | | p-Terphenyl d14 #11* |
| 22.496 | BB | 229.94376 | 8.11263e-3 | 1.86545 | | Benzo(a)anthracene #12 |
| 23.366 | BB | 47.31254 | 3.94837e-2 | 1.86807 | | Chrysene #13 |
| 26.096 | BB | 113.72723 | 1.71332e-2 | 1.94852 | | Benzo(b)fluoranthene #14 |
| 27.524 | BB | 341.86874 | 2.86772e-3 | 9.80385e-1 | | Benzo(k)fluoranthene #15 |
| 28.620 | BB | 391.30594 | 4.79658e-3 | 1.87693 | | Benzo(a)pyrene #16 |
| 30.486 | BB | 45.28267 | 4.01910e-2 | 1.81996 | | Dibenz(a,h)anthracene #17 |
| 31.304 | BB | 64.46491 | 2.64644e-2 | 1.70602 | | Benzo(g,h,i)perylene #18 |
| 32.267 | BB | 133.02544 | 1.46430e-2 | 1.94789 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 172.02260

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.367 | BBA | 2408.97021 | 8.39202e-3 | 20.21613 | | Naphthalene #1 |
| 10.991 | BBA | 578.30450 | 3.44252e-2 | 19.90824 | | Acenaphthylene #2 |
| 11.938 | PB | 1427.53931 | 1.40066e-2 | 19.99500 | | 1-Methylnaphthalene #3 |
| 12.512 | BB | 1654.29199 | 1.21340e-2 | 20.07311 | | 2-Methylnaphthalene #4 |
| 12.990 | BB | 875.32526 | 2.27913e-2 | 19.94977 | | Acenaphthene #5 |
| 13.645 | BB | 1141.41296 | 1.74854e-2 | 19.95802 | | Fluorene #6 |
| 15.031 | BBA | 1139.87695 | 1.75248e-2 | 19.97609 | | Phenanthrene #7 |
| 16.436 | PBA | 1861.71484 | 1.08081e-2 | 20.12164 | | Anthracene #8 |
| 17.814 | BB | 94.26736 | 2.10447e-2 | 1.98383 | | Fluoranthene #9 |
| 18.817 | BBA | 177.44864 | 1.11418e-2 | 1.97710 | | Pyrene #10 |
| 21.163 | PBA | 299.75797 | 6.69431e-2 | 20.06673 | | p-Terphenyl d14 #11* |
| 22.480 | PBA | 92.41600 | 2.13859e-2 | 1.97640 | | Benzo(a)anthracene #12 |
| 23.350 | BBA | 128.84131 | 1.53738e-2 | 1.98078 | | Chrysene #13 |
| 26.079 | PBA | 95.94950 | 2.04774e-2 | 1.96479 | | Benzo(b)fluoranthene #14 |
| 27.508 | PBA | 42.16855 | 2.35825e-2 | 9.94439e-1 | | Benzo(k)fluoranthene #15 |
| 28.603 | BBA | 75.51116 | 2.68219e-2 | 2.02535 | | Benzo(a)pyrene #16 |
| 30.469 | PBA | 19.48373 | 9.22648e-2 | 1.79766 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.286 | BB | 35.67522 | 5.59279e-2 | 1.99524 | | Benzo(g,h,i)perylene #18 |
| 32.253 | BB | 98.52372 | 1.99748e-2 | 1.96799 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 198.92832

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003620.D Sample Name: WG126189-01 CCV
HPLC4 9/27/2002 10:20:41 PM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========
Injection Date : 9/27/2002 5:26:59 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 | 20.246 | 1.2 |
| 1-Methylnaphthalene #3 | 11.912 | 20.0 | 20.310 | 1.5 |
| 2-Methylnaphthalene #4 | 12.489 | 20.0 | 20.328 | 1.6 |
| Acenaphthene #5 | 12.969 | 20.0 | 20.143 | 0.7 |
| Fluorene #6 | 13.628 | 20.0 | 20.062 | 0.3 |
| Phenanthrene #7 | 15.019 | 20.0 | 20.066 | 0.3 |
| Anthracene #8 | 16.433 | 20.0 | 19.431 | -2.8 |
| Fluoranthene #9 | 17.815 | 2.0 | 1.999 | -0.1 |
| Pyrene #10 | 18.821 | 2.0 | 2.068 | 3.4 |
| p-Terphenyl d14 #11* | 21.184 | 20.0 | 19.561 | -2.2 |
| Benzo(a)anthracene #12 | 22.507 | 2.0 | 1.962 | -1.9 |
| Chrysene #13 | 23.387 | 2.0 | 2.011 | 0.5 |
| Benzo(b)fluoranthene #14 | 26.129 | 2.0 | 2.003 | 0.1 |
| Benzo(k)fluoranthene #15 | 27.577 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.675 | 2.0 | 2.067 | 3.4 |
| Dibenz(a,h)anthracene #1 | 30.560 | 2.0 | 1.999 | 0.0 |
| Benzo(g,h,i)perylene #18 | 31.383 | 2.0 | 2.071 | 3.5 |
| Indeno(1,2,3-cd)pyrene # | 32.361 | 2.0 | 1.908 | -4.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.315 | 20.0 | 20.067 | 0.3 |
| Acenaphthylene #2 | 10.944 | 20.0 | 19.750 | -1.3 |
| 1-Methylnaphthalene #3 | 11.894 | 20.0 | 19.828 | -0.9 |
| 2-Methylnaphthalene #4 | 12.471 | 20.0 | 19.961 | -0.2 |
| Acenaphthene #5 | 12.951 | 20.0 | 19.708 | -1.5 |
| Fluorene #6 | 13.608 | 20.0 | 19.749 | -1.3 |
| Phenanthrene #7 | 15.000 | 20.0 | 19.798 | -1.0 |
| Anthracene #8 | 16.414 | 20.0 | 19.468 | -2.7 |
| Fluoranthene #9 | 17.795 | 2.0 | 1.964 | -1.8 |
| Pyrene #10 | 18.801 | 2.0 | 1.946 | -2.7 |
| p-Terphenyl d14 #11* | 21.165 | 20.0 | 19.904 | -0.5 |
| Benzo(a)anthracene #12 | 22.488 | 2.0 | 1.927 | -3.6 |
| Chrysene #13 | 23.369 | 2.0 | 1.985 | -0.7 |
| Benzo(b)fluoranthene #14 | 26.109 | 2.0 | 1.948 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.558 | 1.0 | 0.988 | -1.2 |
| Benzo(a)pyrene #16 | 28.655 | 2.0 | 1.964 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.540 | 2.0 | 1.813 | -9.3 |
| Benzo(g,h,i)perylene #18 | 31.362 | 2.0 | 1.790 | -10.5 |
| Indeno(1,2,3-cd)pyrene # | 32.347 | 2.0 | 1.899 | -5.0 |

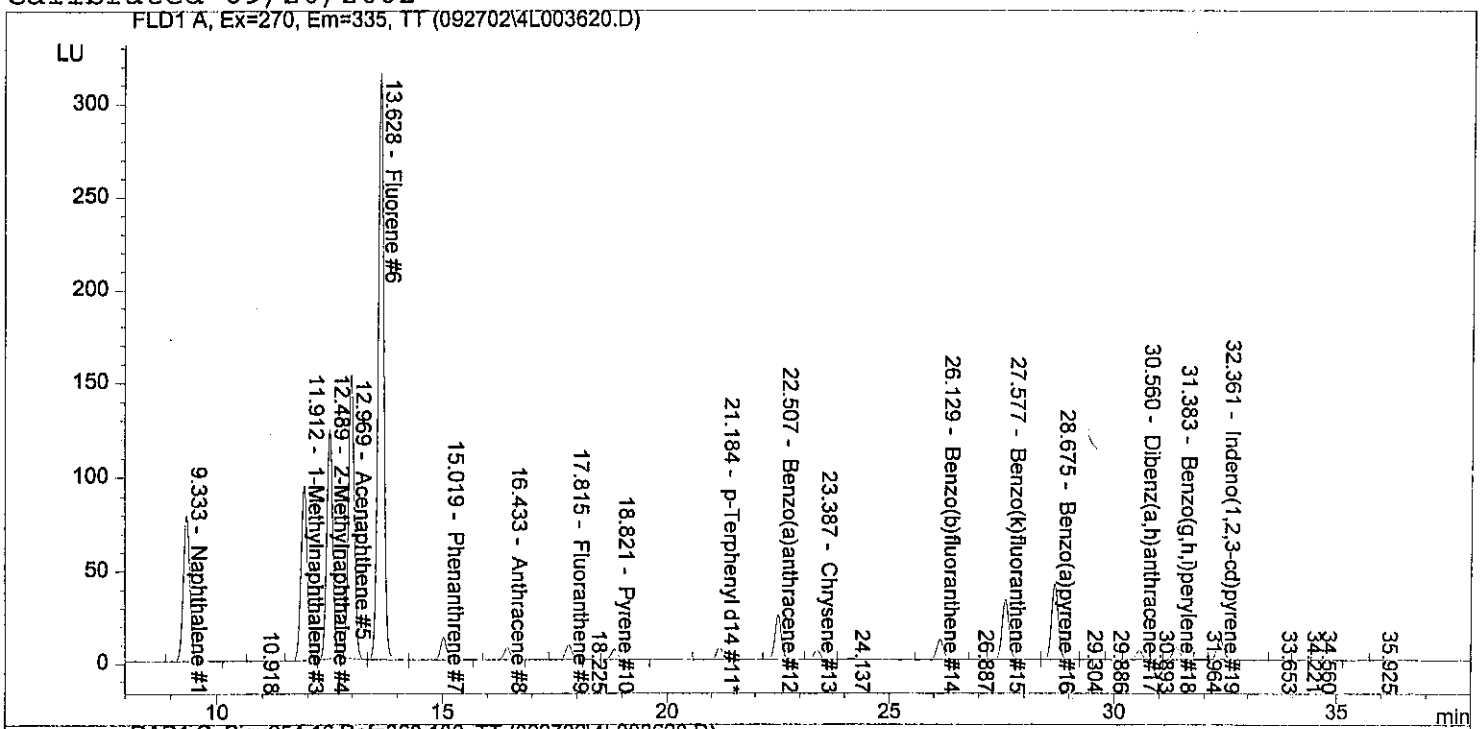
# = Failed 15.0% Criteria

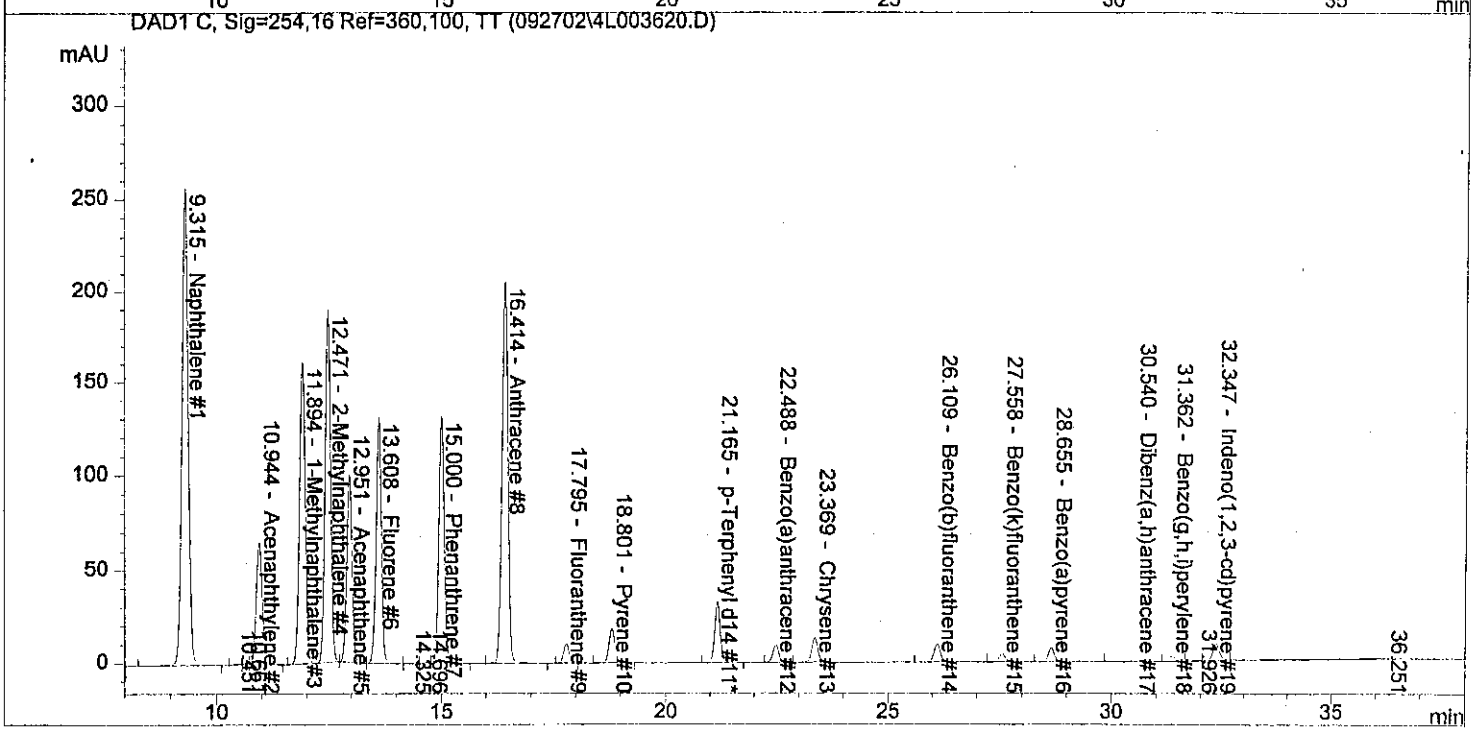
==========

Injection Date : 9/27/2002 5:26:59 PM  Seq. Line : 2
Sample Name : WG126189-01 CCV  Vial : 2
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/26/2002 2:16:36 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 786.90051 | 2.57286e-2 | 20.24587 | | Naphthalene #1 |
| 11.912 | BB | 899.44598 | 2.25801e-2 | 20.30962 | | 1-Methylnaphthalene #3 |
| 12.489 | BB | 1158.43542 | 1.75481e-2 | 20.32833 | | 2-Methylnaphthalene #4 |
| 12.969 | BB | 1439.71399 | 1.39909e-2 | 20.14292 | | Acenaphthene #5 |
| 13.628 | BB | 2975.08667 | 6.74337e-3 | 20.06212 | | Fluorene #6 |
| 15.019 | BBA | 117.47395 | 1.70808e-1 | 20.06554 | | Phenanthrene #7 |
| 16.433 | BBA | 63.31028 | 3.06909e-1 | 19.43052 | | Anthracene #8 |
| 17.815 | PB | 77.52129 | 2.57833e-2 | 1.99876 | | Fluoranthene #9 |
| 18.821 | BB | 57.17892 | 3.61740e-2 | 2.06839 | | Pyrene #10 |
| 21.184 | BB | 64.24245 | 3.04488e-1 | 19.56103 | | p-Terphenyl d14 #11* |
| 22.507 | BB | 242.20642 | 8.10240e-3 | 1.96245 | | Benzo(a)anthracene #12 |
| 23.387 | BB | 51.00372 | 3.94237e-2 | 2.01076 | | Chrysene #13 |
| 26.129 | BBA | 116.94890 | 1.71235e-2 | 2.00258 | | Benzo(b)fluoranthene #14 |
| 27.577 | BB | 348.45425 | 2.86702e-3 | 9.99026e-1 | | Benzo(k)fluoranthene #15 |
| 28.675 | BB | 432.26569 | 4.78256e-3 | 2.06734 | | Benzo(a)pyrene #16 |
| 30.560 | PB | 49.91634 | 4.00560e-2 | 1.99945 | | Dibenz(a,h)anthracene #17 |
| 31.383 | BB | 78.96623 | 2.62211e-2 | 2.07058 | | Benzo(g,h,i)perylene #18 |
| 32.361 | BB | 130.23892 | 1.46486e-2 | 1.90782 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 179.23311

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.315 | PBA | 2391.25317 | 8.39171e-3 | 20.06670 | | Naphthalene #1 |
| 10.944 | BBA | 573.64691 | 3.44285e-2 | 19.74982 | | Acenaphthylene #2 |
| 11.894 | PB | 1415.48877 | 1.40076e-2 | 19.82758 | | 1-Methylnaphthalene #3 |
| 12.471 | BB | 1644.99878 | 1.21341e-2 | 19.96065 | | 2-Methylnaphthalene #4 |
| 12.951 | BB | 864.61725 | 2.27943e-2 | 19.70835 | | Acenaphthene #5 |
| 13.608 | BB | 1129.36890 | 1.74871e-2 | 19.74939 | | Fluorene #6 |
| 15.000 | BBA | 1129.61230 | 1.75263e-2 | 19.79798 | | Phenanthrene #7 |
| 16.414 | BBA | 1801.27124 | 1.08081e-2 | 19.46838 | | Anthracene #8 |
| 17.795 | BB | 93.31702 | 2.10482e-2 | 1.96416 | | Fluoranthene #9 |
| 18.801 | BBA | 174.63751 | 1.11449e-2 | 1.94631 | | Pyrene #10 |
| 21.165 | BBA | 297.29660 | 6.69501e-2 | 19.90405 | | p-Terphenyl d14 #11* |
| 22.488 | PBA | 90.06752 | 2.13961e-2 | 1.92710 | | Benzo(a)anthracene #12 |
| 23.369 | BBA | 129.13004 | 1.53732e-2 | 1.98514 | | Chrysene #13 |
| 26.109 | BBA | 95.10111 | 2.04804e-2 | 1.94771 | | Benzo(b)fluoranthene #14 |
| 27.558 | BB | 41.89190 | 2.35857e-2 | 9.88050e-1 | | Benzo(k)fluoranthene #15 |
| 28.655 | BBA | 73.16279 | 2.68463e-2 | 1.96415 | | Benzo(a)pyrene #16 |
| 30.540 | PBA | 19.63749 | 9.23418e-2 | 1.81336 | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.362 | PB | 31.92082 | 5.60807e-2 | 1.79014 | | Benzo(g,h,i)perylene #18 |
| 32.347 | BB | 94.97542 | 1.99956e-2 | 1.89909 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 196.45811

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003631.D Sample Name: WG126189-02 CCV
HPLC4 9/30/2002 11:08:25 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/28/2002 3:50:10 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.335 | 20.0 | 18.981 | -5.1 |
| 1-Methylnaphthalene #3 | 11.911 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.487 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.966 | 20.0 | 19.432 | -2.8 |
| Fluorene #6 | 13.620 | 20.0 | 19.844 | -0.8 |
| Phenanthrene #7 | 15.006 | 20.0 | 18.905 | -5.5 |
| Anthracene #8 | 16.411 | 20.0 | 19.650 | -1.8 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.959 | -2.1 |
| Pyrene #10 | 18.799 | 2.0 | 1.745 | -12.7 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.340 | -3.3 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.882 | -5.9 |
| Chrysene #13 | 23.344 | 2.0 | 1.870 | -6.5 |
| Benzo(b)fluoranthene #14 | 26.074 | 2.0 | 1.929 | -3.5 |
| Benzo(k)fluoranthene #15 | 27.515 | 1.0 | 0.978 | -2.2 |
| Benzo(a)pyrene #16 | 28.608 | 2.0 | 1.827 | -8.6 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.857 | -7.1 |
| Benzo(g,h,i)perylene #18 | 31.293 | 2.0 | 1.718 | -14.1 |
| Indeno(1,2,3-cd)pyrene # | 32.261 | 2.0 | 1.940 | -3.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.321 | 20.0 | 20.136 | 0.7 |
| Acenaphthylene #2 | 10.949 | 20.0 | 19.790 | -1.1 |
| 1-Methylnaphthalene #3 | 11.897 | 20.0 | 19.889 | -0.6 |
| 2-Methylnaphthalene #4 | 12.473 | 20.0 | 19.994 | 0.0 |
| Acenaphthene #5 | 12.952 | 20.0 | 19.845 | -0.8 |
| Fluorene #6 | 13.606 | 20.0 | 19.820 | -0.9 |
| Phenanthrene #7 | 14.991 | 20.0 | 19.816 | -0.9 |
| Anthracene #8 | 16.397 | 20.0 | 19.851 | -0.7 |
| Fluoranthene #9 | 17.777 | 2.0 | 1.974 | -1.3 |
| Pyrene #10 | 18.783 | 2.0 | 1.981 | -1.0 |
| p-Terphenyl d14 #11* | 21.140 | 20.0 | 19.659 | -1.7 |
| Benzo(a)anthracene #12 | 22.457 | 2.0 | 1.963 | -1.8 |
| Chrysene #13 | 23.330 | 2.0 | 1.971 | -1.5 |
| Benzo(b)fluoranthene #14 | 26.059 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.500 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.593 | 2.0 | 1.949 | -2.6 |
| Dibenz(a,h)anthracene #1 | 30.455 | 2.0 | 1.865 | -6.7 |
| Benzo(g,h,i)perylene #18 | 31.277 | 2.0 | 1.921 | -4.0 |
| Indeno(1,2,3-cd)pyrene # | 32.249 | 2.0 | 1.955 | -2.3 |

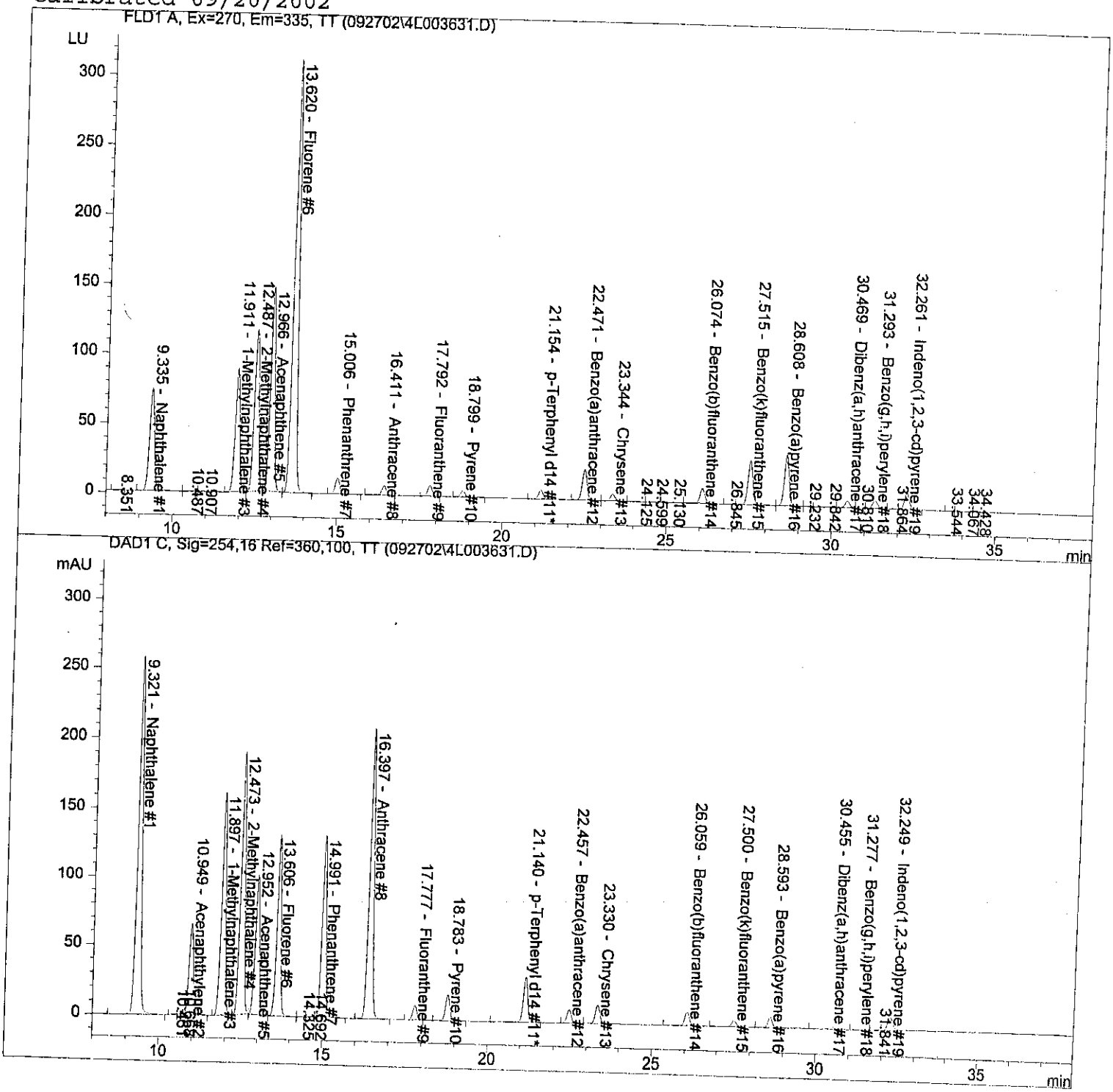
# = Failed 15.0% Criteria

==========

Injection Date : 9/28/2002 3:50:10 AM
Sample Name : WG126189-02 CCV
Acq. Operator : RDC

Seq. Line : 13
Vial : 13
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 3:50:23 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.335 | BB | 736.87067 | 2.57591e-2 | 18.98114 | | Naphthalene #1 |
| 11.911 | BB | 846.10565 | 2.26038e-2 | 19.12517 | | 1-Methylnaphthalene #3 |
| 12.487 | BB | 1097.25098 | 1.75600e-2 | 19.26775 | | 2-Methylnaphthalene #4 |
| 12.966 | BB | 1388.41650 | 1.39955e-2 | 19.43154 | | Acenaphthene #5 |
| 13.620 | BB | 2942.69775 | 6.74353e-3 | 19.84417 | | Fluorene #6 |
| 15.006 | BBA | 110.51191 | 1.71071e-1 | 18.90533 | | Phenanthrene #7 |
| 16.411 | BBA | 64.02818 | 3.06890e-1 | 19.64961 | | Anthracene #8 |
| 17.792 | PB | 75.95542 | 2.57912e-2 | 1.95898 | | Fluoranthene #9 |
| 18.799 | BBA | 47.93214 | 3.64140e-2 | 1.74540 | | Pyrene #10 |
| 21.154 | BBA | 63.50793 | 3.04535e-1 | 19.34039 | | p-Terphenyl d14 #11* |
| 22.471 | BB | 231.99622 | 8.11084e-3 | 1.88168 | | Benzo(a)anthracene #12 |
| 23.344 | BB | 47.35949 | 3.94829e-2 | 1.86989 | | Chrysene #13 |
| 26.074 | BBA | 112.56907 | 1.71369e-2 | 1.92908 | | Benzo(b)fluoranthene #14 |
| 27.515 | BB | 341.06305 | 2.86781e-3 | 9.78104e-1 | | Benzo(k)fluoranthene #15 |
| 28.608 | BB | 380.65662 | 4.80071e-3 | 1.82742 | | Benzo(a)pyrene #16 |
| 30.469 | BB | 46.24251 | 4.01608e-2 | 1.85714 | | Dibenz(a,h)anthracene #17 |
| 31.293 | BB | 64.93436 | 2.64548e-2 | 1.71783 | | Benzo(g,h,i)perylene #18 |
| 32.261 | BB | 132.51083 | 1.46440e-2 | 1.94049 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 172.25113

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.321 | PBA | 2399.50342 | 8.39185e-3 | 20.13628 | | Naphthalene #1 |
| 10.949 | BBA | 574.82001 | 3.44277e-2 | 19.78972 | | Acenaphthylene #2 |
| 11.897 | PB | 1419.94165 | 1.40072e-2 | 19.88945 | | 1-Methylnaphthalene #3 |
| 12.473 | BB | 1647.73633 | 1.21341e-2 | 19.99378 | | 2-Methylnaphthalene #4 |
| 12.952 | BB | 870.66028 | 2.27926e-2 | 19.84459 | | Acenaphthene #5 |
| 13.606 | BB | 1133.41846 | 1.74865e-2 | 19.81954 | | Fluorene #6 |
| 14.991 | BBA | 1130.66370 | 1.75262e-2 | 19.81622 | | Phenanthrene #7 |
| 16.397 | BB | 1836.69800 | 1.08081e-2 | 19.85127 | | Anthracene #8 |
| 17.777 | BB | 93.78806 | 2.10465e-2 | 1.97391 | | Fluoranthene #9 |
| 18.783 | BBA | 177.77100 | 1.11415e-2 | 1.98063 | | Pyrene #10 |
| 21.140 | PBA | 293.58472 | 6.69610e-2 | 19.65872 | | p-Terphenyl d14 #11* |
| 22.457 | PBA | 91.79173 | 2.13885e-2 | 1.96329 | | Benzo(a)anthracene #12 |
| 23.330 | BBA | 128.16815 | 1.53752e-2 | 1.97061 | | Chrysene #13 |
| 26.059 | PBA | 95.95579 | 2.04773e-2 | 1.96492 | | Benzo(b)fluoranthene #14 |
| 27.500 | PB | 42.12954 | 2.35829e-2 | 9.93538e-1 | | Benzo(k)fluoranthene #15 |
| 28.593 | BBA | 72.56543 | 2.68528e-2 | 1.94858 | | Benzo(a)pyrene #16 |
| 30.455 | PBA | 20.14636 | 9.25884e-2 | 1.86532 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.277 | BB | 34.31247 | 5.59795e-2 | 1.92079 | | Benzo(g,h,i)perylene #18 |
| 32.249 | BB | 97.84663 | 1.99786e-2 | 1.95484 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 197.33600

Results obtained with enhanced integrator!

*** End of Report ***

==========

Data File C:\HPCHEM\2\DATA\092702\4L003642.D Sample Name: WG126189-03 CCV
HPLC4 9/30/2002 11:17:36 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/28/2002 2:13:16 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.345 | 20.0 | 18.913 | -5.4 |
| 1-Methylnaphthalene #3 | 11.923 | 20.0 | 19.090 | -4.6 |
| 2-Methylnaphthalene #4 | 12.500 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.979 | 20.0 | 19.497 | -2.5 |
| Fluorene #6 | 13.636 | 20.0 | 20.038 | 0.2 |
| Phenanthrene #7 | 15.022 | 20.0 | 18.872 | -5.6 |
| Anthracene #8 | 16.429 | 20.0 | 20.146 | 0.7 |
| Fluoranthene #9 | 17.809 | 2.0 | 1.969 | -1.6 |
| Pyrene #10 | 18.816 | 2.0 | 1.702 | -14.9 |
| p-Terphenyl d14 #11* | 21.169 | 20.0 | 19.579 | -2.1 |
| Benzo(a)anthracene #12 | 22.487 | 2.0 | 1.876 | -6.2 |
| Chrysene #13 | 23.359 | 2.0 | 1.873 | -6.3 |
| Benzo(b)fluoranthene #14 | 26.085 | 2.0 | 1.925 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.519 | 1.0 | 0.984 | -1.6 |
| Benzo(a)pyrene #16 | 28.612 | 2.0 | 1.836 | -8.2 |
| Dibenz(a,h)anthracene #1 | 30.480 | 2.0 | 1.843 | -7.8 |
| Benzo(g,h,i)perylene #18 | 31.301 | 2.0 | 1.713 | -14.4 |
| Indeno(1,2,3-cd)pyrene # | 32.268 | 2.0 | 1.960 | -2.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 20.277 | 1.4 |
| Acenaphthylene #2 | 10.959 | 20.0 | 20.000 | 0.0 |
| 1-Methylnaphthalene #3 | 11.908 | 20.0 | 20.062 | 0.3 |
| 2-Methylnaphthalene #4 | 12.484 | 20.0 | 20.166 | 0.8 |
| Acenaphthene #5 | 12.963 | 20.0 | 20.055 | 0.3 |
| Fluorene #6 | 13.620 | 20.0 | 20.020 | 0.1 |
| Phenanthrene #7 | 15.006 | 20.0 | 20.070 | 0.3 |
| Anthracene #8 | 16.413 | 20.0 | 20.136 | 0.7 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.980 | -1.0 |
| Pyrene #10 | 18.799 | 2.0 | 1.987 | -0.6 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.911 | -0.4 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.985 | -0.7 |
| Chrysene #13 | 23.344 | 2.0 | 1.990 | -0.5 |
| Benzo(b)fluoranthene #14 | 26.068 | 2.0 | 1.981 | -0.9 |
| Benzo(k)fluoranthene #15 | 27.502 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.596 | 2.0 | 1.963 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.464 | 2.0 | 1.847 | -7.6 |
| Benzo(g,h,i)perylene #18 | 31.283 | 2.0 | 1.993 | -0.4 |
| Indeno(1,2,3-cd)pyrene # | 32.255 | 2.0 | 1.983 | -0.9 |

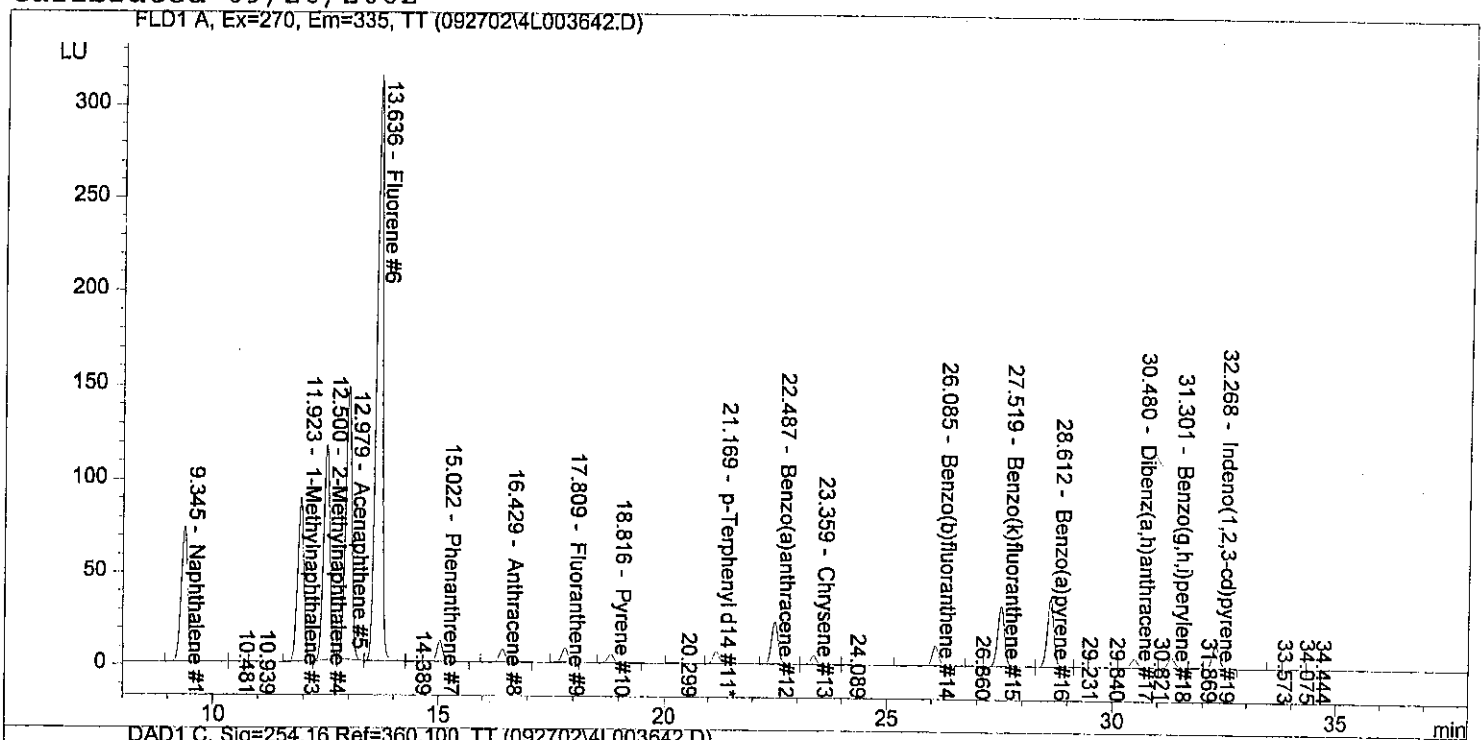
# = Failed 15.0% Criteria

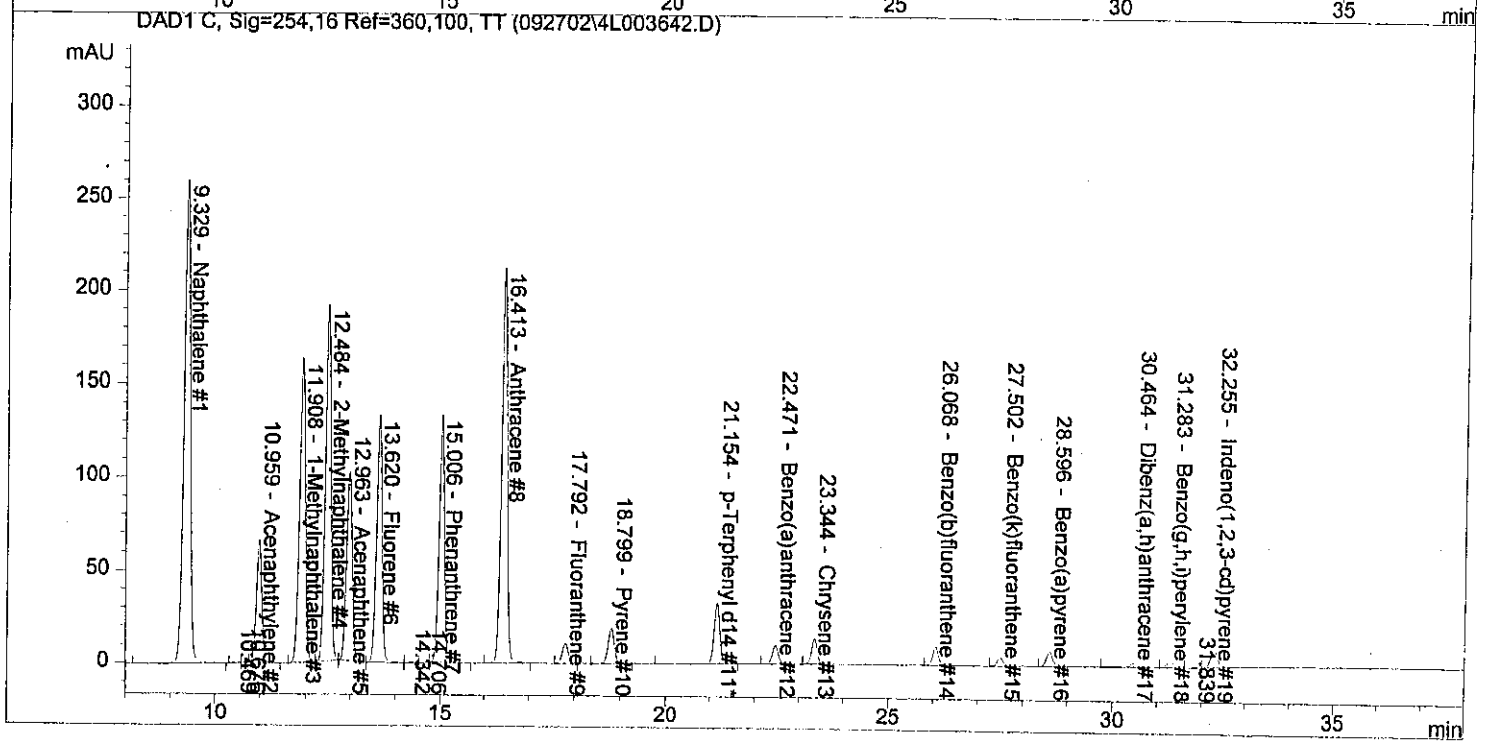
==========

Injection Date : 9/28/2002 2:13:16 PM
Sample Name : WG126189-03 CCV
Acq. Operator : RDC

Seq. Line : 24
Vial : 13
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 2:13:37 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002



==========

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 734.18384 | 2.57609e-2 | 18.91322 | | Naphthalene #1 |
| 11.923 | BB | 844.50049 | 2.26045e-2 | 19.08953 | | 1-Methylnaphthalene #3 |
| 12.500 | BB | 1097.27051 | 1.75600e-2 | 19.26809 | | 2-Methylnaphthalene #4 |
| 12.979 | BB | 1393.14941 | 1.39950e-2 | 19.49718 | | Acenaphthene #5 |
| 13.636 | BB | 2971.44165 | 6.74339e-3 | 20.03759 | | Fluorene #6 |
| 15.022 | BBA | 110.30974 | 1.71079e-1 | 18.87164 | | Phenanthrene #7 |
| 16.429 | BBA | 65.65425 | 3.06848e-1 | 20.14587 | | Anthracene #8 |
| 17.809 | PB | 76.33027 | 2.57893e-2 | 1.96850 | | Fluoranthene #9 |
| 18.816 | BBA | 46.70221 | 3.64531e-2 | 1.70244 | | Pyrene #10 |
| 21.169 | BB | 64.30165 | 3.04484e-1 | 19.57881 | | p-Terphenyl d14 #11* |
| 22.487 | BB | 231.30237 | 8.11144e-3 | 1.87620 | | Benzo(a)anthracene #12 |
| 23.359 | BB | 47.45094 | 3.94813e-2 | 1.87342 | | Chrysene #13 |
| 26.085 | BBA | 112.34219 | 1.71376e-2 | 1.92527 | | Benzo(b)fluoranthene #14 |
| 27.519 | BB | 343.05939 | 2.86759e-3 | 9.83755e-1 | | Benzo(k)fluoranthene #15 |
| 28.612 | BB | 382.58804 | 4.79995e-3 | 1.83640 | | Benzo(a)pyrene #16 |
| 30.480 | BB | 45.87802 | 4.01721e-2 | 1.84302 | | Dibenz(a,h)anthracene #17 |
| 31.301 | BB | 64.73683 | 2.64588e-2 | 1.71286 | | Benzo(g,h,i)perylene #18 |
| 32.268 | BB | 133.87988 | 1.46413e-2 | 1.96017 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.08397

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.329 | BBA | 2416.22339 | 8.39215e-3 | 20.27730 | | Naphthalene #1 |
| 10.959 | BBA | 580.99133 | 3.44233e-2 | 19.99964 | | Acenaphthylene #2 |
| 11.908 | PB | 1432.33130 | 1.40062e-2 | 20.06157 | | 1-Methylnaphthalene #3 |
| 12.484 | BB | 1661.97900 | 1.21338e-2 | 20.16613 | | 2-Methylnaphthalene #4 |
| 12.963 | BB | 880.00739 | 2.27900e-2 | 20.05533 | | Acenaphthene #5 |
| 13.620 | BB | 1145.00500 | 1.74849e-2 | 20.02024 | | Fluorene #6 |
| 15.006 | BBA | 1145.26196 | 1.75240e-2 | 20.06953 | | Phenanthrene #7 |
| 16.413 | BBA | 1863.02014 | 1.08081e-2 | 20.13575 | | Anthracene #8 |
| 17.792 | PB | 94.09203 | 2.10453e-2 | 1.98020 | | Fluoranthene #9 |
| 18.799 | BBA | 178.38405 | 1.11408e-2 | 1.98734 | | Pyrene #10 |
| 21.154 | PBA | 297.39642 | 6.69499e-2 | 19.91065 | | p-Terphenyl d14 #11* |
| 22.471 | PBA | 92.82799 | 2.13841e-2 | 1.98505 | | Benzo(a)anthracene #12 |
| 23.344 | BBA | 129.43442 | 1.53726e-2 | 1.98974 | | Chrysene #13 |
| 26.068 | BBA | 96.76061 | 2.04745e-2 | 1.98113 | | Benzo(b)fluoranthene #14 |
| 27.502 | BBA | 42.15440 | 2.35826e-2 | 9.94112e-1 | | Benzo(k)fluoranthene #15 |
| 28.596 | BBA | 73.13522 | 2.68466e-2 | 1.96343 | | Benzo(a)pyrene #16 |
| 30.464 | PBA | 19.97178 | 9.25052e-2 | 1.84749 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ng/ml] | | |
|---|---|---|---|---|---|---|
| 31.283 | BB | 35.62944 | 5.59295e-2 | 1.99274 | | Benzo(g,h,i)perylene #18 |
| 32.255 | BBA | 99.29555 | 1.99705e-2 | 1.98298 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 199.40035 | | |

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 |

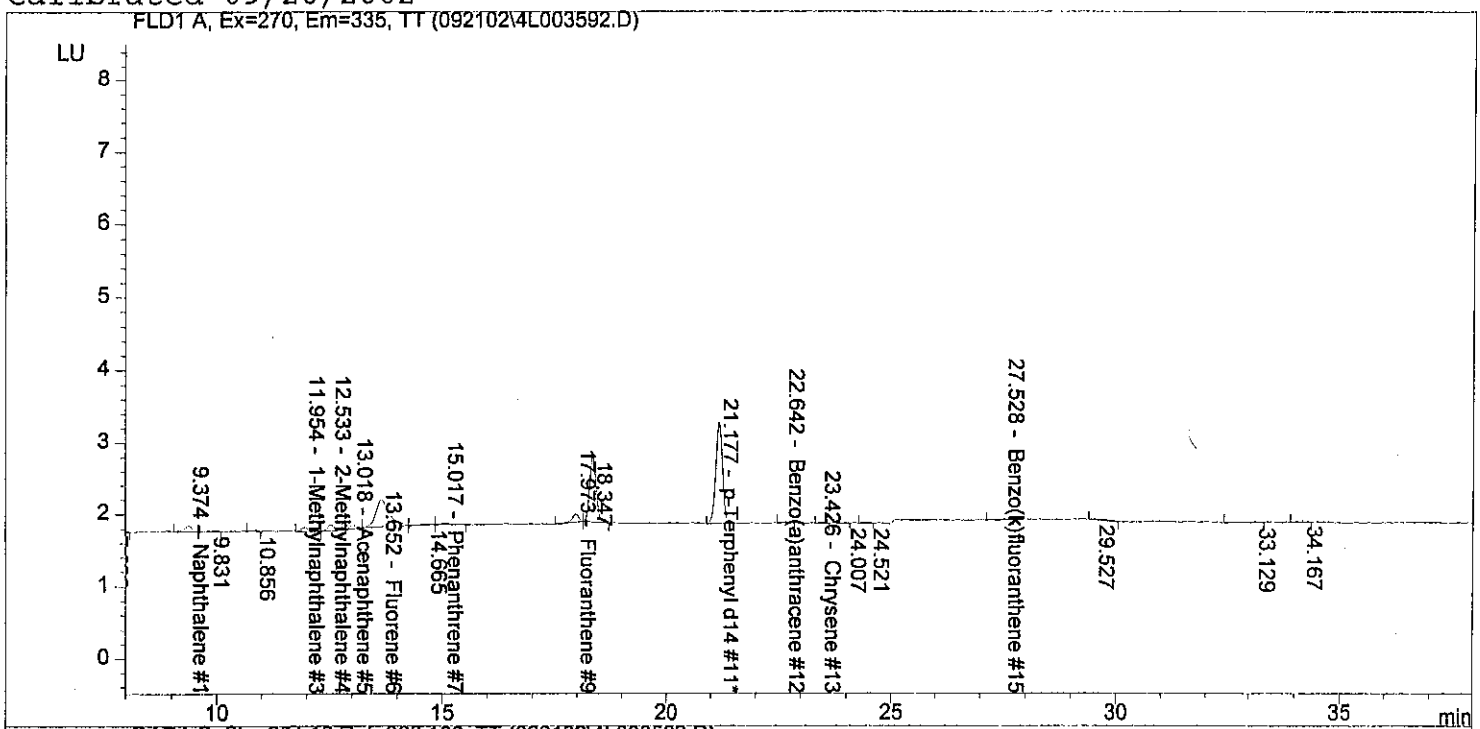
| COMPOUND | STD #1 RT | STD #2 RT | STD #3 RT | RT WIN |
|---|---|---|---|---|
| Naphthalene (FLD) | 9.337 | 9.362 | 9.352 | 0.038 |
| 1-Methylnaphthalene (FLD) | 11.935 | 11.941 | 11.940 | 0.010 |
| 2-Methylnaphthalene (FLD) | 12.517 | 12.523 | 12.521 | 0.009 |
| Acenaphthene (FLD) | 13.001 | 13.006 | 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 |

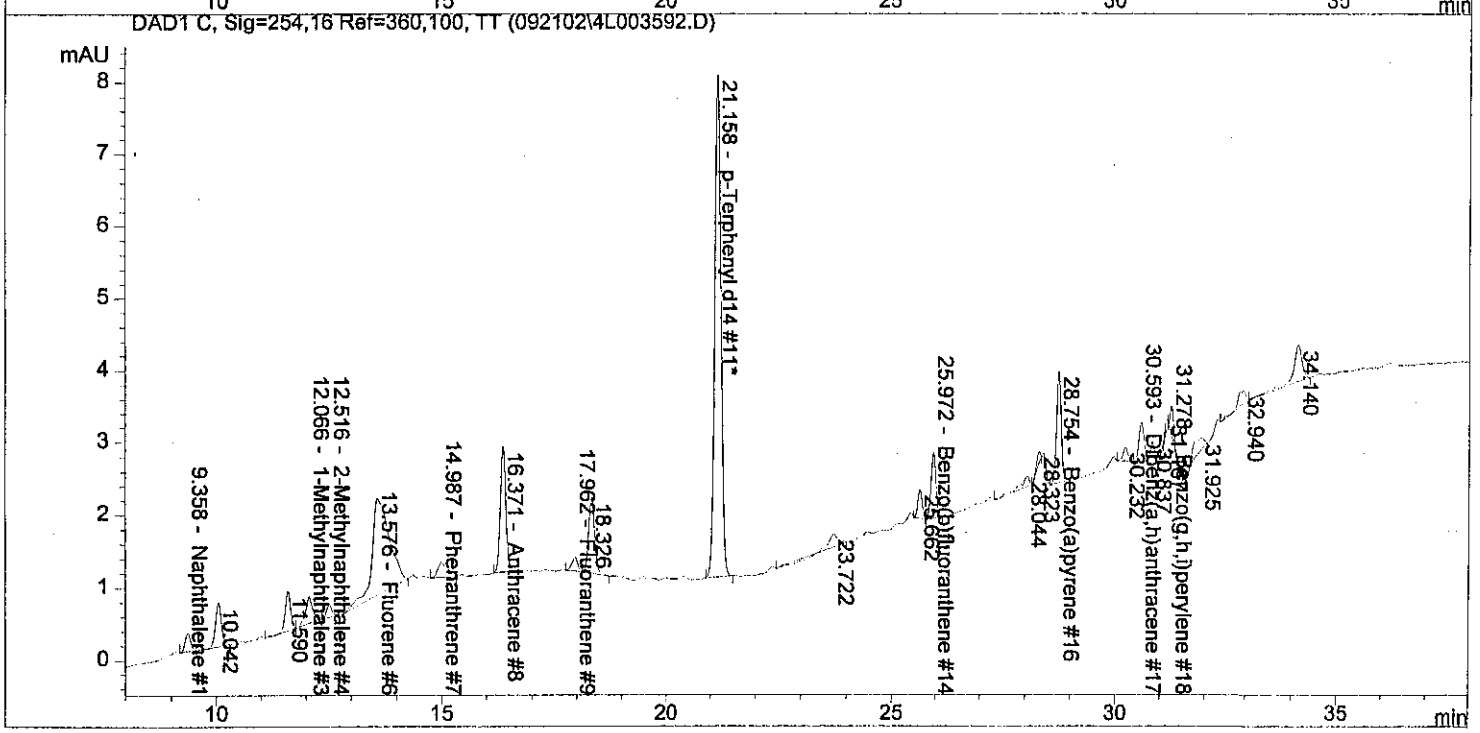
# 2.2.7.4 Raw QC Data

==========

Injection Date : 9/22/2002 4:11:48 AM  Seq. Line : 15
Sample Name : WG125616-02 WBLK  Vial : 15
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 4:11:16 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.374 | BB | 9.20602e-1 | 4.09291e-1 | 3.76794e-1 | | Naphthalene #1 |
| 11.954 | BB | 6.64957e-1 | 5.29024e-1 | 3.51778e-1 | | 1-Methylnaphthalene #3 |
| 12.533 | BB | 8.86726e-1 | 2.96739e-1 | 2.63126e-1 | | 2-Methylnaphthalene #4 |
| 13.018 | BB | 5.65273e-1 | 3.27767e-1 | 1.85278e-1 | | Acenaphthene #5 |
| 13.652 | BB | 7.59753 | 1.23108e-2 | 9.35313e-2 | | Fluorene #6 |
| 15.017 | BBA | 2.59779e-1 | 2.04837 | 5.32122e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.973 | PB | 1.05906 | 5.33292e-2 | 5.64786e-2 | F | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.177 | BBA | 13.98228 | 3.19216e-1 | 4.46337 44.66 | | p-Terphenyl d14 #11* |
| 22.642 | BB | 3.04496e-1 | 1.60360e-1 | 4.88289e-2 | | Benzo(a)anthracene #12 |
| 23.426 | BB | 1.77524e-1 | 2.59344e-1 | 4.60398e-2 | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.528 | BB | 2.49354e-1 | 5.37255e-2 | 1.33966e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.43075

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.358 | BB | 2.25756 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 12.066 | BB | 4.18840 | 5.26668e-2 | 2.20590e-1 cmol | | 1-Methylnaphthalene #3 |
| 12.516 | BB | 1.46516 | 4.88822e-2 | 7.16200e-2 ↓ | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.576 | BB | 35.22351 | 2.26123e-2 | 7.96483e-1 NC | | Fluorene #6 |
| 14.987 | PB | 2.84047 | 8.67833e-2 | 2.46505e-1 cmol | | Phenanthrene #7 |
| 16.371 | BBA | 14.28379 | 1.08645e-2 | 1.55187e-1 ↓ | | Anthracene #8 |
| 17.962 | BB | 1.68250 | 3.99728e-2 | 6.72541e-2 | F | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.158 | BBA | 62.98908 | 7.01366e-2 | 4.41784 44.26 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.972 | BB | 7.03358 | 2.47737e-2 | 1.74248e-1 NC | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.754 | BB | 10.93023 | 3.13103e-2 | 3.42229e-1 NC | | Benzo(a)pyrene #16 |
| 30.593 | BB | 3.84991 | 5.23124e-2 | 2.01398e-1 ↓ | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.278 | BB | 1.09436 | 9.69868e-2 | 1.06139e-1 | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.79949

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), (Naphthalene

==========

*** End of Report ***

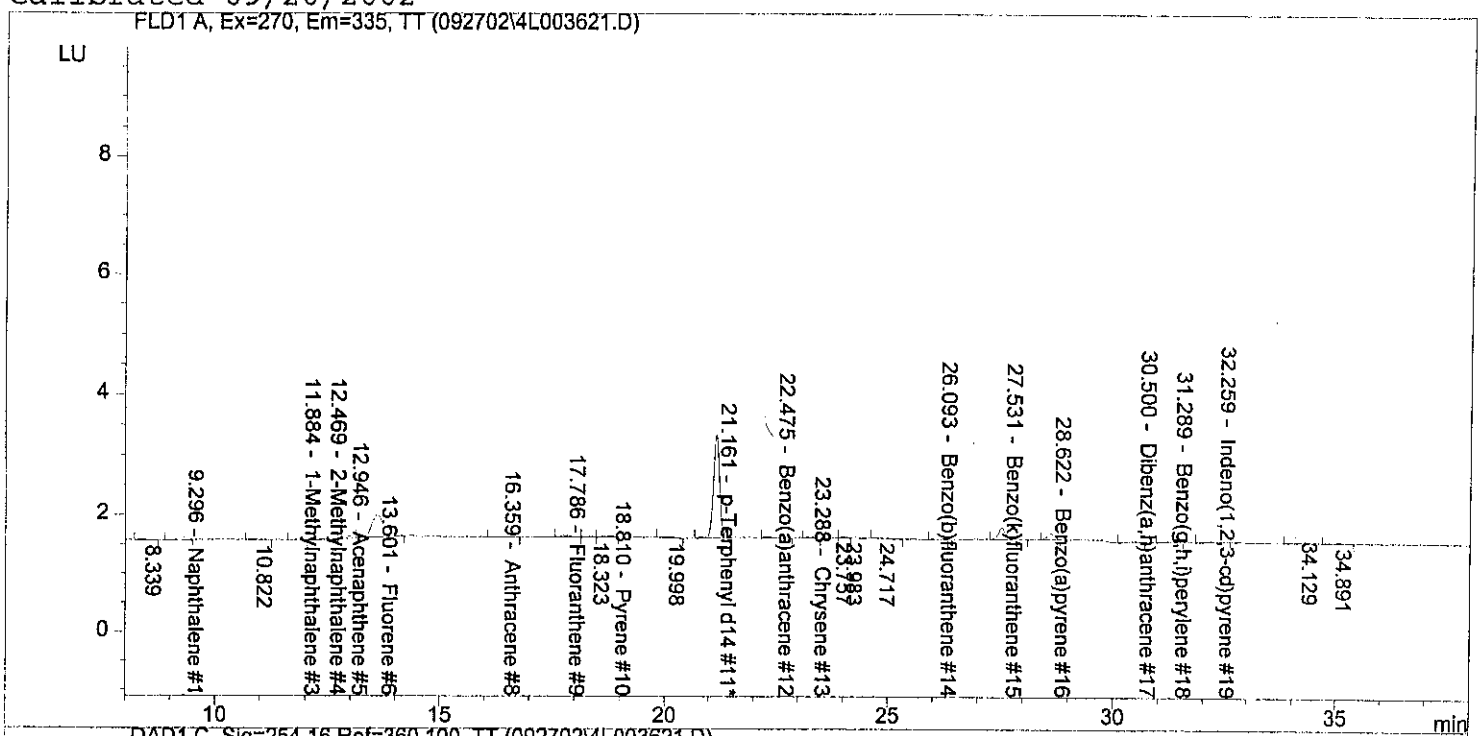
==========

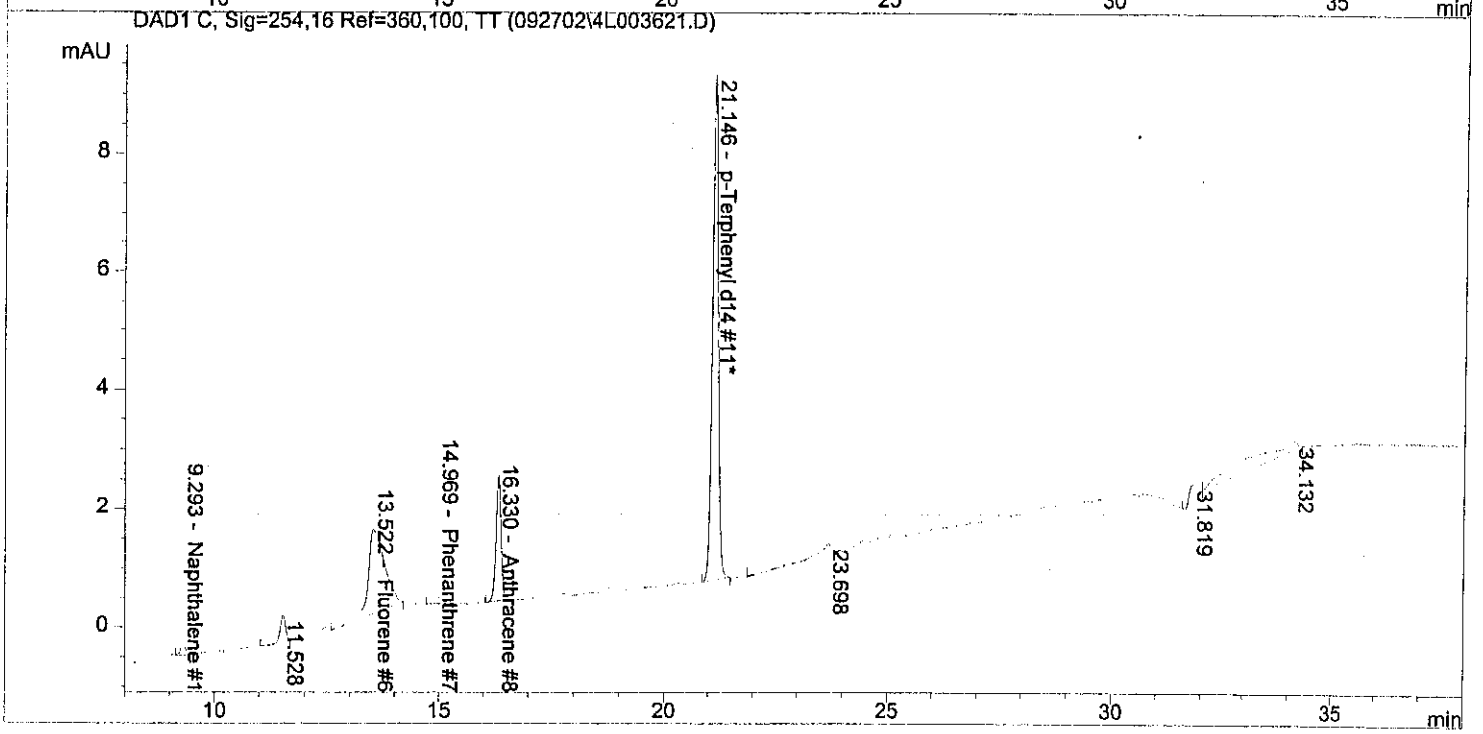
Injection Date : 9/27/2002 6:23:42 PM
Sample Name : WG126062-02 WBLK
Acq. Operator : RDC

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/26/2002 2:16:36 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.296 | BB | 5.98393e-1 | 6.16065e-1 | 3.68649e-1 | | Naphthalene #1 |
| 11.884 | BB | 3.97275e-1 | 8.70517e-1 | 3.45834e-1 | | 1-Methylnaphthalene #3 |
| 12.469 | BB | 6.45484e-1 | 4.01163e-1 | 2.58945e-1 | | 2-Methylnaphthalene #4 |
| 12.946 | BB | 4.09960e-1 | 4.46688e-1 | 1.83124e-1 | | Acenaphthene #5 |
| 13.601 | BB | 7.70816 | 1.22307e-2 | 9.42758e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.359 | PBA | 3.34105e-1 | 6.31418e-1 | 2.10960e-1 | | Anthracene #8 |
| 17.786 | BB | 3.33034e-1 | 1.14212e-1 | 3.80363e-2 | | Fluoranthene #9 |
| 18.810 | BB | 2.37528e-1 | 3.34372e-1 | 7.94226e-2 | | Pyrene #10 |
| 21.161 | BB | 17.08326 | 3.15799e-1 | 5.39488 | | p-Terphenyl d14 #11* |
| 22.475 | BB | 1.06010 | 5.16991e-2 | 5.48063e-2 | | Benzo(a)anthracene #12 |
| 23.288 | BB | 3.26393e-1 | 1.58687e-1 | 5.17944e-2 | | Chrysene #13 |
| 26.093 | BBA | 3.95097e-1 | 1.18219e-1 | 4.67078e-2 | | Benzo(b)fluoranthene #14 |
| 27.531 | BBA | 2.18594 | 8.63625e-3 | 1.88784e-2 | | Benzo(k)fluoranthene #15 |
| 28.622 | BBA | 1.03742 | 6.04271e-2 | 6.26880e-2 | | Benzo(a)pyrene #16 |
| 30.500 | PB | 2.47942e-1 | 3.04217e-1 | 7.54282e-2 | | Dibenz(a,h)anthracene #17 |
| 31.289 | BB | 3.53517e-1 | 2.66671e-1 | 9.42730e-2 | | Benzo(g,h,i)perylene #18 |
| 32.259 | BB | 5.56830e-1 | 7.76547e-2 | 4.32405e-2 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 7.42194 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.293 | BB | 1.32572 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.511 | | - | - | - | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.522 | BB | 36.46761 | 2.24318e-2 | 8.18034e-1 NC | | Fluorene #6 |
| 14.969 | PB | 1.52260 | 1.46879e-1 | 2.23638e-1 cmol | | Phenanthrene #7 |
| 16.330 | PBA | 17.42477 | 1.08543e-2 | 1.89133e-1 cmol | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.146 | PBA | 76.42993 | 6.94256e-2 | 5.30619 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | 53.1% | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.53700

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), (Naphthalene

==========

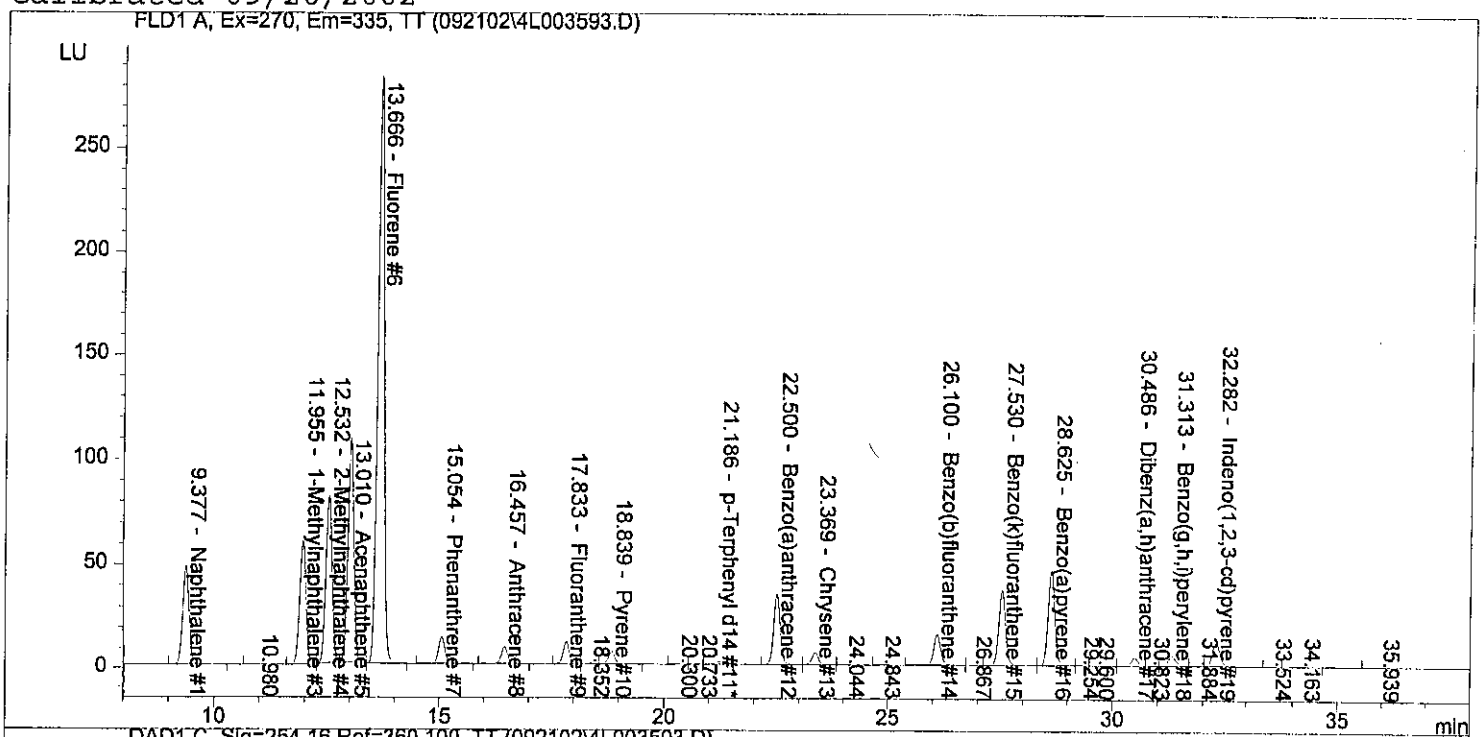
*** End of Report ***

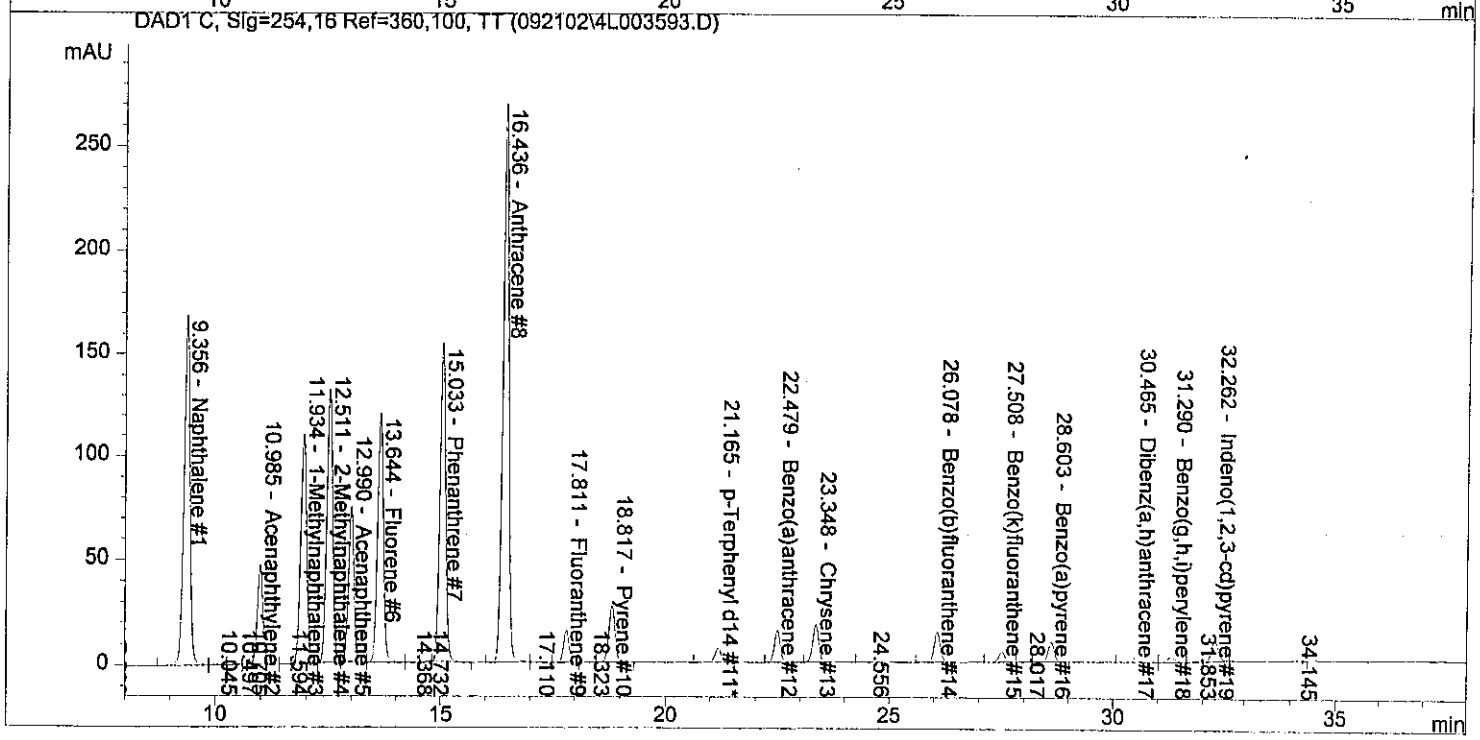
==========

Injection Date : 9/22/2002 5:08:25 AM
Sample Name : WG125616-03 WLCS
Acq. Operator : RDC

Seq. Line : 16
Vial : 16
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 5:07:56 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 | 481.33789 | 2.60138e-2 | 12.52144 | | Naphthalene #1 |
| 11.955 | BB | 575.39679 | 2.27912e-2 | 13.11396 | | 1-Methylnaphthalene #3 |
| 12.532 | BB | 765.44128 | 1.76579e-2 | 13.51608 | | 2-Methylnaphthalene #4 |
| 13.010 | BB | 1024.97144 | 1.40408e-2 | 14.39141 | | Acenaphthene #5 |
| 13.666 | BBA | 2710.42554 | 6.74477e-3 | 18.28119 | | Fluorene #6 |
| 15.054 | BBA | 129.29434 | 1.70428e-1 | 22.03537 | | Phenanthrene #7 |
| 16.457 | BBA | 83.99226 | 3.06485e-1 | 25.74241 | | Anthracene #8 |
| 17.833 | PB | 109.94381 | 2.56708e-2 | 2.82235 | | Fluoranthene #9 |
| 18.839 | BBA | 65.85987 | 3.60101e-2 | 2.37162 | | Pyrene #10 |
| 21.186 | BB | 13.65544 | 3.19667e-1 | 4.36520 | 43.7% | p-Terphenyl d14 #11* |
| 22.500 | BB | 348.97888 | 8.04377e-3 | 2.80710 | | Benzo(a)anthracene #12 |
| 23.369 | BB | 62.05806 | 3.92869e-2 | 2.43807 | | Chrysene #13 |
| 26.100 | BB | 163.08620 | 1.70266e-2 | 2.77680 | | Benzo(b)fluoranthene #14 |
| 27.530 | BB | 382.44406 | 2.86378e-3 | 1.09524 | | Benzo(k)fluoranthene #15 |
| 28.625 | BB | 480.71851 | 4.76907e-3 | 2.29258 | | Benzo(a)pyrene #16 |
| 30.486 | BB | 39.92503 | 4.03861e-2 | 1.61241 | | Dibenz(a,h)anthracene #17 |
| 31.313 | BB | 56.99602 | 2.66379e-2 | 1.51826 | | Benzo(g,h,i)perylene #18 |
| 32.282 | BB | 137.08499 | 1.46351e-2 | 2.00626 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 145.70774 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.356 | PB | 1589.58997 | 8.37019e-3 | 13.30517 | | Naphthalene #1 |
| 10.985 | BB | 421.01111 | 3.45786e-2 | 14.55796 | | Acenaphthylene #2 |
| 11.934 | BB | 974.23767 | 1.40596e-2 | 13.69734 | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 1163.12378 | 1.21477e-2 | 14.12930 | | 2-Methylnaphthalene #4 |
| 12.990 | BB | 647.83862 | 2.28774e-2 | 14.82086 | | Acenaphthene #5 |
| 13.644 | BB | 1070.72839 | 1.74961e-2 | 18.73362 | | Fluorene #6 |
| 15.033 | BBA | 1341.24805 | 1.74988e-2 | 23.47023 | | Phenanthrene #7 |
| 16.436 | BB | 2406.98706 | 1.08080e-2 | 26.01477 | | Anthracene #8 |
| 17.811 | BB | 135.24704 | 2.09405e-2 | 2.83214 | | Fluoranthene #9 |
| 18.817 | BBA | 253.11058 | 1.10851e-2 | 2.80575 | | Pyrene #10 |
| 21.165 | BBA | 62.74049 | 7.01526e-2 | 4.40141 | 44.0% | p-Terphenyl d14 #11* |
| 22.479 | PBA | 140.56660 | 2.12513e-2 | 2.98723 | | Benzo(a)anthracene #12 |
| 23.348 | PBA | 168.73589 | 1.53099e-2 | 2.58334 | | Chrysene #13 |
| 26.078 | BBA | 138.66808 | 2.03727e-2 | 2.82504 | | Benzo(b)fluoranthene #14 |
| 27.508 | BB | 47.22672 | 2.35300e-2 | 1.11125 | | Benzo(k)fluoranthene #15 |
| 28.603 | BBA | 92.45966 | 2.66827e-2 | 2.46707 | | Benzo(a)pyrene #16 |
| 30.465 | BB | 19.48624 | 9.22661e-2 | 1.79792 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.290 | BB | 31.34413 | 5.61074e-2 | 1.75864 | | Benzo(g,h,i)perylene #18 |
| 32.262 | BB | 102.58334 | 1.99528e-2 | 2.04682 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 166.34583

Results obtained with enhanced integrator!

*** End of Report ***

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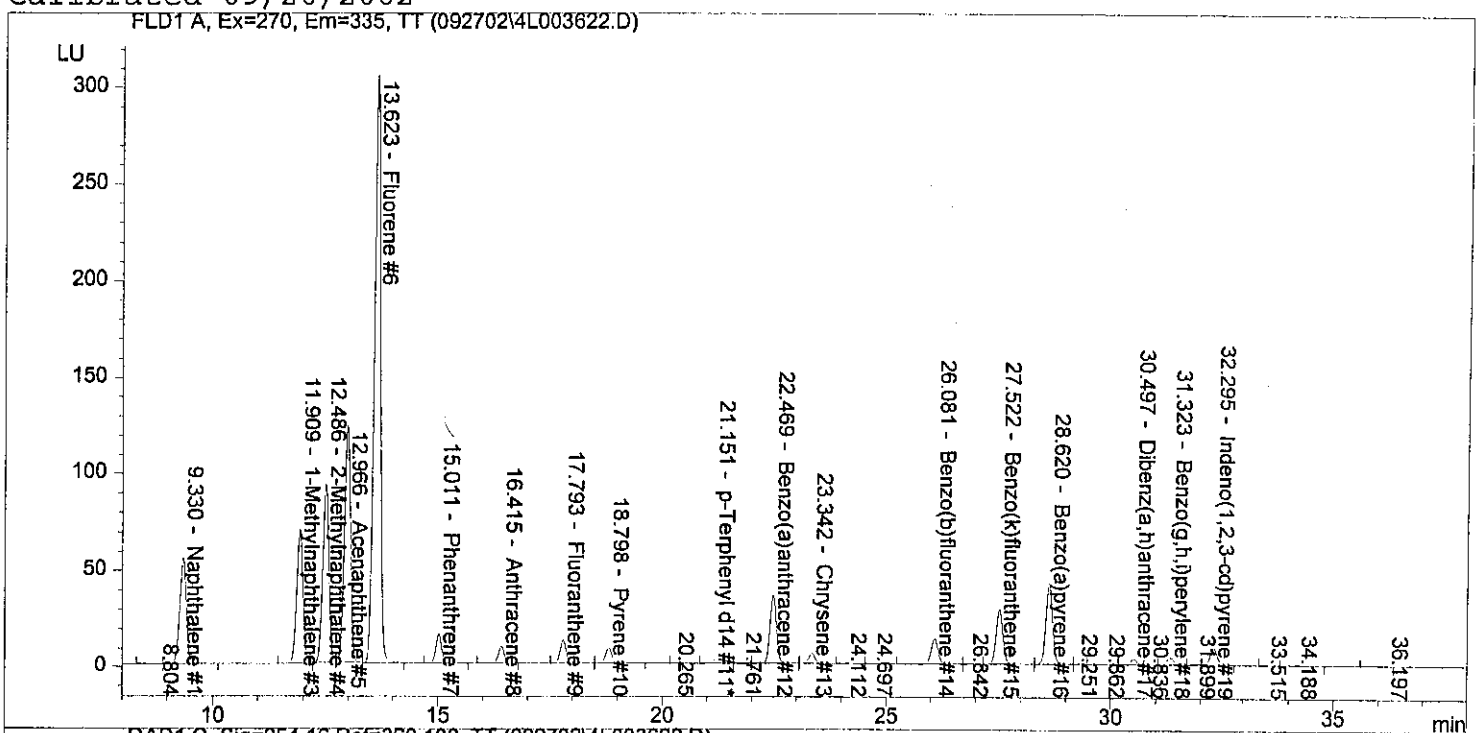
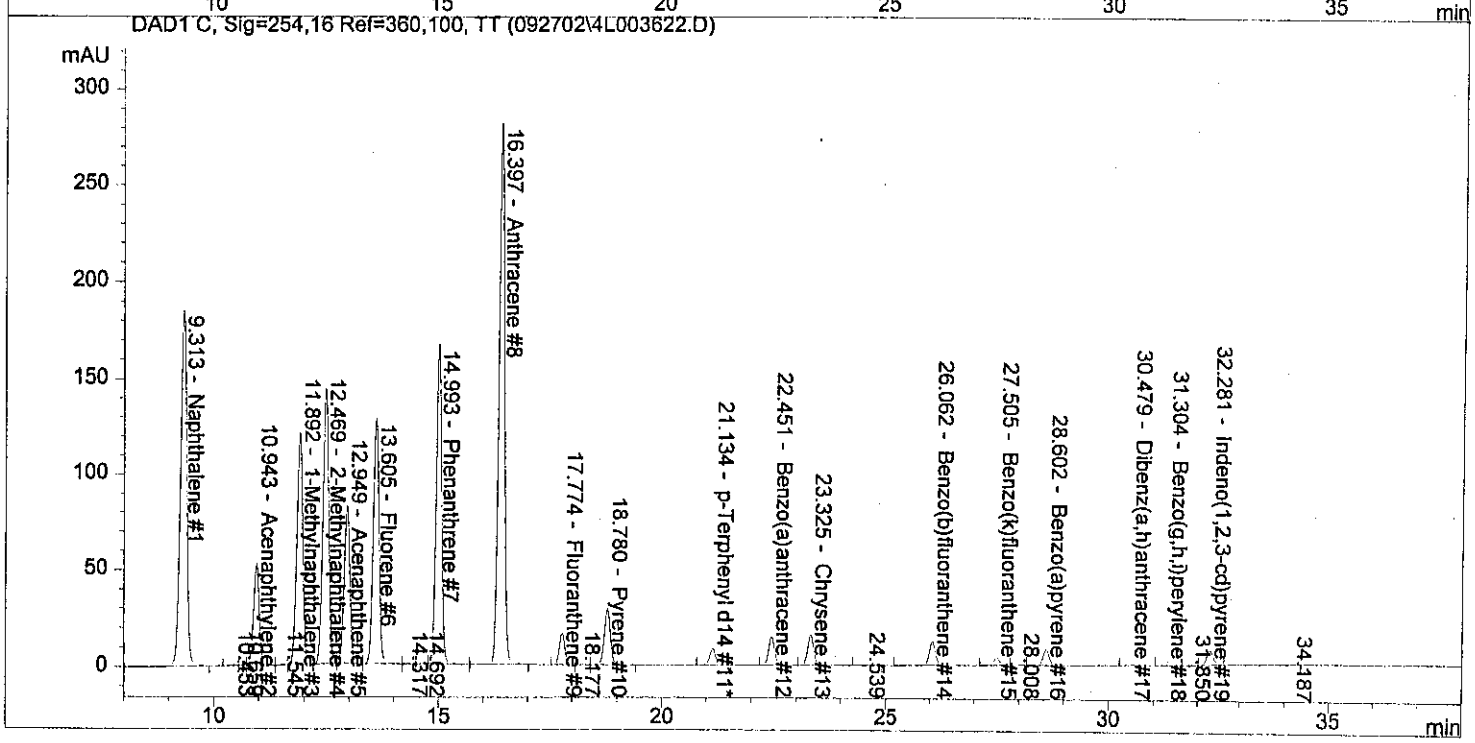
Injection Date : 9/27/2002 7:20:25 PM
Sample Name : WG126062-03 WLCS
Acq. Operator : RDC

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 8 µl

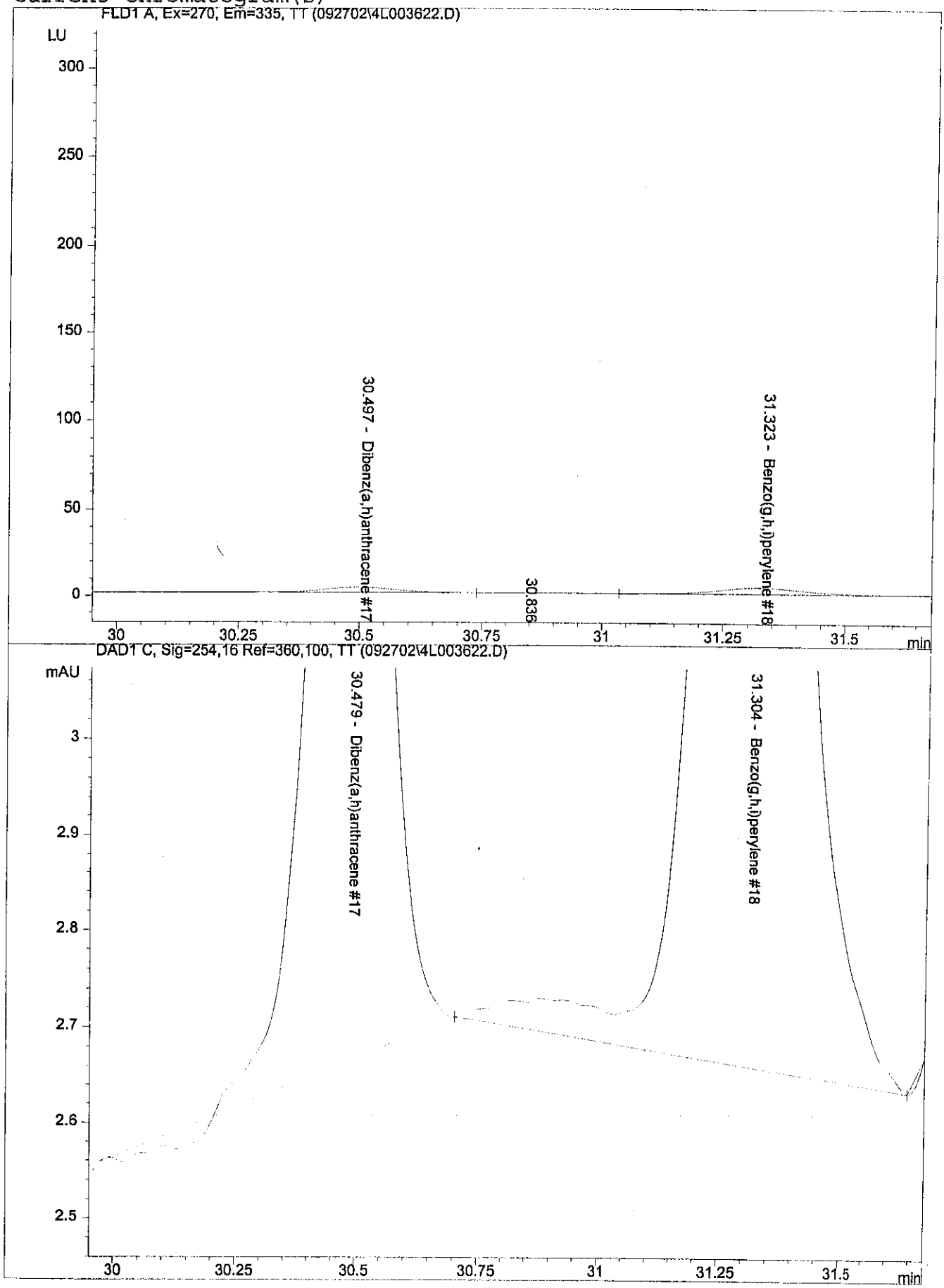
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/26/2002 2:16:36 PM
(modified after loading)

Calibrated 09/20/2002

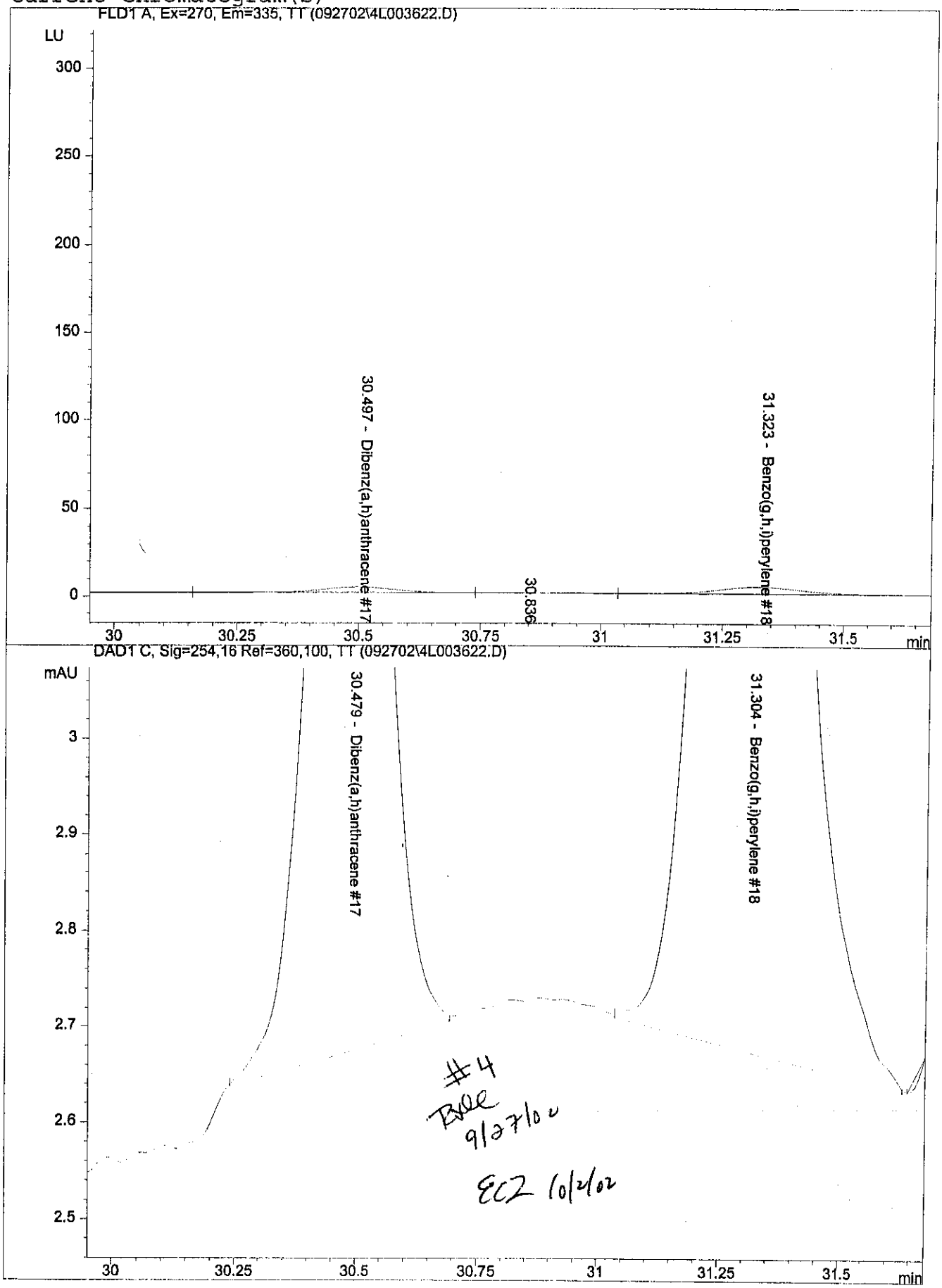


Current Chromatogram(s)



Current Chromatogram(s)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | BBA | 556.29346 | 2.59149e-2 | 14.41627 | | Naphthalene #1 |
| 11.909 | BB | 663.57037 | 2.27133e-2 | 15.07189 | | 1-Methylnaphthalene #3 |
| 12.486 | BB | 869.79761 | 1.76191e-2 | 15.32502 | | 2-Methylnaphthalene #4 |
| 12.966 | BB | 1163.09644 | 1.40202e-2 | 16.30688 | | Acenaphthene #5 |
| 13.623 | BB | 2887.73145 | 6.74381e-3 | 19.47430 | | Fluorene #6 |
| 15.011 | BBA | 146.70108 | 1.69979e-1 | 24.93616 | | Phenanthrene #7 |
| 16.415 | BBA | 86.21117 | 3.06452e-1 | 26.41959 | | Anthracene #8 |
| 17.793 | PB | 120.98444 | 2.56463e-2 | 3.10280 | | Fluoranthene #9 |
| 18.798 | BBA | 85.88283 | 3.57583e-2 | 3.07102 | | Pyrene #10 |
| 21.151 | BB | 16.44490 | 3.16397e-1 | 5.20312 | | p-Terphenyl d14 #11* |
| 22.469 | BB | 361.67130 | 8.03910e-3 | 2.90751 | | Benzo(a)anthracene #12 |
| 23.342 | BB | 58.58308 | 3.93244e-2 | 2.30374 | | Chrysene #13 |
| 26.081 | BB | 143.87227 | 1.70594e-2 | 2.45437 | | Benzo(b)fluoranthene #14 |
| 27.522 | BB | 302.88528 | 2.87250e-3 | 8.70038e-1 | | Benzo(k)fluoranthene #15 |
| 28.620 | BB | 439.98453 | 4.78022e-3 | 2.10322 | | Benzo(a)pyrene #16 |
| 30.497 | BB | 31.11422 | 4.08529e-2 | 1.27111 | | Dibenz(a,h)anthracene #17 |
| 31.323 | BB | 47.25027 | 2.69469e-2 | 1.27325 | | Benzo(g,h,i)perylene #18 |
| 32.295 | BB | 102.50812 | 1.47218e-2 | 1.50911 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 158.01940

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.313 | BB | 1711.46191 | 8.37476e-3 | 14.33308 | | Naphthalene #1 |
| 10.943 | BB | 462.78119 | 3.45277e-2 | 15.97876 | | Acenaphthylene #2 |
| 11.892 | BB | 1056.18018 | 1.40466e-2 | 14.83576 | | 1-Methylnaphthalene #3 |
| 12.469 | BB | 1248.84497 | 1.21445e-2 | 15.16664 | | 2-Methylnaphthalene #4 |
| 12.949 | BB | 704.50922 | 2.28507e-2 | 16.09855 | | Acenaphthene #5 |
| 13.605 | BB | 1125.12170 | 1.74877e-2 | 19.67582 | | Fluorene #6 |
| 14.993 | BB | 1430.84131 | 1.74896e-2 | 25.02483 | | Phenanthrene #7 |
| 16.397 | BBA | 2471.05225 | 1.08080e-2 | 26.70717 | | Anthracene #8 |
| 17.774 | PB | 142.89407 | 2.09277e-2 | 2.99044 | | Fluoranthene #9 |
| 18.780 | BBA | 270.15265 | 1.10767e-2 | 2.99240 | | Pyrene #10 |
| 21.134 | BBA | 76.16551 | 6.94371e-2 | 5.28872 | | p-Terphenyl d14 #11* |
| 22.451 | PBA | 135.10806 | 2.12617e-2 | 2.87263 | | Benzo(a)anthracene #12 |
| 23.325 | PB | 147.17972 | 1.53402e-2 | 2.25776 | | Chrysene #13 |
| 26.062 | BBA | 117.01661 | 2.04162e-2 | 2.38903 | | Benzo(b)fluoranthene #14 |
| 27.505 | BB | 36.73861 | 2.36549e-2 | 8.69047e-1 | | Benzo(k)fluoranthene #15 |
| 28.602 | BB | 77.03605 | 2.68069e-2 | 2.06510 | | Benzo(a)pyrene #16 |
| 30.479 | MM | 11.98877 | 8.61141e-2 | 1.03240 | | Dibenz(a,h)anthracene #17 |

52.916

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.304 | MM | 21.80879 | 5.67540e-2 | 1.23774 | | Benzo(g,h,i)perylene #18 |
| 32.281 | BB | 75.29875 | 2.01465e-2 | 1.51700 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 173.33287 | | |

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 | WG125711-01 STD6 | 8310 | 1 | Sample | | |
| 3 | 3 | WG125711-02 STD6 | 8310 | 1 | Sample | | |
| 4 | 4 | WG125711-03 STD5 | 8310 | 1 | Sample | | |
| 5 | 5 | WG125711-04 STD4 | 8310 | 1 | Sample | | |
| 6 | 6 | WG125711-05 STD3 | 8310 | 1 | Sample | | |
| 7 | 7 | WG125711-06 STD2 | 8310 | 1 | Sample | | |
| 8 | 8 | WG125711-07 STD1 | 8310 | 1 | Sample | | |
| 9 | 9 | WG125711-08 ALT | 8310 | 1 | Sample | | |

RJC 9/21/02

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003569 | 01:01 ✓ | | accn blk |
| No | 2 | 2 | 8310 | 4L003570 | 02:01 ✓ | SOS 61-07 | WG125711-01 ST |
| No | 3 | 3 | 8310 | 4L003571 | 03:01 ✓ | SOS 59-38 | WG125711-02 ST |
| No | 4 | 4 | 8310 | 4L003572 | 04:01 ✓ | DIL'N OF SOS 61-07/59-38 | WG125711-03 ST |
| No | 5 | 5 | 8310 | 4L003573 | 05:01 ✓ | | WG125711-04 ST |
| No | 6 | 6 | 8310 | 4L003574 | 06:01 ✓ | | WG125711-05 ST |
| No | 7 | 7 | 8310 | 4L003575 | 07:01 ✓ | | WG125711-06 ST |
| No | 8 | 8 | 8310 | 4L003576 | 08:01 ✓ | | WG125711-07 ST |
| No | 9 | 9 | 8310 | 4L003577 | 09:01 ✓ | DIL'N OF SOS 60-26/60-27 | WG125711-08 AL |

RJC 9/21/02

validation

KEMRON ENVIRONMENTAL SERVICES

# HPLC Laboratory Maintenance Log

Analysis Date/Time Sept. 20, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092002 A

Analyst Initials RDE SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**

- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**

Yes ____ No ____

**Additional Maintenance**

Problem: _____

Action Taken: _____

**Comments**

NOTE: ACCN is JTBaker Lot #X32823

Reviewed By: [illegible]

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG125769-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG125546-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG125546-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG125546-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG125546-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG125546-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG125769-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | WG125616-02 WBLK | 8310 | 1 | Sample | | |
| 16 | 16 | WG125616-03 WLCS | 8310 | 1 | Sample | | |
| 17 | 17 | L0209310-01 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 19 | 19 | WG125616-01 WREF | 8310 | 1 | Sample | | |
| 20 | 20 | WG125616-04 WMS | 8310 | 1 | Sample | | |
| 21 | 21 | WG125616-05 WMSD | 8310 | 1 | Sample | | |
| 22 | 22 | L0209310-06 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209310-07 831W | 8310 | 1 | Sample | | |
| 24 | 24 | WG125769-03 CCV | 8310 | 1 | Sample | | |
| 25 | 25 | L0209310-08 831W | 8310 | 1 | Sample | | |
| 26 | 26 | L0209310-09 831W | 8310 | 1 | Sample | | |
| 27 | 27 | L0209310-10 831W | 8310 | 1 | Sample | | |
| 28 | 28 | L0209310-11 831W | 8310 | 1 | Sample | | |
| 29 | 29 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 30 | 30 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 31 | 31 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 32 | 32 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 33 | 33 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 34 | 34 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 35 | 35 | WG125769-04 CCV | 8310 | 1 | Sample | | |
| 36 | 36 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 37 | 35 | WG125769-05 CCV | 8310 | 1 | Sample | | |

9/24/02

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003578 | 01:01 ✓ | | accn blk |
| No | 2 | 2 | 8310 | 4L003579 | 02:01 ✓ | SOS 61-07/59-38 | WG125769-01 CC |
| No | 3 | 3 | 8310 | 4L003580 | 03:01 ✓ | | WG125546-02 WB |
| No | 4 | 4 | 8310 | 4L003581 | 04:01 ✓ | | WG125546-03 WL |
| No | 5 | 5 | 8310 | 4L003582 | 05:01 | RE, SURR. LOW, LCS | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003583 | 06:01 | RE, same | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003584 | 07:01 | RE, same | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003585 | 08:01 | RE, LCS low | WG125546-01 WR |
| No | 9 | 9 | 8310 | 4L003586 | 09:01 | RE, SURR + LCS low | WG125546-04 WM |
| No | 10 | 10 | 8310 | 4L003587 | 10:01 | RE, same | WG125546-05 WM |
| No | 11 | 11 | 8310 | 4L003588 | 11:01 | RE, same | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003589 | 12:01 | RE, ~~SURR~~ + LCS low | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003590 | 13:01 ✓ | SOS 61-07/59-38 | WG125769-02 CC |
| No | 14 | 14 | 8310 | 4L003591 | 14:01 | RE, LCS low | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003592 | 15:01 ✓ | | WG125616-02 WB |
| No | 16 | 16 | 8310 | 4L003593 | 16:01 ✓ | | WG125616-03 WL |
| No | 17 | 17 | 8310 | 4L003594 | 17:01 ✓ | | L0209310-01 83 |
| No | 18 | 18 | 8310 | 4L003595 | 18:01 | RE, low surr. | L0209310-02 83 |
| No | 19 | 19 | 8310 | 4L003596 | 19:01 ✓ | | WG125616-01 WR |
| No | 20 | 20 | 8310 | 4L003597 | 20:01 ✓ | | WG125616-04 WM |
| No | 21 | 21 | 8310 | 4L003598 | 21:01 ✓ | | WG125616-05 WM |
| No | 22 | 22 | 8310 | 4L003599 | 22:01 ✓ | | L0209310-06 83 |
| No | 23 | 23 | 8310 | 4L003600 | 23:01 ✓ | | L0209310-07 83 |
| No | 24 | 24 | 8310 | 4L003601 | 24:01 ✓ | SOS 61-07/59-38 | WG125769-03 CC |
| No | 25 | 25 | 8310 | 4L003602 | 25:01 ✓ | | L0209310-08 83 |
| No | 26 | 26 | 8310 | 4L003603 | 26:01 ✓ | | L0209310-09 83 |
| No | 27 | 27 | 8310 | 4L003604 | 27:01 ✓ | | L0209310-10 83 |
| No | 28 | 28 | 8310 | 4L003605 | 28:01 ✓ | | L0209310-11 83 |
| No | 29 | 29 | 8310 | 4L003606 | 29:01 | RE, low surr. | L0209337-01 83 |
| No | 30 | 30 | 8310 | 4L003607 | 30:01 | RE, same | L0209337-02 83 |
| No | 31 | 31 | 8310 | 4L003608 | 31:01 | RE, same | L0209337-03 83 |
| No | 32 | 32 | 8310 | 4L003609 | 32:01 | RE, same | L0209337-04 83 |
| No | 33 | 33 | 8310 | 4L003610 | 33:01 | RE, same | L0209337-05 83 |
| No | 34 | 34 | 8310 | 4L003611 | 34:01 | RE, same | L0209337-06 83 |
| No | 35 | 35 | 8310 | 4L003612 | 35:01 ✓ | SOS 61-07/59-38 | WG125769-04 CC |
| No | 36 | 36 | 8310 | 4L003613 | 36:01 | RE, low surr. | L0209337-07 83 |
| No | 37 | 35 | 8310 | 4L003614 | 37:01 ✓ | SOS 61-07/59-38 | WG125769-05 CC |

RJC
9/26/02

EQ 10/1/02

KEMRON ENVIRONMENTAL SERVICES

# HPLC Laboratory Maintenance Log

Analysis Date/Time Sept. 21, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092102
Analyst Initials [illegible] SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**

- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**

Yes ____ No ____

**Additional Maintenance**

Problem: ____

Action Taken: ____

**Comments**

WG 125769-02 (4L003590) – CCV
-03 (4L003601)
-04 (4L003612)
-05 (4L003613)
pyrene %D >15% for confirming fl. detector / no pyrene detected by UV requires conf.

SDG L0209235 – all sent for RE due to low LCS + surr. on some, in SDG

L0209310-02, L0209337-01 – 07 > sent for RE due to low surr.

Reviewed By: ECZ 10/1/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG126189-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126062-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126062-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG126062-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG126062-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG126062-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG126189-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 16 | 16 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 17 | 17 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 19 | 19 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 20 | 20 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 21 | 21 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 22 | 22 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 24 | 13 | WG126189-03 CCV | 8310 | 1 | Sample | | |

PARC 9/27/02

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003619 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003620 | 02:01 | SOS 61-07/59-38 | WG126189-01 CC |
| No | 3 | 3 | 8310 | 4L003621 | 03:01 | | WG126062-02 WB |
| No | 4 | 4 | 8310 | 4L003622 | 04:01 | | WG126062-03 WL |
| No | 5 | 5 | 8310 | 4L003623 | 05:01 | | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003624 | 06:01 | | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003625 | 07:01 | | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003626 | 08:01 | | WG126062-01 WR |
| No | 9 | 9 | 8310 | 4L003627 | 09:01 | | WG126062-04 WM |
| No | 10 | 10 | 8310 | 4L003628 | 10:01 | | WG126062-05 WM |
| No | 11 | 11 | 8310 | 4L003629 | 11:01 | | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003630 | 12:01 | | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003631 | 13:01 | SOS 61-07/59-38 | WG126189-02 CC |
| No | 14 | 14 | 8310 | 4L003632 | 14:01 | | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003633 | 15:01 | | L0209310-02 83 |
| No | 16 | 16 | 8310 | 4L003634 | 16:01 | | L0209337-01 83 |
| No | 17 | 17 | 8310 | 4L003635 | 17:01 | | L0209337-02 83 |
| No | 18 | 18 | 8310 | 4L003636 | 18:01 | | L0209337-03 83 |
| No | 19 | 19 | 8310 | 4L003637 | 19:01 | | L0209337-04 83 |
| No | 20 | 20 | 8310 | 4L003638 | 20:01 | | L0209337-05 83 |
| No | 21 | 21 | 8310 | 4L003639 | 21:01 | | L0209337-06 83 |
| No | 22 | 22 | 8310 | 4L003640 | 22:01 | | L0209337-07 83 |
| No | 23 | 23 | 8310 | 4L003641 | 23:01 | | L0209337-01 83 |
| No | 24 | 13 | 8310 | 4L003642 | 24:01 | SOS 61-07/59-38 | WG126189-03 CC |

RPC 9/30/02

EC2 10/2/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

**Analysis Date/Time** Sept. 27/02 **Instrument ID** HPLC4 **Column ID** LC-PAH **Data Subdirectory** 092702
**Analyst Initials** RVDC **SOP # HPLC01 Rev. #** 2 ✓ 8310 **SOP # HPLC02 Rev. #** ___ ___ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Re-extracts out of hold — not uploaded

**Reviewed By:** ECZ 10/2/02

Parameter: 8310 - $H_2O$ SOP #: EXHPLCL Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAF, DP
Date/Time Extracted: 09/19/02 @ 1120 Date TV/KD: 09/19/02
Spike/Surrogate Analyst: DP Witness: CAF
Surrogate #: ESS00 42-21 Earliest Hold Date: 09/24/02
Spike #: A = ESS00 4279 Spike #: B = —

Extraction Work Group WG 125616
Analytical Work Group WG 125710

Extract Relinquished By: DCM
Extract Received By & Date: CAF 9/20/02

| | 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 | | | ✓ | | 1000 mL | 100 µL | | 1 mL | T | | | | WG125616-02 |
| 2 | LCS | | | ✓ | | ⊥ | | 500 µL | | | | | | WG ⊥ -03 |
| 3 | 09-310-01 | 8310 | | ✓ | | 960 mL | | | | | | | | |
| 4 | -02 | | | ✓ | | 970 mL | | | | | | | | |
| 5 | -03 | | | ✓ | | 1000 mL | | | | | | | | WG125616-01 |
| 6 | -04 MS | | | ✓ | | 960 mL | | 500 µL | | | | | | -04 ✗ |
| 7 | -05 MSD | | | ✓ | | 1000 mL | | ⊥ | | | | | | -05 ✗ |
| 8 | -06 | | | ✓ | | 950 mL | | | | | | | | |
| 9 | -07 | | | ✓ | | 960 mL | | | | | | | | |
| 10 | -08 | | | ✓ | | 960 mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950 mL | | | | | | | | |
| 12 | -10 | | | ✓ | | 1000 mL | | | | | | | | |
| 13 | -11 | | | ✓ | | 920 mL | | | | ⊥ | | | | |
| 14 | 09-337-01 | 8310 | | ✓ | | 1000 mL | | | | C | | | | |
| 15 | -02 | | | ✓ | | 940 mL | | | | T | | | | * |
| 16 | -03 | | | ✓ | | 930 mL | | | | | | | | * |
| 17 | -04 | | | ✓ | | 1000 mL | | | | | | | | * |
| 18 | -05 | | | ✓ | | 960 mL | | | | | | | | * |
| 19 | -06 | | | ✓ | | 1000 mL | | | | | | | | * |
| 20 | -07 | | | ✓ | | 940 mL | | | | | | | | * |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

9/26

9/26

DP 09/19/02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 41264
Reagent: Fortified Lot #: CR2254
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: CR2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

Extraction Notes For Volume # 191 Page # 015

General Comments: * ~~Extract~~ Hg Sample required pH adjustment (increase) to achieve a pH in the desired neutral range (5-9). Sample changed color when NaOH was added to raise the pH. 1N NaOH → ER 2255

* MS, MSD OE 09-310-03

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: —NA—

Supervisor Review: _____ Date: _____

Parameter: 8310 4/20 SOP #: EXHPLC 1 Revision #: 6
Extraction Analyst(s): RCH TV/KD Analyst(s): DDP
Date/Time Extracted: 9/26/02 1400 Date TV/KD: 09/26/02
Spike/Surrogate Analyst: RCH Witness: DDP
Surrogate #: ES00042-21 Earliest Hold Date: OCT
Spike #: A = ES00042-19 Spike #: B = —

Extraction Work Group WG 126062
Analytical Work Group WG 126254

Extract Relinquished By: RCH
Extract Received By & Date: EC 9/27/02

| | 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 | | | ✓ | | 1000mL | 100ul | | 1mL | T | | | | WG 126062-02 |
| 2 | LCS | | | ✓ | | ↓ | | 500ul | | | | | | WG ↓ -03 |
| 3 | 09-285-01 | 8310 | | ✓ | | 940mL | | | | | | | | Re-ext oct/hxD |
| 4 | -02 | | | ✓ | | 970mL | | | | | | | | |
| 5 | -03 | | | ✓ | | 915mL | | | | | | | | |
| 6 | -04 | | | ✓ | | 975mL | | | | | | | | |
| 7 | -05MS | | | ✓ | | 950mL | | 500ul | | | | | | MS 126062-01 |
| 8 | -06MSD | | | ✓ | | 950mL | | ↓ | | | | | | ↓ -04 |
| 9 | -07 | | | ✓ | | 950mL | | | | | | | | ↓ -05 |
| 10 | -08 | | | ✓ | | 925mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950mL | | | | | | | | |
| 12 | 09-310-02 | | | ✓ | | 1000mL | | | | | | | | |
| 13 | 09-337-01 | | | ✓ | | 970mL | | | | ↓ | | | | * |
| 14 | -02 | | | ✓ | | ↓ | | | | C | | | | |
| 15 | -03 | | | ✓ | | 950mL | | | | T | | | | *⊗ |
| 16 | -04 | | | ✓ | | 960mL | | | | | | | | *⊗ |
| 17 | -05 | | | ✓ | | 930mL | | | | | | | | *⊗ |
| 18 | -06 | | | ✓ | | 970mL | | | | | | | | *⊗ |
| 19 | -07 | ↓ | | | | 960mL | ↓ | | ↓ | ↓ | | | | ↓ |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | DDP | | | | | | |
| 23 | | | | | | | | 09/26/02 | | | | | | |
| 24 | | | | | | | | | | | | | | |

ethylene Chloride Lot #: 42084
exane Lot #: —
her Lot #: —
ethanol Lot #: —
lvent: CH3CN Lot #: 41264
agent: Fant. Sol. Lot #: Ex 2254
agent: — Lot #: —
agent: — Lot #: —
id: — Lot #: —
orisil Lot #: —
ica Gel Lot #: —
Analyst / Date / Time: —
ed $Na_2SO_4$ Lot #: EX2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 191 Page # 51

General Comments: None

Extraction Anomalies: ~~* Extract~~ 9/36 Sample required pH adjustment to acheive a neutral pH (5 to 9). (*) 9 Sample changed color when 10N NaOH (SR2262) was added to adjust ~~the~~ the pH.

Concentration Anomalies: None

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

# Semi-Volatile 8310 Checklist

**Run Date:** 20-Sep-02

**Analyst:** RDC

**Instrument:** HPLC4

**Workorders:** **Due Date:** **Priority:**

RECALIBRATION....

| | | 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 | |
| | 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: | |

**Primary Reviewer:** RDC 9/26/02

**Secondary Reviewer:** [illegible]

**Supervisor Review:** [illegible]

√ NA

Run Date: 21-Sep-02

Analyst: RDC

Instrument: HPLC4

| Workorders: | Due Date: | Priority: |
|---|---|---|
| WG125709 09-285 | 9/27/2002 | |
| WG125710 09-310 | 9/30/2002 | |
| WG125710 09-337 | 9/26/2002 | |

| | | 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 | √ |
| | Excel Spreadsheet | √ |
| Samples: | TCL Hits | √ |
| | Surrogates | √ |
| | Correct Factors | √ |
| | Dilutions | √ |
| | Check Sample Histories | NA |
| | Corrective Action | √ |
| 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: | |

All L029285 SDG sent for RE due to low LCS and low surrogates on some fractions.

L0209310-02 and all of SDG L0209337 sent for re-ext. due to low surr.

L0209337-01 needs 10X....

Primary Reviewer: TQC 9/30/02

Secondary Reviewer: ECR 10/1/02

Supervisor Review: [illegible] 10/1/02

√
NA

Run Date: 27-Sep-02

Analyst: RDC

Instrument: HPLC4

| Workorders: | Due Date: | Priority: |
|---|---|---|
| WG126256 09-285 | 9/27/2002 | |
| WG126256 09-310 | 9/30/2002 | |
| WG126256 09-337 | 9/26/2002 | |

| | | 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 | NA |
| Samples: | TCL Hits | √ |
| | Surrogates | √ |
| | Correct Factors | √ |
| | Dilutions | √ |
| | 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: | |

Re-extractions out of holding time.....

LCS and BLANK met all acceptance criteria.
Several samples yet failed surrogate low....

Primary Reviewer: TYLC 10/1/02

Secondary Reviewer: ECZ 10/2/02

Supervisor Review: [illegible]

√
NA

**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.: L0209310**

**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: dlh DATE: 9/30/02

Rev. 7/14/00

**ANIONS (9056)**

**Login Number** L0209310

**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
- ✓ Duplicate chromatogram and quantitation report
- ✓ Instrument Run Log
- ✓ Daily Checklist
- ✓ Example Calculations

Checked By: dh Date: 9/30/02

# 2.4.5.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 8

Analytical Method: 9056 AAB#: WG125591

Login Number: L0209310 Contract #: Bill Canelos

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| 062-46DUP-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.72 | 09/18/02 | 2 | 1.72 | |
| 062-46EQB-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.2 | 09/18/02 | 2 | 1.2 | |
| 062-CEF46-12I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.23 | 09/18/02 | 2 | 1.23 | |
| 062-CEF46-13I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.3 | 09/18/02 | 2 | 1.3 | |
| 062-CEF46-14D-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.19 | 09/18/02 | 2 | 1.19 | |
| 062-CEF46-15I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.27 | 09/18/02 | 2 | 1.27 | |
| 062-CEF46-2S-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.01 | 09/18/02 | 2 | 1.01 | |
| 062-CEF46-7I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.19 | 09/18/02 | 2 | 1.19 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.1 | 09/18/02 | 2 | 1.1 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.11 | 09/18/02 | 2 | 1.11 | |
| 062-CEF46-9I-Q3-02-20 | 09/17/02 | 09/18/02 | 09/18/02 | 2 | 1.11 | 09/18/02 | 2 | 1.11 | |

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

KEMRON FORMS - Modified 05/28/2002
Version 1.1

Report generated 10/01/2002 14:24

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209310 Run Date: 09/18/2002 Sample ID: WG125591-01
Instrument ID: IC2 Run Time: 14:55 Method: 9056
File ID: 091802.11 Analyst: JWR Matrix: Water
Workgroup (AAB#): WG125591 Units: mg/L
Contract #: Cal ID: IC2-

| Analytes | MDL | RDL | 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 |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 09/10/2002
Version 1.2
Report generated 09/25/2002 19:11

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209310
Run Date: 09/18/2002
Sample ID: WG125591-02
Instrument ID: IC2
Run Time: 15:07
Method: 9056
File ID: 091802.12
Analyst: JWR
Matrix: Water
Workgroup (AAB#): WG125591
Units: mg/L
Contract #:
Cal ID: IC2-

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Nitrate | 4.07 | 4.32 | 106 | 90 - 110 | |
| Nitrite | 3.65 | 3.62 | 99.1 | 90 - 110 | |
| Phosphate | 9.78 | 10.1 | 103 | 90 - 110 | |

KEMRON FORMS - Modified 09/10/2002
Version 1.3
Report generated 09/25/2002 19:11

KEMRON ENVIRONMENTAL SERVICES
MS/MSD REPORT

Loginnum:L0209310 Cal ID: IC2- Worknum:WG125591
Instrument ID:IC2 Contract #: Method:9056
Parent ID:L0209310-03 File ID:091802.15 Dil:1 Matrix:Water
Sample ID:L0209310-04 MS File ID:091802.16 Dil:1 Units:mg/L
Sample ID:L0209310-05 MSD File ID:091802.17 Dil:1

| Analyte | Parent | MS Spiked | MS Found | MS %Rec | MSD Spiked | MSD Found | MSD %Rec | %RPD | %Rec Limits | RPD Limit | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate | ND | 4.07 | 4.14 | 102 | 4.07 | 4.10 | 101 | 0.869 | 80 - 120 | 20 | |
| Nitrite | ND | 3.65 | 3.71 | 102 | 3.65 | 3.61 | 98.8 | 2.88 | 80 - 120 | 20 | |
| Phosphate | ND | 9.78 | 8.43 | 86.2 | 9.78 | 8.12 | 83.0 | 3.74 | 80 - 120 | 20 | |

* FAILS %REC LIMIT

# FAILS RPD LIMIT

KEMRON FORMS - Modified 09/20/2002
Version 1.2
Report generated 09/25/2002 19:11

KEMRON ENVIRONMENTAL SERVICES
DUPLICATE REPORT

Sample Ref: L0209310-01
Instrument ID: IC2
Sample ID: WG125591-03 File ID: 091802.13 Dil: 1
Duplicate ID: WG125591-04 File ID: 091802.14 Dil: 1

Worknum: WG125591
Method: 9056
Matrix: WATER
Units: mg/L

| Analyte | Sample | Duplicate | RPD | RPD Limit | Q |
|---|---|---|---|---|---|
| Nitrate | | | | 20 | |
| Nitrite | | | | 20 | |
| Phosphate | 0.292 | 0.257 | 12.6 | 20 | |

KEMRON FORMS - Modified 09/05/2002
Version 1.1
Report generated 09/25/2002 19:12

METHOD BLANK SUMMARY

Login Number: L0209310
Blank File ID: 091802.11
Date Analyzed: 09/18/02
Time Analyzed: 14:55
Analyst: JWR

Work Group: WG125591
Blank Sample ID: WG125591-01
Instrument ID: IC2
Method: 9056

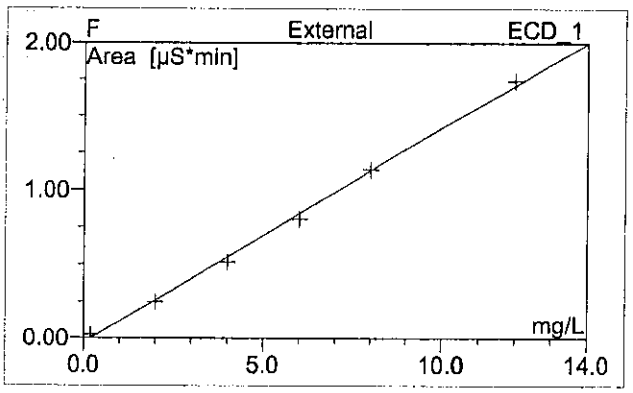
This Method Blank Applies To The Following Samples:

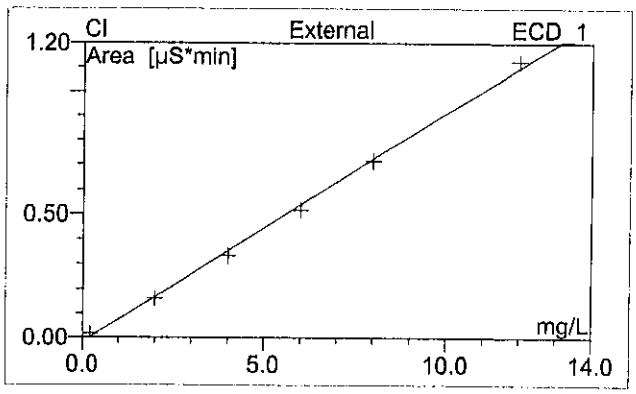
| Client ID | Lab Sample ID | Lab File ID | Time Analyzed | TAG |
|---|---|---|---|---|
| LCS | WG125591-02 | 091802.12 | 09/18/02 15:07 | 01 |
| 062-CEF46-2S-Q3-02-20 | L0209310-01 | 091802.13 | 09/18/02 15:18 | 01 |
| DUP | WG125591-04 | 091802.14 | 09/18/02 15:30 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-03 | 091802.15 | 09/18/02 15:41 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-04 | 091802.16 | 09/18/02 15:53 | 01 |
| 062-CEF46-9I-Q3-02-20 | L0209310-05 | 091802.17 | 09/18/02 16:04 | 01 |
| 062-CEF46-12I-Q3-02-20 | L0209310-06 | 091802.18 | 09/18/02 16:16 | 01 |
| 062-CEF46-14D-Q3-02-20 | L0209310-08 | 091802.19 | 09/18/02 16:27 | 01 |
| 062-CEF46-15I-Q3-02-20 | L0209310-09 | 091802.20 | 09/18/02 16:39 | 01 |
| 062-46DUP-Q3-02-20 | L0209310-10 | 091802.22 | 09/18/02 17:19 | 01 |
| 062-46EQB-Q3-02-20 | L0209310-11 | 091802.23 | 09/18/02 17:31 | 01 |
| 062-CEF46-13I-Q3-02-20 | L0209310-07 | 091802.28 | 09/18/02 18:28 | 01 |
| 062-CEF46-7I-Q3-02-20 | L0209310-02 | 091802.29 | 09/18/02 18:40 | 01 |

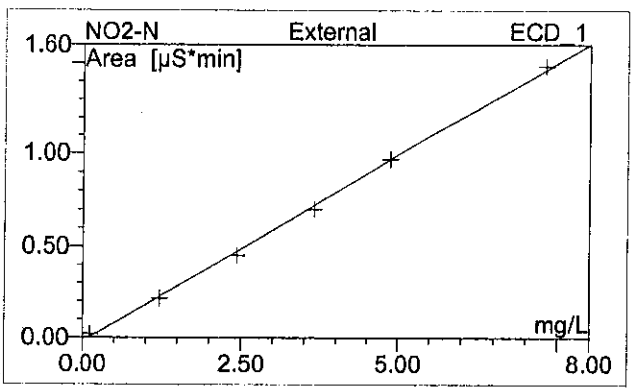
# 6 ANION STD #6

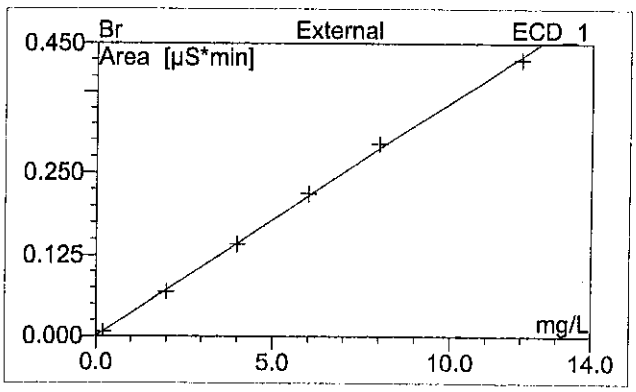
## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:06** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |



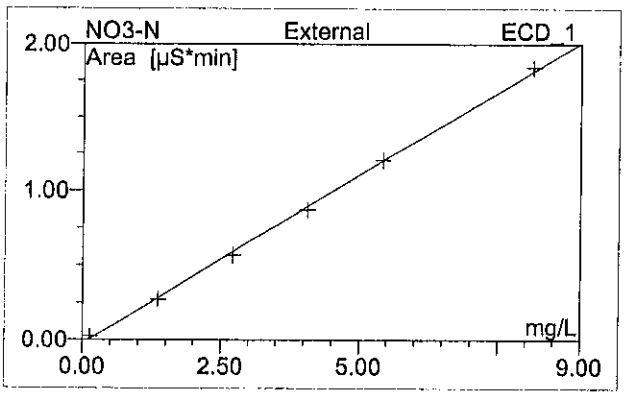



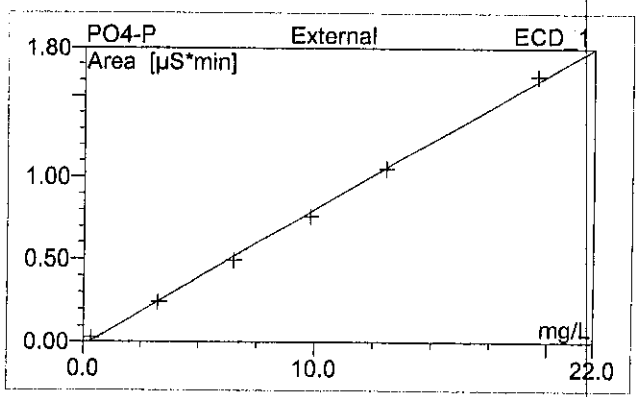

| No. | Ret.Time min | Peak Name | Cal.Type | Points | Corr.Coeff. % | Offset | Slope | Curve |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.43 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 4 | 1.73 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 5 | 2.10 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 6 | 3.18 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 7 | 3.60 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 8 | 6.14 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 9 | 8.20 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

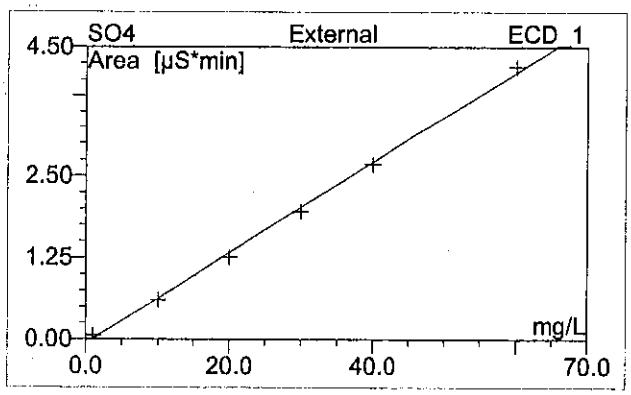
# 6 ANION STD #6

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:06** | *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 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.43 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 4 | 1.73 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 5 | 2.10 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 6 | 3.18 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 7 | 3.60 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 8 | 6.14 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 9 | 8.20 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

# 8 ANION ALT STD

## 1,1 JWR ANION ALT STD SOS0060-31

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:56** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| ANION ALT STD | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 5.8796 | -2.01 | PASS |
| Cl | 6 | 5.9275 | -1.21 | PASS |
| NO2-N | 3.65 | 3.5402 | -3.01 | PASS |
| Br | 6 | 6.0765 | 1.27 | PASS |
| NO3-N | 4.07 | 4.0147 | -1.36 | PASS |
| PO4-P | 9.78 | 9.7018 | -0.80 | PASS |
| SO4 | 30 | 29.4057 | -1.98 | PASS |

# 10 WG125592-01 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-01 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **46** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 14:44** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-01 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0866 | 1.44 | PASS |
| Cl | 6 | 6.2883 | 4.81 | PASS |
| NO2-N | 3.65 | 3.7196 | 1.91 | PASS |
| Br | 6 | 6.4130 | 6.88 | PASS |
| NO3-N | 4.07 | 4.3044 | 5.76 | PASS |
| PO4-P | 9.78 | 10.2414 | 4.72 | PASS |
| SO4 | 30 | 30.8155 | 2.72 | PASS |

# 21 WG125592-02 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-02 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **46** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 16:50** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-02 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0715 | 1.19 | PASS |
| Cl | 6 | 6.2762 | 4.60 | PASS |
| NO2-N | 3.65 | 3.7491 | 2.71 | PASS |
| Br | 6 | 6.3838 | 6.40 | PASS |
| NO3-N | 4.07 | 4.3188 | 6.11 | PASS |
| PO4-P | 9.78 | 10.1940 | 4.23 | PASS |
| SO4 | 30 | 30.9191 | 3.06 | PASS |

# 27 WG125592-03 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-03 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **53** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 18:17** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-03 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0679 | 1.13 | PASS |
| Cl | 6 | 6.2352 | 3.92 | PASS |
| NO2-N | 3.65 | 3.6281 | -0.60 | PASS |
| Br | 6 | 6.4436 | 7.39 | PASS |
| NO3-N | 4.07 | 4.3481 | 6.83 | PASS |
| PO4-P | 9.78 | 10.2671 | 4.98 | PASS |
| SO4 | 30 | 31.0289 | 3.43 | PASS |

# 31 WG125592-04 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-04 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **52** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 19:03** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-04 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 5.8828 | -1.95 | PASS |
| Cl | 6 | 6.2803 | 4.67 | PASS |
| NO2-N | 3.65 | 3.5054 | -3.96 | PASS |
| Br | 6 | 6.2681 | 4.47 | PASS |
| NO3-N | 4.07 | 4.2300 | 3.93 | PASS |
| PO4-P | 9.78 | 9.8312 | 0.52 | PASS |
| SO4 | 30 | 30.2491 | 0.83 | PASS |

Operator: Analyst

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 32

Created: 9/18/2002 13:04:05 by Analyst
Last Update: 9/18/2002 19:40:58 by Analyst

| No. | Name | Inj. Date/Time | Dil. Factor | Sample ID | Comment |
|---|---|---|---|---|---|
| 1 | ANION STD #1 | 7/30/2002 22:02:57 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 2 | ANION STD #2 | 7/30/2002 22:20:52 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 3 | ANION STD #3 | 7/30/2002 22:32:22 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 4 | ANION STD #4 | 7/30/2002 22:43:52 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 5 | ANION STD #5 | 7/30/2002 22:55:22 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 6 | ANION STD #6 | 7/30/2002 23:06:52 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 7 | ELUENT BLANK | 7/30/2002 23:18:22 | 1.0000 | | 1,1 JWR |
| 8 | ANION ALT STD | 7/30/2002 23:56:16 | 1.0000 | | 1,1 JWR ANION ALT STD SOS0060-31 |
| 9 | ELUENT BLANK | 9/18/2002 14:32:57 | 1.0000 | | 1,1 JWR |
| 10 | WG125592-01 ANION CCV | 9/18/2002 14:44:27 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 11 | WG125591-01 ANION BLANK | 9/18/2002 14:55:57 | 1.0000 | | 1,1 JWR |
| 12 | WG125591-02 ANION LCS | 9/18/2002 15:07:26 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 13 | WG125591-03 DUP-REF | 9/18/2002 15:18:57 | 1.0000 | | 1,1 JWR L0209310-01 DUP-REF |
| 14 | WG125591-04 DUP | 9/18/2002 15:30:27 | 1.0000 | | 1,1 JWR L0209310-01 DUP |
| 15 | WG125591-05 MS/MSD-REF | 9/18/2002 15:41:57 | 1.0000 | | 1,1 JWR L0209310-03 MS/MSD-REF |
| 16 | WG125591-06 MS | 9/18/2002 15:53:27 | 1.0000 | | 1,1 JWR L0209310-04 MS |
| 17 | WG125591-07 MSD | 9/18/2002 16:04:57 | 1.0000 | | 1,1 JWR L0209310-05 MSD |
| 18 | L0209310-06 | 9/18/2002 16:16:27 | 1.0000 | | 1,1 JWR |
| 19 | L0209310-08 | 9/18/2002 16:27:57 | 1.0000 | | 1,1 JWR |
| 20 | L0209310-09 | 9/18/2002 16:39:27 | 1.0000 | | 1,1 JWR |
| 21 | WG125592-02 ANION CCV | 9/18/2002 16:50:56 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 22 | L0209310-10 | 9/18/2002 17:19:56 | 1.0000 | | 1,1 JWR |
| 23 | L0209310-11 | 9/18/2002 17:31:26 | 1.0000 | | 1,1 JWR |
| 24 | L0209310-07 (RR 1/5 SO4 INT?) | 9/18/2002 17:42:56 | 1.0000 | | 1,5 JWR |
| 25 | L0209310-02 (RR 1/100 SO4 INT?) | 9/18/2002 17:54:26 | 1.0000 | | 1,100 JWR |
| 26 | ELUENT BLANK | 9/18/2002 18:05:56 | 1.0000 | | 1,1 JWR |
| 27 | WG125592-03 ANION CCV | 9/18/2002 18:17:25 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 28 | L0209310-07 | 9/18/2002 18:28:55 | 1.0000 | | 1,1 JWR |
| 29 | L0209310-02 | 9/18/2002 18:40:25 | 1.0000 | | 1,1 JWR |
| 30 | L0209310-02 (RR 1/10 SO4 INT?) | 9/18/2002 18:51:55 | 1.0000 | | 1,10 JWR |
| 31 | WG125592-04 ANION CCV | 9/18/2002 19:03:25 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 32 | END | 9/18/2002 19:16:14 | 1.0000 | | 1,1 JWR |

1395 psi
R325649

JWR 09/25/02
TRC 9/26/02

Sequence: 091802 IC2
Operator: Analyst

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 32

Created: 9/18/2002 13:04:05 by Analyst
Last Update: 9/18/2002 19:40:58 by Analyst

| No. | Name | Type | Pos. | Inj. Vol. | Program | Method | Status |
|---|---|---|---|---|---|---|---|
| 1 | ANION STD #1 | Standard | 1 | 25.0 | 9056 | 9056 | Finished |
| 2 | ANION STD #2 | Standard | 2 | 25.0 | 9056 | 9056 | Finished |
| 3 | ANION STD #3 | Standard | 3 | 25.0 | 9056 | 9056 | Finished |
| 4 | ANION STD #4 | Standard | 5 | 25.0 | 9056 | 9056 | Finished |
| 5 | ANION STD #5 | Standard | 5 | 25.0 | 9056 | 9056 | Finished |
| 6 | ANION STD #6 | Standard | 6 | 25.0 | 9056 | 9056 | Finished |
| 7 | ELUENT BLANK | Unknown | 7 | 25.0 | 9056 | 9056 | Finished |
| 8 | ANION ALT STD | Unknown | 36 | 25.0 | 9056 | 9056 | Finished |
| 9 | ELUENT BLANK | Unknown | 45 | 25.0 | 9056 | 9056 | Finished |
| 10 | WG125592-01 ANION CCV | Unknown | 46 | 25.0 | 9056 | 9056 | Finished |
| 11 | WG125591-01 ANION BLANK | Unknown | 47 | 25.0 | 9056 | 9056 | Finished |
| 12 | WG125591-02 ANION LCS | Unknown | 46 | 25.0 | 9056 | 9056 | Finished |
| 13 | WG125591-03 DUP-REF | Unknown | 47 | 25.0 | 9056 | 9056 | Finished |
| 14 | WG125591-04 DUP | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 15 | WG125591-05 MS/MSD-REF | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 16 | WG125591-06 MS | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 17 | WG125591-07 MSD | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 18 | L0209310-06 | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 19 | L0209310-08 | Unknown | 49 | 25.0 | 9056 | 9056 | Finished |
| 20 | L0209310-09 | Unknown | 49 | 25.0 | 9056 | 9056 | Finished |
| 21 | WG125592-02 ANION CCV | Unknown | 46 | 25.0 | 9056 | 9056 | Finished |
| 22 | L0209310-10 | Unknown | 51 | 25.0 | 9056 | 9056 | Finished |
| 23 | L0209310-11 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 24 | L0209310-07 (RR 1/5 SO4 INT?) | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 25 | L0209310-02 (RR 1/100 SO4 INT?) | Unknown | 53 | 25.0 | 9056 | 9056 | Finished |
| 26 | ELUENT BLANK | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 27 | WG125592-03 ANION CCV | Unknown | 53 | 25.0 | 9056 | 9056 | Finished |
| 28 | L0209310-07 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 29 | L0209310-02 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished |
| 30 | L0209310-02 (RR 1/10 SO4 INT?) | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 31 | WG125592-04 ANION CCV | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 32 | END | Unknown | 44 | 25.0 | DX-320 OFF | 9056 | Finished |

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**KEMRON ENVIRONMENTAL SERVICES**
**IC Laboratory Maintenance Log**

**Analysis Date/Time** 09/18/02 **Instrument ID** IC2 **Column ID** AG4A-SC **Data Subdirectory** 091802
**Analyst Initials** DWR **SOP # IC01 Rev. #** 2 ✓ 9056 AS4A-SC **SOP # IC02 Rev. #** ____ 314.0

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 1395 psi
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
**Problem:** _____

Action Taken: _____

**Comments**

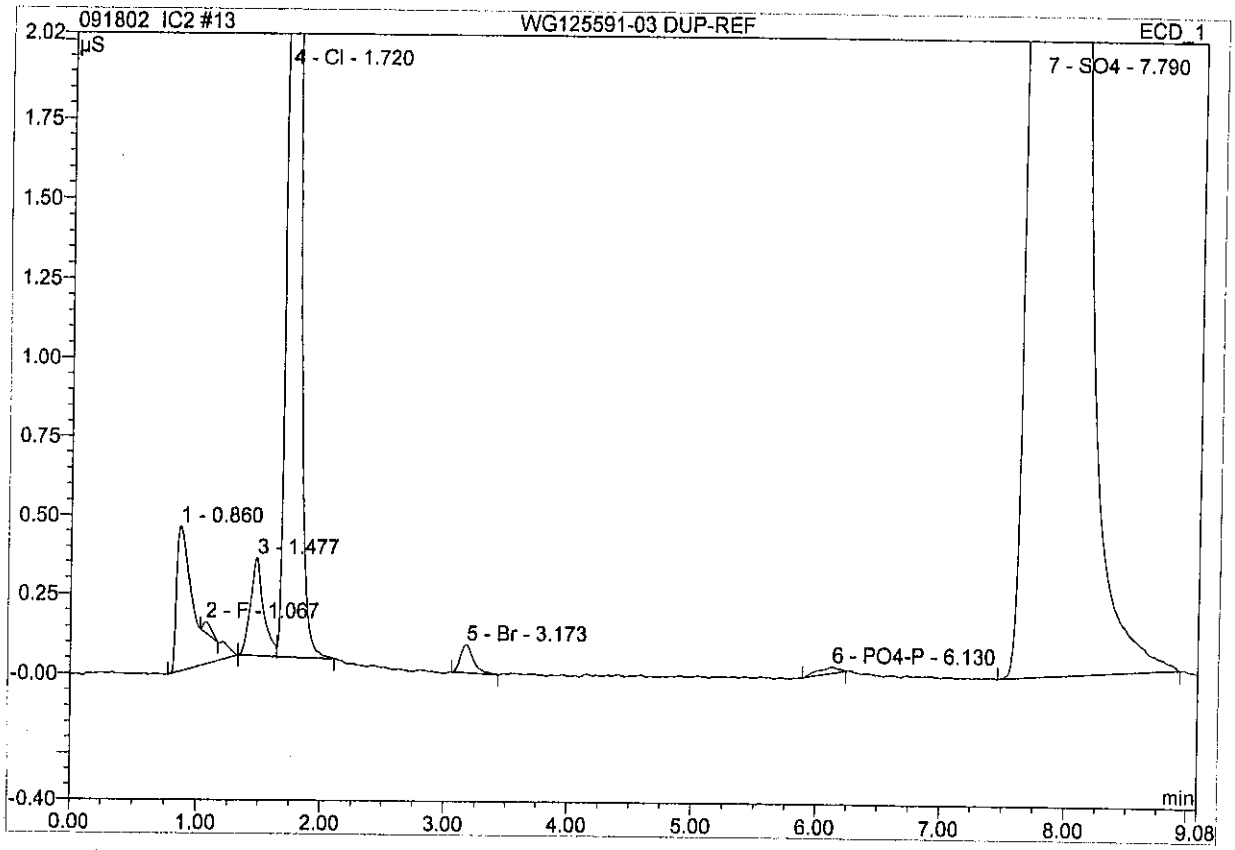
**Reviewed By:** EC2 9/26/02

# 2.4.5.2 Sample Data

# 13 WG125591-03 DUP-REF

## 1,1 JWR L0209310-01 DUP-REF

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125591-03 DUP-REF** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **47** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 15:18** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

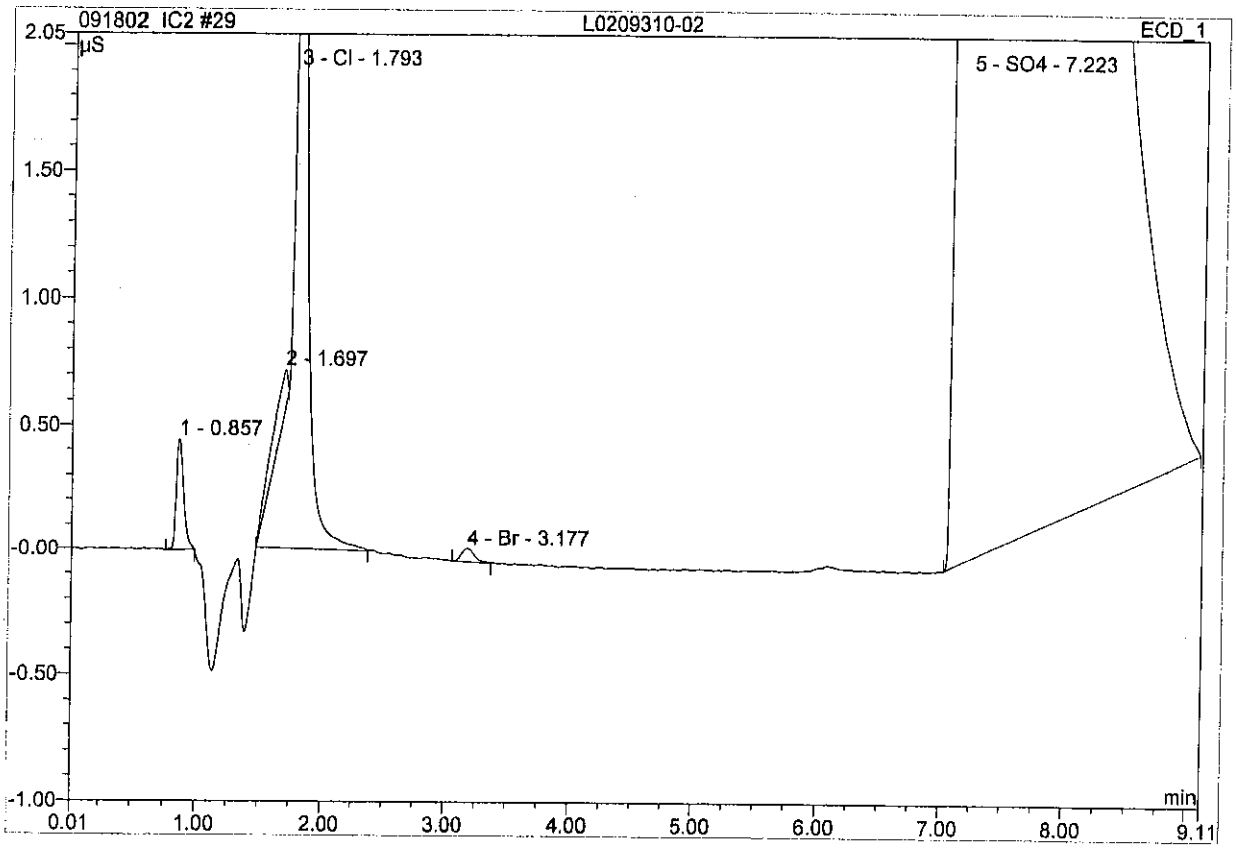



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.86 | n.a. | 0.458 | 0.076 | 1.00 | n.a. | BMB |
| 2 | 1.07 | F | 0.033 | 0.003 | 0.04 | 0.220 | Rd |
| 3 | 1.48 | n.a. | 0.308 | 0.038 | 0.51 | n.a. | bM |
| 4 | 1.72 | Cl | 8.230 | 0.641 | 8.49 | 7.094 | MB |
| 5 | 3.17 | Br | 0.087 | 0.011 | 0.14 | 0.297 | BMB |
| 6 | 6.13 | PO4-P | 0.019 | 0.004 | 0.05 | 0.292 | BMB |
| 7 | 7.79 | SO4 | 25.110 | 6.777 | 89.77 | 98.351 | BMB |
| **Total:** | | | 34.246 | 7.549 | 100.00 | 106.253 | |

# 29 L0209310-02

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209310-02** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **53** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 18:40** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

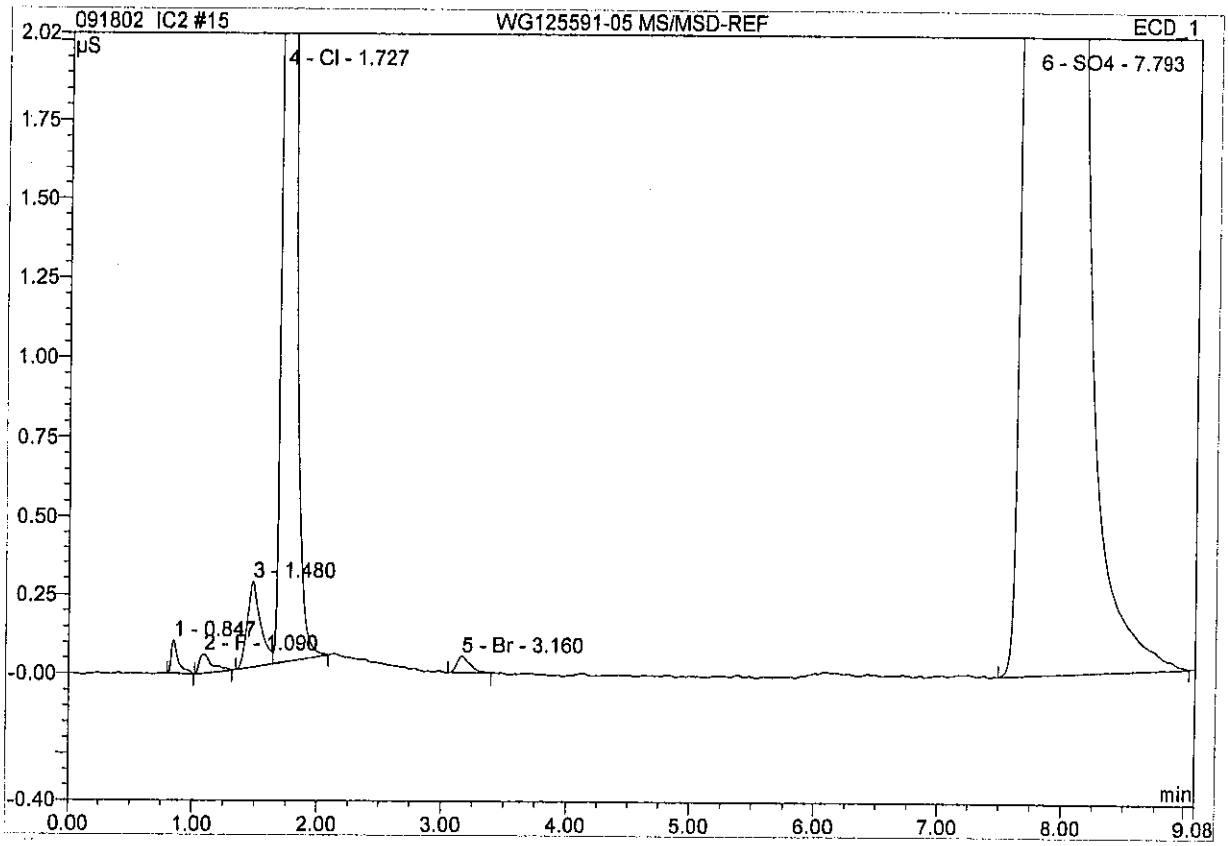



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.86 | n.a. | 0.451 | 0.031 | 0.03 | n.a. | BM |
| 2 | 1.70 | n.a. | 0.149 | 0.028 | 0.03 | n.a. | Ru |
| 3 | 1.79 | Cl | 3.112 | 0.423 | 0.46 | 4.744 | BMB |
| 4 | 3.18 | Br | 0.055 | 0.007 | 0.01 | 0.181 | BMB |
| 5 | 7.22 | SO4 | 161.762 | 92.121 | 99.47 | 1325.291 | BMB |
| **Total:** | | | 165.528 | 92.608 | 100.00 | 1330.216 | |

# 15 WG125591-05 MS/MSD-REF

## 1,1 JWR L0209310-03 MS/MSD-REF

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125591-05 MS/MSD-REF** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **48** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 15:41** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

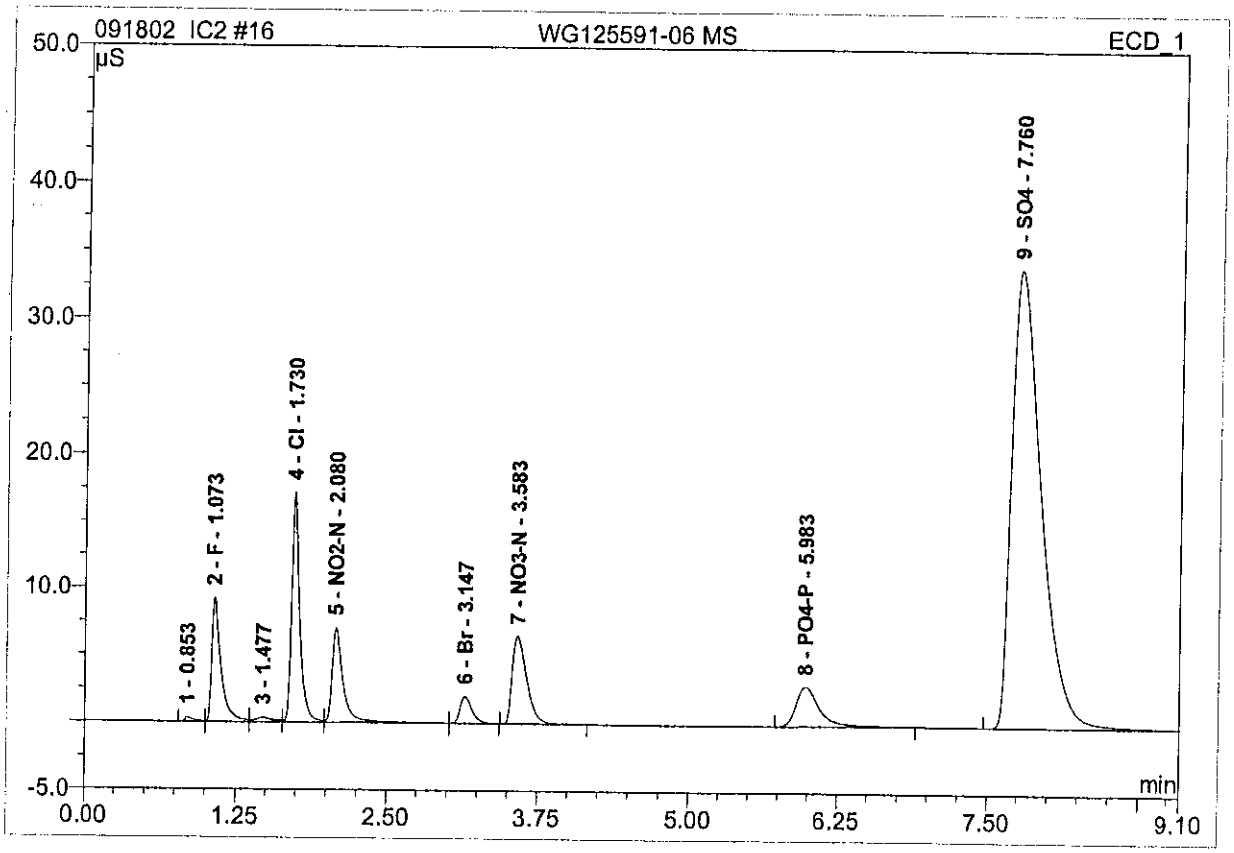



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.105 | 0.007 | 0.08 | n.a. | BMB |
| 2 | 1.09 | F | 0.061 | 0.007 | 0.08 | 0.250 | BMB |
| 3 | 1.48 | n.a. | 0.268 | 0.034 | 0.40 | n.a. | BM |
| 4 | 1.73 | Cl | 8.932 | 0.697 | 8.22 | 7.702 | MB |
| 5 | 3.16 | Br | 0.052 | 0.006 | 0.08 | 0.177 | BMB |
| 6 | 7.79 | SO4 | 28.173 | 7.735 | 91.15 | 112.133 | BMB |
| **Total:** | | | 37.592 | 8.487 | 100.00 | 120.262 | |

# 16 WG125591-06 MS

## 1,1 JWR L0209310-04 MS

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125591-06 MS** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **48** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 15:53** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

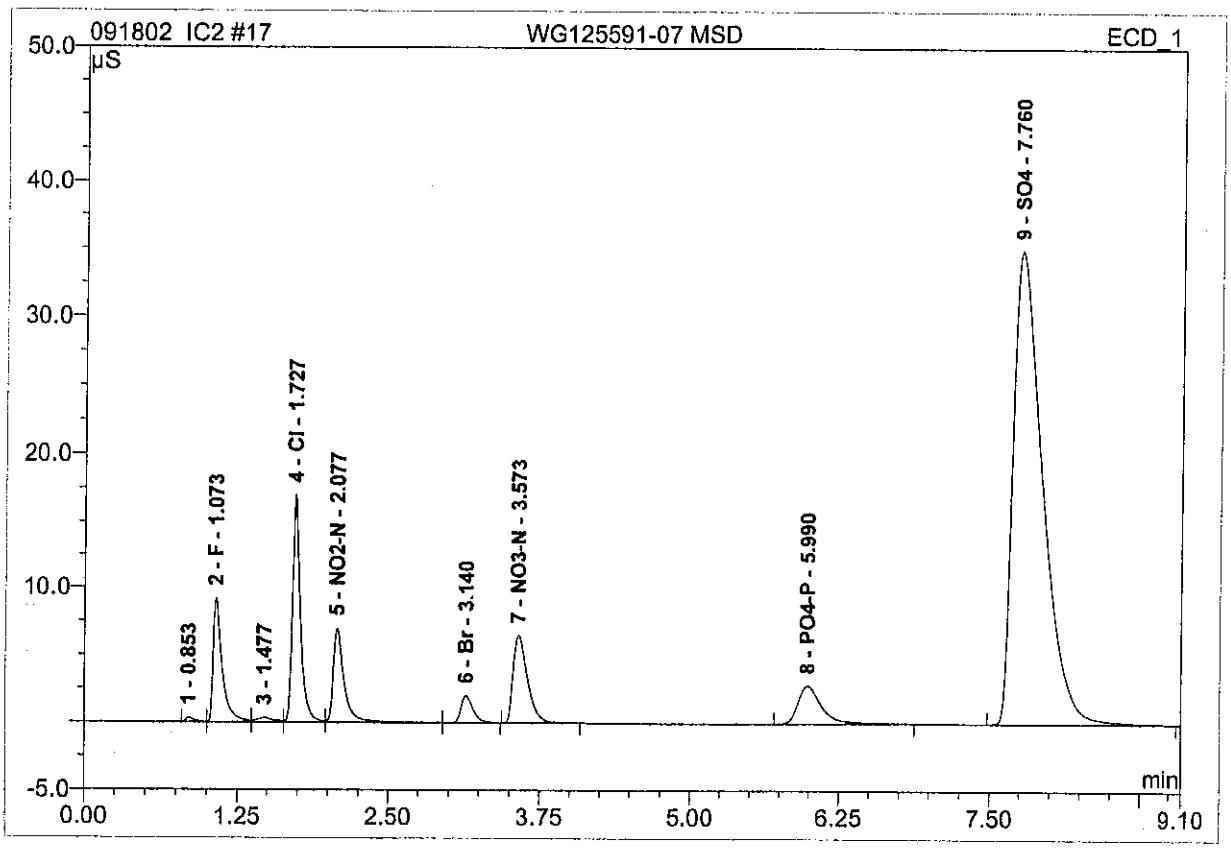



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.324 | 0.027 | 0.19 | n.a. | BM |
| 2 | 1.07 | F | 9.205 | 0.794 | 5.50 | 5.675 | M |
| 3 | 1.48 | n.a. | 0.339 | 0.055 | 0.38 | n.a. | M |
| 4 | 1.73 | Cl | 17.155 | 1.320 | 9.15 | 14.403 | M |
| 5 | 2.08 | NO2-N | 7.032 | 0.735 | 5.09 | 3.715 ✓ | M |
| 6 | 3.15 | Br | 1.967 | 0.229 | 1.59 | 6.389 | MB |
| 7 | 3.58 | NO3-N | 6.498 | 0.912 | 6.32 | 4.136 ✓ | BMB |
| 8 | 5.98 | PO4-P | 2.885 | 0.677 | 4.69 | 8.432 ✓ | BMB |
| 9 | 7.76 | SO4 | 33.993 | 9.683 | 67.10 | 140.138 | BMB |
| **Total:** | | | 79.397 | 14.431 | 100.00 | 182.888 | |

# 17 WG125591-07 MSD

## 1,1 JWR L0209310-05 MSD

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125591-07 MSD** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **48** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 16:04** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

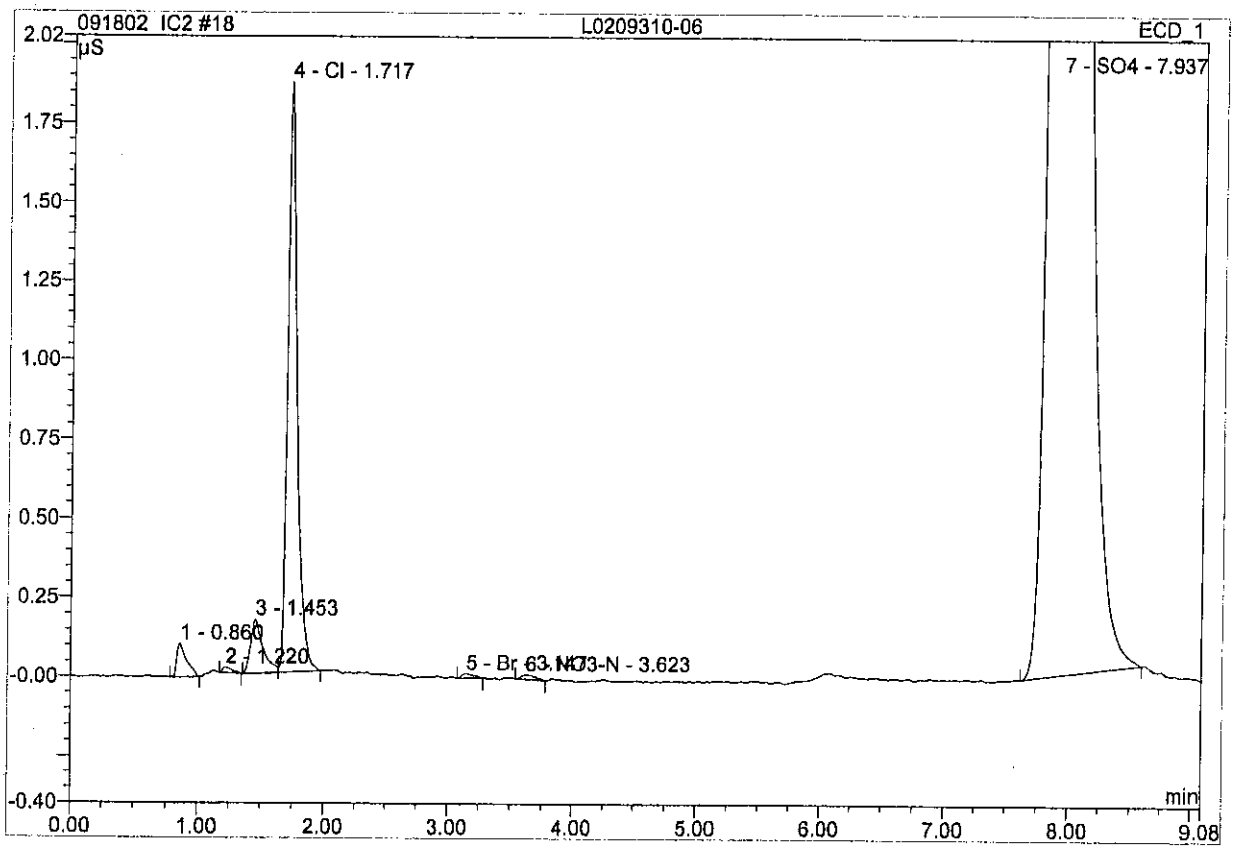



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.328 | 0.027 | 0.18 | n.a. | BM |
| 2 | 1.07 | F | 9.188 | 0.789 | 5.37 | 5.646 | M |
| 3 | 1.48 | n.a. | 0.333 | 0.053 | 0.36 | n.a. | M |
| 4 | 1.73 | Cl | 16.985 | 1.301 | 8.86 | 14.203 | M |
| 5 | 2.08 | NO2-N | 6.972 | 0.713 | 4.86 | 3.609 | M |
| 6 | 3.14 | Br | 1.958 | 0.226 | 1.54 | 6.309 | MB |
| 7 | 3.57 | NO3-N | 6.481 | 0.903 | 6.15 | 4.101 | BMB |
| 8 | 5.99 | PO4-P | 2.782 | 0.651 | 4.43 | 8.122 | BMB |
| 9 | 7.76 | SO4 | 34.938 | 10.024 | 68.24 | 145.037 | BMB |
| **Total:** | | | 79.965 | 14.689 | 100.00 | 187.027 | |

# 18 L0209310-06

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209310-06** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **48** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 16:16** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

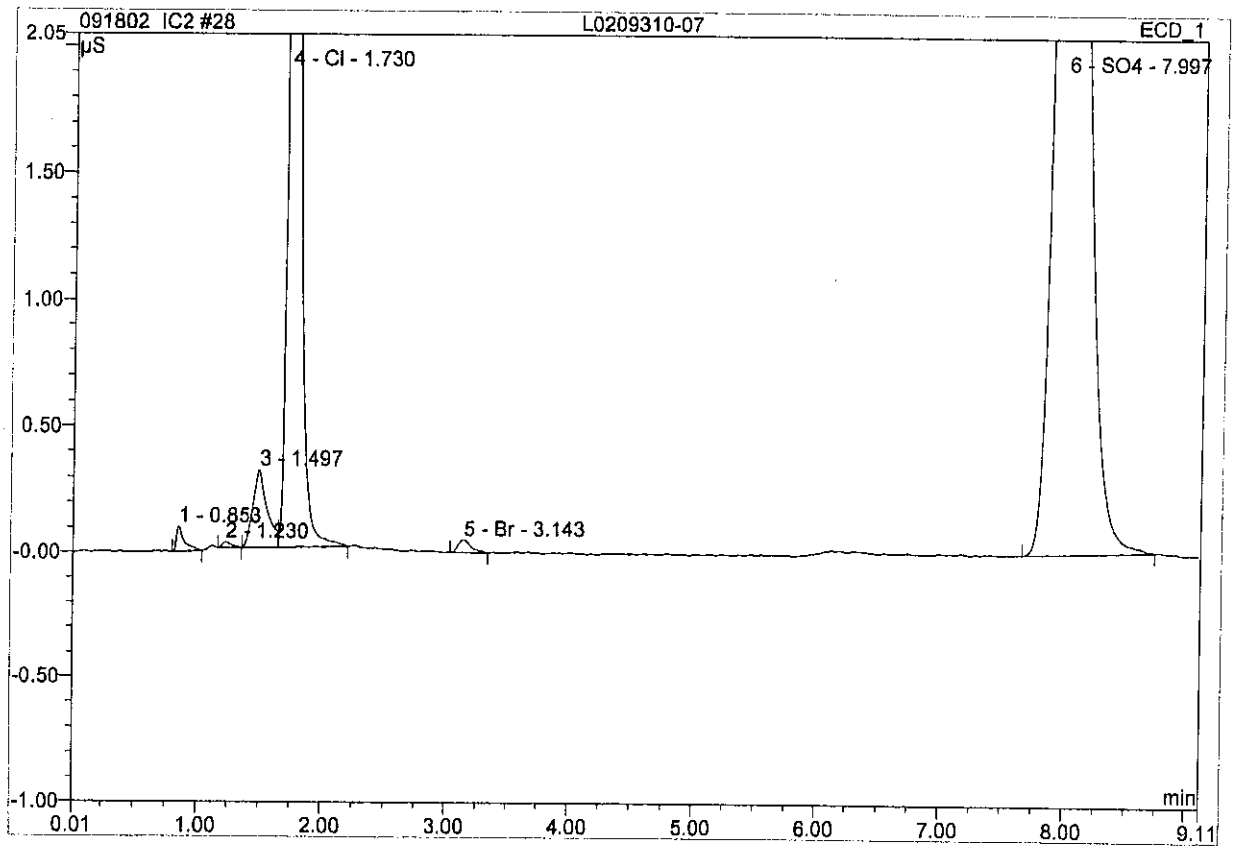



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.86 | n.a. | 0.107 | 0.010 | 0.37 | n.a. | BMB |
| 2 | 1.22 | n.a. | 0.018 | 0.002 | 0.06 | n.a. | BMB |
| 3 | 1.45 | n.a. | 0.171 | 0.020 | 0.74 | n.a. | BM |
| 4 | 1.72 | Cl | 1.864 | 0.162 | 6.10 | 1.931 | MB |
| 5 | 3.15 | Br | 0.015 | 0.002 | 0.06 | 0.045 | BMB |
| 6 | 3.62 | NO3-N | 0.014 | 0.002 | 0.07 | 0.107 ✓ | BMB |
| 7 | 7.94 | SO4 | 9.749 | 2.451 | 92.60 | 36.171 | BMB |
| **Total:** | | | 11.938 | 2.647 | 100.00 | 38.253 | |

# 28 L0209310-07

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209310-07** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **52** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 18:28** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

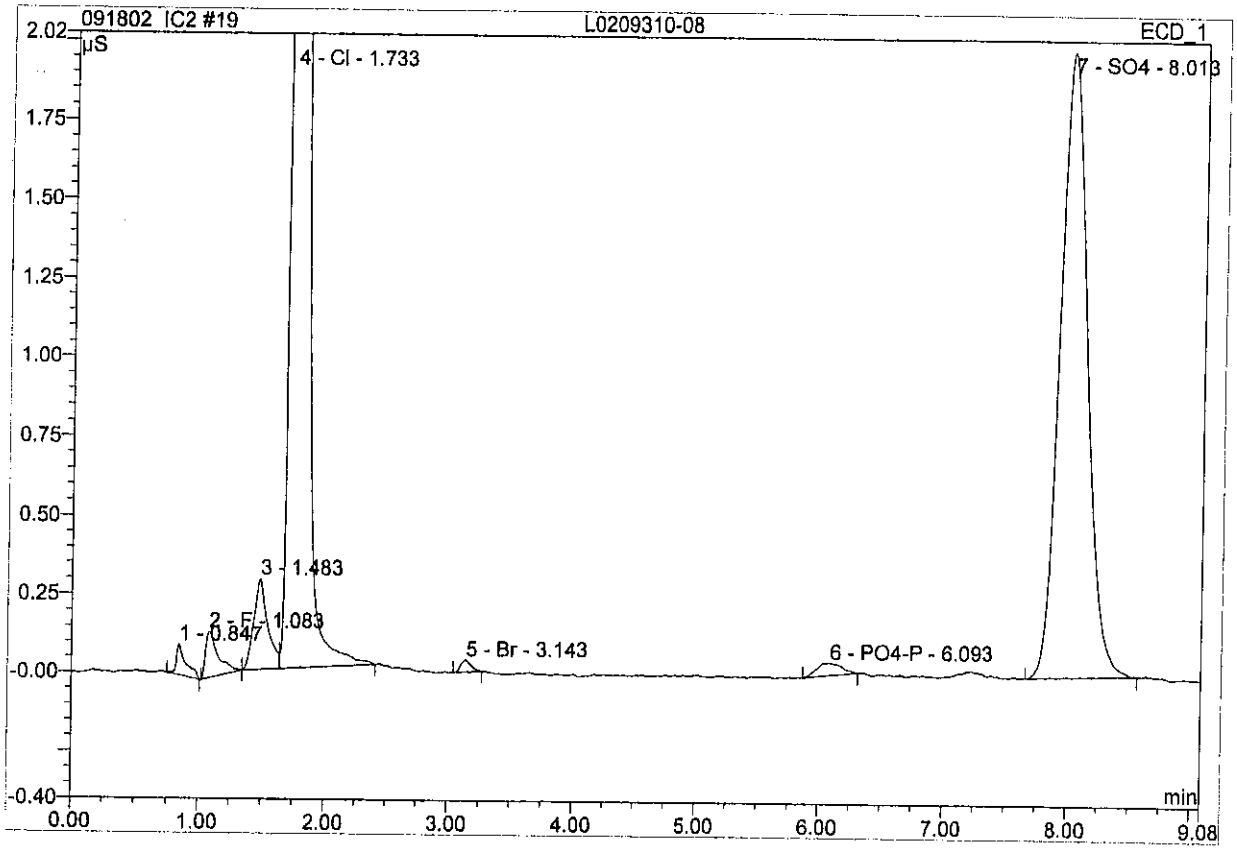



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.099 | 0.007 | 0.34 | n.a. | BMB |
| 2 | 1.23 | n.a. | 0.022 | 0.002 | 0.09 | n.a. | BMB |
| 3 | 1.50 | n.a. | 0.307 | 0.041 | 1.93 | n.a. | BM |
| 4 | 1.73 | Cl | 7.497 | 0.593 | 27.90 | 6.578 | MB |
| 5 | 3.14 | Br | 0.050 | 0.006 | 0.29 | 0.170 | BMB |
| 6 | 8.00 | SO4 | 5.874 | 1.476 | 69.45 | 22.151 | BMB |
| **Total:** | | | 13.849 | 2.126 | 100.00 | 28.899 | |

# 19 L0209310-08

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209310-08** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **49** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 16:27** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

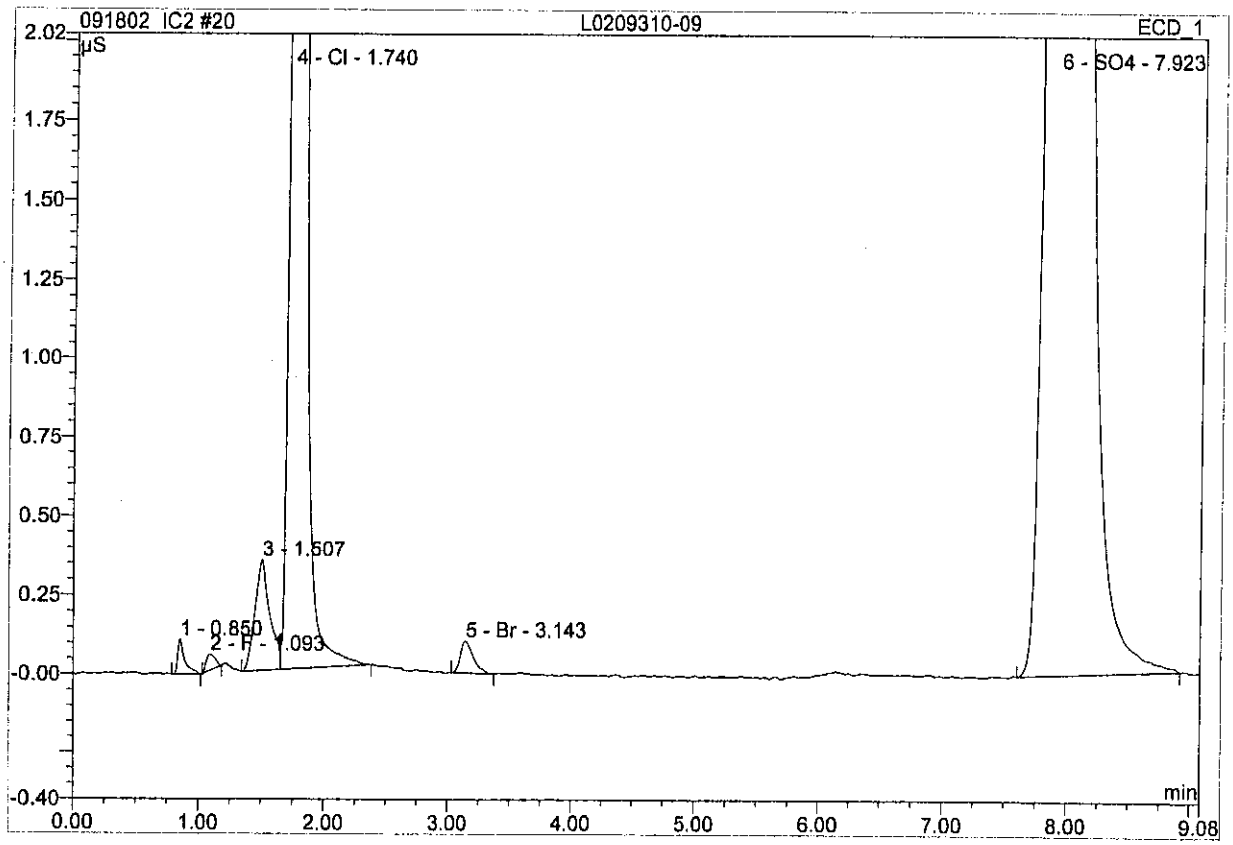



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.098 | 0.009 | 0.39 | n.a. | BMB |
| 2 | 1.08 | F | 0.149 | 0.017 | 0.74 | 0.319 | BMB |
| 3 | 1.48 | n.a. | 0.287 | 0.037 | 1.62 | n.a. | bM |
| 4 | 1.73 | Cl | 22.970 | 1.713 | 74.75 | 18.638 | MB |
| 5 | 3.14 | Br | 0.038 | 0.004 | 0.16 | 0.102 | BMB |
| 6 | 6.09 | PO4-P | 0.038 | 0.009 | 0.40 | 0.355 | BMB |
| 7 | 8.01 | SO4 | 1.978 | 0.503 | 21.94 | 8.157 | BMB |
| **Total:** | | | 25.558 | 2.292 | 100.00 | 27.571 | |

# 20 L0209310-09

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209310-09** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **49** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 16:39** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

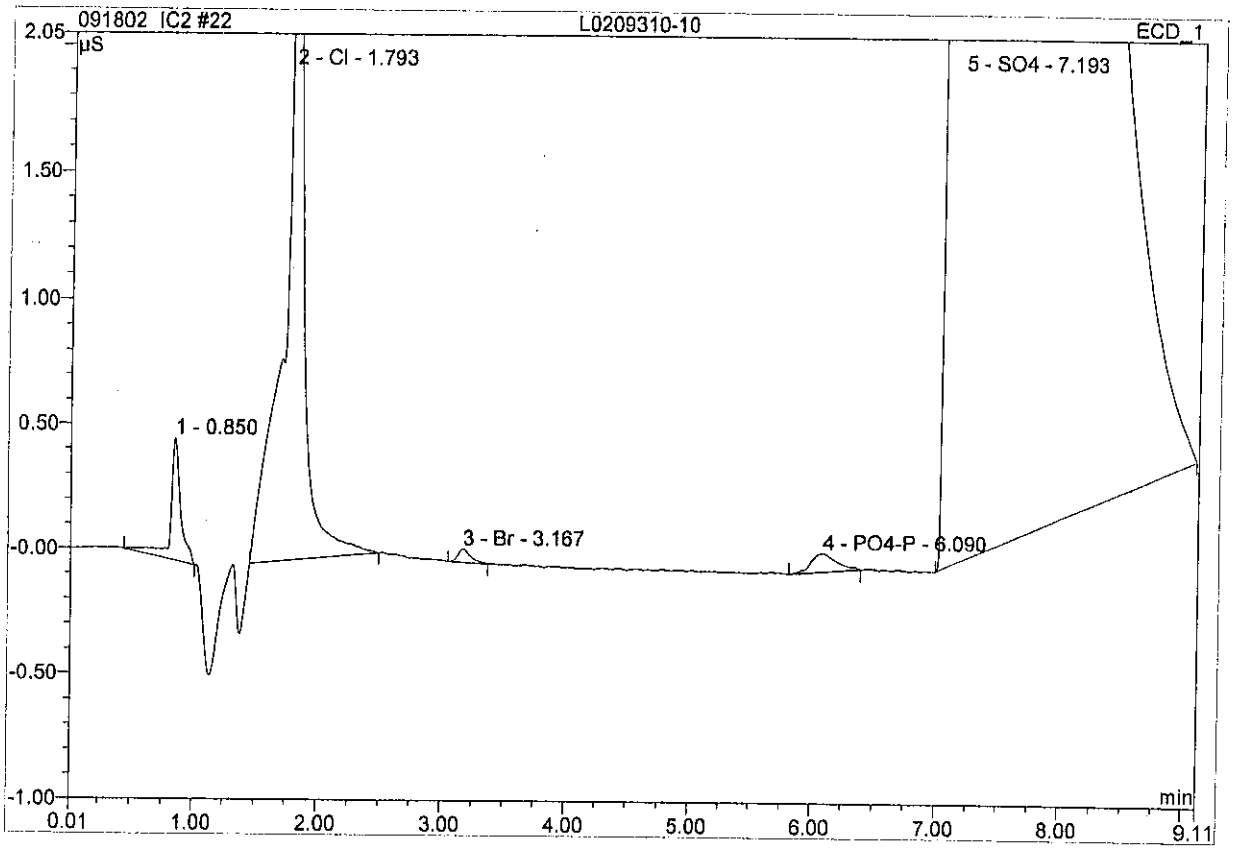



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.110 | 0.007 | 0.15 | n.a. | BMB |
| 2 | 1.09 | F | 0.051 | 0.004 | 0.09 | 0.231 | BMB |
| 3 | 1.51 | n.a. | 0.348 | 0.049 | 1.00 | n.a. | BM |
| 4 | 1.74 | Cl | 18.993 | 1.424 | 29.19 | 15.525 | MB |
| 5 | 3.14 | Br | 0.101 | 0.012 | 0.25 | 0.344 | BMB |
| 6 | 7.92 | SO4 | 13.263 | 3.381 | 69.32 | 49.534 | BMB |
| **Total:** | | | 32.867 | 4.878 | 100.00 | 65.634 | |

# 22 L0209310-10

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209310-10** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **51** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 17:19** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

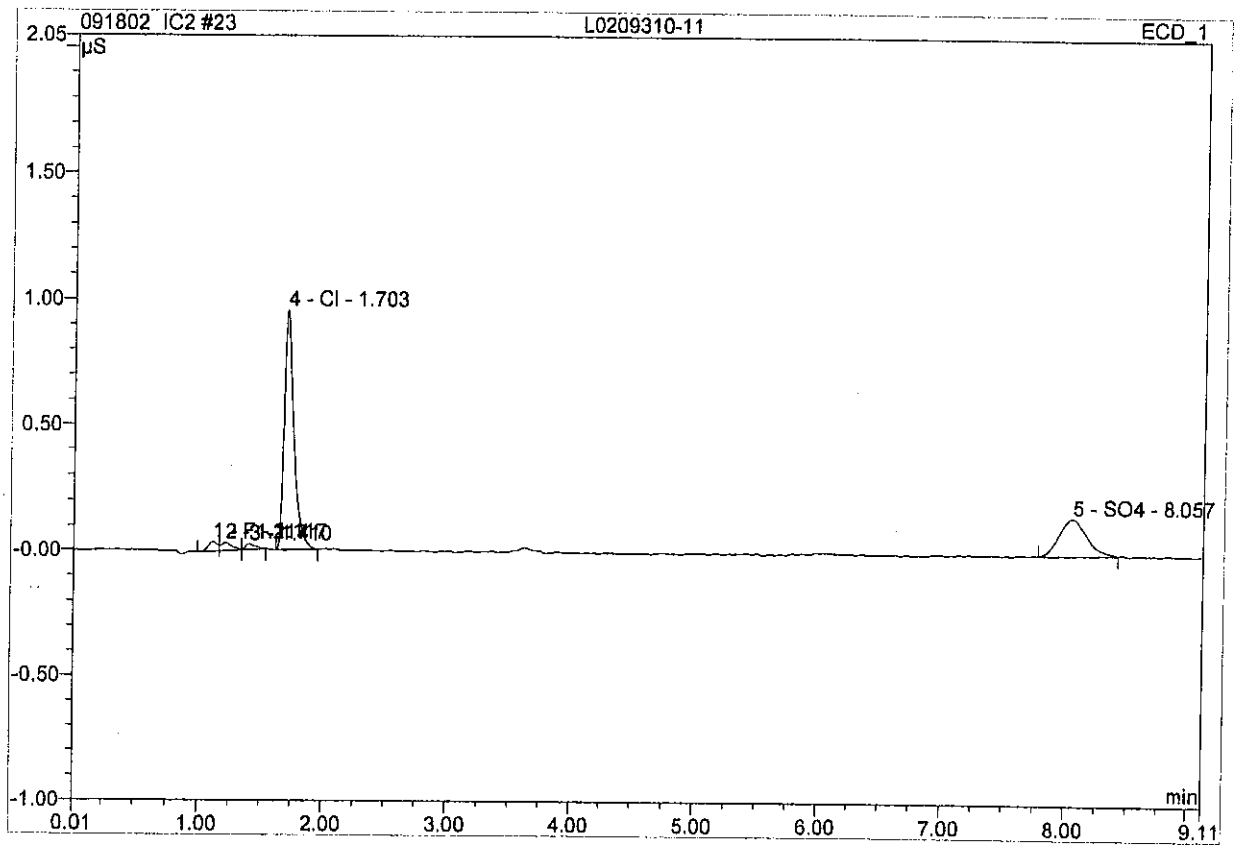



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.493 | 0.048 | 0.05 | n.a. | BMB |
| 2 | 1.79 | Cl | 3.212 | 0.510 | 0.53 | 5.679 | BMB |
| 3 | 3.17 | Br | 0.055 | 0.007 | 0.01 | 0.183 | BMB |
| 4 | 6.09 | PO4-P | 0.075 | 0.018 | 0.02 | 0.461 ✓ | BMB |
| 5 | 7.19 | SO4 | 166.640 | 96.423 | 99.40 | 1387.144 | BMB |
| **Total:** | | | 170.475 | 97.005 | 100.00 | 1393.467 | |

# 23 L0209310-11

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209310-11** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **52** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 17:31** | *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 | 1.12 | F | 0.037 | 0.003 | 2.44 | 0.224 | BM |
| 2 | 1.22 | n.a. | 0.032 | 0.003 | 2.39 | n.a. | M |
| 3 | 1.41 | n.a. | 0.023 | 0.002 | 1.64 | n.a. | MB |
| 4 | 1.70 | Cl | 0.954 | 0.086 | 64.28 | 1.116 | BMB |
| 5 | 8.06 | SO4 | 0.150 | 0.039 | 29.24 | 1.489 | BMB |
| **Total:** | | | 1.196 | 0.133 | 100.00 | 2.828 | |

# 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

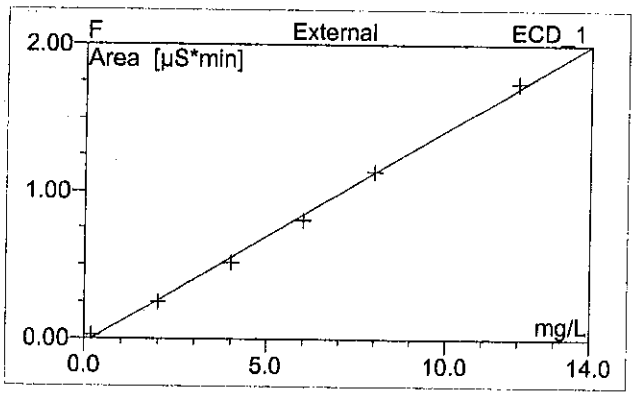
Primary Intermediate Std. Conc Br, Cl, and F are at 100 mg/L
NO2 is at 200 mg/L
NO3 is at 300 mg/L
PO4 and SO4 are at 500 mg/L

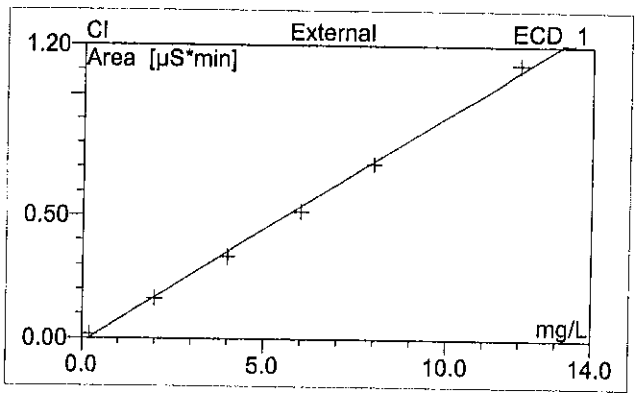
Alternate intermediate standard concentrations are twice the amount of the primary standard.

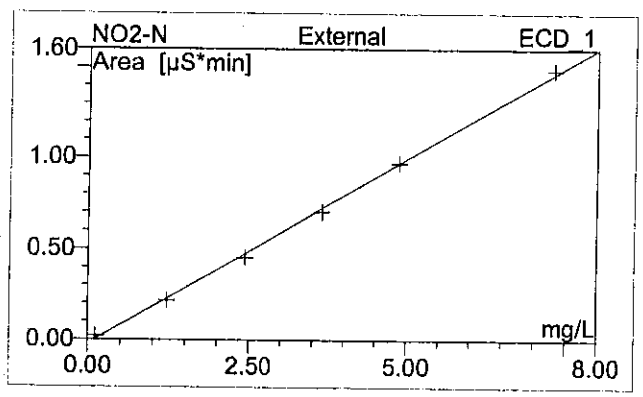
# 6 ANION STD #6

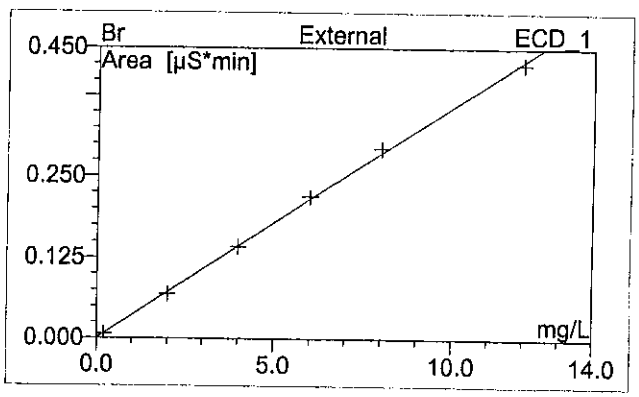
## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:06** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |



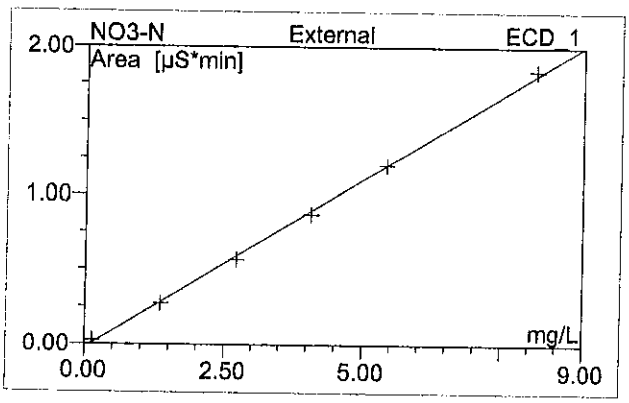



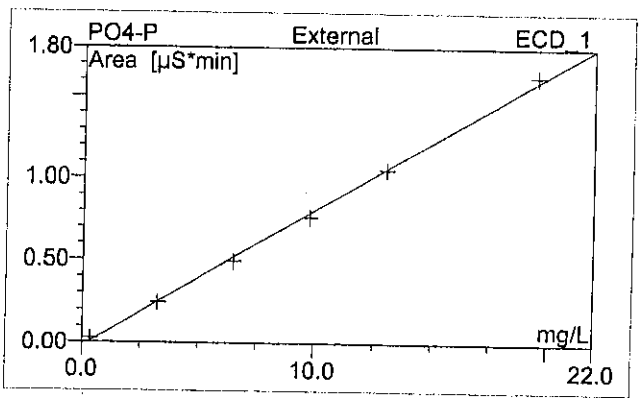

| No. | Ret.Time min | Peak Name | Cal.Type | Points | Corr.Coeff. % | Offset | Slope | Curve |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.43 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 4 | 1.73 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 5 | 2.10 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 6 | 3.18 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 7 | 3.60 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 8 | 6.14 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 9 | 8.20 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

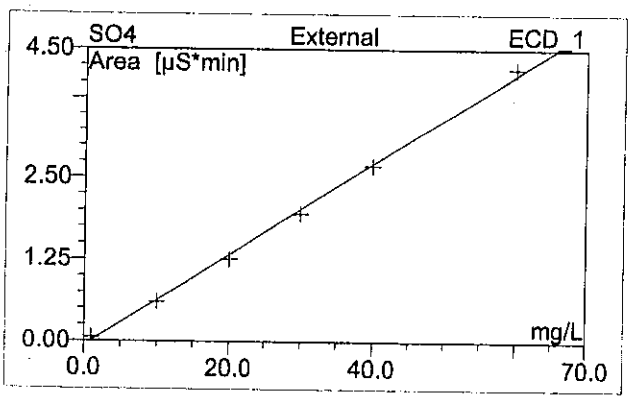
# 6 ANION STD #6

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:06** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |



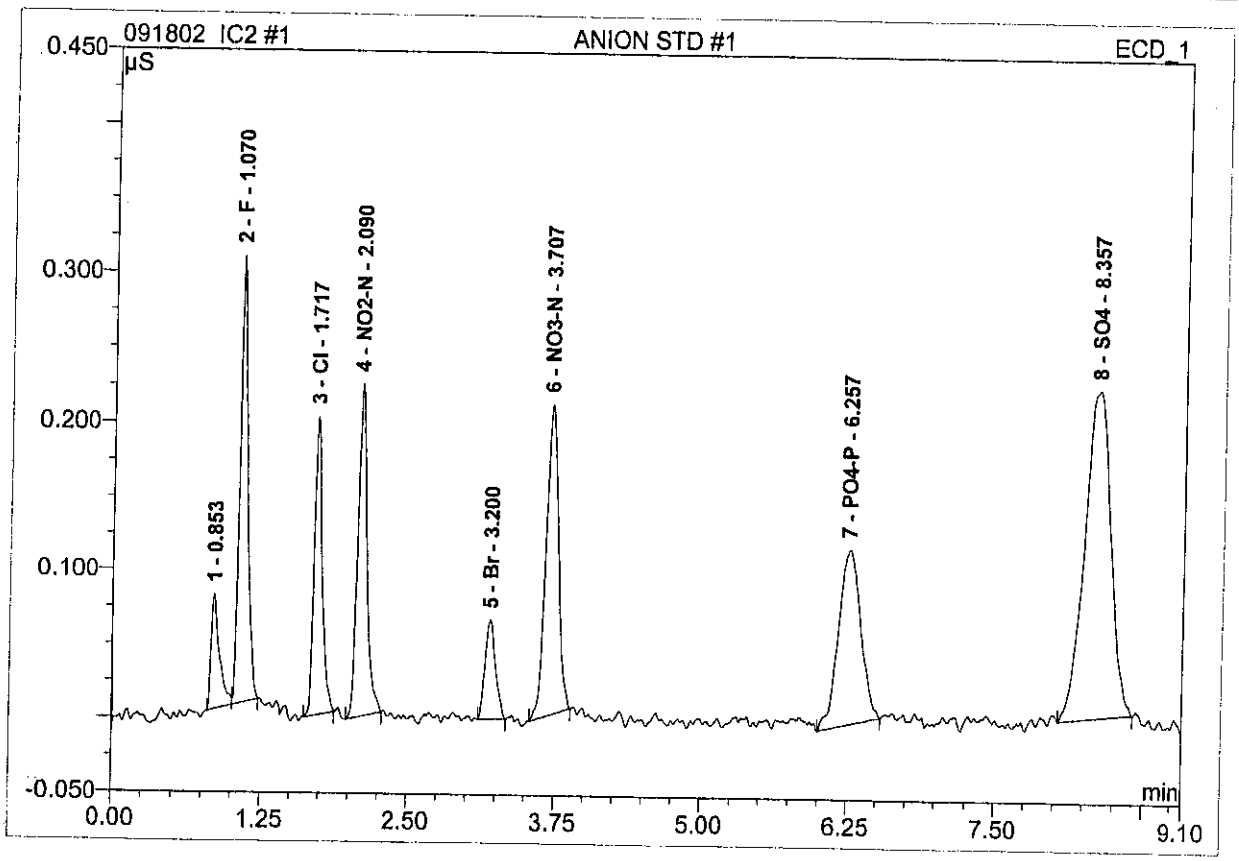




| No. | Ret.Time min | Peak Name | Cal.Type | Points | Corr.Coeff. % | Offset | Slope | Curve |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.43 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 4 | 1.73 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 5 | 2.10 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 6 | 3.18 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 7 | 3.60 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 8 | 6.14 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 9 | 8.20 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

# 1 ANION STD #1

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:02** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

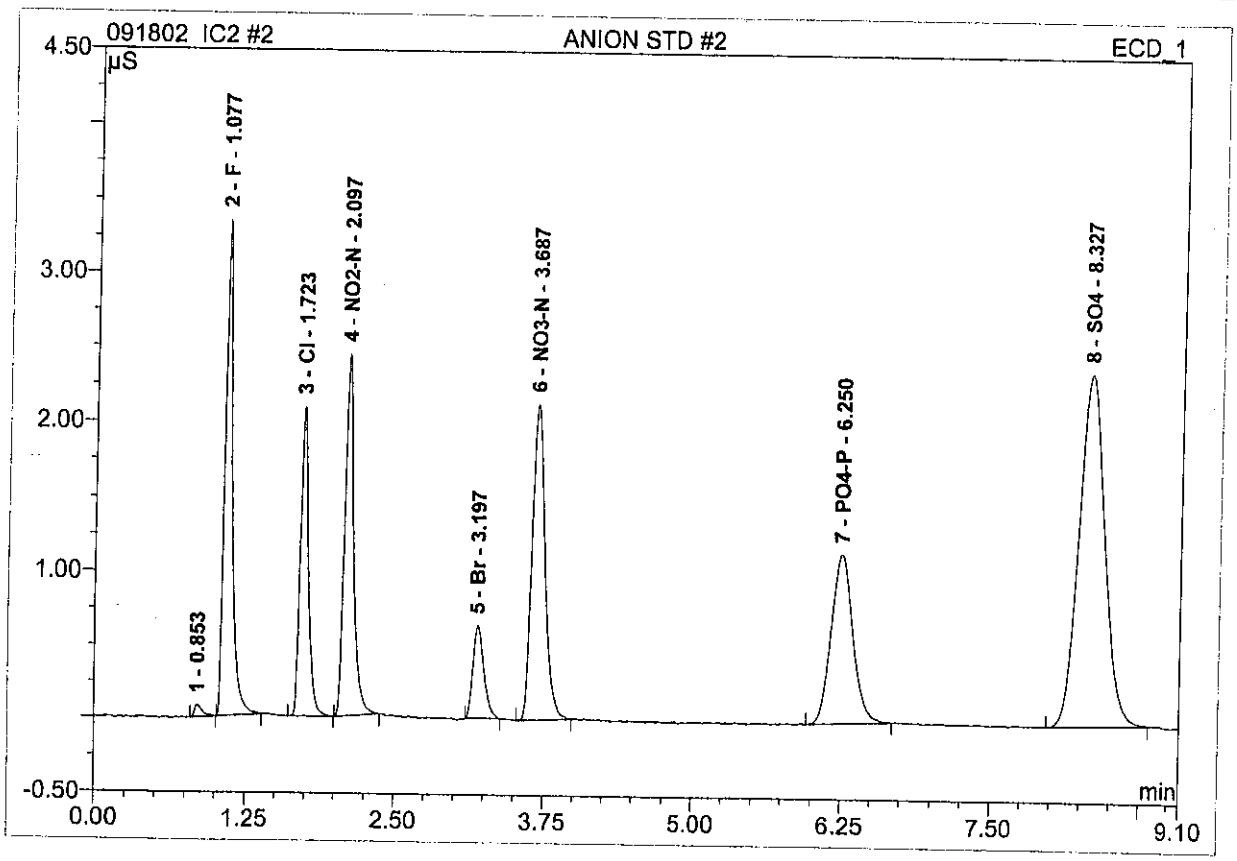



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.078 | 0.006 | 3.51 | n.a. | BM |
| 2 | 1.07 | F | 0.301 | 0.023 | 12.59 | 0.358 | MB |
| 3 | 1.72 | Cl | 0.202 | 0.016 | 8.84 | 0.363 | BMB |
| 4 | 2.09 | NO2-N | 0.224 | 0.021 | 11.38 | 0.199 | BMB |
| 5 | 3.20 | Br | 0.066 | 0.007 | 3.79 | 0.190 | BMB |
| 6 | 3.71 | NO3-N | 0.210 | 0.026 | 14.20 | 0.213 | BMB |
| 7 | 6.26 | PO4-P | 0.118 | 0.026 | 14.27 | 0.556 | BMB |
| 8 | 8.36 | SO4 | 0.221 | 0.057 | 31.42 | 1.743 | BMB |
| **Total:** | | | 1.420 | 0.181 | 100.00 | 3.623 | |

# 2 ANION STD #2

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:20** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

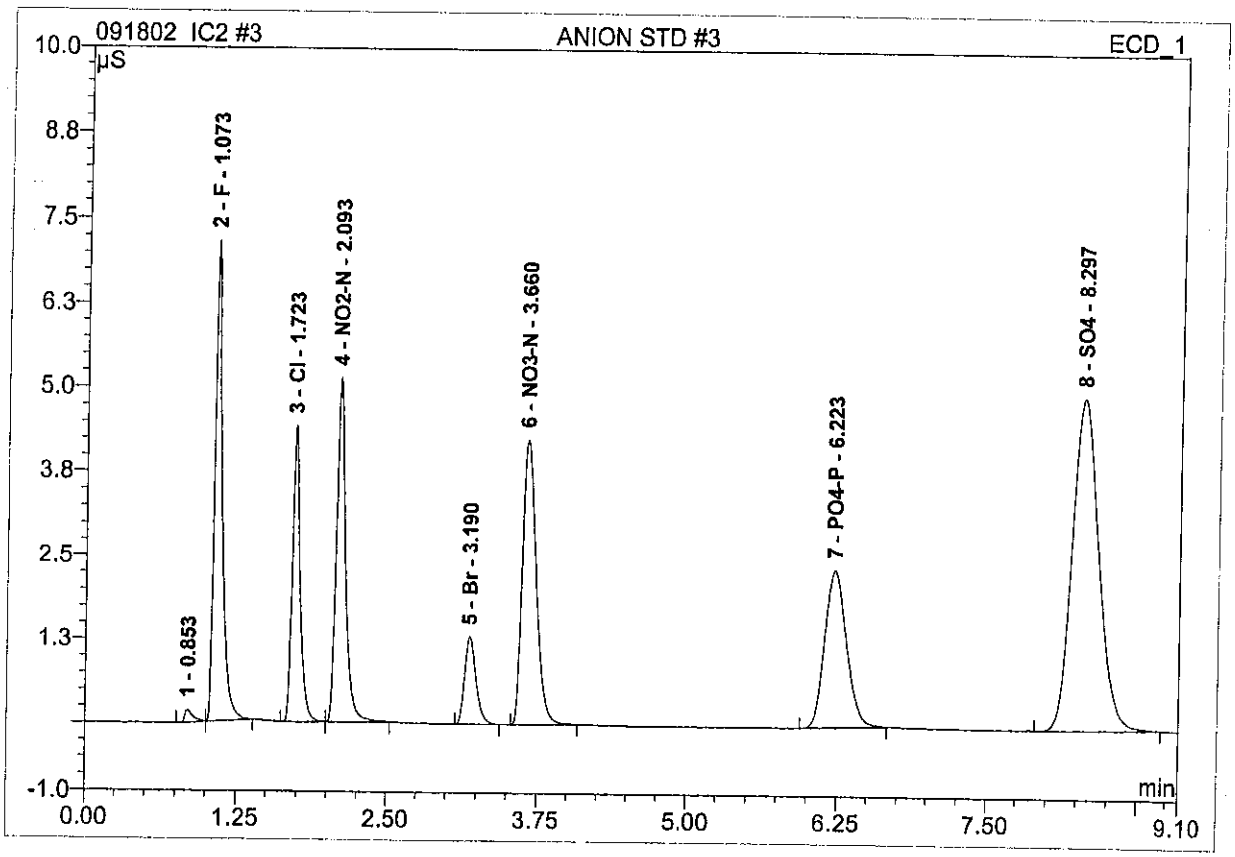



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.084 | 0.006 | 0.34 | n.a. | BMB |
| 2 | 1.08 | F | 3.342 | 0.248 | 13.63 | 1.915 | BMB |
| 3 | 1.72 | Cl | 2.087 | 0.163 | 8.92 | 1.943 | BMB |
| 4 | 2.10 | NO2-N | 2.432 | 0.216 | 11.87 | 1.163 | BMB |
| 5 | 3.20 | Br | 0.633 | 0.069 | 3.76 | 1.913 | BMB |
| 6 | 3.69 | NO3-N | 2.126 | 0.272 | 14.93 | 1.304 | BMB |
| 7 | 6.25 | PO4-P | 1.150 | 0.243 | 13.33 | 3.184 | BMB |
| 8 | 8.33 | SO4 | 2.372 | 0.606 | 33.22 | 9.635 | BMB |
| **Total:** | | | 14.225 | 1.823 | 100.00 | 21.057 | |

# 3 ANION STD #3

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:32** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

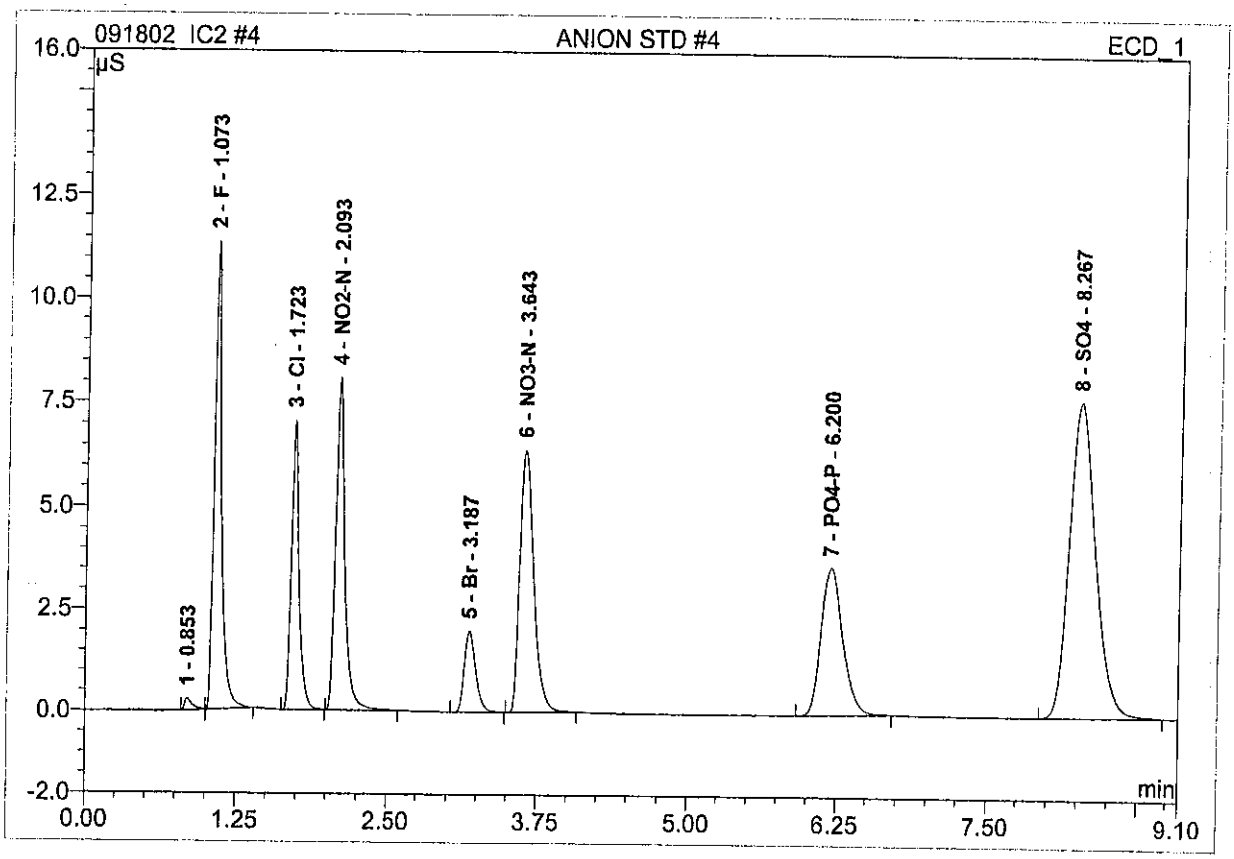



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.181 | 0.014 | 0.38 | n.a. | BM |
| 2 | 1.07 | F | 7.141 | 0.516 | 13.68 | 3.760 | MB |
| 3 | 1.72 | Cl | 4.412 | 0.334 | 8.85 | 3.786 | BM |
| 4 | 2.09 | NO2-N | 5.117 | 0.452 | 11.99 | 2.323 | MB |
| 5 | 3.19 | Br | 1.303 | 0.142 | 3.76 | 3.962 | BMB |
| 6 | 3.66 | NO3-N | 4.248 | 0.564 | 14.95 | 2.597 | BMB |
| 7 | 6.22 | PO4-P | 2.343 | 0.493 | 13.06 | 6.204 | BMB |
| 8 | 8.30 | SO4 | 4.947 | 1.258 | 33.34 | 19.006 | BMB |
| **Total:** | | | 29.692 | 3.772 | 100.00 | 41.639 | |

# 4 ANION STD #4

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:43** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

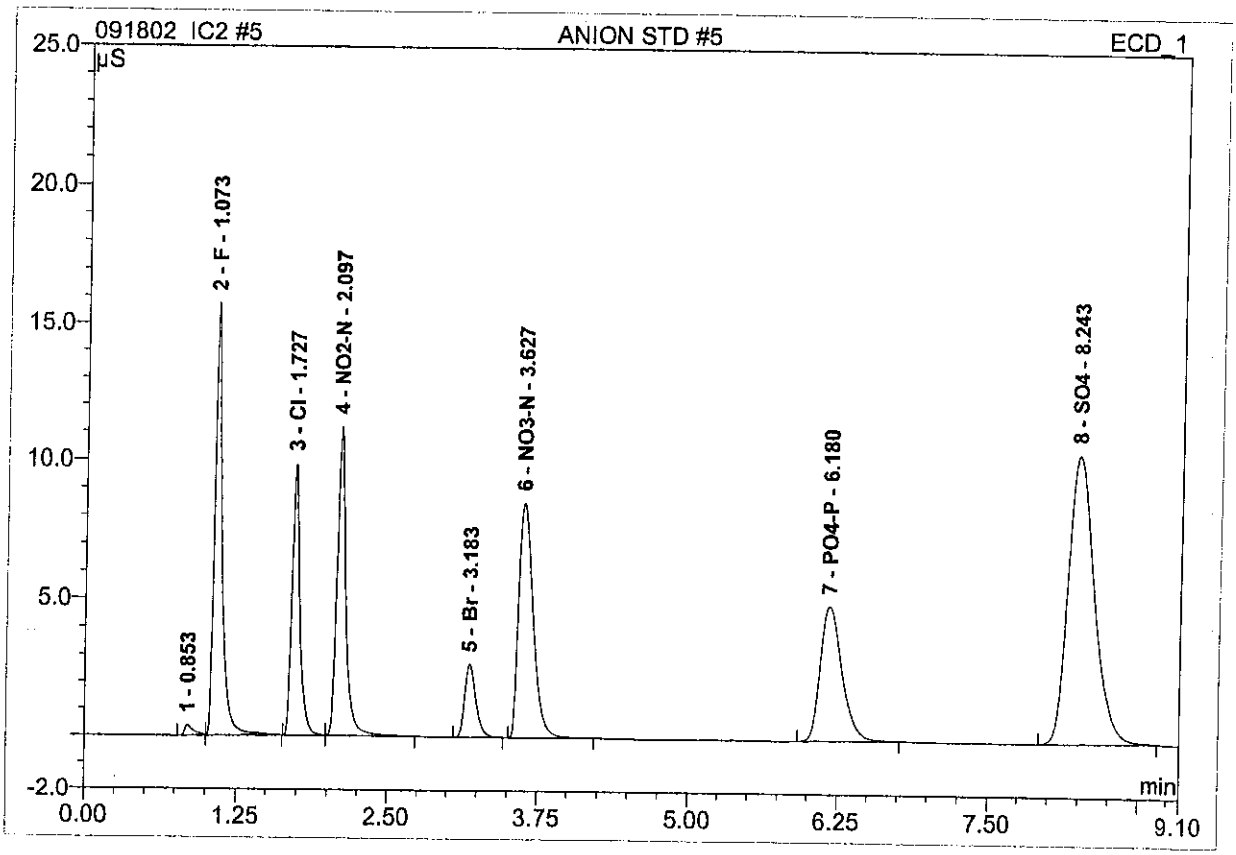



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.279 | 0.021 | 0.37 | n.a. | BM |
| 2 | 1.07 | F | 11.336 | 0.802 | 13.72 | 5.732 | MB |
| 3 | 1.72 | Cl | 7.018 | 0.517 | 8.85 | 5.758 | BMB |
| 4 | 2.09 | NO2-N | 8.062 | 0.701 | 12.00 | 3.548 | BMB |
| 5 | 3.19 | Br | 2.001 | 0.218 | 3.73 | 6.087 | BMB |
| 6 | 3.64 | NO3-N | 6.383 | 0.871 | 14.90 | 3.955 | BMB |
| 7 | 6.20 | PO4-P | 3.614 | 0.762 | 13.05 | 9.466 | BMB |
| 8 | 8.27 | SO4 | 7.646 | 1.951 | 33.39 | 28.972 | BMB |
| **Total:** | | | 46.338 | 5.843 | 100.00 | 63.518 | |

# 5 ANION STD #5

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:55** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

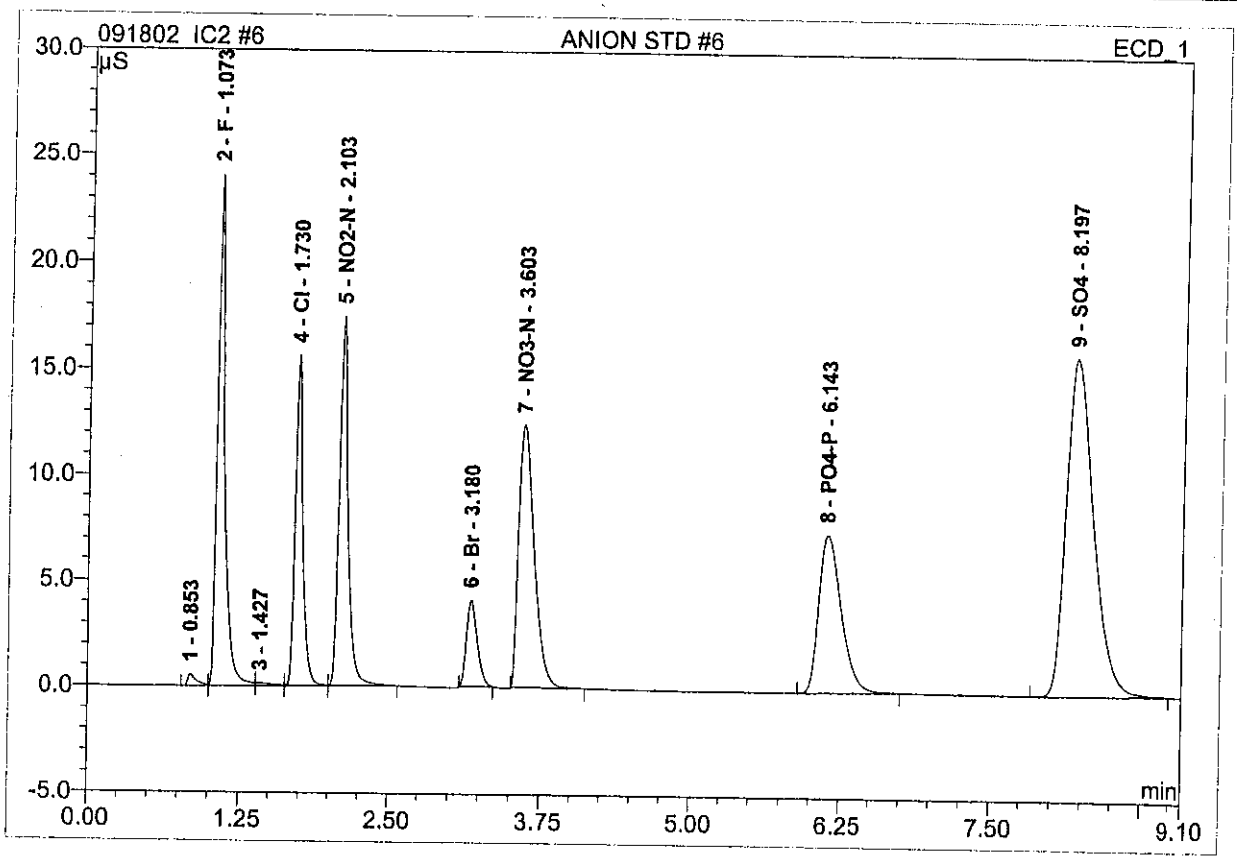



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.378 | 0.032 | 0.39 | n.a. | BM |
| 2 | 1.07 | F | 15.721 | 1.134 | 14.05 | 8.024 | MB |
| 3 | 1.73 | Cl | 9.820 | 0.714 | 8.84 | 7.878 | BM |
| 4 | 2.10 | NO2-N | 11.177 | 0.970 | 12.01 | 4.872 | MB |
| 5 | 3.18 | Br | 2.717 | 0.294 | 3.64 | 8.196 | BMB |
| 6 | 3.63 | NO3-N | 8.498 | 1.201 | 14.87 | 5.418 | BMB |
| 7 | 6.18 | PO4-P | 4.918 | 1.050 | 13.00 | 12.943 | BMB |
| 8 | 8.24 | SO4 | 10.455 | 2.681 | 33.20 | 39.466 | BMB |
| **Total:** | | | 63.684 | 8.074 | 100.00 | 86.796 | |

# 6 ANION STD #6

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:06** | *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 | 0.85 | n.a. | 0.563 | 0.048 | 0.38 | n.a. | BM |
| 2 | 1.07 | F | 24.053 | 1.741 | 13.93 | 12.210 | M |
| 3 | 1.43 | n.a. | 0.135 | 0.020 | 0.16 | n.a. | M |
| 4 | 1.73 | Cl | 15.625 | 1.123 | 8.98 | 12.281 | M |
| 5 | 2.10 | NO2-N | 17.457 | 1.484 | 11.87 | 7.404 | MB |
| 6 | 3.18 | Br | 4.075 | 0.425 | 3.40 | 11.854 | BM |
| 7 | 3.60 | NO3-N | 12.414 | 1.837 | 14.70 | 8.236 | BMB |
| 8 | 6.14 | PO4-P | 7.448 | 1.626 | 13.01 | 19.911 | BMB |
| 9 | 8.20 | SO4 | 15.947 | 4.196 | 33.57 | 61.250 | BMB |
| **Total:** | | | 97.717 | 12.499 | 100.00 | 133.145 | |

# 8 ANION ALT STD

## 1,1 JWR ANION ALT STD SOS0060-31

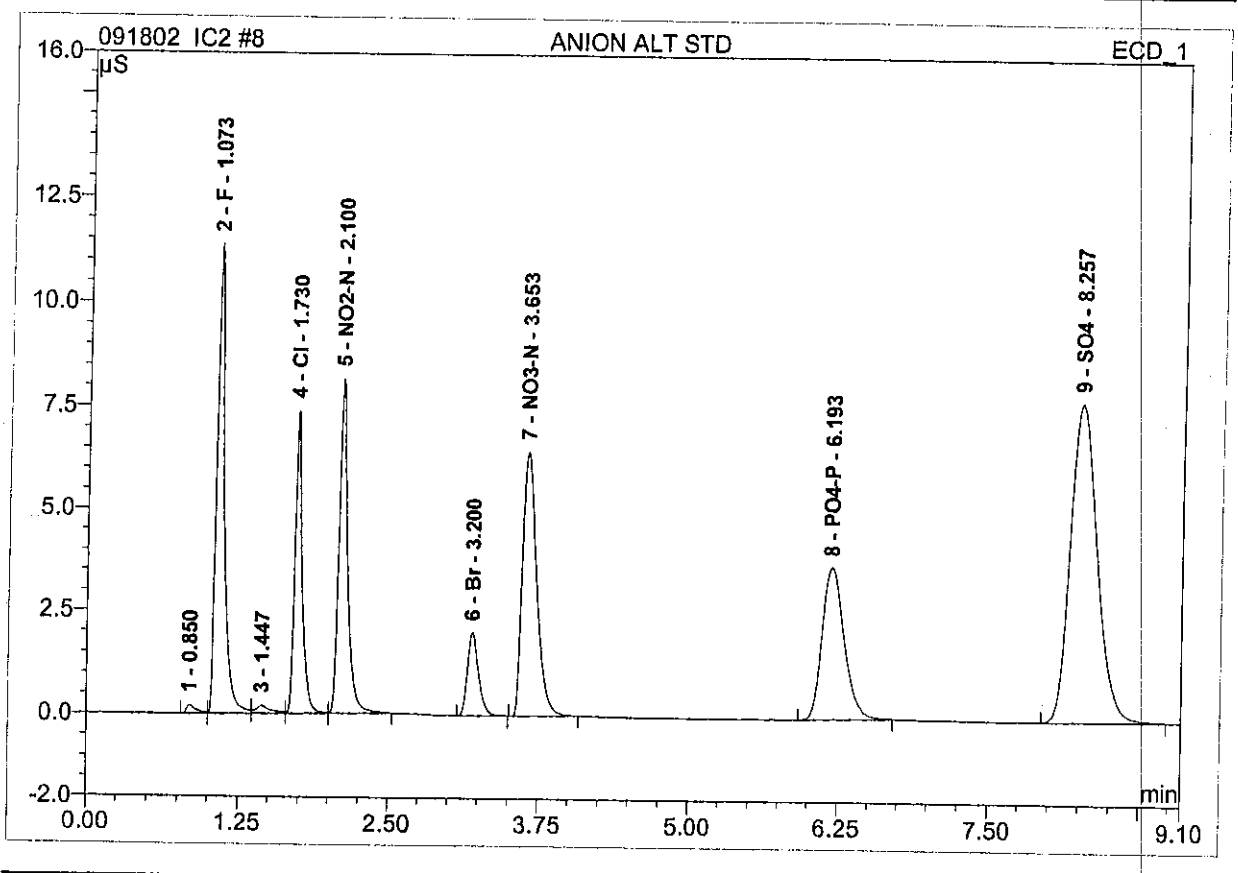
| | | | |
|---|---|---|---|
| *Sample Name:* | **ANION ALT STD** | | *Injection Volume:* |
| *Vial Number:* | **36** | | *Channel:* |
| *Sample Type:* | **unknown** | | *Wavelength:* |
| *Control Program:* | **9056** | | *Bandwidth:* |
| *Quantif. Method:* | **9056** | | *Dilution Factor:* |
| *Recording Time:* | **7/30/2002 23:56** | | *Sample Weight:* |
| *Run Time (min):* | **9.10** | | *Sample Amount:* |

| ANION ALT STD | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 5.8796 | -2.01 | PASS |
| Cl | 6 | 5.9275 | -1.21 | PASS |
| NO2-N | 3.65 | 3.5402 | -3.01 | PASS |
| Br | 6 | 6.0765 | 1.27 | PASS |
| NO3-N | 4.07 | 4.0147 | -1.36 | PASS |
| PO4-P | 9.78 | 9.7018 | -0.80 | PASS |
| SO4 | 30 | 29.4057 | -1.98 | PASS |

# 8 ANION ALT STD

## 1,1 JWR ANION ALT STD SOS0060-31

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:56** | *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 | 0.85 | n.a. | 0.205 | 0.018 | 0.31 | n.a. | BM |
| 2 | 1.07 | F | 11.357 | 0.823 | 13.80 | 5.880 | M |
| 3 | 1.45 | n.a. | 0.196 | 0.027 | 0.45 | n.a. | M |
| 4 | 1.73 | Cl | 7.381 | 0.533 | 8.93 | 5.928 | M |
| 5 | 2.10 | NO2-N | 8.144 | 0.699 | 11.72 | 3.540 | MB |
| 6 | 3.20 | Br | 2.007 | 0.218 | 3.65 | 6.076 | BMB |
| 7 | 3.65 | NO3-N | 6.447 | 0.884 | 14.82 | 4.015 | BMB |
| 8 | 6.19 | PO4-P | 3.684 | 0.782 | 13.10 | 9.702 | BMB |
| 9 | 8.26 | SO4 | 7.765 | 1.981 | 33.21 | 29.406 | BMB |
| **Total:** | | | 47.185 | 5.965 | 100.00 | 64.546 | |

# 10 WG125592-01 ANION CCV

## 1,1 JWR CS-03-37-19

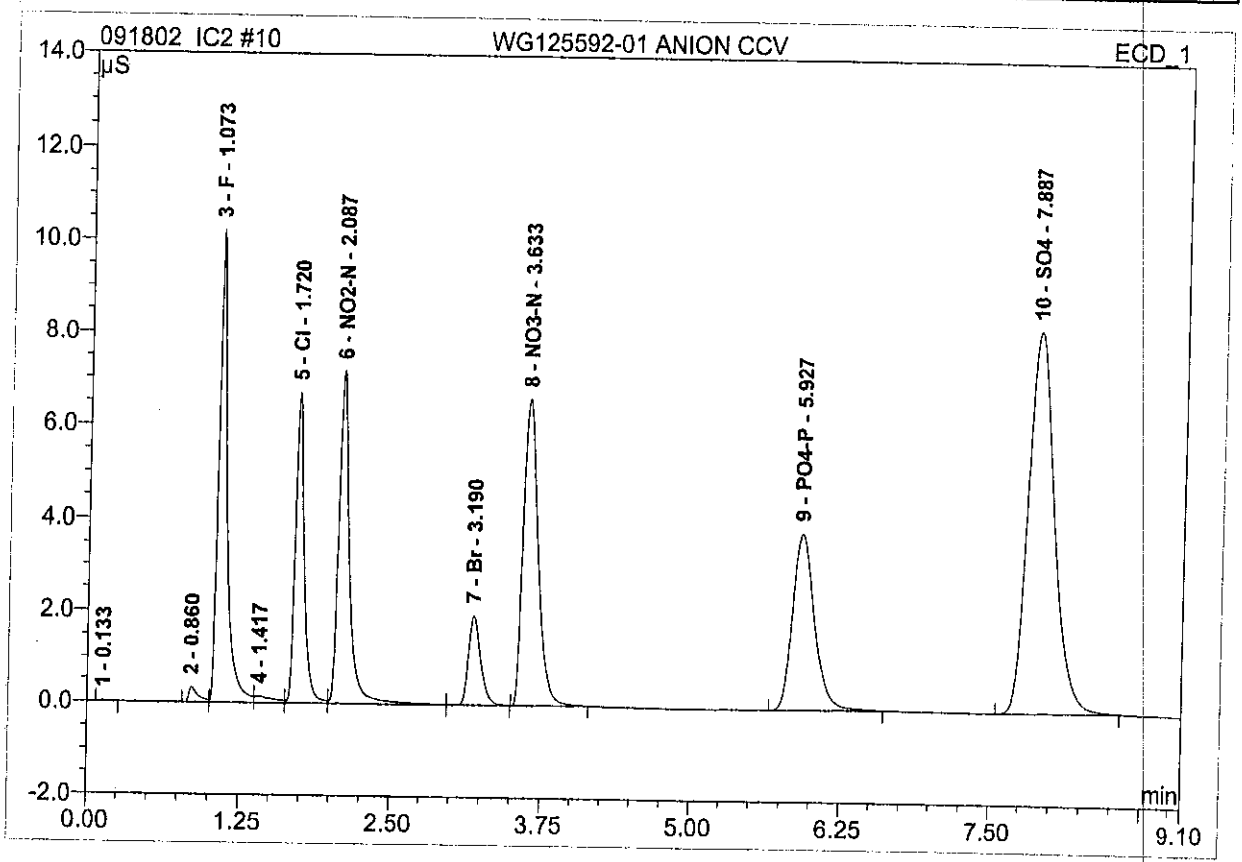
| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-01 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **46** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 14:44** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-01 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0866 | 1.44 | PASS |
| Cl | 6 | 6.2883 | 4.81 | PASS |
| NO2-N | 3.65 | 3.7196 | 1.91 | PASS |
| Br | 6 | 6.4130 | 6.88 | PASS |
| NO3-N | 4.07 | 4.3044 | 5.76 | PASS |
| PO4-P | 9.78 | 10.2414 | 4.72 | PASS |
| SO4 | 30 | 30.8155 | 2.72 | PASS |

# 10 WG125592-01 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-01 ANION 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:* | **9/18/2002 14:44** | *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 | 0.13 | n.a. | 0.021 | 0.001 | 0.02 | n.a. | BMB |
| 2 | 0.86 | n.a. | 0.315 | 0.029 | 0.46 | n.a. | BM |
| 3 | 1.07 | F | 10.198 | 0.853 | 13.56 | 6.087 | M |
| 4 | 1.42 | n.a. | 0.143 | 0.024 | 0.37 | n.a. | M |
| 5 | 1.72 | Cl | 6.687 | 0.566 | 9.00 | 6.288 | M |
| 6 | 2.09 | NO2-N | 7.167 | 0.736 | 11.69 | 3.720 | M |
| 7 | 3.19 | Br | 1.953 | 0.230 | 3.65 | 6.413 | MB |
| 8 | 3.63 | NO3-N | 6.591 | 0.949 | 15.09 | 4.304 | BMB |
| 9 | 5.93 | PO4-P | 3.848 | 0.826 | 13.13 | 10.241 | BMB |
| 10 | 7.89 | SO4 | 8.246 | 2.079 | 33.04 | 30.816 | BMB |
| **Total:** | | | 45.167 | 6.293 | 100.00 | 67.869 | |

# 21 WG125592-02 ANION CCV

## 1,1 JWR CS-03-37-19

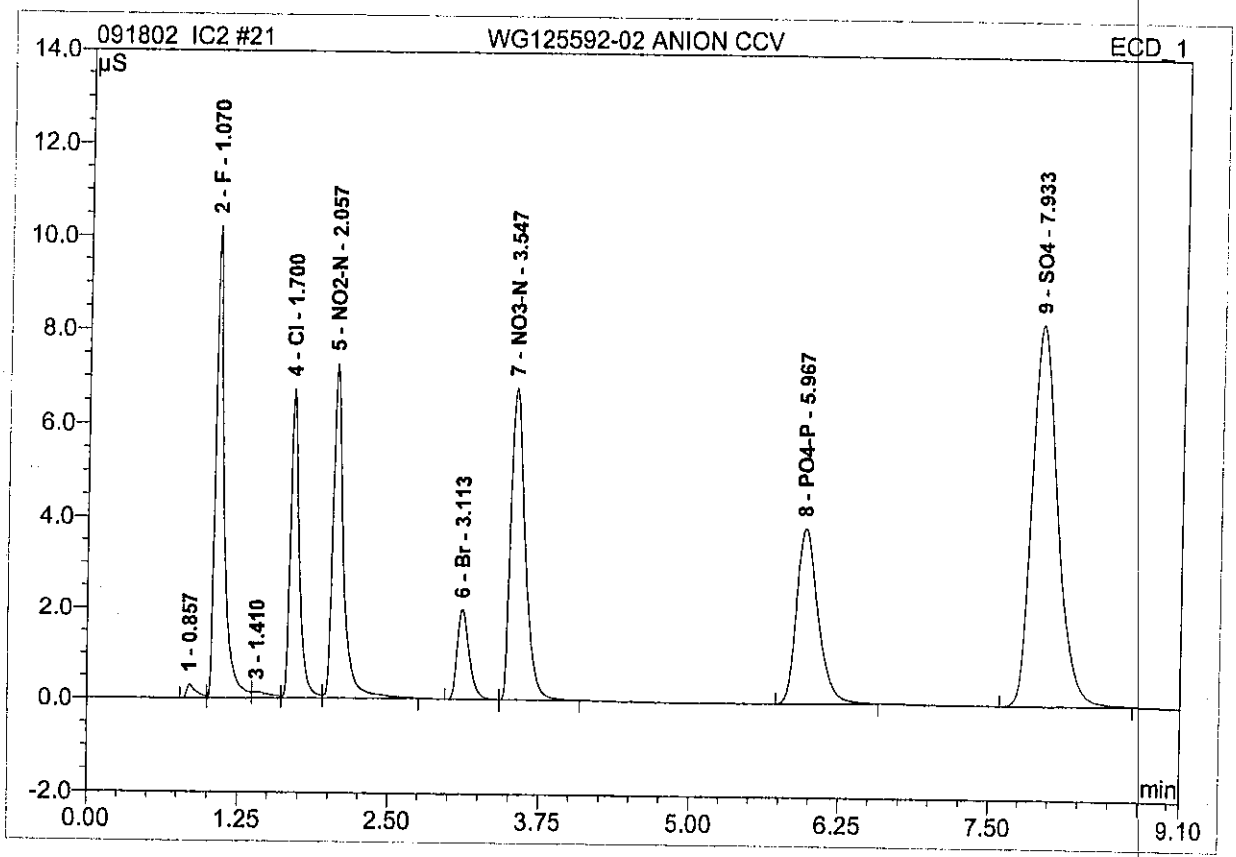
| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-02 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **46** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 16:50** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-02 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0715 | 1.19 | PASS |
| Cl | 6 | 6.2762 | 4.60 | PASS |
| NO2-N | 3.65 | 3.7491 | 2.71 | PASS |
| Br | 6 | 6.3838 | 6.40 | PASS |
| NO3-N | 4.07 | 4.3188 | 6.11 | PASS |
| PO4-P | 9.78 | 10.1940 | 4.23 | PASS |
| SO4 | 30 | 30.9191 | 3.06 | PASS |

# 21 WG125592-02 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-02 ANION 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:* | **9/18/2002 16:50** | *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 | 0.86 | n.a. | 0.300 | 0.028 | 0.44 | n.a. | BM |
| 2 | 1.07 | F | 10.213 | 0.851 | 13.51 | 6.071 | M |
| 3 | 1.41 | n.a. | 0.142 | 0.023 | 0.36 | n.a. | M |
| 4 | 1.70 | Cl | 6.718 | 0.565 | 8.97 | 6.276 | M |
| 5 | 2.06 | NO2-N | 7.255 | 0.742 | 11.78 | 3.749 | MB |
| 6 | 3.11 | Br | 1.988 | 0.229 | 3.63 | 6.384 | BM |
| 7 | 3.55 | NO3-N | 6.771 | 0.953 | 15.13 | 4.319 | MB |
| 8 | 5.97 | PO4-P | 3.853 | 0.822 | 13.06 | 10.194 | BMB |
| 9 | 7.93 | SO4 | 8.261 | 2.086 | 33.12 | 30.919 | BMB |
| **Total:** | | | 45.502 | 6.298 | 100.00 | 67.912 | |

# 27 WG125592-03 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-03 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **53** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 18:17** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-03 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0679 | 1.13 | PASS |
| Cl | 6 | 6.2352 | 3.92 | PASS |
| NO2-N | 3.65 | 3.6281 | -0.60 | PASS |
| Br | 6 | 6.4436 | 7.39 | PASS |
| NO3-N | 4.07 | 4.3481 | 6.83 | PASS |
| PO4-P | 9.78 | 10.2671 | 4.98 | PASS |
| SO4 | 30 | 31.0289 | 3.43 | PASS |



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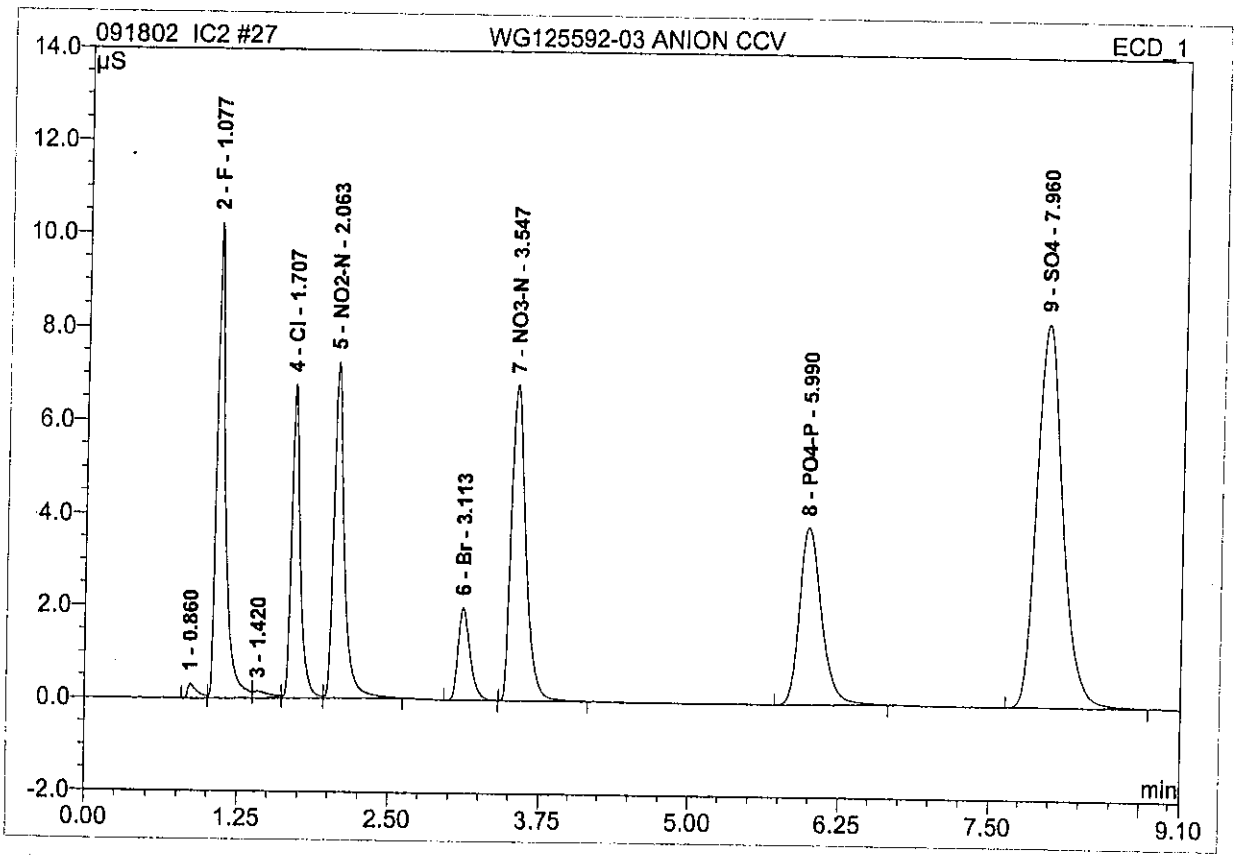
Version 6.30 SP1 Build 587

# 27 WG125592-03 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-03 ANION CCV** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **53** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 18:17** | *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 | 0.86 | n.a. | 0.295 | 0.027 | 0.43 | n.a. | BM |
| 2 | 1.08 | F | 10.212 | 0.851 | 13.52 | 6.068 | M |
| 3 | 1.42 | n.a. | 0.145 | 0.022 | 0.35 | n.a. | M |
| 4 | 1.71 | Cl | 6.758 | 0.561 | 8.92 | 6.235 | M |
| 5 | 2.06 | NO2-N | 7.250 | 0.717 | 11.40 | 3.628 | MB |
| 6 | 3.11 | Br | 1.987 | 0.231 | 3.67 | 6.444 | BMB |
| 7 | 3.55 | NO3-N | 6.799 | 0.959 | 15.25 | 4.348 | BMB |
| 8 | 5.99 | PO4-P | 3.831 | 0.828 | 13.17 | 10.267 | BMB |
| 9 | 7.96 | SO4 | 8.271 | 2.094 | 33.29 | 31.029 | BMB |
| **Total:** | | | 45.547 | 6.290 | 100.00 | 68.019 | |

# 31 WG125592-04 ANION CCV

## 1,1 JWR CS-03-37-19

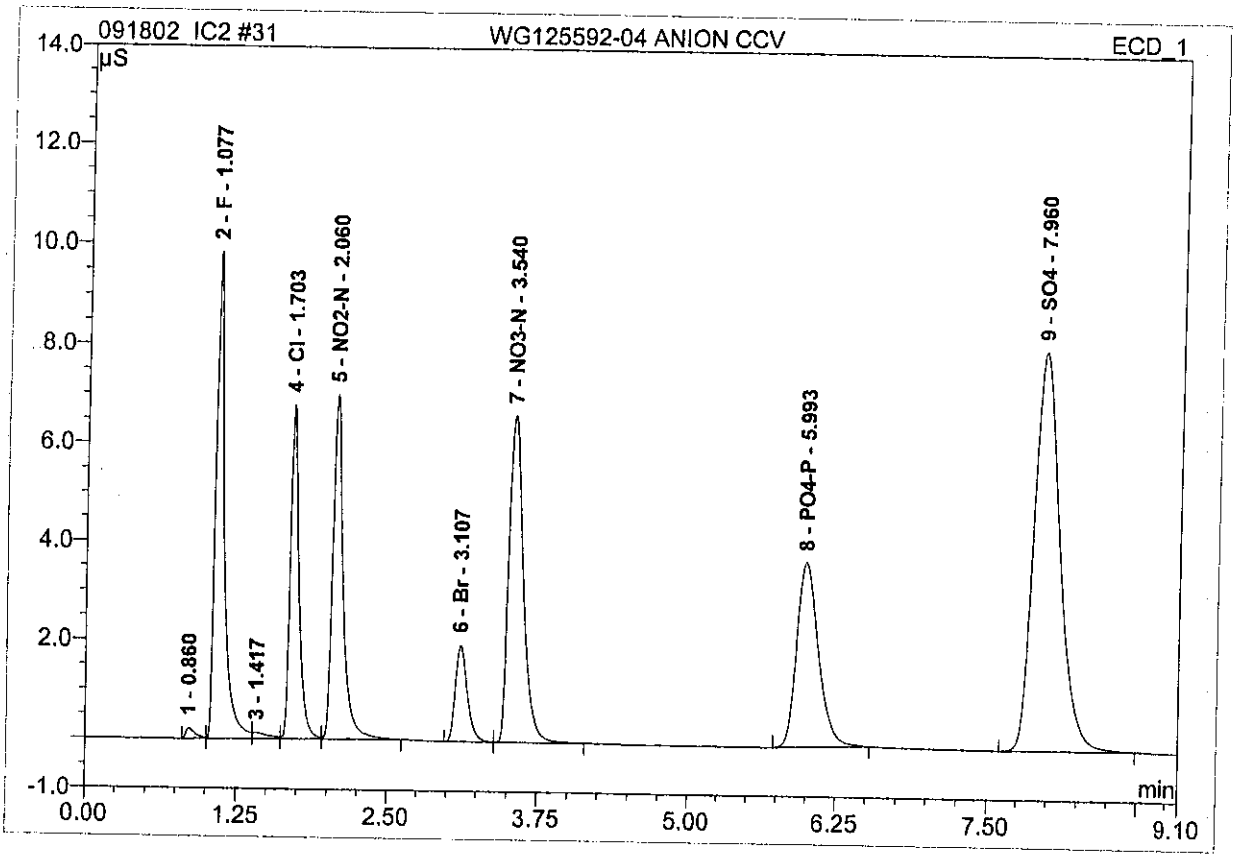
| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-04 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **52** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/18/2002 19:03** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125592-04 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 5.8828 | -1.95 | PASS |
| Cl | 6 | 6.2803 | 4.67 | PASS |
| NO2-N | 3.65 | 3.5054 | -3.96 | PASS |
| Br | 6 | 6.2681 | 4.47 | PASS |
| NO3-N | 4.07 | 4.2300 | 3.93 | PASS |
| PO4-P | 9.78 | 9.8312 | 0.52 | PASS |
| SO4 | 30 | 30.2491 | 0.83 | PASS |

# 31 WG125592-04 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125592-04 ANION CCV** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **52** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 19:03** | *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 | 0.86 | n.a. | 0.211 | 0.018 | 0.30 | n.a. | BM |
| 2 | 1.08 | F | 9.816 | 0.824 | 13.49 | 5.883 | M |
| 3 | 1.42 | n.a. | 0.126 | 0.018 | 0.30 | n.a. | M |
| 4 | 1.70 | Cl | 6.782 | 0.565 | 9.26 | 6.280 | M |
| 5 | 2.06 | NO2-N | 6.984 | 0.692 | 11.33 | 3.505 | MB |
| 6 | 3.11 | Br | 1.941 | 0.225 | 3.68 | 6.268 | BM |
| 7 | 3.54 | NO3-N | 6.626 | 0.933 | 15.27 | 4.230 | MB |
| 8 | 5.99 | PO4-P | 3.702 | 0.792 | 12.97 | 9.831 | BMB |
| 9 | 7.96 | SO4 | 8.069 | 2.040 | 33.40 | 30.249 | BMB |
| **Total:** | | | 44.257 | 6.107 | 100.00 | 66.247 | |

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 |

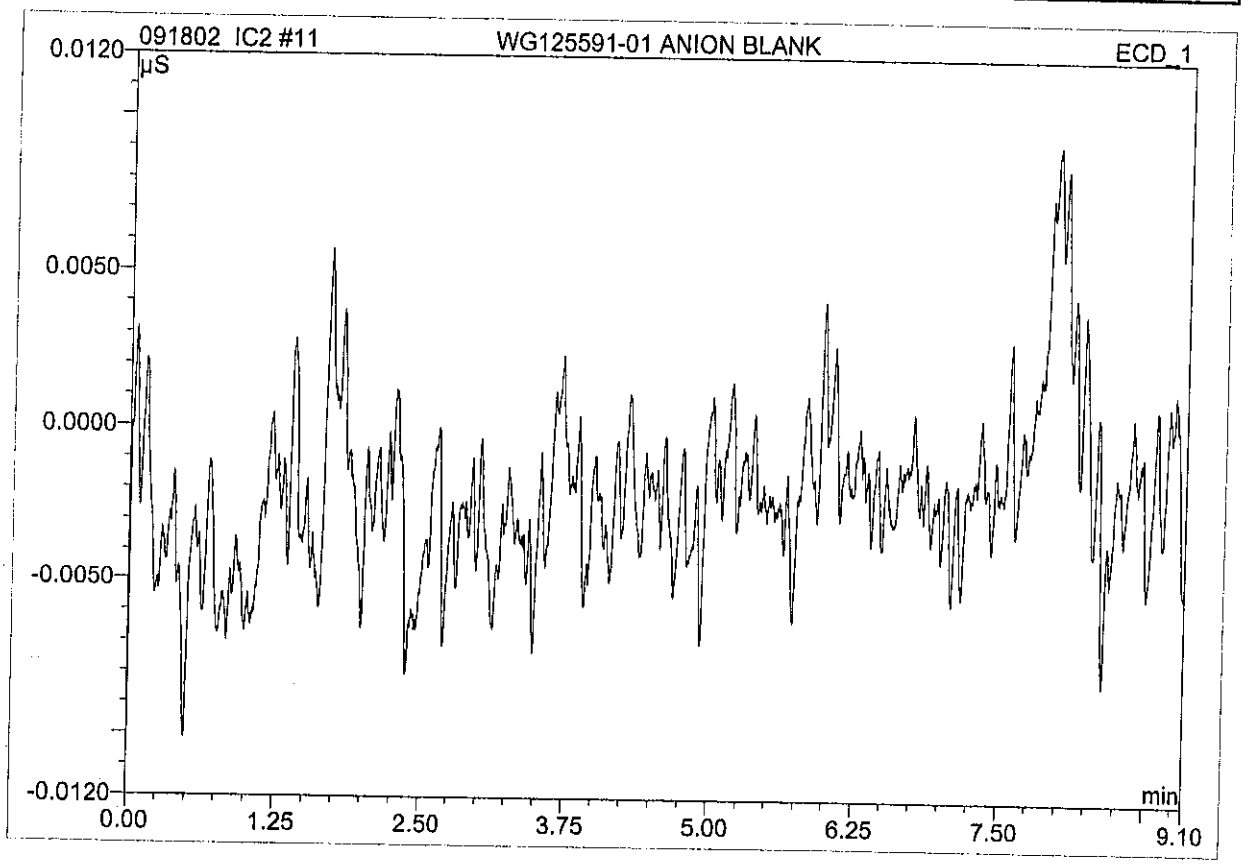
| COMPOUND | STD #1 RT | STD #2 RT | STD #3 RT | RT WIN |
|---|---|---|---|---|
| F | 1.07 | 1.07 | 1.08 | 0.017 |
| Cl | 1.69 | 1.69 | 1.70 | 0.017 |
| NO2-N | 2.05 | 2.04 | 2.06 | 0.030 |
| Br | 3.12 | 3.11 | 3.16 | 0.079 |
| NO3-N | 3.55 | 3.53 | 3.58 | 0.075 |
| PO4-P | 5.85 | 5.83 | 5.76 | 0.142 |
| SO4 | 7.59 | 7.58 | 7.51 | 0.131 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

# 2.4.5.4 Raw Data

# 11 WG125591-01 ANION BLANK

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125591-01 ANION BLANK** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **47** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 14:55** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

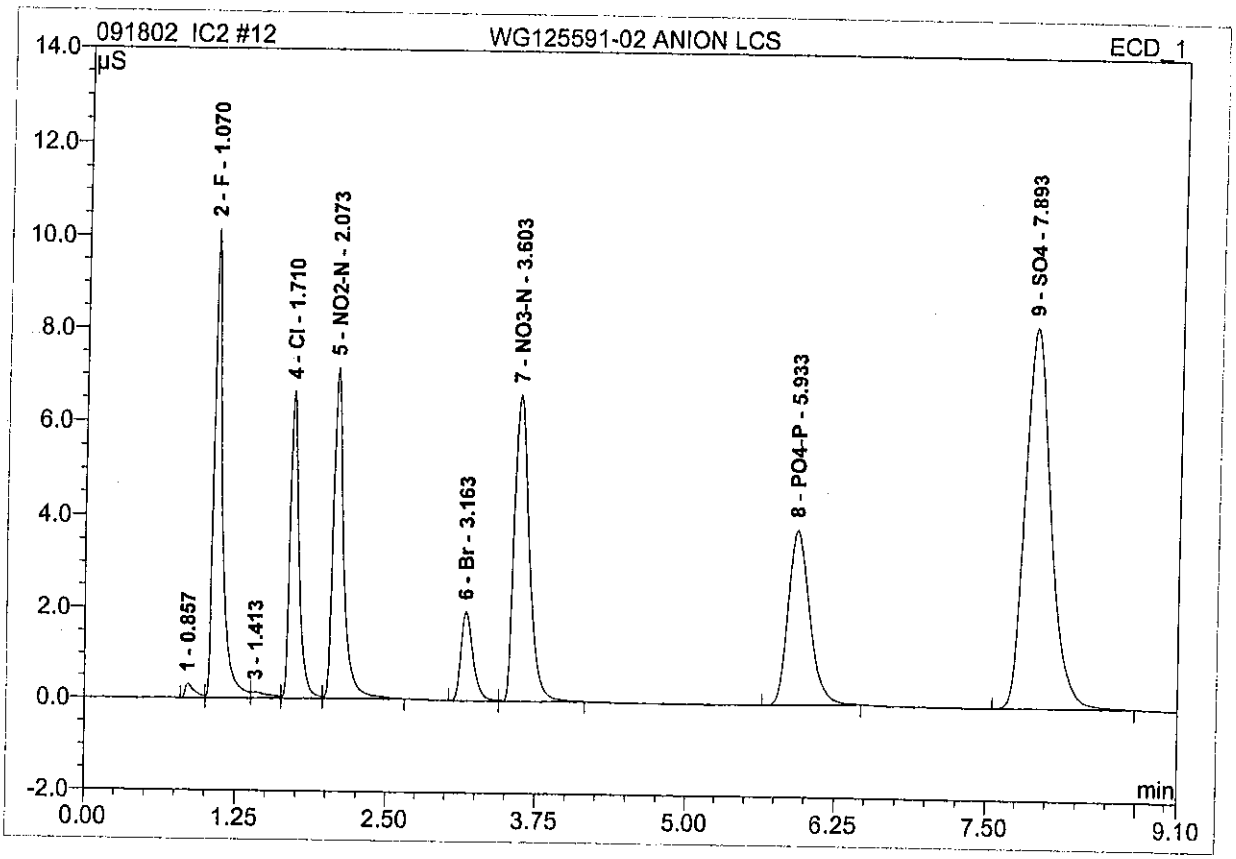



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# 12 WG125591-02 ANION LCS

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125591-02 ANION LCS** | *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:* | **9/18/2002 15:07** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

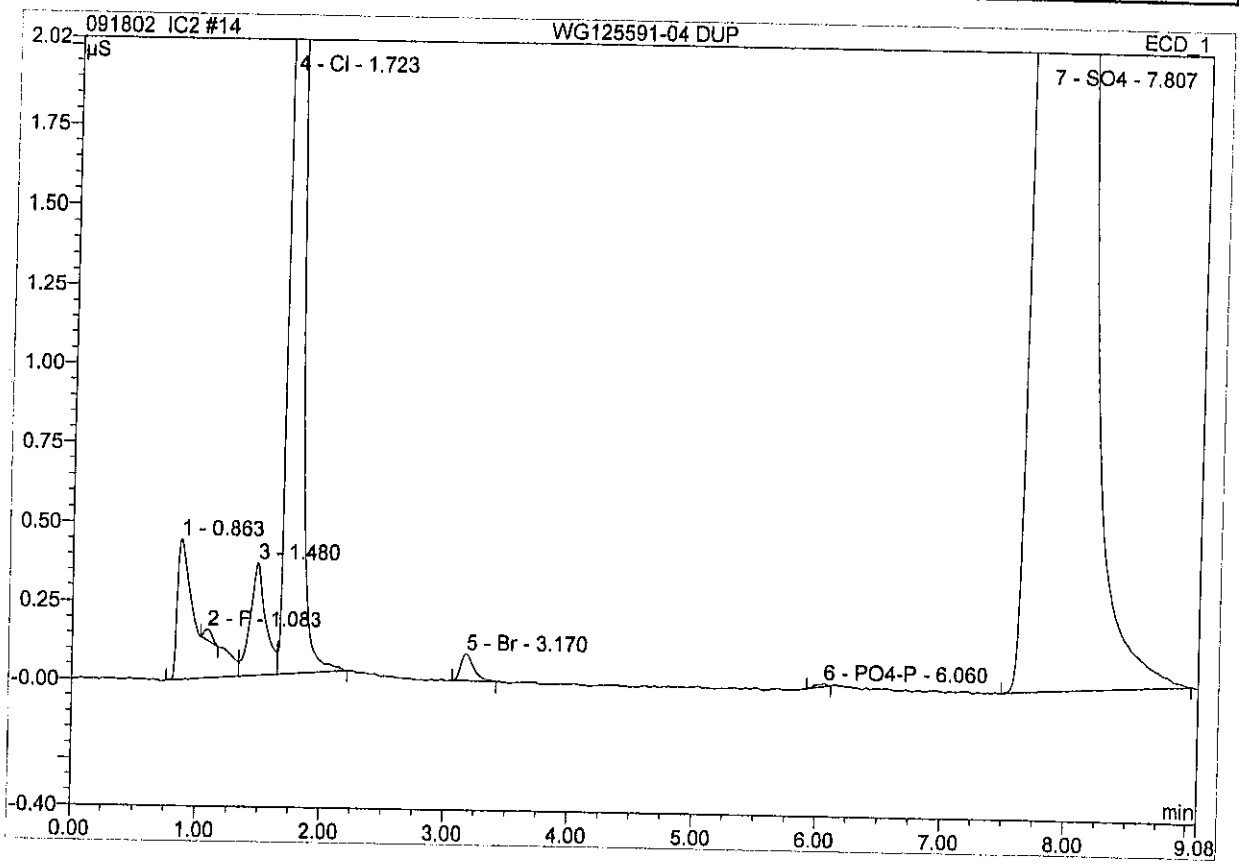



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.86 | n.a. | 0.307 | 0.028 | 0.45 | n.a. | BM |
| 2 | 1.07 | F | 10.140 | 0.850 | 13.59 | 6.061 | M |
| 3 | 1.41 | n.a. | 0.131 | 0.020 | 0.33 | n.a. | M |
| 4 | 1.71 | Cl | 6.642 | 0.558 | 8.93 | 6.200 | M |
| 5 | 2.07 | NO2-N | 7.143 | 0.716 | 11.45 | 3.620 | MB |
| 6 | 3.16 | Br | 1.958 | 0.230 | 3.68 | 6.425 | BM |
| 7 | 3.60 | NO3-N | 6.620 | 0.953 | 15.24 | 4.320 | MB |
| 8 | 5.93 | PO4-P | 3.828 | 0.813 | 13.01 | 10.084 | BMB |
| 9 | 7.89 | SO4 | 8.241 | 2.083 | 33.32 | 30.875 | BMB |
| **Total:** | | | 45.009 | 6.251 | 100.00 | 67.586 | |

# 14 WG125591-04 DUP

## 1,1 JWR L0209310-01 DUP

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125591-04 DUP** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **48** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/18/2002 15:30** | *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 |
|---|---|---|---|---|---|---|---|
| 1 | 0.86 | n.a. | 0.446 | 0.088 | 1.15 | n.a. | BM |
| 2 | 1.08 | F | 0.034 | 0.003 | 0.03 | 0.220 | Rd |
| 3 | 1.48 | n.a. | 0.358 | 0.052 | 0.69 | n.a. | M |
| 4 | 1.72 | Cl | 8.272 | 0.654 | 8.62 | 7.232 | MB |
| 5 | 3.17 | Br | 0.086 | 0.011 | 0.14 | 0.295 | BMB |
| 6 | 6.06 | PO4-P | 0.009 | 0.001 | 0.01 | 0.257 | BMB |
| 7 | 7.81 | SO4 | 25.087 | 6.781 | 89.35 | 98.412 | BMB |
| Total: | | | 34.292 | 7.589 | 100.00 | 106.415 | |

Operator: Analyst
Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 32

Created: 9/18/2002 13:04:05 by Analyst
Last Update: 9/18/2002 19:40:58 by Analyst

| No. | Name | Inj. Date/Time | Dil. Factor | Sample ID | Comment |
|---|---|---|---|---|---|
| 1 | ANION STD #1 | 7/30/2002 22:02:57 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 2 | ANION STD #2 | 7/30/2002 22:20:52 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 3 | ANION STD #3 | 7/30/2002 22:32:22 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 4 | ANION STD #4 | 7/30/2002 22:43:52 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 5 | ANION STD #5 | 7/30/2002 22:55:22 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 6 | ANION STD #6 | 7/30/2002 23:06:52 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 7 | ELUENT BLANK | 7/30/2002 23:18:22 | 1.0000 | | 1,1 JWR |
| 8 | ANION ALT STD | 7/30/2002 23:56:16 | 1.0000 | | 1,1 JWR ANION ALT STD SOS0060-31 |
| 9 | ELUENT BLANK | 9/18/2002 14:32:57 | 1.0000 | | 1,1 JWR |
| 10 | WG125592-01 ANION CCV | 9/18/2002 14:44:27 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 11 | WG125591-01 ANION BLANK | 9/18/2002 14:55:57 | 1.0000 | | 1,1 JWR |
| 12 | WG125591-02 ANION LCS | 9/18/2002 15:07:26 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 13 | WG125591-03 DUP-REF | 9/18/2002 15:18:57 | 1.0000 | | 1,1 JWR L0209310-01 DUP-REF |
| 14 | WG125591-04 DUP | 9/18/2002 15:30:27 | 1.0000 | | 1,1 JWR L0209310-01 DUP |
| 15 | WG125591-05 MS/MSD-REF | 9/18/2002 15:41:57 | 1.0000 | | 1,1 JWR L0209310-03 MS/MSD-REF |
| 16 | WG125591-06 MS | 9/18/2002 15:53:27 | 1.0000 | | 1,1 JWR L0209310-04 MS |
| 17 | WG125591-07 MSD | 9/18/2002 16:04:57 | 1.0000 | | 1,1 JWR L0209310-05 MSD |
| 18 | L0209310-06 | 9/18/2002 16:16:27 | 1.0000 | | 1,1 JWR |
| 19 | L0209310-08 | 9/18/2002 16:27:57 | 1.0000 | | 1,1 JWR |
| 20 | L0209310-09 | 9/18/2002 16:39:27 | 1.0000 | | 1,1 JWR |
| 21 | WG125592-02 ANION CCV | 9/18/2002 16:50:56 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 22 | L0209310-10 | 9/18/2002 17:19:56 | 1.0000 | | 1,1 JWR |
| 23 | L0209310-11 | 9/18/2002 17:31:26 | 1.0000 | | 1,1 JWR |
| 24 | L0209310-07 (RR 1/5 SO4 INT?) | 9/18/2002 17:42:56 | 1.0000 | | 1,5 JWR |
| 25 | L0209310-02 (RR 1/100 SO4 INT?) | 9/18/2002 17:54:26 | 1.0000 | | 1,100 JWR |
| 26 | ELUENT BLANK | 9/18/2002 18:05:56 | 1.0000 | | 1,1 JWR |
| 27 | WG125592-03 ANION CCV | 9/18/2002 18:17:25 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 28 | L0209310-07 | 9/18/2002 18:28:55 | 1.0000 | | 1,1 JWR |
| 29 | L0209310-02 | 9/18/2002 18:40:25 | 1.0000 | | 1,1 JWR |
| 30 | L0209310-02 (RR 1/10 SO4 INT?) | 9/18/2002 18:51:55 | 1.0000 | | 1,10 JWR |
| 31 | WG125592-04 ANION CCV | 9/18/2002 19:03:25 | 1.0000 | | 1,1 JWR CS-03-37-19 |
| 32 | END | 9/18/2002 19:16:14 | 1.0000 | | 1,1 JWR |

1395 psi
R325649

JWR 09/25/02
TRC 9/26/02

PeakNet © Dionex Corporation, Version 6.30 SP1 Build 587

Operator: Analyst
Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 32

Created: 9/18/2002 13:04:05 by Analyst
Last Update: 9/18/2002 19:40:58 by Analyst

| No. | Name | Type | Pos. | Inj. Vol. | Program | Method | Status |
|---|---|---|---|---|---|---|---|
| 1 | ANION STD #1 | Standard | 1 | 25.0 | 9056 | 9056 | Finished |
| 2 | ANION STD #2 | Standard | 2 | 25.0 | 9056 | 9056 | Finished |
| 3 | ANION STD #3 | Standard | 3 | 25.0 | 9056 | 9056 | Finished |
| 4 | ANION STD #4 | Standard | 5 | 25.0 | 9056 | 9056 | Finished |
| 5 | ANION STD #5 | Standard | 5 | 25.0 | 9056 | 9056 | Finished |
| 6 | ANION STD #6 | Standard | 6 | 25.0 | 9056 | 9056 | Finished |
| 7 | ELUENT BLANK | Unknown | 7 | 25.0 | 9056 | 9056 | Finished |
| 8 | ANION ALT STD | Unknown | 36 | 25.0 | 9056 | 9056 | Finished |
| 9 | ELUENT BLANK | Unknown | 45 | 25.0 | 9056 | 9056 | Finished |
| 10 | WG125592-01 ANION CCV | Unknown | 46 | 25.0 | 9056 | 9056 | Finished |
| 11 | WG125591-01 ANION BLANK | Unknown | 47 | 25.0 | 9056 | 9056 | Finished |
| 12 | WG125591-02 ANION LCS | Unknown | 46 | 25.0 | 9056 | 9056 | Finished |
| 13 | WG125591-03 DUP-REF | Unknown | 47 | 25.0 | 9056 | 9056 | Finished |
| 14 | WG125591-04 DUP | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 15 | WG125591-05 MS/MSD-REF | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 16 | WG125591-06 MS | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 17 | WG125591-07 MSD | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 18 | L0209310-06 | Unknown | 48 | 25.0 | 9056 | 9056 | Finished |
| 19 | L0209310-08 | Unknown | 49 | 25.0 | 9056 | 9056 | Finished |
| 20 | L0209310-09 | Unknown | 49 | 25.0 | 9056 | 9056 | Finished |
| 21 | WG125592-02 ANION CCV | Unknown | 46 | 25.0 | 9056 | 9056 | Finished |
| 22 | L0209310-10 | Unknown | 51 | 25.0 | 9056 | 9056 | Finished |
| 23 | L0209310-11 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 24 | L0209310-07 (RR 1/5 SO4 INT?) | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 25 | L0209310-02 (RR 1/100 SO4 INT?) | Unknown | 53 | 25.0 | 9056 | 9056 | Finished |
| 26 | ELUENT BLANK | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 27 | WG125592-03 ANION CCV | Unknown | 53 | 25.0 | 9056 | 9056 | Finished |
| 28 | L0209310-07 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 29 | L0209310-02 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished |
| 30 | L0209310-02 (RR 1/10 SO4 INT?) | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 31 | WG125592-04 ANION CCV | Unknown | 52 | 25.0 | 9056 | 9056 | Finished |
| 32 | END | Unknown | 44 | 25.0 | DX-320 OFF | 9056 | Finished |

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**KEMRON ENVIRONMENTAL SERVICES**
**IC Laboratory Maintenance Log**

**Analysis Date/Time** 09/18/02 **Instrument ID** IC2 **Column ID** AG4A-SC **Data Subdirectory** 091802
**Analyst Initials** SWR **SOP # IC01 Rev. #** 2 ✓ 9056 AS4A-SC **SOP # IC02 Rev. #** ____ 314.0

**Daily Check**
- ☑ **Mobile phase reservoir**
- ☑ System pressure 1395 psi
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
**Problem:** _____

Action Taken: _____

**Comments**

**Reviewed By:** EC2 9/26/02

# Semi-Volatile 9056 Checklist

Run Date: 09/18/02

Analyst: JWR

Instrument: IC2

Workorders: L0209310 Due Date: 09/30/02 Priority:

WG125591

| | | 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 09-310 | ✓ |
| | | |
| | | |
| Case Narrative: | | |
| Corrective Action: | | NA |
| 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

Samples had very high SO4 content. Chromatograms were zoomed in to show a closer view of client chosen anions.

Primary Reviewer: JWR/09/25/02

Secondary Reviewer: EQ 9/26/02

Supervisor Review: RDC 9/26/02 / dlh 9/30/02

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

**KEMRON REPORT L0209337**

**PREPARED FOR CCI**

**WORK ID: CECIL FIELD/BLDG 46**


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# 1.0 Summary Report

# 1.1 Laboratory Report

**Cover Page**
**Laboratory Narrative**
**Laboratory Results**

**KEMRON ENVIRONMENTAL SERVICES**
**REPORT NARRATIVE**

**L0209337**

**CHAIN OF CUSTODY:**

The chain of custody number was 163151-063.

**SHIPMENT CONDITIONS:**

The chain of custody forms were received sealed in a cooler. The cooler temperatures were 1, 2, 1 and 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 Lopez DATE: 9/19/02

# GC VOLATILE ORGANICS - BETX

**KEMRON Login No: L0209337**

**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:** The MS/MSD results were not associated with this sample delivery group (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: CSH REVIEWED: _____ DATE: 9/23/02

Rev. 6/00

**REPORT NARRATIVE**
**GC PETROLEUM RANGE ORGANICS**

**KEMRON Report No.: L0209337**

**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 were not associated with this sample delivery group.

**SAMPLES**

**Samples:** Sample 01 was analyzed at a 10X dilution in order to maintain analysis within range of calibration. All acceptance criteria were met.
**Surrogates**: The surrogate for sample 01 was diluted out due to an analysis at a 10X dilution. All other 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: Eric Zum DATE: 10/7/02

Rev. 7/14/00

**REPORT NARRATIVE**
**PAH HPLC**

**KEMRON Login No.: L0209337**

**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** : For mid-run and ending CCVs analyzed with the initial extraction batch of this sample delivery group, pyrene %D, as measured by the confirming fluorescence detector, was outside of the limits. There was no pyrene to confirm by this detector.

**BATCH QA/QC**

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

**SAMPLES**

**Surrogates**: All sample fractions yielded a percent recovery for the surrogate that was below the advisory limits. All fractions were re-extracted out of holding time. The re-extraction of sample fraction 06 met all acceptance criteria. The re-extraction of all other sample fractions yielded a percent recovery for the surrogate that was below the advisory limit. For sample fraction 01, re-analyzed at a dilution, the surrogate was diluted out.
**Samples:** Sample fraction 01 was re-analyzed at a dilution in order to maintain the analysis within the range of calibration. 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: Eric C Zum DATE: 10/8/02

Rev. 7/14/00

**REPORT NARRATIVE**
**COMMON ANIONS**

**KEMRON Report No.: L0209337**

**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 of the samples were initially screened at dilutions to rule out matrix interference that result in poor orthophoshate recovery. The samples were then reanalyzed at lesser dilutions if possible. The dilution reported is the safest most undiluted result that would not affect the integrity of the analytical column.

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: 9/26/02

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 # : WG125606

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-1S-Q3-02-20 | L0209337-01 |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 |
| 062-46TB-Q3-02-20 | L0209337-08 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 08-OCT-02

Title: Laboratory Director

8

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 17:15

Concentration Units: ug/L File ID: 5G14789

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 50.0 | 100 | 262 | 100 | |
| Ethylbenzene | 50.0 | 100 | 541 | 100 | |
| Methyl tert-butyl ether | 50.0 | 100 | 542 | 100 | |
| Toluene | 50.0 | 100 | 1170 | 100 | |
| Xylenes, Total | 50.0 | 100 | 5760 | 100 | |

| 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 # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-5I-Q3-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 17:50

Concentration Units: ug/L File ID: 5G14790

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 13.2 | 1 | |

| 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 # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-6D-Q3-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:25

Concentration Units: ug/L File ID: 5G14791

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.907 | 1 | J |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.961 | 1 | J |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 9.05 | 1 | |

| 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.

Page 1 of 1

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-21I-Q3-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:59

Concentration Units: ug/L File ID: 5G14792

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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.

Page 1 of 1

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-Q3-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 19:34

Concentration Units: ug/L File ID: 5G14793

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 2.19 | 1 | |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 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 # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-25I-Q3-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 20:08

Concentration Units: ug/L File ID: 5G14794

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 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.

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8021B Preparatory Method: 8021B\5030B AAB # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-26I-Q3-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 20:43

Concentration Units: ug/L File ID: 5G14795

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 5.00 | 10.0 | 1390 | 10 | |
| Ethylbenzene | 5.00 | 10.0 | 37.3 | 10 | |
| Methyl tert-butyl ether | 5.00 | 10.0 | 13.5 | 10 | |
| Toluene | 5.00 | 10.0 | 6.32 | 10 | J |
| Xylenes, Total | 5.00 | 10.0 | 513 | 10 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| a,a,a-Trifluorotoluene | 105 | 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 # : WG125606

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-46TB-Q3-02-20 Lab Sample ID: L0209337-08 Matrix: Water

% Solids: 0 Initial Calibration ID: HP5 20-FEB-2002

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 21:18

Concentration Units: ug/L File ID: 5G14796

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Benzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | U |
| Methyl tert-butyl ether | 0.500 | 1.00 | 0.500 | 1 | U |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | U |
| Xylenes, Total | 0.500 | 1.00 | 0.500 | 1 | U |

| 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 PACKAGE**

Analytical Method : 8015 MOD

Lab Name : Kemron Environmental Services

Base/Command : NAS Cecil Field Jacksonville (

AAB # : WG125690

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-1S-Q3-02-20 | L0209337-01 |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 08-OCT-02

Title: Laboratory Director

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8015 MOD Preparatory Method: 8015 MOD\3510C AAB # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 14:46

Concentration Units: ug/L File ID: 2G22293

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 2630 | 5260 | 15300 | 10 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-5I-Q3-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 30-SEP-02 23:45

Concentration Units: ug/L File ID: 2G22249

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 275 | 549 | 776 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 54.1 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-6D-Q3-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 00:01

Concentration Units: ug/L File ID: 2G22250

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 275 | 549 | 840 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 58.9 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-21I-Q3-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 00:16

Concentration Units: ug/L File ID: 2G22251

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 260 | 521 | 834 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 63.6 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-Q3-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 00:32

Concentration Units: ug/L File ID: 2G22252

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 255 | 510 | 779 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 63.1 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-25I-Q3-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 01:17

Concentration Units: ug/L File ID: 2G22255

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 810 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 64.9 | 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 # : WG125690

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-26I-Q3-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HP2 30-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 01-OCT-02 01:33

Concentration Units: ug/L File ID: 2G22256

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 269 | 538 | 1350 | 1 | |

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 96.8 | 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 # : WG125710

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-1S-Q3-02-20 | L0209337-01 |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 08-OCT-02

Title: Laboratory Director

KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-03-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 17:24

Concentration Units: ug/L File ID:4L003606.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 23.0 | 1 | |
| 2-Methylnaphthalene | 0.336 | 1.0 | 36.0 | 1 | |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 170 | 1 | I |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 17:24

Concentration Units: % Recovery File ID: 4L003606.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 32.3 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 17:24

Concentration Units: ug/L File ID: 4L003606.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 19.0 | 1 | |
| 2-Methylnaphthalene | 0.336 | 1.0 | 52.0 | 1 | |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 160 | 1 | I |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 17:24

Concentration Units: % Recovery File ID: 4L003606.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 33.0 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 25-SEP-02 17:41

Concentration Units: ug/L File ID: 4L003617.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 3.62 | 10 | 3.62 | 10 | U |
| 2-Methylnaphthalene | 3.36 | 10 | 3.36 | 10 | U |
| Acenaphthene | 4.15 | 10 | 4.15 | 10 | U |
| Acenaphthylene | 3.51 | 10 | 3.51 | 10 | U |
| Anthracene | 2.85 | 10 | 2.85 | 10 | U |
| Benzo(a)anthracene | 0.300 | 2.0 | 0.300 | 10 | U |
| Benzo(a)pyrene | 0.530 | 2.0 | 0.530 | 10 | U |
| Benzo(b)fluoranthene | 0.340 | 2.0 | 0.340 | 10 | U |
| Benzo(g,h,i)perylene | 0.500 | 2.0 | 0.500 | 10 | U |
| Benzo(k)fluoranthene | 0.720 | 2.0 | 0.720 | 10 | U |
| Chrysene | 0.240 | 2.0 | 0.240 | 10 | U |
| Dibenzo(a,h)anthracene | 0.770 | 2.0 | 0.770 | 10 | U |
| Fluoranthene | 0.500 | 2.0 | 0.500 | 10 | U |
| Fluorene | 5.59 | 10 | 5.59 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 0.800 | 2.0 | 0.800 | 10 | U |
| Naphthalene | 3.59 | 10 | 180 | 10 | |
| Phenanthrene | 2.87 | 10 | 2.87 | 10 | U |
| Pyrene | 0.680 | 2.0 | 0.680 | 10 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 25-SEP-02 17:41

Concentration Units: % Recovery File ID:4L003617.F

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 25-SEP-02 17:41

Concentration Units: ug/L File ID: 4L003617.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 3.62 | 10 | 3.62 | 10 | U |
| 2-Methylnaphthalene | 3.36 | 10 | 3.36 | 10 | U |
| Acenaphthene | 4.15 | 10 | 4.15 | 10 | U |
| Acenaphthylene | 3.51 | 10 | 3.51 | 10 | U |
| Anthracene | 2.85 | 10 | 2.85 | 10 | U |
| Benzo(a)anthracene | 0.300 | 2.0 | 0.300 | 10 | U |
| Benzo(a)pyrene | 0.530 | 2.0 | 0.530 | 10 | U |
| Benzo(b)fluoranthene | 0.340 | 2.0 | 0.340 | 10 | U |
| Benzo(g,h,i)perylene | 0.500 | 2.0 | 0.500 | 10 | U |
| Benzo(k)fluoranthene | 0.720 | 2.0 | 0.720 | 10 | U |
| Chrysene | 0.240 | 2.0 | 0.240 | 10 | U |
| Dibenzo(a,h)anthracene | 0.770 | 2.0 | 0.770 | 10 | U |
| Fluoranthene | 0.500 | 2.0 | 0.500 | 10 | U |
| Fluorene | 5.59 | 10 | 5.59 | 10 | U |
| Indeno(1,2,3-cd)pyrene | 0.800 | 2.0 | 0.800 | 10 | U |
| Naphthalene | 3.59 | 10 | 170 | 10 | |
| Phenanthrene | 2.87 | 10 | 2.87 | 10 | U |
| Pyrene | 0.680 | 2.0 | 0.680 | 10 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 25-SEP-02 17:41

Concentration Units: % Recovery File ID: 4L003617.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-5I-Q3-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 18:21

Concentration Units: ug/L File ID: 4L003607.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.385 | 1.1 | 0.385 | 1 | U |
| 2-Methylnaphthalene | 0.357 | 1.1 | 0.357 | 1 | U |
| Acenaphthene | 0.441 | 1.1 | 0.441 | 1 | U |
| Acenaphthylene | 0.373 | 1.1 | 0.373 | 1 | U |
| Anthracene | 0.303 | 1.1 | 0.303 | 1 | U |
| Benzo(a)anthracene | 0.0319 | 0.21 | 0.0319 | 1 | U |
| Benzo(a)pyrene | 0.0564 | 0.21 | 0.0564 | 1 | U |
| Benzo(b)fluoranthene | 0.0362 | 0.21 | 0.0362 | 1 | U |
| Benzo(g,h,i)perylene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Benzo(k)fluoranthene | 0.0766 | 0.21 | 0.0766 | 1 | U |
| Chrysene | 0.0255 | 0.21 | 0.0255 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0819 | 0.21 | 0.0819 | 1 | U |
| Fluoranthene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Fluorene | 0.595 | 1.1 | 0.595 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0851 | 0.21 | 0.0851 | 1 | U |
| Naphthalene | 0.382 | 1.1 | 0.382 | 1 | U |
| Phenanthrene | 0.305 | 1.1 | 0.305 | 1 | U |
| Pyrene | 0.0723 | 0.21 | 0.0723 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-5I-Q3-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 18:21

Concentration Units: % Recovery File ID:4L003607.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 19.0 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-6D-Q3-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 19:18

Concentration Units: ug/L File ID: 4L003608.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.389 | 1.1 | 0.389 | 1 | U |
| 2-Methylnaphthalene | 0.361 | 1.1 | 0.361 | 1 | U |
| Acenaphthene | 0.446 | 1.1 | 0.446 | 1 | U |
| Acenaphthylene | 0.377 | 1.1 | 0.377 | 1 | U |
| Anthracene | 0.306 | 1.1 | 0.306 | 1 | U |
| Benzo(a)anthracene | 0.0323 | 0.22 | 0.0323 | 1 | U |
| Benzo(a)pyrene | 0.0570 | 0.22 | 0.0570 | 1 | U |
| Benzo(b)fluoranthene | 0.0366 | 0.22 | 0.0366 | 1 | U |
| Benzo(g,h,i)perylene | 0.0538 | 0.22 | 0.0538 | 1 | U |
| Benzo(k)fluoranthene | 0.0774 | 0.22 | 0.0774 | 1 | U |
| Chrysene | 0.0258 | 0.22 | 0.0258 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0828 | 0.22 | 0.0828 | 1 | U |
| Fluoranthene | 0.0538 | 0.22 | 0.0538 | 1 | U |
| Fluorene | 0.601 | 1.1 | 0.601 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0860 | 0.22 | 0.0860 | 1 | U |
| Naphthalene | 0.386 | 1.1 | 0.386 | 1 | U |
| Phenanthrene | 0.309 | 1.1 | 0.309 | 1 | U |
| Pyrene | 0.0731 | 0.22 | 0.0731 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-6D-Q3-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 19:18

Concentration Units: % Recovery File ID: 4L003608.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 24.3 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-21I-Q3-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 20:14

Concentration Units: ug/L File ID:4L003609.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-21I-Q3-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 20:14

Concentration Units: % Recovery File ID: 4L003609.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 20.8 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-Q3-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 21:11

Concentration Units: ug/L File ID: 4L003610.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 | 0.366 | 1.0 | 0.366 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-Q3-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 21:11

Concentration Units: % Recovery File ID:4L003610.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 21.8 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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

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KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-25I-Q3-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 22:07

Concentration Units: ug/L File ID: 4L003611.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-25I-Q3-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 22-SEP-02 22:07

Concentration Units: % Recovery File ID: 4L003611.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 14.9 | 40 - 132 | |

| Internal Std | Qualifier |
|---|---|

Comments:

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

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KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 8310 Preparatory Method: 8310\3510C AAB # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-26I-Q3-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 23-SEP-02 00:01

Concentration Units: ug/L File ID: 4L003613.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 0.385 | 1.1 | 0.385 | 1 | U |
| 2-Methylnaphthalene | 0.357 | 1.1 | 0.357 | 1 | U |
| Acenaphthene | 0.441 | 1.1 | 0.441 | 1 | U |
| Acenaphthylene | 0.373 | 1.1 | 0.373 | 1 | U |
| Anthracene | 0.303 | 1.1 | 0.303 | 1 | U |
| Benzo(a)anthracene | 0.0319 | 0.21 | 0.0319 | 1 | U |
| Benzo(a)pyrene | 0.0564 | 0.21 | 0.0564 | 1 | U |
| Benzo(b)fluoranthene | 0.0362 | 0.21 | 0.0362 | 1 | U |
| Benzo(g,h,i)perylene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Benzo(k)fluoranthene | 0.0766 | 0.21 | 0.0766 | 1 | U |
| Chrysene | 0.0255 | 0.21 | 0.0255 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0819 | 0.21 | 0.0819 | 1 | U |
| Fluoranthene | 0.0532 | 0.21 | 0.0532 | 1 | U |
| Fluorene | 0.595 | 1.1 | 0.595 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0851 | 0.21 | 0.0851 | 1 | U |
| Naphthalene | 0.382 | 1.1 | 0.382 | 1 | U |
| Phenanthrene | 0.305 | 1.1 | 0.305 | 1 | U |
| Pyrene | 0.0723 | 0.21 | 0.0723 | 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 # : WG125710

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-26I-Q3-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: HPLC4 20-SEP-2002

Date Received: 19-SEP-02 Date Extracted: 19-SEP-02 Date Analyzed: 23-SEP-02 00:01

Concentration Units: % Recovery File ID: 4L003613.R

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|

| Surrogate | Recovery | Control Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 20.3 | 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 # : WG125720

Contract # : Bill Canelos

Prime Contractor : CCI

| Field sample ID | Lab Sample ID |
|---|---|
| 062-CEF46-1S-Q3-02-20 | L0209337-01 |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 |

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 E. Vandenberg

Name: David E. Vandenberg

Date: 08-OCT-02

Title: Laboratory Director

**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-1S-Q3-02-20 Lab Sample ID: L0209337-01 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:57

Concentration Units: mg/L File ID: 091902.39

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-5I-Q3-02-20 Lab Sample ID: L0209337-02 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:00

Concentration Units: mg/L File ID: 091902.34

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 1.34 | 12 | 1.34 | 20 | U |
| Nitrite | 1.22 | 8.0 | 1.22 | 20 | U |
| Phosphate | 3.26 | 20 | 3.26 | 20 | U |

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 # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-6D-Q3-02-20 Lab Sample ID: L0209337-03 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 17:48

Concentration Units: mg/L File ID: 091902.33

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 1.34 | 12 | 1.34 | 20 | U |
| Nitrite | 1.22 | 8.0 | 1.22 | 20 | U |
| Phosphate | 3.26 | 20 | 3.26 | 20 | U |

Comments:

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

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KEMRON ENVIRONMENTAL SERVICES

ANALYSES DATA SHEET 2

RESULTS

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-21I-Q3-02-20 Lab Sample ID: L0209337-04 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:34

Concentration Units: mg/L File ID: 091902.37

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.134 | 1.2 | 0.134 | 2 | U |
| Nitrite | 0.122 | 0.80 | 0.122 | 2 | U |
| Phosphate | 0.326 | 2.0 | 0.326 | 2 | U |

Comments:

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

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-24D-Q3-02-20 Lab Sample ID: L0209337-05 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:46

Concentration Units: mg/L File ID: 091902.38

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.0670 | 0.60 | 0.0670 | 1 | U |
| Nitrite | 0.0610 | 0.40 | 0.0610 | 1 | U |
| Phosphate | 0.163 | 1.0 | 0.163 | 1 | U |

Comments:

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

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-25I-Q3-02-20 Lab Sample ID: L0209337-06 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:23

Concentration Units: mg/L File ID: 091902.36

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.134 | 1.2 | 0.134 | 2 | U |
| Nitrite | 0.122 | 0.80 | 0.122 | 2 | U |
| Phosphate | 0.326 | 2.0 | 0.326 | 2 | U |

Comments:

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

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**KEMRON ENVIRONMENTAL SERVICES**

**ANALYSES DATA SHEET 2**

**RESULTS**

Analytical Method : 9056 Preparatory Method: 9056 AAB # : WG125720

Lab Name : Kemron Environmental Services Contract#: Bill Canelos

Field Sample ID: 062-CEF46-26I-Q3-02-20 Lab Sample ID: L0209337-07 Matrix: Water

% Solids: 0 Initial Calibration ID: IC2 19-SEP-02

Date Received: 19-SEP-02 Date Extracted: Date Analyzed: 19-SEP-02 18:11

Concentration Units: mg/L File ID: 091902.35

| Analyte | MDL | RL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Nitrate | 0.670 | 6.0 | 0.670 | 10 | U |
| Nitrite | 0.610 | 4.0 | 0.610 | 10 | U |
| Phosphate | 1.63 | 10 | 1.63 | 10 | U |

Comments:

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

Page 1 of 1

# 1.2 Attachments

**Kemron Environmental Services**
**Analyst Listing**
Monday, August 12 2002

AJF - AMANDA J. FICKIESEN
ALT - ANN L. THAYER
ARS - ANGELINA R. SCOTT
BRF - BRENT F. FOOS
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
CSH - CHRIS S. HILL
DAD - DAVE A. DAULEY
DAH - DON A. HUNTER
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
DOV - DENISE O. VANDENBERG
DP - DEANNA L. PIERSON
DRB - DOUG R. BARNETT
DSM - DAVID S. MOSSOR
DST - DENNIS S. TEPE
ECL - ERIC C. LAWSON
HV - HEMA VILASAGAR
JAL - JOHN A. LENT
JJG - JAKE J. GREUEY
JKW - JANE K. WARDEN
JLM - JOY L. MULLINS
JLS - JANICE L. SCHIMMEL
JMM - JARROD M. MARTIN
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
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
RPM - RYAN P. MCALLISTER
RWC - ROD W. CAMPBELL
SJK - SINDY J. KINNEY
SLP - SHERI L. PFALZGRAF
SLT - STEPHANIE L. TEPE
SMW - SHAUNA M. WELCH
TJH - TIM J. HOEFLICH
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
VKL - VICKY K. LAUER

KEMRON FORMS: JUL-25-02

# List of Valid Qualifiers
## August 5, 2002

## *Standard Qualifiers*

These are KEMRON's Standard Report Qualifiers

| | |
|---|---|
| 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 | Semi-quantitative result. out of instrument calibration range |
| J | Present below nominal reporting limit |
| L | Sample reporting limits elevated due to matrix interference |
| 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 |
| NS | Not spiked |
| P | Concentration >40% difference between The two GC columns |
| QNS | Quantity not sufficient to perform analysis |
| 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 o f control limits |
| X | Exceeds regulatory limit |
| 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 semi-quantitative 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) |

H:\DATA\COMMON\Qualifier List 08-05-02.doc

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
**163151-063**

| 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<br>Building 46 | 163151 | Stephanie Tepe<br>Kemron Environmental Services | Bill Canelos<br>J.A Jones Env. Services | 6219 Authority Road, Jacksonville, FL 32221<br>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 46 Quarterly GW Sampling Event | 0062 | 3868 | Christelle Newsome<br>CH2M Hill Constuctors, Inc. | 115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346<br>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<br>Fax:904-777-4262 | Phone: 740-373-4071<br>Fax: 740-373-4835 | | |

ANALYSES REQUIRED (Include Method Numbers)

| ITEM | SAMPLE IDENTIFIER | SAMPLE DESCRIPTION/LOCATION | MATRIX | DATE COLLECTED | TIME COLLECTED | DATA PKG LEVEL | TAT (calendar days) | BTEX by 8021B | Naphthalene & 15 Method 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-CEF46-1S-Q3-02-20 | CEF-46-1S | W | 09/18/02 | 9:05 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 2 | 062-CEF46-5I-Q3-02-20 | CEF-46-5I | W | 09/18/02 | 8:30 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 3 | 062-CEF46-6D-Q3-02-20 | CEF-46-6D | W | 09/18/02 | 8:55 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 4 | 062-CEF46-21I-Q3-02-20 | CEF-46-21I | W | 09/18/02 | 10:35 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 5 | 062-CEF46-24D-Q3-02-20 | CEF-46-24D | W | 09/18/02 | 10:00 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 6 | 062-CEF46-25I-Q3-02-20 | CEF-46-25I | W | 09/18/02 | 11:50 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 7 | 062-CEF46-26I-Q3-02-20 | CEF-46-26I | W | 09/18/02 | 13:20 | III/C | 14 | 2 | 2 | 2 | 1 | | | | Grab | | |
| 8 | 062-46TB2-Q3-02-20 | Trip Blank #2 | W | NA | NA | III/C | 14 | 2 | | | | | | | Grab | Prepared by Lab | |
| 9 | NA | Temperature Blank | W | NA | NA | III/C | 14 | | | | | 4 | | | Grab | Prepared by Lab | |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | |

| SAMPLER(S) AND COMPANY: (please print) | COURIER AND SHIPPING NUMBER: |
|---|---|
| Randy Dumaop / Mark Yarbrough<br>J.A. Jones Environmental Services | Federal Express Track # 791934523402, 791934523413, 791934523424, 791934523446. (4 Coolers) |

| RELINQUISHED BY | DATE | TIME | RECEIVED BY | DATE | TIME |
|---|---|---|---|---|---|
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| R. Dumaop | 9/18/02 | 18:00 | Federal Express Track # 791934523402, 791934523413, 791934523424, 791934523446. (4 Coolers) | 9/18/02 | 18:00 |
| Printed Name and Signature: | | | Printed Name and Signature: | | |
| | | | SHANNA HYDE | 9/19/02 | 0957 |

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: 9-337 Client: CCI # of Samples: 8 Due Date: 9-26-02 Page:

| Sample # | Analysis | Reason | Removed By ADT | Removed From | Moved To | Reliq. by | Ret'd By ADT | Ret'd To | Rec'd By | Reason |
|---|---|---|---|---|---|---|---|---|---|---|
| 107 A | 8310 | Ext | MM 9/19/02 @1120 | Login | ELB | SMH | 9-19-02 DCL @1300 | crusher | MM | disposal |
| 107 A | FLA-PRO | Ext | MM 9/19/02 @1120 | Login | ELB | SMH | " " | " " | MM | " " |
| 1-7(A) | 9056 | Analysis | JWR 09/19/02 @1140 | Log In | Wet Lab | Brq | JWR 09/24/02 @1130 | Archive | SMH | Archive |
| CSH 9/19/02 ~~1-8 ~~ | ~~BTME~~ | ~~GRO~~ | ANAC | CSH 9/20/02 @1430 | V-1 | ORG-4 | Brq 10/7/02 @1300 | Archive-2 | Brq | Archive |
| 8TB | FLA-PRO | EXT | CAF 9-19-02 @0555 | Login | Elab | CSH | 09-09-02 DCL @1300 | crusher | MM | disposal |
| 107 B | 8310 | Re-ext | MM 9/26/02 @1348 | Walk-in | ELB | Brq | 9-26-02 DCL @1300 | crusher | MM | disposal |

CSH 9/19/02

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

| CLIENT: CCI | DATE: ~~9-18-02~~ 9-19-02 SMH | SHIPPED BY: (X) FED-EX ( ) AIRBORNE ( ) UPS ( ) EMERY ( ) RPS ( ) US MAIL ( ) KEMRON ( ) CLIENT |
|---|---|---|
| BRG Other SMH | | |

| | | |
|---|---|---|
| COOLER ID: KL 480 | COOLER ID: KL 682 | COOLER ID: KL 639 |
| INDEX #: 7919 3452 3446 | INDEX #: 7919 3452 3402 | INDEX #: 7919 3452 3413 |
| 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) 1 °C |
| TEMP IN RANGE (4°C ± 2°) ~~( ) YES~~ SMH (✓) 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 | SAMPLE INTACT (✓) YES ( ) NO | SAMPLE INTACT (✓) YES ( ) NO |
| SALVAGEBLE ( ) YES ( ) NO | SALVAGEBLE ( ) YES ( ) NO | SALVAGEBLE ( ) YES ( ) NO |
| SAMPLE TYPE: WATER (✓) SOIL ( ) OTHER ( ) | SAMPLE TYPE: WATER (✓) SOIL ( ) OTHER ( ) | SAMPLE TYPE: WATER (✓) SOIL ( ) OTHER ( ) |
| LABELS: INTACT (✓) YES ( ) NO | LABELS: INTACT (✓) YES ( ) NO | LABELS: INTACT (✓) YES ( ) NO |
| LEGIBLE (✓) YES ( ) NO | LEGIBLE (✓) YES ( ) NO | LEGIBLE (✓) YES ( ) NO |
| MATCH COC (✓) YES ( ) NO | MATCH COC (✓) 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 | LOG-IN COMMENTS | LOG-IN COMMENTS |
| VOAs 1320 | 1150 1035 | 855 830 |

TSR COMMENTS

| CONTACT: | DATE: | TIME: |
|---|---|---|

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

Revised 05/29/02

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

| CLIENT: | DATE: | SHIPPED BY: |
|---|---|---|
| CCI<br>BRG Other SMH | SMH ~~4/18/02~~ 9/9/02<br>0957 | (✓) FED-EX ( ) AIRBORNE<br>( ) UPS ( ) EMERY<br>( ) RPS ( ) US MAIL<br>( ) KEMRON ( ) CLIENT |

| | | |
|---|---|---|
| COOLER ID: KL-1133 | COOLER ID: | COOLER ID: |
| INDEX #: 7919 3452 3424 | INDEX #: | 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) °C | TEMP: (D) (E) °C |
| TEMP IN RANGE (4°C ± 2°) ( ) YES (✓) NO SMH | 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<br>SALVAGEBLE ( ) YES ( ) NO | SAMPLE INTACT ( ) YES ( ) NO<br>SALVAGEBLE ( ) YES ( ) NO | SAMPLE INTACT ( ) YES ( ) NO<br>SALVAGEBLE ( ) YES ( ) NO |
| SAMPLE TYPE:<br>WATER (✓) SOIL ( ) OTHER ( ) | SAMPLE TYPE:<br>WATER ( ) SOIL ( ) OTHER ( ) | SAMPLE TYPE:<br>WATER ( ) SOIL ( ) OTHER ( ) |
| LABELS: INTACT (✓) YES ( ) NO<br>LEGIBLE (✓) YES ( ) NO<br>MATCH COC (✓) YES ( ) NO | LABELS: INTACT ( ) YES ( ) NO<br>LEGIBLE ( ) YES ( ) NO<br>MATCH COC ( ) YES ( ) NO | LABELS: INTACT ( ) YES ( ) NO<br>LEGIBLE ( ) YES ( ) NO<br>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<br>905 1000 | LOG-IN COMMENTS | LOG-IN COMMENTS |

TSR COMMENTS

| CONTACT: | DATE: | TIME: |
|---|---|---|

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

Revised 05/29/02

CRF#4

## Sample Receipt Form #2

Client: CCI Project:
Date Received: 9-19-02

_____ Cooler temperature > than 6 degrees Celcius
Reason_____

_____ Samples received not on chain of custody

_____ Samples on chain of custody not received

✓ Information on sample containers different from chain of custody
2 BOTTLES LABELLED 51 - LOGGED IN BY TIMES
ONE BOTTLE WAS 15 - ONLY ON 9056 BOTTLE

_____ Sample containers received broken, leaking or not sealed (List sample ID)

_____ pH out (List sample ID, which container, pH prior to adjusting, amount of acid, preservative)

_____ Insufficient sample volume

_____ Air bubbles present in Voa vials (List sample ID)

_____ Hold time expired (List sample ID)

**TSR:**
Was client notified regarding information: YES NO
Name of person contacted:_____ Company:_____
TSR:_____ Date:_____

# COOLER RECEIPT FORM

Contractor Cooler _____
MRD Cooler # _____
Number of Coolers 4

PROJECT: CCI LIMS# L0709337

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

A. **PRELIMINARY EXAMINATION PHASE:** Date cooler opened: 9/19/02 C-of-C Number: 1631/5/1603
by (print) SHAUNA HYDE (sign) Shauna Hyde

1. Did cooler come with a shipping slip (air bill, etc.)? ..... YES NO
   If YES, enter carrier name & air bill number here: Fedex see CRF#3
2. Were custody seals on outside of cooler? ..... YES NO
   How many & where? 1 FRONT, seal date: 9/18/02 seal name: CUSTODY
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 _____ °C See CRF#3 ..... YES NO
10. Have designated person initial here to acknowledge receipt of cooler: SMH (date) 9/19/02

B. **LOG-IN PHASE:** Date samples were logged-in: 9/19/02
by (print) SHAUNA HYDE (sign) Shauna Hyde

11. Describe type of packing in cooler: baggie, 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? ..... See CRF#4 1 905e BOTTLE ..... 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: L0209337**

**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:** The MS/MSD results were not associated with this sample delivery group (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: CSH REVIEWED: _____ DATE: 9/23/02

Rev. 6/00

# BETX-GC DATA (8021)

**Login Number:** L0209337

**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:** Janice L. Schimmel **Date:** 9/20/02

# 2.1.3.1 QC Summary

METHOD BLANK SUMMARY

Login Number: L0209337
Blank File ID: 5G14777
Date Analyzed: 09/19/02
Time Analyzed: 09:44
Analyst: CSH

Work Group: WG125606
Blank Sample ID: WG125606-01
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 | WG125606-02 | 5G14778 | 09/19/02 10:19 | |
| 062-CEF46-1S-Q3-02-20 | L0209337-01 | 5G14789 | 09/19/02 17:15 | |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 | 5G14790 | 09/19/02 17:50 | |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 | 5G14791 | 09/19/02 18:25 | |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 | 5G14792 | 09/19/02 18:59 | |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 | 5G14793 | 09/19/02 19:34 | |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 | 5G14794 | 09/19/02 20:08 | |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 | 5G14795 | 09/19/02 20:43 | |
| 062-46TB-Q3-02-20 | L0209337-08 | 5G14796 | 09/19/02 21:18 | |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209337
Run Date: 09/19/2002
Sample ID: WG125606-01
Instrument ID: HP5
Run Time: 09:44
Method: 8021B
File ID: 5G14777
Analyst: CSH
Matrix: Water
Workgroup (AAB#): WG125606
Units: ug/L
Contract #:
Cal ID: HP5-20-FEB-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| MTBE | 0.500 | 1.00 | 0.500 | 1 | ND |
| Benzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Toluene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Ethylbenzene | 0.500 | 1.00 | 0.500 | 1 | ND |
| Total xylenes | 0.500 | 1.00 | 0.500 | 1 | ND |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| TFT | 103 | 70 - 130 | PASS |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 09/10/2002
Version 1.2
Report generated

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209337
Instrument ID: HP5
File ID: 5G14778
Workgroup (AAB#): WG125606
Contract #:

Run Date: 09/19/2002
Run Time: 10:19
Analyst: CSH

Sample ID: WG125606-02
Method: 8021B
Matrix: Water
Units: ug/L
Cal ID: HP5-20-FEB-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| MTBE | 20.0 | 18.6 | 93.2 | 41 - 161 | |
| Benzene | 20.0 | 18.8 | 93.8 | 80 - 122 | |
| Toluene | 20.0 | 18.7 | 93.6 | 80 - 124 | |
| Ethylbenzene | 20.0 | 19.3 | 96.6 | 80 - 125 | |
| Total xylenes | 60.0 | 57.0 | 95.0 | 80 - 121 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| TFT | 104 | 70 - 130 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 09/10/2002
Version 1.3
Report generated

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8021B

AAB#: WG125606

Login Number: L0209337

| 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 |
|---|---|---|---|---|---|---|---|---|---|
| 062-46TB-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.89 | 09/19/02 | 14 | 1.89 | |
| 062-CEF46-1S-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.34 | 09/19/02 | 14 | 1.34 | |
| 062-CEF46-21I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.35 | 09/19/02 | 14 | 1.35 | |
| 062-CEF46-24D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.40 | 09/19/02 | 14 | 1.40 | |
| 062-CEF46-25I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.35 | 09/19/02 | 14 | 1.35 | |
| 062-CEF46-26I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.31 | 09/19/02 | 14 | 1.31 | |
| 062-CEF46-5I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.39 | 09/19/02 | 14 | 1.39 | |
| 062-CEF46-6D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 14 | 1.40 | 09/19/02 | 14 | 1.40 | |

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

SURROGATE STANDARDS

Login Number: L0209337
Instrument Id: HP5
Workgroup (AAB#): WG125606

Method: 8021
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209337-01 | 100 | | 106 |
| L0209337-02 | 1.00 | | 106 |
| L0209337-03 | 1.00 | | 106 |
| L0209337-04 | 1.00 | | 106 |
| L0209337-05 | 1.00 | | 105 |
| L0209337-06 | 1.00 | | 104 |
| L0209337-07 | 10.0 | | 105 |
| L0209337-08 | 1.00 | | 103 |
| WG125606-01 | 1.00 | | 103 |
| WG125606-02 | 1.00 | | 104 |

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

Underline = Result out of surrogate limits

DL = surrogate diluted out

Calibration Table Report
Method: 8021W.M
Title: METHOD 8021B - Water - 02/20/02
Last Calibration: Wed Feb 20 13:38:18 2002

Calibration Files

| Compound | 1 | 10 | 20 | 50 | 100 | 200 | 300 | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|
| | [illegible]234.D | [illegible]235.D | [illegible]236.D | [illegible]237.D | [illegible]238.D | [illegible]239.D | [illegible]240.D | | | |
| MTBE | 12539.098 | 11196.949 | 11243.150 | 11041.255 | 10933.684 | 9845.119 | 10773.245 | 11081.800 | 7.192 | |
| Benzene | 62790.330 | 47015.533 | 60310.422 | 60394.203 | 62248.899 | 55692.162 | 60796.018 | 58463.900 | 9.482 | |
| TFT | 11675.944 | 16647.005 | 18691.041 | 16931.193 | 18308.322 | 18431.867 | 17514.953 | 16885.800 | 14.359 | |
| Toluene | 57450.429 | 41830.870 | 54992.322 | 55224.813 | 57150.005 | 51457.407 | 56493.530 | 53514.200 | 10.332 | LR=0.99 |
| Chlorobenzene | 51107.594 | 47796.569 | 57648.045 | 58702.207 | 60282.238 | 53862.815 | 58927.160 | 55475.200 | 8.416 | |
| Ethylbenzene | 44734.021 | 33822.898 | 47197.088 | 47781.820 | 49450.708 | 44065.886 | 48876.353 | 45132.700 | 11.903 | LR=0.9 |
| m-,p-Xylene | 54877.067 | 41916.389 | 56810.621 | 56708.147 | 57983.908 | 51196.233 | 56259.916 | 53678.900 | 10.487 | LR=0.9 |
| o-Xylene | 46024.604 | 38803.321 | 48912.004 | 49234.646 | 50426.567 | 45138.795 | 49785.014 | 46903.600 | 8.690 | |
| BFB | 40807.196 | 48040.267 | 50130.380 | 49818.364 | 51211.872 | 50893.985 | 46902.798 | 48257.800 | 7.520 | |
| 1,3-Dichlorobenzene | 43022.355 | 39773.416 | 46613.595 | 47301.443 | 48695.412 | 43962.076 | 48263.141 | 45375.900 | 7.171 | |
| 1,4-Dichlorobenzene | 50593.879 | 45110.732 | 50592.251 | 50273.527 | 50626.153 | 45302.288 | 49211.494 | 48815.800 | 5.152 | |
| 1,2-Dichlorobenzene | 38039.156 | 36942.905 | 40744.634 | 40929.219 | 41461.798 | 37452.005 | 40820.717 | 39484.300 | 4.855 | |
| BCB | 42403.048 | 46209.846 | 48055.779 | 48169.399 | 49155.647 | 48910.071 | 45036.779 | 46848.700 | 5.245 | |

Wed Feb 20 13:38:50 2002

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D
Acq On : 20 Feb 2002 14:36
Sample : WG113244-08 ALT SOURCE 20PPB 5ML
Misc : 1,1 S-90-(28,39)
IntFile : autoint1.e

Vial: 12
Operator: CBN
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Feb 20 13:38:18 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 | 18.883 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.634 | -3.2 | 100 | 0.00 |
| 3 | S | TFT | 30.000 | 33.780 | -12.6 | 102 | 0.00 |
| 4 | TM | Toluene | 20.000 | 21.185 | -5.9 | 101 | 0.01 |
| 5 | TM | Chlorobenzene | 20.000 | 20.732 | -3.7 | 100 | 0.02 |
| 6 | TM | Ethylbenzene | 20.000 | 21.461 | -7.3 | 102 | 0.02 |
| 7 | TM | m-,p-Xylene | 40.000 | 41.777 | -4.4 | 100 | 0.01 |
| 8 | TM | o-Xylene | 20.000 | 20.473 | -2.4 | 98 | 0.00 |
| 9 | S | BFB | 30.000 | 32.137 | -7.1 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 21.006 | -5.0 | 102 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 21.101 | -5.5 | 102 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 21.435 | -7.2 | 104 | 0.02 |
| 13 | S | BCB | 30.000 | 32.070 | -6.9 | 104 | 0.02 |

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D
Acq On : 19 Sep 2002 8:54
Sample : WG125605-01 8021 STD 20PPB 5ML
Misc : 1,1 S-(98-29,99-16)
IntFile : autoint1.e

Vial: 1
Operator: CSH
Inst : HP5
Multiplr: 1.00

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 18.541 | 7.3 | 91 | 0.00 |
| 2 | TM | Benzene | 20.000 | 18.198 | 9.0 | 88 | -0.02 |
| 3 | S | TFT | 30.000 | 31.396 | -4.7 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 18.450 | 7.8 | 90 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 18.922 | 5.4 | 91 | -0.03 |
| 6 | TM | Ethylbenzene | 20.000 | 18.761 | 6.2 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 40.000 | 37.229 | 6.9 | 88 | -0.03 |
| 8 | TM | o-Xylene | 20.000 | 18.697 | 6.5 | 90 | -0.03 |
| 9 | S | BFB | 30.000 | 28.289 | 5.7 | 91 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.815 | 5.9 | 92 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.521 | 2.4 | 94 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.546 | 2.3 | 95 | -0.03 |
| 13 | S | BCB | 30.000 | 26.939 | 10.2 | 88 | -0.02 |

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

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D  Vial: 9
Acq On : 19 Sep 2002 15:56  Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 18.852 | 5.7 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.346 | -1.7 | 99 | -0.02 |
| 3 | S | TFT | 30.000 | 31.535 | -5.1 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 19.963 | 0.2 | 97 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 20.040 | -0.2 | 96 | -0.04 |
| 6 | TM | Ethylbenzene | 20.000 | 20.653 | -3.3 | 99 | -0.04 |
| 7 | TM | m-,p-Xylene | 40.000 | 40.601 | -1.5 | 96 | -0.05 |
| 8 | TM | o-Xylene | 20.000 | 19.973 | 0.1 | 96 | -0.05 |
| 9 | S | BFB | 30.000 | 28.049 | 6.5 | 90 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.642 | 1.8 | 96 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.036 | -0.2 | 97 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.697 | 1.5 | 95 | -0.04 |
| 13 | S | BCB | 30.000 | 26.418 | 11.9 | 86 | -0.03 |

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\091902\5G14797.D  Vial: 19
Acq On : 19 Sep 2002 21:52  Operator: CSH
Sample : WG125605-03 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 17.707 | 11.5 | 87 | -0.01 |
| 2 | TM | Benzene | 20.000 | 19.843 | 0.8 | 96 | -0.03 |
| 3 | S | TFT | 30.000 | 31.220 | -4.1 | 94 | -0.04 |
| 4 | TM | Toluene | 20.000 | 19.864 | 0.7 | 97 | -0.06 |
| 5 | TM | Chlorobenzene | 20.000 | 19.843 | 0.8 | 95 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 20.548 | -2.7 | 98 | -0.06 |
| 7 | TM | m-,p-Xylene | 40.000 | 40.317 | -0.8 | 95 | -0.06 |
| 8 | TM | o-Xylene | 20.000 | 19.815 | 0.9 | 95 | -0.06 |
| 9 | S | BFB | 30.000 | 27.928 | 6.9 | 90 | -0.06 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.340 | 3.3 | 94 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.658 | 1.7 | 95 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.336 | 3.3 | 94 | -0.04 |
| 13 | S | BCB | 30.000 | 26.463 | 11.8 | 86 | -0.03 |

# Injection Log

Directory: c:\hpchem\2\data\022002

WG113234
1 278

ANALYST: CBN

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g12231.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12::0 |
| 2 | 2 | 5g12232.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12::5 |
| 3 | 2 | 5g12233.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12::4 |
| 4 | 3 | 5g12234.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12::2 |
| 5 | 4 | 5g12235.d | 1. | WG113244-02 STD 2 10PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12::5 |
| 6 | 5 | 5g12236.d | 1. | WG113244-03 STD 3 20PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13::3 |
| 7 | 6 | 5g12237.d | 1. | WG113244-04 STD 4 50PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13::0 |
| 8 | 7 | 5g12238.d | 1. | WG113244-05 STD 5 100PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13::4 |
| 9 | 8 | 5g12239.d | 1. | WG113244-06 STD 6 200PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13::1 |
| 10 | 9 | 5g12240.d | 1. | WG113244-07 STD 7 300PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 13::5 |
| 11 | 10 | 5g12241.d | 1. | RINSE | 1,1 S-90-39 | 20 Feb 102 12::2 |
| 12 | 11 | 5g12242.d | 1. | RINSE | 1,1 S-90-39 | 20 Feb 102 12::0 |
| 13 | 12 | 5g12243.d | 1. | WG113244-08 ALT SOURCE 20PPB 5ML | 1,1 S-90-(28,39) | 20 Feb 102 12::3 |
| 14 | 1 | 5g12244.d | 1. | WG113278-01 STD 1 90PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12::4 |
| 15 | 2 | 5g12245.d | 1. | WG113278-02 STD 2 360PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12::1 |
| 16 | 3 | 5g12246.d | 1. | WG113278-03 STD 3 900PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12::5 |
| 17 | 4 | 5g12247.d | 1. | WG113278-04 STD 4 1800PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12::2 |
| 18 | 5 | 5g12248.d | 1. | WG113278-05 STD 5 3600PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12::0 |
| 19 | 6 | 5g12249.d | 1. | WG113278-06 STD 6 7200PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12::3 |
| 20 | 7 | 5g12250.d | 1. | RINSE | 1,1 S-90-42 | 20 Feb 102 12::1 |
| 21 | 8 | 5g12251.d | 1. | RINSE | 1,1 S-90-42 | 20 Feb 102 12::4 |
| 22 | 9 | 5g12252.d | 1. | WG113278-07 ALT SOURCE 900PPB 5ML | 1,1 S-90-(08,42) | 20 Feb 102 12::1 |

Directory: C:\hpchem\2\data\091902

WG125606

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14776.d | 1. | WG125605-01 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 12::5 |
| 2 | 2 | 5g14777.d | 1. | WG125606-01 WATER BLANK 5ML | 1,1 S-99-16 | 19 Sep 102 12::4 |
| 3 | 3 | 5g14778.d | 1. | WG125606-02 WATER LCS 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 13::1 |
| 4 | 1 | 5g14779.d | 1. | L0209327-01 A 5ML | 1,1 S-99-16 | 19 Sep 102 13::1 |
| 5 | 2 | 5g14780.d | 1. | L0209327-02 A 5ML RR HIGHSSS | 1,1 S-99-16 | 19 Sep 102 13::5 |
| 6 | 3 | 5g14781.d | 1. | L0209327-03 A 5ML | 1,1 S-99-16 | 19 Sep 102 13::2 |
| 7 | 4 | 5g14782.d | 1. | L0209315-01 B 5ML 200X | 1,100 S-99-16 | 19 Sep 102 12::0 |
| 8 | 5 | 5g14783.d | 1. | L0209315-02 B 5ML 200X | 1,100 S-99-16 | 19 Sep 102 12::3 |
| 9 | 6 | 5g14784.d | 1. | WG125606-03 L0209310-10 B 5ML 20X | 1,20 S-99-16 | 19 Sep 102 12::1 |
| 10 | 7 | 5g14785.d | 1. | WG125606-04 L0209310-10 MS B 5ML 20X | 1,20 S-(98-29,99-16) | 19 Sep 102 12::4 |
| 11 | 8 | 5g14786.d | 1. | WG125606-05 L0209310-10 MSD B 5ML 20X | 1,20 S-(98-29,99-16) | 19 Sep 102 12::2 |
| 12 | 9 | 5g14787.d | 1. | WG125605-02 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 12::5 |
| 13 | 10 | 5g14788.d | 1. | L0209327-02 B 5ML | 1,1 S-99-16,RE | 19 Sep 102 12::4 |
| 14 | 11 | 5g14789.d | 1. | L0209337-01 A 5ML 100X | 1,100 S-99-16 | 19 Sep 102 12::1 |
| 15 | 12 | 5g14790.d | 1. | L0209337-02 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::5 |
| 16 | 13 | 5g14791.d | 1. | L0209337-03 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::2 |
| 17 | 14 | 5g14792.d | 1. | L0209337-04 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::5 |
| 18 | 15 | 5g14793.d | 1. | L0209337-05 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::3 |
| 19 | 15 | 5g14794.d | 1. | L0209337-06 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::0 |
| 20 | 17 | 5g14795.d | 1. | L0209337-07 A 5ML 10X | 1,10 S-99-16 | 19 Sep 102 12::4 |
| 21 | 18 | 5g14796.d | 1. | L0209337-08 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::1 |
| 22 | 19 | 5g14797.d | 1. | WG125605-03 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 12::5 |

pH<2

pH<2

# VOA - GC

**Date:** 9/19/02 **Analyst:** CSH **Method:** (8021) 8015 602

**Instrument:** HP5 **Work Group:** WG/256006

| | 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 9/20/02

Secondary Reviewers Initials & Date Checked: QJS 9/20/02

_____ • 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: _____

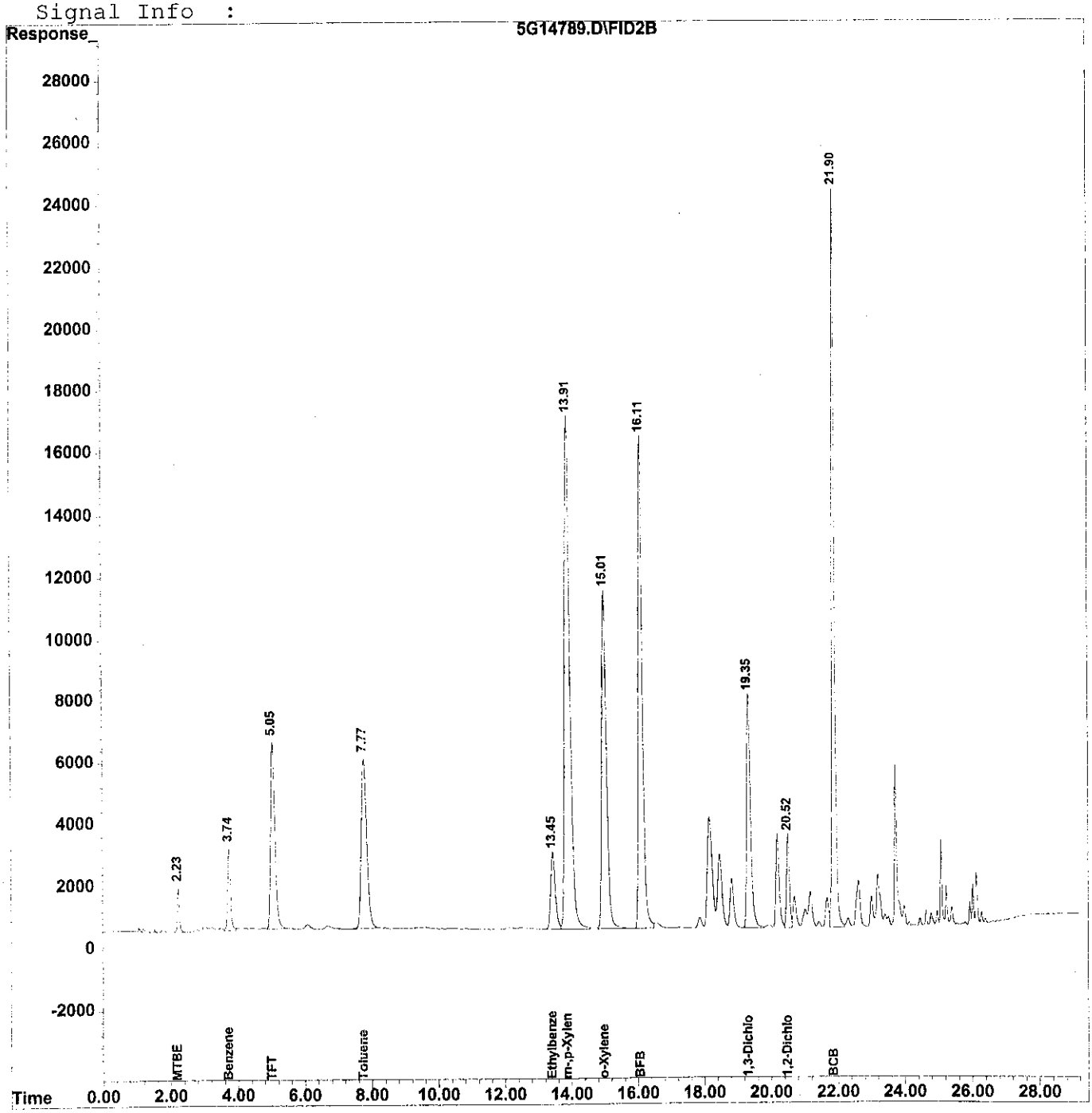
✓ = Checked & OK
NA = Not Applicable

# 2.1.3.2 Sample Data

Data File : C:\HPCHEM\2\DATA\091902\5G14789.D  Vial: 11
Acq On : 19 Sep 2002 17:15  Operator: CSH
Sample : L0209337-01 A 5ML 100X  Inst : HP5
Misc : 1,100 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 17:45 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14789.D  Vial: 11
Acq On : 19 Sep 2002 17:15  Operator: CSH
Sample : L0209337-01 A 5ML 100X  Inst : HP5
Misc : 1,100 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 17:45 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

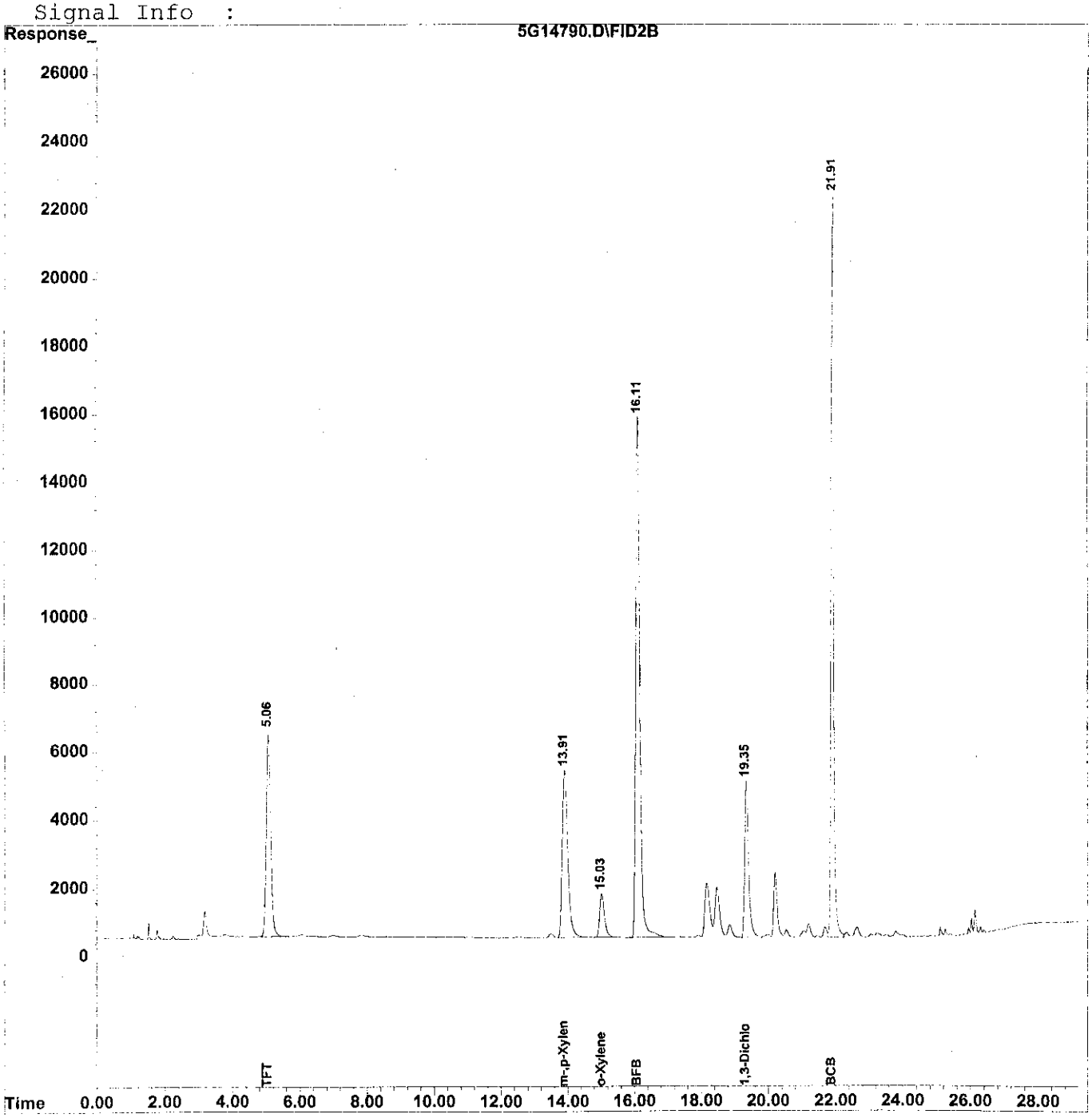
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 538430 | 31.8866 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 106.29% |
| 9) S BFB | 16.11 | 1342220 | 27.8135 ug/L |
| Spiked Amount 30.000 | | Recovery = | 92.71% |
| 13) S BCB | 21.90 | 1342091 | 28.6474 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 95.49% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 60103 | 5.4236 ug/L |
| 2) TM Benzene | 3.74 | 152997 | 2.6170 ug/L |
| 4) TM Toluene | 7.77 | 627947 | 11.7342 ug/L |
| 5) TM Chlorobenzene | 12.50 | 2618 | <MDL ug/L |
| 6) TM Ethylbenzene | 13.45 | 244205 | 5.4108 ug/L |
| 7) TM m-,p-Xylene | 13.91 | 1865720 | 34.7570 ug/L |
| 8) TM o-Xylene | 15.02 | 1073428 | 22.8859 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.35 | 598832 | 13.1971 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.96 | 8118 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.52 | 179863 | 4.5553 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14790.D  Vial: 12
Acq On : 19 Sep 2002 17:50  Operator: CSH
Sample : L0209337-02 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 18:19 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14790.D  Vial: 12
Acq On : 19 Sep 2002 17:50  Operator: CSH
Sample : L0209337-02 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 18:19 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

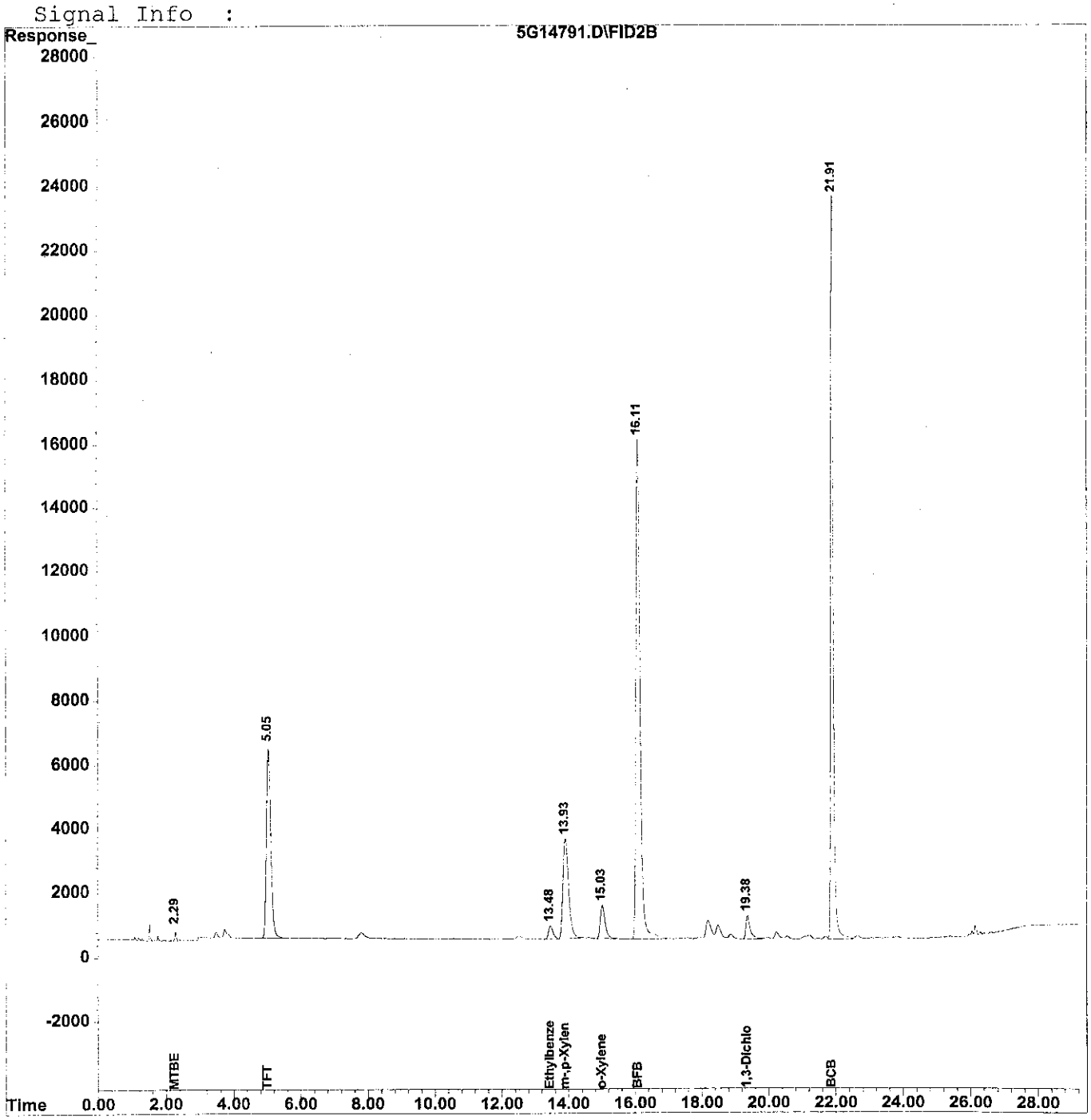
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 536065 | 31.7465 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = | 105.82% |
| 9) S BFB | 16.11 | 1325667 | 27.4705 ug/L |
| Spiked Amount 30.000 | | Recovery = | 91.57% |
| 13) S BCB | 21.91 | 1206781 | 25.7591 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = | 85.86% |
| Target Compounds | | | |
| 1) TM MTBE | 2.25 | 4105 | <MDL ug/L |
| 2) TM Benzene | 3.76 | 1203 | <MDL ug/L |
| 4) TM Toluene | 7.86 | 3484 | <MDL ug/L |
| 5) TM Chlorobenzene | 0.00 | 0 | N.D. ug/L |
| 6) TM Ethylbenzene | 13.51 | 12222 | <MDL ug/L |
| 7) TM m-,p-Xylene | 13.92 | 564331 | 10.5131 ug/L |
| 8) TM o-Xylene | 15.03 | 128029 | 2.7296 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.36 | 372575 | 8.2109 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.99f | 8671 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.55 | 18150 | <MDL ug/L |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14791.D  Vial: 13
Acq On : 19 Sep 2002 18:25  Operator: CSH
Sample : L0209337-03 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 18:54 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14791.D  Vial: 13
Acq On : 19 Sep 2002 18:25  Operator: CSH
Sample : L0209337-03 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 18:54 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 536641 | 31.7807 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 105.94% |
| 9) S BFB | 16.11 | 1358232 | 28.1453 ug/L |
| Spiked Amount 30.000 | | Recovery = | 93.82% |
| 13) S BCB | 21.91 | 1267976 | 27.0654 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 90.22% |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 10654 | ~~0.9614 ug/L~~ |
| 2) TM Benzene | 3.75 | 15057 | <MDL ug/L |
| 4) TM Toluene | 7.81 | 23370 | <MDL ug/L |
| 5) TM Chlorobenzene | 12.52 | 11067 | <MDL ug/L |
| 6) TM Ethylbenzene | 13.48 | 40927 | 0.9068 ug/L |
| 7) TM m-,p-Xylene | 13.93 | 366670 | 6.8308 ug/L |
| 8) TM o-Xylene | 15.03 | 104276 | 2.2232 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.39 | 65900 | ~~1.4523 ug/L~~ |
| 11) TM 1,4-Dichlorobenzene | 19.99f | 4383 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.24 | 19638 | <MDL ug/L |

RT Good
CSH 9/20/02

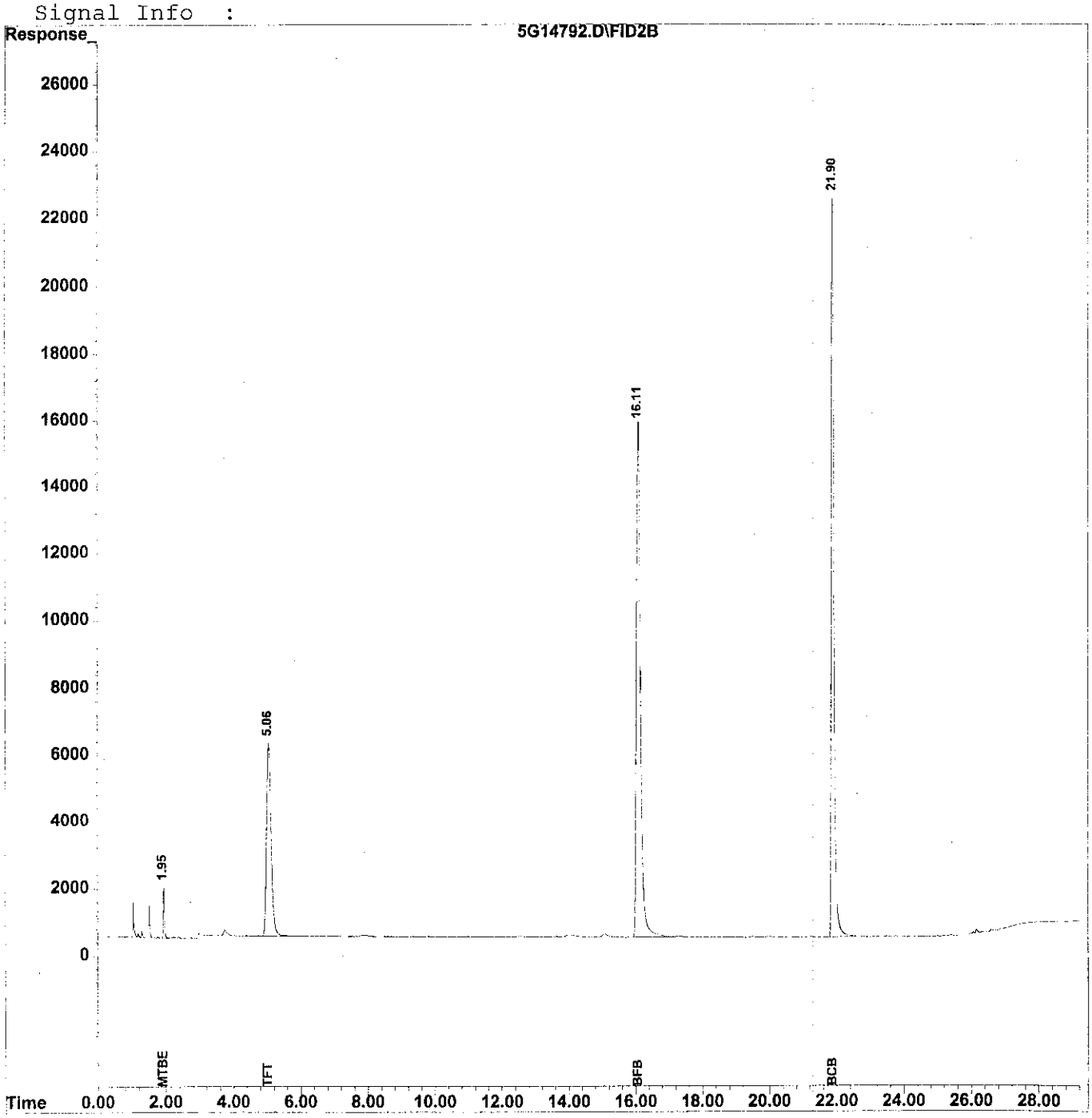
(f)=RT Delta > 1/2 Window  (m)=manual int

Quantitation Report

Data File : C:\HPCHEM\2\DATA\091902\5G14792.D  Vial: 14
Acq On : 19 Sep 2002 18:59  Operator: CSH
Sample : L0209337-04 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 19:29 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14792.D Vial: 14
Acq On : 19 Sep 2002 18:59 Operator: CSH
Sample : L0209337-04 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 19:29 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

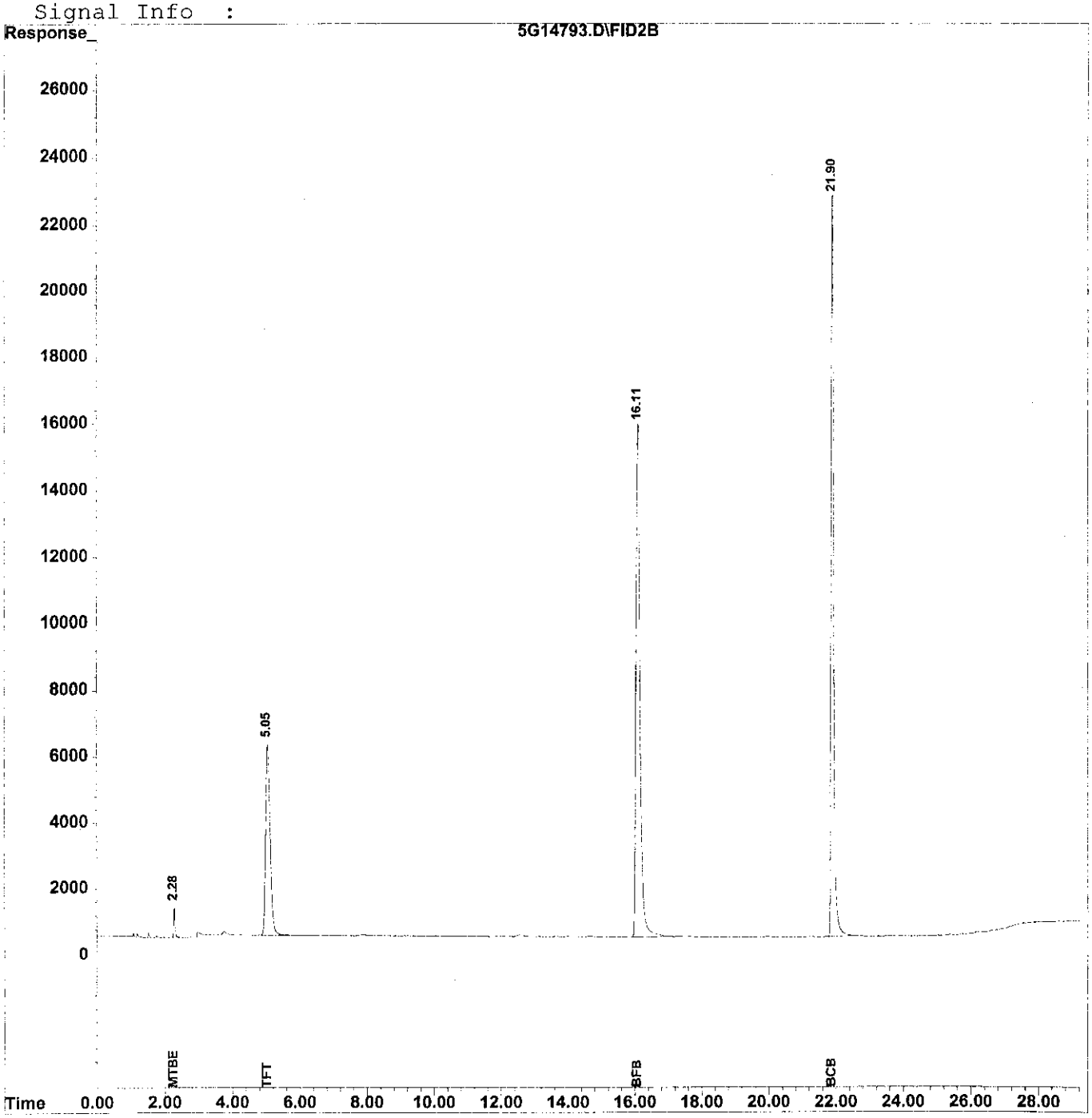
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.06 | 538163 | 31.8708 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 106.24% |
| 9) S BFB | 16.11 | 1333455 | 27.6319 ug/L |
| Spiked Amount 30.000 | | Recovery = | 92.11% |
| 13) S BCB | 21.90 | 1210568 | 25.8400 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 86.13% |
| Target Compounds | | | |
| 1) TM MTBE | 1.95f | 34726 | ~~3.1336 ug/L~~ |
| 2) TM Benzene | 3.75 | 12740 | <MDL ug/L |
| 4) TM Toluene | 7.83 | 1870 | <MDL 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 | 14.03 | 11763 | <MDL ug/L |
| 8) TM o-Xylene | 15.08 | 10961 | <MDL ug/L |
| 10) TM 1,3-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 11) TM 1,4-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 12) 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\091902\5G14793.D  Vial: 15
Acq On : 19 Sep 2002 19:34  Operator: CSH
Sample : L0209337-05 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 20:03 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14793.D Vial: 15
Acq On : 19 Sep 2002 19:34 Operator: CSH
Sample : L0209337-05 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 20:03 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

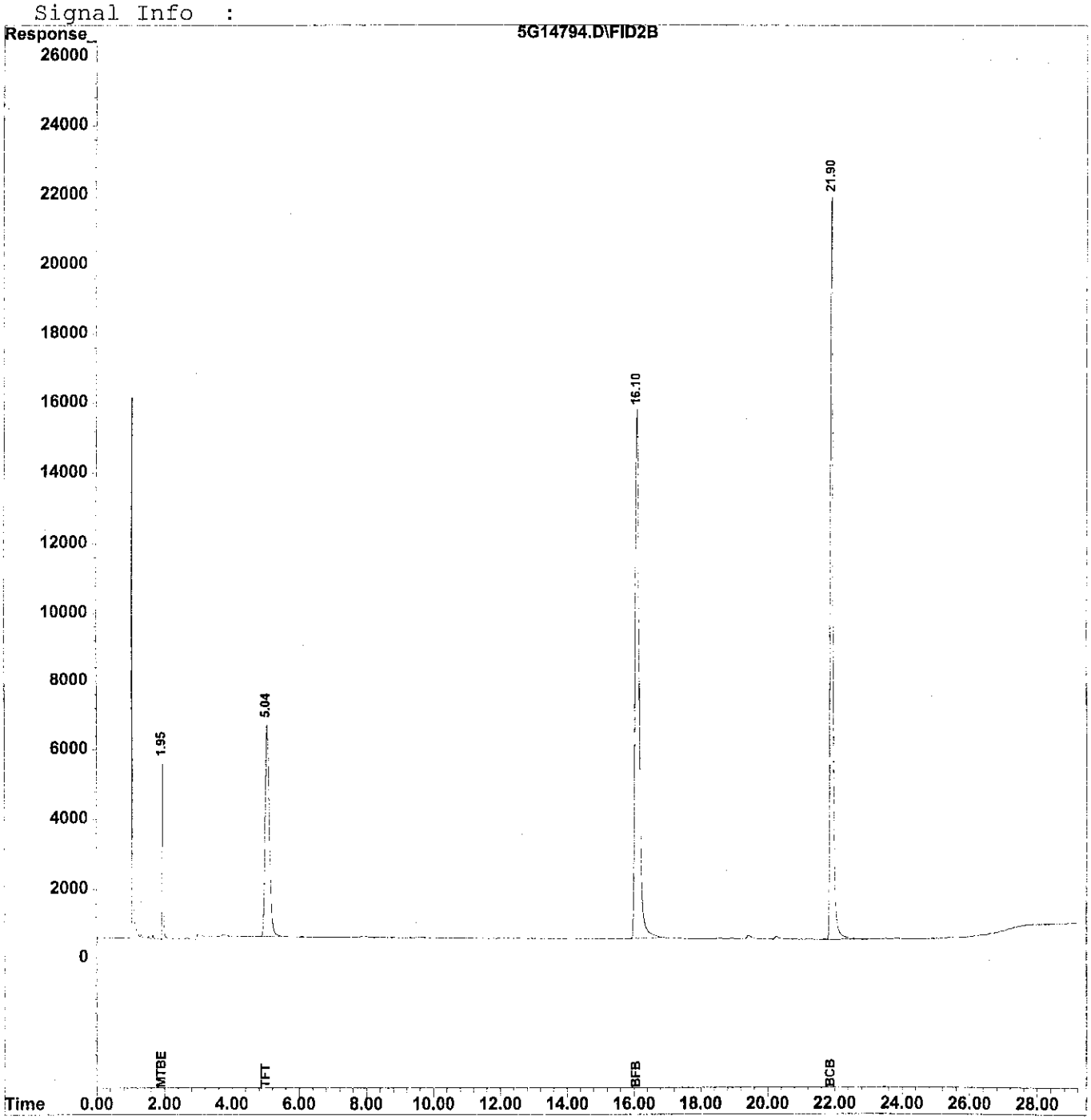
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 531608 | 31.4826 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 104.94% | | | |
| 9) S BFB | 16.11 | 1344201 | 27.8546 ug/L |
| Spiked Amount 30.000 Recovery = 92.85% | | | |
| 13) S BCB | 21.90 | 1230400 | 26.2633 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 87.54% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 24269 | 2.1900 ug/L |
| 2) TM Benzene | 3.75 | 10417 | <MDL ug/L |
| 4) TM Toluene | 7.85 | 2972 | <MDL ug/L |
| 5) TM Chlorobenzene | 12.56 | 3219 | <MDL 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 11) TM 1,4-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 12) 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\091902\5G14794.D  Vial: 15
Acq On : 19 Sep 2002 20:08  Operator: CSH
Sample : L0209337-06 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autointl.e
Quant Time: Sep 19 20:38 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14794.D Vial: 15
Acq On : 19 Sep 2002 20:08 Operator: CSH
Sample : L0209337-06 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 20:38 2002 Quant Results File: 8021W.RES

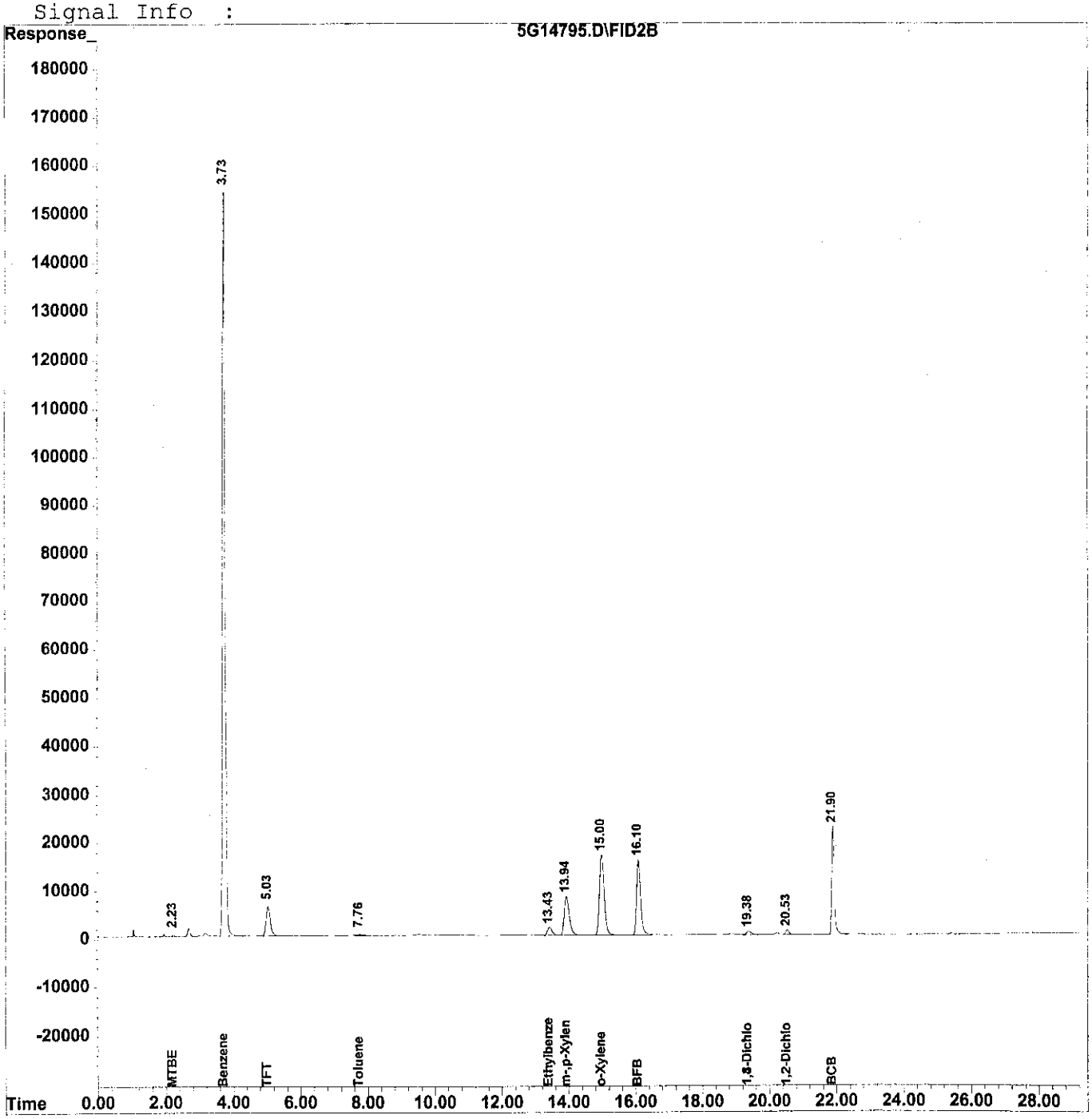
Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 525459 | 31.1185 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 103.73% |
| 9) S BFB | 16.10 | 1305827 | 27.0594 ug/L |
| Spiked Amount 30.000 | | Recovery = | 90.20% |
| 13) S BCB | 21.91 | 1190571 | 25.4131 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 84.71% |
| Target Compounds | | | |
| 1) TM MTBE | 1.95f | 110065 | ~~9.9321 ug/L~~ |
| 2) TM Benzene | 3.75 | 948 | <MDL 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.44 | 11379 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.44f | 11379 | <MDL ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.27 | 5898 | <MDL ug/L |

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

```
Data File : C:\HPCHEM\2\DATA\091902\5G14795.D          Vial: 17
Acq On    : 19 Sep 2002  20:43                     Operator: CSH
Sample    : L0209337-07 A 5ML 10X                  Inst    : HP5
Misc      : 1,10 S-99-16                           Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 19 21:12 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 02/20/02
Last Update  : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

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



Data File : C:\HPCHEM\2\DATA\091902\5G14795.D  Vial: 17
Acq On : 19 Sep 2002 20:43  Operator: CSH
Sample : L0209337-07 A 5ML 10X  Inst : HP5
Misc : 1,10 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 21:12 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

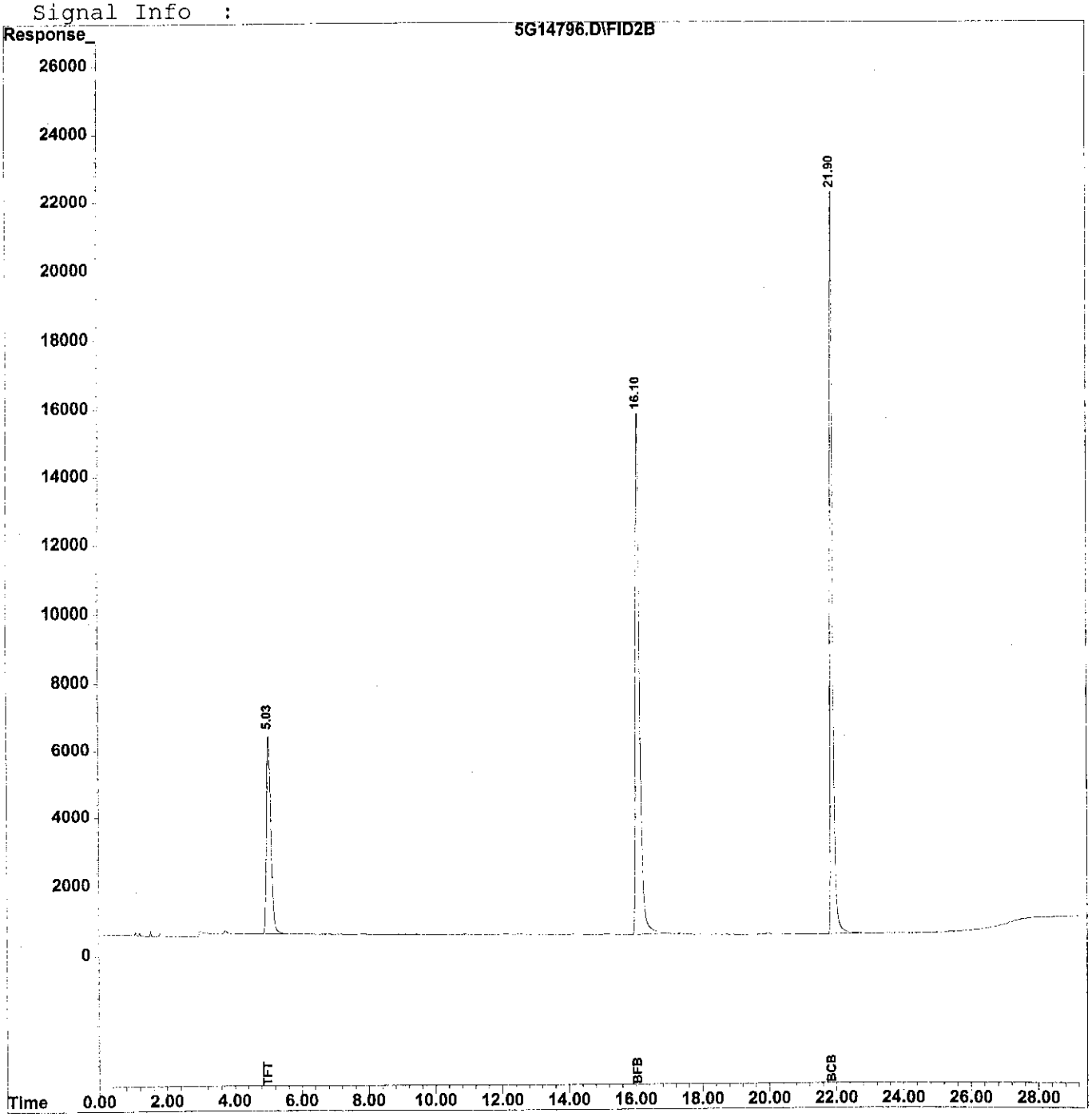
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 530309 | 31.4057 ug/L |
| Spiked Amount 30.000 Range 70 - 130 | | Recovery = | 104.69% ✓ |
| 9) S BFB | 16.10 | 1337296 | 27.7115 ug/L |
| Spiked Amount 30.000 | | Recovery = | 92.37% |
| 13) S BCB | 21.90 | 1243368 | 26.5401 ug/L |
| Spiked Amount 30.000 Range 37 - 137 | | Recovery = | 88.47% |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 15001 | 1.3537 ug/L |
| 2) TM Benzene | 3.73 | 8148565 | 139.3776 ug/L |
| 4) TM Toluene | 7.76 | 33844 | 0.6324 ug/L DF |
| 5) TM Chlorobenzene | 12.49 | 13617 | <MDL ug/L |
| 6) TM Ethylbenzene | 13.43 | 168412 | 3.7315 ug/L |
| 7) TM m-,p-Xylene | 13.94 | 866752 | 16.1470 ug/L |
| 8) TM o-Xylene | 15.00 | 1647927 | 35.1344 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.38 | 72366 | ~~1.5948 ug/L~~ |
| 11) TM 1,4-Dichlorobenzene | 19.38f | 72366 | ~~1.4824 ug/L~~ |
| 12) TM 1,2-Dichlorobenzene | 20.53 | 66001 | ~~1.6716 ug/L~~ |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14796.D  Vial: 18
Acq On : 19 Sep 2002 21:18  Operator: CSH
Sample : L0209337-08 A 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 21:47 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14796.D Vial: 18
Acq On : 19 Sep 2002 21:18 Operator: CSH
Sample : L0209337-08 A 5ML Inst : HP5
Misc : 1,1 S-99-16 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 21:47 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 519877 | 30.7879 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = 102.63% | |
| 9) S BFB | 16.10 | 1311453 | 27.1760 ug/L |
| Spiked Amount 30.000 | | Recovery = 90.59% | |
| 13) S BCB | 21.90 | 1202794 | 25.6740 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = 85.58% | |
| Target Compounds | | | |
| 1) TM MTBE | 1.80f | 2488 | <MDL ug/L |
| 2) TM Benzene | 3.74 | 4885 | <MDL 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 11) TM 1,4-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |
| 12) TM 1,2-Dichlorobenzene | 0.00 | 0 | N.D. ug/L |

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

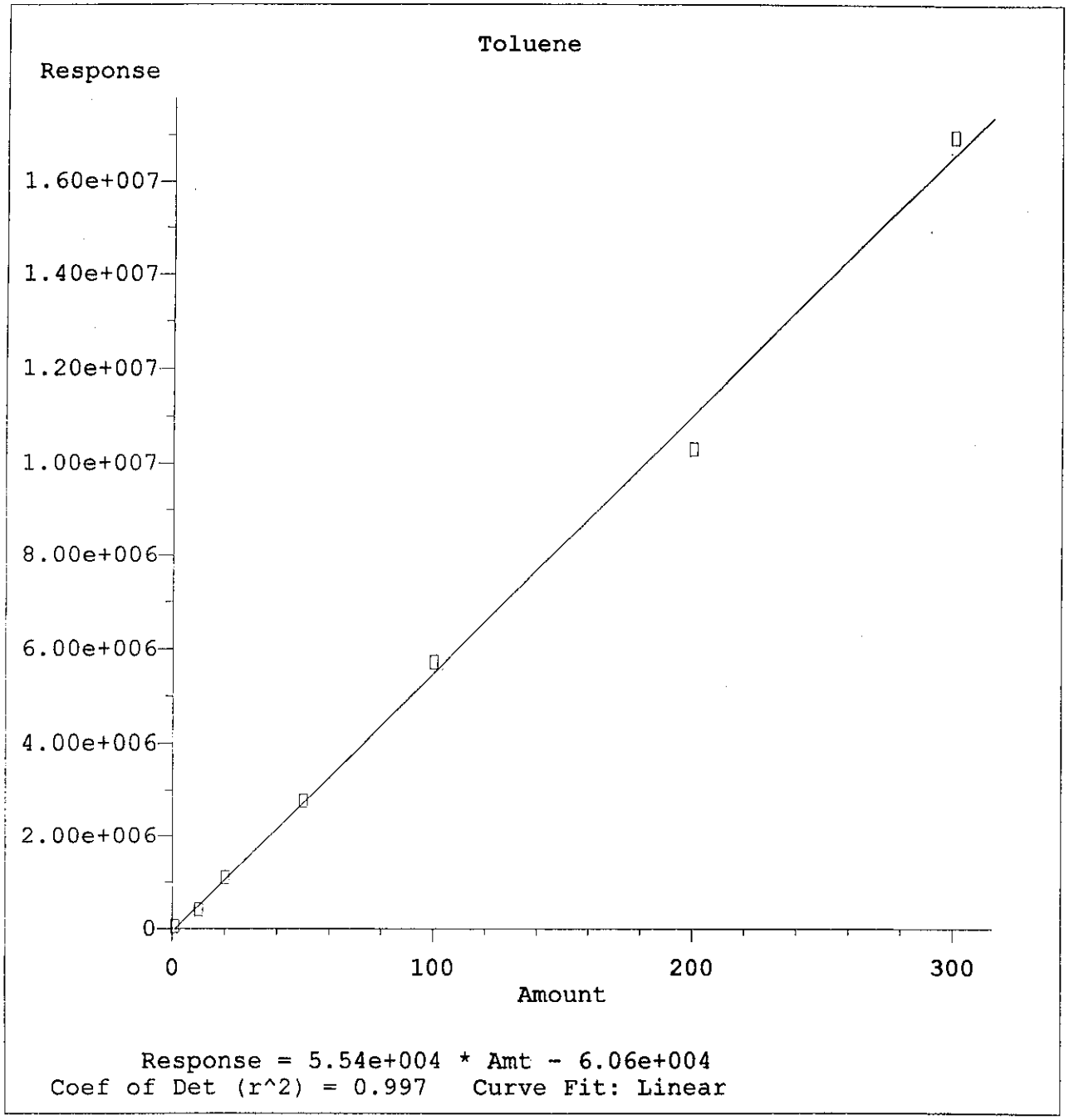
# 2.1.3.3 Standards Data

Calibration Table Report
Method: 8021W.M
Title: METHOD 8021B - Water - 02/20/02
Last Calibration: Wed Feb 20 13:38:18 2002

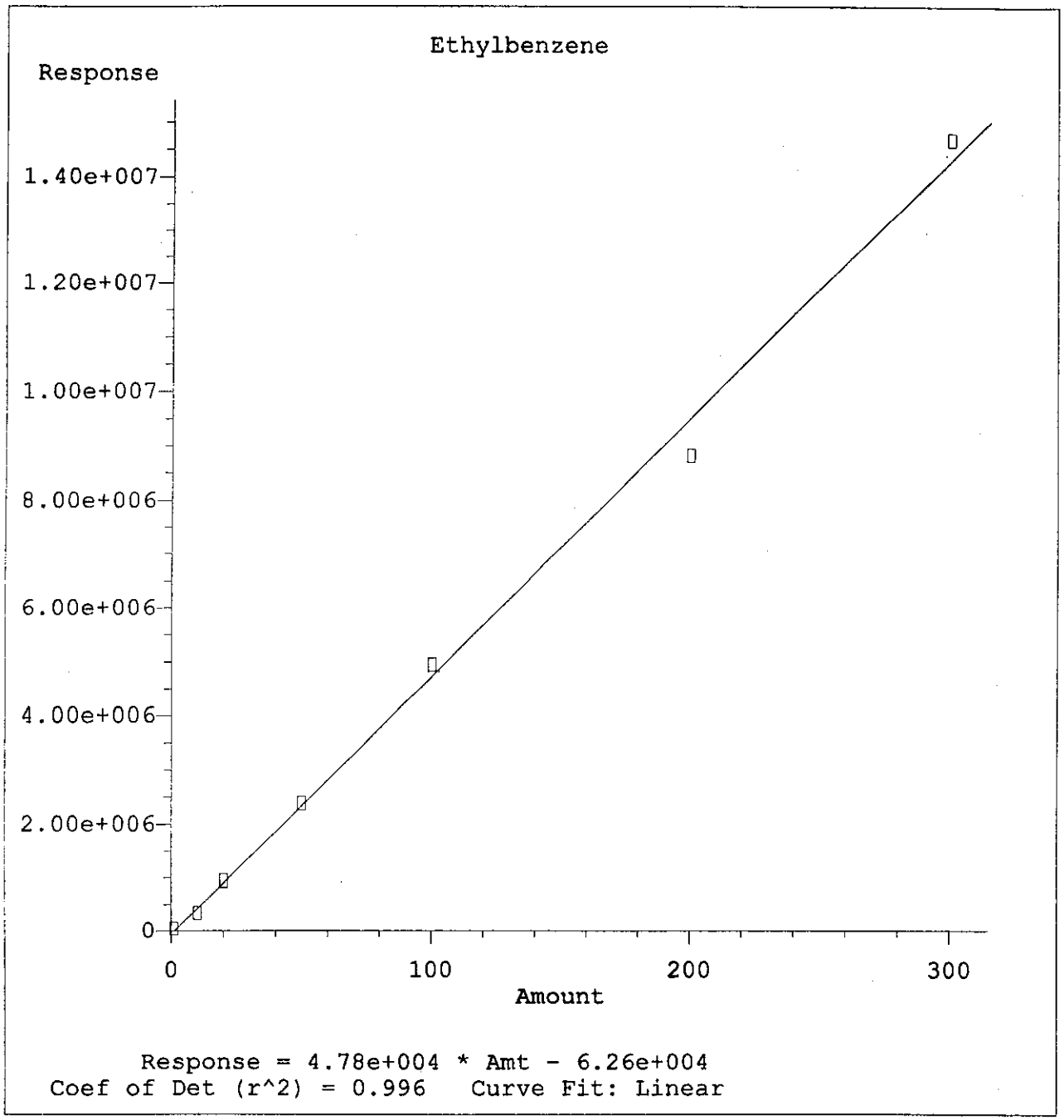
Calibration Files

| Compound | 1<br>5012234.D | 10<br>5012235.D | 20<br>5012236.D | 50<br>5012237.D | 100<br>5012238.D | 200<br>5012239.D | 300<br>5012240.D | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|
| MTBE | 12539.098 | 11196.949 | 11243.150 | 11041.255 | 10933.684 | 9845.119 | 10773.245 | 11081.800 | 7.192 | |
| Benzene | 62790.330 | 47015.533 | 60310.422 | 60394.203 | 62248.899 | 55692.162 | 60796.018 | 58463.900 | 9.482 | |
| TFT | 11675.944 | 16647.005 | 18691.041 | 16931.193 | 18308.322 | 18431.867 | 17514.953 | 16885.800 | 14.359 | |
| Toluene | 57450.429 | 41830.870 | 54992.322 | 55224.813 | 57150.005 | 51457.407 | 56493.530 | 53514.200 | 10.332 | LR=0.99 |
| Chlorobenzene | 51107.594 | 47796.569 | 57648.045 | 58702.207 | 60282.238 | 53862.815 | 58927.160 | 55475.200 | 8.416 | |
| Ethylbenzene | 44734.021 | 33822.898 | 47197.088 | 47781.820 | 49450.708 | 44065.886 | 48876.353 | 45132.700 | 11.903 | LR=0.9 |
| m-,p-Xylene | 54877.067 | 41916.389 | 56810.621 | 56708.147 | 57983.908 | 51196.233 | 56259.916 | 53678.900 | 10.487 | LR=0.9 |
| o-Xylene | 46024.604 | 38803.321 | 48912.004 | 49234.646 | 50426.567 | 45138.795 | 49785.014 | 46903.600 | 8.690 | |
| BFB | 40807.196 | 48040.267 | 50130.380 | 49818.364 | 51211.872 | 50893.985 | 46902.798 | 48257.800 | 7.520 | |
| 1,3-Dichlorobenzene | 43022.355 | 39773.416 | 46613.595 | 47301.443 | 48695.412 | 43962.076 | 48263.141 | 45375.900 | 7.171 | |
| 1,4-Dichlorobenzene | 50593.879 | 45110.732 | 50592.251 | 50273.527 | 50626.153 | 45302.288 | 49211.494 | 48815.800 | 5.152 | |
| 1,2-Dichlorobenzene | 38039.156 | 36942.905 | 40744.634 | 40929.219 | 41461.798 | 37452.005 | 40820.717 | 39484.300 | 4.855 | |
| BCB | 42403.048 | 46209.846 | 48055.779 | 48169.399 | 49155.647 | 48910.071 | 45036.779 | 46848.700 | 5.245 | |

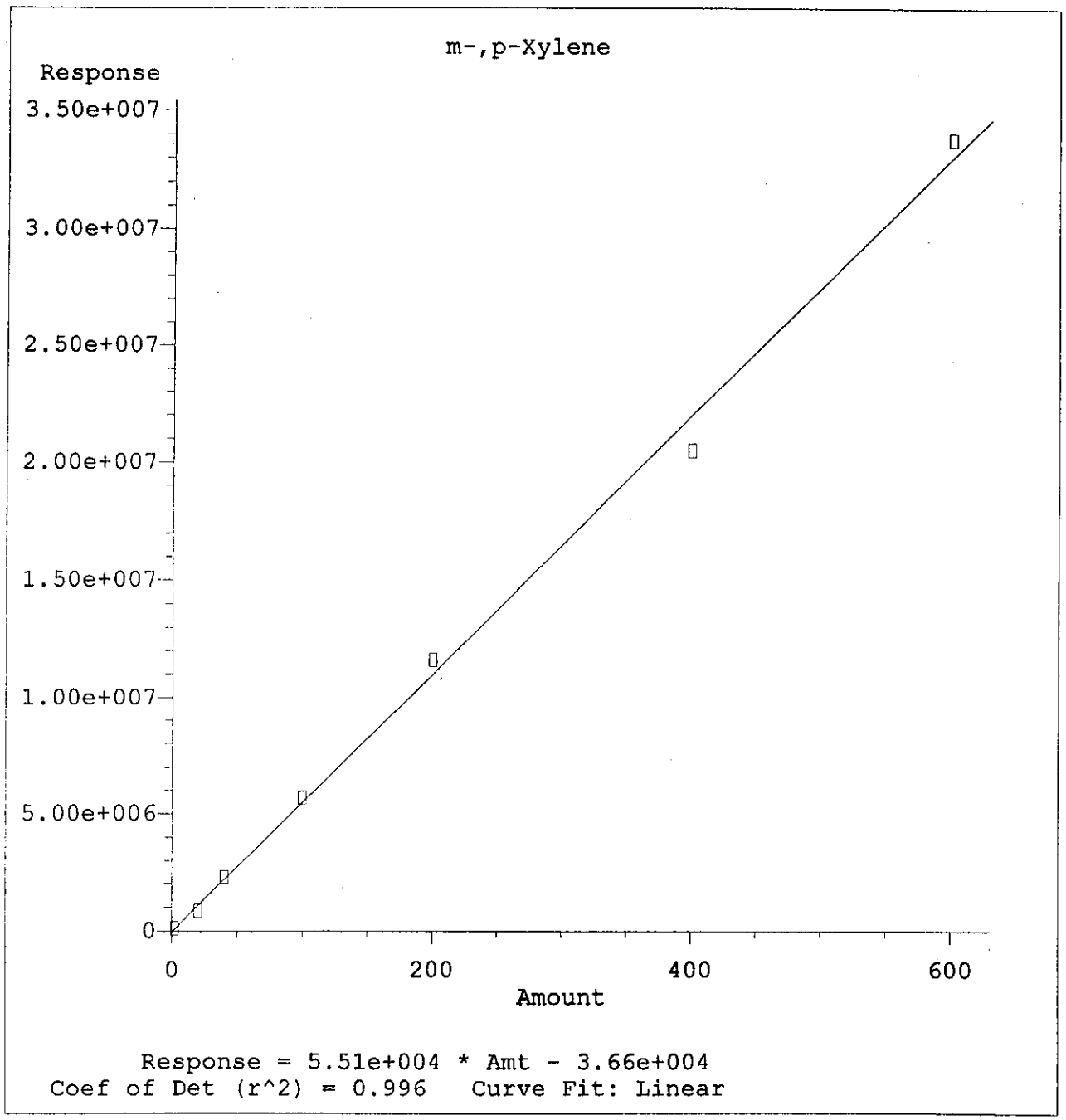
Wed Feb 20 13:38:50 2002




Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Thu Feb 21 07:37:12 2002




Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Thu Feb 21 07:37:12 2002

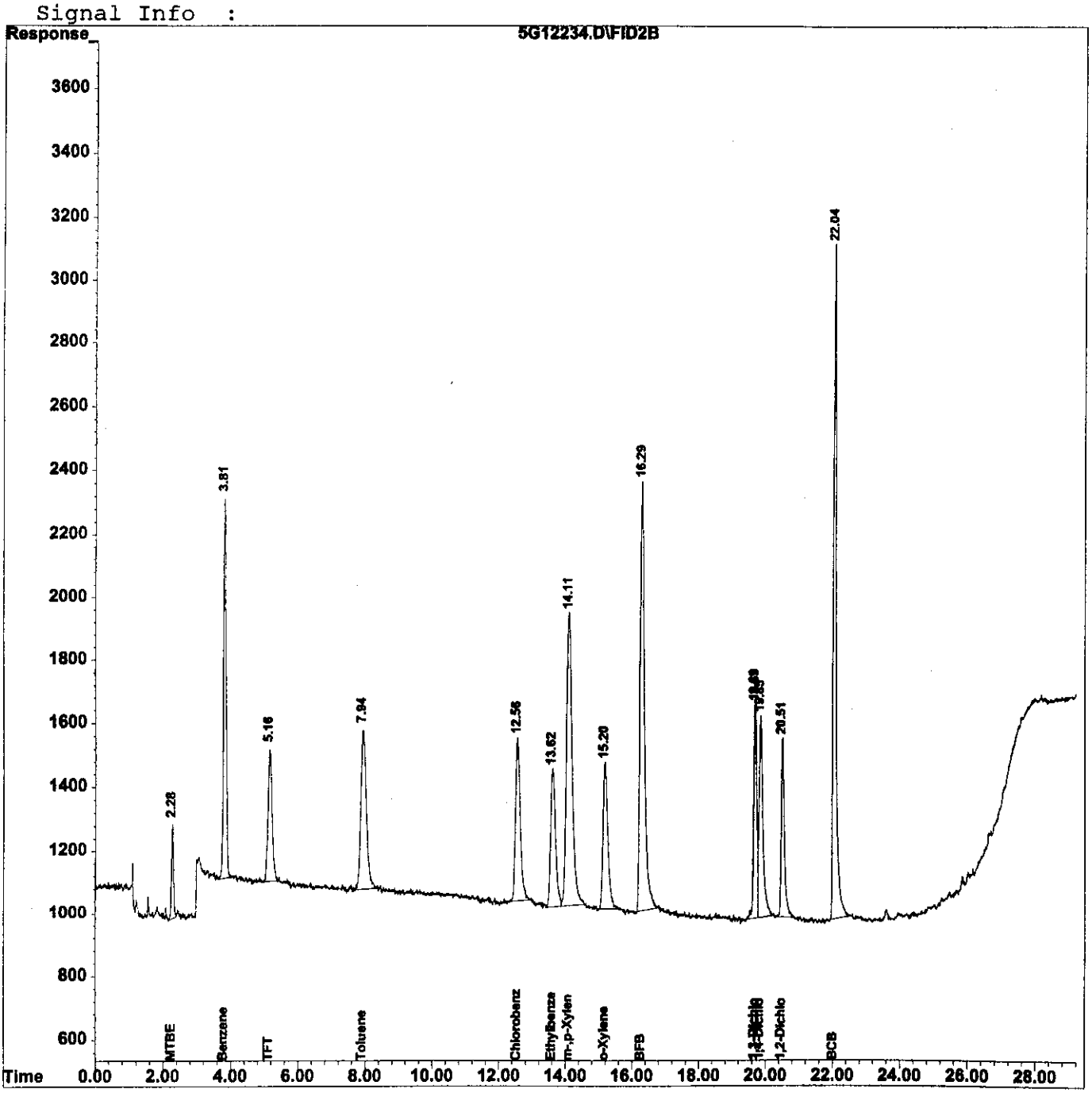



Method Name: C:\HPCHEM\2\METHODS\8021W.M
Calibration Table Last Updated: Thu Feb 21 07:37:12 2002

Data File : C:\HPCHEM\2\DATA\022002\5G12234.D  Vial: 3
Acq On : 20 Feb 2002 9:22  Operator: CBN
Sample : WG113244-01 STD 1 1PPB 5ML  Inst : HP5
Misc : 1,1 S-89-49,90-39  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 9:51 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12234.D Vial: 3
Acq On : 20 Feb 2002 9:22 Operator: CBN
Sample : WG113244-01 STD 1 1PPB 5ML Inst : HP5
Misc : 1,1 S-89-49,90-39 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 9:51 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.16 | 35028 | 1.7272 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 5.76%# | | | |
| 9) S BFB | 16.29 | 122422 | 2.2088 ug/L |
| Spiked Amount 30.000 Recovery = 7.36% | | | |
| 13) S BCB | 22.04 | 127209 | 2.3923 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 7.97%# | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.28 | 12539 | 1.0376 ug/L |
| 2) TM Benzene | 3.82 | 62790 | 0.8887 ug/L |
| 4) TM Toluene | 7.94 | 57450 | 0.5403 ug/L |
| 5) TM Chlorobenzene | 12.56 | 51108 | 0.7568 ug/L |
| 6) TM Ethylbenzene | 13.62 | 44734 | 0.8046 ug/L |
| 7) TM m-,p-Xylene | 14.11 | 109754 | 1.6329 ug/L |
| 8) TM o-Xylene | 15.20 | 46025 | 0.7916 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.69 | 43022 | 0.7747 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.86 | 50594 | 0.8634 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.51 | 38039 | 0.7869 ug/L |

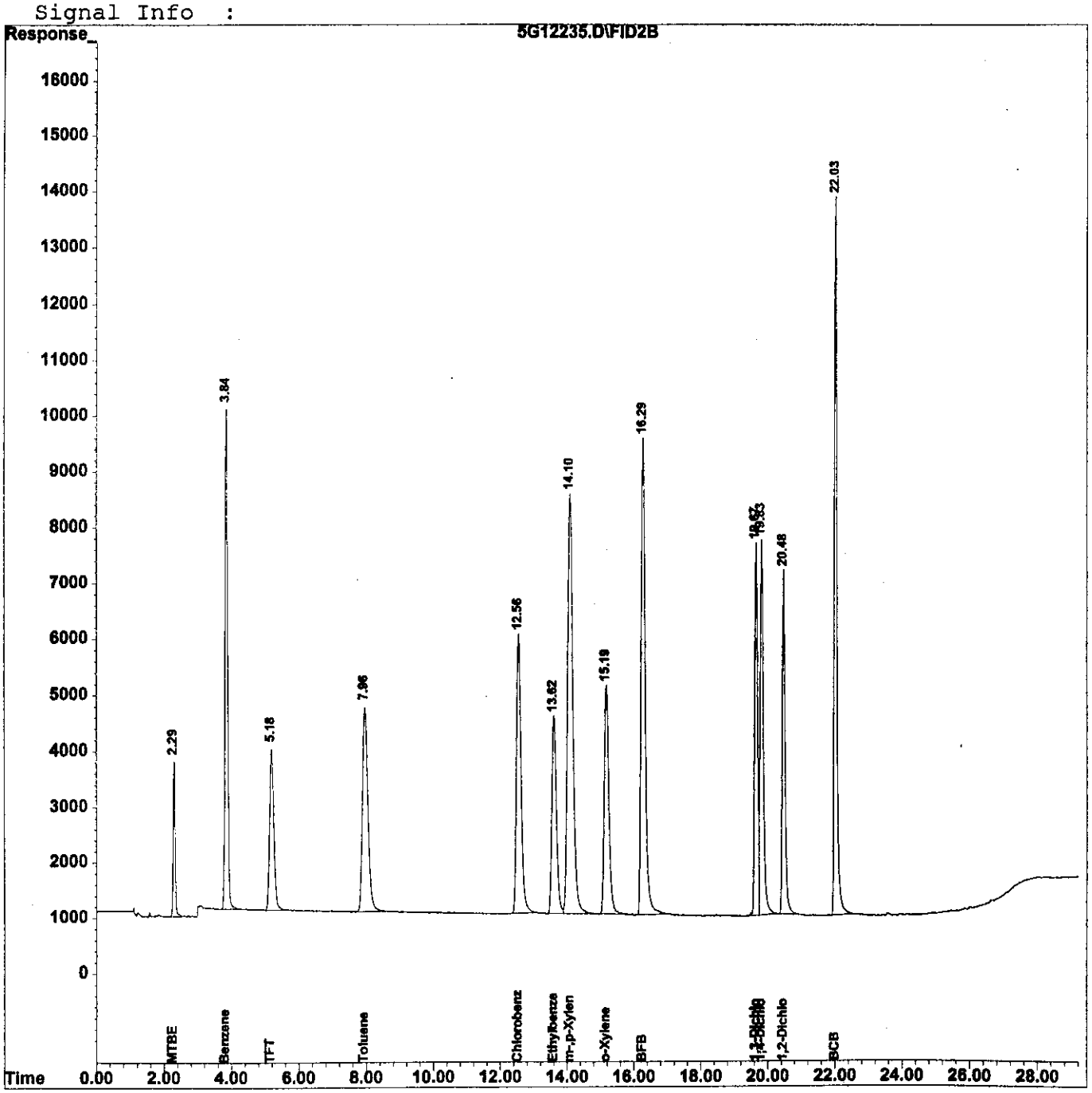
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\2\DATA\022002\5G12235.D  Vial: 4
Acq On : 20 Feb 2002 9:56  Operator: CBN
Sample : WG113244-02 STD 2 10PPB 5ML  Inst : HP5
Misc : 1,1 S-89-49,90-39  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 10:26 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12235.D
Acq On : 20 Feb 2002 9:56
Sample : WG113244-02 STD 2 10PPB 5ML
Misc : 1,1 S-89-49,90-39
IntFile : autoint1.e
Quant Time: Feb 20 10:26 2002 Quant Results File: 8021W.RES

Vial: 4
Operator: CBN
Inst : HP5
Multiplr: 1.00

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 249705 | 12.3125 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 41.04%# | | | |
| 9) S BFB | 16.29 | 720604 | 13.0018 ug/L |
| Spiked Amount 30.000 Recovery = 43.34% | | | |
| 13) S BCB | 22.03 | 693148 | 13.0351 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 43.45% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 111969 | 9.2658 ug/L |
| 2) TM Benzene | 3.84 | 470155 | 6.6547 ug/L |
| 4) TM Toluene | 7.96 | 418309 | 6.3797 ug/L |
| 5) TM Chlorobenzene | 12.56 | 477966 | 7.0781 ug/L |
| 6) TM Ethylbenzene | 13.62 | 338229 | 6.0834 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 838328 | 12.4722 ug/L |
| 8) TM o-Xylene | 15.19 | 388033 | 6.6739 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.67 | 397734 | 7.1620 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.83 | 451107 | 7.6985 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.49 | 369429 | 7.6418 ug/L |

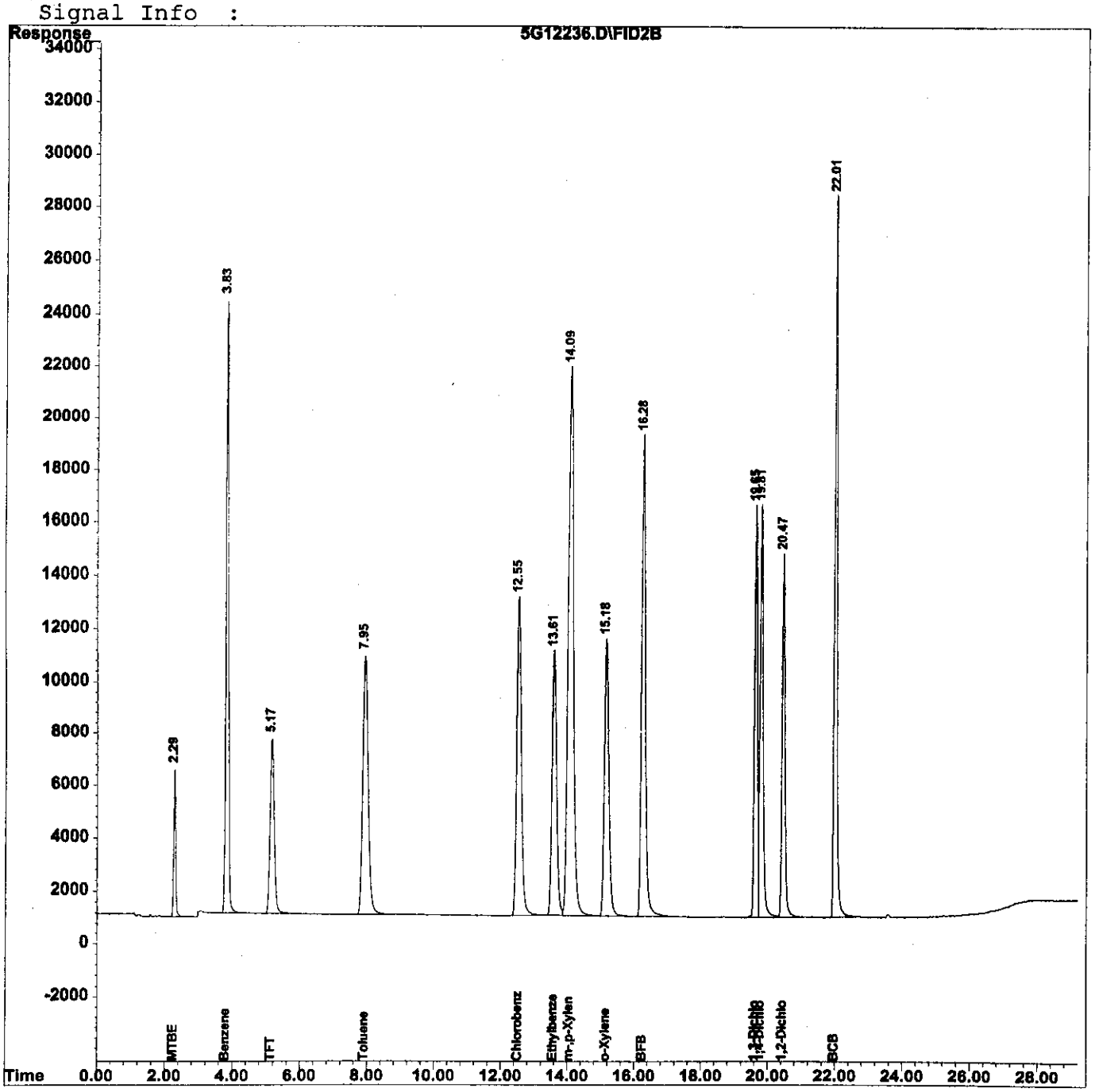
(f)=RT Delta > 1/2 Window (m)=manual int

Quantitation Report

Data File : C:\HPCHEM\2\DATA\022002\5G12236.D  Vial: 5
Acq On : 20 Feb 2002 10:31  Operator: CBN
Sample : WG113244-03 STD 3 20PPB 5ML  Inst : HP5
Misc : 1,1 S-89-49,90-39  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 11:01 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12236.D Vial: 5
Acq On : 20 Feb 2002 10:31 Operator: CBN
Sample : WG113244-03 STD 3 20PPB 5ML Inst : HP5
Misc : 1,1 S-89-49,90-39 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 11:01 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.17 | 560731 | 27.6487 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 92.16% | | | |
| 9) S BFB | 16.28 | 1503911 | 27.1350 ug/L |
| Spiked Amount 30.000 Recovery = 90.45% | | | |
| 13) S BCB | 22.01 | 1441673 | 27.1117 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 90.37% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 224863 | 18.6081 ug/L |
| 2) TM Benzene | 3.83 | 1206208 | 17.0729 ug/L |
| 4) TM Toluene | 7.95 | 1099846 | 17.4083 ug/L |
| 5) TM Chlorobenzene | 12.55 | 1152961 | 17.0740 ug/L |
| 6) TM Ethylbenzene | 13.61 | 943942 | 16.9778 ug/L |
| 7) TM m-,p-Xylene | 14.09 | 2272425 | 33.8079 ug/L |
| 8) TM o-Xylene | 15.18 | 978240 | 16.8250 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 932272 | 16.7874 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 1011845 | 17.2680 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 814893 | 16.8565 ug/L |

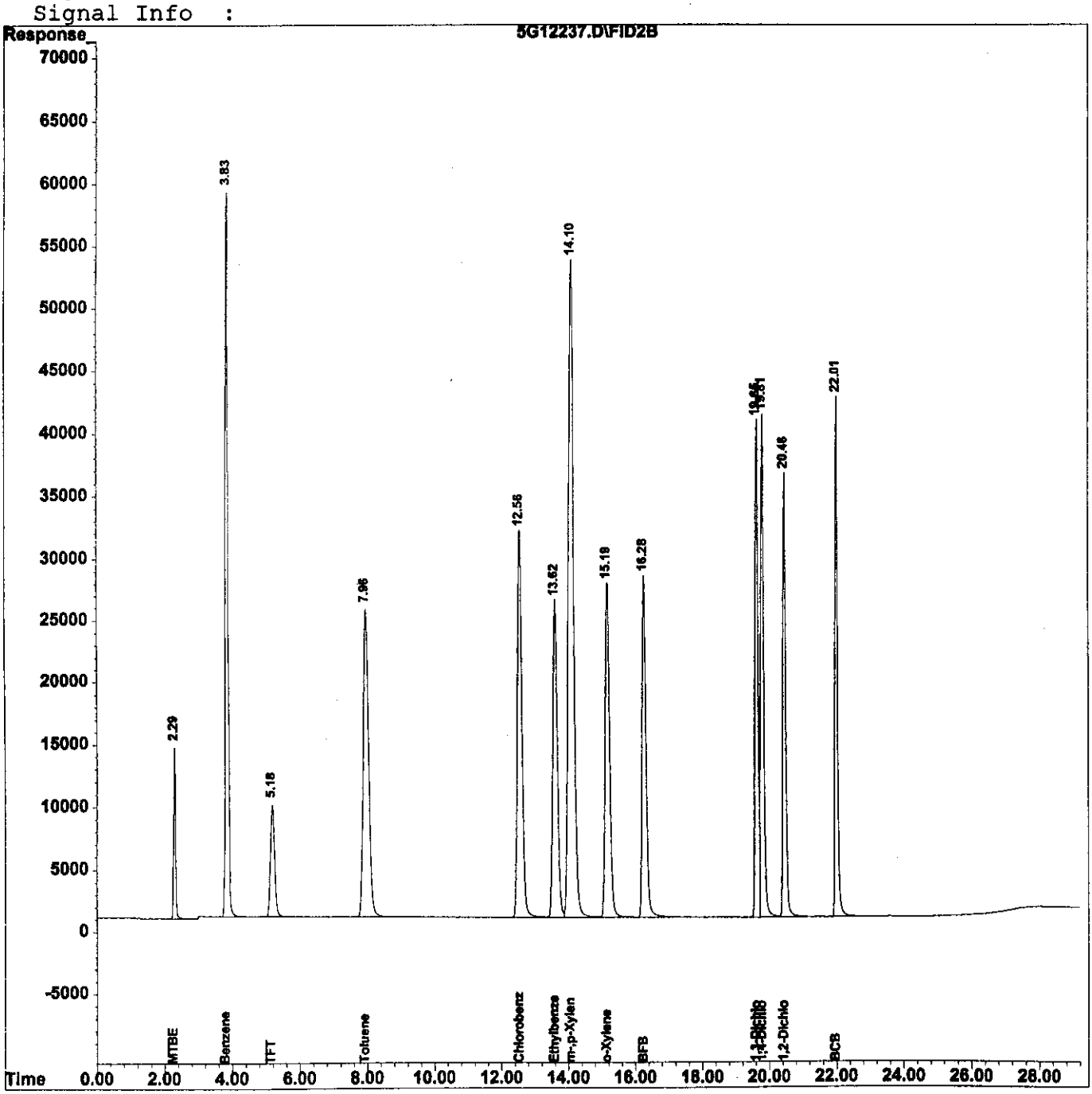
(f)=RT Delta > 1/2 Window (m)=manual int

Quantitation Report

Data File : C:\HPCHEM\2\DATA\022002\5G12237.D  Vial: 6
Acq On : 20 Feb 2002 11:06  Operator: CBN
Sample : WG113244-04 STD 4 50PPB 5ML  Inst : HP5
Misc : 1,1 S-89-49,90-39  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 11:36 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12237.D Vial: 6
Acq On : 20 Feb 2002 11:06 Operator: CBN
Sample : WG113244-04 STD 4 50PPB 5ML Inst : HP5
Misc : 1,1 S-89-49,90-39 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 11:36 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

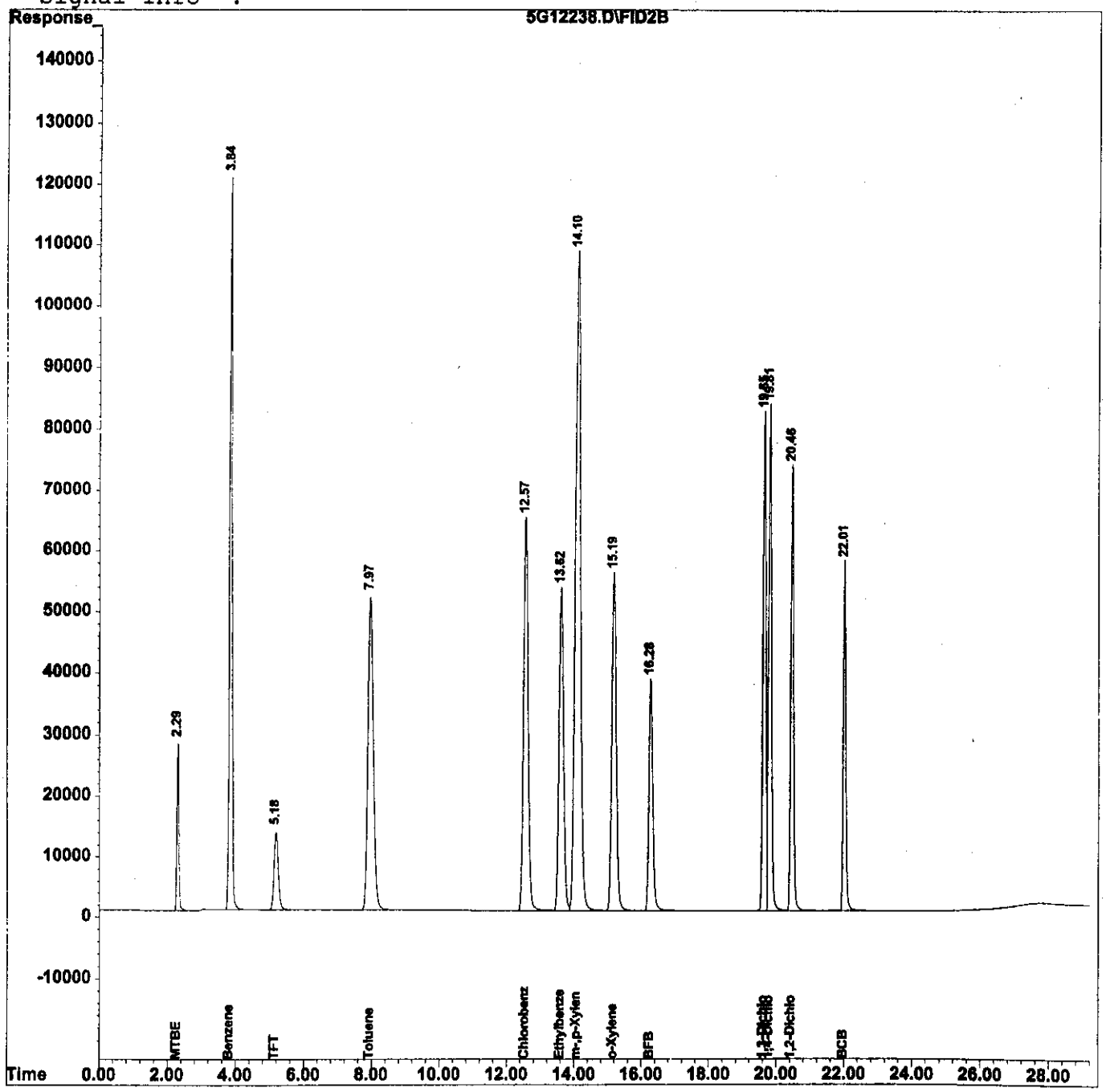
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 761904 | 37.5682 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 125.23% | | | |
| 9) S BFB | 16.28 | 2241826 | 40.4492 ug/L |
| Spiked Amount 30.000 Recovery = 134.83% | | | |
| 13) S BCB | 22.01 | 2167623 | 40.7637 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 135.88% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 552063 | 45.6849 ug/L |
| 2) TM Benzene | 3.83 | 3019710 | 42.7415 ug/L |
| 4) TM Toluene | 7.96 | 2761241 | 44.2929 ug/L |
| 5) TM Chlorobenzene | 12.56 | 2935110 | 43.4655 ug/L |
| 6) TM Ethylbenzene | 13.62 | 2389091 | 42.9704 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 5670815 | 84.3672 ug/L |
| 8) TM o-Xylene | 15.19 | 2461732 | 42.3400 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 2365072 | 42.5879 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 2513676 | 42.8981 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 2046461 | 42.3321 ug/L |

Quantitation Report

Data File : C:\HPCHEM\2\DATA\022002\5G12238.D  Vial: 7
Acq On : 20 Feb 2002 11:41  Operator: CBN
Sample : WG113244-05 STD 5 100PPB 5ML  Inst : HP5
Misc : 1,1 S-89-49,90-39  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 12:11 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12238.D Vial: 7
Acq On : 20 Feb 2002 11:41 Operator: CBN
Sample : WG113244-05 STD 5 100PPB 5ML Inst : HP5
Misc : 1,1 S-89-49,90-39 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 12:11 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

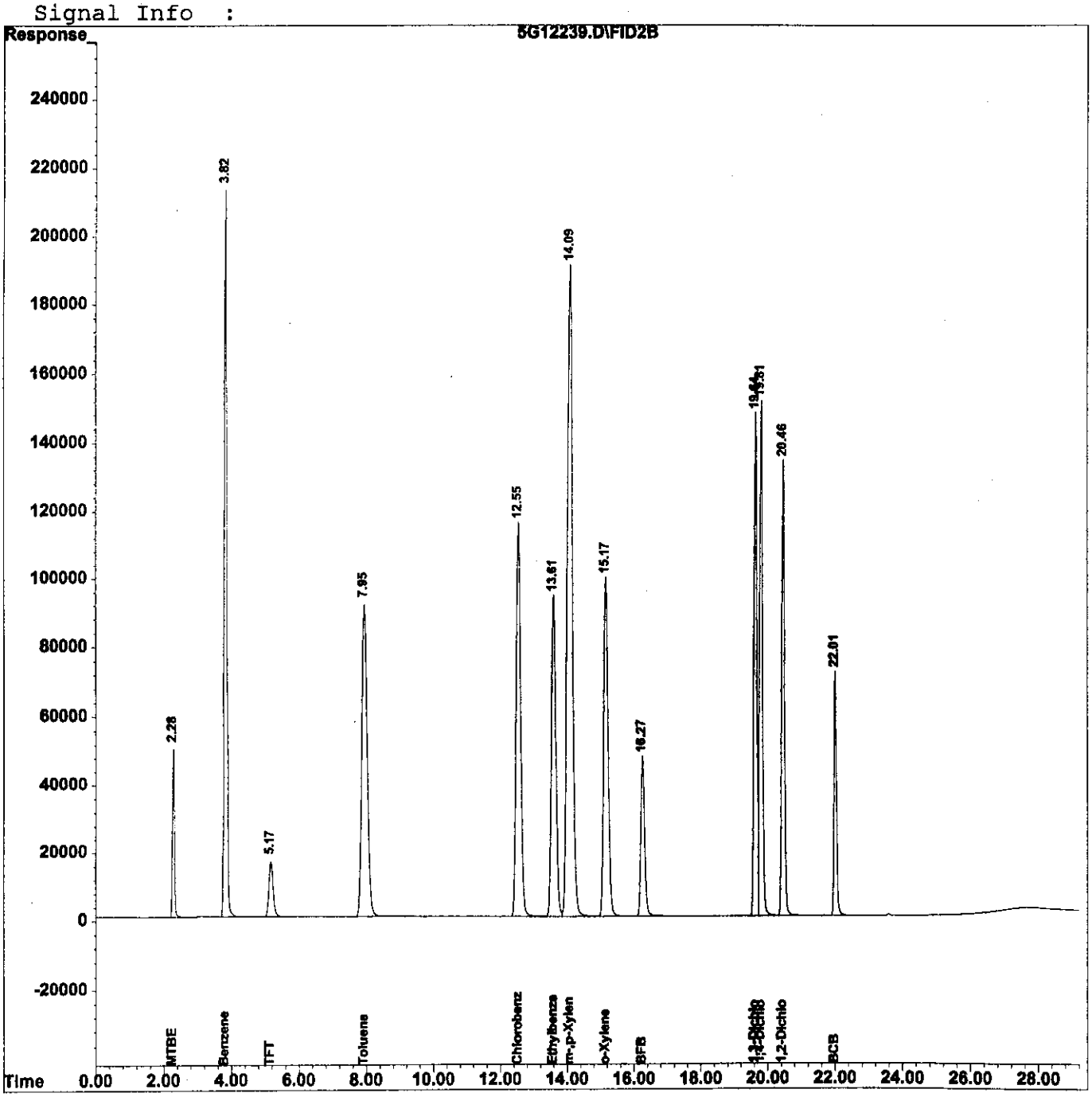
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 1098499 | 54.1651 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 180.55%# | | | |
| 9) S BFB | 16.28 | 3072712 | 55.4408 ug/L |
| Spiked Amount 30.000 Recovery = 184.80% | | | |
| 13) S BCB | 22.01 | 2949339 | 55.4644 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 184.88%# | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.30 | 1093368 | 90.4797 ug/L |
| 2) TM Benzene | 3.84 | 6224890 | 88.1083 ug/L |
| 4) TM Toluene | 7.97 | 5715001 | 92.0904 ug/L |
| 5) TM Chlorobenzene | 12.57 | 6028224 | 89.2708 ug/L |
| 6) TM Ethylbenzene | 13.63 | 4945071 | 88.9425 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 11596782 | 172.5304 ug/L |
| 8) TM o-Xylene | 15.19 | 5042657 | 86.7301 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 4869541 | 87.6859 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 5062615 | 86.3979 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 4146180 | 85.7659 ug/L |

Quantitation Report

Data File : C:\HPCHEM\2\DATA\022002\5G12239.D  Vial: 8
Acq On : 20 Feb 2002 12:16  Operator: CBN
Sample : WG113244-06 STD 6 200PPB 5ML  Inst : HP5
Misc : 1,1 S-89-49,90-39  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 12:46 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12239.D Vial: 8
Acq On : 20 Feb 2002 12:16 Operator: CBN
Sample : WG113244-06 STD 6 200PPB 5ML Inst : HP5
Misc : 1,1 S-89-49,90-39 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 12:46 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

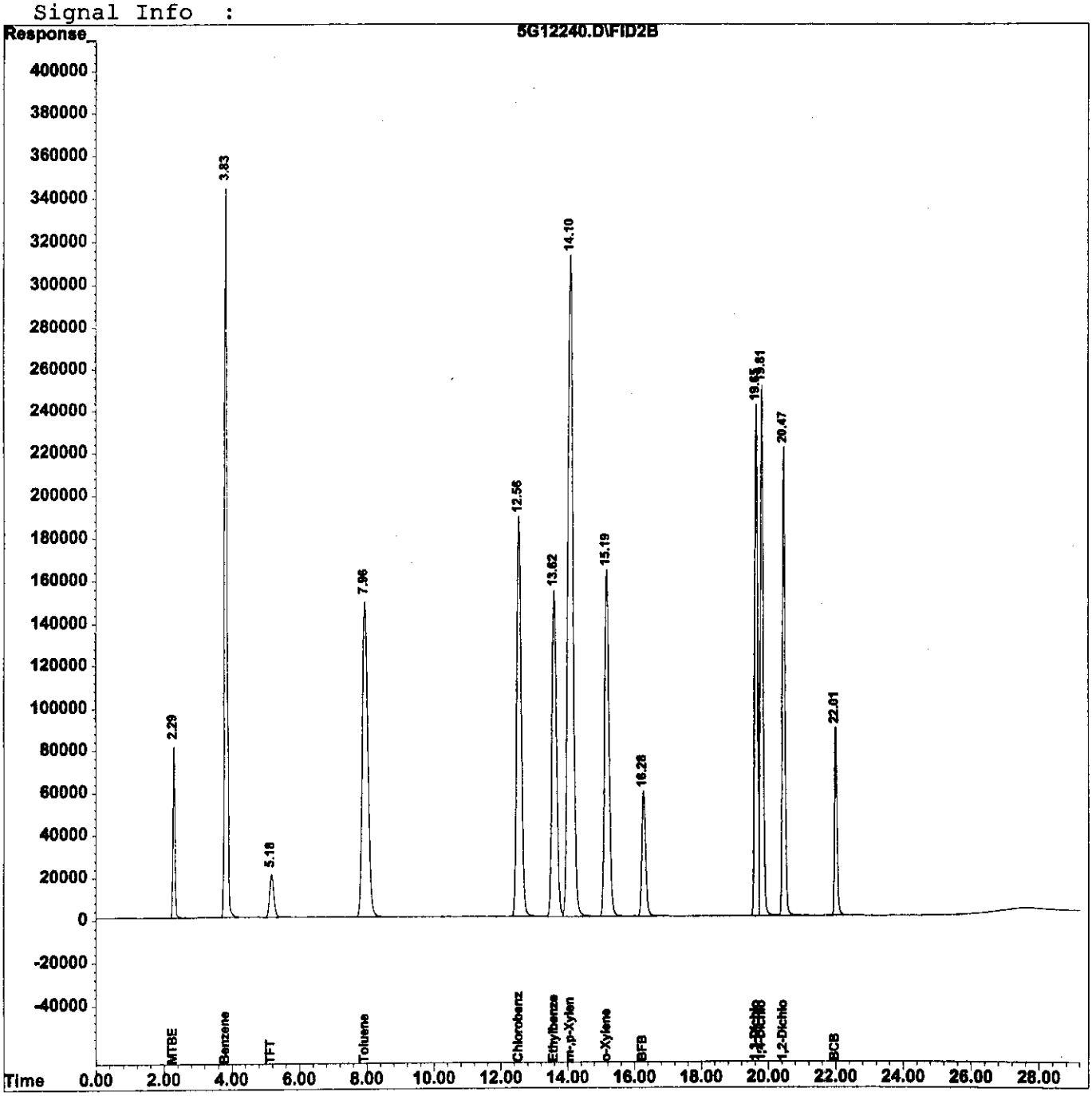
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.17 | 1382390 | 68.1633 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 227.21%# | | | |
| 9) S BFB | 16.27 | 3817049 | 68.8708 ug/L |
| Spiked Amount 30.000 Recovery = 229.57% | | | |
| 13) S BCB | 22.01 | 3668255 | 68.9841 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 229.95%# | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.28 | 1969024 | 162.9429 ug/L |
| 2) TM Benzene | 3.82 | 11138432 | 157.6555 ug/L |
| 4) TM Toluene | 7.95 | 10291481 | 166.1468 ug/L |
| 5) TM Chlorobenzene | 12.55 | 10772563 | 159.5289 ug/L |
| 6) TM Ethylbenzene | 13.61 | 8813177 | 158.5146 ug/L |
| 7) TM m-,p-Xylene | 14.09 | 20478493 | 304.6675 ug/L |
| 8) TM o-Xylene | 15.17 | 9027759 | 155.2710 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.64 | 8792415 | 158.3251 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.81 | 9060458 | 154.6246 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.46 | 7490401 | 154.9428 ug/L |

Quantitation Report

Data File : C:\HPCHEM\2\DATA\022002\5G12240.D  Vial: 9
Acq On : 20 Feb 2002 12:51  Operator: CBN
Sample : WG113244-07 STD 7 300PPB 5ML  Inst : HP5
Misc : 1,1 S-89-49,90-39  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 13:20 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12240.D Vial: 9
Acq On : 20 Feb 2002 12:51 Operator: CBN
Sample : WG113244-07 STD 7 300PPB 5ML Inst : HP5
Misc : 1,1 S-89-49,90-39 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 20 13:20 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/01/02
Last Update : Tue Feb 05 08:48:34 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 1751495 | 86.3632 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 287.88%# | | | |
| 9) S BFB | 16.28 | 4690280 | 84.6265 ug/L |
| Spiked Amount 30.000 Recovery = 282.09% | | | |
| 13) S BCB | 22.01 | 4503678 | 84.6948 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 282.32%# | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 3231974 | 267.4560 ug/L |
| 2) TM Benzene | 3.83 | 18238806 | 258.1555 ug/L |
| 4) TM Toluene | 7.96 | 16948059 | 273.8631 ug/L |
| 5) TM Chlorobenzene | 12.56 | 17678148 | 261.7924 ug/L |
| 6) TM Ethylbenzene | 13.62 | 14662906 | 263.7283 ug/L |
| 7) TM m-,p-Xylene | 14.11 | 33755949 | 502.2021 ug/L |
| 8) TM o-Xylene | 15.19 | 14935504 | 256.8799 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.65 | 14478942 | 260.7224 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.82 | 14763448 | 251.9511 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.47 | 12246215 | 253.3193 ug/L |

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D  Vial: 12
Acq On : 20 Feb 2002 14:36  Operator: CBN
Sample : WG113244-08 ALT SOURCE 20PPB 5ML  Inst : HP5
Misc : 1,1 S-90-(28,39)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Feb 20 13:38:18 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 | 11.082 | 10.463 E3 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 58.464 | 60.318 E3 | -3.2 | 100 | 0.00 |
| 3 | S | TFT | 16.886 | 19.013 E3 | -12.6 | 102 | 0.00 |
| 4 | TM | Toluene | 53.514 | 55.634 E3 | -4.0 | 101 | 0.01 |
| 5 | TM | Chlorobenzene | 55.475 | 57.505 E3 | -3.7 | 100 | 0.02 |
| 6 | TM | Ethylbenzene | 45.133 | 48.198 E3 | -6.8 | 102 | 0.02 |
| 7 | TM | m-,p-Xylene | 53.679 | 56.581 E3 | -5.4 | 100 | 0.01 |
| 8 | TM | o-Xylene | 46.904 | 48.014 E3 | -2.4 | 98 | 0.00 |
| 9 | S | BFB | 48.258 | 51.695 E3 | -7.1 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 47.659 E3 | -5.0 | 102 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 51.504 E3 | -5.5 | 102 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 42.318 E3 | -7.2 | 104 | 0.02 |
| 13 | S | BCB | 46.849 | 50.081 E3 | -6.9 | 104 | 0.02 |

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

# Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D  Vial: 12
Acq On : 20 Feb 2002 14:36  Operator: CBN
Sample : WG113244-08 ALT SOURCE 20PPB 5ML  Inst : HP5
Misc : 1,1 S-90-(28,39)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Feb 20 13:38:18 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 | 18.883 | 5.6 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.634 | -3.2 | 100 | 0.00 |
| 3 | S | TFT | 30.000 | 33.780 | -12.6 | 102 | 0.00 |
| 4 | TM | Toluene | 20.000 | 21.185 | -5.9 | 101 | 0.01 |
| 5 | TM | Chlorobenzene | 20.000 | 20.732 | -3.7 | 100 | 0.02 |
| 6 | TM | Ethylbenzene | 20.000 | 21.461 | -7.3 | 102 | 0.02 |
| 7 | TM | m-,p-Xylene | 40.000 | 41.777 | -4.4 | 100 | 0.01 |
| 8 | TM | o-Xylene | 20.000 | 20.473 | -2.4 | 98 | 0.00 |
| 9 | S | BFB | 30.000 | 32.137 | -7.1 | 103 | 0.00 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 21.006 | -5.0 | 102 | 0.00 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 21.101 | -5.5 | 102 | 0.00 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 21.435 | -7.2 | 104 | 0.02 |
| 13 | S | BCB | 30.000 | 32.070 | -6.9 | 104 | 0.02 |

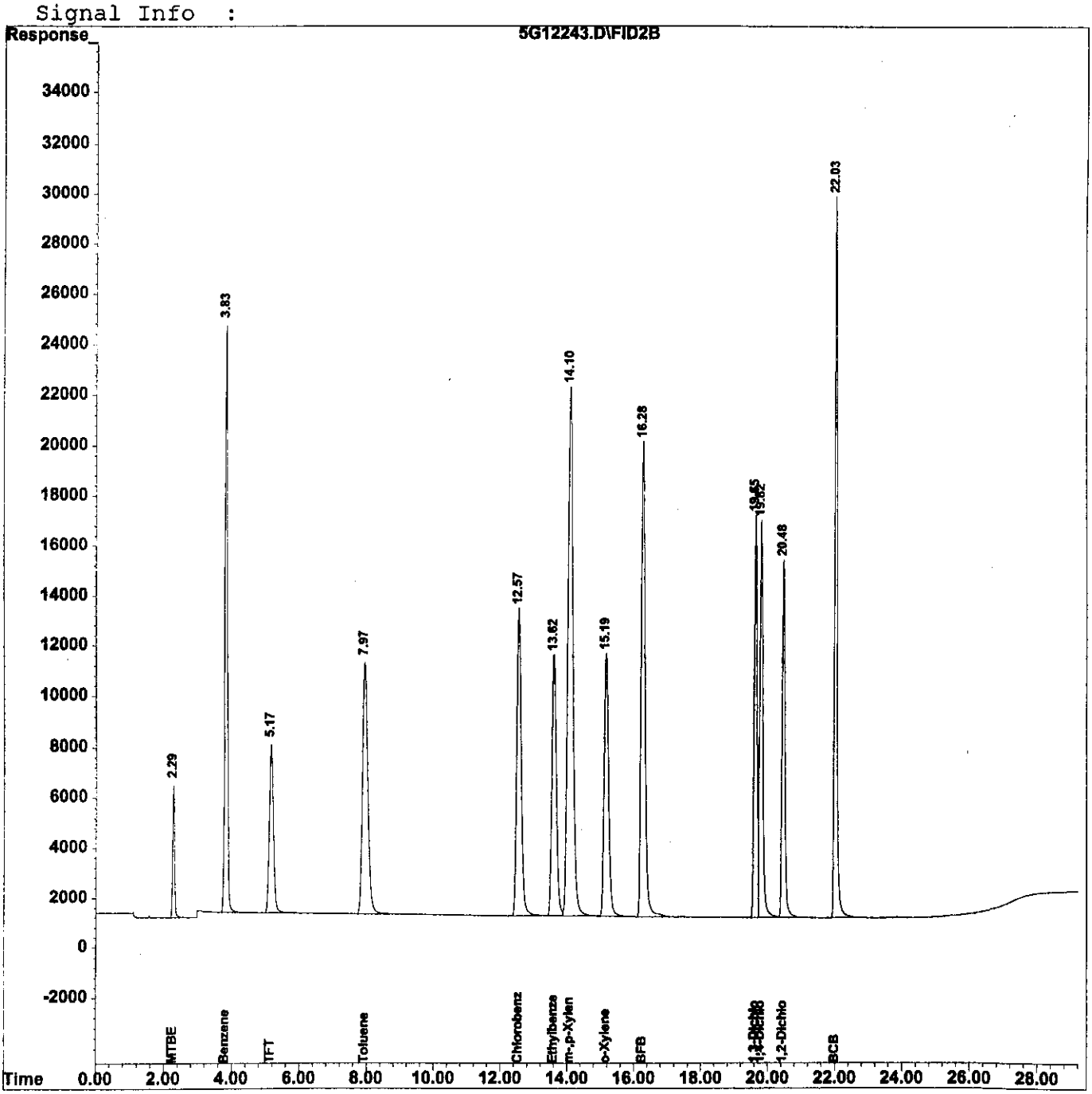
(#) = Out of Range  SPCC's out = 0  CCC's out = 0

Quantitation Report

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D  Vial: 12
Acq On : 20 Feb 2002 14:36  Operator: CBN
Sample : WG113244-08 ALT SOURCE 20PPB 5ML  Inst : HP5
Misc : 1,1 S-90-(28,39)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 21 7:53 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Thu Feb 21 07:37:12 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\2\DATA\022002\5G12243.D Vial: 12
Acq On : 20 Feb 2002 14:36 Operator: CBN
Sample : WG113244-08 ALT SOURCE 20PPB 5ML Inst : HP5
Misc : 1,1 S-90-(28,39) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Feb 21 7:53 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Thu Feb 21 07:37:12 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.18 | 570396 | 33.7797 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 112.60% | | | |
| 9) S BFB | 16.28 | 1550865 | 32.1371 ug/L |
| Spiked Amount 30.000 Recovery = 107.12% | | | |
| 13) S BCB | 22.04 | 1502441 | 32.0701 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 106.90% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.29 | 209259 | 18.8832 ug/L |
| 2) TM Benzene | 3.83 | 1206355 | 20.6342 ug/L |
| 4) TM Toluene | 7.97 | 1112678 | 21.1851 ug/L |
| 5) TM Chlorobenzene | 12.57 | 1150106 | 20.7319 ug/L |
| 6) TM Ethylbenzene | 13.63 | 963955 | 21.4608 ug/L |
| 7) TM m-,p-Xylene | 14.10 | 2263226 | 41.7771 ug/L |
| 8) TM o-Xylene | 15.19 | 960278 | 20.4735 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.66 | 953171 | 21.0061 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.82 | 1030076 | 21.1013 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.48 | 846365 | 21.4355 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D  Vial: 1
Acq On : 19 Sep 2002 8:54  Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.273 E3 | 7.3 | 91 | 0.00 |
| 2 | TM | Benzene | 58.464 | 53.197 E3 | 9.0 | 88 | -0.02 |
| 3 | S | TFT | 16.886 | 17.672 E3 | -4.7 | 95 | -0.02 |
| 4 | TM | Toluene | 53.514 | 49.367 E3 | 7.7 | 90 | -0.03 |
| 5 | TM | Chlorobenzene | 55.475 | 52.486 E3 | 5.4 | 91 | -0.03 |
| 6 | TM | Ethylbenzene | 45.133 | 42.336 E3 | 6.2 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 53.679 | 49.960 E3 | 6.9 | 88 | -0.03 |
| 8 | TM | o-Xylene | 46.904 | 43.847 E3 | 6.5 | 90 | -0.03 |
| 9 | S | BFB | 48.258 | 45.506 E3 | 5.7 | 91 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 42.688 E3 | 5.9 | 92 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 47.648 E3 | 2.4 | 94 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 38.587 E3 | 2.3 | 95 | -0.03 |
| 13 | S | BCB | 46.849 | 42.069 E3 | 10.2 | 88 | -0.02 |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D  Vial: 1
Acq On : 19 Sep 2002 8:54  Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 2002
Response via : Multiple Level Calibration

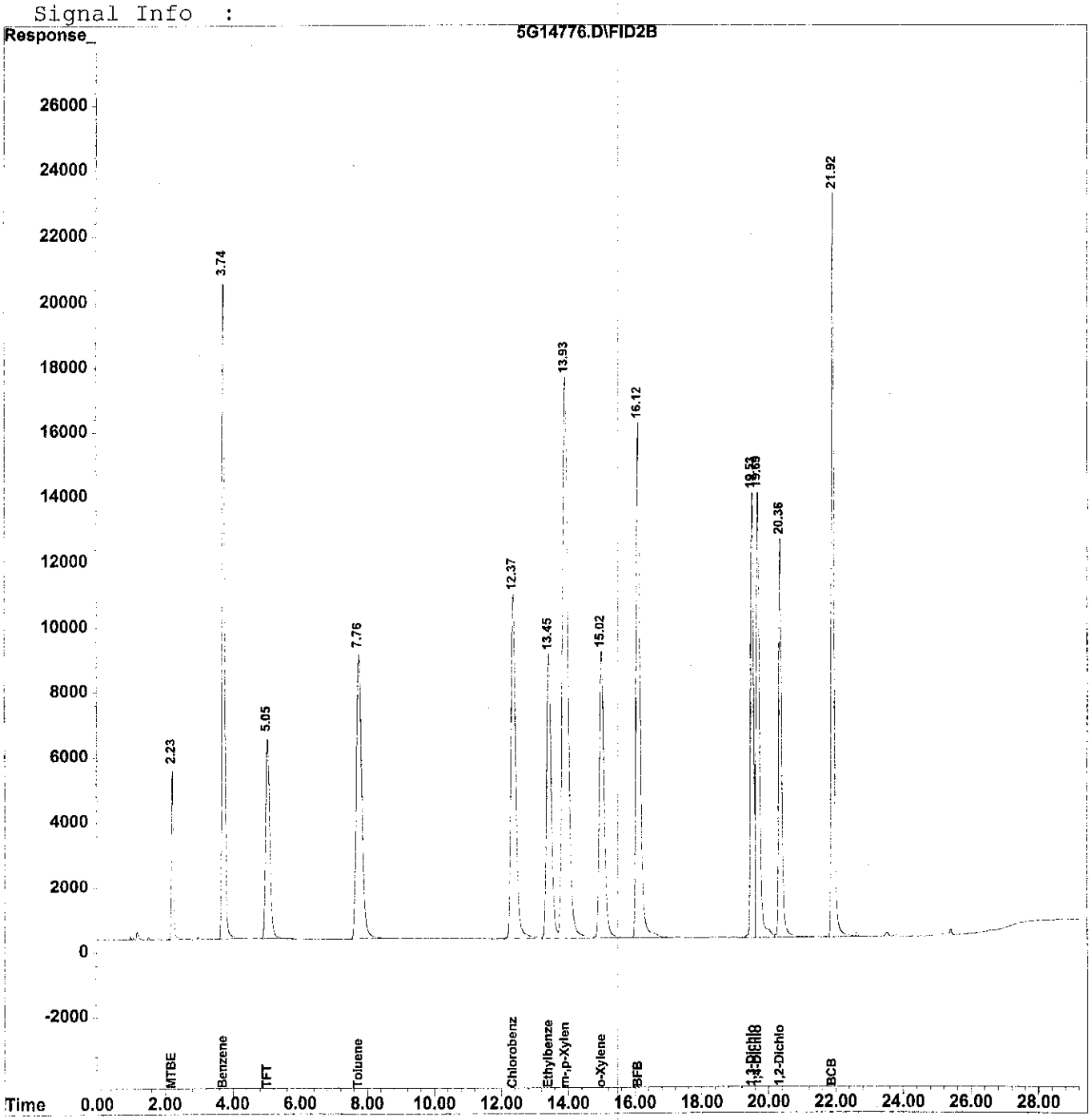
Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 18.541 | 7.3 | 91 | 0.00 |
| 2 | TM | Benzene | 20.000 | 18.198 | 9.0 | 88 | -0.02 |
| 3 | S | TFT | 30.000 | 31.396 | -4.7 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 18.450 | 7.8 | 90 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 18.922 | 5.4 | 91 | -0.03 |
| 6 | TM | Ethylbenzene | 20.000 | 18.761 | 6.2 | 90 | -0.03 |
| 7 | TM | m-,p-Xylene | 40.000 | 37.229 | 6.9 | 88 | -0.03 |
| 8 | TM | o-Xylene | 20.000 | 18.697 | 6.5 | 90 | -0.03 |
| 9 | S | BFB | 30.000 | 28.289 | 5.7 | 91 | -0.03 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 18.815 | 5.9 | 92 | -0.03 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.521 | 2.4 | 94 | -0.03 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.546 | 2.3 | 95 | -0.03 |
| 13 | S | BCB | 30.000 | 26.939 | 10.2 | 88 | -0.02 |

Data File : C:\HPCHEM\2\DATA\091902\5G14776.D  Vial: 1
Acq On : 19 Sep 2002 8:54  Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 9:23 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14776.D Vial: 1
Acq On : 19 Sep 2002 8:54 Operator: CSH
Sample : WG125605-01 8021 STD 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 9:23 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 530151 | 31.3963 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 104.65% | | | |
| 9) S BFB | 16.12 | 1365188 | 28.2895 ug/L |
| Spiked Amount 30.000 Recovery = 94.30% | | | |
| 13) S BCB | 21.92 | 1262078 | 26.9395 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 89.80% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 205466 | 18.5409 ug/L |
| 2) TM Benzene | 3.74 | 1063949 | 18.1984 ug/L |
| 4) TM Toluene | 7.76 | 987343 | 18.4501 ug/L |
| 5) TM Chlorobenzene | 12.38 | 1049724 | 18.9224 ug/L |
| 6) TM Ethylbenzene | 13.45 | 846722 | 18.7607 ug/L |
| 7) TM m-,p-Xylene | 13.93 | 1998404 | 37.2289 ug/L |
| 8) TM o-Xylene | 15.03 | 876939 | 18.6966 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.53 | 853760 | 18.8153 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.70 | 952951 | 19.5214 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.36 | 771747 | 19.5456 ug/L |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D  Vial: 9
Acq On : 19 Sep 2002 15:56  Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 10.446 E3 | 5.7 | 93 | 0.00 |
| 2 | TM | Benzene | 58.464 | 59.474 E3 | -1.7 | 99 | -0.02 |
| 3 | S | TFT | 16.886 | 17.750 E3 | -5.1 | 95 | -0.02 |
| 4 | TM | Toluene | 53.514 | 53.414 E3 | 0.2 | 97 | -0.03 |
| 5 | TM | Chlorobenzene | 55.475 | 55.588 E3 | -0.2 | 96 | -0.04 |
| 6 | TM | Ethylbenzene | 45.133 | 46.607 E3 | -3.3 | 99 | -0.04 |
| 7 | TM | m-,p-Xylene | 53.679 | 54.485 E3 | -1.5 | 96 | -0.05 |
| 8 | TM | o-Xylene | 46.904 | 46.840 E3 | 0.1 | 96 | -0.05 |
| 9 | S | BFB | 48.258 | 45.119 E3 | 6.5 | 90 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 44.563 E3 | 1.8 | 96 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 48.904 E3 | -0.2 | 97 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 38.886 E3 | 1.5 | 95 | -0.04 |
| 13 | S | BCB | 46.849 | 41.255 E3 | 11.9 | 86 | -0.03 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
5G14787.D 8021W.M  Thu Sep 19 16:26:28 2002  Page 1

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D  Vial: 9
Acq On : 19 Sep 2002 15:56  Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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%

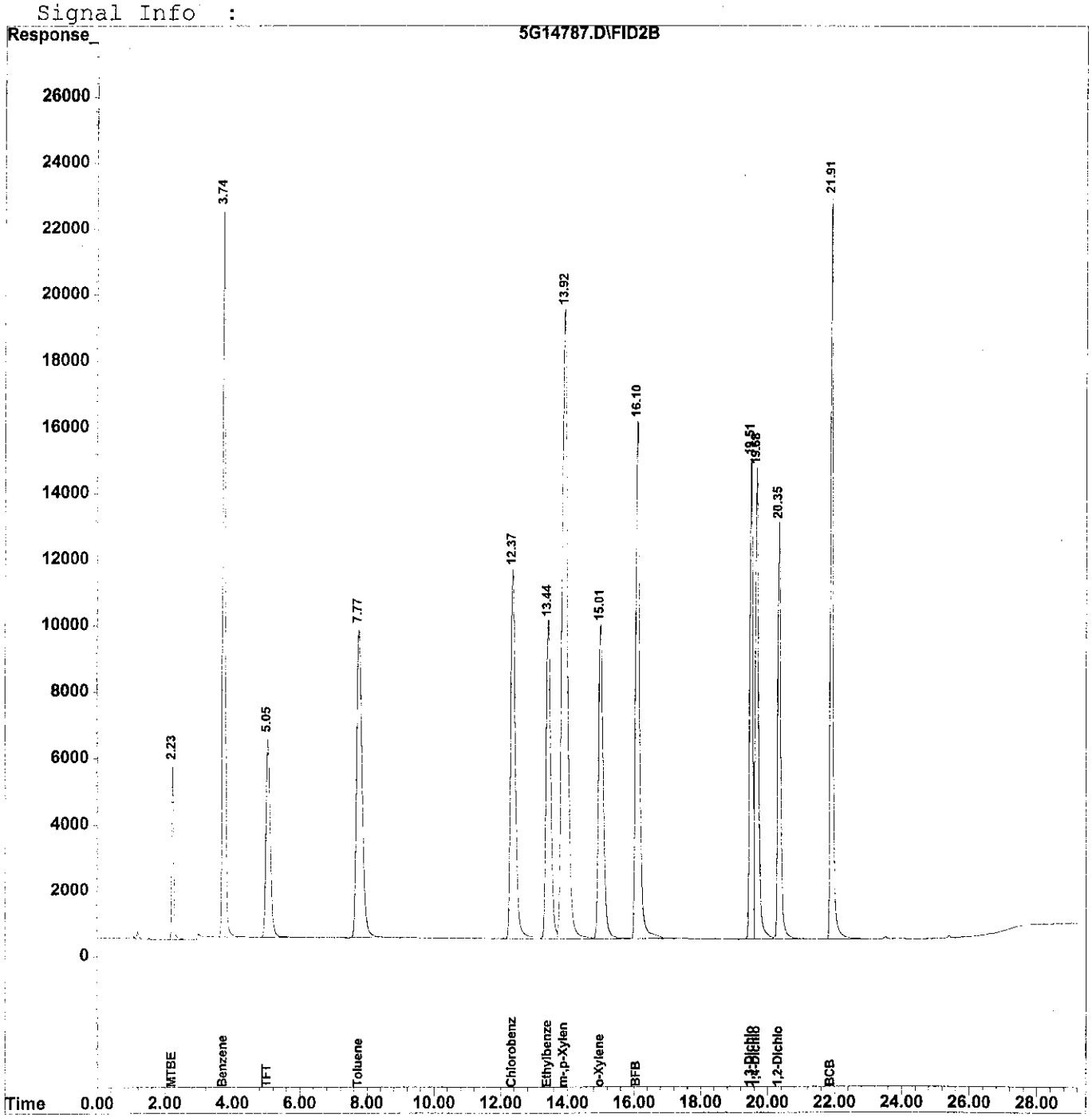
| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | TM | MTBE | 20.000 | 18.852 | 5.7 | 93 | 0.00 |
| 2 | TM | Benzene | 20.000 | 20.346 | -1.7 | 99 | -0.02 |
| 3 | S | TFT | 30.000 | 31.535 | -5.1 | 95 | -0.02 |
| 4 | TM | Toluene | 20.000 | 19.963 | 0.2 | 97 | -0.03 |
| 5 | TM | Chlorobenzene | 20.000 | 20.040 | -0.2 | 96 | -0.04 |
| 6 | TM | Ethylbenzene | 20.000 | 20.653 | -3.3 | 99 | -0.04 |
| 7 | TM | m-,p-Xylene | 40.000 | 40.601 | -1.5 | 96 | -0.05 |
| 8 | TM | o-Xylene | 20.000 | 19.973 | 0.1 | 96 | -0.05 |
| 9 | S | BFB | 30.000 | 28.049 | 6.5 | 90 | -0.04 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.642 | 1.8 | 96 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 20.036 | -0.2 | 97 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.697 | 1.5 | 95 | -0.04 |
| 13 | S | BCB | 30.000 | 26.418 | 11.9 | 86 | -0.03 |

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

Data File : C:\HPCHEM\2\DATA\091902\5G14787.D  Vial: 9
Acq On : 19 Sep 2002 15:56  Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 16:25 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14787.D  Vial: 9
Acq On : 19 Sep 2002 15:56  Operator: CSH
Sample : WG125605-02 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 16:25 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.05 | 532500 | 31.5355 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 105.12% | | | |
| 9) S BFB | 16.11 | 1353578 | 28.0489 ug/L |
| Spiked Amount 30.000 Recovery = 93.50% | | | |
| 13) S BCB | 21.91 | 1237652 | 26.4181 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 88.06% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 208916 | 18.8522 ug/L |
| 2) TM Benzene | 3.74 | 1189487 | 20.3456 ug/L |
| 4) TM Toluene | 7.77 | 1068289 | 19.9627 ug/L |
| 5) TM Chlorobenzene | 12.37 | 1111751 | 20.0405 ug/L |
| 6) TM Ethylbenzene | 13.44 | 932138 | 20.6533 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2179394 | 40.6006 ug/L |
| 8) TM o-Xylene | 15.01 | 936810 | 19.9731 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 891256 | 19.6416 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.68 | 978086 | 20.0363 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 777711 | 19.6967 ug/L |

Data File : C:\HPCHEM\2\DATA\091902\5G14797.D  Vial: 19
Acq On : 19 Sep 2002 21:52  Operator: CSH
Sample : WG125605-03 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 11.082 | 9.811 E3 | 11.5 | 87 | -0.01 |
| 2 | TM | Benzene | 58.464 | 58.005 E3 | 0.8 | 96 | -0.03 |
| 3 | S | TFT | 16.886 | 17.573 E3 | -4.1 | 94 | -0.04 |
| 4 | TM | Toluene | 53.514 | 53.149 E3 | 0.7 | 97 | -0.06 |
| 5 | TM | Chlorobenzene | 55.475 | 55.041 E3 | 0.8 | 95 | -0.06 |
| 6 | TM | Ethylbenzene | 45.133 | 46.370 E3 | -2.7 | 98 | -0.06 |
| 7 | TM | m-,p-Xylene | 53.679 | 54.104 E3 | -0.8 | 95 | -0.06 |
| 8 | TM | o-Xylene | 46.904 | 46.470 E3 | 0.9 | 95 | -0.06 |
| 9 | S | BFB | 48.258 | 44.925 E3 | 6.9 | 90 | -0.06 |
| 10 | TM | 1,3-Dichlorobenzene | 45.376 | 43.879 E3 | 3.3 | 94 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 48.816 | 47.980 E3 | 1.7 | 95 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 39.484 | 38.174 E3 | 3.3 | 94 | -0.04 |
| 13 | S | BCB | 46.849 | 41.325 E3 | 11.8 | 86 | -0.03 |

Data File : C:\HPCHEM\2\DATA\091902\5G14797.D  Vial: 19
Acq On : 19 Sep 2002 21:52  Operator: CSH
Sample : WG125605-03 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e

Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Apr 24 10:21:22 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 | 17.707 | 11.5 | 87 | -0.01 |
| 2 | TM | Benzene | 20.000 | 19.843 | 0.8 | 96 | -0.03 |
| 3 | S | TFT | 30.000 | 31.220 | -4.1 | 94 | -0.04 |
| 4 | TM | Toluene | 20.000 | 19.864 | 0.7 | 97 | -0.06 |
| 5 | TM | Chlorobenzene | 20.000 | 19.843 | 0.8 | 95 | -0.06 |
| 6 | TM | Ethylbenzene | 20.000 | 20.548 | -2.7 | 98 | -0.06 |
| 7 | TM | m-,p-Xylene | 40.000 | 40.317 | -0.8 | 95 | -0.06 |
| 8 | TM | o-Xylene | 20.000 | 19.815 | 0.9 | 95 | -0.06 |
| 9 | S | BFB | 30.000 | 27.928 | 6.9 | 90 | -0.06 |
| 10 | TM | 1,3-Dichlorobenzene | 20.000 | 19.340 | 3.3 | 94 | -0.04 |
| 11 | TM | 1,4-Dichlorobenzene | 20.000 | 19.658 | 1.7 | 95 | -0.04 |
| 12 | TM | 1,2-Dichlorobenzene | 20.000 | 19.336 | 3.3 | 94 | -0.04 |
| 13 | S | BCB | 30.000 | 26.463 | 11.8 | 86 | -0.03 |

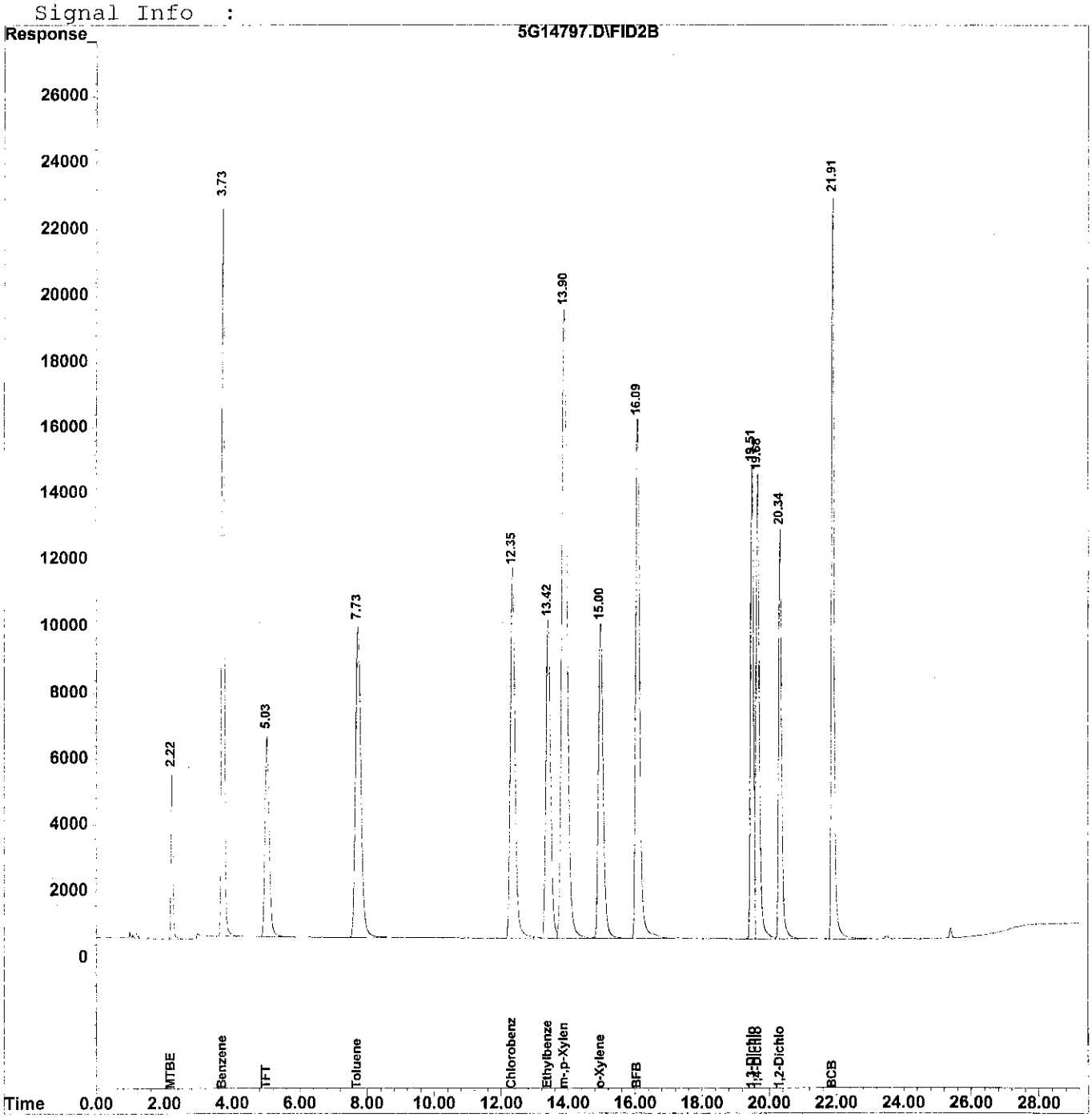
(#) = Out of Range  SPCC's out = 0  CCC's out = 0

Quantitation Report

Data File : C:\HPCHEM\2\DATA\091902\5G14797.D  Vial: 19
Acq On : 19 Sep 2002 21:52  Operator: CSH
Sample : WG125605-03 8021 STD 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 22:22 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\2\DATA\091902\5G14797.D            Vial: 19
Acq On    : 19 Sep 2002  21:52                        Operator: CSH
Sample    : WG125605-03 8021 STD 20PPB 5ML            Inst    : HP5
Misc      : 1,1 S-(98-29,99-16)                       Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 19 22:22 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 02/20/02
Last Update  : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj.  :
Signal Phase :
Signal Info  :

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

  System Monitoring Compounds
 3) S   TFT                            5.03         527177  31.2202 ug/L
Spiked Amount     30.000   Range  70 - 130    Recovery   =  104.07%
 9) S   BFB                           16.09        1347743  27.9280 ug/L
Spiked Amount   30.000                    Recovery      =   93.09%
13) S   BCB                           21.91        1239756  26.4630 ug/L
Spiked Amount     30.000   Range  37 - 137    Recovery   =   88.21%

  Target Compounds
 1) TM  MTBE                           2.23         196222   17.7067 ug/L
 2) TM  Benzene                        3.73        1160092   19.8429 ug/L
 4) TM  Toluene                        7.74        1062982   19.8635 ug/L
 5) TM  Chlorobenzene                 12.35        1100817   19.8434 ug/L
 6) TM  Ethylbenzene                  13.42         927405   20.5484 ug/L
 7) TM  m-,p-Xylene                   13.90        2164170   40.3170 ug/L
 8) TM  o-Xylene                      15.00         929410   19.8153 ug/L
10) TM  1,3-Dichlorobenzene           19.51         877585   19.3403 ug/L
11) TM  1,4-Dichlorobenzene           19.68         959604   19.6577 ug/L
12) TM  1,2-Dichlorobenzene           20.35         763489   19.3365 ug/L

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

DAILY RETENTION TIME
WINDOW DETERMINATION
GC VOLATILES

**Date of Analysis:** 19-Sep-02
**Filename:** 5G14776
**Sub Directory:** 091902
**Instrument:** HP5
**Matrix:** WATER

| Analyte Name | STD RT | From RT | To RT |
|---|---|---|---|
| methyl-tert-butyl-ether | 2.231 | **2.208** | **2.254** |
| benzene | 3.740 | **3.710** | **3.770** |
| 1,1,1-trifluorotoluene (SS) | 5.048 | **5.004** | **5.092** |
| toluene | 7.765 | **7.697** | **7.833** |
| chlorobenzene | 12.378 | **12.301** | **12.455** |
| ethylbenzene | 13.445 | **13.359** | **13.531** |
| m+p-xylene | 13.939 | **13.836** | **14.042** |
| o-xylene | 15.026 | **14.923** | **15.129** |
| bromofluorobenzene (SS) | 16.119 | **16.033** | **16.205** |
| 1,3-dichlorobenzene | 19.528 | **19.463** | **19.593** |
| 1,4-dichlorobenzene | 19.696 | **19.632** | **19.760** |
| 1,2-dichlorobenzene | 20.358 | **20.301** | **20.415** |
| bromochlorobenzene (SS) | 21.918 | **21.865** | **21.971** |

| | | | |
|---|---|---|---|
| **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 |

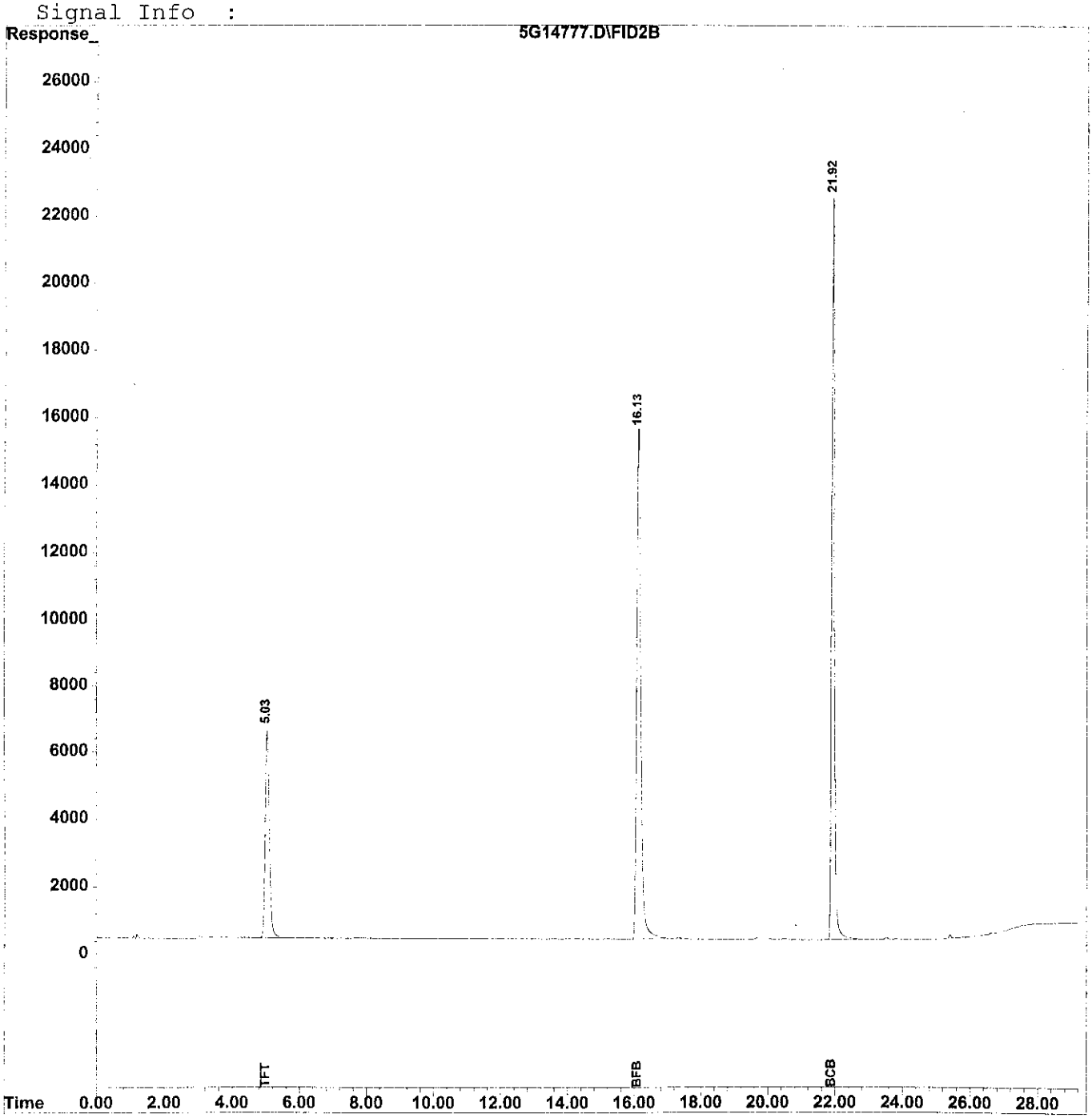
| Analyte Name | RT #1 | RT #2 | RT #3 | Mean | STD DEV | RT Window |
|---|---|---|---|---|---|---|
| methyl-tert-butyl-ether | 2.319 | 2.304 | 2.312 | 2.312 | 0.008 | **0.023** |
| benzene | 3.883 | 3.863 | 3.875 | 3.874 | 0.010 | **0.030** |
| 1,1,1-trifluorotoluene (SS) | 5.246 | 5.217 | 5.231 | 5.231 | 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\091902\5G14777.D  Vial: 2
Acq On : 19 Sep 2002 9:44  Operator: CSH
Sample : WG125606-01 WATER BLANK 5ML  Inst : HP5
Misc : 1,1 S-99-16  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 10:14 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



```
Data File : C:\HPCHEM\2\DATA\091902\5G14777.D            Vial: 2
Acq On    : 19 Sep 2002   9:44                       Operator: CSH
Sample    : WG125606-01 WATER BLANK 5ML              Inst    : HP5
Misc      : 1,1 S-99-16                              Multiplr: 1.00
IntFile   : autoint1.e
Quant Time: Sep 19 10:14 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title        : METHOD 8021B - Water - 02/20/02
Last Update  : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

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

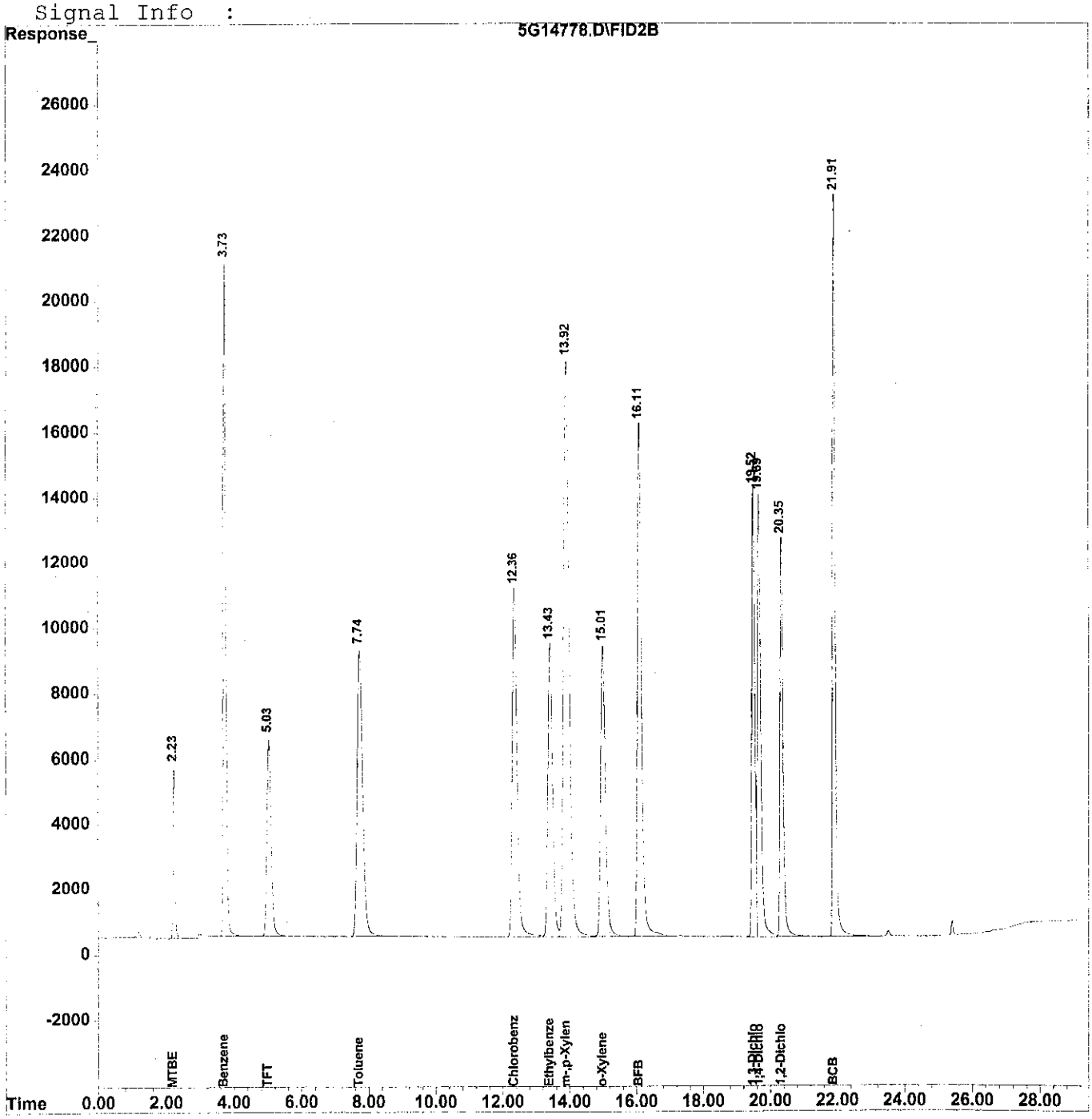
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.03 | 523781 | 31.0191 ug/L |
| Spiked Amount 30.000 | Range 70 - 130 | Recovery = 103.40% | |
| 9) S BFB | 16.13 | 1327027 | 27.4987 ug/L |
| Spiked Amount 30.000 | | Recovery = 91.66% | |
| 13) S BCB | 21.92 | 1246942 | 26.6164 ug/L |
| Spiked Amount 30.000 | Range 37 - 137 | Recovery = 88.72% | |
| 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 o-Xylene | 0.00 | 0 | N.D. ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.67 | 994 | <MDL ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.67 | 994 | <MDL ug/L |
| 12) 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\091902\5G14778.D  Vial: 3
Acq On : 19 Sep 2002 10:19  Operator: CSH
Sample : WG125606-02 WATER LCS 20PPB 5ML  Inst : HP5
Misc : 1,1 S-(98-29,99-16)  Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 10:48 2002  Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\2\DATA\091902\5G14778.D Vial: 3
Acq On : 19 Sep 2002 10:19 Operator: CSH
Sample : WG125606-02 WATER LCS 20PPB 5ML Inst : HP5
Misc : 1,1 S-(98-29,99-16) Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Sep 19 10:48 2002 Quant Results File: 8021W.RES

Quant Method : C:\HPCHEM\2\METHODS\8021W.M (Chemstation Integrator)
Title : METHOD 8021B - Water - 02/20/02
Last Update : Wed Sep 18 11:06:53 2002
Response via : Initial Calibration
DataAcq Meth : 8021W.M

Volume Inj. :
Signal Phase :
Signal Info :

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 3) S TFT | 5.04 | 525794 | 31.1383 ug/L |
| Spiked Amount 30.000 Range 70 - 130 Recovery = 103.79% | | | |
| 9) S BFB | 16.11 | 1357954 | 28.1396 ug/L |
| Spiked Amount 30.000 Recovery = 93.80% | | | |
| 13) S BCB | 21.91 | 1260491 | 26.9056 ug/L |
| Spiked Amount 30.000 Range 37 - 137 Recovery = 89.69% | | | |
| Target Compounds | | | |
| 1) TM MTBE | 2.23 | 206528 | 18.6367 ug/L |
| 2) TM Benzene | 3.73 | 1096926 | 18.7624 ug/L |
| 4) TM Toluene | 7.74 | 1001950 | 18.7231 ug/L |
| 5) TM Chlorobenzene | 12.36 | 1061439 | 19.1336 ug/L |
| 6) TM Ethylbenzene | 13.43 | 872043 | 19.3218 ug/L |
| 7) TM m-,p-Xylene | 13.92 | 2045721 | 38.1103 ug/L |
| 8) TM o-Xylene | 15.01 | 885572 | 18.8807 ug/L |
| 10) TM 1,3-Dichlorobenzene | 19.52 | 852595 | 18.7896 ug/L |
| 11) TM 1,4-Dichlorobenzene | 19.69 | 942760 | 19.3126 ug/L |
| 12) TM 1,2-Dichlorobenzene | 20.35 | 763806 | 19.3445 ug/L |

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

# Injection Log

Directory: c:\hpchem\2\data\022002

WG113234
⊥ 278

ANALYST: CBN

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g12231.d | 1. | WG113234-01 8021 STD 20PPB 5ML | 1,1 S-90-(28,15) | 20 Feb 102 12::0 |
| 2 | 2 | 5g12232.d | 1. | WG113234-01 8021 STD 20PPB 5ML ⊥ | 1,1 S-90-(28,15) | 20 Feb 102 12::5 |
| 3 | 2 | 5g12233.d | 1. | WG113244-01 STD 1 1PPB 5ML | 1,1 S-89-49,90-39 | 20 Feb 102 12::4 |
| 4 | 3 | 5g12234.d | 1. | WG113244-01 STD 1 1PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 12::2 |
| 5 | 4 | 5g12235.d | 1. | WG113244-02 STD 2 10PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 12::5 |
| 6 | 5 | 5g12236.d | 1. | WG113244-03 STD 3 20PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::3 |
| 7 | 6 | 5g12237.d | 1. | WG113244-04 STD 4 50PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::0 |
| 8 | 7 | 5g12238.d | 1. | WG113244-05 STD 5 100PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::4 |
| 9 | 8 | 5g12239.d | 1. | WG113244-06 STD 6 200PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::1 |
| 10 | 9 | 5g12240.d | 1. | WG113244-07 STD 7 300PPB 5ML ✓ | 1,1 S-89-49,90-39 | 20 Feb 102 13::5 |
| 11 | 10 | 5g12241.d | 1. | RINSE ✓ | 1,1 S-90-39 | 20 Feb 102 12::2 |
| 12 | 11 | 5g12242.d | 1. | RINSE ✓ | 1,1 S-90-39 | 20 Feb 102 12::0 |
| 13 | 12 | 5g12243.d | 1. | WG113244-08 ALT SOURCE 20PPB 5ML ✓ | 1,1 S-90-(28,39) | 20 Feb 102 12::3 |
| 14 | 1 | 5g12244.d | 1. | WG113278-01 STD 1 90PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::4 |
| 15 | 2 | 5g12245.d | 1. | WG113278-02 STD 2 360PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::1 |
| 16 | 3 | 5g12246.d | 1. | WG113278-03 STD 3 900PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::5 |
| 17 | 4 | 5g12247.d | 1. | WG113278-04 STD 4 1800PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::2 |
| 18 | 5 | 5g12248.d | 1. | WG113278-05 STD 5 3600PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::0 |
| 19 | 6 | 5g12249.d | 1. | WG113278-06 STD 6 7200PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::3 |
| 20 | 7 | 5g12250.d | 1. | RINSE ✓ | 1,1 S-90-42 | 20 Feb 102 12::1 |
| 21 | 8 | 5g12251.d | 1. | RINSE ✓ | 1,1 S-90-42 | 20 Feb 102 12::4 |
| 22 | 9 | 5g12252.d | 1. | WG113278-07 ALT SOURCE 900PPB 5ML ✓ | 1,1 S-90-(08,42) | 20 Feb 102 12::1 |

Directory: c:\hpchem\2\data\091902

WG125606

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 5g14776.d | 1. | WG125605-01 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 12::5 |
| 2 | 2 | 5g14777.d | 1. | WG125606-01 WATER BLANK 5ML | 1,1 S-99-16 | 19 Sep 102 12::4 |
| 3 | 3 | 5g14778.d | 1. | WG125606-02 WATER LCS 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 13::1 |
| 4 | 1 | 5g14779.d | 1. | L0209327-01 A 5ML | 1,1 S-99-16 | 19 Sep 102 13::1 |
| 5 | 2 | 5g14780.d | 1. | L0209327-02 A 5ML RR HIGHSSS | 1,1 S-99-16 | 19 Sep 102 13::5 |
| 6 | 3 | 5g14781.d | 1. | L0209327-03 A 5ML | 1,1 S-99-16 | 19 Sep 102 13::2 |
| 7 | 4 | 5g14782.d | 1. | L0209315-01 B 5ML 200X | 1,100 S-99-16 | 19 Sep 102 12::0 |
| 8 | 5 | 5g14783.d | 1. | L0209315-02 B 5ML 200X | 1,100 S-99-16 | 19 Sep 102 12::3 |
| 9 | 6 | 5g14784.d | 1. | WG125606-03 L0209310-10 B 5ML 20X | 1,20 S-99-16 | 19 Sep 102 12::1 |
| 10 | 7 | 5g14785.d | 1. | WG125606-04 L0209310-10 MS B 5ML 20X | 1,20 S-(98-29,99-16) | 19 Sep 102 12::4 |
| 11 | 8 | 5g14786.d | 1. | WG125606-05 L0209310-10 MSD B 5ML 20X | 1,20 S-(98-29,99-16) | 19 Sep 102 12::2 |
| 12 | 9 | 5g14787.d | 1. | WG125605-02 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 12::5 |
| 13 | 10 | 5g14788.d | 1. | L0209327-02 B 5ML | 1,1 S-99-16,RE | 19 Sep 102 12::4 |
| 14 | 11 | 5g14789.d | 1. | L0209337-01 A 5ML 100X | 1,100 S-99-16 | 19 Sep 102 12::1 |
| 15 | 12 | 5g14790.d | 1. | L0209337-02 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::5 |
| 16 | 13 | 5g14791.d | 1. | L0209337-03 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::2 |
| 17 | 14 | 5g14792.d | 1. | L0209337-04 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::5 |
| 18 | 15 | 5g14793.d | 1. | L0209337-05 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::3 |
| 19 | 15 | 5g14794.d | 1. | L0209337-06 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::0 |
| 20 | 17 | 5g14795.d | 1. | L0209337-07 A 5ML 10X | 1,10 S-99-16 | 19 Sep 102 12::4 |
| 21 | 18 | 5g14796.d | 1. | L0209337-08 A 5ML | 1,1 S-99-16 | 19 Sep 102 12::1 |
| 22 | 19 | 5g14797.d | 1. | WG125605-03 8021 STD 20PPB 5ML | 1,1 S-(98-29,99-16) | 19 Sep 102 12::5 |

pH<2

pH<2

# 2.2 Semivolatiles

# 2.2.6 PRO QC Data (8015)

**REPORT NARRATIVE**
**GC PETROLEUM RANGE ORGANICS**

**KEMRON Report No.: L0209337**

**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 were not associated with this sample delivery group.

**SAMPLES**

**Samples:** Sample 01 was analyzed at a 10X dilution in order to maintain analysis within range of calibration. All acceptance criteria were met.
**Surrogates**: The surrogate for sample 01 was diluted out due to an analysis at a 10X dilution. All other 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: Eric Zimmer DATE: 10/7/02

Rev. 7/14/00

## TRPH – GC DATA (FLA-PRO)

**Login Number** L0209337

### 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: CLK Date: 10/7/02

# 2.2.6.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0209337
Blank File ID: 2G22233
Date Analyzed: 09/30/02
Time Analyzed: 19:41
Analyst: CLK

Work Group: WG125690
Blank Sample ID: WG125593-02
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 | WG125593-03 | 2G22234 | 09/30/02 19:56 | 01 |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 | 2G22249 | 09/30/02 23:45 | 01 |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 | 2G22250 | 10/01/02 00:01 | 01 |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 | 2G22251 | 10/01/02 00:16 | 01 |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 | 2G22252 | 10/01/02 00:32 | 01 |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 | 2G22255 | 10/01/02 01:17 | 01 |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 | 2G22256 | 10/01/02 01:33 | 01 |
| 062-CEF46-1S-Q3-02-20 | L0209337-01 | 2G22293 | 10/01/02 14:46 | 01 |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209337
Run Date: 09/30/2002
Sample ID: WG125593-02
Instrument ID: HP2
Run Time: 19:41
Method: 8015 MOD
File ID: 2G22233
Analyst: CLK
Matrix: Water
Workgroup (AAB#): WG125690
Units: ug/L
Contract #:
Cal ID: HP2-30-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 250 | 500 | 279 | 1 | J |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 61.5 | 49 - 174 | PASS |

* Analyte detected above RDL

KEMRON FORMS - Modified 10/02/2002
Version 1.2

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209337
Instrument ID: HP2
File ID: 2G22234
Workgroup (AAB#): WG125690
Contract #:

Run Date: 09/30/2002
Run Time: 19:56
Analyst: CLK

Sample ID: WG125593-03
Method: 8015 MOD
Matrix: Water
Units: ug/L
Cal ID: HP2-30-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| TRPH-Florida PRO | 3400 | 2750 | 80.9 | 50 - 150 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| o-Terphenyl | 74.7 | 49 - 174 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method:8015_MOD_____ AAB#:WG125690

Login Number:L0209337

| 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-CEF46-1S-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.976 | 10/01/02 | 40 | 12.3 | |
| 062-CEF46-21I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.913 | 10/01/02 | 40 | 11.7 | |
| 062-CEF46-24D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.938 | 10/01/02 | 40 | 11.7 | |
| 062-CEF46-25I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.861 | 10/01/02 | 40 | 11.7 | |
| 062-CEF46-26I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.799 | 10/01/02 | 40 | 11.7 | |
| 062-CEF46-5I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 1.00 | 09/30/02 | 40 | 11.6 | |
| 062-CEF46-6D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.983 | 10/01/02 | 40 | 11.6 | |

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

KEMRON ENVIRONMENTAL SERVICES
SURROGATE STANDARDS

Login Number: L0209337
Instrument Id: HP2
Workgroup (AAB#): WG125690

Method: FLA-PRO
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209337-01 | 10.0 | 01 | DL |
| L0209337-02 | 1.00 | 01 | 54.1 |
| L0209337-03 | 1.00 | 01 | 58.9 |
| L0209337-04 | 1.00 | 01 | 63.6 |
| L0209337-05 | 1.00 | 01 | 63.1 |
| L0209337-06 | 1.00 | 01 | 64.9 |
| L0209337-07 | 1.00 | 01 | 96.8 |
| WG125593-02 | 1.00 | 01 | 61.5 |
| WG125593-03 | 1.00 | 01 | 74.7 |

| 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 09/30/02
Last Update : Tue Oct 01 12:55:15 2002

Calibration Files

| | | | | | |
|---|---|---|---|---|---|
| 5 | =2G22221.D | 50 | =2G22220.D | 100 | =2G22219.D |
| 200 | =2G22218.D | 400 | =2G22217.D | 600 | =2G22216.D |

| | | Compound | 5 | 50 | 100 | 200 | 400 | 600 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | H | Petroleum Range | 2.271 | 1.856 | 1.875 | 1.941 | 1.906 | 1.977 | 1.971 | E4 | 7.79 |
| 2) | s | O-Terphenyl | 2.418 | 1.883 | 1.915 | 1.952 | 1.890 | 1.970 | 2.005 | E4 | 10.25 |
| 3) | s | n-Nonatriacontane | | | | | | | 0.000 | 0 | -1.00 |

#) = Out of Range

Login Number: L0209337
File ID: 2G22222
ALT ID: WG126333-07
Units: mg/L

Instrument ID: HP2
Run Date: 09/30/2002
Run Time: 16:39
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| n-Nonatriacontane | | 200 | | 0 | | |
| Petroleum Range | | 3400 | 2930 | 17000 | 13.8 | |

Login Number: L0209337
File ID: 2G22232
CCV ID: WG126333-08
Units: mg/L

Instrument ID: HP2
Run Date: 09/30/2002
Run Time: 19:20
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| n-Nonatriacontane | 200 | | 0 | | |
| Petroleum Range | 3400 | 3360 | 19500 | 1.2 | |

* Exceeds %D Limit

Login Number: L0209337
File ID: 2G22243
CCV ID: WG126333-09
Units: mg/L

Instrument ID: HP2
Run Date: 09/30/2002
Run Time: 22:13
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| n-Nonatriacontane | 200 | | 0 | | |
| Petroleum Range | 3400 | 3310 | 19200 | 2.6 | |

* Exceeds %D Limit

Login Number: L0209337
File ID: 2G22254
CCV ID: WG126333-10
Units: mg/L

Instrument ID: HP2
Run Date: 10/01/2002
Run Time: 01:02
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| n-Nonatriacontane | 200 | | 0 | | |
| Petroleum Range | 3400 | 3220 | 18600 | 5.3 | |

* Exceeds %D Limit

CONTINUING CALIBRATION REPORT

Login Number: L0209337
File ID: 2G22265
CCV ID: WG126333-11
Units: mg/L

Instrument ID: HP2
Run Date: 10/01/2002
Run Time: 03:51
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| n-Nonatriacontane | 200 | | 0 | | |
| Petroleum Range | 3400 | 3340 | 19300 | 1.8 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2

CONTINUING CALIBRATION REPORT

Login Number: L0209337
File ID: 2G22286
CCV ID: WG126392-02
Units: mg/L

Instrument ID: HP2
Run Date: 10/01/2002
Run Time: 12:58
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| n-Nonatriacontane | | 200 | | 0 | | |
| Petroleum Range | | 3400 | 3210 | 18600 | 5.6 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2

CONTINUING CALIBRATION REPORT

Login Number: L0209337
File ID: 2G22295
CCV ID: WG126392-03
Units: mg/L

Instrument ID: HP2
Run Date: 10/01/2002
Run Time: 15:16
Analyst: CLK
Cal ID: HP2 - 30-SEP-02

| Analyte | | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|---|
| n-Nonatriacontane | | 200 | | 0 | | |
| Petroleum Range | | 3400 | 3360 | 19500 | 1.2 | |

* Exceeds %D Limit

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 2g22195.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 13::1 |
| 2 | 2 | 2g22196.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::2 |
| 3 | 3 | 2g22197.d | 1. | CC 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::3 |
| 4 | 4 | 2g22198.d | 1. | CC 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::2 |
| 5 | 2 | 2g22199.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::3 |
| 6 | 5 | 2g22200.d | 1. | WG126331-01 10000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 7 | 6 | 2g22201.d | 1. | WG126331-02 5000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::0 |
| 8 | 7 | 2g22202.d | 1. | WG126331-03 2500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::1 |
| 9 | 8 | 2g22203.d | 1. | WG126331-04 1000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::2 |
| 10 | 9 | 2g22204.d | 1. | RR 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::3 |
| 11 | 10 | 2g22205.d | 1. | ✓ WG126331-06 100ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 12 | 9 | 2g22206.d | 1. | RR 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::5 |
| 13 | 11 | 2g22207.d | 1. | ✓ WG126331-05 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 12::0 |
| 14 | 12 | 2g22208.d | 1. | ✓ WG126331-07 1000ppm ALT SOURCE DRO STD | 1,1 SOS60-11 | 30 Sep 102 12::2 |
| 15 | 13 | 2g22209.d | 1. | DRO SURR ESS0042-29 | 1,1 | 30 Sep 102 12::3 |
| 16 | 14 | 2g22210.d | 10. | L0209424-09 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::4 |
| 17 | 15 | 2g22211.d | 100. | L0209424-13 Soil DRO 100X | 7,100 SOIL | 30 Sep 102 12::5 |
| 18 | 16 | 2g22212.d | 10. | L0209424-14 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::0 |
| 19 | 1 | 2g22213.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::1 |
| 20 | 8 | 2g22214.d | 1. | ✓ WG126331-08 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 12::2 |
| 21 | 2 | 2g22215.d | 1. | ✓ WIN DEF STD PRO | 1,1 SOS60-20 | 30 Sep 102 12::4 |
| 22 | 17 | 2g22216.d | 1. | WG126333-01 600ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| 23 | 18 | 2g22217.d | 1. | WG126333-02 400ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 24 | 19 | 2g22218.d | 1. | WG126333-03 200ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::3 |
| 25 | 20 | 2g22219.d | 1. | WG126333-04 100ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::4 |
| 26 | 21 | 2g22220.d | 1. | WG126333-05 50ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| | 22 | 2g22221.d | 1. | WG126333-06 5ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 28 | 23 | 2g22222.d | 1. | WG126333-07 200ppm ALT SOURCE PRO STD | 1,1 SOS61-36 | 30 Sep 102 12::3 |
| 29 | 24 | 2g22223.d | 1. | ✓ WG125345-01 BLK 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::0 |
| 30 | 25 | 2g22224.d | 1. | WG125345-02 LCS 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::1 |
| 31 | 26 | 2g22225.d | 1. | WG125345-03 LCS DUP 9/16 V190P1037,1 SOIL | | 30 Sep 102 12::3 |
| 32 | 27 | 2g22226.d | 1. | WG125774-01 BLK 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::4 |
| 33 | 28 | 2g22227.d | 1. | WG125774-02 LCS 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::0 |
| 34 | 29 | 2g22228.d | 1. | WG125774-03 LCS DUP 9/23 V190P1417,1 SOIL | | 30 Sep 102 12::1 |
| 35 | 30 | 2g22229.d | 1. | RE L0209260-01 Soil PRO | 7,1 SOIL | 30 Sep 102 12::3 |
| 36 | 31 | 2g22230.d | 1. | ✓ L0209260-01 Soil PRO RE | 7,1,RE SOIL | 30 Sep 102 12::4 |
| 37 | 1 | 2g22231.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::0 |
| 38 | 19 | 2g22232.d | 1. | ✓ WG126333-08 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 12::2 |
| 39 | 32 | 2g22233.d | 1. | ✓ WG125593-02 BLK 9/19 V191P11 | 1,1 | 30 Sep 102 12::4 |
| 40 | 33 | 2g22234.d | 1. | ✓ WG125593-03 LCS 9/19 V191P11 | 1,1 | 30 Sep 102 12::5 |
| 41 | 34 | 2g22235.d | 1. | RE L0209310-01 Water PRO | 1,1 | 30 Sep 102 12::1 |
| 42 | 35 | 2g22236.d | 1. | ✓ L0209310-02 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 43 | 36 | 2g22237.d | 1. | WG125593-01 L0209310-03 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 44 | 37 | 2g22238.d | 1. | WG125593-04 L0209310-04 Water PRO MS | 1,1 | 30 Sep 102 12::5 |
| 45 | 38 | 2g22239.d | 1. | WG125593-05 L0209310-05 Water PRO MSD | 1,1 | 30 Sep 102 12::1 |
| 46 | 39 | 2g22240.d | 1. | L0209310-06 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 47 | 40 | 2g22241.d | 1. | L0209310-07 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 48 | 1 | 2g22242.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::5 |
| 49 | 19 | 2g22243.d | 1. | ✓ WG126333-09 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 13::1 |
| 50 | 41 | 2g22244.d | 1. | L0209310-08 Water PRO | 1,1 | 30 Sep 102 13::2 |
| 51 | 42 | 2g22245.d | 1. | L0209310-09 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 52 | 43 | 2g22246.d | 1. | L0209310-10 Water PRO | 1,1 | 30 Sep 102 13::5 |
| 53 | 44 | 2g22247.d | 1. | L0209310-11 Water PRO | 1,1 | 30 Sep 102 13::1 |

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 5 | 45 | 2g22248.d | 1. | RR10 L0209337-01 Water PRO | 1,1 | 30 Sep 102 13::3 |
| 55 | 46 | 2g22249.d | 1. | ✓ L0209337-02 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 56 | 47 | 2g22250.d | 1. | L0209337-03 Water PRO | 1,1 | 1 Oct 102 13::0 |
| 57 | 48 | 2g22251.d | 1. | L0209337-04 Water PRO | 1,1 | 1 Oct 102 13::1 |
| 58 | 49 | 2g22252.d | 1. | L0209337-05 Water PRO | 1,1 | 1 Oct 102 13::3 |
| 59 | 1 | 2g22253.d | 1. | MA CH2CL2 | 1,1 | 1 Oct 102 13::4 |
| 60 | 19 | 2g22254.d | 1. | ✓ WG126333-10 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::0 |
| 61 | 50 | 2g22255.d | 1. | ✓ L0209337-06 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 62 | 51 | 2g22256.d | 1. | ✓ L0209337-07 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 63 | 52 | 2g22257.d | 1. | ✓ WG125523-02 BLK 9/18 V191P3 | 1,1 | 1 Oct 102 12::4 |
| 64 | 53 | 2g22258.d | 1. | ✓ WG125523-03 LCS 9/18 V191P3 | 1,1 | 1 Oct 102 12::0 |
| 65 | 54 | 2g22259.d | 1. | RE L0209285-01 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 66 | 55 | 2g22260.d | 1. | L0209285-02 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 67 | 56 | 2g22261.d | 1. | L0209285-03 Water PRO | 1,1 | 1 Oct 102 12::5 |
| 68 | 57 | 2g22262.d | 1. | L0209285-07 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 69 | 58 | 2g22263.d | 1. | L0209285-08 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 70 | 1 | 2g22264.d | 1. | MA CH2CL2 | 1,1 | 1 Oct 102 12::3 |
| 71 | 19 | 2g22265.d | 1. | ✓ WG126333-11 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::5 |
| 72 | 59 | 2g22266.d | 1. | RR L0209285-09 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 73 | 60 | 2g22267.d | 1. | WG125523-01 L0209285-04 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 74 | 61 | 2g22268.d | 1. | WG125523-04 L0209285-05 Water PRO MS | 1,1 | 1 Oct 102 12::3 |
| 75 | 62 | 2g22269.d | 1. | WG125523-05 L0209285-06 Water PRO MSD | 1,1 | 1 Oct 102 12::5 |
| 76 | 63 | 2g22270.d | 1. | WG125776-02 BLK 9/23 V191P31 | 1,1 | 1 Oct 102 12::0 |
| 77 | 64 | 2g22271.d | 1. | WG125776-03 LCS 9/23 V191P31 | 1,1 | 1 Oct 102 12::2 |
| [illegible] | 65 | 2g22272.d | 1. | L0209285-01 Water PRO RE | 1,1,RE | 1 Oct 102 12::3 |

CLK
10/1/02
[illegible]

Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 9/30/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 093002
Analyst Initials CLK

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. # 3 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**

L0209424-09 10X, SS DL
↓ -10 100X, ↓
↓ -11 10X, ↓
W6125345-01 BLK 9/16 V190P103, took hit >RL, o-Terphenyl high
↓ -02 LCS ↓ ↓, o-Terphenyl high
↓ -03 LCS DUP ↓ ↓, ↓
L0209260-01, o-Terphenyl high, Needed RE due to BLK
↓ -01 RE, o-Terphenyl high,
L0209310-01, o-Terphenyl low, Needs RE
L0209337-01, Needs 10X
W6125523-02 BLK 9/18 V191P3
L0209285-01, Needed RE due to BLK
-02,
-03,
-07,
-08,

Reviewed By: [illegible]

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| | 1 | 2g22273.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::5 |
| | 2 | 2g22274.d | 1. | ✓ WIN DEF STD PRO | 1,1 SOS60-20 | 1 Oct 102 12::1 |
| | 3 | 2g22275.d | 1. | ✓ WG126392-01 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::5 |
| | 4 | 2g22276.d | 1. | RE L0209285-09 Water PRO | 1,1 | 1 Oct 102 13::0 |
| | 5 | 2g22277.d | 1. | WG125523-01 L0209285-04 Water PRO | 1,1 | 1 Oct 102 13::2 |
| | 6 | 2g22278.d | 1. | WG125523-04 L0209285-05 Water PRO MS | 1,1 | 1 Oct 102 13::3 |
| | 7 | 2g22279.d | 1. | WG125523-05 L0209285-06 Water PRO MSD | 1,1 | 1 Oct 102 13::5 |
| | 8 | 2g22280.d | 1. | ✓ WG125776-02 BLK 9/23 V191P31 | 1,1 | 1 Oct 102 13::0 |
| | 9 | 2g22281.d | 1. | WG125776-03 LCS 9/23 V191P31 | 1,1 | 1 Oct 102 13::2 |
| 0 | 10 | 2g22282.d | 1. | L0209285-01 Water PRO RE | 1,1,RE | 1 Oct 102 13::5 |
| 1 | 11 | 2g22283.d | 1. | L0209285-02 Water PRO RE | 1,1,RE | 1 Oct 102 13::1 |
| 2 | 12 | 2g22284.d | 1. | L0209285-03 Water PRO RE | 1,1,RE | 1 Oct 102 13::2 |
| 3 | 1 | 2g22285.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 13::4 |
| 4 | 3 | 2g22286.d | 1. | ✓ WG126392-02 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 13::5 |
| 5 | 13 | 2g22287.d | 1. | WG125776-01 L0209285-04 Water PRO RE | 1,1,RE | 1 Oct 102 12::1 |
| 6 | 14 | 2g22288.d | 1. | WG125776-04 L0209285-05 Water PRO MS RE | 1,1,RE | 1 Oct 102 12::2 |
| 7 | 15 | 2g22289.d | 1. | WG125776-05 L0209285-06 Water PRO MSD R | 1,1,RE | 1 Oct 102 12::4 |
| 8 | 16 | 2g22290.d | 1. | L0209285-07 Water PRO RE | 1,1,RE | 1 Oct 102 12::5 |
| 9 | 17 | 2g22291.d | 1. | L0209285-08 Water PRO RE | 1,1,RE | 1 Oct 102 12::1 |
| 0 | 18 | 2g22292.d | 1. | L0209285-09 Water PRO RE | 1,1,RE | 1 Oct 102 12::3 |
| 1 | 19 | 2g22293.d | 10. | L0209337-01 Water PRO 10X | 1,10 | 1 Oct 102 12::4 |
| 2 | 1 | 2g22294.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::0 |
| 3 | 3 | 2g22295.d | 1. | ✓ WG126392-03 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::1 |
| 4 | 20 | 2g22296.d | 1. | ✓ WIN DEF STD TPH | 1,1 SOS60-28 | 1 Oct 102 12::3 |
| 5 | 21 | 2g22297.d | 1. | cc 1000ppm TPH CCV | 1,1 N15-41 | 1 Oct 102 12::5 |
| 6 | 2 | 2g22298.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 1 Oct 102 12::0 |
| 7 | 22 | 2g22299.d | 1. | WG126394-01 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::1 |
| 8 | 23 | 2g22300.d | 1. | WG126279-01 BLK 9/30 V191P69 | 1,1 | 1 Oct 102 12::3 |
| 9 | 24 | 2g22301.d | 1. | WG126279-02 LCS 9/30 V191P69 | 1,1 | 1 Oct 102 12::4 |
| 0 | 25 | 2g22302.d | 1. | WG126279-03 LCS DUP 9/30 V191P69 | 1,1 | 1 Oct 102 12::5 |
| 1 | 26 | 2g22303.d | 1. | L0209457-01 Water DRO | 1,1 | 1 Oct 102 12::0 |
| 2 | 1 | 2g22304.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::1 |
| 3 | 22 | 2g22305.d | 1. | ✓ WG126394-02 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::2 |
| 4 | 27 | 2g22306.d | 1. | WG126345-01 BLK 10/1 V192P3 | 7,1 SOIL | 1 Oct 102 12::4 |
| 5 | 28 | 2g22307.d | 1. | WG126345-02 LCS 10/1 V192P3 | 7,1 SOIL | 1 Oct 102 12::5 |
| 6 | 29 | 2g22308.d | 1. | WG126345-03 LCS DUP 10/1 V192P3 | 7,1 SOIL | 1 Oct 102 12::0 |
| 7 | 30 | 2g22309.d | 1. | L0209424-01 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::1 |
| 8 | 31 | 2g22310.d | 1. | L0209424-02 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::2 |
| 9 | 32 | 2g22311.d | 1. | L0209424-03 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::3 |
| 0 | 33 | 2g22312.d | 1. | L0209424-04 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::4 |
| 1 | 34 | 2g22313.d | 1. | L0209424-05 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::5 |
| 2 | 35 | 2g22314.d | 1. | L0209424-06 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::0 |
| 3 | 1 | 2g22315.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::1 |
| 4 | 22 | 2g22316.d | 1. | ✓ WG126394-03 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::3 |
| 5 | 36 | 2g22317.d | 1. | L0209424-07 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::4 |
| 6 | 37 | 2g22318.d | 1. | L0209424-08 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::5 |
| 7 | 38 | 2g22319.d | 1. | L0209424-10 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::0 |
| 8 | 39 | 2g22320.d | 1. | L0209424-11 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::1 |
| 9 | 40 | 2g22321.d | 1. | L0209424-12 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::2 |
| 0 | 1 | 2g22322.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::3 |

| ine | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 22 | 2g22323.d | 1. | ✓WG126394-04 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::4 |
| 2 | 41 | 2g22324.d | 1. | WG126309-01 BLK 10/1 V191P71 | 1,1 | 1 Oct 102 12::5 |
| 3 | 42 | 2g22325.d | 1. | WG126309-02 LCS 10/1 V191P71 | 1,1 | 1 Oct 102 13::0 |
| 4 | 43 | 2g22326.d | 1. | WG126309-03 LCS DUP 10/1 V191P71 | 1,1 | 1 Oct 102 13::1 |
| 5 | 44 | 2g22327.d | 1. | RR10 L0209513-11 Water DRO | 1,1 | 1 Oct 102 13::2 |
| 6 | 45 | 2g22328.d | 1. | ✓WG126306-01 BLK 10/1 V190P195 | 7,1 SOIL | 1 Oct 102 13::3 |
| 7 | 46 | 2g22329.d | 1. | ✓WG126306-02 LCS 10/1 V190P195 | 7,1 SOIL | 1 Oct 102 13::4 |
| 8 | 47 | 2g22330.d | 1. | ✓WG126306-03 LCS DUP 10/1 V190P195 | 7,1 SOIL | 1 Oct 102 13::5 |
| 9 | 48 | 2g22331.d | 1. | RE L0209513-09 Soil DRO | 7,1 SOIL | 1 Oct 102 13::1 |
| 0 | 49 | 2g22332.d | 1. | RE L0209513-07 Soil DRO | 7,1 SOIL | 1 Oct 102 13::2 |
| 1 | 1 | 2g22333.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 13::3 |
| 2 | 22 | 2g22334.d | 1. | ✓WG126394-05 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 13::4 |
| 3 | 50 | 2g22335.d | 1. | RE L0209495-01 Water DRO | 1,1 | 1 Oct 102 13::5 |
| 4 | 51 | 2g22336.d | 1. | RE L0209495-02 Water DRO | 1,1 | 2 Oct 102 13::0 |
| 5 | 52 | 2g22337.d | 1. | ✓L0209495-03 Water DRO | 1,1 | 2 Oct 102 13::1 |
| 6 | 53 | 2g22338.d | 1. | RE L0209495-04 Water DRO | 1,1 | 2 Oct 102 13::2 |
| 7 | 54 | 2g22339.d | 1. | ✓L0209495-05 Water DRO | 1,1 | 2 Oct 102 13::3 |
| 8 | 55 | 2g22340.d | 1. | ✓L0209495-06 Water DRO | 1,1 | 2 Oct 102 13::4 |
| 9 | 56 | 2g22341.d | 1. | RE L0209495-07 Water DRO | 1,1 | 2 Oct 102 13::5 |
| 0 | 57 | 2g22342.d | 1. | L0209495-08 Water DRO | 1,1 | 2 Oct 102 12::0 |
| 1 | 58 | 2g22343.d | 1. | L0209495-09 Water DRO | 1,1 | 2 Oct 102 12::1 |
| 2 | 1 | 2g22344.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::3 |
| 3 | 22 | 2g22345.d | 1. | ✓WG126394-06 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::4 |
| 4 | 59 | 2g22346.d | 1. | RE L0209495-10 Water DRO | 1,1 | 2 Oct 102 12::5 |
| 5 | 60 | 2g22347.d | 1. | RE L0209495-11 Water DRO | 1,1 | 2 Oct 102 12::0 |
| 6 | 61 | 2g22348.d | 1. | ✓L0209495-12 Water DRO | 1,1 | 2 Oct 102 12::1 |
| 7 | 62 | 2g22349.d | 1. | L0209495-13 Water DRO | 1,1 | 2 Oct 102 12::2 |
| 8 | 63 | 2g22350.d | 1. | L0209495-14 Water DRO | 1,1 | 2 Oct 102 12::3 |
| 9 | 64 | 2g22351.d | 1. | L0209495-15 Water DRO | 1,1 | 2 Oct 102 12::4 |
| 0 | 65 | 2g22352.d | 1. | L0209495-16 Water DRO | 1,1 | 2 Oct 102 12::5 |
| 1 | 66 | 2g22353.d | 1. | RE L0209495-17 Water DRO | 1,1 | 2 Oct 102 12::0 |
| 2 | 67 | 2g22354.d | 1. | ✓L0209495-18 Water DRO | 1,1 | 2 Oct 102 12::1 |
| 3 | 1 | 2g22355.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::2 |
| 4 | 22 | 2g22356.d | 1. | ✓WG126394-07 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::3 |
| 5 | 68 | 2g22357.d | 1. | ✓L0209495-19 Water DRO | 1,1 | 2 Oct 102 12::5 |
| 6 | 69 | 2g22358.d | 1. | RR10 L0209513-05 Soil DRO | 7,1 SOIL | 2 Oct 102 12::0 |
| 7 | 70 | 2g22359.d | 1. | RE L0209513-06 Soil DRO | 7,1 SOIL | 2 Oct 102 12::1 |
| 8 | 71 | 2g22360.d | 1. | RR20 L0209513-02 Soil DRO | 7,1 SOIL | 2 Oct 102 12::2 |
| 9 | 72 | 2g22361.d | 1. | RR20 L0209513-03 Soil DRO | 7,1 SOIL | 2 Oct 102 12::3 |
| 0 | 73 | 2g22362.d | 1. | RE L0209513-10 Soil DRO | 7,1 SOIL | 2 Oct 102 12::4 |
| 1 | 74 | 2g22363.d | 1. | L0209513-08 Soil DRO | 7,1 SOIL | 2 Oct 102 12::5 |
| 2 | 75 | 2g22364.d | 1. | L0209513-01 Soil DRO | 7,1 SOIL | 2 Oct 102 12::0 |
| 3 | 1 | 2g22365.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::1 |
| 4 | 22 | 2g22366.d | 1. | ✓WG126394-08 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::2 |
| 5 | 76 | 2g22367.d | 1. | RE L0209513-04 Soil DRO | 7,1 SOIL | 2 Oct 102 12::3 |
| 6 | 77 | 2g22368.d | 100. | L0210009-01 Soil DRO 100X | 7,100 SOIL | 2 Oct 102 12::4 |
| 7 | 78 | 2g22369.d | 10. | L0210009-01 Soil DRO 10X | 7,10 SOIL | 2 Oct 102 12::5 |
| 8 | 1 | 2g22370.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::1 |
| 9 | 1 | 2g22371.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::2 |
| 00 | 22 | 2g22372.d | 1. | CL 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::3 |

CLK 10/2/02

REMKON ENVIRONMENTAL SERVICES

# Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 10/1/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 100102
Analyst Initials CLF

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. # 3 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
- [x] Change septum
- [ ] Clip column (___cm)
- [ ] Injection port seal (goldseal)
- [ ] Change gases ___

**Returned To Control?**
Yes ___ No ___

**Additional Maintenance**
Problem: ___

Action Taken: ___

**Comments**

L0209285-09, Needed RE due to BLK
WG125523-01 L0209285-04, Needed RE Due to BLK
-04 -05 MS
-05 -06 MSD
09-285 (RE's) Reported
L0209337-01 10X, as DL
WG126345-03 LCS DUP 10/1 V192P3, o-Terphenyl high
L0209513-11, o-T low, Needs 10X
WG126306-01 BLK 10/1 V190P195, took hit > RL
L0209513-09, Need RE due to BLK
-07
-06
-10
-18
-01
L0209495-01, o-Terphenyl & octacosane low, Need RE
-02
-04
-07
-08
-09
-10
-11
-17
L0209513-04, Needs RR
Will ~~meet~~ 20 times
~~Amount > 20 times~~ 10/2/02
Amount found in BLK
L0209495-03, 05, 06, 13, 14, 15, 16, 18, 19, o-Terphenyl low
L0209513-05, 02, 03 ~~Meet~~ 10/2/02 took hit > 20 times Amount found in BLK

Reviewed By: [illegible]

Volume 191
Page 11

Parameter: FLA-Pro HLo SOP #: EXPRO Revision #: 3
Extraction Analyst(s): RCK TV/KD Analyst(s): CAF, DPC
Date/Time Extracted: 9/19/02 0830 Date TV/KD: 9-19-02
Spike/Surrogate Analyst: CAF Witness: RCK
Surrogate #: ESS0041-36 Earliest Hold Date: 9/24
Spike #: A = ESS0041-41 Spike #: B = —

Extraction Work Group WG 125593
Analytical Work Group WG 125690

Extract Relinquished By: RCK
Extract Received By & Date: CAF 9/20/02

| | 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 | | ✓ | | | 1000 mL | 1 mL | | 1 mL | T | | | | WG125593-02 |
| 2 | LCS | | ✓ | | | ⊥ | ⊥ | 1 mL | ⊥ | ⊥ | | | | WG -03 |
| 3 | OF-310-01 | FLA-PRO | ✓ | | | 975 mL | | | | | | | | |
| 4 | -02 | ⊥ | ✓ | | | 960 mL | | | | | | | | |
| 5 | -03 | | ✓ | | | 975 mL | | | | | | | | WG125593-01 |
| 6 | -04 MS | | ✓ | | | ⊥ | | 1 mL | | | | | | * -04 |
| 7 | -05 MSD | | ✓ | | | 1000 mL | | ⊥ | | | | | | * -05 |
| 8 | -06 | | ✓ | | | ⊥ | | | | | | | | |
| 9 | -07 | | ✓ | | | 970 mL | | | | | | | | |
| 10 | -08 | | ✓ | | | 1000 mL | | | | | | | | |
| 11 | -09 | | ✓ | | | ⊥ | | | | | | | | |
| 12 | -10 | | ✓ | | | ⊥ | | | ⊥ | ⊥ | | | | |
| 13 | -11 | ⊥ | ✓ | | | 950 mL | ⊥ | | 1 mL | T | | | | |
| 14 | 09-227-01 | FLA-PRO | ✓ | | | 950 mL | 1 mL | | | | | | | |
| 15 | -02 | | ✓ | | | 910 mL | | | | | | | | |
| 16 | -03 | | ✓ | | | 910 mL | | | | | | | | |
| 17 | -04 | | ✓ | | | 960 mL | | | | | | | | |
| 18 | -05 | | ✓ | | | 980 mL | | | | | | | | |
| 19 | -06 | | ✓ | | | 1000 mL | | | | | | | | X |
| 20 | -07 | ⊥ | ✓ | | | 930 mL | ⊥ | | ⊥ | ⊥ | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

9/20

DPC 09/19/02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: 1:1 HCl Lot #: EA2199
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: EA2211

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

Extraction Notes For Volume # 191 Page # 11

General Comments: * MS, MSD of 09-310-03

Extraction Anomalies: * Used (B) Bottle of SX 09-337-07 due to loss of SX during concentration stage.

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

# 2.2.6.2 Sample Data

Data File : C:\HPCHEM\1\DATA\100102\2G22293.D Vial: 19
Acq On : 1 Oct 2002 14:46 Operator: CLK
Sample : L0209337-01 Water PRO 10X Inst : HP2
Misc : 1,10 Multiplr: 10.00
IntFile : PETRO.E
Quant Time: Oct 2 8:55 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

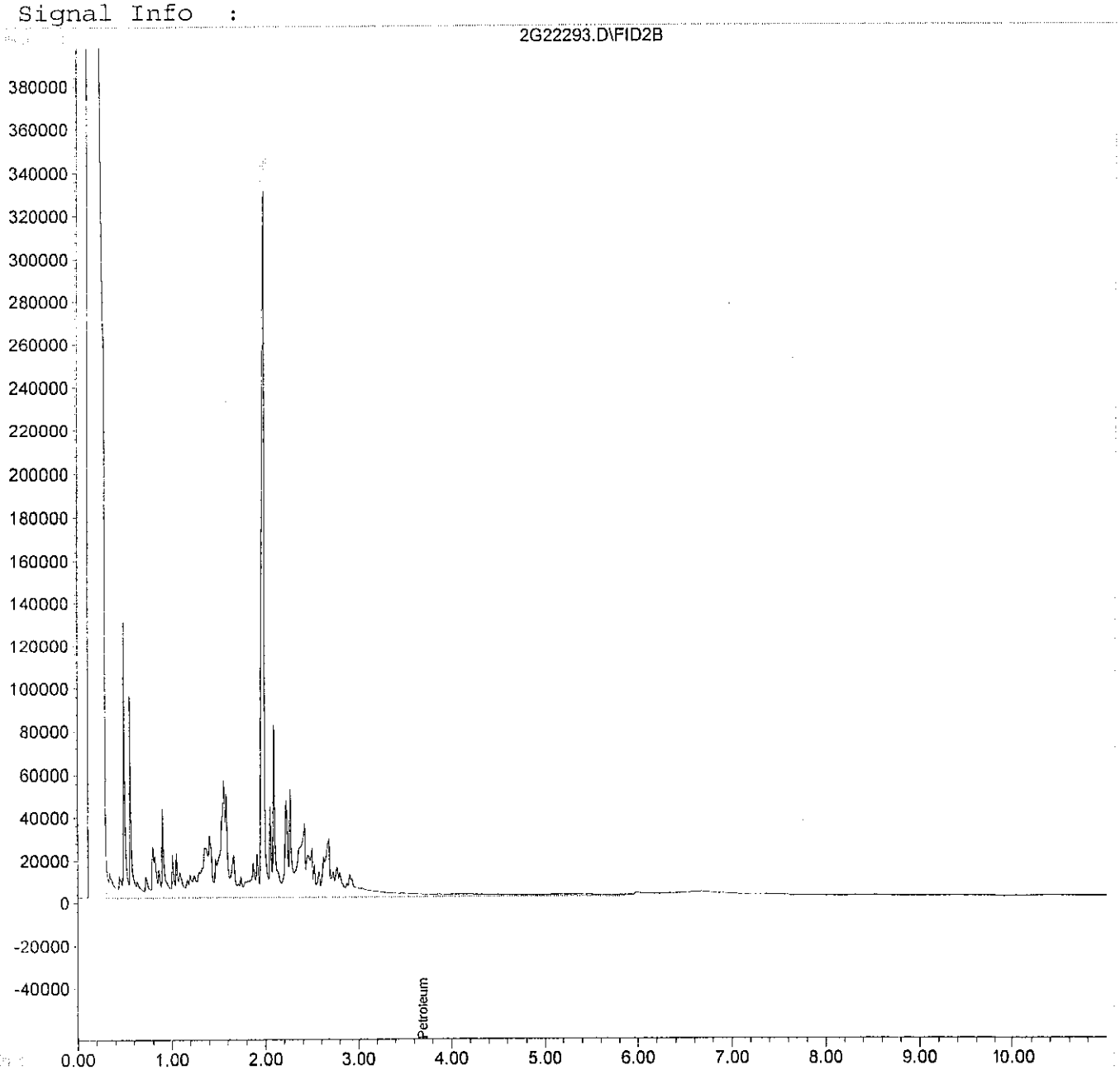
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.86 | 8850 | 4.415 ppb |
| Spiked Amount 20.000 Range 49 - 174 | Recovery | = | 22.08%# DL |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | Recovery | = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 28708089 | 1456.605 ppb ✓ |

(f)=RT Delta > 1/2 Window (m)=manual int.
2G22293.D FLASHPRO.M Wed Oct 02 08:56:01 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\100102\2G22293.D Vial: 19
Acq On : 1 Oct 2002 14:46 Operator: CLK
Sample : L0209337-01 Water PRO 10X Inst : HP2
Misc : 1,10 Multiplr: 10.00
IntFile : PETRO.E
Quant Time: Oct 2 8:55 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 30 Sep 2002 23:45 Operator: CLK
Sample : L0209337-02 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:52 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

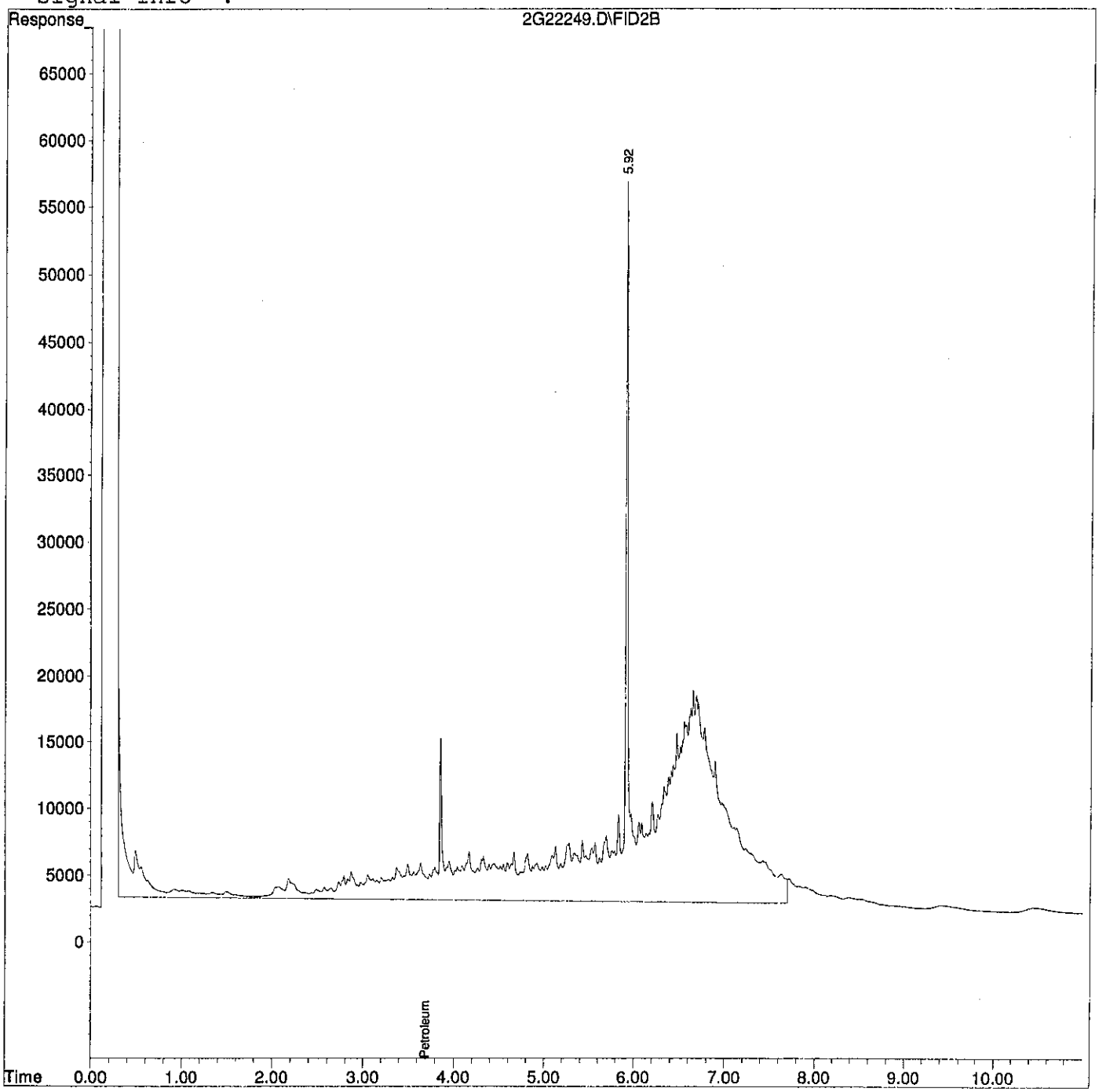
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.85 | 216800 | 10.814 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 54.07% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 13909475 | 705.746 ppb |

(f)=RT Delta > 1/2 Window (m)=manual int.
2G22249.D FLASHPRO.M Tue Oct 01 13:52:37 2002 HP2

Acq On : 30 Sep 2002 23:45 Operator: CLK
Sample : L0209337-02 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:52 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 1 Oct 2002 00:01 Operator: CLK
Sample : L0209337-03 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:52 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.86 | 236003 | 11.772 ppb |
| Spiked Amount 20.000 Range 49 - 174 | Recovery | = | 58.86% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | Recovery | = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 15070852 | 764.672 ppb |

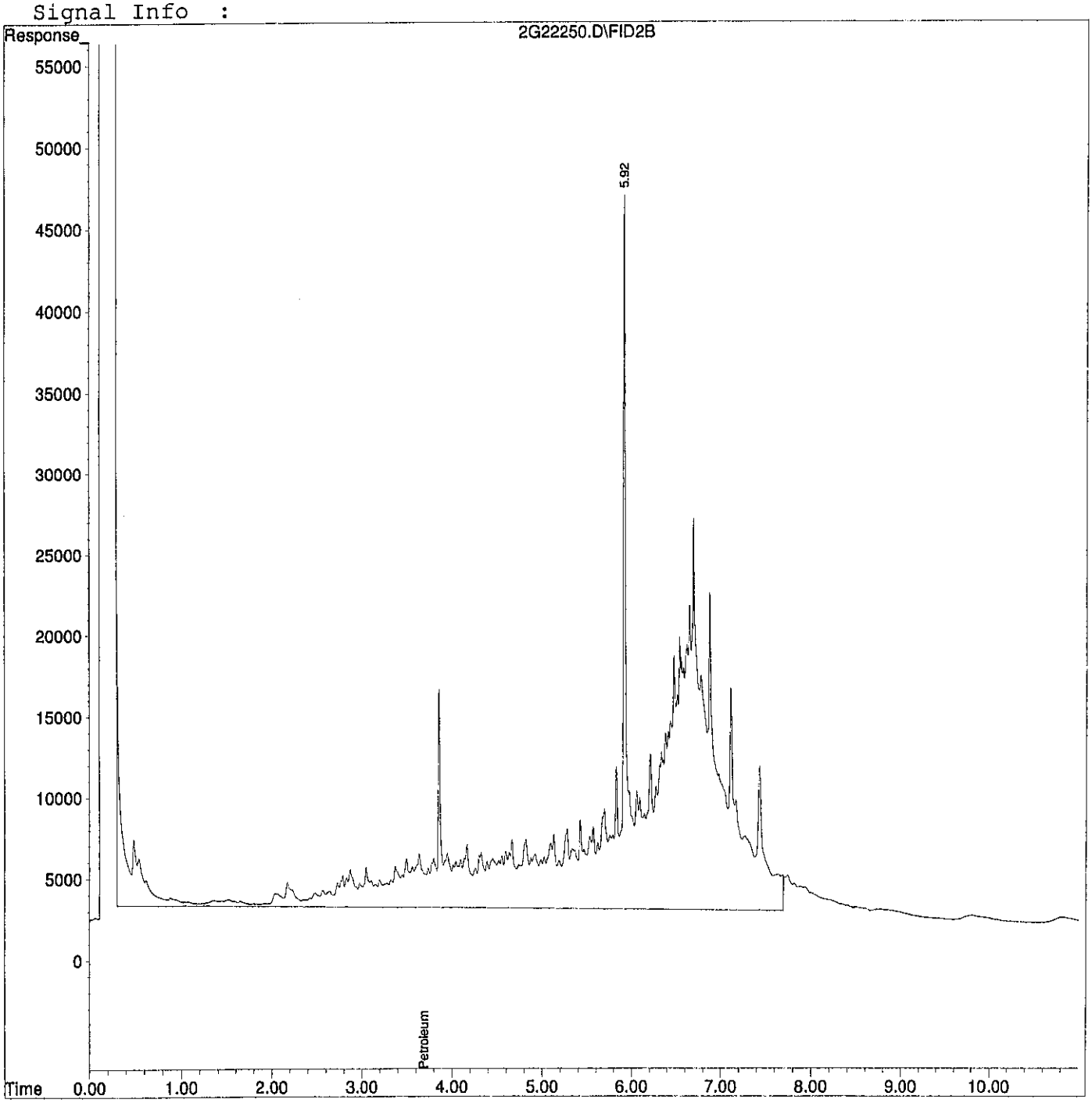
(f)=RT Delta > 1/2 Window (m)=manual int.
2G22250.D FLASHPRO.M Tue Oct 01 13:52:56 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\[illegible]

Acq On : 1 Oct 2002 00:01 Operator: CLK
Sample : L0209337-03 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:52 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22251.D  Vial: 10
Acq On : 1 Oct 2002 00:16  Operator: CLK
Sample : L0209337-04 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.85 | 254893 | 12.714 ppb |
| Spiked Amount 20.000 Range 49 - 174 | Recovery | = | 63.57% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | Recovery | = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 15770754 | 800.184 ppb |

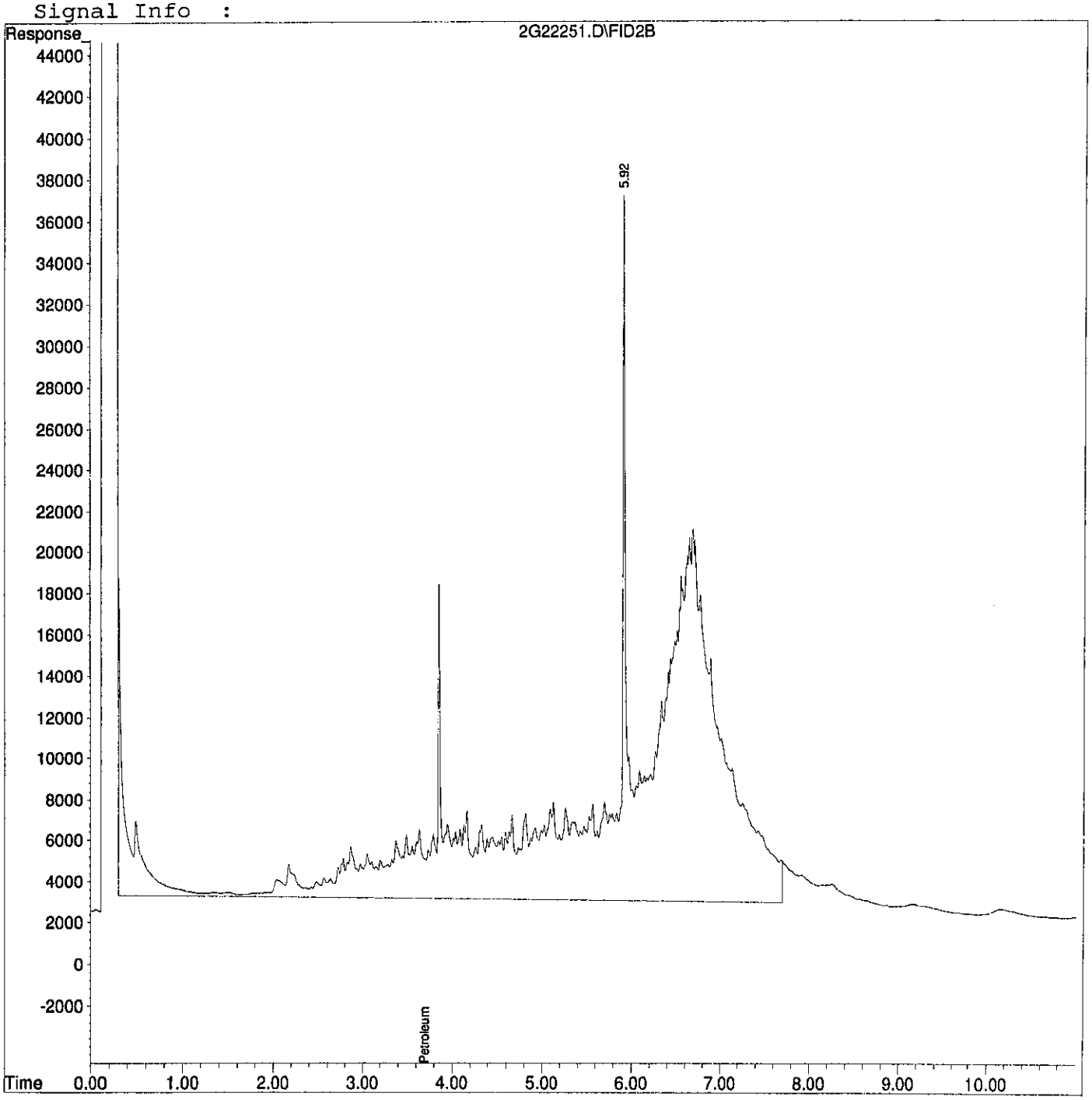
(f)=RT Delta > 1/2 Window  (m)=manual int.
2G22251.D FLASHPRO.M Tue Oct 01 13:53:19 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\[illegible]

Acq On : 1 Oct 2002 00:16 Operator: CLK
Sample : L0209337-04 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22252.D Vial: 49
Acq On : 1 Oct 2002 00:32 Operator: CLK
Sample : L0209337-05 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3.86 | 252743 | 12.607 ppb |
| Spiked Amount 20.000 Range 49 - 174 Recovery = 63.04% | | | |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 Recovery = 0.00% | | | |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 15041819 | 763.199 ppb |

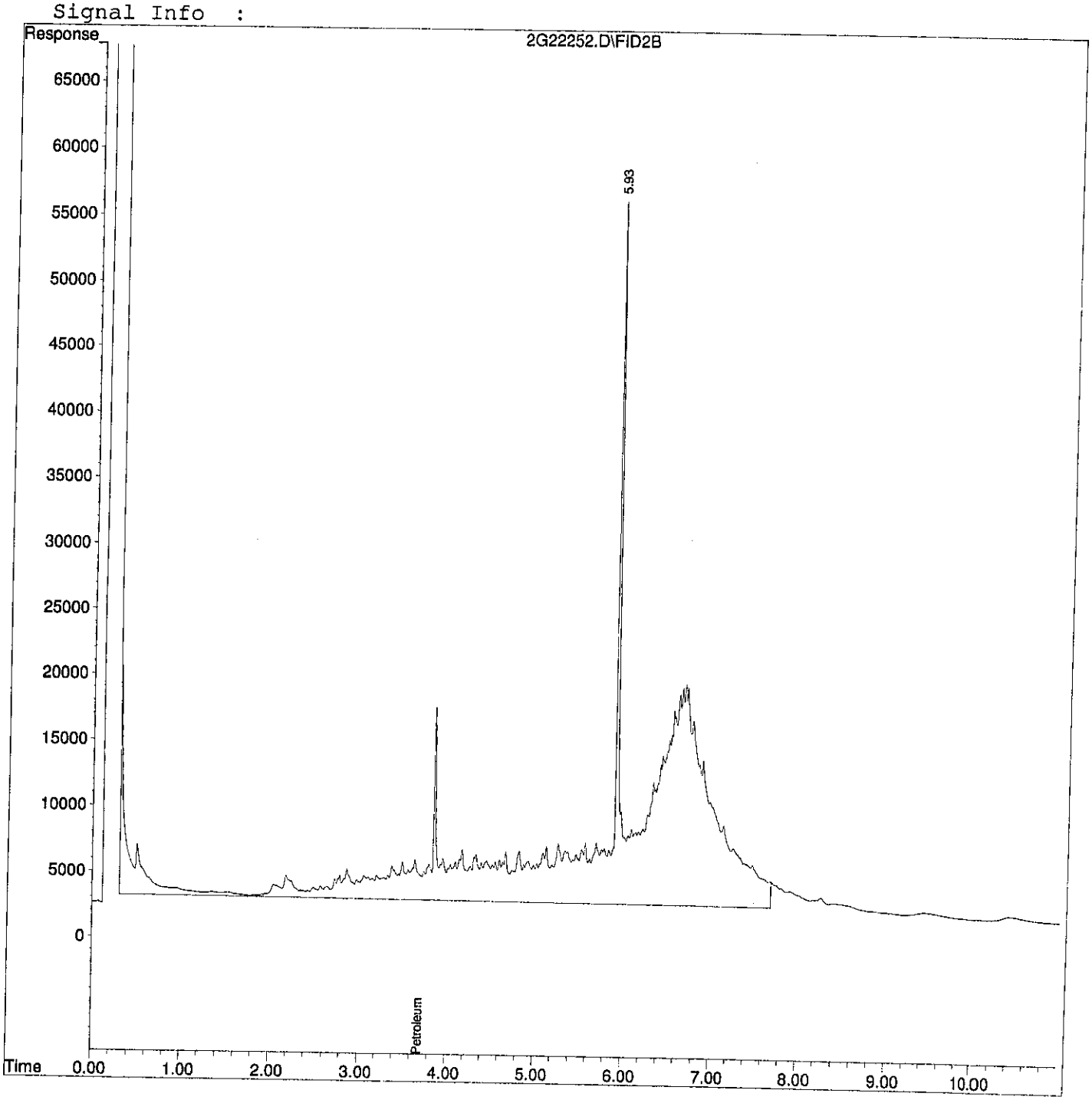
(f)=RT Delta > 1/2 Window (m)=manual int.

Acq On : 1 Oct 2002 00:32
Sample : L0209337-05 Water PRO
Misc : 1,1
IntFile : PETRO.E
Quant Time: Oct 1 13:53 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 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2022255.D  Vial: 55
Acq On : 1 Oct 2002 1:17  Operator: CLK
Sample : L0209337-06 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

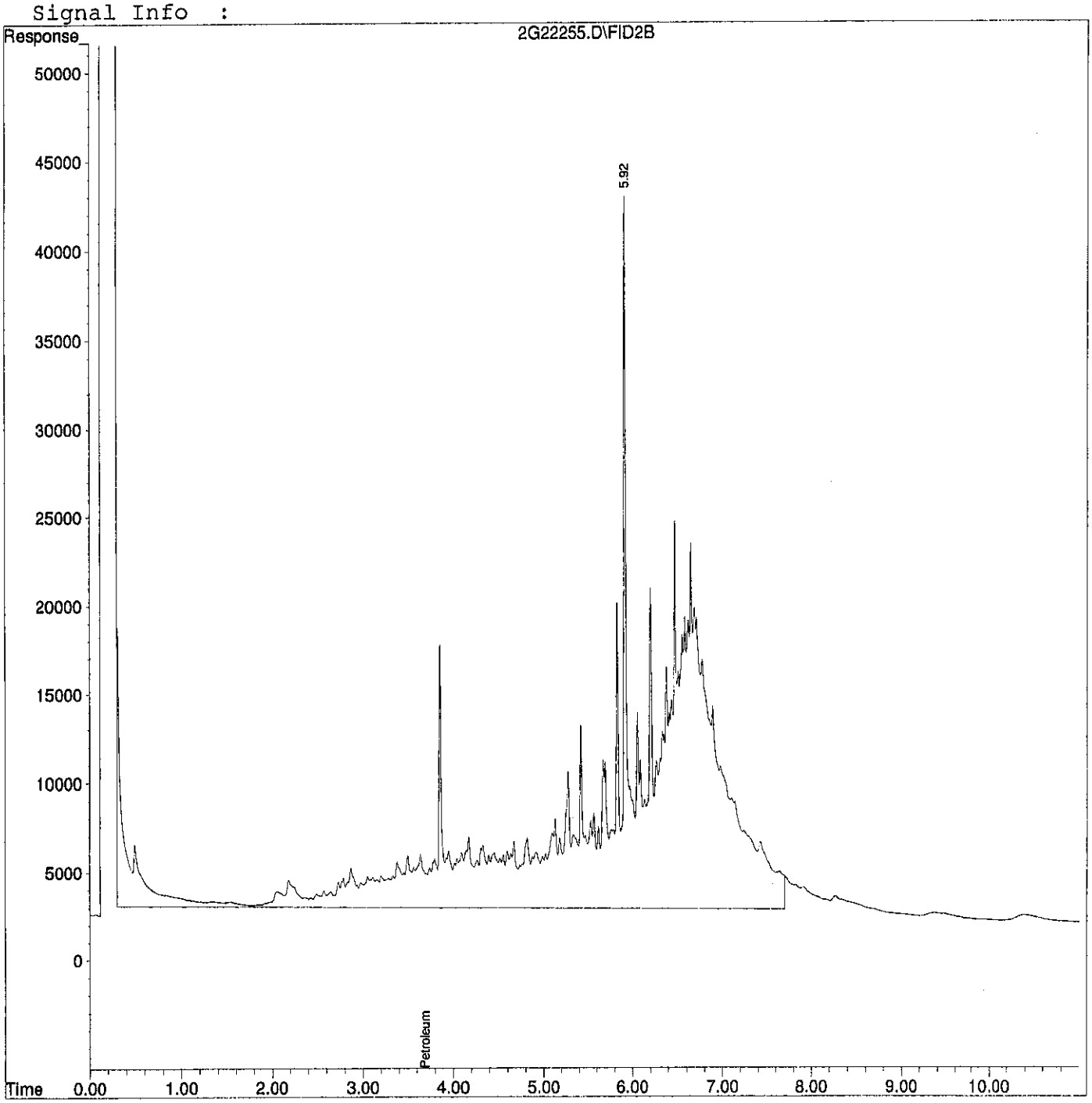
| Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|
| System Monitoring Compounds | | | | |
| 2) s O-Terphenyl | 3.86 | 259928 | 12.966 | ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 64.83% | |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. | ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% | |
| Target Compounds | | | | |
| 1) H Petroleum Range | 3.70 | 15972086 | 810.400 | ppb |

(f)=RT Delta > 1/2 Window  (m)=manual int.
2022255.D FLASHPRO.M Tue Oct 01 13:54:25 2002 HP2 Page 1 of 1

Data File : C:\HPCHEM\1\DATA\093002\2G22255.D Vial: 56
Acq On : 1 Oct 2002 1:17 Operator: CLK
Sample : L0209337-06 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22256.D  Vial: 54
Acq On : 1 Oct 2002 1:33  Operator: CLK
Sample : L0209337-07 Water PRO  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

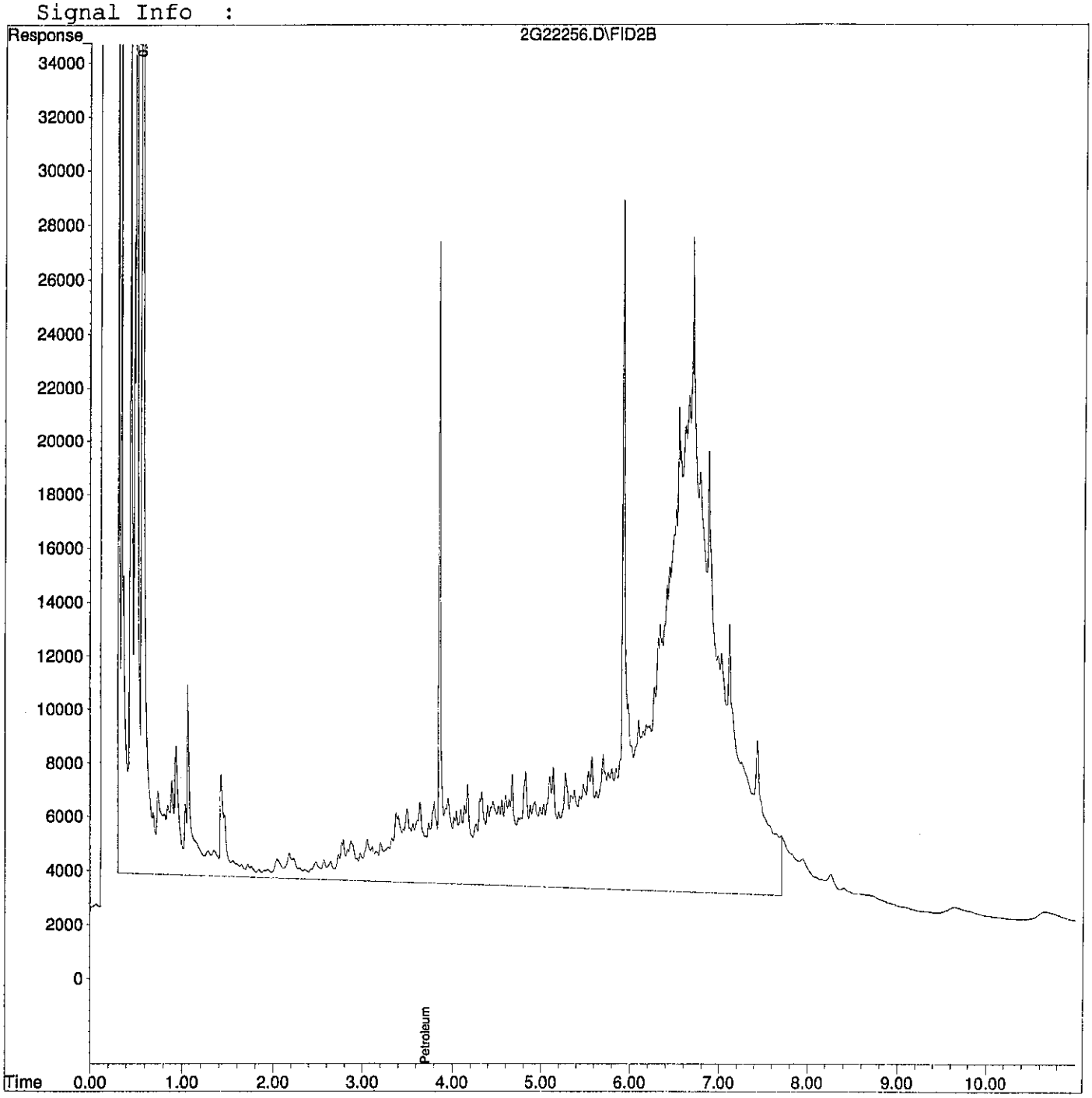
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.86 | 387967 | 19.352 ppb |
| Spiked Amount 20.000 Range 49 - 174 | Recovery | = | 96.76% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | Recovery | = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 24826132 | 1259.640 ppb |

(f)=RT Delta > 1/2 Window  (m)=manual int.
2G22256.D FLASHPRO.M Tue Oct 01 13:54:44 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\093002\2G22256.D Vial: 31
Acq On : 1 Oct 2002 1:33 Operator: CLK
Sample : L0209337-07 Water PRO Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 09/30/02
Last Update : Tue Oct 01 12:55:15 2002

Calibration Files

| | | | | | |
|---|---|---|---|---|---|
| 5 | =2G22221.D | 50 | =2G22220.D | 100 | =2G22219.D |
| 200 | =2G22218.D | 400 | =2G22217.D | 600 | =2G22216.D |

| | | Compound | 5 | 50 | 100 | 200 | 400 | 600 | Avg | | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | H | Petroleum Range | 2.271 | 1.856 | 1.875 | 1.941 | 1.906 | 1.977 | 1.971 | E4 | 7.79 |
| 2) | s | O-Terphenyl | 2.418 | 1.883 | 1.915 | 1.952 | 1.890 | 1.970 | 2.005 | E4 | 10.25 |
| 3) | s | n-Nonatriacontane | | | | | | | 0.000 | 0 | -1.00 |

(#) = Out of Range

Acq On : 30 Sep 2002 15:02 Operator: CLK
Sample : WG126333-01 600ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 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 | 11818581 | 673.014 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery | = 3365.07%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 201641724 | 10155.619 ppb |

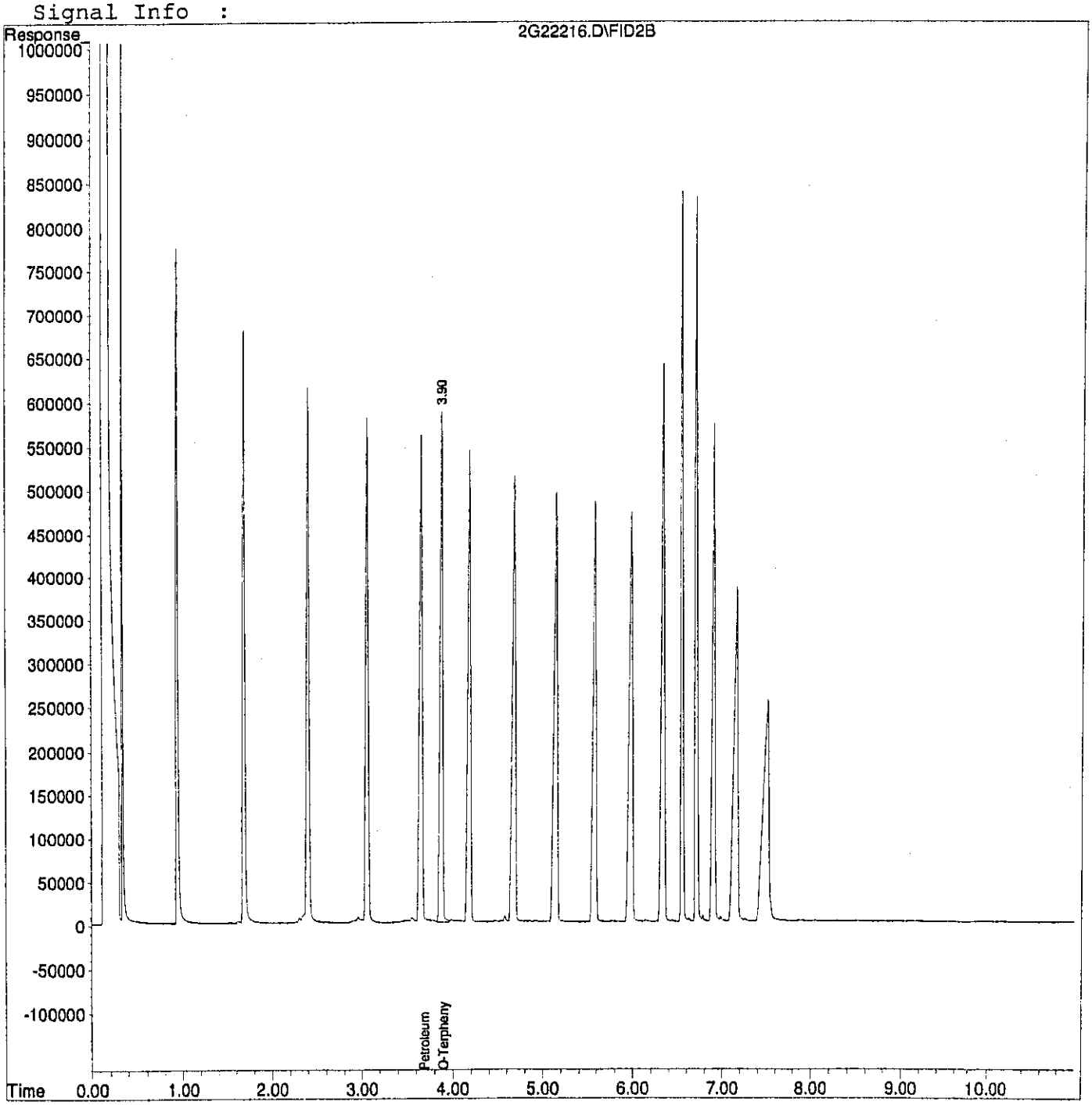
(f)=RT Delta > 1/2 Window (m)=manual int.
2G22216.D FLASHPRO.M Tue Oct 01 10:53:55 2002 HP2

Data File : C:\HPCHEM\1\DATA\[illegible]

Acq On : 30 Sep 2002 15:02 Operator: CLK
Sample : WG126333-01 600ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\[illegible]

Acq On : 30 Sep 2002 15:18 Operator: CLK
Sample : WG126333-02 400ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

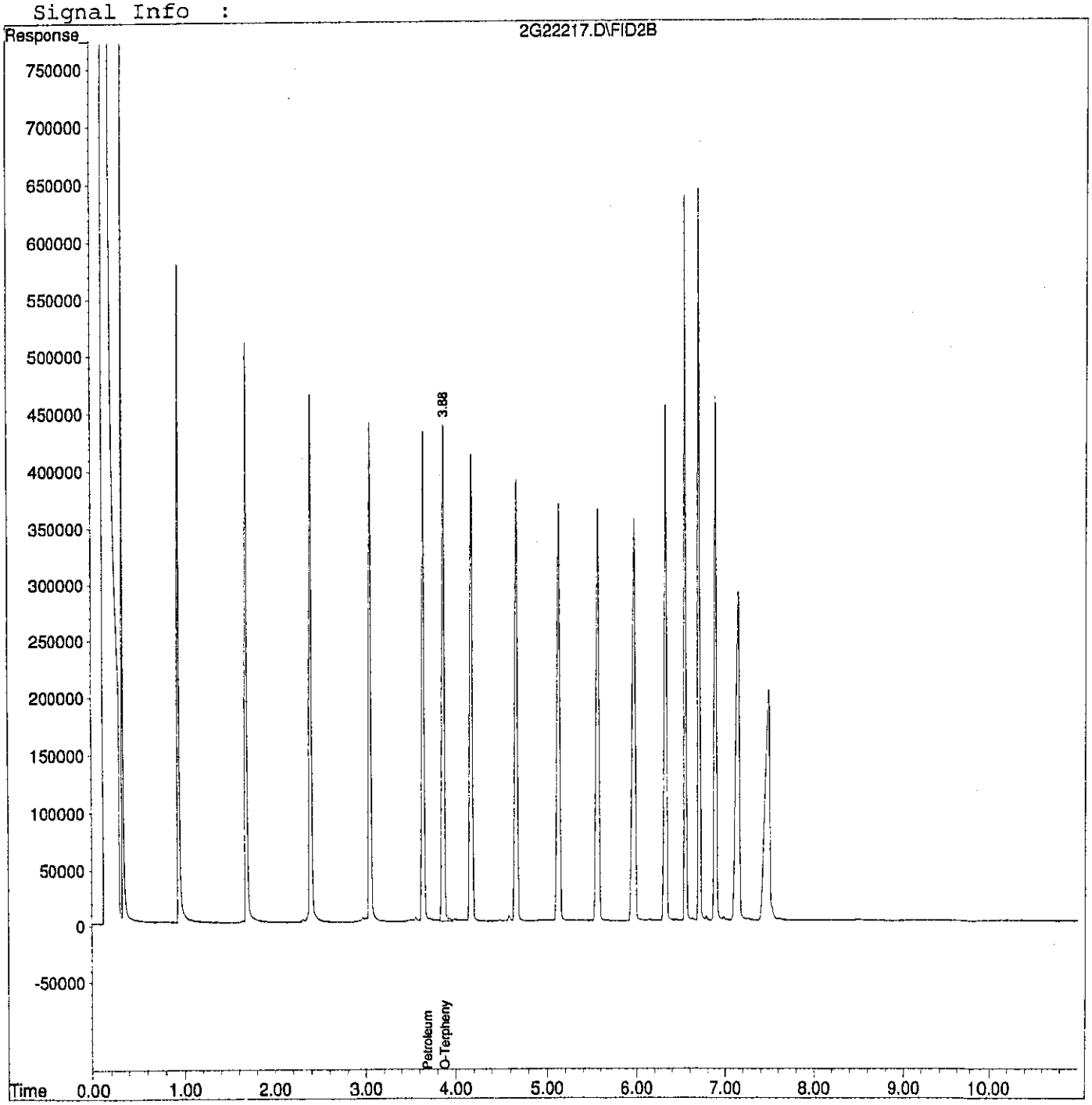
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.88 | 7559380 | 430.472 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery | = 2152.36%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery | = 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 129641209 | 6529.337 ppb |

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

Acq On : 30 Sep 2002 15:18 Operator: CLK
Sample : WG126333-02 400ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

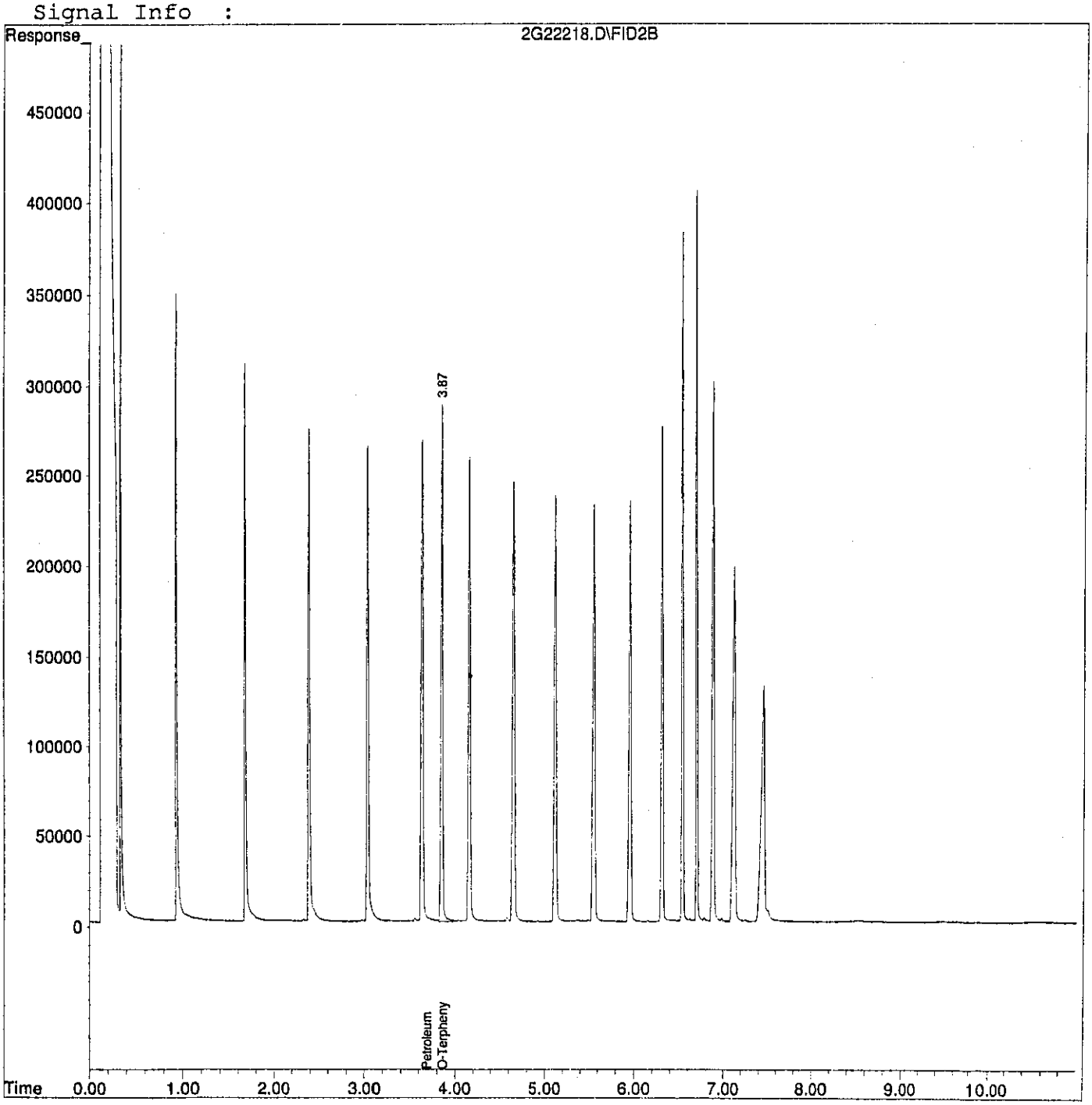


```
Acq On     : 30 Sep 2002  15:33                          Operator: CLK
Sample     : WG126333-03 200ppm PRO STD                  Inst    : HP2
Misc       : 1,1 SOS61-44                                Multiplr: 1.00
IntFile    : PETRO.E
Quant Time: Oct  1 10:54 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Mon Sep 30 18:50:34 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        3904228  222.328 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    = 1111.64%#
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70       65978505 3322.986 ppb
```

Acq On : 30 Sep 2002 15:33 Operator: CLK
Sample : WG126333-03 200ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

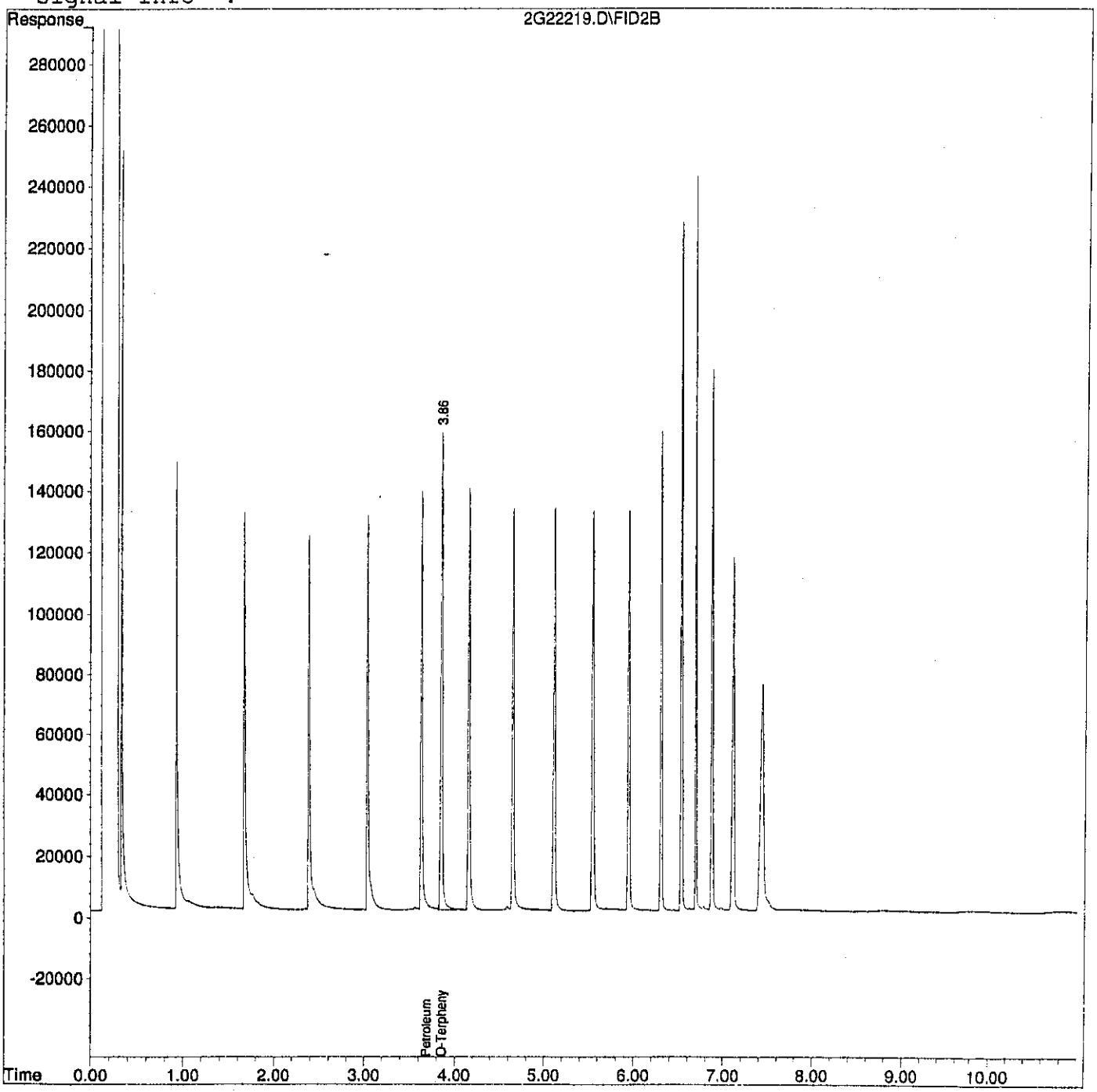


```
Acq On     : 30 Sep 2002  15:49                          Operator: CLK
Sample     : WG126333-04 100ppm PRO STD                  Inst    : HP2
Misc       : 1,1 SOS61-44                                Multiplr: 1.00
IntFile    : PETRO.E
Quant Time: Oct  1 10:54 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Mon Sep 30 18:50:34 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        1915063  109.054 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =  545.27%#
 3) s   n-Nonatriacontane              0.00               0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70       31868794 1605.061 ppb
```

Acq On : 30 Sep 2002 15:49 Operator: CLK
Sample : WG126333-04 100ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 30 Sep 2002 16:04 Operator: CLK
Sample : WG126333-05 50ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

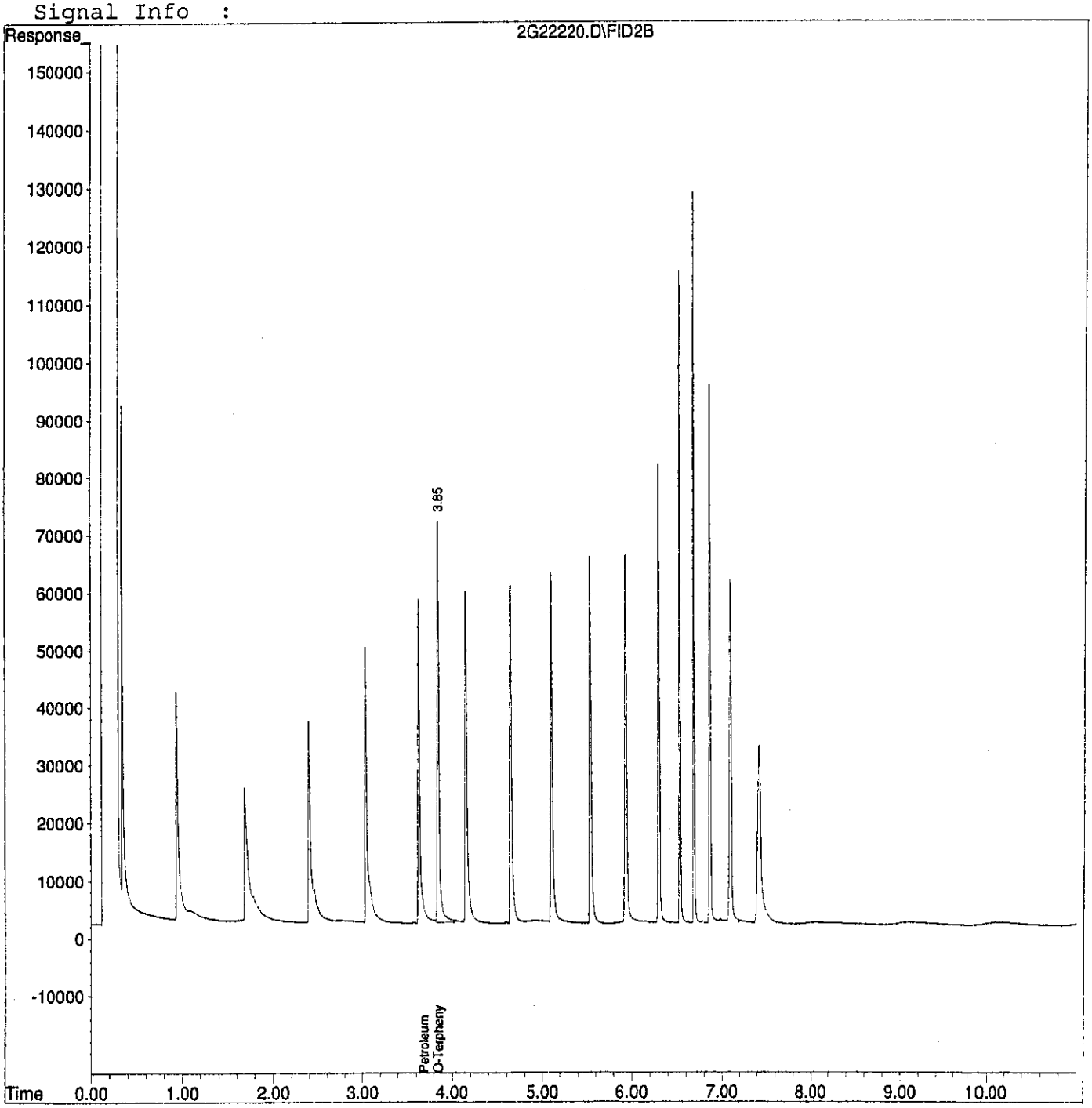
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.85 | 941680 | 53.624 ppb |
| Spiked Amount 20.000 Range 49 - 174 | Recovery | = | 268.12%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | Recovery | = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 15773532 | 794.429 ppb |

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

Acq On : 30 Sep 2002 16:04 Operator: CLK
Sample : WG126333-05 50ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 10:54 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Mon Sep 30 18:50:34 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

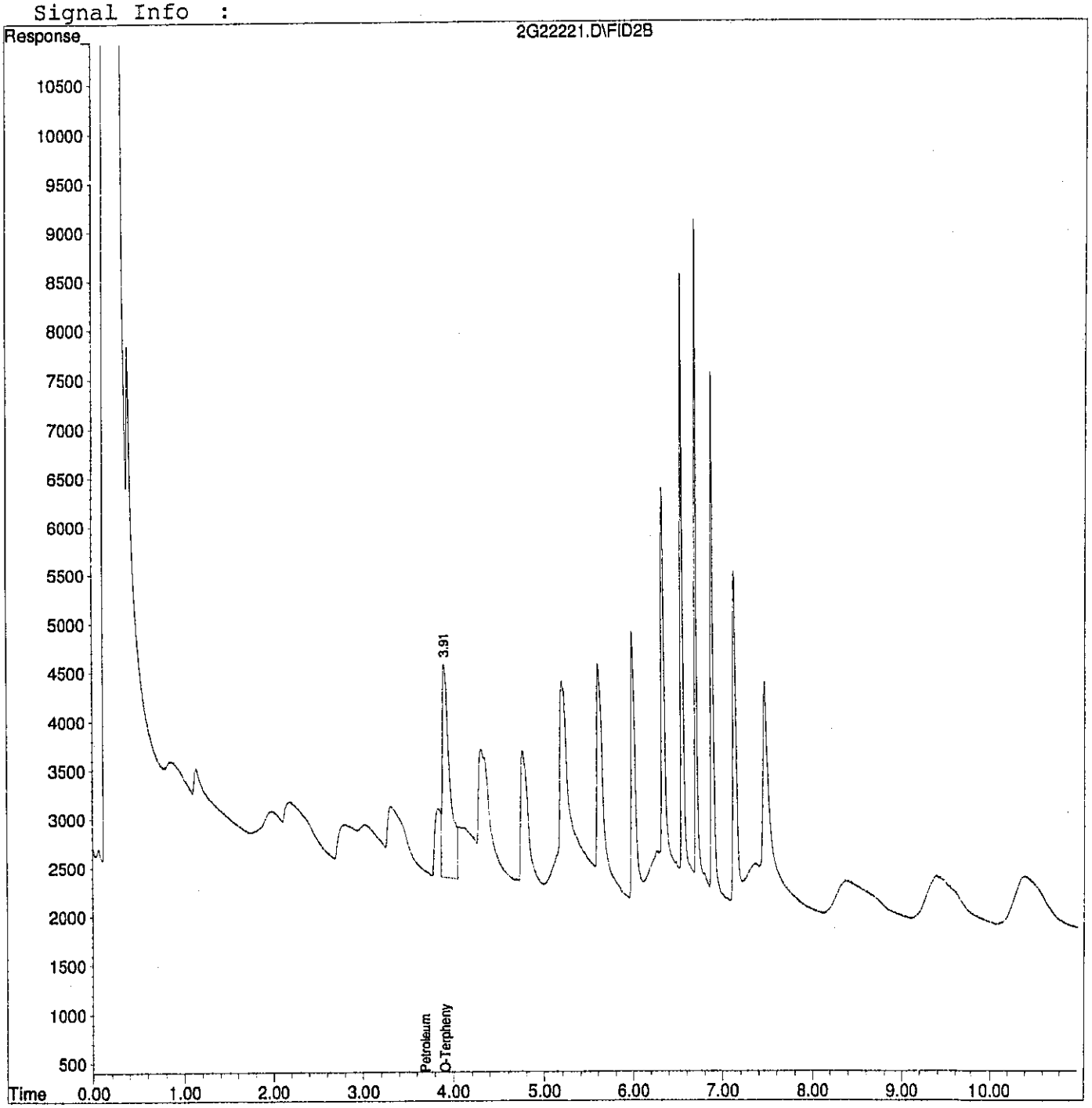


```
Acq On     : 30 Sep 2002  16:19                          Operator: CLK
Sample     : WG126333-06 5ppm PRO STD                    Inst    : HP2
Misc       : 1,1 SOS61-44                                Multiplr: 1.00
IntFile    : PETRO.E
Quant Time: Oct  1 12:52 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Tue Oct 01 12:51:53 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                    3.91         120918    6.886 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =   34.43%#
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70        1930422   97.225 ppb
```

Acq On : 30 Sep 2002 16:19 Operator: CLK
Sample : WG126333-06 5ppm PRO STD Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 12:52 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:51:53 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Acq On : 30 Sep 2002 16:39 Operator: CLK
Sample : WG126333-07 200ppm ALT SOURCE PRO STD Inst : HP2
Misc : 1,1 SOS61-36 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:55:15 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 | 2925.883 | 13.9 | 87 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 0.860 | 99.6# | 0 | 0.05 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2G22222.D FLASHPRO.M Tue Oct 01 12:57:29 2002 HP2 Page 1

Acq On : 30 Sep 2002 16:39 Operator: CLK
Sample : WG126333-07 200ppm ALT SOURCE PRO STD Inst : HP2
Misc : 1,1 SOS61-36 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:55:15 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 |

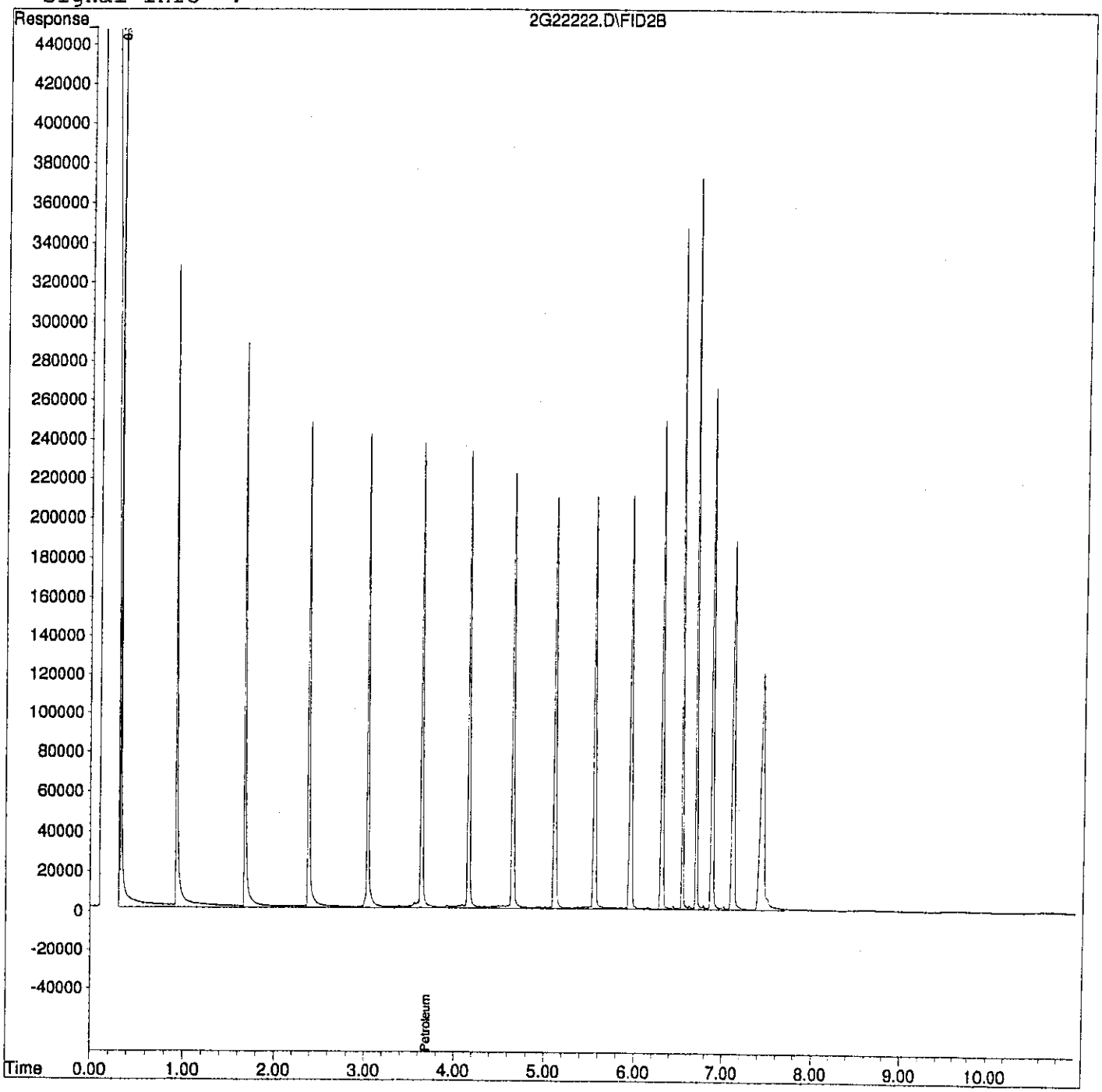
(#) = Out of Range SPCC's out = 0 CCC's out = 0
2G22222.D FLASHPRO.M Tue Oct 01 12:57:29 2002 HP2

```
Acq On     : 30 Sep 2002  16:39                          Operator: CLK
Sample     : WG126333-07 200ppm ALT SOURCE PRO STD       Inst    : HP2
Misc       : 1,1 SOS61-36                                Multiplr: 1.00
IntFile    : PETRO.E
Quant Time: Oct  1 12:57 2002  Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title        : PETROLEUM RANGE ORGANICS 09/30/02
Last Update  : Tue Oct 01 12:54:37 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                    3.92          17233    0.860 ppb
Spiked Amount     20.000   Range  49 - 174    Recovery    =    4.30%#
 3) s   n-Nonatriacontane              0.00              0    N.D.  ppm
Spiked Amount   20.000                    Recovery       =    0.00%

  Target Compounds
 1) H   Petroleum Range                3.70       57665950 2925.883 ppb
```

Acq On : 30 Sep 2002 16:39 Operator: CLK
Sample : WG126333-07 200ppm ALT SOURCE PRO STD Inst : HP2
Misc : 1,1 SOS61-36 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 12:57 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22232.D Vial: 19
Acq On : 30 Sep 2002 19:20 Operator: CLK
Sample : WG126333-08 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3357.543 | 1.2 | 100 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 195.272 | 2.4 | 100 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2G22232.D FLASHPRO.M Tue Oct 01 13:06:34 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\093002\2G22232.D  Vial: 19
Acq On : 30 Sep 2002 19:20  Operator: CLK
Sample : WG126333-08 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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\093002\2G22232.D Vial: 19
Acq On : 30 Sep 2002 19:20 Operator: CLK
Sample : WG126333-08 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:06 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

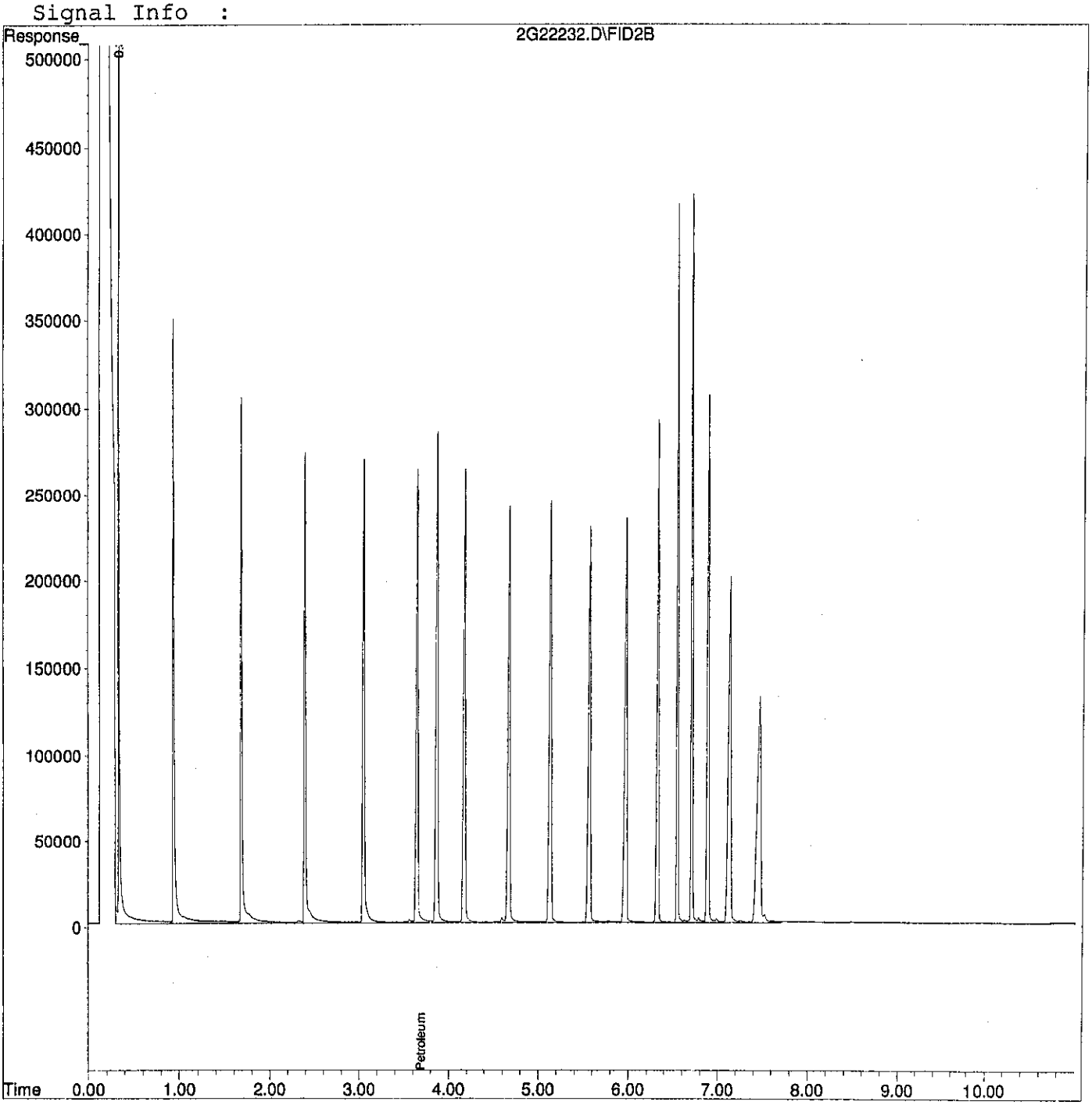
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.87 | 3914720 | 195.272 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery | = 976.36%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery | = 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 66173479 | 3357.543 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22232.D Vial: 19
Acq On : 30 Sep 2002 19:20 Operator: CLK
Sample : WG126333-08 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:06 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22243.D Vial: 19
Acq On : 30 Sep 2002 22:13 Operator: CLK
Sample : WG126333-09 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3310.669 | 2.6 | 99 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 194.028 | 3.0 | 100 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2G22243.D FLASHPRO.M Tue Oct 01 13:29:33 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\093002\2G22243.D Vial: 19
Acq On : 30 Sep 2002 22:13 Operator: CLK
Sample : WG126333-09 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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\093002\2G22243.D Vial: 19
Acq On : 30 Sep 2002 22:13 Operator: CLK
Sample : WG126333-09 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:29 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

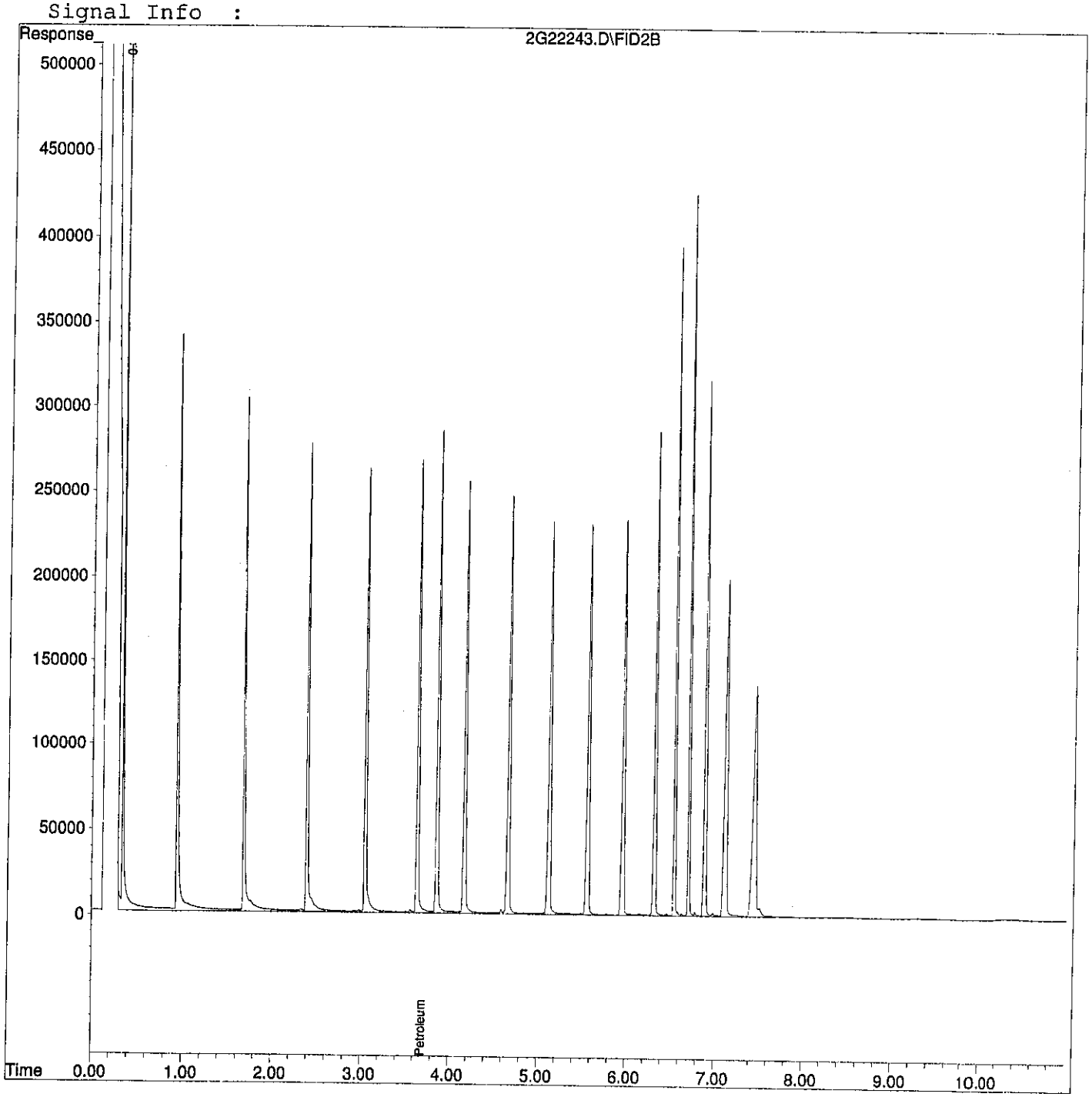
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.87 | 3889770 | 194.028 ppb |
| Spiked Amount 20.000 Range 49 - 174 Recovery = 970.14%# | | | |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 Recovery = 0.00% | | | |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 65249648 | 3310.669 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22243.D  Vial: 19
Acq On : 30 Sep 2002 22:13  Operator: CLK
Sample : WG126333-09 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:29 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22254.D Vial: 19
Acq On : 1 Oct 2002 1:02 Operator: CLK
Sample : WG126333-10 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3215.695 | 5.4 | 96 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 187.480 | 6.3 | 96 | 0.00 |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22254.D  Vial: 19
Acq On : 1 Oct 2002 1:02  Operator: CLK
Sample : WG126333-10 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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\093002\2G22254.D  Vial: 19
Acq On : 1 Oct 2002 1:02  Operator: CLK
Sample : WG126333-10 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

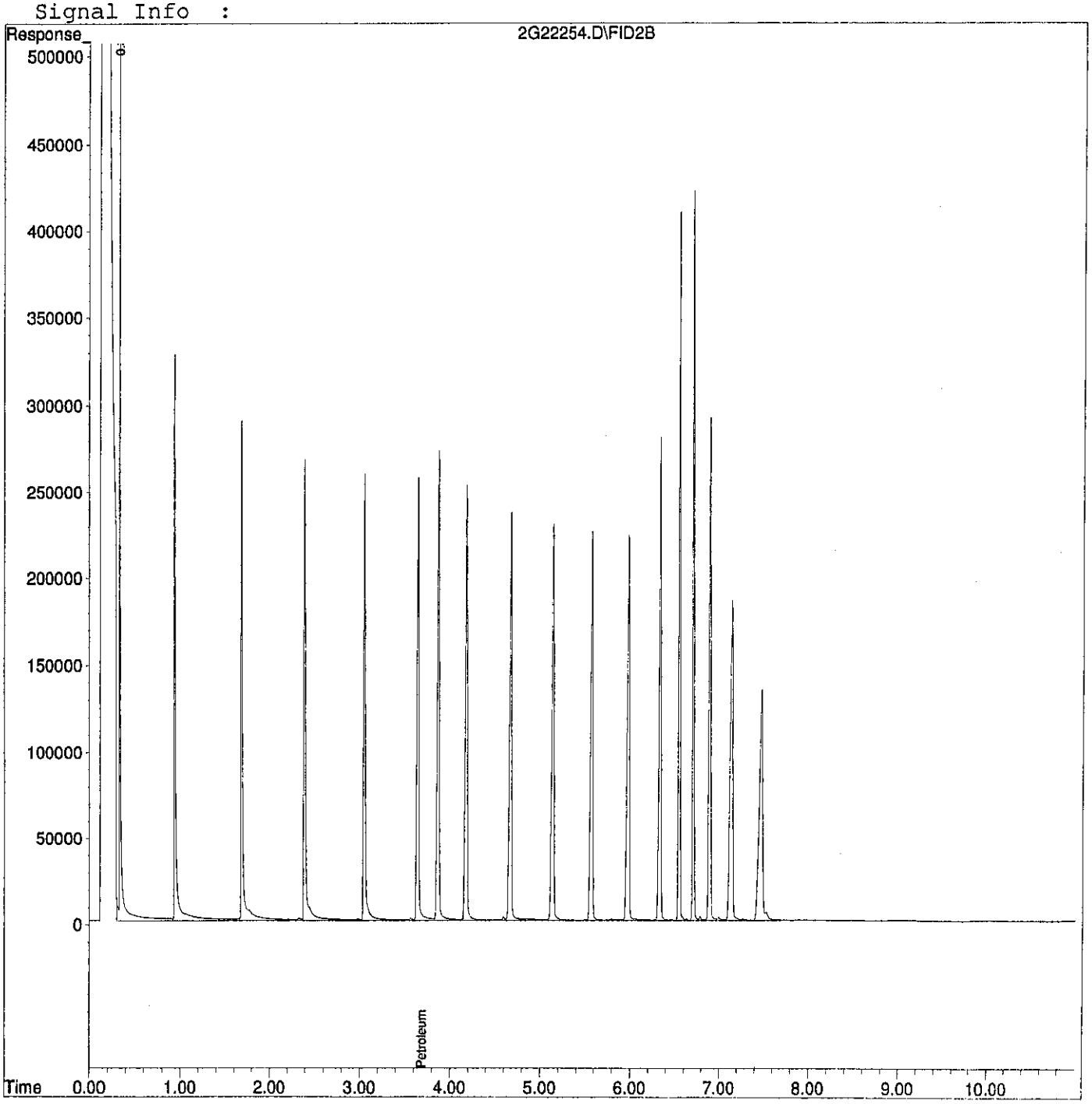
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.88 | 3758503 | 187.480 ppb |
| Spiked Amount 20.000 Range 49 - 174 Recovery = 937.40%# | | | |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 Recovery = 0.00% | | | |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 63377823 | 3215.695 ppb |

(f)=RT Delta > 1/2 Window  (m)=manual int.
2G22254.D FLASHPRO.M Tue Oct 01 13:54:00 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\[illegible]\2G22254.D Vial: 19
Acq On : 1 Oct 2002 1:02 Operator: CLK
Sample : WG126333-10 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22265.D  Vial: 19
Acq On : 1 Oct 2002 3:51  Operator: CLK
Sample : WG126333-11 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3336.871 | 1.9 | 100 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 193.789 | 3.1 | 100 | 0.03 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0
2G22265.D FLASHPRO.M  Tue Oct 01 14:30:22 2002  HP2  Page 1

Data File : C:\HPCHEM\1\DATA\093002\2G22265.D  Vial: 19
Acq On : 1 Oct 2002 3:51  Operator: CLK
Sample : WG126333-11 200ppm PRO CCV  Inst : HP2
Misc : 1,1 SOS61-44  Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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
2G22265.D FLASHPRO.M  Tue Oct 01 14:30:22 2002  HP2

Data File : C:\HPCHEM\1\DATA\092002\2G22265.D Vial: 19
Acq On : 1 Oct 2002 3:51 Operator: CLK
Sample : WG126333-11 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 14:30 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 14:29:17 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

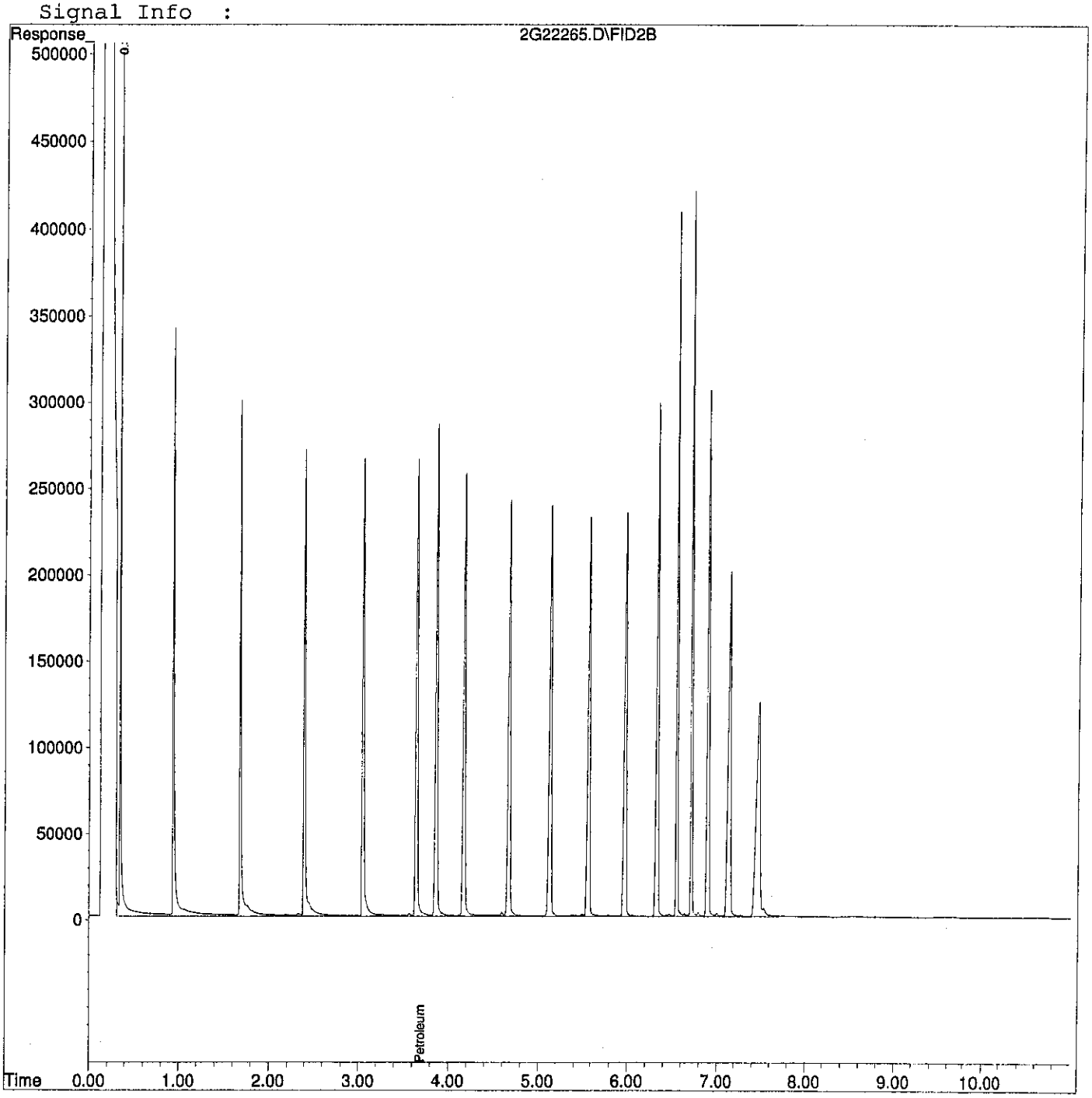
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.88 | 3884981 | 193.789 ppb |
| Spiked Amount 20.000 | Range 49 - 174 | Recovery | = 968.94%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery | = 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 65766059 | 3336.871 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22265.D Vial: 19
Acq On : 1 Oct 2002 3:51 Operator: CLK
Sample : WG126333-11 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 14:30 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 14:29:17 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\100102\2G22286.D Vial: 3
Acq On : 1 Oct 2002 12:58 Operator: CLK
Sample : WG126392-02 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3213.414 | 5.5 | 96 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 186.599 | 6.7 | 96 | 0.00 |

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

Data File : C:\HPCHEM\1\DATA\100102\2G22286.D Vial: 3
Acq On : 1 Oct 2002 12:58 Operator: CLK
Sample : WG126392-02 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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\100102\2G22286.D
Acq On : 1 Oct 2002 12:58 Operator: CLK
Sample : WG126392-02 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 2 8:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

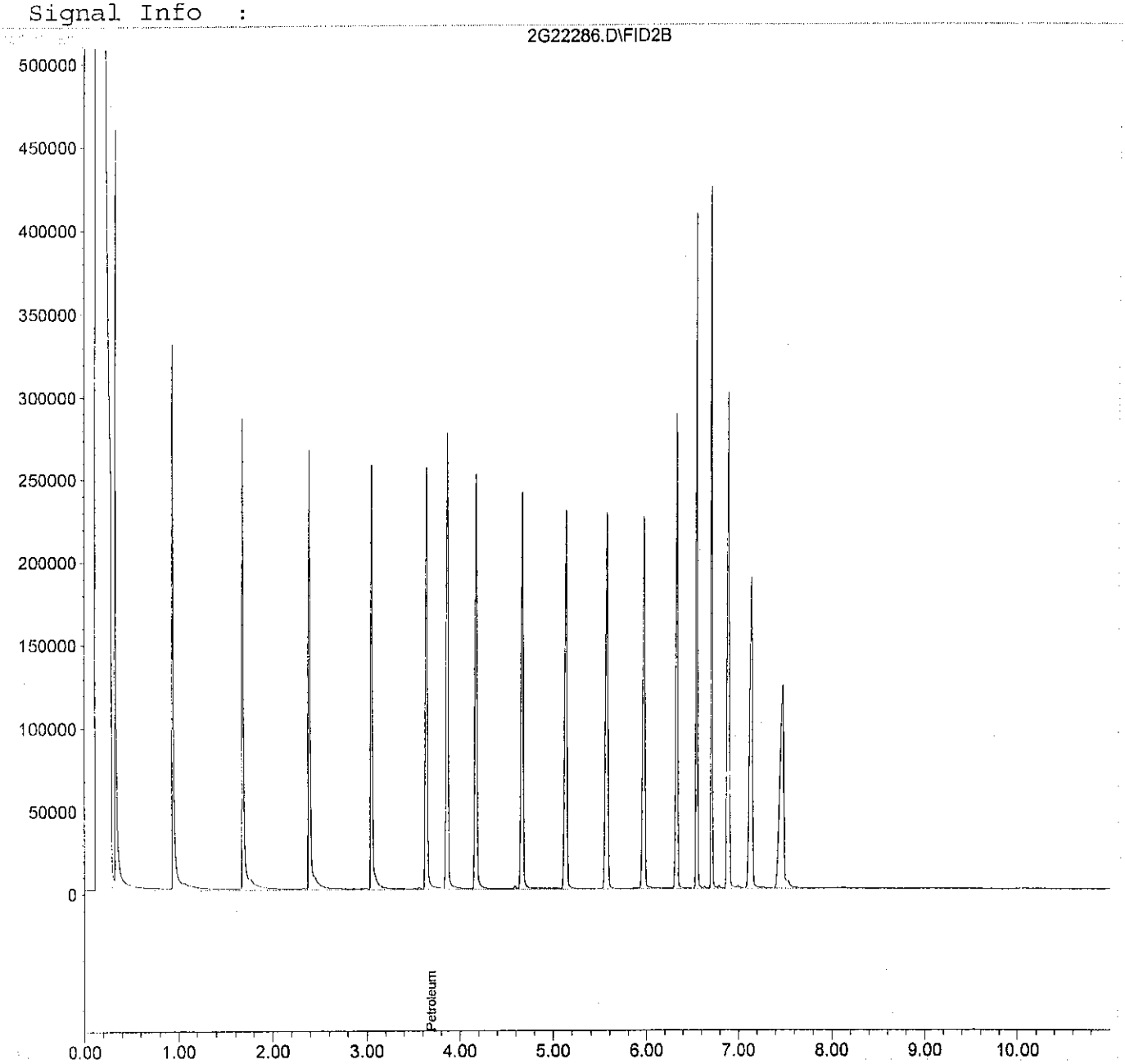
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.87 | 3740841 | 186.599 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery | = 933.00%# |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery | = 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 63332871 | 3213.414 ppb |

(f)=RT Delta > 1/2 Window (m)=manual int.
2G22286.D FLASHPRO.M Wed Oct 02 08:53:47 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\100102\2G22286.D Vial: 5
Acq On : 1 Oct 2002 12:58 Operator: CLK
Sample : WG126392-02 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 2 8:53 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\100102\2G22295.D Vial: 3
Acq On : 1 Oct 2002 15:16 Operator: CLK
Sample : WG126392-03 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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 | 3358.615 | 1.2 | 100 | 0.00 |
| 2 | s | O-Terphenyl | 200.000 | 196.300 | 1.8 | 101 | 0.00 |

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

Data File : C:\HPCHEM\1\DATA\100102\2G22295.D
Acq On : 1 Oct 2002 15:16
Sample : WG126392-03 200ppm PRO CCV
Misc : 1,1 SOS61-44
IntFile : PETRO.E

Operator: CLK
Inst : HP2
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 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\100102\2G22295.D Vial: 3
Acq On : 1 Oct 2002 15:16 Operator: CLK
Sample : WG126392-03 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 2 8:56 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

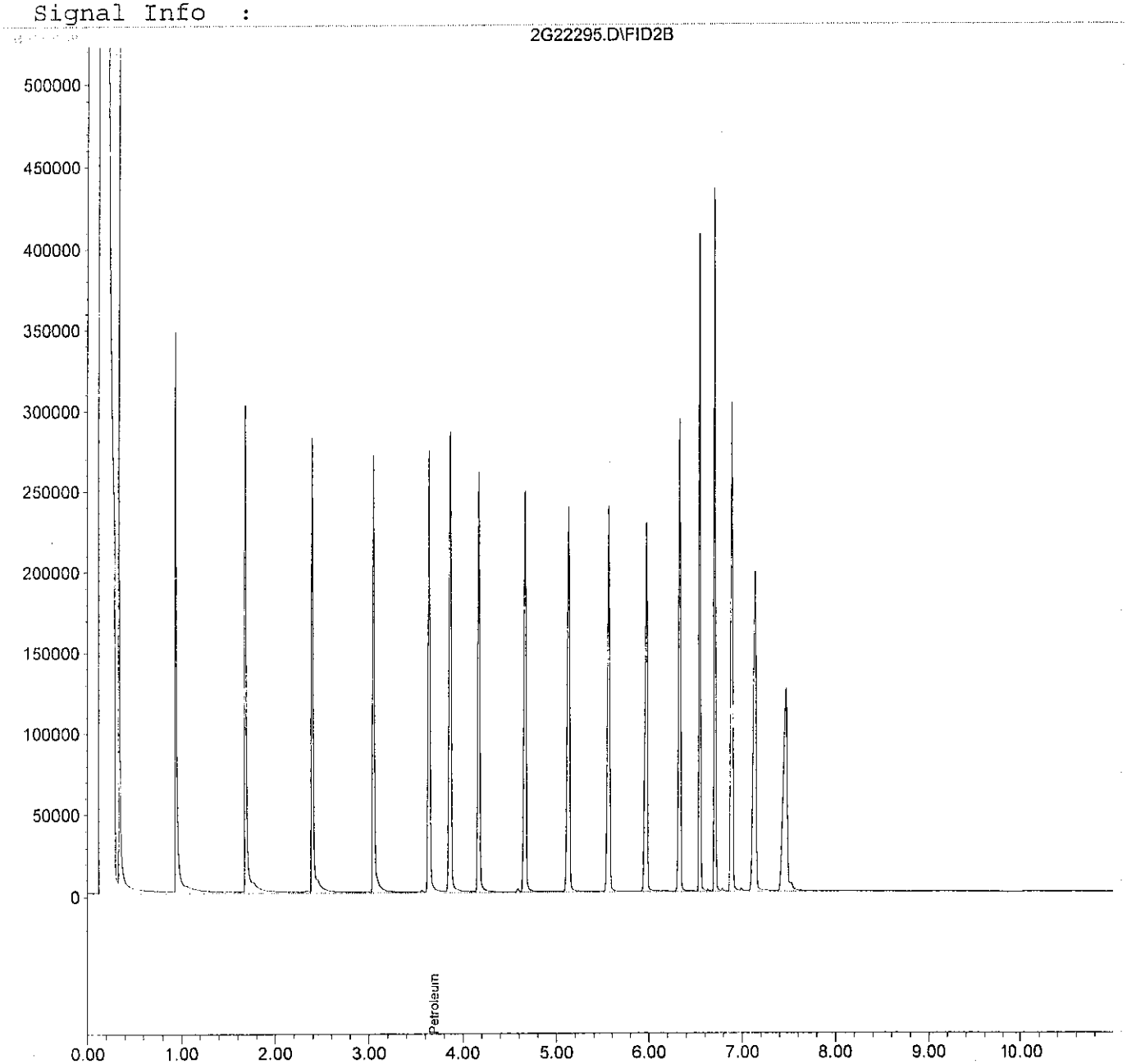
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.87 | 3935331 | 196.300 ppb |
| Spiked Amount 20.000 Range 49 - 174 Recovery = 981.50%# | | | |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 Recovery = 0.00% | | | |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 66194615 | 3358.615 ppb |

(f)=RT Delta > 1/2 Window (m)=manual int.
2G22295.D FLASHPRO.M Wed Oct 02 08:56:26 2002 HP2 Page 1

Data File : C:\HPCHEM\1\DATA\100102\2G22295.D Vial: 3
Acq On : 1 Oct 2002 15:16 Operator: CLK
Sample : WG126392-03 200ppm PRO CCV Inst : HP2
Misc : 1,1 SOS61-44 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 2 8:56 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



RETENTION TIME WINDOWS

Lab Name: Kemron Environmental Services

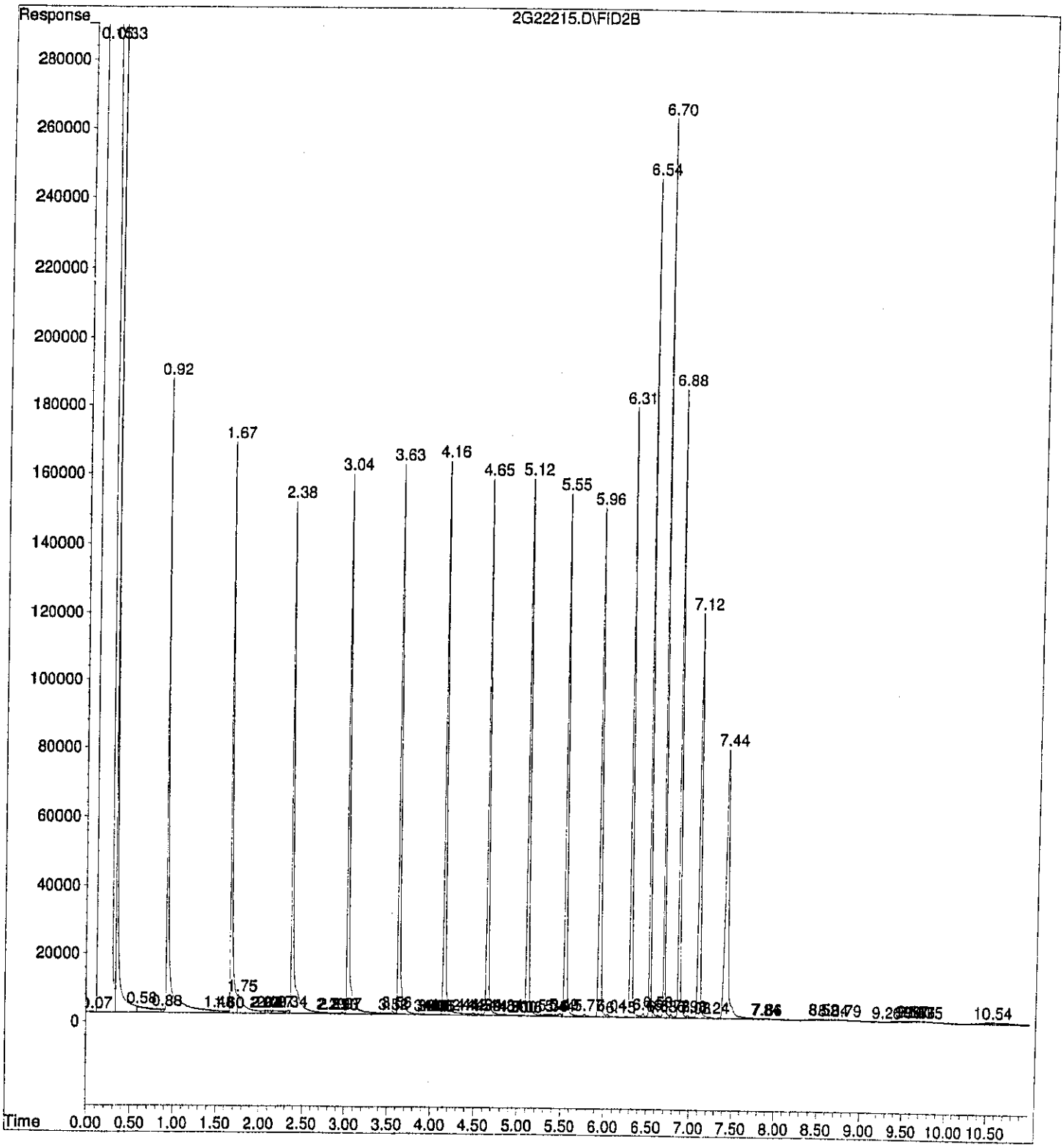
Instrument ID: HP-2

GC Column: RTX-5

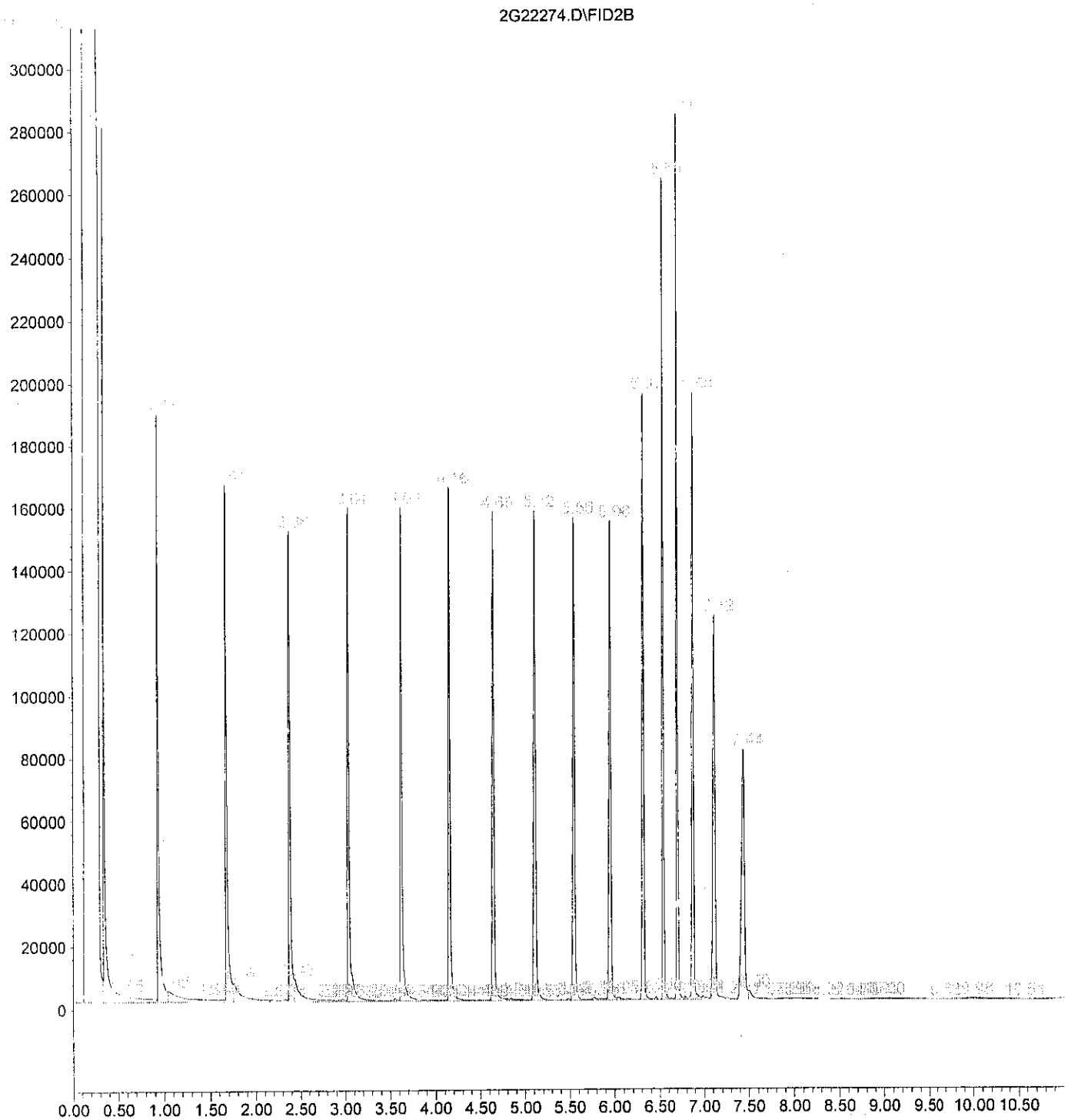
| | WIN.STD #1 | WIN.STD #2 | WIN.STD #3 |
|---|---|---|---|
| Date Run | 01-23-02 | 01-24-02 | 01-25-02 |
| File # | 2g18031 | 2g18074 | 2g18121 |

| 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\093002\2G22215.D
Operator : CLK
Acquired : 30 Sep 2002 14:47 using AcqMethod FLASHPRO.M
Instrument : HP2
Sample Name: WIN DEF STD PRO
Misc Info : 1,1 SOS60-20
Vial Number: 2



File : C:\HPCHEM\1\DATA\100102\2G22274.D
Operator : CLK
Acquired : 1 Oct 2002 9:15 using AcqMethod FLASHPRO.M
Instrument : HP2
Sample Name: WIN DEF STD PRO
Misc Info : 1,1 SOS60-20
Vial Number: 2



# 2.2.6.4 Raw QC Data

Data File : C:\HPCHEM\1\DATA\093002\2G22233.D Vial: 32
Acq On : 30 Sep 2002 19:41 Operator: CLK
Sample : WG125593-02 BLK 9/19 V191P11 Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

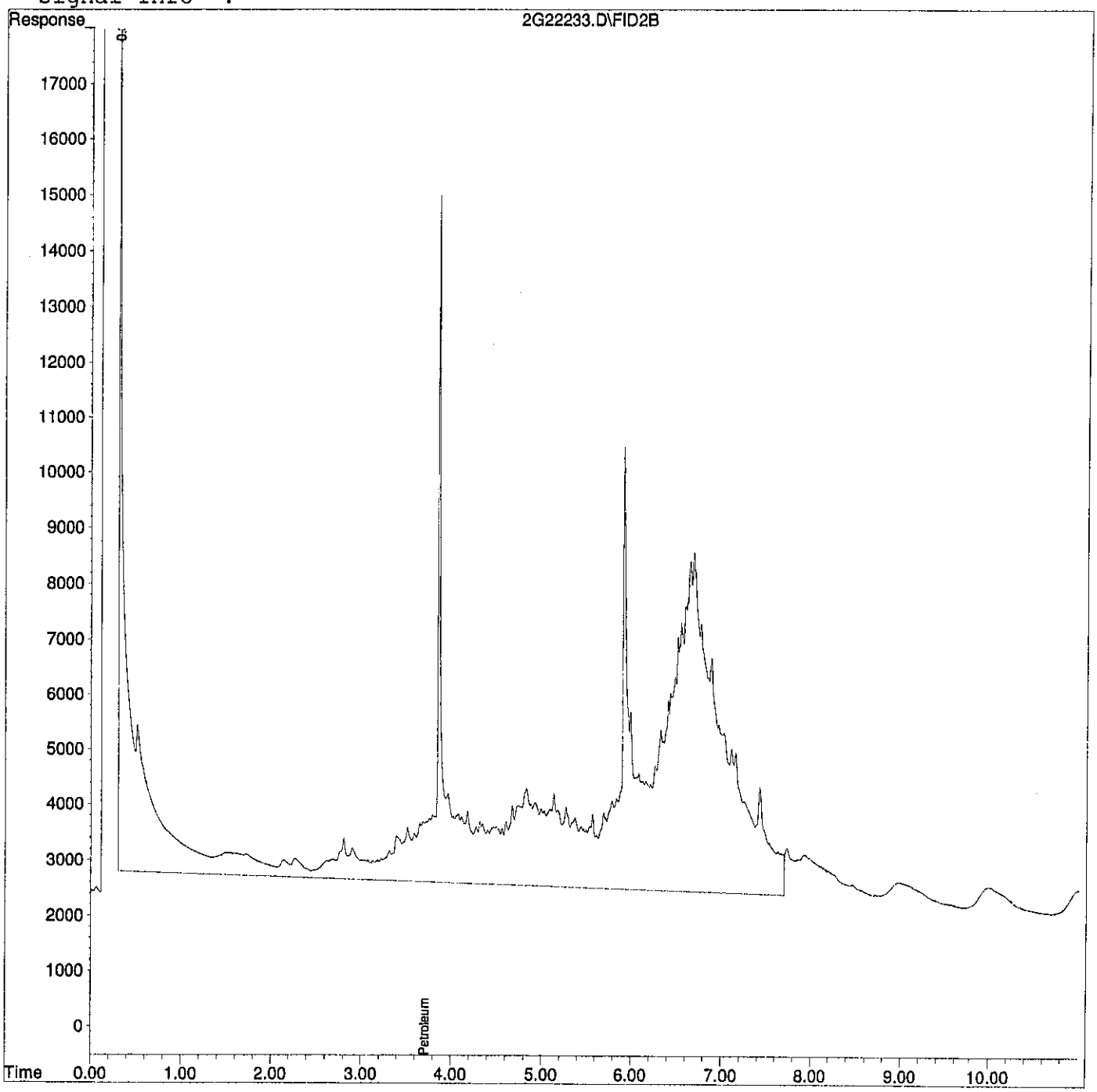
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.86 | 246321 | 12.287 ppb |
| Spiked Amount 20.000 Range 49 - 174 Recovery = 61.44% | | | |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 Recovery = 0.00% | | | |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 5501336 | 279.129 ppb F |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22233.D  Vial: 32
Acq On : 30 Sep 2002 19:41  Operator: CLK
Sample : WG125593-02 BLK 9/19 V191P11  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\093002\2G22234.D  Vial: 33
Acq On : 30 Sep 2002 19:56  Operator: CLK
Sample : WG125593-03 LCS 9/19 V191P11  Inst : HP2
Misc : 1,1  Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Initial Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :

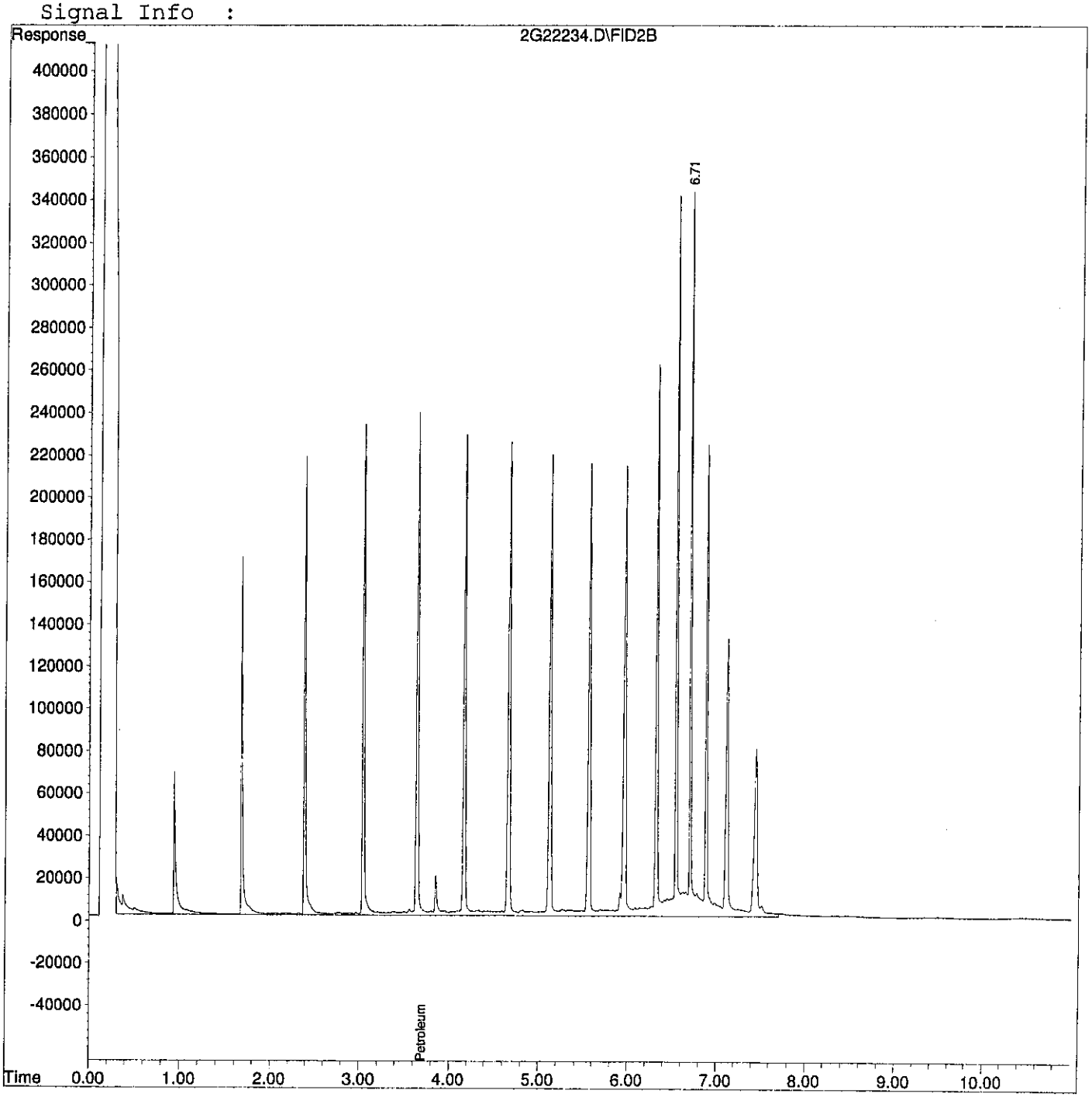
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 2) s O-Terphenyl | 3.85 | 299609 | 14.945 ppb |
| Spiked Amount 20.000 Range 49 - 174 | | Recovery = | 74.72% |
| 3) s n-Nonatriacontane | 0.00 | 0 | N.D. ppm |
| Spiked Amount 20.000 | | Recovery = | 0.00% |
| Target Compounds | | | |
| 1) H Petroleum Range | 3.70 | 54241005 | 2752.107 ppb |

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

Data File : C:\HPCHEM\1\DATA\093002\2G22234.D Vial: 33
Acq On : 30 Sep 2002 19:56 Operator: CLK
Sample : WG125593-03 LCS 9/19 V191P11 Inst : HP2
Misc : 1,1 Multiplr: 1.00
IntFile : PETRO.E
Quant Time: Oct 1 13:22 2002 Quant Results File: FLASHPRO.RES

Quant Method : C:\HPCHEM\1\METHODS\FLASHPRO.M (Chemstation Integrator)
Title : PETROLEUM RANGE ORGANICS 09/30/02
Last Update : Tue Oct 01 12:54:37 2002
Response via : Multiple Level Calibration
DataAcq Meth : FLASHPRO.M

Volume Inj. :
Signal Phase :
Signal Info :



| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 2g22195.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 13::1 |
| 2 | 2 | 2g22196.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::2 |
| 3 | 3 | 2g22197.d | 1. | CL 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::3 |
| 4 | 4 | 2g22198.d | 1. | CC 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 13::2 |
| 5 | 2 | 2g22199.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 30 Sep 102 13::3 |
| 6 | 5 | 2g22200.d | 1. | WG126331-01 10000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 7 | 6 | 2g22201.d | 1. | WG126331-02 5000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::0 |
| 8 | 7 | 2g22202.d | 1. | WG126331-03 2500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::1 |
| 9 | 8 | 2g22203.d | 1. | WG126331-04 1000ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::2 |
| 10 | 9 | 2g22204.d | 1. | RR 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::3 |
| 11 | 10 | 2g22205.d | 1. | ✓ WG126331-06 100ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::4 |
| 12 | 9 | 2g22206.d | 1. | RR 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 13::5 |
| 13 | 11 | 2g22207.d | 1. | ✓ WG126331-05 500ppm DRO STD | 1,1 N15-27 | 30 Sep 102 12::0 |
| 14 | 12 | 2g22208.d | 1. | ✓ WG126331-07 1000ppm ALT SOURCE DRO STD | 1,1 SOS60-11 | 30 Sep 102 12::2 |
| 15 | 13 | 2g22209.d | 1. | DRO SURR ESS0042-29 | 1,1 | 30 Sep 102 12::3 |
| 16 | 14 | 2g22210.d | 10. | L0209424-09 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::4 |
| 17 | 15 | 2g22211.d | 100. | L0209424-13 Soil DRO 100X | 7,100 SOIL | 30 Sep 102 12::5 |
| 18 | 16 | 2g22212.d | 10. | L0209424-14 Soil DRO 10X | 7,10 SOIL | 30 Sep 102 12::0 |
| 19 | 1 | 2g22213.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::1 |
| 20 | 8 | 2g22214.d | 1. | ✓ WG126331-08 1000ppm DRO CCV | 1,1 N15-27 | 30 Sep 102 12::2 |
| 21 | 2 | 2g22215.d | 1. | ✓ WIN DEF STD PRO | 1,1 SOS60-20 | 30 Sep 102 12::4 |
| 22 | 17 | 2g22216.d | 1. | WG126333-01 600ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| 23 | 18 | 2g22217.d | 1. | WG126333-02 400ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 24 | 19 | 2g22218.d | 1. | WG126333-03 200ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::3 |
| 25 | 20 | 2g22219.d | 1. | WG126333-04 100ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::4 |
| 26 | 21 | 2g22220.d | 1. | WG126333-05 50ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::0 |
| 2 | 22 | 2g22221.d | 1. | WG126333-06 5ppm PRO STD | 1,1 SOS61-44 | 30 Sep 102 12::1 |
| 28 | 23 | 2g22222.d | 1. | WG126333-07 200ppm ALT SOURCE PRO STD | 1,1 SOS61-36 | 30 Sep 102 12::3 |
| 29 | 24 | 2g22223.d | 1. | ✓ WG125345-01 BLK 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::0 |
| 30 | 25 | 2g22224.d | 1. | WG125345-02 LCS 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::1 |
| 31 | 26 | 2g22225.d | 1. | WG125345-03 LCS DUP 9/16 V190P103 | 7,1 SOIL | 30 Sep 102 12::3 |
| 32 | 27 | 2g22226.d | 1. | WG125774-01 BLK 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::4 |
| 33 | 28 | 2g22227.d | 1. | WG125774-02 LCS 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::0 |
| 34 | 29 | 2g22228.d | 1. | WG125774-03 LCS DUP 9/23 V190P141 | 7,1 SOIL | 30 Sep 102 12::1 |
| 35 | 30 | 2g22229.d | 1. | RE L0209260-01 Soil PRO | 7,1 SOIL | 30 Sep 102 12::3 |
| 36 | 31 | 2g22230.d | 1. | ✓ L0209260-01 Soil PRO RE | 7,1,RE SOIL | 30 Sep 102 12::4 |
| 37 | 1 | 2g22231.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::0 |
| 38 | 19 | 2g22232.d | 1. | ✓ WG126333-08 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 12::2 |
| 39 | 32 | 2g22233.d | 1. | ✓ WG125593-02 BLK 9/19 V191P11 | 1,1 | 30 Sep 102 12::4 |
| 40 | 33 | 2g22234.d | 1. | ✓ WG125593-03 LCS 9/19 V191P11 | 1,1 | 30 Sep 102 12::5 |
| 41 | 34 | 2g22235.d | 1. | RE L0209310-01 Water PRO | 1,1 | 30 Sep 102 12::1 |
| 42 | 35 | 2g22236.d | 1. | ✓ L0209310-02 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 43 | 36 | 2g22237.d | 1. | WG125593-01 L0209310-03 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 44 | 37 | 2g22238.d | 1. | WG125593-04 L0209310-04 Water PRO MS | 1,1 | 30 Sep 102 12::5 |
| 45 | 38 | 2g22239.d | 1. | WG125593-05 L0209310-05 Water PRO MSD | 1,1 | 30 Sep 102 12::1 |
| 46 | 39 | 2g22240.d | 1. | L0209310-06 Water PRO | 1,1 | 30 Sep 102 12::2 |
| 47 | 40 | 2g22241.d | 1. | L0209310-07 Water PRO | 1,1 | 30 Sep 102 12::4 |
| 48 | 1 | 2g22242.d | 1. | NA CH2CL2 | 1,1 | 30 Sep 102 12::5 |
| 49 | 19 | 2g22243.d | 1. | ✓ WG126333-09 200ppm PRO CCV | 1,1 SOS61-44 | 30 Sep 102 13::1 |
| 5 | 41 | 2g22244.d | 1. | L0209310-08 Water PRO | 1,1 | 30 Sep 102 13::2 |
| 51 | 42 | 2g22245.d | 1. | L0209310-09 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 52 | 43 | 2g22246.d | 1. | L0209310-10 Water PRO | 1,1 | 30 Sep 102 13::5 |
| 53 | 44 | 2g22247.d | 1. | L0209310-11 Water PRO | 1,1 | 30 Sep 102 13::1 |

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 5 | 45 | 2g22248.d | 1. | RR10 L0209337-01 Water PRO | 1,1 | 30 Sep 102 13::3 |
| 55 | 46 | 2g22249.d | 1. | ✓ L0209337-02 Water PRO | 1,1 | 30 Sep 102 13::4 |
| 56 | 47 | 2g22250.d | 1. | L0209337-03 Water PRO | 1,1 | 1 Oct 102 13::0 |
| 57 | 48 | 2g22251.d | 1. | L0209337-04 Water PRO | 1,1 | 1 Oct 102 13::1 |
| 58 | 49 | 2g22252.d | 1. | L0209337-05 Water PRO | 1,1 | 1 Oct 102 13::3 |
| 59 | 1 | 2g22253.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 13::4 |
| 60 | 19 | 2g22254.d | 1. | ✓WG126333-10 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::0 |
| 61 | 50 | 2g22255.d | 1. | ✓L0209337-06 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 62 | 51 | 2g22256.d | 1. | ✓L0209337-07 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 63 | 52 | 2g22257.d | 1. | ✓WG125523-02 BLK 9/18 V191P3 | 1,1 | 1 Oct 102 12::4 |
| 64 | 53 | 2g22258.d | 1. | ✓WG125523-03 LCS 9/18 V191P3 | 1,1 | 1 Oct 102 12::0 |
| 65 | 54 | 2g22259.d | 1. | RE L0209285-01 Water PRO | 1,1 | 1 Oct 102 12::1 |
| 66 | 55 | 2g22260.d | 1. | L0209285-02 Water PRO | 1,1 | 1 Oct 102 12::3 |
| 67 | 56 | 2g22261.d | 1. | L0209285-03 Water PRO | 1,1 | 1 Oct 102 12::5 |
| 68 | 57 | 2g22262.d | 1. | L0209285-07 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 69 | 58 | 2g22263.d | 1. | L0209285-08 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 70 | 1 | 2g22264.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::3 |
| 71 | 19 | 2g22265.d | 1. | ✓ WG126333-11 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::5 |
| 72 | 59 | 2g22266.d | 1. | RR L0209285-09 Water PRO | 1,1 | 1 Oct 102 12::0 |
| 73 | 60 | 2g22267.d | 1. | WG125523-01 L0209285-04 Water PRO | 1,1 | 1 Oct 102 12::2 |
| 74 | 61 | 2g22268.d | 1. | WG125523-04 L0209285-05 Water PRO MS | 1,1 | 1 Oct 102 12::3 |
| 75 | 62 | 2g22269.d | 1. | WG125523-05 L0209285-06 Water PRO MSD | 1,1 | 1 Oct 102 12::5 |
| 76 | 63 | 2g22270.d | 1. | WG125776-02 BLK 9/23 V191P31 | 1,1 | 1 Oct 102 12::0 |
| 77 | 64 | 2g22271.d | 1. | WG125776-03 LCS 9/23 V191P31 | 1,1 | 1 Oct 102 12::2 |
| 7[illegible] | 65 | 2g22272.d | 1. | L0209285-01 Water PRO RE | 1,1,RE | 1 Oct 102 12::3 |

CLK
10/1/02
[illegible]

Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 9/30/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 093002
Analyst Initials CLK

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. # 3 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**

L0209424-09 10X, SS DL
⊥ -10 100X, ⊥
⊥ -11 10X, ⊥
W6125345-01 BLK 9/16 V190P103, took hit >RL, O-Terphenyl high
⊥ -02 LCS ⊥ ⊥, O-Terphenyl high
⊥ -03 LCS DUP ⊥ ⊥
L0209260-01, O-Terphenyl high, Needed RE due to BLK
⊥ -01 RE, O-Terphenyl high,
L0209310-01, O-Terphenyl low, Needs RE
L0209337-01, Needs 10X
W6125523-02 BLK 9/18 V191P3
L0209285-01, Needed RE due to BLK
-02,
-03,
-07,
⊥ -08, ⊥

Reviewed By: [signature]

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 1 | 1 | 2g22273.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::5 |
| 2 | 2 | 2g22274.d | 1. | ✓ WIN DEF STD PRO | 1,1 SOS60-20 | 1 Oct 102 12::1 |
| 3 | 3 | 2g22275.d | 1. | ✓ WG126392-01 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::5 |
| 4 | 4 | 2g22276.d | 1. | RE L0209285-09 Water PRO | 1,1 | 1 Oct 102 13::0 |
| 5 | 5 | 2g22277.d | 1. | WG125523-01 L0209285-04 Water PRO | 1,1 | 1 Oct 102 13::2 |
| 6 | 6 | 2g22278.d | 1. | WG125523-04 L0209285-05 Water PRO MS | 1,1 | 1 Oct 102 13::3 |
| 7 | 7 | 2g22279.d | 1. | WG125523-05 L0209285-06 Water PRO MSD | 1,1 | 1 Oct 102 13::5 |
| 8 | 8 | 2g22280.d | 1. | ✓ WG125776-02 BLK 9/23 V191P31 | 1,1 | 1 Oct 102 13::0 |
| 9 | 9 | 2g22281.d | 1. | WG125776-03 LCS 9/23 V191P31 | 1,1 | 1 Oct 102 13::2 |
| 10 | 10 | 2g22282.d | 1. | L0209285-01 Water PRO RE | 1,1,RE | 1 Oct 102 13::5 |
| 11 | 11 | 2g22283.d | 1. | L0209285-02 Water PRO RE | 1,1,RE | 1 Oct 102 13::1 |
| 12 | 12 | 2g22284.d | 1. | L0209285-03 Water PRO RE | 1,1,RE | 1 Oct 102 13::2 |
| 13 | 1 | 2g22285.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 13::4 |
| 14 | 3 | 2g22286.d | 1. | ✓ WG126392-02 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 13::5 |
| 15 | 13 | 2g22287.d | 1. | WG125776-01 L0209285-04 Water PRO RE | 1,1,RE | 1 Oct 102 12::1 |
| 16 | 14 | 2g22288.d | 1. | WG125776-04 L0209285-05 Water PRO MS RE | 1,1,RE | 1 Oct 102 12::2 |
| 17 | 15 | 2g22289.d | 1. | WG125776-05 L0209285-06 Water PRO MSD R | 1,1,RE | 1 Oct 102 12::4 |
| 18 | 16 | 2g22290.d | 1. | L0209285-07 Water PRO RE | 1,1,RE | 1 Oct 102 12::5 |
| 19 | 17 | 2g22291.d | 1. | L0209285-08 Water PRO RE | 1,1,RE | 1 Oct 102 12::1 |
| 20 | 18 | 2g22292.d | 1. | L0209285-09 Water PRO RE | 1,1,RE | 1 Oct 102 12::3 |
| 21 | 19 | 2g22293.d | 10. | L0209337-01 Water PRO 10X | 1,10 | 1 Oct 102 12::4 |
| 22 | 1 | 2g22294.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::0 |
| 23 | 3 | 2g22295.d | 1. | ✓ WG126392-03 200ppm PRO CCV | 1,1 SOS61-44 | 1 Oct 102 12::1 |
| 24 | 20 | 2g22296.d | 1. | ✓ WIN DEF STD TPH | 1,1 SOS60-28 | 1 Oct 102 12::3 |
| 25 | 21 | 2g22297.d | 1. | CC 1000ppm TPH CCV | 1,1 N15-41 | 1 Oct 102 12::5 |
| 26 | 2 | 2g22298.d | 1. | ✓ WIN DEF STD DRO | 1,1 SOS60-20 | 1 Oct 102 12::0 |
| 27 | 22 | 2g22299.d | 1. | WG126394-01 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::1 |
| 28 | 23 | 2g22300.d | 1. | WG126279-01 BLK 9/30 V191P69 | 1,1 | 1 Oct 102 12::3 |
| 29 | 24 | 2g22301.d | 1. | WG126279-02 LCS 9/30 V191P69 | 1,1 | 1 Oct 102 12::4 |
| 30 | 25 | 2g22302.d | 1. | WG126279-03 LCS DUP 9/30 V191P69 | 1,1 | 1 Oct 102 12::5 |
| 31 | 26 | 2g22303.d | 1. | L0209457-01 Water DRO | 1,1 | 1 Oct 102 12::0 |
| 32 | 1 | 2g22304.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::1 |
| 33 | 22 | 2g22305.d | 1. | ✓ WG126394-02 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::2 |
| 34 | 27 | 2g22306.d | 1. | WG126345-01 BLK 10/1 V192P3 | 7,1 SOIL | 1 Oct 102 12::4 |
| 35 | 28 | 2g22307.d | 1. | WG126345-02 LCS 10/1 V192P3 | 7,1 SOIL | 1 Oct 102 12::5 |
| 36 | 29 | 2g22308.d | 1. | WG126345-03 LCS DUP 10/1 V192P3 | 7,1 SOIL | 1 Oct 102 12::0 |
| 37 | 30 | 2g22309.d | 1. | L0209424-01 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::1 |
| 38 | 31 | 2g22310.d | 1. | L0209424-02 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::2 |
| 39 | 32 | 2g22311.d | 1. | L0209424-03 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::3 |
| 40 | 33 | 2g22312.d | 1. | L0209424-04 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::4 |
| 41 | 34 | 2g22313.d | 1. | L0209424-05 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::5 |
| 42 | 35 | 2g22314.d | 1. | L0209424-06 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::0 |
| 43 | 1 | 2g22315.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::1 |
| 44 | 22 | 2g22316.d | 1. | ✓ WG126394-03 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::3 |
| 45 | 36 | 2g22317.d | 1. | L0209424-07 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::4 |
| 46 | 37 | 2g22318.d | 1. | L0209424-08 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::5 |
| 47 | 38 | 2g22319.d | 1. | L0209424-10 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::0 |
| 48 | 39 | 2g22320.d | 1. | L0209424-11 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::1 |
| 49 | 40 | 2g22321.d | 1. | L0209424-12 Soil DRO RE | 7,1,RE SOIL | 1 Oct 102 12::2 |
| 50 | 1 | 2g22322.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 12::3 |

| Line | Vial | FileName | Multiplier | SampleName | Misc Info | Injected |
|---|---|---|---|---|---|---|
| 51 | 22 | 2g22323.d | 1. | ✓WG126394-04 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 12::4 |
| 52 | 41 | 2g22324.d | 1. | WG126309-01 BLK 10/1 V191P71 | 1,1 | 1 Oct 102 12::5 |
| 53 | 42 | 2g22325.d | 1. | WG126309-02 LCS 10/1 V191P71 | 1,1 | 1 Oct 102 13::0 |
| 54 | 43 | 2g22326.d | 1. | WG126309-03 LCS DUP 10/1 V191P71 | 1,1 | 1 Oct 102 13::1 |
| 55 | 44 | 2g22327.d | 1. | RR10 L0209513-11 Water DRO | 1,1 | 1 Oct 102 13::2 |
| 56 | 45 | 2g22328.d | 1. | ✓WG126306-01 BLK 10/1 V190P195 | 7,1 SOIL | 1 Oct 102 13::3 |
| 57 | 46 | 2g22329.d | 1. | ✓WG126306-02 LCS 10/1 V190P195 | 7,1 SOIL | 1 Oct 102 13::4 |
| 58 | 47 | 2g22330.d | 1. | ✓WG126306-03 LCS DUP 10/1 V190P195 | 7,1 SOIL | 1 Oct 102 13::5 |
| 59 | 48 | 2g22331.d | 1. | RE L0209513-09 Soil DRO | 7,1 SOIL | 1 Oct 102 13::1 |
| 60 | 49 | 2g22332.d | 1. | RE L0209513-07 Soil DRO | 7,1 SOIL | 1 Oct 102 13::2 |
| 61 | 1 | 2g22333.d | 1. | NA CH2CL2 | 1,1 | 1 Oct 102 13::3 |
| 62 | 22 | 2g22334.d | 1. | ✓WG126394-05 1000ppm DRO CCV | 1,1 N15-27 | 1 Oct 102 13::4 |
| 63 | 50 | 2g22335.d | 1. | RE L0209495-01 Water DRO | 1,1 | 1 Oct 102 13::5 |
| 64 | 51 | 2g22336.d | 1. | RE L0209495-02 Water DRO | 1,1 | 2 Oct 102 13::0 |
| 65 | 52 | 2g22337.d | 1. | ✓L0209495-03 Water DRO | 1,1 | 2 Oct 102 13::1 |
| 66 | 53 | 2g22338.d | 1. | RE L0209495-04 Water DRO | 1,1 | 2 Oct 102 13::2 |
| 67 | 54 | 2g22339.d | 1. | ✓L0209495-05 Water DRO | 1,1 | 2 Oct 102 13::3 |
| 68 | 55 | 2g22340.d | 1. | ✓L0209495-06 Water DRO | 1,1 | 2 Oct 102 13::4 |
| 69 | 56 | 2g22341.d | 1. | RE L0209495-07 Water DRO | 1,1 | 2 Oct 102 13::5 |
| 70 | 57 | 2g22342.d | 1. | L0209495-08 Water DRO | 1,1 | 2 Oct 102 12::0 |
| 71 | 58 | 2g22343.d | 1. | L0209495-09 Water DRO | 1,1 | 2 Oct 102 12::1 |
| 72 | 1 | 2g22344.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::3 |
| 73 | 22 | 2g22345.d | 1. | ✓WG126394-06 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::4 |
| 74 | 59 | 2g22346.d | 1. | RE L0209495-10 Water DRO | 1,1 | 2 Oct 102 12::5 |
| 75 | 60 | 2g22347.d | 1. | RE L0209495-11 Water DRO | 1,1 | 2 Oct 102 12::0 |
| 76 | 61 | 2g22348.d | 1. | ✓L0209495-12 Water DRO | 1,1 | 2 Oct 102 12::1 |
| 77 | 62 | 2g22349.d | 1. | L0209495-13 Water DRO | 1,1 | 2 Oct 102 12::2 |
| 78 | 63 | 2g22350.d | 1. | L0209495-14 Water DRO | 1,1 | 2 Oct 102 12::3 |
| 79 | 64 | 2g22351.d | 1. | L0209495-15 Water DRO | 1,1 | 2 Oct 102 12::4 |
| 80 | 65 | 2g22352.d | 1. | L0209495-16 Water DRO | 1,1 | 2 Oct 102 12::5 |
| 81 | 66 | 2g22353.d | 1. | RE L0209495-17 Water DRO | 1,1 | 2 Oct 102 12::0 |
| 82 | 67 | 2g22354.d | 1. | ✓L0209495-18 Water DRO | 1,1 | 2 Oct 102 12::1 |
| 83 | 1 | 2g22355.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::2 |
| 84 | 22 | 2g22356.d | 1. | ✓WG126394-07 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::3 |
| 85 | 68 | 2g22357.d | 1. | ✓L0209495-19 Water DRO | 1,1 | 2 Oct 102 12::5 |
| 86 | 69 | 2g22358.d | 1. | RR10 L0209513-05 Soil DRO | 7,1 SOIL | 2 Oct 102 12::0 |
| 87 | 70 | 2g22359.d | 1. | RE L0209513-06 Soil DRO | 7,1 SOIL | 2 Oct 102 12::1 |
| 88 | 71 | 2g22360.d | 1. | RR20 L0209513-02 Soil DRO | 7,1 SOIL | 2 Oct 102 12::2 |
| 89 | 72 | 2g22361.d | 1. | RR20 L0209513-03 Soil DRO | 7,1 SOIL | 2 Oct 102 12::3 |
| 90 | 73 | 2g22362.d | 1. | RE L0209513-10 Soil DRO | 7,1 SOIL | 2 Oct 102 12::4 |
| 91 | 74 | 2g22363.d | 1. | L0209513-08 Soil DRO | 7,1 SOIL | 2 Oct 102 12::5 |
| 92 | 75 | 2g22364.d | 1. | L0209513-01 Soil DRO | 7,1 SOIL | 2 Oct 102 12::0 |
| 93 | 1 | 2g22365.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::1 |
| 94 | 22 | 2g22366.d | 1. | ✓WG126394-08 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::2 |
| 95 | 76 | 2g22367.d | 1. | RE L0209513-04 Soil DRO | 7,1 SOIL | 2 Oct 102 12::3 |
| 96 | 77 | 2g22368.d | 100. | L0210009-01 Soil DRO 100X | 7,100 SOIL | 2 Oct 102 12::4 |
| 97 | 78 | 2g22369.d | 10. | L0210009-01 Soil DRO 10X | 7,10 SOIL | 2 Oct 102 12::5 |
| 98 | 1 | 2g22370.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::1 |
| 99 | 1 | 2g22371.d | 1. | NA CH2CL2 | 1,1 | 2 Oct 102 12::2 |
| 100 | 22 | 2g22372.d | 1. | CL 1000ppm DRO CCV | 1,1 N15-27 | 2 Oct 102 12::3 |

CLK 10/2/02

KEMRON ENVIRONMENTAL SERVICES

# Semivolatile GC Laboratory Maintenance Log

Analysis Date/Time 10/1/02 Instrument ID HP2 Column ID RTX-5 Data Subdirectory 100102
Analyst Initials CLF

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. # 3 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

L0209285-09, Needed RE due to BLK
WG125523-01 L0209285-04, Needed RE Due to BLK
-04 -05 MS
-05 -06 MSD
09-285 (RE's) Reported
L0209337-01 10X, as PL
WG126345-03 LCS DUP 10/1 V192P3, o-Terphenyl high
L0209513-11, o-T low, Needs 10X
WG126306-01 BLK 10/1 V190P195, took hit > RL
L0209513-09, Need RE due to BLK
-07
-06
-10
-08
-01
L0209495-01, o-Terphenyl & octacosane low, Need RE
-02
-04
-07
-08
-09
-10
-11
-17
L0209513-04, Needs RR
Will be ~~meet~~ 20 times
CLF 10/2/02 > ~~Hgh~~ Cal
Amount found in BLK
L0209495-03, 05, 06, 13, 14, 15, 16, 18, 19, o-Terphenyl low
L0209513-05, 02, 03 ~~Meet~~ CLF 10/2/02 took hit > 20 times Amount found in BLK

Reviewed By: [illegible]

Volume 191
Page 11

Parameter: FLA-PRO HLO SOP #: EXPRO Revision #: 3
Extraction Analyst(s): RCK TV/KD Analyst(s): CAF, DP
Date/Time Extracted: 9/19/02 0830 Date TV/KD: 9-19-02
Spike/Surrogate Analyst: CAF Witness: RCK
Surrogate #: ESS0041-36 Earliest Hold Date: 9/24
Spike #: A = ESS0041-41 Spike #: B = —

Extraction Work Group WG 125593
Analytical Work Group WG 126690

Extract Relinquished By: RCK
Extract Received By & Date: OZJ 9/20/02

| | 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 | | ✓ | | | 1000 mL | 1 mL | | 1 mL | T | | | | WG 125593-02 |
| 2 | LCS | | ✓ | | | ↓ | ↓ | 1 mL | ↓ | ↓ | | | | WG -03 |
| 3 | 01-310-01 | FLA-PRO | ✓ | | | 975 mL | | | | | | | | |
| 4 | -02 | ↓ | ✓ | | | 960 mL | | | | | | | | |
| 5 | -03 | | ✓ | | | 975 mL | | | | | | | | WG 125593-01 |
| 6 | -04 MS | | ✓ | | | ↓ | | 1 mL | | | | | | * -04 |
| 7 | -05 MSD | | ✓ | | | 1000 mL | | ↓ | | | | | | * -05 |
| 8 | -06 | | ✓ | | | ↓ | | | | | | | | |
| 9 | -07 | | ✓ | | | 970 mL | | | | | | | | |
| 10 | -08 | | ✓ | | | 1000 mL | | | | | | | | |
| 11 | -09 | | ✓ | | | ↓ | | | | | | | | |
| 12 | -10 | | ✓ | | | ↓ | | | ↓ | ↓ | | | | |
| 13 | -11 | ↓ | ✓ | | | 950 mL | ↓ | | 1 mL | T | | | | |
| 14 | 09-337-01 | FLA-PRO | ✓ | | | 950 mL | 1 mL | | | | | | | |
| 15 | -02 | | ✓ | | | 910 mL | | | | | | | | |
| 16 | -03 | | ✓ | | | 910 mL | | | | | | | | |
| 17 | -04 | | ✓ | | | 960 mL | | | | | | | | |
| 18 | -05 | | ✓ | | | 980 mL | | | | | | | | |
| 19 | -06 | | ✓ | | | 1000 mL | | | | | | | | |
| 20 | -07 | ↓ | ✓ | | | 930 mL | ↓ | | ↓ | ↓ | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

9/20 DP 09/19/02

Methylene Chloride Lot #: 42084
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 #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: ER2211

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 3665A | | N/A | |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

Extraction Notes For Volume # 191 Page # 11

General Comments: * MS, MSD of 09-310-03

Extraction Anomalies: * Used (B) Bottle of SX 09-337-07 due to loss of SX during concentration stage.

Concentration Anomalies: None

Clean-Up Anomalies: None

Supervisor Review: _____ Date: _____

Run Date: 9/30/02

Analyst: CLK

Instrument: HP2

Method: 8015 (DRO)
(PRO)

| Workorders: | Due Date: | Priority: |
|---|---|---|
| 09-424 | 10/1 | |
| 09-260 | 9/19 | P1 |
| 09-260 (RE) | 9/19 | P1 |
| 09-310 | 9/30 | — |
| 09-337 | 9/26 | — |
| 64-285 | 9/27 | — |

| | | Analyst |
|---|---|---|
| System Performance Check: | Endrin/DDT Breakdown | NA |
| Initial Calibration: | Average RF | ✓ |
| | Linear or quadratic regression | NA |
| | Alt Source Check | ✓ |
| Continuing Calibration: | Continuing Calibration | ✓ |
| | Client Specific Requirements | ✓ |
| | Ending Standards | ✓ |
| | Special Standards | NA |
| Blanks: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| LCS/LCS DUP: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| | Spike Compounds | ✓ |
| | MS/MSD | ✓ |
| Samples: | Quant Reports/Chromatograms | ✓ |
| | Surrogates | ✓ |
| | Dilution runs | ✓ |
| | Check Sample Histories | NA |
| Data Package: | Run logs | ✓ |
| | Bench sheets | ✓ |
| | QC sheets | ✓ |
| | Upload results | ✓ |
| | Seedpak workgroups | ✓ |
| | Level 2 | |
| | Level 3 | |
| | Level 4 copies | |
| | Level x | |
| | Case narratives | |

| | Supervisor |
|---|---|
| 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: | |

√ = Checked & OK

NA = Not Applicable

Comments:

09-310-01, Needs RE
09-337-01, Needs 10X

Primary Reviewer: CLK 10/1/02

Secondary Reviewer: TRC 10/1/02

Supervisor Review: [illegible] 10/1/02

Run Date: 10/1/02

Analyst: CLK

Instrument: HP2

Method: 8015 (PRO) (DRO)

| Workorders: | Due Date: | Priority: |
|---|---|---|
| 09-285 | 9/27 | — |
| 09-285 (RE) | 9/27 | — |
| 09-337 | 9/26 | — |
| 09-457 | 10/2 | P1 |
| 09-424 (RE) | 10/1 | P1 |
| 09-573 | 10/3 | P1 |
| 09-495 | 10/3 | — |

| | | Analyst |
|---|---|---|
| System Performance Check: | Endrin/DDT Breakdown | NA |
| Initial Calibration: | Average RF | ↓ |
| | Linear or quadratic regression | ↓ |
| | Alt Source Check | ↓ |
| Continuing Calibration: | Continuing Calibration | ✓ |
| | Client Specific Requirements | ✓ |
| | Ending Standards | ✓ |
| | Special Standards | NA |
| Blanks: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| LCS/LCS DUP: | Quant Report/Chromatogram | ✓ |
| | Surrogates | ✓ |
| | Spike Compounds | ✓ |
| | MS/MSD | ✓ |
| Samples: | Quant Reports/Chromatograms | ✓ |
| | Surrogates | ✓ |
| | Dilution runs | ✓ |
| | Check Sample Histories | NA |
| Data Package: | Run logs | ✓ |
| | Bench sheets | ✓ |
| | QC sheets | ✓ |
| | Upload results | ✓ |
| | Seedpak workgroups | ✓ |
| | Level 2 | |
| | Level 3 | |
| | Level 4 copies | |
| | Level x | |
| | Case narratives | |

| | Supervisor |
|---|---|
| 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: | |

√ = Checked & OK

NA = Not Applicable

Comments:

09-285 (RE's) Reported

09-495-01, Need RE due to Surr.
-02
-04
-07
-08
-09
-10
-11
-17

09-573-01, Need RE due to BLK
-06
-08
-10
-07
-09

Primary Reviewer: CLK 10/2/02

Secondary Reviewer: ECZ 10/2/02

Supervisor Review: [illegible]

**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)]

| | | Example: |
|---|---|---|
| Where: | 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)]

| | | Example: |
|---|---|---|
| | Ax = Area of the compound being measured | 10000 |
| | Vf = Final volume of sample extract (mL). | 1 |
| Where: | 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.: L0209337**

**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** : For mid-run and ending CCVs analyzed with the initial extraction batch of this sample delivery group, pyrene %D, as measured by the confirming fluorescence detector, was outside of the limits. There was no pyrene to confirm by this detector.

**BATCH QA/QC**

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

**SAMPLES**

**Surrogates**: All sample fractions yielded a percent recovery for the surrogate that was below the advisory limits. All fractions were re-extracted out of holding time. The re-extraction of sample fraction 06 met all acceptance criteria. The re-extraction of all other sample fractions yielded a percent recovery for the surrogate that was below the advisory limit. For sample fraction 01, re-analyzed at a dilution, the surrogate was diluted out.
**Samples:** Sample fraction 01 was re-analyzed at a dilution in order to maintain the analysis within the range of calibration. 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: Eric Zamm DATE: 10/8/02

Rev. 7/14/00

## PAH HPLC DATA (8310)

**Login Number** L0209337

### 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: TQC Date: 10/7/02

# 2.2.7.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

# METHOD BLANK SUMMARY

Login Number: L0209337
Blank File ID: 4L003592.R
Date Analyzed: 09/22/02
Time Analyzed: 04:11
Analyst: "

Work Group: WG125710
Blank Sample ID: WG125616-02
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 | WG125616-03 | 4L003593.R | 09/22/02 05:08 | 01 |
| 062-CEF46-1S-Q3-02-20 | L0209337-01 | 4L003606.R | 09/22/02 17:24 | 01 |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 | 4L003607.R | 09/22/02 18:21 | 01 |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 | 4L003608.R | 09/22/02 19:18 | 01 |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 | 4L003609.R | 09/22/02 20:14 | 01 |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 | 4L003610.R | 09/22/02 21:11 | 01 |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 | 4L003611.R | 09/22/02 22:07 | 01 |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 | 4L003613.R | 09/23/02 00:01 | 01 |
| 062-CEF46-1S-Q3-02-20 | L0209337-01 | 4L003617.R | 09/25/02 17:41 | DL01 |

KEMRON FORMS - Modified 07/10/2002
Version 1.1
Report generated 10/07/2002 22:12

METHOD BLANK SUMMARY

Login Number: L0209337
Blank File ID: 4L003592.F
Date Analyzed: 09/22/02
Time Analyzed: 04:11
Analyst: "

Work Group: WG125710
Blank Sample ID: WG125616-02
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 | WG125616-03 | 4L003593.F | 09/22/02 05:08 | CF01 |
| 062-CEF46-1S-Q3-02-20 | L0209337-01 | 4L003606.F | 09/22/02 17:24 | CF01 |
| 062-CEF46-1S-Q3-02-20 | L0209337-01 | 4L003617.F | 09/25/02 17:41 | CFDL01 |

KEMRON FORMS - Modified 07/10/2002
Version 1.1
Report generated 10/07/2002 22:12

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209337
Run Date: 09/22/2002
Sample ID: WG125616-02
Instrument ID: HPLC4
Run Time: 04:11
Method: 8310
File ID: 4L003592.R
Analyst: "
Matrix: Water
Workgroup (AAB#): WG125710
Units: ug/L
Contract #:
Cal ID: HPLC4-20-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0673 | 1 | J |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 44.2 | 40 - 132 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/02/2002
Version 1.2
Report generated 10/07/2002 22:12

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209337 Run Date: 09/22/2002 Sample ID: WG125616-02
Instrument ID: HPLC4 Run Time: 04:11 Method: 8310
File ID: 4L003592.F Analyst: " Matrix: Water
Workgroup (AAB#): WG125710 Units: ug/L
Contract #: Cal ID: HPLC4-20-SEP-2002

| Analytes | MDL | RDL | Concentration | Dilution | Qualifier |
|---|---|---|---|---|---|
| Acenaphthene | 0.415 | 1.0 | 0.415 | 1 | U |
| Acenaphthylene | 0.351 | 1.0 | 0.351 | 1 | U |
| Anthracene | 0.285 | 1.0 | 0.285 | 1 | U |
| Benzo(a)anthracene | 0.0300 | 0.20 | 0.0300 | 1 | U |
| Benzo(a)pyrene | 0.0530 | 0.20 | 0.0530 | 1 | U |
| Benzo(b)fluoranthene | 0.0340 | 0.20 | 0.0340 | 1 | U |
| Benzo(g,h,i)perylene | 0.0500 | 0.20 | 0.0500 | 1 | U |
| Benzo(k)fluoranthene | 0.0720 | 0.20 | 0.0720 | 1 | U |
| Chrysene | 0.0240 | 0.20 | 0.0240 | 1 | U |
| Dibenzo(a,h)anthracene | 0.0770 | 0.20 | 0.0770 | 1 | U |
| Fluorene | 0.559 | 1.0 | 0.559 | 1 | U |
| Indeno(1,2,3-cd)pyrene | 0.0800 | 0.20 | 0.0800 | 1 | U |
| Naphthalene | 0.359 | 1.0 | 0.359 | 1 | U |
| 2-Methylnaphthalene | 0.336 | 1.0 | 0.336 | 1 | U |
| 1-Methylnaphthalene | 0.362 | 1.0 | 0.362 | 1 | U |
| Phenanthrene | 0.287 | 1.0 | 0.287 | 1 | U |
| Pyrene | 0.0680 | 0.20 | 0.0680 | 1 | U |
| Fluoranthene | 0.0500 | 0.20 | 0.0565 | 1 | J |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 44.6 | 40 - 132 | PASS |

* Analyte detected above RDL

U This analyte was not detected in the sample.

KEMRON FORMS - Modified 10/02/2002
Version 1.2
Report generated 10/07/2002 22:12

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209337
Run Date: 09/22/2002
Sample ID: WG125616-03
Instrument ID: HPLC4
Run Time: 05:08
Method: 8310
File ID: 4L003593.R
Analyst: "
Matrix: Water
Workgroup (AAB#): WG125710
Units: ug/L
Contract #:
Cal ID: HPLC4-20-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 50.0 | 14.8 | 29.6 | 25 - 78 | |
| Acenaphthylene | 50.0 | 14.6 | 29.1 | 25 - 77 | |
| Anthracene | 50.0 | 26.0 | 52.0 | 47 - 101 | |
| Benzo(a)anthracene | 5.00 | 2.99 | 59.7 | 50 - 115 | |
| Benzo(a)pyrene | 5.00 | 2.47 | 49.3 | 29 - 113 | |
| Benzo(b)fluoranthene | 5.00 | 2.83 | 56.5 | 41 - 110 | |
| Benzo(g,h,i)perylene | 5.00 | 1.76 | 35.2 | 11 - 84 | |
| Benzo(k)fluoranthene | 2.50 | 1.11 | 44.4 | 25 - 107 | |
| Chrysene | 5.00 | 2.58 | 51.7 | 39 - 120 | |
| Dibenzo(a,h)anthracene | 5.00 | 1.80 | 36.0 | 10 - 92 | |
| Fluoranthene | 5.00 | 2.83 | 56.6 | 55 - 104 | |
| Fluorene | 50.0 | 18.7 | 37.5 | 29 - 84 | |
| Indeno(1,2,3-cd)pyrene | 5.00 | 2.05 | 40.9 | 16 - 98 | |
| Naphthalene | 50.0 | 13.3 | 26.6 | 25 - 68 | |
| 2-Methylnaphthalene | 50.0 | 14.1 | 28.3 | 26 - 72 | |
| 1-Methylnaphthalene | 50.0 | 13.7 | 27.4 | 26 - 71 | |
| Phenanthrene | 50.0 | 23.5 | 46.9 | 39 - 95 | |
| Pyrene | 5.00 | 2.81 | 56.1 | 56 - 104 | |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 44.0 | 40 - 132 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/02/2002
Version 1.3
Report generated 10/07/2002 22:12

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209337
Run Date: 09/22/2002
Sample ID: WG125616-03
Instrument ID: HPLC4
Run Time: 05:08
Method: 8310
File ID: 4L003593.F
Analyst: "
Matrix: Water
Workgroup (AAB#): WG125710
Units: ug/L
Contract #:
Cal ID: HPLC4-20-SEP-2002

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Acenaphthene | 50.0 | 14.4 | 28.8 | 25 - 78 | |
| Acenaphthylene | 50.0 | | 0 | 25 - 77 | * |
| Anthracene | 50.0 | 25.7 | 51.5 | 47 - 101 | |
| Benzo(a)anthracene | 5.00 | 2.81 | 56.1 | 50 - 115 | |
| Benzo(a)pyrene | 5.00 | 2.29 | 45.9 | 29 - 113 | |
| Benzo(b)fluoranthene | 5.00 | 2.78 | 55.5 | 41 - 110 | |
| Benzo(g,h,i)perylene | 5.00 | 1.52 | 30.4 | 11 - 84 | |
| Benzo(k)fluoranthene | 2.50 | 1.10 | 43.8 | 25 - 107 | |
| Chrysene | 5.00 | 2.44 | 48.8 | 39 - 120 | |
| Dibenzo(a,h)anthracene | 5.00 | 1.61 | 32.2 | 10 - 92 | |
| Fluoranthene | 5.00 | 2.82 | 56.4 | 55 - 104 | |
| Fluorene | 50.0 | 18.3 | 36.6 | 29 - 84 | |
| Indeno(1,2,3-cd)pyrene | 5.00 | 2.01 | 40.1 | 16 - 98 | |
| Naphthalene | 50.0 | 12.5 | 25.0 | 25 - 68 | |
| 2-Methylnaphthalene | 50.0 | 13.5 | 27.0 | 26 - 72 | |
| 1-Methylnaphthalene | 50.0 | 13.1 | 26.2 | 26 - 71 | |
| Phenanthrene | 50.0 | 22.0 | 44.1 | 39 - 95 | |
| Pyrene | 5.00 | 2.37 | 47.4 | 56 - 104 | * |

| Surrogates | % Recovery | Surrogate Limits | Qualifier |
|---|---|---|---|
| p-terphenyl-d14 | 43.7 | 40 - 132 | PASS |

* Analyte outside control limits

NS Analyte not spiked

KEMRON FORMS - Modified 10/02/2002
Version 1.3
Report generated 10/07/2002 22:12

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 9

Analytical Method: 8310

AAB#: WG125710

Login Number: L0209337

| 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-CEF46-1S-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 1.09 | 09/22/02 | 40 | 3.25 | |
| 062-CEF46-1S-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 1.09 | 09/25/02 | 40 | 6.26 | |
| 062-CEF46-21I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 1.03 | 09/22/02 | 40 | 3.37 | |
| 062-CEF46-24D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 1.06 | 09/22/02 | 40 | 3.41 | |
| 062-CEF46-25I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.979 | 09/22/02 | 40 | 3.45 | |
| 062-CEF46-26I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 0.917 | 09/23/02 | 40 | 3.53 | |
| 062-CEF46-5I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 1.12 | 09/22/02 | 40 | 3.29 | |
| 062-CEF46-6D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 7 | 1.10 | 09/22/02 | 40 | 3.33 | |

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

KEMRON FORMS - Modified 09/12/2002
Version 1.2
Report generated 10/07/2002 22:12

SURROGATE STANDARDS

Login Number: L0209337
Instrument Id: HPLC4
Workgroup (AAB#): WG125710

Method: 8310
Matrix: WATER

| Sample Number | Dilution | Tag | 1 |
|---|---|---|---|
| L0209337-01 | 1.00 | 01 | 33.0 |
| L0209337-01 | 1.00 | CF01 | 32.3 |
| L0209337-01 | 10.0 | CFDL01 | |
| L0209337-01 | 10.0 | DL01 | |
| L0209337-02 | 1.00 | 01 | 19.0 |
| L0209337-03 | 1.00 | 01 | 24.3 |
| L0209337-04 | 1.00 | 01 | 20.8 |
| L0209337-05 | 1.00 | 01 | 21.8 |
| L0209337-06 | 1.00 | 01 | 14.9 |
| L0209337-07 | 1.00 | 01 | 20.3 |
| WG125616-02 | 1.00 | 01 | 44.2 |
| WG125616-02 | 1.00 | CF01 | 44.6 |
| WG125616-03 | 1.00 | 01 | 44.0 |
| WG125616-03 | 1.00 | CF01 | 43.7 |

| Surrogates | Surrogate Limits | | |
|---|---|---|---|
| 1 - p-terphenyl-d14 | 40 | - | 132 |

Underline = Result out of surrogate limits

DL = surrogate diluted out

KEMRON FORMS - Modified 09/18/2002
Version 1.2
Report generated 10/07/2002 22:12

HPLC4 8310 CALIBRATION

Calib. Data Modified : 9/21/2002 3:41:57 PM

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=360,100, TT

| RetTime [min] | Sig | Lvl | Amount [ug/L] | Area | Amt/Area | Ref | Grp | Name |
|---|---|---|---|---|---|---|---|---|
| 9.370 | 2 | 1 | 1.00000 | 113.50661 | 8.81006e-3 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 575.15820 | 8.69326e-3 | | | |
| | | 3 | 10.00000 | 1182.50085 | 8.45665e-3 | | | |
| | | 4 | 20.00000 | 2466.37598 | 8.10906e-3 | | | |
| | | 5 | 50.00000 | 5949.45410 | 8.40413e-3 | | | |
| | | 6 | 100.00000 | 1.18503e4 | 8.43861e-3 | | | |
| 9.386 | 1 | 1 | 1.00000 | 36.15768 | 2.76566e-2 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 181.29584 | 2.75792e-2 | | | |
| | | 3 | 10.00000 | 374.62244 | 2.66935e-2 | | | |
| | | 4 | 20.00000 | 783.70270 | 2.55199e-2 | | | |
| | | 5 | 50.00000 | 1921.86047 | 2.60165e-2 | | | |
| | | 6 | 100.00000 | 3962.24902 | 2.52382e-2 | | | |
| 10.990 | 2 | 1 | 1.00000 | 28.32826 | 3.53004e-2 | | | Acenaphthylene #2 |
| | | 2 | 5.00000 | 137.48097 | 3.63687e-2 | | | |
| | | 3 | 10.00000 | 282.83063 | 3.53568e-2 | | | |
| | | 4 | 20.00000 | 588.70093 | 3.39731e-2 | | | |
| | | 5 | 50.00000 | 1437.33740 | 3.47865e-2 | | | |
| | | 6 | 100.00000 | 2944.69458 | 3.39594e-2 | | | |
| 11.936 | 2 | 1 | 1.00000 | 67.43660 | 1.48287e-2 | | | 1-Methylnaphthalene #3 |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000 | 339.69986 | 1.47189e-2 | |
| | | 3 | 10.00000 | 697.62793 | 1.43343e-2 | |
| | | 4 | 20.00000 | 1455.42712 | 1.37417e-2 | |
| | | 5 | 50.00000 | 3540.73169 | 1.41214e-2 | |
| | | 6 | 100.00000 | 7205.42578 | 1.38784e-2 | |
| 11.952 | 1 | 1 | 1.00000 | 41.36844 | 2.41730e-2 | 1-Methylnaphthalene #3 |
| | | 2 | 5.00000 | 208.15732 | 2.40203e-2 | |
| | | 3 | 10.00000 | 426.31619 | 2.34568e-2 | |
| | | 4 | 20.00000 | 890.99243 | 2.24469e-2 | |
| | | 5 | 50.00000 | 2194.00391 | 2.27894e-2 | |
| | | 6 | 100.00000 | 4509.24463 | 2.21767e-2 | |
| 12.511 | 2 | 1 | 1.00000 | 78.89049 | 1.26758e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 394.82016 | 1.26640e-2 | |
| | | 3 | 10.00000 | 811.48065 | 1.23232e-2 | |
| | | 4 | 20.00000 | 1689.06653 | 1.18409e-2 | |
| | | 5 | 50.00000 | 4096.85840 | 1.22045e-2 | |
| | | 6 | 100.00000 | 8267.85547 | 1.20950e-2 | |
| 12.527 | 1 | 1 | 1.00000 | 53.71581 | 1.86165e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 268.35944 | 1.86317e-2 | |
| | | 3 | 10.00000 | 553.23322 | 1.80756e-2 | |
| | | 4 | 20.00000 | 1155.66101 | 1.73061e-2 | |
| | | 5 | 50.00000 | 2823.16040 | 1.77106e-2 | |
| | | 6 | 100.00000 | 5776.03906 | 1.73129e-2 | |
| 12.989 | 2 | 1 | 1.00000 | 41.25003 | 2.42424e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 207.93272 | 2.40462e-2 | |
| | | 3 | 10.00000 | 427.28159 | 2.34038e-2 | |
| | | 4 | 20.00000 | 891.23303 | 2.24408e-2 | |
| | | 5 | 50.00000 | 2174.84375 | 2.29902e-2 | |
| | | 6 | 100.00000 | 4440.60303 | 2.25195e-2 | |
| 13.005 | 1 | 1 | 1.00000 | 67.56156 | 1.48013e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 338.71442 | 1.47617e-2 | |
| | | 3 | 10.00000 | 697.65833 | 1.43337e-2 | |
| | | 4 | 20.00000 | 1456.78040 | 1.37289e-2 | |
| | | 5 | 50.00000 | 3543.34277 | 1.41110e-2 | |
| | | 6 | 100.00000 | 7218.86475 | 1.38526e-2 | |
| 13.645 | 2 | 1 | 1.00000 | 53.42283 | 1.87186e-2 | Fluorene #6 |
| | | 2 | 5.00000 | 271.81696 | 1.83947e-2 | |
| | | 3 | 10.00000 | 558.21259 | 1.79143e-2 | |
| | | 4 | 20.00000 | 1164.00928 | 1.71820e-2 | |
| | | 5 | 50.00000 | 2835.69336 | 1.76324e-2 | |
| | | 6 | 100.00000 | 5779.26465 | 1.73032e-2 | |
| 13.661 | 1 | 1 | 1.00000 | 142.12080 | 7.03627e-3 | Fluorene #6 |
| | | 2 | 5.00000 | 713.18817 | 7.01077e-3 | |
| | | 3 | 10.00000 | 1462.86792 | 6.83589e-3 | |
| | | 4 | 20.00000 | 3039.59375 | 6.57983e-3 | |
| | | 5 | 50.00000 | 7369.04883 | 6.78514e-3 | |
| | | 6 | 100.00000 | 1.48701e4 | 6.72489e-3 | |
| 15.030 | 2 | 1 | 1.00000 | 54.35011 | 1.83992e-2 | Phenanthrene #7 |
| | | 2 | 5.00000 | 271.18774 | 1.84374e-2 | |
| | | 3 | 10.00000 | 557.24799 | 1.79453e-2 | |
| | | 4 | 20.00000 | 1160.96094 | 1.72271e-2 | |
| | | 5 | 50.00000 | 2824.41431 | 1.77028e-2 | |
| | | 6 | 100.00000 | 5771.65283 | 1.73261e-2 | |
| 15.046 | 1 | 1 | 1.00000 | 5.95919 | 1.67808e-1 | Phenanthrene #7 |
| | | 2 | 5.00000 | 26.72914 | 1.87062e-1 | |
| | | 3 | 10.00000 | 55.65540 | 1.79677e-1 | |

| [min] | Sig | | [ug/L] | | | | |
|---|---|---|---|---|---|---|---|
| | | 4 | 20.00000 | 116.89686 | 1.71091e-1 | | |
| | | 5 | 50.00000 | 289.00418 | 1.73008e-1 | | |
| | | 6 | 100.00000 | 601.35211 | 1.66292e-1 | | |
| 16.434 | 2 | 1 | 1.00000 | 86.66844 | 1.15382e-2 | | Anthracene #8 |
| | | 2 | 5.00000 | 442.03864 | 1.13112e-2 | | |
| | | 3 | 10.00000 | 911.06781 | 1.09761e-2 | | |
| | | 4 | 20.00000 | 1898.27124 | 1.05359e-2 | | |
| | | 5 | 50.00000 | 4625.47705 | 1.08097e-2 | | |
| | | 6 | 100.00000 | 9245.92676 | 1.08156e-2 | | |
| 16.451 | 1 | 1 | 1.00000 | 3.09896 | 3.22688e-1 | | Anthracene #8 |
| | | 2 | 5.00000 | 15.51351 | 3.22300e-1 | | |
| | | 3 | 10.00000 | 31.83507 | 3.14119e-1 | | |
| | | 4 | 20.00000 | 66.18985 | 3.02161e-1 | | |
| | | 5 | 50.00000 | 162.79338 | 3.07138e-1 | | |
| | | 6 | 100.00000 | 327.53006 | 3.05315e-1 | | |
| 17.814 | 2 | 1 | 1.00000e-1 | 4.45056 | 2.24691e-2 | | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 22.06173 | 2.26637e-2 | | |
| | | 3 | 1.00000 | 45.92867 | 2.17729e-2 | | |
| | | 4 | 2.00000 | 96.07294 | 2.08175e-2 | | |
| | | 5 | 5.00000 | 235.31152 | 2.12484e-2 | | |
| | | 6 | 10.00000 | 483.72876 | 2.06727e-2 | | |
| 17.831 | 1 | 1 | 1.00000e-1 | 3.68034 | 2.71714e-2 | | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 18.38673 | 2.71935e-2 | | |
| | | 3 | 1.00000 | 37.53587 | 2.66412e-2 | | |
| | | 4 | 2.00000 | 78.17149 | 2.55848e-2 | | |
| | | 5 | 5.00000 | 192.03598 | 2.60368e-2 | | |
| | | 6 | 10.00000 | 394.27036 | 2.53633e-2 | | |
| 18.819 | 2 | 1 | 1.00000e-1 | 8.04064 | 1.24368e-2 | | Pyrene #10 |
| | | 2 | 5.00000e-1 | 41.80117 | 1.19614e-2 | | |
| | | 3 | 1.00000 | 86.62556 | 1.15439e-2 | | |
| | | 4 | 2.00000 | 181.36873 | 1.10273e-2 | | |
| | | 5 | 5.00000 | 444.82697 | 1.12403e-2 | | |
| | | 6 | 10.00000 | 914.12830 | 1.09394e-2 | | |
| 18.835 | 1 | 1 | 1.00000e-1 | 2.49880 | 4.00192e-2 | | Pyrene #10 |
| | | 2 | 5.00000e-1 | 12.35667 | 4.04640e-2 | | |
| | | 3 | 1.00000 | 25.55995 | 3.91237e-2 | | |
| | | 4 | 2.00000 | 54.85559 | 3.64594e-2 | | |
| | | 5 | 5.00000 | 136.01701 | 3.67601e-2 | | |
| | | 6 | 10.00000 | 286.95029 | 3.48492e-2 | | |
| 21.166 | 2 | 1 | 1.00000 | 13.68986 | 7.30468e-2 | | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 69.45084 | 7.19934e-2 | | |
| | | 3 | 10.00000 | 144.49483 | 6.92066e-2 | | |
| | | 4 | 20.00000 | 303.50552 | 6.58967e-2 | | |
| | | 5 | 50.00000 | 742.32825 | 6.73556e-2 | | |
| | | 6 | 100.00000 | 1513.75256 | 6.60610e-2 | | |
| 21.184 | 1 | 1 | 1.00000 | 3.44864 | 2.89969e-1 | | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 15.59836 | 3.20547e-1 | | |
| | | 3 | 10.00000 | 31.67122 | 3.15744e-1 | | |
| | | 4 | 20.00000 | 66.96288 | 2.98673e-1 | | |
| | | 5 | 50.00000 | 161.49503 | 3.09607e-1 | | |
| | | 6 | 100.00000 | 333.88467 | 2.99505e-1 | | |
| 22.481 | 2 | 1 | 1.00000e-1 | 4.41380 | 2.26562e-2 | | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 21.93929 | 2.27902e-2 | | |
| | | 3 | 1.00000 | 44.75309 | 2.23448e-2 | | |
| | | 4 | 2.00000 | 94.19716 | 2.12321e-2 | | |
| | | 5 | 5.00000 | 231.56067 | 2.15926e-2 | | |

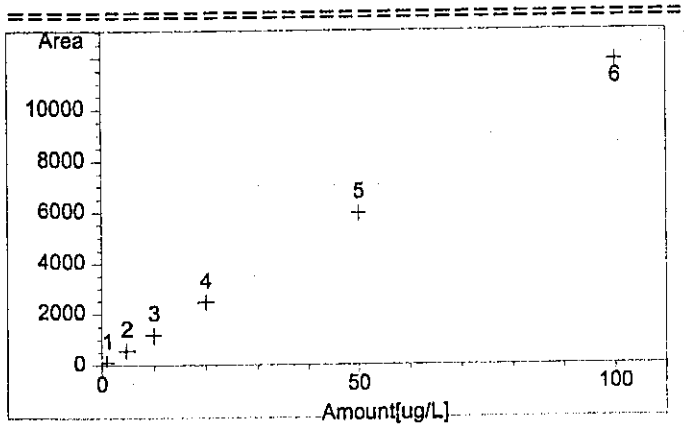
| [min] | Sig | | [ug/L] | | | | |
|---|---|---|---|---|---|---|---|
| | | 6 | 10.00000 | 477.03839 | 2.09627e-2 | | |
| 22.500 | 1 | 1 | 1.00000e-1 | 11.41377 | 8.76135e-3 | | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 56.93108 | 8.78255e-3 | | |
| | | 3 | 1.00000 | 118.36651 | 8.44834e-3 | | |
| | | 4 | 2.00000 | 247.33057 | 8.08634e-3 | | |
| | | 5 | 5.00000 | 609.34204 | 8.20557e-3 | | |
| | | 6 | 10.00000 | 1266.77136 | 7.89408e-3 | | |
| 23.359 | 2 | 1 | 1.00000e-1 | 6.12014 | 1.63395e-2 | | Chrysene #13 |
| | | 2 | 5.00000e-1 | 30.40728 | 1.64434e-2 | | |
| | | 3 | 1.00000 | 62.44849 | 1.60132e-2 | | |
| | | 4 | 2.00000 | 131.21184 | 1.52425e-2 | | |
| | | 5 | 5.00000 | 322.17139 | 1.55197e-2 | | |
| | | 6 | 10.00000 | 662.99872 | 1.50830e-2 | | |
| 23.376 | 1 | 1 | 1.00000e-1 | 2.46762 | 4.05248e-2 | | Chrysene #13 |
| | | 2 | 5.00000e-1 | 12.35089 | 4.04829e-2 | | |
| | | 3 | 1.00000 | 24.32562 | 4.11089e-2 | | |
| | | 4 | 2.00000 | 50.90138 | 3.92917e-2 | | |
| | | 5 | 5.00000 | 124.39308 | 4.01952e-2 | | |
| | | 6 | 10.00000 | 259.63892 | 3.85150e-2 | | |
| 26.093 | 2 | 1 | 1.00000e-1 | 4.46468 | 2.23980e-2 | | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 22.81914 | 2.19114e-2 | | |
| | | 3 | 1.00000 | 47.48998 | 2.10571e-2 | | |
| | | 4 | 2.00000 | 98.69814 | 2.02638e-2 | | |
| | | 5 | 5.00000 | 241.35190 | 2.07166e-2 | | |
| | | 6 | 10.00000 | 497.49078 | 2.01009e-2 | | |
| 26.109 | 1 | 1 | 1.00000e-1 | 5.21623 | 1.91709e-2 | | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 27.46255 | 1.82066e-2 | | |
| | | 3 | 1.00000 | 56.03418 | 1.78462e-2 | | |
| | | 4 | 2.00000 | 117.52394 | 1.70178e-2 | | |
| | | 5 | 5.00000 | 288.37061 | 1.73388e-2 | | |
| | | 6 | 10.00000 | 597.08154 | 1.67481e-2 | | |
| 27.533 | 2 | 1 | 5.00000e-2 | 1.34447 | 3.71893e-2 | | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 10.21462 | 2.44747e-2 | | |
| | | 3 | 5.00000e-1 | 20.09780 | 2.48783e-2 | | |
| | | 4 | 1.00000 | 43.10554 | 2.31989e-2 | | |
| | | 5 | 2.50000 | 104.96660 | 2.38171e-2 | | |
| | | 6 | 5.00000 | 216.73499 | 2.30696e-2 | | |
| 27.542 | 1 | 1 | 5.00000e-2 | 16.02236 | 3.12064e-3 | | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 81.89045 | 3.05286e-3 | | |
| | | 3 | 5.00000e-1 | 167.50449 | 2.98499e-3 | | |
| | | 4 | 1.00000 | 354.43918 | 2.82136e-3 | | |
| | | 5 | 2.50000 | 867.17621 | 2.88292e-3 | | |
| | | 6 | 5.00000 | 1767.10413 | 2.82949e-3 | | |
| 28.623 | 2 | 1 | 1.00000e-1 | 2.62369 | 3.81143e-2 | | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 16.64720 | 3.00351e-2 | | |
| | | 3 | 1.00000 | 35.49910 | 2.81697e-2 | | |
| | | 4 | 2.00000 | 74.54464 | 2.68296e-2 | | |
| | | 5 | 5.00000 | 185.12453 | 2.70088e-2 | | |
| | | 6 | 10.00000 | 383.82956 | 2.60532e-2 | | |
| 28.637 | 1 | 1 | 1.00000e-1 | 18.70416 | 5.34640e-3 | | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 94.83067 | 5.27256e-3 | | |
| | | 3 | 1.00000 | 196.83517 | 5.08039e-3 | | |
| | | 4 | 2.00000 | 416.25037 | 4.80480e-3 | | |
| | | 5 | 5.00000 | 1032.61243 | 4.84209e-3 | | |
| | | 6 | 10.00000 | 2154.75366 | 4.64090e-3 | | |
| 30.497 | 2 | 1 | 1.00000e-1 | 4.03842 | 2.47622e-2 | | Dibenz(a,h)anthracene |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000e-1 | 9.72626 | 5.14072e-2 | |
| | | 3 | 1.00000 | 10.95264 | 9.13022e-2 | |
| | | 4 | 2.00000 | 20.66441 | 9.67848e-2 | |
| | | 5 | 5.00000 | 49.22962 | 1.01565e-1 | |
| | | 6 | 10.00000 | 100.69902 | 9.93058e-2 | |
| 30.500 | 1 | 1 | 1.00000e-1 | 2.30826 | 4.33227e-2 | Dibenz(a,h)anthracene |
| | | 2 | 5.00000e-1 | 10.82063 | 4.62080e-2 | |
| | | 3 | 1.00000 | 23.52898 | 4.25008e-2 | |
| | | 4 | 2.00000 | 49.56461 | 4.03514e-2 | |
| | | 5 | 5.00000 | 123.53096 | 4.04757e-2 | |
| | | 6 | 10.00000 | 258.50845 | 3.86835e-2 | |
| 31.297 | 2 | 1 | 1.00000e-1 | 1.20689 | 8.28574e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 7.93134 | 6.30410e-2 | |
| | | 3 | 1.00000 | 17.30395 | 5.77903e-2 | |
| | | 4 | 2.00000 | 35.98459 | 5.55793e-2 | |
| | | 5 | 5.00000 | 89.16454 | 5.60761e-2 | |
| | | 6 | 10.00000 | 182.95050 | 5.46596e-2 | |
| 31.330 | 1 | 1 | 1.00000e-1 | 3.25644 | 3.07083e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 16.79211 | 2.97759e-2 | |
| | | 3 | 1.00000 | 35.19607 | 2.84123e-2 | |
| | | 4 | 2.00000 | 74.49189 | 2.68486e-2 | |
| | | 5 | 5.00000 | 187.63147 | 2.66480e-2 | |
| | | 6 | 10.00000 | 398.71832 | 2.50804e-2 | |
| 32.289 | 2 | 1 | 1.00000e-1 | 4.03389 | 2.47900e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 22.99526 | 2.17436e-2 | |
| | | 3 | 1.00000 | 47.15022 | 2.12088e-2 | |
| | | 4 | 2.00000 | 99.87663 | 2.00247e-2 | |
| | | 5 | 5.00000 | 248.71965 | 2.01030e-2 | |
| | | 6 | 10.00000 | 515.31970 | 1.94054e-2 | |
| 32.292 | 1 | 1 | 1.00000e-1 | 6.42581 | 1.55622e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 32.39291 | 1.54355e-2 | |
| | | 3 | 1.00000 | 65.71149 | 1.52180e-2 | |
| | | 4 | 2.00000 | 137.54715 | 1.45405e-2 | |
| | | 5 | 5.00000 | 337.52823 | 1.48136e-2 | |
| | | 6 | 10.00000 | 696.87433 | 1.43498e-2 | |

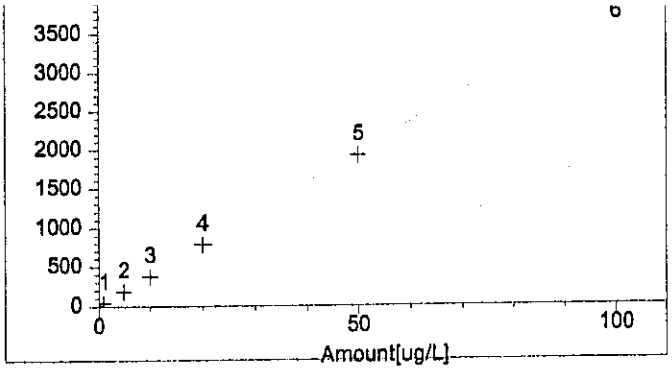
## Peak Sum Table

***No Entries in table***

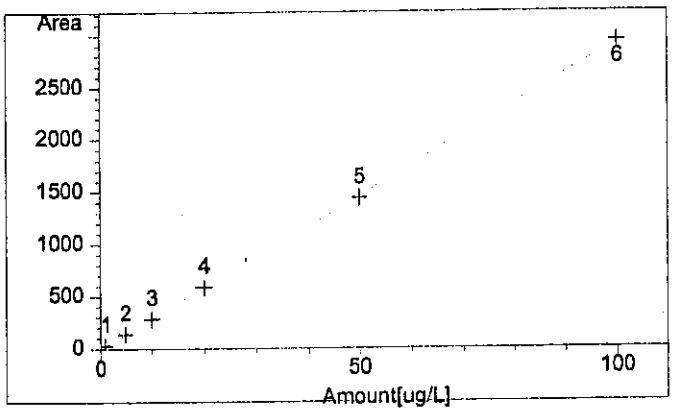
## Calibration Curves



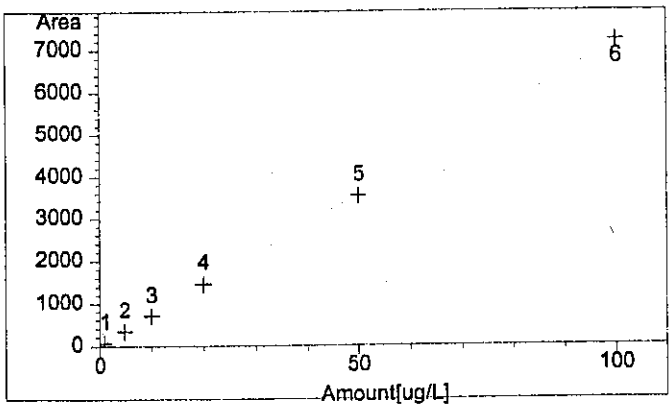

Naphthalene #1 at exp. RT: 9.370
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 42.10085
Formula: y = mx + b
m: 118.56238
b: 12.09798
x: Amount[ug/L]
y: Area



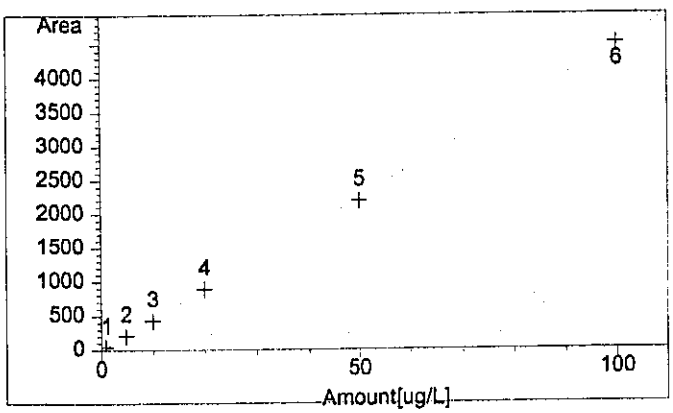

FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99990
Residual Std. Dev.: 22.76520
Formula: y = mx + b
m: 39.55796
b: -13.98462
x: Amount [ug/L]
y: Area



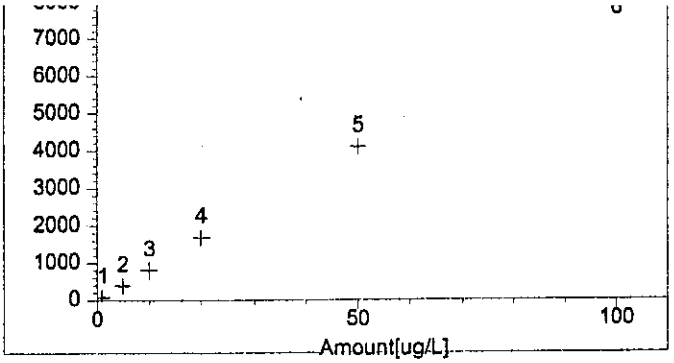

Acenaphthylene #2 at exp. RT: 10.990
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99993
Residual Std. Dev.: 13.87446
Formula: y = mx + b
m: 29.39910
b: -6.97993
x: Amount [ug/L]
y: Area



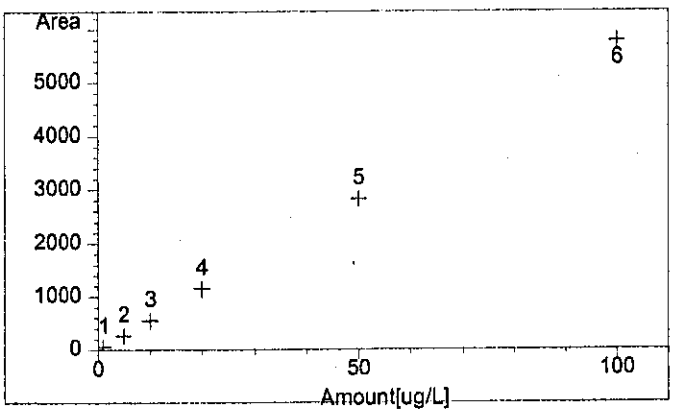

1-Methylnaphthalene #3 at exp. RT: 11.936
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 27.06350
Formula: y = mx + b
m: 71.97944
b: -11.68952
x: Amount [ug/L]
y: Area



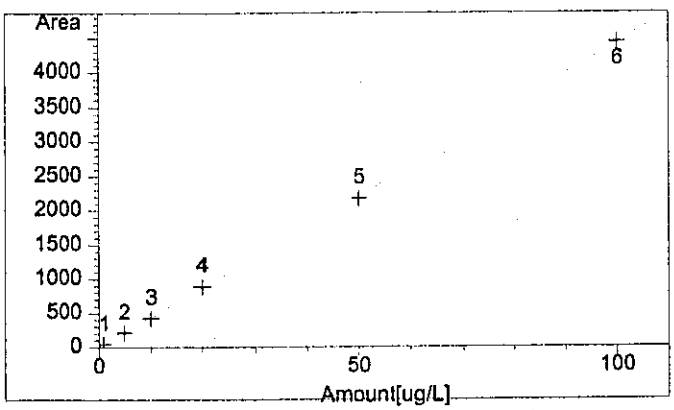

1-Methylnaphthalene #3 at exp. RT: 11.952
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 23.34269
Formula: y = mx + b
m: 45.03399
b: -15.17702
x: Amount [ug/L]
y: Area



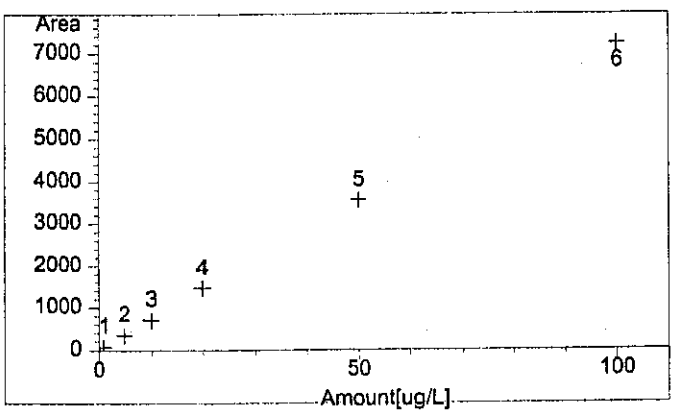

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 24.46395
Formula: y = mx + b
m: 82.63518
b: -4.45318
x: Amount [ug/L]
y: Area



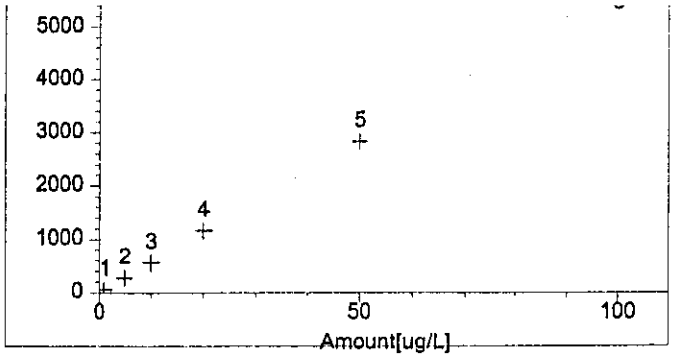

2-Methylnaphthalene #4 at exp. RT: 12.527
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 25.92926
Formula: y = mx + b
m: 57.68935
b: -14.29286
x: Amount [ug/L]
y: Area



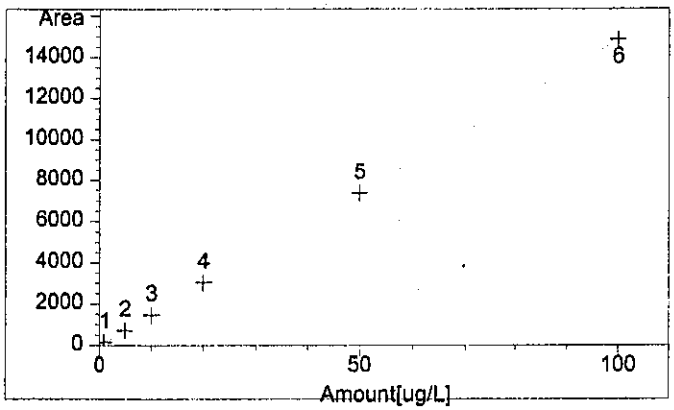

Acenaphthene #5 at exp. RT: 12.989
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 18.49792
Formula: y = mx + b
m: 44.35375
b: -9.52193
x: Amount [ug/L]
y: Area



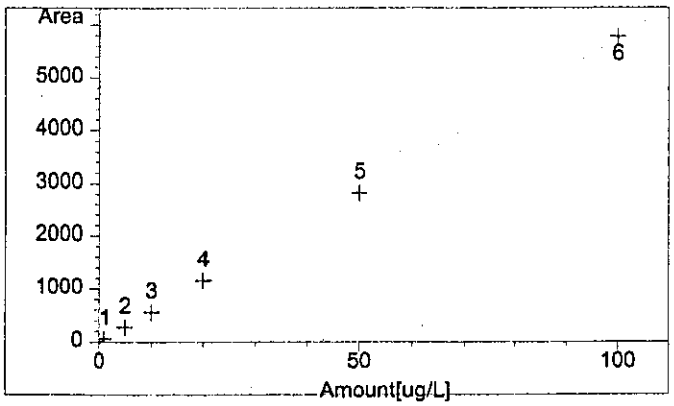

Acenaphthene #5 at exp. RT: 13.005
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 28.42417
Formula: y = mx + b
m: 72.11015
b: -12.79514
x: Amount [ug/L]
y: Area



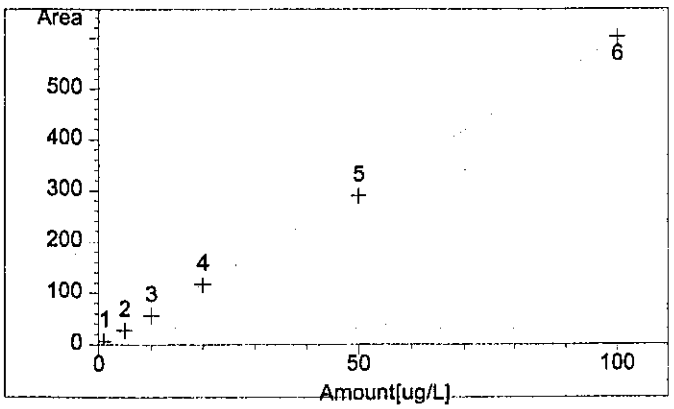

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 22.64515
Formula: y = mx + b
m: 57.72968
b: -10.75723
x: Amount[ug/L]
y: Area



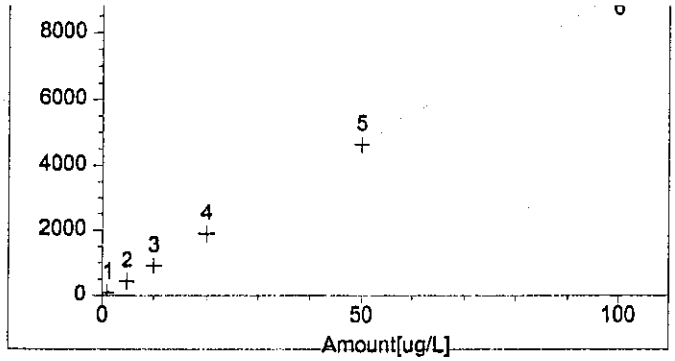

Fluorene #6 at exp. RT: 13.661
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 43.79925
Formula: y = mx + b
m: 148.60784
b: -6.30196
x: Amount[ug/L]
y: Area



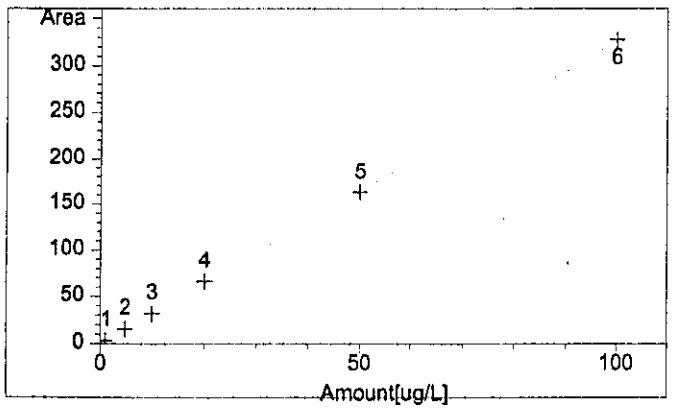

Phenanthrene #7 at exp. RT: 15.030
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99994
Residual Std. Dev.: 25.16007
Formula: y = mx + b
m: 57.63105
b: -11.36587
x: Amount[ug/L]
y: Area



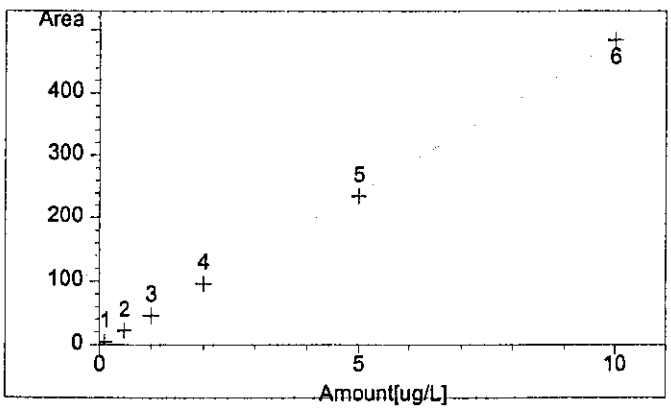

Phenanthrene #7 at exp. RT: 15.046
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99982
Residual Std. Dev.: 4.52698
Formula: y = mx + b
m: 6.00070
b: -2.93332
x: Amount[ug/L]
y: Area



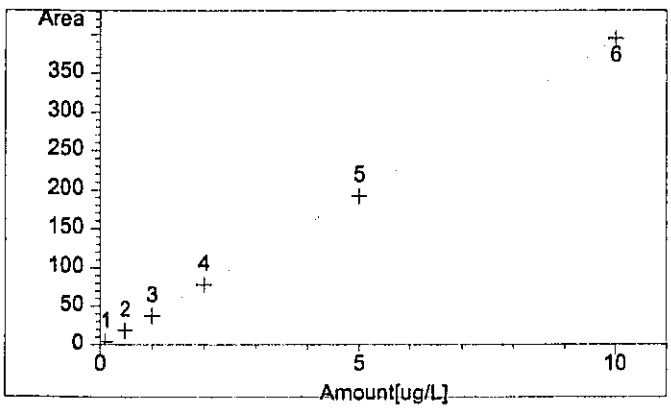

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 24.43398
Formula: y = mx + b
m: 92.52675
b: -7.51211e-2
x: Amount [ug/L]
y: Area



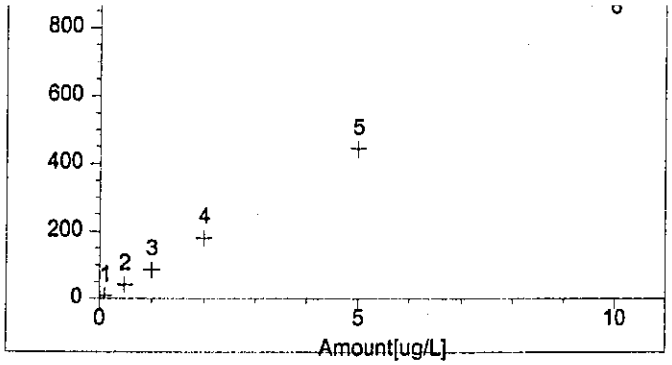

Anthracene #8 at exp. RT: 16.451
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.67749
Formula: y = mx + b
m: 3.27667
b: -3.57142e-1
x: Amount [ug/L]
y: Area



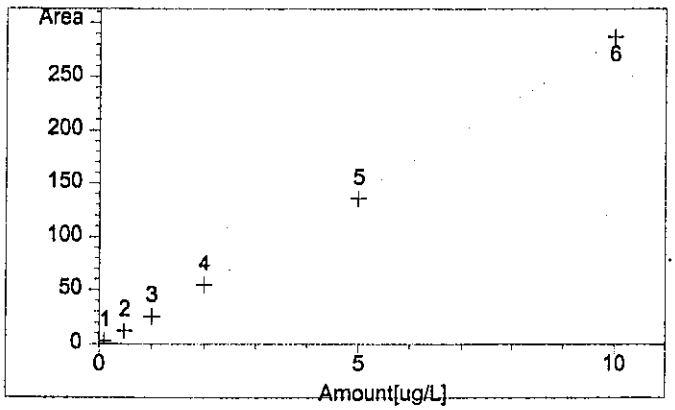

Fluoranthene #9 at exp. RT: 17.814
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 2.54900
Formula: y = mx + b
m: 48.30746
b: -1.56638
x: Amount [ug/L]
y: Area



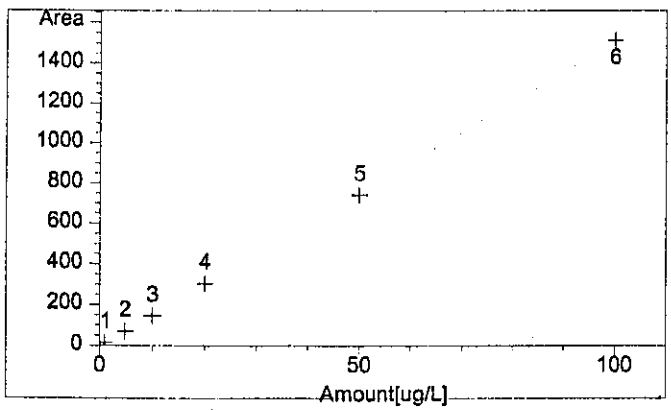

Fluoranthene #9 at exp. RT: 17.831
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 1.96619
Formula: y = mx + b
m: 39.36727
b: -1.16435
x: Amount [ug/L]
y: Area



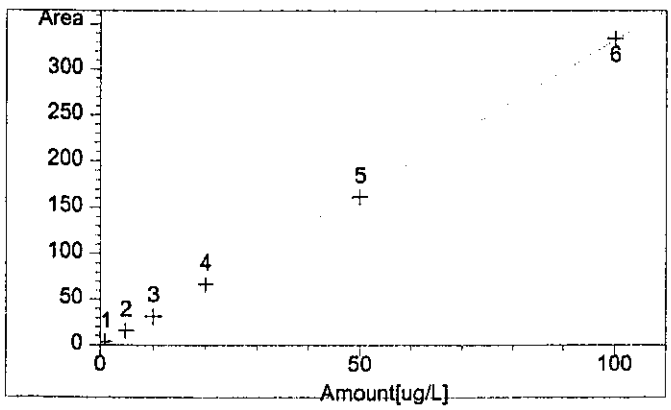

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99992
Residual Std. Dev.: 4.72317
Formula: y = mx + b
m: 91.30718
b: -3.07459
x: Amount [ug/L]
y: Area



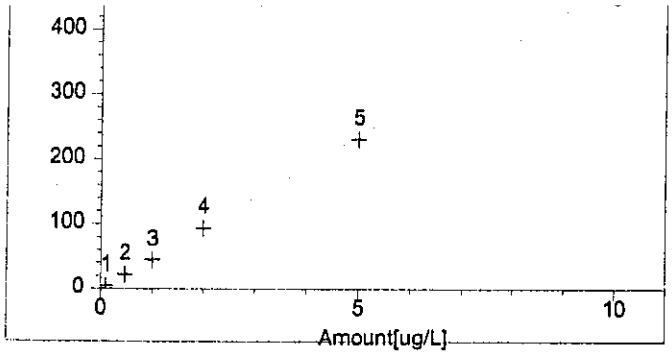

Pyrene #10 at exp. RT: 18.835
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99969
Residual Std. Dev.: 2.87563
Formula: y = mx + b
m: 28.62860
b: -2.03623
x: Amount [ug/L]
y: Area



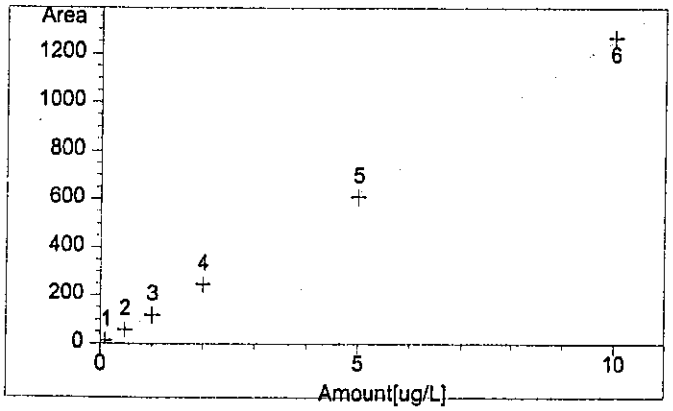

p-Terphenyl d14 #11* at exp. RT: 21.166
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 6.08636
Formula: y = mx + b
m: 15.13008
b: -3.85316
x: Amount [ug/L]
y: Area



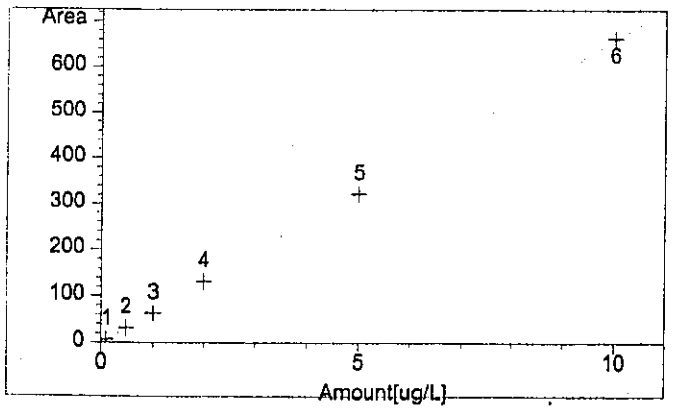

p-Terphenyl d14 #11* at exp. RT: 21.184
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 2.19201
Formula: y = mx + b
m: 3.32901
b: -8.76314e-1
x: Amount [ug/L]
y: Area



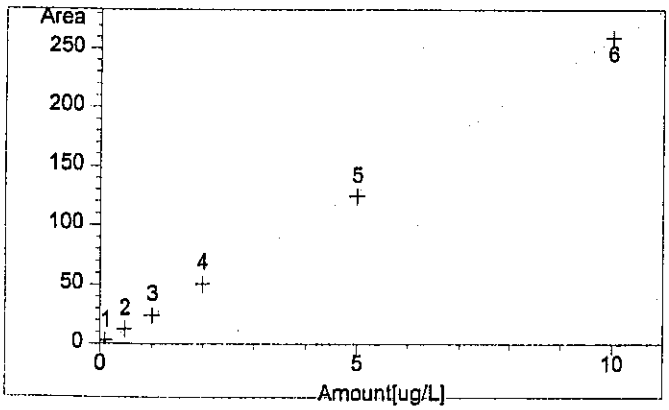

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 2.69756
Formula: y = mx + b
m: 47.63481
b: -1.72930
x: Amount [ug/L]
y: Area



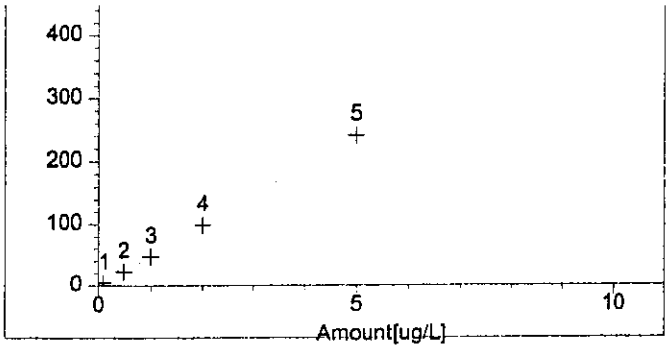

Benzo(a)anthracene #12 at exp. RT: 22.500
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99984
Residual Std. Dev.: 9.13801
Formula: y = mx + b
m: 126.41028
b: -5.86798
x: Amount [ug/L]
y: Area



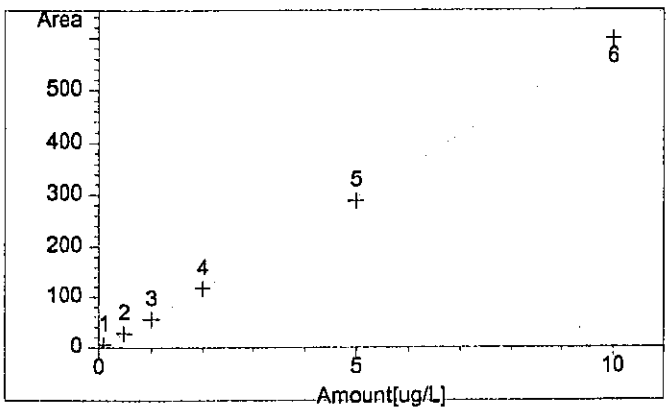

Chrysene #13 at exp. RT: 23.359
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 3.62002
Formula: y = mx + b
m: 66.20908
b: -2.30442
x: Amount [ug/L]
y: Area



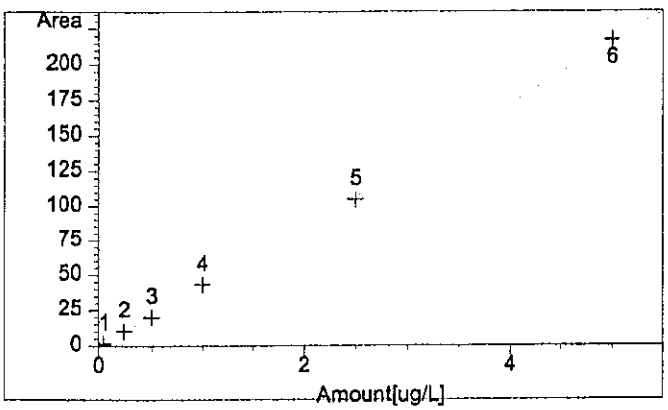

Chrysene #13 at exp. RT: 23.376
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 2.08259
Formula: y = mx + b
m: 25.86946
b: -1.01350
x: Amount [ug/L]
y: Area



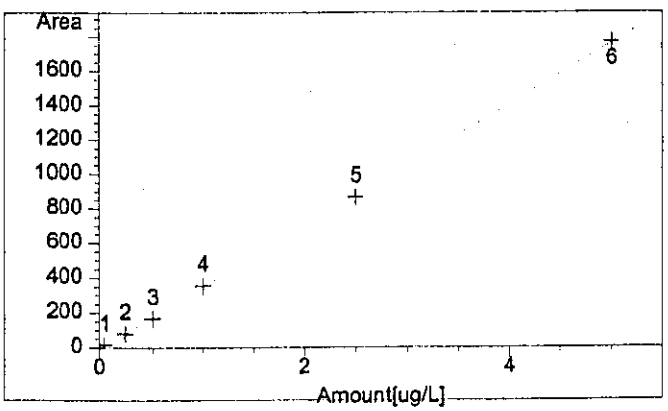

Correlation: 0.99990
Residual Std. Dev.: 2.82913
Formula: y = mx + b
m: 49.65860
b: -1.61933
x: Amount [ug/L]
y: Area



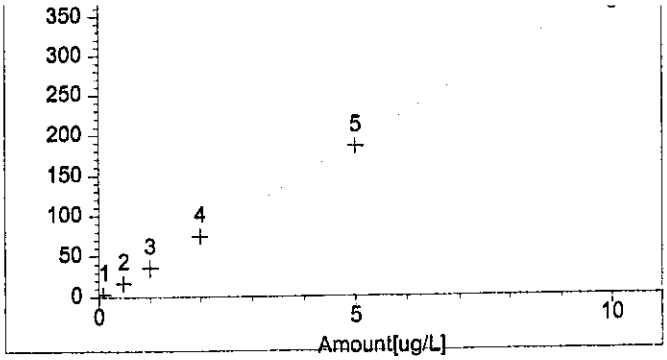

Benzo(b)fluoranthene #14 at exp. RT: 26.1
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 3.86702
Formula: y = mx + b
m: 59.59178
b: -2.38831
x: Amount [ug/L]
y: Area



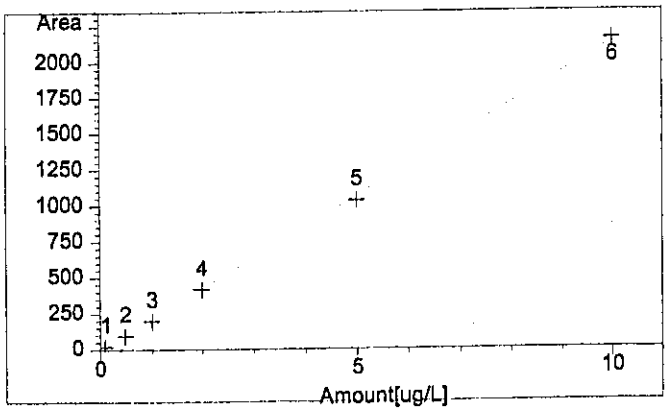

Benzo(k)fluoranthene #15 at exp. RT: 27.5
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99988
Residual Std. Dev.: 1.32598
Formula: y = mx + b
m: 43.30366
b: -8.94286e-1
x: Amount [ug/L]
y: Area



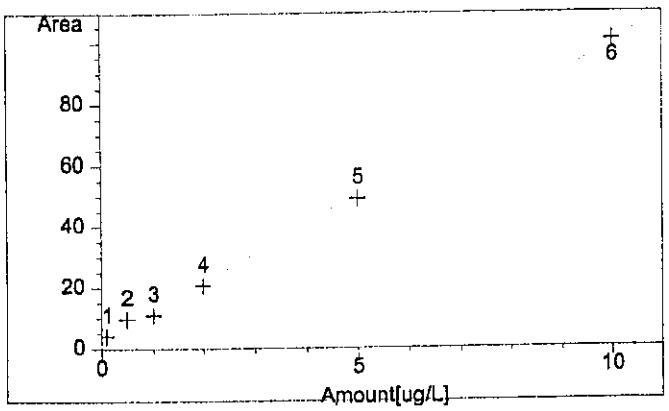

Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 7.00765
Formula: y = mx + b
m: 353.28181
b: -4.48344
x: Amount [ug/L]
y: Area



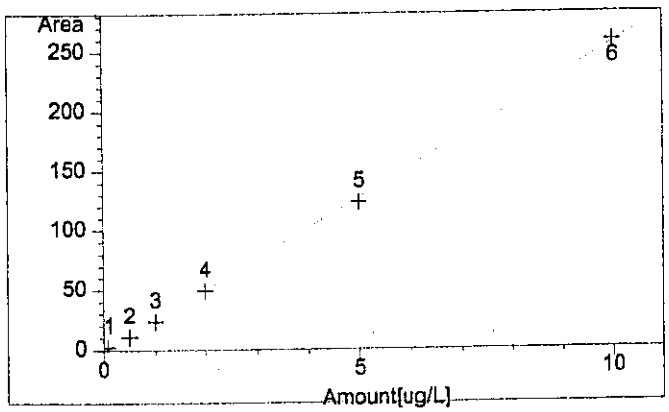

Correlation: 0.99986
Residual Std. Dev.: 2.54104
Formula: y = mx + b
m: 38.36965
b: -2.20097
x: Amount [ug/L]
y: Area



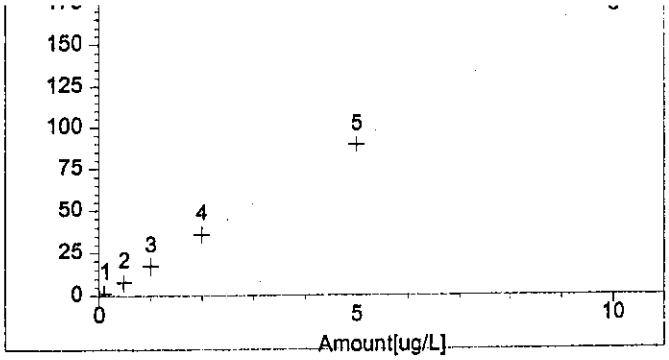

Benzo(a)pyrene #16 at exp. RT: 28.637
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 17.16464
Formula: y = mx + b
m: 215.11398
b: -12.44764
x: Amount [ug/L]
y: Area



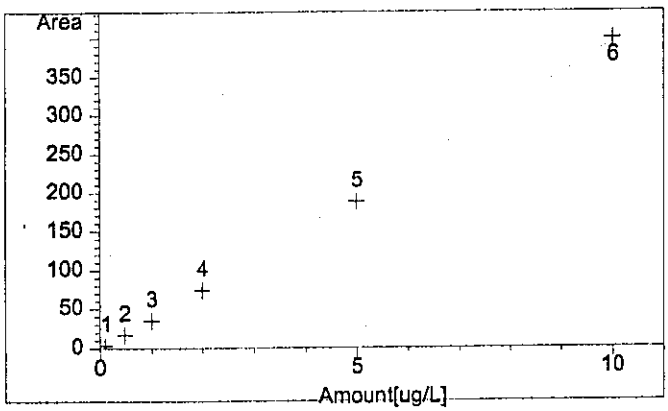

Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99883
Residual Std. Dev.: 1.90720
Formula: y = mx + b
m: 9.79400
b: 1.87742
x: Amount [ug/L]
y: Area



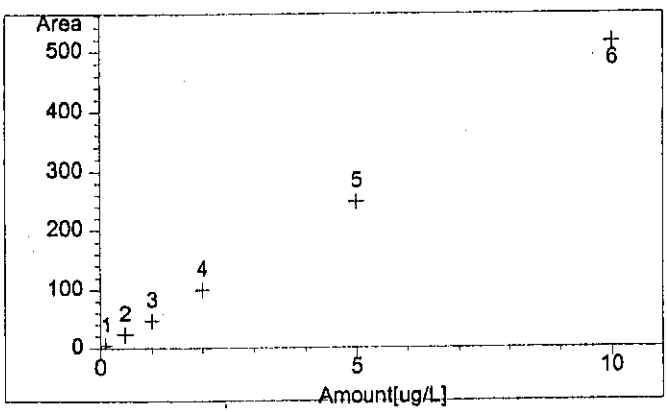

Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99977
Residual Std. Dev.: 2.21658
Formula: y = mx + b
m: 25.81486
b: -1.69923
x: Amount [ug/L]
y: Area



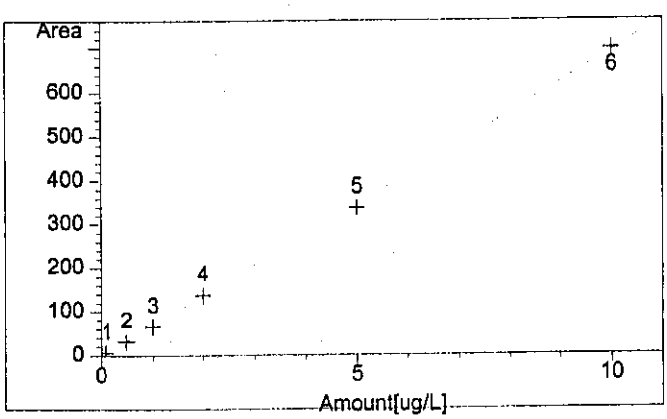

Correlation: 0.99993
Residual Std. Dev.: 0.87515
Formula: y = mx + b
m: 18.30547
b: -8.48559e-1
x: Amount[ug/L]
y: Area




Benzo(g,h,i)perylene #18 at exp. RT: 31.3
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99960
Residual Std. Dev.: 4.55128
Formula: y = mx + b
m: 39.77749
b: -3.39643
x: Amount[ug/L]
y: Area




Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99986
Residual Std. Dev.: 3.42563
Formula: y = mx + b
m: 51.49794
b: -2.82376
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: 0.99989
Residual Std. Dev.: 4.18223
Formula: y = mx + b
m: 69.55020
b: -2.45055
x: Amount[ug/L]
y: Area

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Data File C:\HPCHEM\2\DATA\092002A\4L003577.D Sample Name: WG125711-08 ALT
HPLC4 9/21/2002 3:43:44 PM

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

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Injection Date : 9/20/2002 11:11:11 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.385 | 20.0 | 18.926 | -5.4 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.738 | -6.3 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 18.427 | -7.9 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.647 | -1.8 |
| Fluorene #6 | 13.660 | 20.0 | 19.693 | -1.5 |
| Phenanthrene #7 | 15.045 | 20.0 | 18.674 | -6.6 |
| Anthracene #8 | 16.447 | 20.0 | 20.326 | 1.6 |
| Fluoranthene #9 | 17.827 | 2.0 | 1.962 | -1.9 |
| Pyrene #10 | 18.833 | 2.0 | 1.737 | -13.1 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.493 | 2.0 | 1.784 | -10.8 |
| Chrysene #13 | 23.365 | 2.0 | 1.845 | -7.7 |
| Benzo(b)fluoranthene #14 | 26.100 | 2.0 | 1.927 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.532 | 1.0 | 0.868 | -13.2 |
| Benzo(a)pyrene #16 | 28.630 | 2.0 | 1.961 | -1.9 |
| Dibenz(a,h)anthracene #1 | 30.502 | 2.0 | 2.097 | 4.9 |
| Benzo(g,h,i)perylene #18 | 31.334 | 2.0 | 1.841 | -8.0 |
| Indeno(1,2,3-cd)pyrene # | 32.307 | 2.0 | 1.875 | -6.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.366 | 20.0 | 19.710 | -1.4 |
| Acenaphthylene #2 | 10.988 | 20.0 | 18.672 | -6.6 |
| 1-Methylnaphthalene #3 | 11.934 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.508 | 20.0 | 18.839 | -5.8 |
| Acenaphthene #5 | 12.987 | 20.0 | 19.757 | -1.2 |
| Fluorene #6 | 13.641 | 20.0 | 19.490 | -2.6 |
| Phenanthrene #7 | 15.025 | 20.0 | 19.121 | -4.4 |
| Anthracene #8 | 16.428 | 20.0 | 20.325 | 1.6 |
| Fluoranthene #9 | 17.807 | 2.0 | 1.915 | -4.3 |
| Pyrene #10 | 18.812 | 2.0 | 1.887 | -5.7 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.473 | 2.0 | 1.827 | -8.7 |
| Chrysene #13 | 23.346 | 2.0 | 1.899 | -5.1 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.924 | -3.8 |
| Benzo(k)fluoranthene #15 | 27.512 | 1.0 | 0.882 | -11.8 |
| Benzo(a)pyrene #16 | 28.610 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.481 | 2.0 | 2.086 | 4.3 |
| Benzo(g,h,i)perylene #18 | 31.310 | 2.0 | 1.959 | -2.1 |
| Indeno(1,2,3-cd)pyrene # | 32.291 | 2.0 | 1.885 | -5.7 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\092102\4L003590.D Sample Name: WG125769-02 CCV
HPLC4 9/24/2002 11:10:42 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

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Injection Date : 9/22/2002 2:18:29 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.375 | 20.0 | 18.729 | -6.4 |
| 1-Methylnaphthalene #3 | 11.950 | 20.0 | 18.817 | -5.9 |
| 2-Methylnaphthalene #4 | 12.526 | 20.0 | 18.990 | -5.1 |
| Acenaphthene #5 | 13.004 | 20.0 | 19.217 | -3.9 |
| Fluorene #6 | 13.659 | 20.0 | 19.797 | -1.0 |
| Phenanthrene #7 | 15.046 | 20.0 | 18.551 | -7.2 |
| Anthracene #8 | 16.453 | 20.0 | 19.951 | -0.2 |
| Fluoranthene #9 | 17.832 | 2.0 | 1.942 | -2.9 |
| Pyrene #10 | 18.837 | 2.0 | 1.667 | -16.7 # |
| p-Terphenyl d14 #11* | 21.181 | 20.0 | 19.837 | -0.8 |
| Benzo(a)anthracene #12 | 22.499 | 2.0 | 1.849 | -7.5 |
| Chrysene #13 | 23.372 | 2.0 | 1.826 | -8.7 |
| Benzo(b)fluoranthene #14 | 26.101 | 2.0 | 1.926 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.528 | 1.0 | 0.970 | -3.0 |
| Benzo(a)pyrene #16 | 28.622 | 2.0 | 1.863 | -6.9 |
| Dibenz(a,h)anthracene #1 | 30.487 | 2.0 | 1.801 | -10.0 |
| Benzo(g,h,i)perylene #18 | 31.313 | 2.0 | 1.710 | -14.5 |
| Indeno(1,2,3-cd)pyrene # | 32.275 | 2.0 | 1.937 | -3.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.356 | 20.0 | 20.044 | 0.2 |
| Acenaphthylene #2 | 10.984 | 20.0 | 19.651 | -1.7 |
| 1-Methylnaphthalene #3 | 11.931 | 20.0 | 19.763 | -1.2 |
| 2-Methylnaphthalene #4 | 12.507 | 20.0 | 19.866 | -0.7 |
| Acenaphthene #5 | 12.985 | 20.0 | 19.697 | -1.5 |
| Fluorene #6 | 13.640 | 20.0 | 19.705 | -1.5 |
| Phenanthrene #7 | 15.027 | 20.0 | 19.727 | -1.4 |
| Anthracene #8 | 16.433 | 20.0 | 19.956 | -0.2 |
| Fluoranthene #9 | 17.812 | 2.0 | 1.956 | -2.2 |
| Pyrene #10 | 18.816 | 2.0 | 1.960 | -2.0 |
| p-Terphenyl d14 #11* | 21.162 | 20.0 | 19.775 | -1.1 |
| Benzo(a)anthracene #12 | 22.479 | 2.0 | 1.954 | -2.3 |
| Chrysene #13 | 23.353 | 2.0 | 1.951 | -2.4 |
| Benzo(b)fluoranthene #14 | 26.081 | 2.0 | 1.945 | -2.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.601 | 2.0 | 2.004 | 0.2 |
| Dibenz(a,h)anthracene #1 | 30.467 | 2.0 | 1.922 | -3.9 |
| Benzo(g,h,i)perylene #18 | 31.291 | 2.0 | 1.987 | -0.7 |
| Indeno(1,2,3-cd)pyrene # | 32.258 | 2.0 | 1.970 | -1.5 |

# = Failed 15.0% Criteria

Check Standard Report

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Data File C:\HPCHEM\2\DATA\092102\4L003612.D Sample Name: WG125769-04 CCV
HPLC4 9/24/2002 11:11:37 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

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Injection Date : 9/22/2002 11:04:39 PM Seq. Line : 35

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.382 | 20.0 | 18.743 | -6.3 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.861 | -5.7 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 19.047 | -4.8 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.297 | -3.5 |
| Fluorene #6 | 13.661 | 20.0 | 19.973 | -0.1 |
| Phenanthrene #7 | 15.047 | 20.0 | 18.754 | -6.2 |
| Anthracene #8 | 16.452 | 20.0 | 19.826 | -0.9 |
| Fluoranthene #9 | 17.830 | 2.0 | 1.963 | -1.8 |
| Pyrene #10 | 18.835 | 2.0 | 1.663 | -16.8 # |
| p-Terphenyl d14 #11* | 21.179 | 20.0 | 19.881 | -0.6 |
| Benzo(a)anthracene #12 | 22.496 | 2.0 | 1.865 | -6.7 |
| Chrysene #13 | 23.366 | 2.0 | 1.868 | -6.6 |
| Benzo(b)fluoranthene #14 | 26.096 | 2.0 | 1.949 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.524 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.620 | 2.0 | 1.877 | -6.2 |
| Dibenz(a,h)anthracene #1 | 30.486 | 2.0 | 1.820 | -9.0 |
| Benzo(g,h,i)perylene #18 | 31.304 | 2.0 | 1.706 | -14.7 |
| Indeno(1,2,3-cd)pyrene # | 32.267 | 2.0 | 1.948 | -2.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.367 | 20.0 | 20.216 | 1.1 |
| Acenaphthylene #2 | 10.991 | 20.0 | 19.908 | -0.5 |
| 1-Methylnaphthalene #3 | 11.938 | 20.0 | 19.995 | 0.0 |
| 2-Methylnaphthalene #4 | 12.512 | 20.0 | 20.073 | 0.4 |
| Acenaphthene #5 | 12.990 | 20.0 | 19.950 | -0.3 |
| Fluorene #6 | 13.645 | 20.0 | 19.958 | -0.2 |
| Phenanthrene #7 | 15.031 | 20.0 | 19.976 | -0.1 |
| Anthracene #8 | 16.436 | 20.0 | 20.122 | 0.6 |
| Fluoranthene #9 | 17.814 | 2.0 | 1.984 | -0.8 |
| Pyrene #10 | 18.817 | 2.0 | 1.977 | -1.1 |
| p-Terphenyl d14 #11* | 21.163 | 20.0 | 20.067 | 0.3 |
| Benzo(a)anthracene #12 | 22.480 | 2.0 | 1.976 | -1.2 |
| Chrysene #13 | 23.350 | 2.0 | 1.981 | -1.0 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.603 | 2.0 | 2.025 | 1.3 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.798 | -10.1 |
| Benzo(g,h,i)perylene #18 | 31.286 | 2.0 | 1.995 | -0.2 |
| Indeno(1,2,3-cd)pyrene # | 32.253 | 2.0 | 1.968 | -1.6 |

# = Failed 15.0% Criteria

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Data File C:\HPCHEM\2\DATA\092102\4L003614.D Sample Name: WG125769-05 CCV
HPLC4 9/24/2002 11:11:58 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

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Injection Date : 9/23/2002 12:57:58 AM Seq. Line : 37

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.373 | 20.0 | 18.801 | -6.0 |
| 1-Methylnaphthalene #3 | 11.948 | 20.0 | 18.985 | -5.1 |
| 2-Methylnaphthalene #4 | 12.524 | 20.0 | 19.123 | -4.4 |
| Acenaphthene #5 | 13.002 | 20.0 | 19.357 | -3.2 |
| Fluorene #6 | 13.658 | 20.0 | 19.998 | 0.0 |
| Phenanthrene #7 | 15.047 | 20.0 | 18.785 | -6.1 |
| Anthracene #8 | 16.455 | 20.0 | 20.056 | 0.3 |
| Fluoranthene #9 | 17.837 | 2.0 | 1.975 | -1.3 |
| Pyrene #10 | 18.844 | 2.0 | 1.673 | -16.3 # |
| p-Terphenyl d14 #11* | 21.194 | 20.0 | 19.910 | -0.4 |
| Benzo(a)anthracene #12 | 22.515 | 2.0 | 1.874 | -6.3 |
| Chrysene #13 | 23.389 | 2.0 | 1.863 | -6.9 |
| Benzo(b)fluoranthene #14 | 26.128 | 2.0 | 1.948 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.565 | 1.0 | 0.982 | -1.8 |
| Benzo(a)pyrene #16 | 28.661 | 2.0 | 1.885 | -5.7 |
| Dibenz(a,h)anthracene #1 | 30.538 | 2.0 | 1.822 | -8.9 |
| Benzo(g,h,i)perylene #18 | 31.361 | 2.0 | 1.722 | -13.9 |
| Indeno(1,2,3-cd)pyrene # | 32.323 | 2.0 | 1.976 | -1.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.356 | 20.0 | 20.286 | 1.4 |
| Acenaphthylene #2 | 10.984 | 20.0 | 19.939 | -0.3 |
| 1-Methylnaphthalene #3 | 11.931 | 20.0 | 20.036 | 0.2 |
| 2-Methylnaphthalene #4 | 12.507 | 20.0 | 20.119 | 0.6 |
| Acenaphthene #5 | 12.985 | 20.0 | 19.993 | 0.0 |
| Fluorene #6 | 13.640 | 20.0 | 20.000 | 0.0 |
| Phenanthrene #7 | 15.030 | 20.0 | 20.018 | 0.1 |
| Anthracene #8 | 16.438 | 20.0 | 20.147 | 0.7 |
| Fluoranthene #9 | 17.818 | 2.0 | 1.985 | -0.7 |
| Pyrene #10 | 18.825 | 2.0 | 1.983 | -0.8 |
| p-Terphenyl d14 #11* | 21.177 | 20.0 | 20.104 | 0.5 |
| Benzo(a)anthracene #12 | 22.498 | 2.0 | 1.977 | -1.2 |
| Chrysene #13 | 23.372 | 2.0 | 1.981 | -1.0 |
| Benzo(b)fluoranthene #14 | 26.109 | 2.0 | 1.980 | -1.0 |
| Benzo(k)fluoranthene #15 | 27.547 | 1.0 | 1.003 | 0.3 |
| Benzo(a)pyrene #16 | 28.642 | 2.0 | 2.031 | 1.6 |
| Dibenz(a,h)anthracene #1 | 30.520 | 2.0 | 1.796 | -10.2 |
| Benzo(g,h,i)perylene #18 | 31.341 | 2.0 | 1.930 | -3.5 |
| Indeno(1,2,3-cd)pyrene # | 32.310 | 2.0 | 1.996 | -0.2 |

# = Failed 15.0% Criteria

==========

Data File C:\HPCHEM\2\DATA\092502\4L003616.D Sample Name: WG125983-01 CCV
HPLC4 9/26/2002 2:14:39 PM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/25/2002 4:44:42 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.386 | 20.0 | 20.270 | 1.4 |
| 1-Methylnaphthalene #3 | 11.958 | 20.0 | 20.230 | 1.2 |
| 2-Methylnaphthalene #4 | 12.534 | 20.0 | 20.278 | 1.4 |
| Acenaphthene #5 | 13.011 | 20.0 | 20.165 | 0.8 |
| Fluorene #6 | 13.668 | 20.0 | 20.154 | 0.8 |
| Phenanthrene #7 | 15.053 | 20.0 | 19.749 | -1.3 |
| Anthracene #8 | 16.461 | 20.0 | 19.892 | -0.5 |
| Fluoranthene #9 | 17.836 | 2.0 | 2.018 | 0.9 |
| Pyrene #10 | 18.840 | 2.0 | 1.924 | -3.8 |
| p-Terphenyl d14 #11* | 21.183 | 20.0 | 19.656 | -1.7 |
| Benzo(a)anthracene #12 | 22.506 | 2.0 | 1.961 | -2.0 |
| Chrysene #13 | 23.380 | 2.0 | 1.986 | -0.7 |
| Benzo(b)fluoranthene #14 | 26.124 | 2.0 | 1.992 | -0.4 |
| Benzo(k)fluoranthene #15 | 27.564 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.659 | 2.0 | 1.905 | -4.7 |
| Dibenz(a,h)anthracene #1 | 30.539 | 2.0 | 1.881 | -5.9 |
| Benzo(g,h,i)perylene #18 | 31.356 | 2.0 | 1.744 | -12.8 |
| Indeno(1,2,3-cd)pyrene # | 32.323 | 2.0 | 1.969 | -1.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.370 | 20.0 | 20.109 | 0.5 |
| Acenaphthylene #2 | 10.996 | 20.0 | 19.798 | -1.0 |
| 1-Methylnaphthalene #3 | 11.942 | 20.0 | 19.896 | -0.5 |
| 2-Methylnaphthalene #4 | 12.518 | 20.0 | 20.010 | 0.0 |
| Acenaphthene #5 | 12.995 | 20.0 | 19.834 | -0.8 |
| Fluorene #6 | 13.651 | 20.0 | 19.807 | -1.0 |
| Phenanthrene #7 | 15.037 | 20.0 | 19.870 | -0.7 |
| Anthracene #8 | 16.444 | 20.0 | 19.613 | -1.9 |
| Fluoranthene #9 | 17.819 | 2.0 | 1.971 | -1.5 |
| Pyrene #10 | 18.822 | 2.0 | 1.988 | -0.6 |
| p-Terphenyl d14 #11* | 21.166 | 20.0 | 19.872 | -0.6 |
| Benzo(a)anthracene #12 | 22.489 | 2.0 | 1.958 | -2.1 |
| Chrysene #13 | 23.364 | 2.0 | 1.976 | -1.2 |
| Benzo(b)fluoranthene #14 | 26.106 | 2.0 | 1.967 | -1.7 |
| Benzo(k)fluoranthene #15 | 27.547 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.642 | 2.0 | 1.930 | -3.5 |
| Dibenz(a,h)anthracene #1 | 30.522 | 2.0 | 1.758 | -12.1 |
| Benzo(g,h,i)perylene #18 | 31.338 | 2.0 | 1.805 | -9.7 |
| Indeno(1,2,3-cd)pyrene # | 32.311 | 2.0 | 1.941 | -3.0 |

# = Failed 15.0% Criteria

==========

Data File C:\HPCHEM\2\DATA\092502\4L003618.D Sample Name: WG125983-~~01~~ 02 CCV
HPLC4 9/26/2002 2:17:26 PM

PRC 9/26/02

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/25/2002 6:37:58 PM Seq. Line : 4

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.371 | 20.0 | 19.186 | -4.1 |
| 1-Methylnaphthalene #3 | 11.944 | 20.0 | 19.357 | -3.2 |
| 2-Methylnaphthalene #4 | 12.521 | 20.0 | 19.491 | -2.5 |
| Acenaphthene #5 | 12.999 | 20.0 | 19.573 | -2.1 |
| Fluorene #6 | 13.657 | 20.0 | 19.958 | -0.2 |
| Phenanthrene #7 | 15.047 | 20.0 | 19.065 | -4.7 |
| Anthracene #8 | 16.454 | 20.0 | 19.493 | -2.5 |
| Fluoranthene #9 | 17.834 | 2.0 | 1.972 | -1.4 |
| Pyrene #10 | 18.841 | 2.0 | 1.763 | -11.9 |
| p-Terphenyl d14 #11* | 21.193 | 20.0 | 19.532 | -2.3 |
| Benzo(a)anthracene #12 | 22.515 | 2.0 | 1.897 | -5.1 |
| Chrysene #13 | 23.388 | 2.0 | 1.891 | -5.4 |
| Benzo(b)fluoranthene #14 | 26.124 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.565 | 1.0 | 0.982 | -1.8 |
| Benzo(a)pyrene #16 | 28.661 | 2.0 | 1.820 | -9.0 |
| Dibenz(a,h)anthracene #1 | 30.532 | 2.0 | 1.837 | -8.2 |
| Benzo(g,h,i)perylene #18 | 31.350 | 2.0 | 1.671 | -16.4 # |
| Indeno(1,2,3-cd)pyrene # | 32.313 | 2.0 | 1.937 | -3.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.352 | 20.0 | 20.169 | 0.8 |
| Acenaphthylene #2 | 10.978 | 20.0 | 19.807 | -1.0 |
| 1-Methylnaphthalene #3 | 11.926 | 20.0 | 19.902 | -0.5 |
| 2-Methylnaphthalene #4 | 12.502 | 20.0 | 20.011 | 0.1 |
| Acenaphthene #5 | 12.981 | 20.0 | 19.844 | -0.8 |
| Fluorene #6 | 13.638 | 20.0 | 19.820 | -0.9 |
| Phenanthrene #7 | 15.028 | 20.0 | 19.855 | -0.7 |
| Anthracene #8 | 16.435 | 20.0 | 19.606 | -2.0 |
| Fluoranthene #9 | 17.815 | 2.0 | 1.967 | -1.7 |
| Pyrene #10 | 18.821 | 2.0 | 1.974 | -1.3 |
| p-Terphenyl d14 #11* | 21.174 | 20.0 | 19.844 | -0.8 |
| Benzo(a)anthracene #12 | 22.496 | 2.0 | 1.961 | -2.0 |
| Chrysene #13 | 23.370 | 2.0 | 1.974 | -1.3 |
| Benzo(b)fluoranthene #14 | 26.105 | 2.0 | 1.960 | -2.0 |
| Benzo(k)fluoranthene #15 | 27.546 | 1.0 | 0.983 | -1.7 |
| Benzo(a)pyrene #16 | 28.641 | 2.0 | 1.917 | -4.1 |
| Dibenz(a,h)anthracene #1 | 30.513 | 2.0 | 2.058 | 2.9 |
| Benzo(g,h,i)perylene #18 | 31.329 | 2.0 | 1.800 | -10.0 |
| Indeno(1,2,3-cd)pyrene # | 32.298 | 2.0 | 1.954 | -2.3 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003620.D Sample Name: WG126189-01 CCV
HPLC4 9/27/2002 10:20:41 PM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/27/2002 5:26:59 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 | 20.246 | 1.2 |
| 1-Methylnaphthalene #3 | 11.912 | 20.0 | 20.310 | 1.5 |
| 2-Methylnaphthalene #4 | 12.489 | 20.0 | 20.328 | 1.6 |
| Acenaphthene #5 | 12.969 | 20.0 | 20.143 | 0.7 |
| Fluorene #6 | 13.628 | 20.0 | 20.062 | 0.3 |
| Phenanthrene #7 | 15.019 | 20.0 | 20.066 | 0.3 |
| Anthracene #8 | 16.433 | 20.0 | 19.431 | -2.8 |
| Fluoranthene #9 | 17.815 | 2.0 | 1.999 | -0.1 |
| Pyrene #10 | 18.821 | 2.0 | 2.068 | 3.4 |
| p-Terphenyl d14 #11* | 21.184 | 20.0 | 19.561 | -2.2 |
| Benzo(a)anthracene #12 | 22.507 | 2.0 | 1.962 | -1.9 |
| Chrysene #13 | 23.387 | 2.0 | 2.011 | 0.5 |
| Benzo(b)fluoranthene #14 | 26.129 | 2.0 | 2.003 | 0.1 |
| Benzo(k)fluoranthene #15 | 27.577 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.675 | 2.0 | 2.067 | 3.4 |
| Dibenz(a,h)anthracene #1 | 30.560 | 2.0 | 1.999 | 0.0 |
| Benzo(g,h,i)perylene #18 | 31.383 | 2.0 | 2.071 | 3.5 |
| Indeno(1,2,3-cd)pyrene # | 32.361 | 2.0 | 1.908 | -4.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.315 | 20.0 | 20.067 | 0.3 |
| Acenaphthylene #2 | 10.944 | 20.0 | 19.750 | -1.3 |
| 1-Methylnaphthalene #3 | 11.894 | 20.0 | 19.828 | -0.9 |
| 2-Methylnaphthalene #4 | 12.471 | 20.0 | 19.961 | -0.2 |
| Acenaphthene #5 | 12.951 | 20.0 | 19.708 | -1.5 |
| Fluorene #6 | 13.608 | 20.0 | 19.749 | -1.3 |
| Phenanthrene #7 | 15.000 | 20.0 | 19.798 | -1.0 |
| Anthracene #8 | 16.414 | 20.0 | 19.468 | -2.7 |
| Fluoranthene #9 | 17.795 | 2.0 | 1.964 | -1.8 |
| Pyrene #10 | 18.801 | 2.0 | 1.946 | -2.7 |
| p-Terphenyl d14 #11* | 21.165 | 20.0 | 19.904 | -0.5 |
| Benzo(a)anthracene #12 | 22.488 | 2.0 | 1.927 | -3.6 |
| Chrysene #13 | 23.369 | 2.0 | 1.985 | -0.7 |
| Benzo(b)fluoranthene #14 | 26.109 | 2.0 | 1.948 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.558 | 1.0 | 0.988 | -1.2 |
| Benzo(a)pyrene #16 | 28.655 | 2.0 | 1.964 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.540 | 2.0 | 1.813 | -9.3 |
| Benzo(g,h,i)perylene #18 | 31.362 | 2.0 | 1.790 | -10.5 |
| Indeno(1,2,3-cd)pyrene # | 32.347 | 2.0 | 1.899 | -5.0 |

# = Failed 15.0% Criteria

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003631.D Sample Name: WG126189-02 CCV
HPLC4 9/30/2002 11:08:25 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/28/2002 3:50:10 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.335 | 20.0 | 18.981 | -5.1 |
| 1-Methylnaphthalene #3 | 11.911 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.487 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.966 | 20.0 | 19.432 | -2.8 |
| Fluorene #6 | 13.620 | 20.0 | 19.844 | -0.8 |
| Phenanthrene #7 | 15.006 | 20.0 | 18.905 | -5.5 |
| Anthracene #8 | 16.411 | 20.0 | 19.650 | -1.8 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.959 | -2.1 |
| Pyrene #10 | 18.799 | 2.0 | 1.745 | -12.7 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.340 | -3.3 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.882 | -5.9 |
| Chrysene #13 | 23.344 | 2.0 | 1.870 | -6.5 |
| Benzo(b)fluoranthene #14 | 26.074 | 2.0 | 1.929 | -3.5 |
| Benzo(k)fluoranthene #15 | 27.515 | 1.0 | 0.978 | -2.2 |
| Benzo(a)pyrene #16 | 28.608 | 2.0 | 1.827 | -8.6 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.857 | -7.1 |
| Benzo(g,h,i)perylene #18 | 31.293 | 2.0 | 1.718 | -14.1 |
| Indeno(1,2,3-cd)pyrene # | 32.261 | 2.0 | 1.940 | -3.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.321 | 20.0 | 20.136 | 0.7 |
| Acenaphthylene #2 | 10.949 | 20.0 | 19.790 | -1.1 |
| 1-Methylnaphthalene #3 | 11.897 | 20.0 | 19.889 | -0.6 |
| 2-Methylnaphthalene #4 | 12.473 | 20.0 | 19.994 | 0.0 |
| Acenaphthene #5 | 12.952 | 20.0 | 19.845 | -0.8 |
| Fluorene #6 | 13.606 | 20.0 | 19.820 | -0.9 |
| Phenanthrene #7 | 14.991 | 20.0 | 19.816 | -0.9 |
| Anthracene #8 | 16.397 | 20.0 | 19.851 | -0.7 |
| Fluoranthene #9 | 17.777 | 2.0 | 1.974 | -1.3 |
| Pyrene #10 | 18.783 | 2.0 | 1.981 | -1.0 |
| p-Terphenyl d14 #11* | 21.140 | 20.0 | 19.659 | -1.7 |
| Benzo(a)anthracene #12 | 22.457 | 2.0 | 1.963 | -1.8 |
| Chrysene #13 | 23.330 | 2.0 | 1.971 | -1.5 |
| Benzo(b)fluoranthene #14 | 26.059 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.500 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.593 | 2.0 | 1.949 | -2.6 |
| Dibenz(a,h)anthracene #1 | 30.455 | 2.0 | 1.865 | -6.7 |
| Benzo(g,h,i)perylene #18 | 31.277 | 2.0 | 1.921 | -4.0 |
| Indeno(1,2,3-cd)pyrene # | 32.249 | 2.0 | 1.955 | -2.3 |

# = Failed 15.0% Criteria

==========

Data File C:\HPCHEM\2\DATA\092702\4L003642.D Sample Name: WG126189-03 CCV
HPLC4 9/30/2002 11:17:36 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========
Injection Date : 9/28/2002 2:13:16 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.345 | 20.0 | 18.913 | -5.4 |
| 1-Methylnaphthalene #3 | 11.923 | 20.0 | 19.090 | -4.6 |
| 2-Methylnaphthalene #4 | 12.500 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.979 | 20.0 | 19.497 | -2.5 |
| Fluorene #6 | 13.636 | 20.0 | 20.038 | 0.2 |
| Phenanthrene #7 | 15.022 | 20.0 | 18.872 | -5.6 |
| Anthracene #8 | 16.429 | 20.0 | 20.146 | 0.7 |
| Fluoranthene #9 | 17.809 | 2.0 | 1.969 | -1.6 |
| Pyrene #10 | 18.816 | 2.0 | 1.702 | -14.9 |
| p-Terphenyl d14 #11* | 21.169 | 20.0 | 19.579 | -2.1 |
| Benzo(a)anthracene #12 | 22.487 | 2.0 | 1.876 | -6.2 |
| Chrysene #13 | 23.359 | 2.0 | 1.873 | -6.3 |
| Benzo(b)fluoranthene #14 | 26.085 | 2.0 | 1.925 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.519 | 1.0 | 0.984 | -1.6 |
| Benzo(a)pyrene #16 | 28.612 | 2.0 | 1.836 | -8.2 |
| Dibenz(a,h)anthracene #1 | 30.480 | 2.0 | 1.843 | -7.8 |
| Benzo(g,h,i)perylene #18 | 31.301 | 2.0 | 1.713 | -14.4 |
| Indeno(1,2,3-cd)pyrene # | 32.268 | 2.0 | 1.960 | -2.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 20.277 | 1.4 |
| Acenaphthylene #2 | 10.959 | 20.0 | 20.000 | 0.0 |
| 1-Methylnaphthalene #3 | 11.908 | 20.0 | 20.062 | 0.3 |
| 2-Methylnaphthalene #4 | 12.484 | 20.0 | 20.166 | 0.8 |
| Acenaphthene #5 | 12.963 | 20.0 | 20.055 | 0.3 |
| Fluorene #6 | 13.620 | 20.0 | 20.020 | 0.1 |
| Phenanthrene #7 | 15.006 | 20.0 | 20.070 | 0.3 |
| Anthracene #8 | 16.413 | 20.0 | 20.136 | 0.7 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.980 | -1.0 |
| Pyrene #10 | 18.799 | 2.0 | 1.987 | -0.6 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.911 | -0.4 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.985 | -0.7 |
| Chrysene #13 | 23.344 | 2.0 | 1.990 | -0.5 |
| Benzo(b)fluoranthene #14 | 26.068 | 2.0 | 1.981 | -0.9 |
| Benzo(k)fluoranthene #15 | 27.502 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.596 | 2.0 | 1.963 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.464 | 2.0 | 1.847 | -7.6 |
| Benzo(g,h,i)perylene #18 | 31.283 | 2.0 | 1.993 | -0.4 |
| Indeno(1,2,3-cd)pyrene # | 32.255 | 2.0 | 1.983 | -0.9 |

# = 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 | WG125711-01 STD6 | 8310 | 1 | Sample | | |
| 3 | 3 | WG125711-02 STD6 | 8310 | 1 | Sample | | |
| 4 | 4 | WG125711-03 STD5 | 8310 | 1 | Sample | | |
| 5 | 5 | WG125711-04 STD4 | 8310 | 1 | Sample | | |
| 6 | 6 | WG125711-05 STD3 | 8310 | 1 | Sample | | |
| 7 | 7 | WG125711-06 STD2 | 8310 | 1 | Sample | | |
| 8 | 8 | WG125711-07 STD1 | 8310 | 1 | Sample | | |
| 9 | 9 | WG125711-08 ALT | 8310 | 1 | Sample | | |

| --- | --- | --- | --- | --- | --- | --- | --- |
| No | 1 | 1 | 8310 | 4L003569 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003570 | 02:01 | SOS 61-07 | WG125711-01 ST |
| No | 3 | 3 | 8310 | 4L003571 | 03:01 | SOS 59-38 | WG125711-02 ST |
| No | 4 | 4 | 8310 | 4L003572 | 04:01 | DIL'N OF SOS 61-07/59-37 | WG125711-03 ST |
| No | 5 | 5 | 8310 | 4L003573 | 05:01 | | WG125711-04 ST |
| No | 6 | 6 | 8310 | 4L003574 | 06:01 | | WG125711-05 ST |
| No | 7 | 7 | 8310 | 4L003575 | 07:01 | | WG125711-06 ST |
| No | 8 | 8 | 8310 | 4L003576 | 08:01 | | WG125711-07 ST |
| No | 9 | 9 | 8310 | 4L003577 | 09:01 | DIL'N OF SOS 60-26/60-27 | WG125711-08 AL |

RJOC 9/21/02

KEMRON ENVIRONMENTAL SERV.

# HPLC Laboratory Maintenance Log

Analysis Date/Time Sept. 20, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092002 A
Analyst Initials RDE SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ___ ___ 8330

**Daily Check**

- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**

Yes ____ No _____

**Additional Maintenance**

Problem: _____

Action Taken: _____

**Comments**

NOTE: ACCN in JT Baker Lot # X32823

Reviewed By: [illegible]

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG125769-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG125546-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG125546-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG125546-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG125546-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG125546-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG125769-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | WG125616-02 WBLK | 8310 | 1 | Sample | | |
| 16 | 16 | WG125616-03 WLCS | 8310 | 1 | Sample | | |
| 17 | 17 | L0209310-01 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 19 | 19 | WG125616-01 WREF | 8310 | 1 | Sample | | |
| 20 | 20 | WG125616-04 WMS | 8310 | 1 | Sample | | |
| 21 | 21 | WG125616-05 WMSD | 8310 | 1 | Sample | | |
| 22 | 22 | L0209310-06 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209310-07 831W | 8310 | 1 | Sample | | |
| 24 | 24 | WG125769-03 CCV | 8310 | 1 | Sample | | |
| 25 | 25 | L0209310-08 831W | 8310 | 1 | Sample | | |
| 26 | 26 | L0209310-09 831W | 8310 | 1 | Sample | | |
| 27 | 27 | L0209310-10 831W | 8310 | 1 | Sample | | |
| 28 | 28 | L0209310-11 831W | 8310 | 1 | Sample | | |
| 29 | 29 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 30 | 30 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 31 | 31 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 32 | 32 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 33 | 33 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 34 | 34 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 35 | 35 | WG125769-04 CCV | 8310 | 1 | Sample | | |
| 36 | 36 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 37 | 35 | WG125769-05 CCV | 8310 | 1 | Sample | | |

| Sel | Run | Vial | Method | Datafile | Seqfile | Calibration | Sample Name, 9/24/02 |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003578 | 01:01 ✓ | | accn blk |
| No | 2 | 2 | 8310 | 4L003579 | 02:01 ✓ | SOS 61-07/59-38 | WG125769-01 CC |
| No | 3 | 3 | 8310 | 4L003580 | 03:01 ✓ | | WG125546-02 WB |
| No | 4 | 4 | 8310 | 4L003581 | 04:01 ✓ | | WG125546-03 WL |
| No | 5 | 5 | 8310 | 4L003582 | 05:01 RE, | SURR. LOW, LCS | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003583 | 06:01 RE, | same | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003584 | 07:01 RE, | same | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003585 | 08:01 RE, | LCS low | WG125546-01 WR |
| No | 9 | 9 | 8310 | 4L003586 | 09:01 RE, | SURR + LCS low | WG125546-04 WM |
| No | 10 | 10 | 8310 | 4L003587 | 10:01 RE, | same | WG125546-05 WM |
| No | 11 | 11 | 8310 | 4L003588 | 11:01 RE, | same | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003589 | 12:01 RE, | ~~SURR~~ + LCS low 2/24/02 | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003590 | 13:01 ✓ | SOS 61-07/59-38 | WG125769-02 CC |
| No | 14 | 14 | 8310 | 4L003591 | 14:01 RE, | LCS low | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003592 | 15:01 ✓ | | WG125616-02 WB |
| No | 16 | 16 | 8310 | 4L003593 | 16:01 ✓ | | WG125616-03 WL |
| No | 17 | 17 | 8310 | 4L003594 | 17:01 ✓ | | L0209310-01 83 |
| No | 18 | 18 | 8310 | 4L003595 | 18:01 RE, | low surr. | L0209310-02 83 |
| No | 19 | 19 | 8310 | 4L003596 | 19:01 ✓ | | WG125616-01 WR |
| No | 20 | 20 | 8310 | 4L003597 | 20:01 ✓ | | WG125616-04 WM |
| No | 21 | 21 | 8310 | 4L003598 | 21:01 ✓ | | WG125616-05 WM |
| No | 22 | 22 | 8310 | 4L003599 | 22:01 ✓ | | L0209310-06 83 |
| No | 23 | 23 | 8310 | 4L003600 | 23:01 ✓ | | L0209310-07 83 |
| No | 24 | 24 | 8310 | 4L003601 | 24:01 ✓ | SOS 61-07/59-38 | WG125769-03 CC |
| No | 25 | 25 | 8310 | 4L003602 | 25:01 ✓ | | L0209310-08 83 |
| No | 26 | 26 | 8310 | 4L003603 | 26:01 ✓ | | L0209310-09 83 |
| No | 27 | 27 | 8310 | 4L003604 | 27:01 ✓ | | L0209310-10 83 |
| No | 28 | 28 | 8310 | 4L003605 | 28:01 ✓ | | L0209310-11 83 |
| No | 29 | 29 | 8310 | 4L003606 | 29:01 RE, | low surr. | L0209337-01 83 |
| No | 30 | 30 | 8310 | 4L003607 | 30:01 RE, | same | L0209337-02 83 |
| No | 31 | 31 | 8310 | 4L003608 | 31:01 RE, | same | L0209337-03 83 |
| No | 32 | 32 | 8310 | 4L003609 | 32:01 RE, | same | L0209337-04 83 |
| No | 33 | 33 | 8310 | 4L003610 | 33:01 RE, | same | L0209337-05 83 |
| No | 34 | 34 | 8310 | 4L003611 | 34:01 RE, | same | L0209337-06 83 |
| No | 35 | 35 | 8310 | 4L003612 | 35:01 ✓ | SOS 61-07/59-38 | WG125769-04 CC |
| No | 36 | 36 | 8310 | 4L003613 | 36:01 RE, | low surr. | L0209337-07 83 |
| No | 37 | 35 | 8310 | 4L003614 | 37:01 ✓ | SOS 61-07/59-38 | WG125769-05 CC |

RJC
9/26/02

EQ 10/1/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Sept. 21, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092102
Analyst Initials ADC SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: ____

Action Taken: ____

**Comments**

WG 125769-02 (4L003590) — CCV
-03 (4L003601)
-04 (4L003612)
-05 (4L003613)
} pyrene %D >15% for confirming fl. detector / no pyrene detected by UV requires conf.

SDG L0209285 — all sent for RE due to low LCS & surr. on some, in SDG

L0209310-02, L0209337-01 — 07 > sent for RE due to low surr.

Reviewed By: ECZ 10/1/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG125983-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 4 | 2 | WG125983-~~01~~ 02 CCV | 8310 | 1 | Sample | | |

RAC 9/26/02

RAC 9/26/02

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003615 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003616 | 02:01 | SOS 61-07/59-38 | WG125983-01 CC |
| No | 3 | 3 | 8310 | 4L003617 | 03:01 | | L0209337-01 83 |
| No | 4 | 2 | 8310 | 4L003618 | 04:01 | SOS61-07/59-38 | WG125983-~~01~~ 02 CC |

BPC 9/26/02

ECZ 10/1/02

PPC 9/26/02

REMKON ENVIRONMENTAL SERVICES

# HPLC Laboratory Maintenance Log

Analysis Date/Time Sept. 25, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092502
Analyst Initials RDC SOP # HPLC01 Rev. # 2 ✓ 8310 SOP # HPLC02 Rev. # ___ ___ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure _____
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Ending CCV failed low for benzo(g,h,i)perylene by FLD. Analyte was not needed. RDC

Reviewed By: EQ 10/1/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG126189-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126062-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126062-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG126062-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG126062-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG126062-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG126189-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 16 | 16 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 17 | 17 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 19 | 19 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 20 | 20 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 21 | 21 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 22 | 22 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 24 | 13 | WG126189-03 CCV | 8310 | 1 | Sample | | |

Pall 9/27/02

| Set | Run | Vial | Method | Datafile | Seqfile | Calibration | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003619 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003620 | 02:01 | SOS 61-07/59-38 | WG126189-01 CC |
| No | 3 | 3 | 8310 | 4L003621 | 03:01 | | WG126062-02 WB |
| No | 4 | 4 | 8310 | 4L003622 | 04:01 | | WG126062-03 WL |
| No | 5 | 5 | 8310 | 4L003623 | 05:01 | | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003624 | 06:01 | | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003625 | 07:01 | | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003626 | 08:01 | | WG126062-01 WR |
| No | 9 | 9 | 8310 | 4L003627 | 09:01 | | WG126062-04 WM |
| No | 10 | 10 | 8310 | 4L003628 | 10:01 | | WG126062-05 WM |
| No | 11 | 11 | 8310 | 4L003629 | 11:01 | | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003630 | 12:01 | | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003631 | 13:01 | SOS 61-07/59-38 | WG126189-02 CC |
| No | 14 | 14 | 8310 | 4L003632 | 14:01 | | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003633 | 15:01 | | L0209310-02 83 |
| No | 16 | 16 | 8310 | 4L003634 | 16:01 | | L0209337-01 83 |
| No | 17 | 17 | 8310 | 4L003635 | 17:01 | | L0209337-02 83 |
| No | 18 | 18 | 8310 | 4L003636 | 18:01 | | L0209337-03 83 |
| No | 19 | 19 | 8310 | 4L003637 | 19:01 | | L0209337-04 83 |
| No | 20 | 20 | 8310 | 4L003638 | 20:01 | | L0209337-05 83 |
| No | 21 | 21 | 8310 | 4L003639 | 21:01 | | L0209337-06 83 |
| No | 22 | 22 | 8310 | 4L003640 | 22:01 | | L0209337-07 83 |
| No | 23 | 23 | 8310 | 4L003641 | 23:01 | | L0209337-01 83 |
| No | 24 | 13 | 8310 | 4L003642 | 24:01 | SOS 61-07/59-38 | WG126189-03 CC |

RJRC 9/30/02

EC2 10/2/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

**Analysis Date/Time** Sept. 27/02 **Instrument ID** HPLC4 **Column ID** LC-PAH **Data Subdirectory** 092702
**Analyst Initials** RBC **SOP # HPLC01 Rev. #** 2 ✓ 8310 **SOP # HPLC02 Rev. #** ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Re-extracts out of hold — not uploaded

**Reviewed By:** EC 10/2/02

Volume 191
Page 15

Parameter: 8310 - $H_2O$ SOP #: EXHPLCL Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAF, DP
Date/Time Extracted: 09/19/02@ 1120 Date TV/KD: 09/19/02
Spike/Surrogate Analyst: DP Witness: CAF
Surrogate #: ESS0042-21 Earliest Hold Date: 09/24/02
Spike #: A = ESS004279 Spike #: B = —

Extraction Work Group WG 125616
Analytical Work Group WG 125710

Extract Relinquished By: DCH
Extract Received By & Date: CAF 9/20/02

| | 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 | | | ✓ | | 1000 mL | 100 µL | | 1 mL | T | | | | WG125616-02 |
| 2 | LCS | | | ✓ | | ↓ | ↓ | 500 µL | ↓ | ↓ | | | | WG ↓ -03 |
| 3 | 09-310-01 | 8310 | | ✓ | | 960 mL | | | | | | | | |
| 4 | -02 | ↓ | | ✓ | | 970 mL | | | | | | | | WG125616-01 |
| 5 | -03 | | | ✓ | | 1000 mL | | | | | | | | ↓ -04 ✓ |
| 6 | -04MS | | | ✓ | | 960 mL | | 500 µL | | | | | | ↓ -05 ✓ |
| 7 | -05MSD | | | ✓ | | 1000 mL | | ↓ | | | | | | |
| 8 | -06 | | | ✓ | | 950 mL | | | | | | | | |
| 9 | -07 | | | ✓ | | 960 mL | | | | | | | | |
| 10 | -08 | | | ✓ | | 960 mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950 mL | | | | | | | | |
| 12 | -10 | | | ✓ | | 1000 mL | | | | ↓ | | | | |
| 13 | -11 | ↓ | | ✓ | | 920 mL | | | | C | | | | |
| 14 | 09-337-01 | 8310 | | ✓ | | 1000 mL | | | | T | | | | * |
| 15 | -02 | | | ✓ | | 940 mL | | | | | | | | * |
| 16 | -03 | | | ✓ | | 930 mL | | | | | | | | * |
| 17 | -04 | | | ✓ | | 1000 mL | | | | | | | | * |
| 18 | -05 | | | ✓ | | 960 mL | | | | | | | | * |
| 19 | -06 | | | ✓ | | 1000 mL | | | | | | | | * |
| 20 | -07 | ↓ | | ✓ | | 940 mL | ↓ | | ↓ | ↓ | | | | * |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

9/26

9/26

DP 09/19/02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 41264
Reagent: Fortified Lot #: CR2254
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: BR2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

Extraction Notes For Volume # 191 Page # 015

General Comments: * ~~Extract~~ any Sample required pH adjustment (increase) to achieve a pH in the desired neutral range (5-9). Sample changed color when NaOH was added to raise the pH. 1N NaOH → ER 2255

* MS, MSD OE 09-310-03

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: — NA —

Supervisor Review: _____ Date: _____

Parameter: 8310 420 SOP #: ExHPLC 1 Revision #: 6
Extraction Analyst(s): RW TV/KD Analyst(s): DDP
Date/Time Extracted: 9/26/02 1400 Date TV/KD: 09/26/02
Spike/Surrogate Analyst: RCL Witness: DDP
Surrogate #: ES00042-21 Earliest Hold Date: OK
Spike #: A = ES00042-19 Spike #: B = —

Extraction Work Group WG 126062
Analytical Work Group WG 126254

Extract Relinquished By: RW
Extract Received By & Date: EC 9/27/02

| | 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 | | | ✓ | | 1000mL | 100ul | | 1mL | T | | | | WG 126062-02 |
| 2 | LCS | | | ✓ | | ⊥ | | 500ul | | | | | | WG ⊥ -03 |
| 3 | 09-285-01 | 8310 | | ✓ | | 940mL | | | | | | | | Re-ext occ/hAD |
| 4 | -02 | | | ✓ | | 970mL | | | | | | | | |
| 5 | -03 | | | ✓ | | 915 mL | | | | | | | | |
| 6 | -04 | | | ✓ | | 975mL | | | | | | | | |
| 7 | -05MS | | | ✓ | | 950 mL | | 500ul | | | | | | WG 126062-01 -04 |
| 8 | -06MSD | | | ✓ | | 950mL | | ⊥ | | | | | | ⊥ -05 |
| 9 | -07 | | | ✓ | | 950mL | | | | | | | | |
| 10 | -08 | | | ✓ | | 925mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950mL | | | | | | | | |
| 12 | 09-31002 | | | ✓ | | 1000mL | | | | ⊥ | | | | * |
| 13 | 09-337-01 | | | ✓ | | 970mL | | | | C | | | | |
| 14 | -02 | | | ✓ | | ⊥ | | | | T | | | | *⊗ |
| 15 | -03 | | | ✓ | | 950mL | | | | | | | | *⊗ |
| 16 | -04 | | | ✓ | | 960mL | | | | | | | | *⊗ |
| 17 | -05 | | | ✓ | | 930mL | | | | | | | | *⊗ |
| 18 | -06 | | | ✓ | | 970mL | | | | | | | | |
| 19 | -07 | ⊥ | | | | 960mL | ⊥ | | ⊥ | ⊥ | | | | ⊥ |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

DDP 09/26/02

ethylene Chloride Lot #: 420F4
exane Lot #: —
her Lot #: —
ethanol Lot #: —
lvent: CH3CN Lot #: 41264
agent: Fam. Sol. Lot #: Ex 2254
agent: — Lot #: —
agent: — Lot #: —
id: — Lot #: —
orisil Lot #: —
ica Gel Lot #: —
Analyst / Date / Time: —
ed $Na_2SO_4$ Lot #: E22211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 191 Page # 51

General Comments: None

Extraction Anomalies: ~~* Extract~~ 8/36 Sample required pH adjustment to achieve a neutral pH (5 to 9). (*) 8 Sample changed color when 10N NaOH (ER2262) was added to adjust ~~the~~ the pH.

Concentration Anomalies: None

Clean-Up Anomalies: N/A

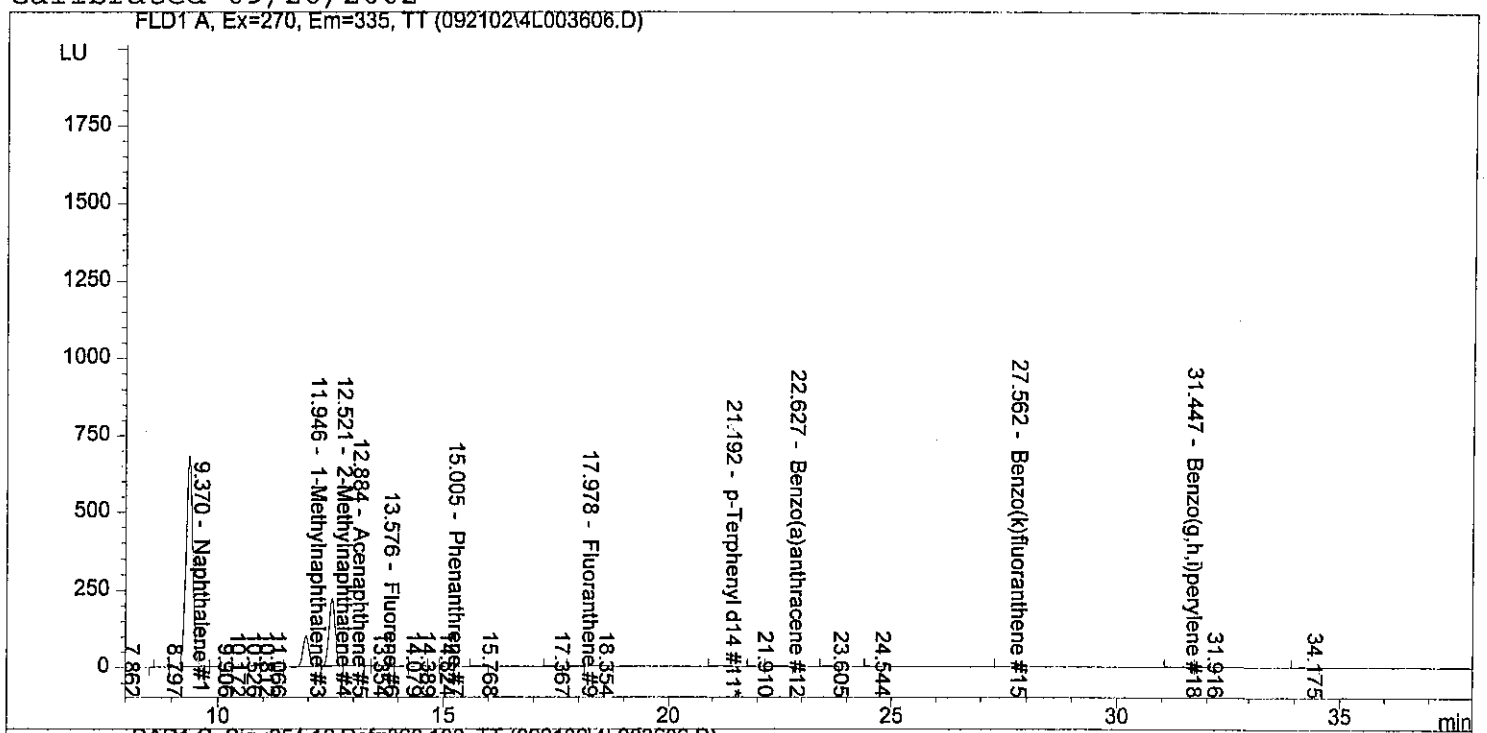
Supervisor Review: _____ Date: _____

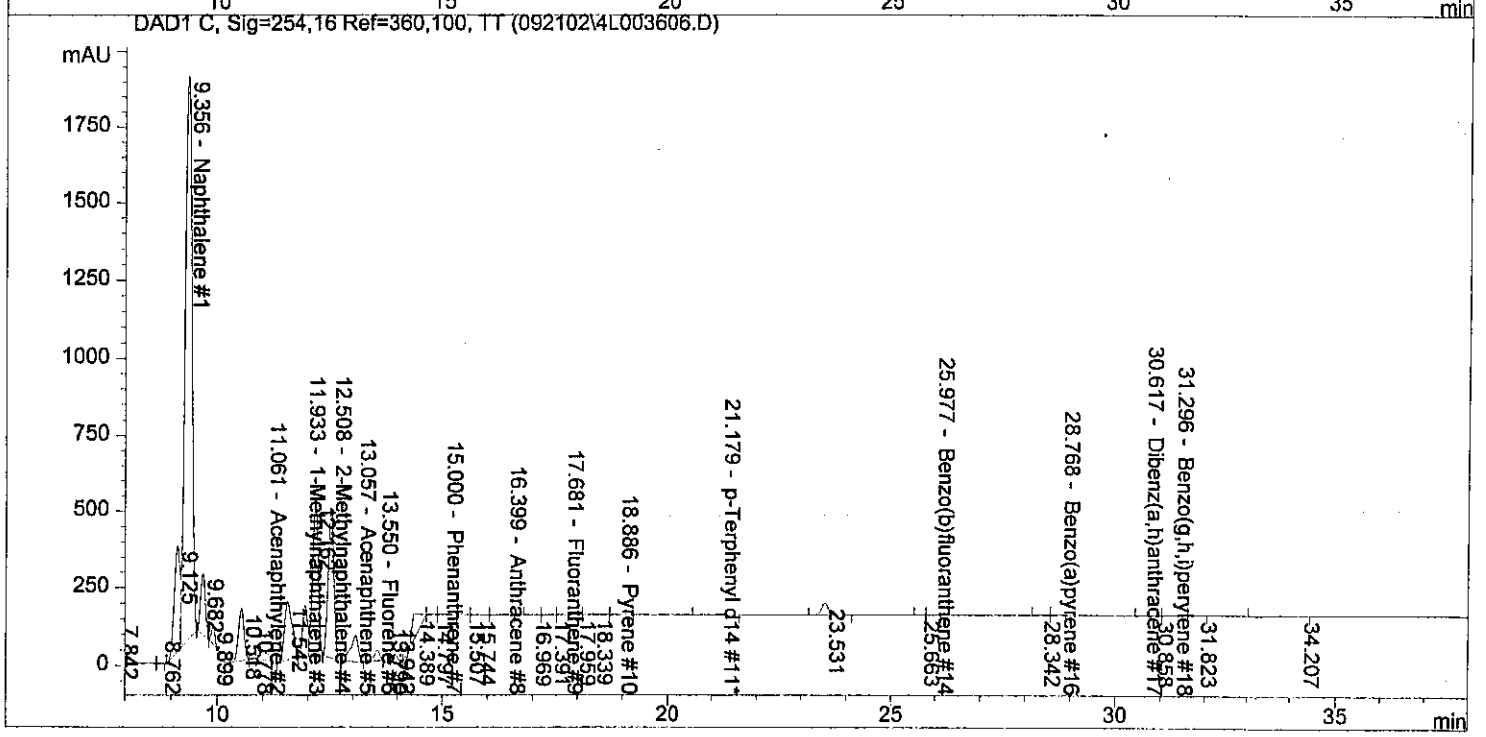
# 2.2.7.2 Sample Data

==========

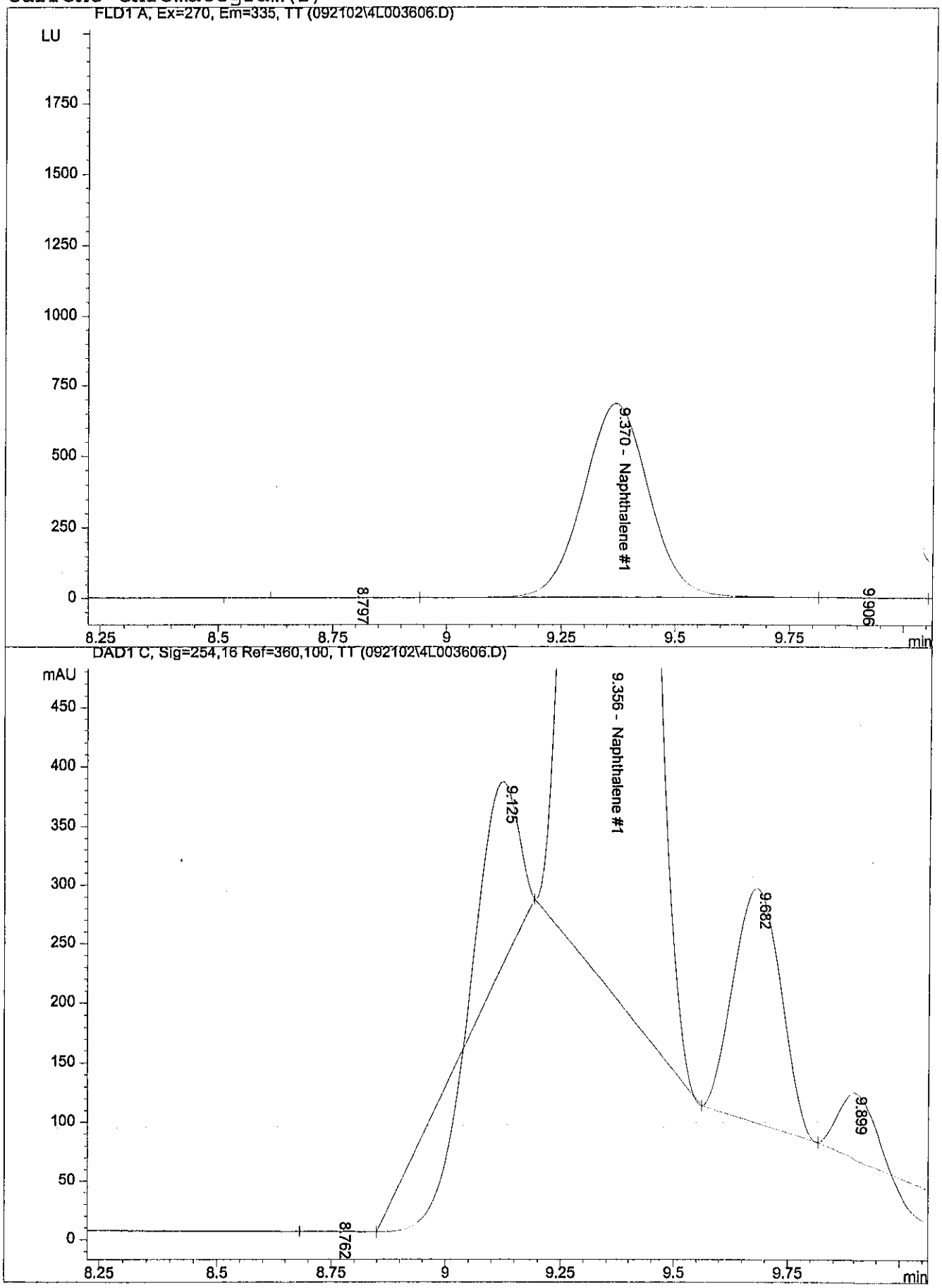
Injection Date : 9/22/2002 5:24:46 PM  Seq. Line : 29
Sample Name : L0209337-01 831W  Vial : 29
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 5:24:19 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002

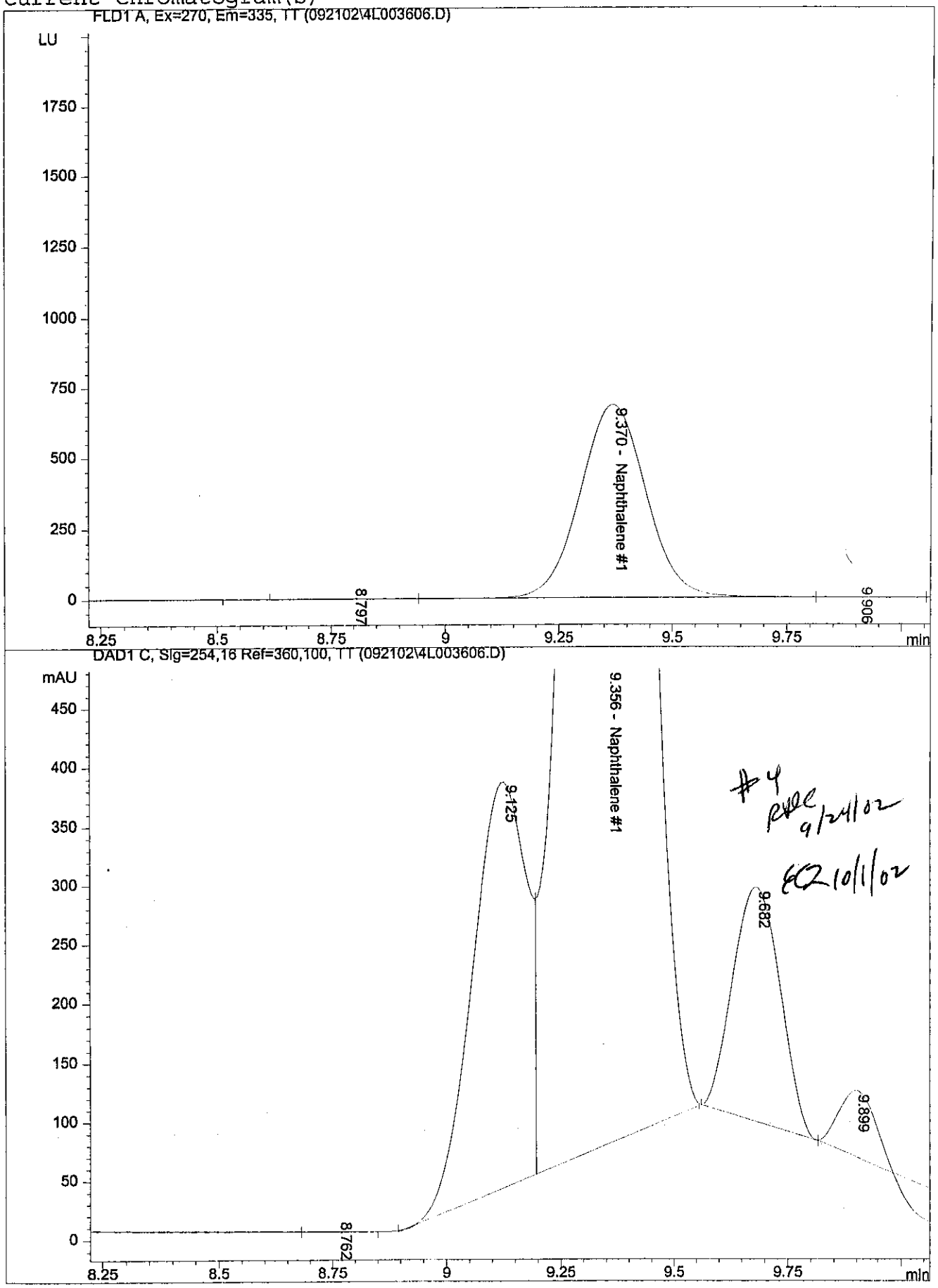


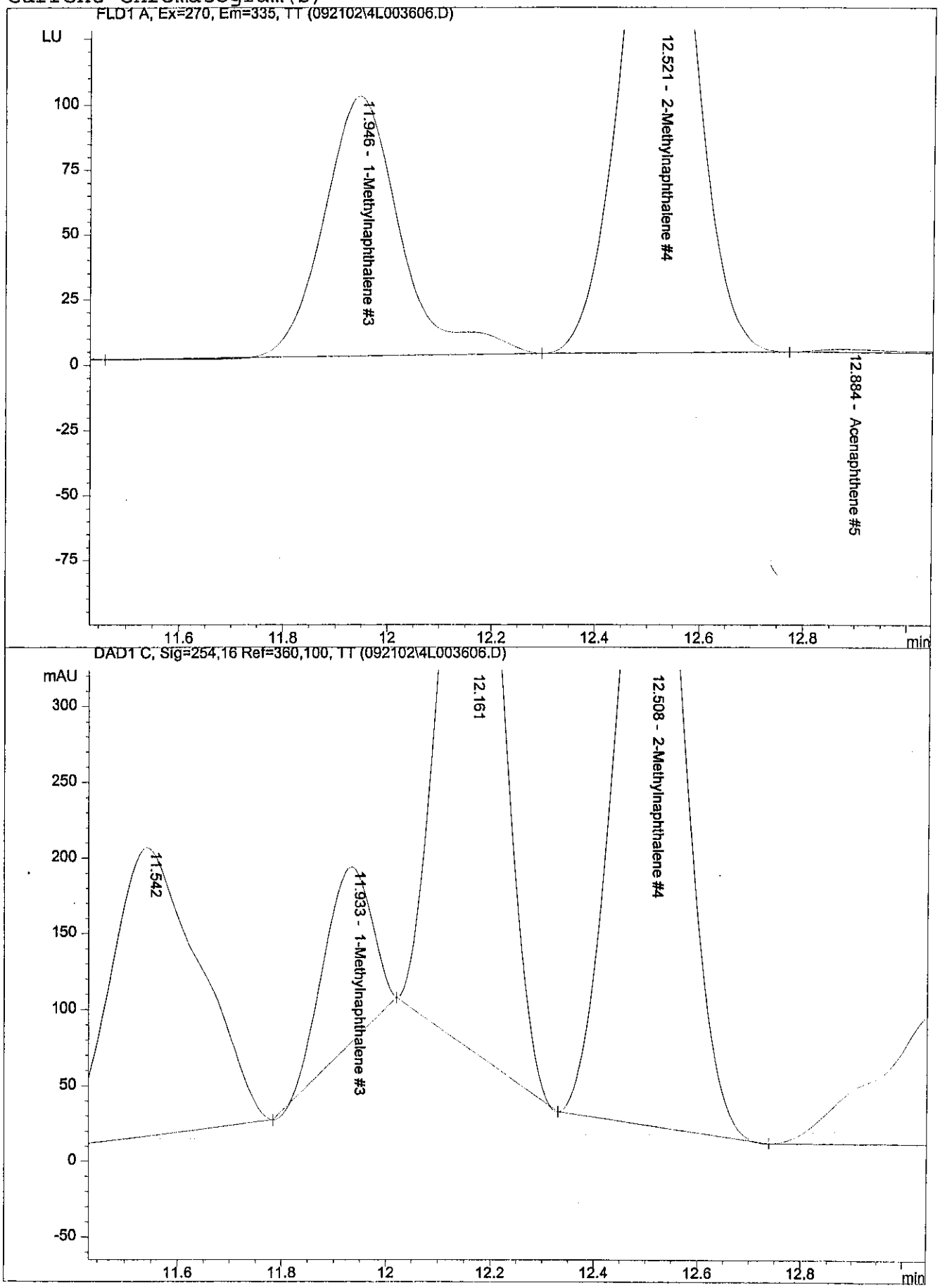
Current Chromatogram(s)



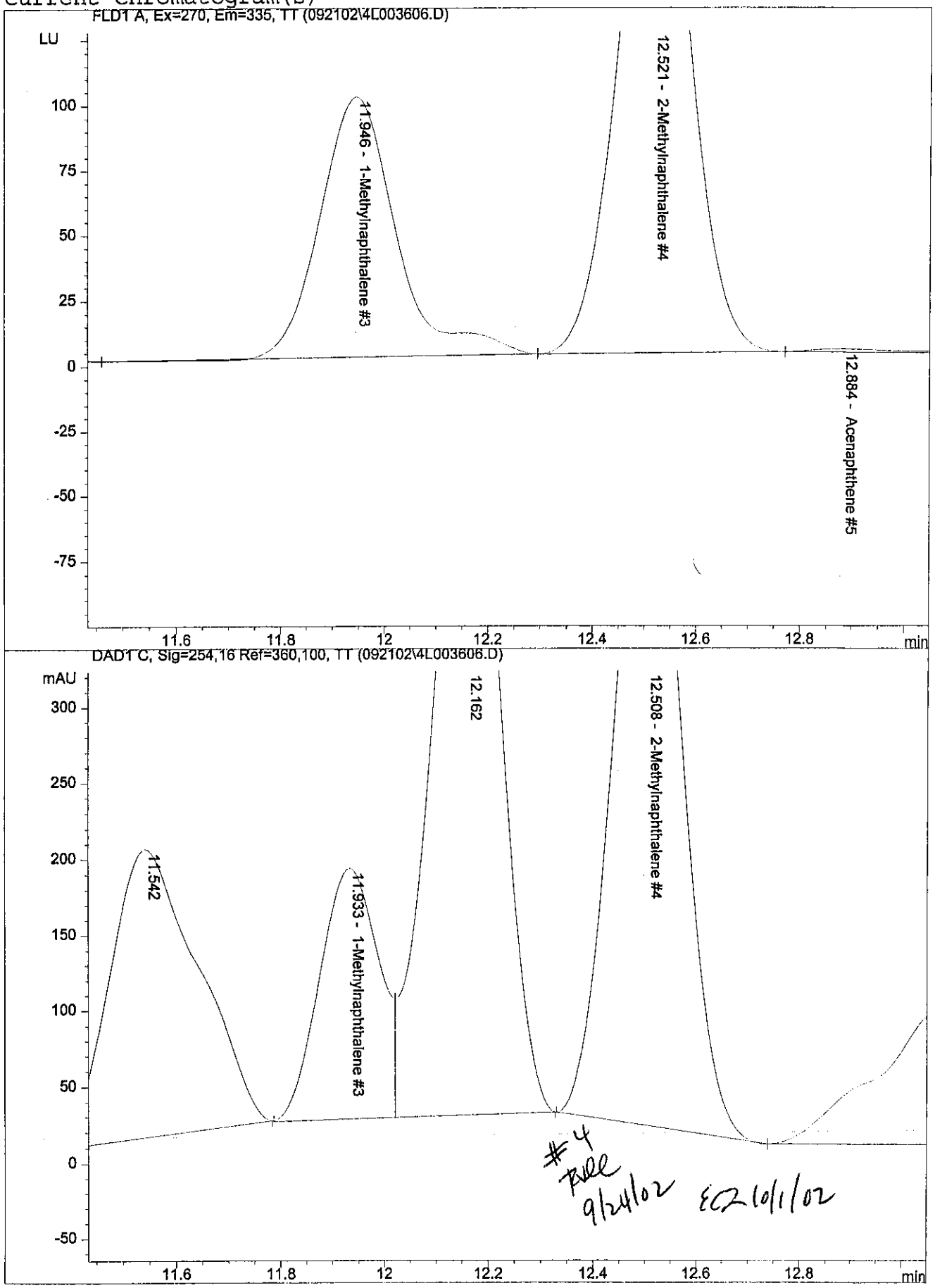
Current Chromatogram(s)



Current Chromatogram(s)



Current Chromatogram(s)



Search result of : DAD1, 11.061 (26.8 mAU, - ) Ref=10.821 & 11.321
Library used : C:\HPCHEM\SPECLIBS\8310_CCV.UVL
Library Name : 8310 CCV
Parameters : Window 10.508 | 10.508 min

Library search results

| # | Match | Entry | Time [min] | Name |
|---|---|---|---|---|
| 1 | 267.6936 | 1 | 10.972 | acenaphthylene |

*** End of Report ***

External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.370 | BB | 6884.87939 | 2.53307e-2 | 174.39888 | I | Naphthalene #1 |
| 11.946 | BB | 1011.53735 | 2.25386e-2 | 22.79865 | ✓ | 1-Methylnaphthalene #3 |
| 12.521 | BB | 2073.87646 | 1.74537e-2 | 36.19679 | ✓ | 2-Methylnaphthalene #4 |
| 12.884 | BB | 16.97175 | 2.43226e-2 | 4.12797e-1 | | Acenaphthene #5 |
| 13.576 | BB | 52.18935 | 7.54167e-3 | 3.93595e-1 | | Fluorene #6 |
| 15.005 | BB | 2.97539e-1 | 1.80956 | 5.38414e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.978 | PB | 3.86881 | 3.30467e-2 | 1.27851e-1 | | Fluoranthene #9 RT |
| 18.835 | | - | - | - | 32.3% | Pyrene #10 |
| 21.192 | BB | 9.89156 | 3.27002e-1 | 3.23456 | | p-Terphenyl d14 #11* |
| 22.627 | BB | 7.49836e-1 | 6.98177e-2 | 5.23519e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.562 | BBA | 1.83490e-1 | 7.19941e-2 | 1.32102e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.447 | BB | 2.18541e-1 | 4.15848e-1 | 9.08797e-2 | RT | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 238.25799

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.356 | FM | 1.86076e4 | 8.42890e-3 | 156.84177 | I | Naphthalene #1 |
| 11.061 | BB | 347.82358 | 3.46972e-2 | 12.06852 | NC | Acenaphthylene #2 |
| 11.933 | MF | 1323.72278 | 1.40155e-2 | 18.55269 | ✓ | 1-Methylnaphthalene #3 |
| 12.508 | BB | 4290.95313 | 1.21139e-2 | 51.98036 | ✓ | 2-Methylnaphthalene #4 |
| 13.057 | BB | 1020.70685 | 2.27563e-2 | 23.22755 | NC | Acenaphthene #5 |
| 13.550 | BB | 323.73538 | 1.78977e-2 | 5.79412 | NC | Fluorene #6 |
| 15.000 | BB | 5.48094 | 5.33343e-2 | 2.92322e-1 | <RL | Phenanthrene #7 |
| 16.399 | BB | 19.81507 | 1.08487e-2 | 2.14967e-1 | <MDL | Anthracene #8 |
| 17.681 | BB | 1.11974 | 4.96586e-2 | 5.56046e-2 | | Fluoranthene #9 RT |
| 18.886 | BBA | 5.24178 | 1.73760e-2 | 9.10812e-2 | NC | Pyrene #10 |
| 21.179 | BB | 46.14225 | 7.16127e-2 | 3.30437 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | 33.0% | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.977 | BBA | 3.21397 | 3.02836e-2 | 9.73307e-2 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.768 | BB | 4.75145 | 3.81348e-2 | 1.81196e-1 | RT/NC | Benzo(a)pyrene #16 |
| 30.617 | BB | 1.99459 | 5.99837e-3 | 1.19643e-2 | NC | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | [ug/L] | | | |
|---|---|---|---|---|---|---|
| 31.296 | BB | 4.68311 | 6.45269e-2 | 3.02187e-1 | NC | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 273.01602

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

==========

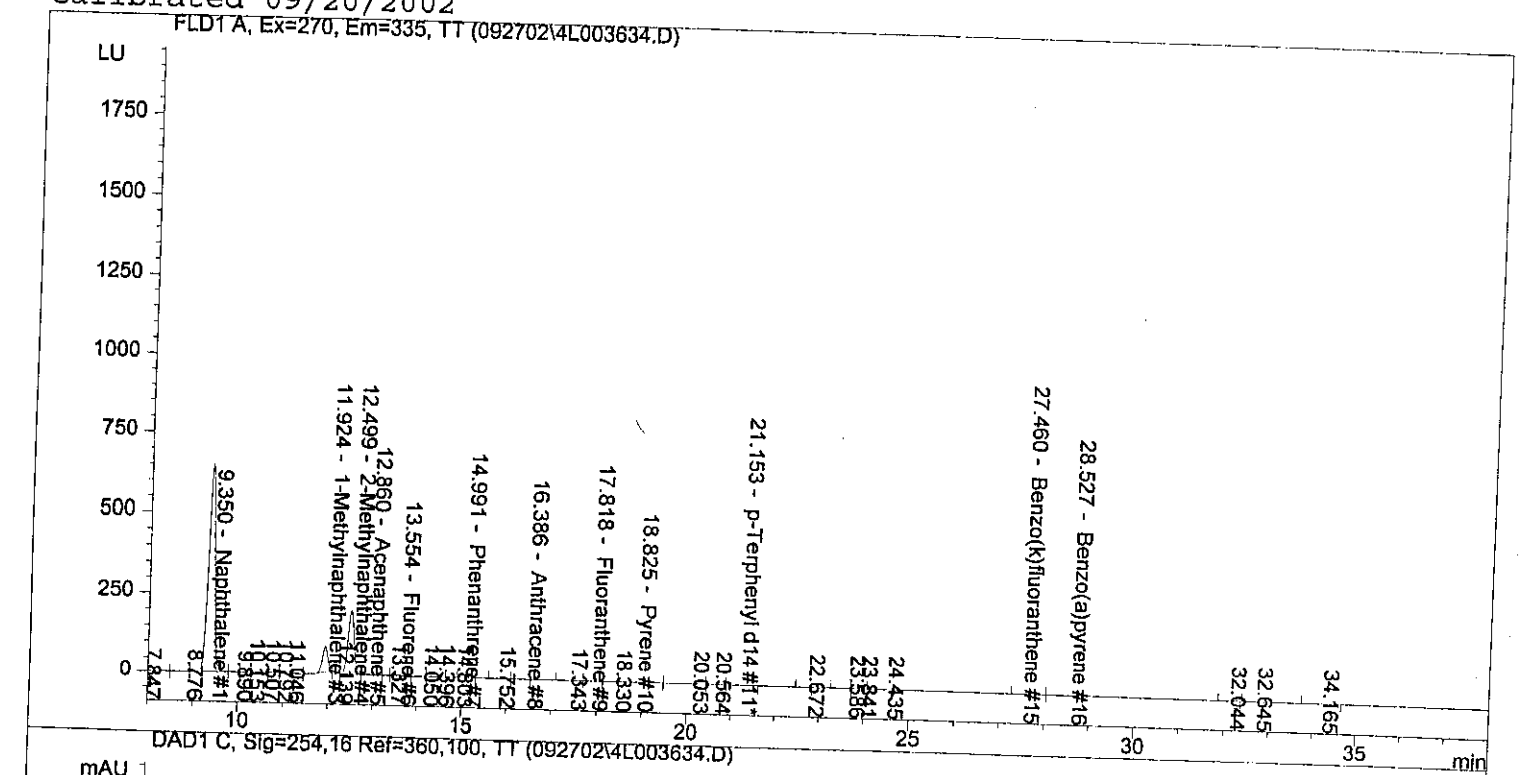
*** End of Report ***

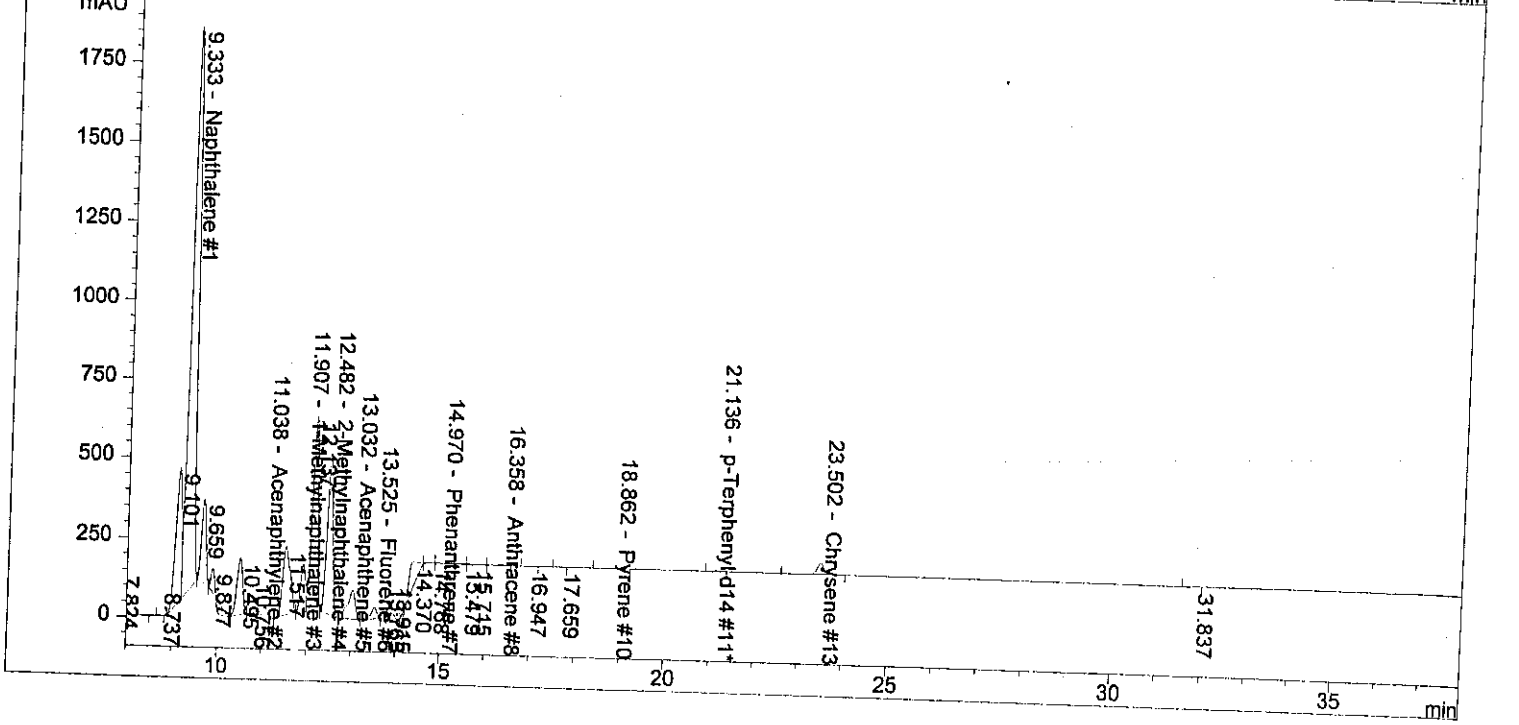
==========

Injection Date : 9/28/2002 6:40:06 AM
Sample Name : L0209337-01 831W
Acq. Operator : RDC

Seq. Line : 16
Vial : 16
Inj : 1
Inj Volume : 8 µl

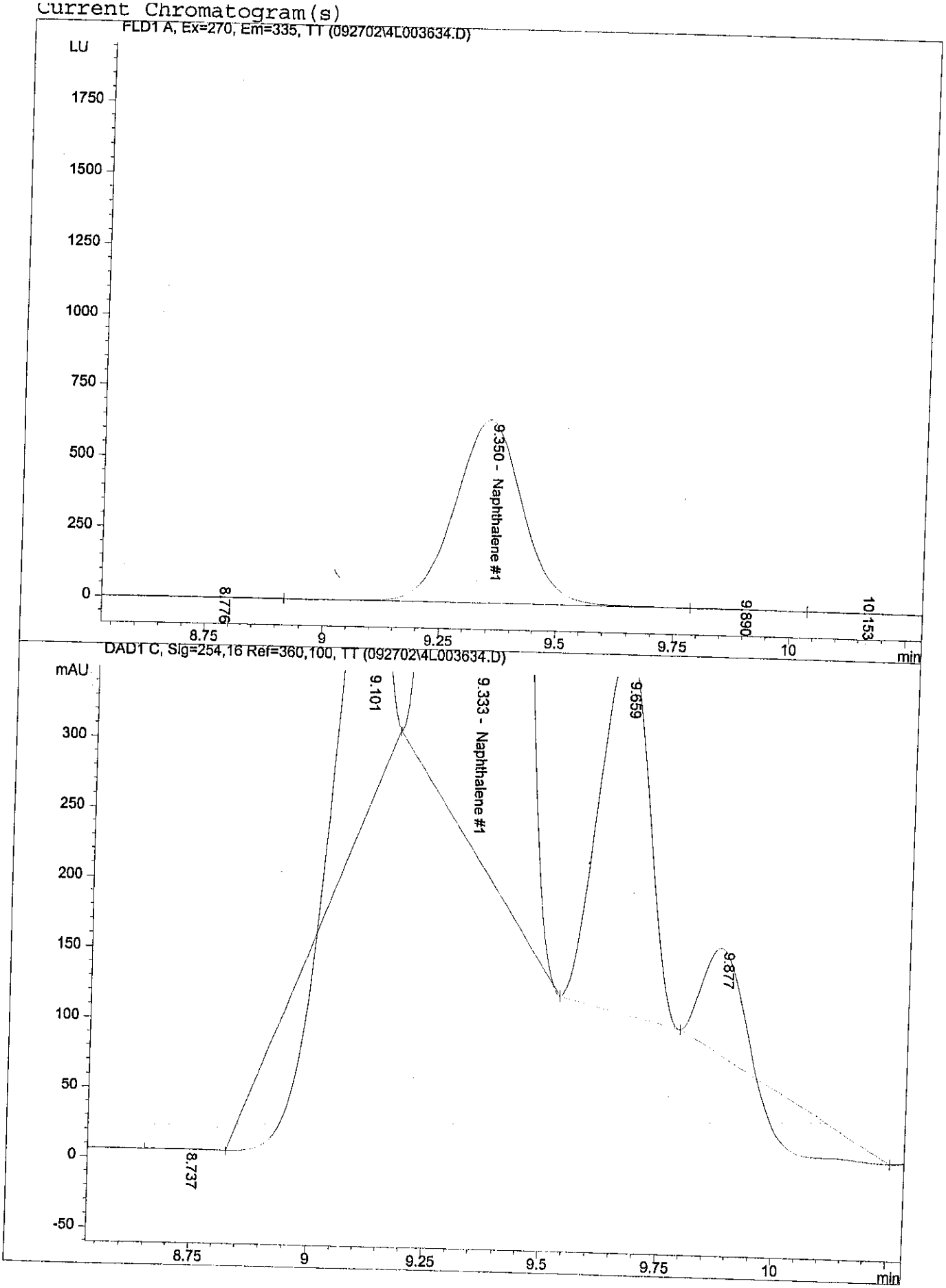
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 6:40:19 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002




PLC4 9/30/2002 11:13:39 AM

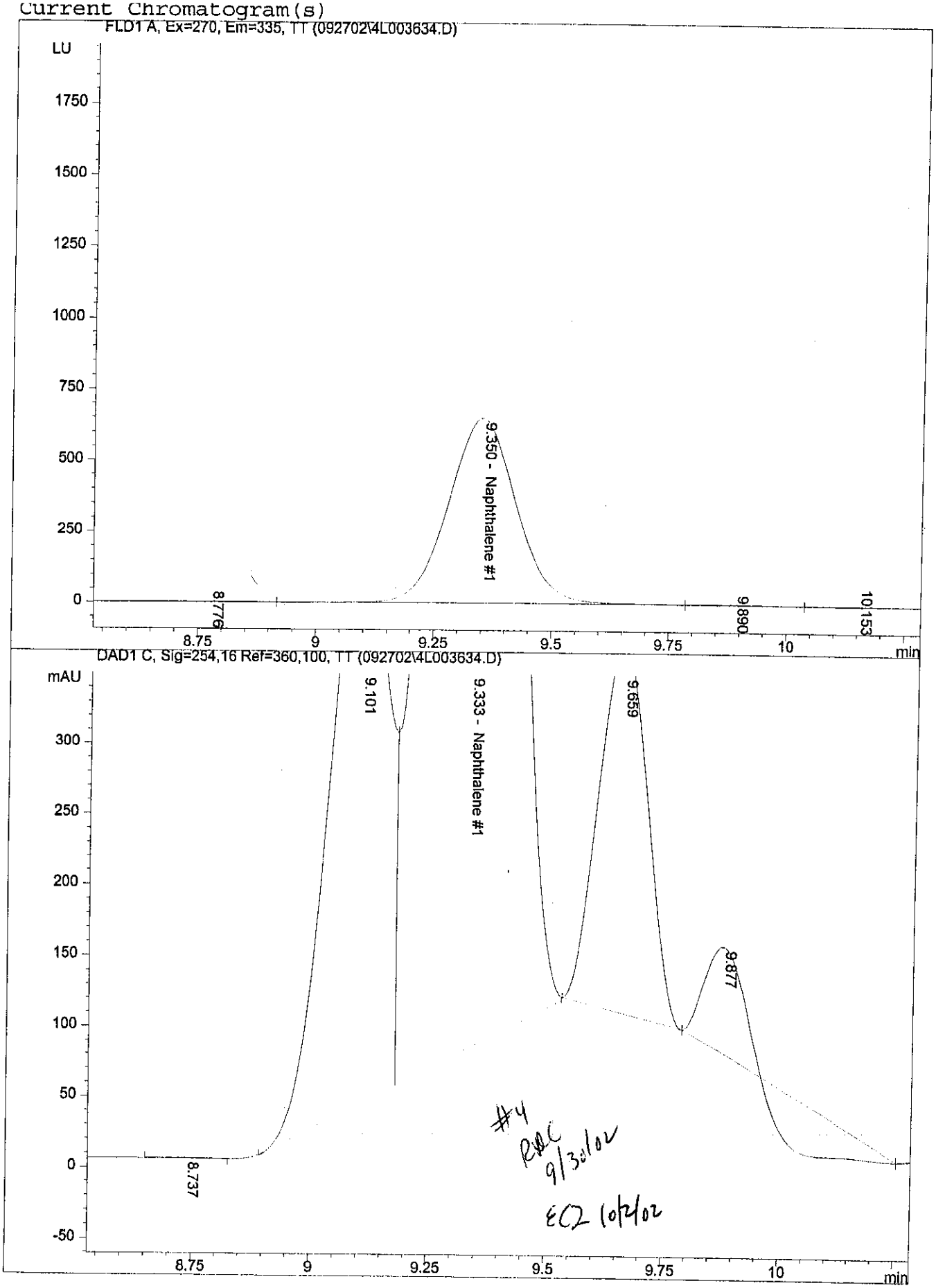
Current Chromatogram(s)




IPLC4 9/30/2002 11:12:12 AM

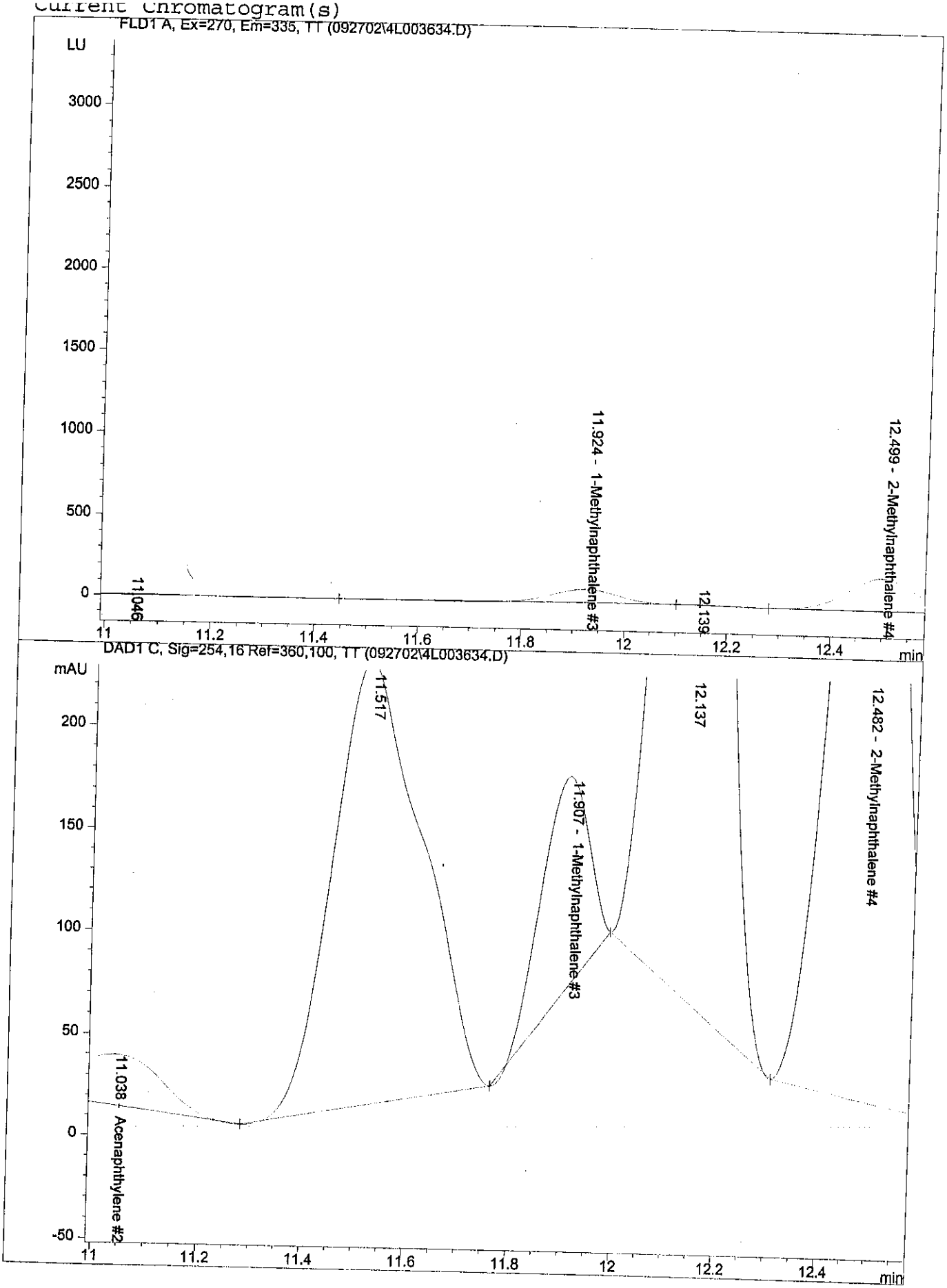
Page 1 of 1

Current Chromatogram(s)



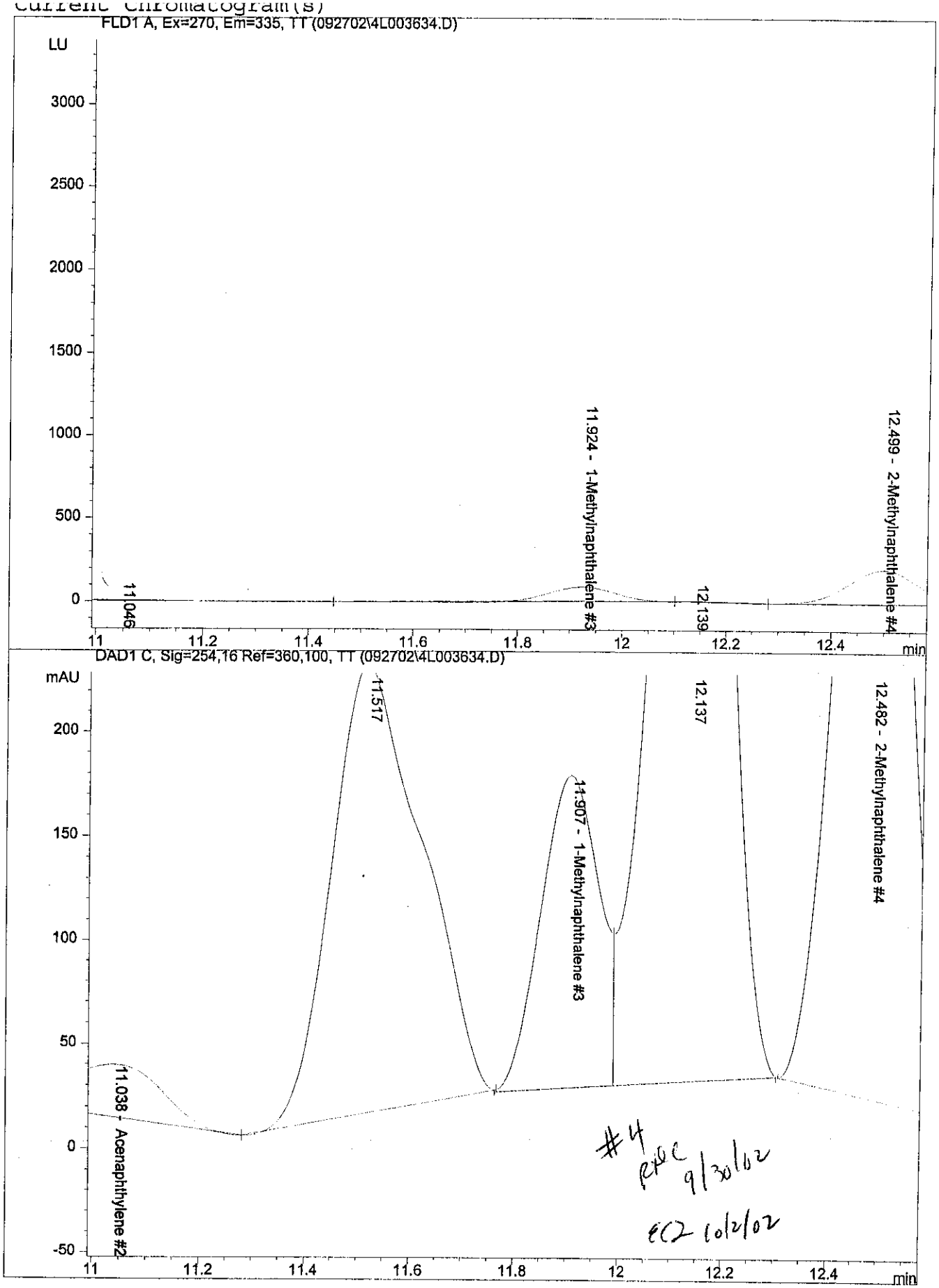

HPLC4 9/30/2002 11:12:29 AM

Current Chromatogram(s)




HPLC4 9/30/2002 11:13:20 AM

Current Chromatogram(s)




HPLC4 9/30/2002 11:13:37 AM

Page 1 of 1

Search result of : DAD1, 11.041 (35.0 mAU, - ) Ref=10.274 & 11.301
Library used : C:\HPCHEM\SPECLIBS\8310_CCV.UVL
Library Name : 8310 CCV
Parameters : Window 10.488 | 10.488 min

Library search results

| # | Match | Entry | Time [min] | Name |
|---|---|---|---|---|
| 1 | 261.6624 | 1 | 10.972 | acenaphthylene |

*** End of Report ***

External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 | 6507.78076 | 2.53337e-2 | 164.86607 | | Naphthalene #1 |
| 11.924 | BB | 700.78882 | 2.26864e-2 | 15.89834 | | 1-Methylnaphthalene #3 |
| 12.499 | BB | 1921.72546 | 1.74631e-2 | 33.55937 | | 2-Methylnaphthalene #4 |
| 12.860 | BB | 19.23660 | 2.30917e-2 | 4.44206e-1 | | Acenaphthene #5 |
| 13.554 | BB | 50.64041 | 7.56653e-3 | 3.83172e-1 | | Fluorene #6 |
| 14.991 | BB | 1.92317e-1 | 2.70845 | 5.20879e-1 | | Phenanthrene #7 |
| 16.386 | BB | 1.48782e-1 | 1.03777 | 1.54402e-1 | | Anthracene #8 |
| 17.818 | BB | 1.89140e-1 | 1.81776e-1 | 3.43812e-2 | | Fluoranthene #9 |
| 18.825 | BB | 2.98514e-1 | 2.73196e-1 | 8.15529e-2 | | Pyrene #10 |
| 21.153 | BB | 7.55452 | 3.35235e-1 | 2.53254 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.460 | BB | 2.72112e-1 | 4.94689e-2 | 1.34611e-2 | | Benzo(k)fluoranthene #15 |
| 28.527 | BB | 2.32932e-1 | 2.53071e-1 | 5.89482e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 218.54733 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.333 | FM | 1.76345e4 | 8.42859e-3 | 148.63443 | | Naphthalene #1 |
| 11.038 | BB | 333.08981 | 3.47274e-2 | 11.56735 | | Acenaphthylene #2 |
| 11.907 | MF | 1167.07104 | 1.40320e-2 | 16.37635 | | 1-Methylnaphthalene #3 |
| 12.482 | BB | 4330.67725 | 1.21138e-2 | 52.46107 | | 2-Methylnaphthalene #4 |
| 13.032 | BB | 1085.52478 | 2.27438e-2 | 24.68893 | | Acenaphthene #5 |
| 13.525 | BB | 350.39554 | 1.78539e-2 | 6.25593 | | Fluorene #6 |
| 14.970 | BB | 3.96630 | 6.70751e-2 | 2.66040e-1 | | Phenanthrene #7 |
| 16.358 | BB | 29.02347 | 1.08357e-2 | 3.14488e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.862 | BBA | 6.80867 | 1.58977e-2 | 1.08242e-1 | | Pyrene #10 |
| 21.136 | PBA | 31.09814 | 7.42827e-2 | 2.31005 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.502 | BBA | 374.81714 | 1.51965e-2 | 5.69592 | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 268.67881

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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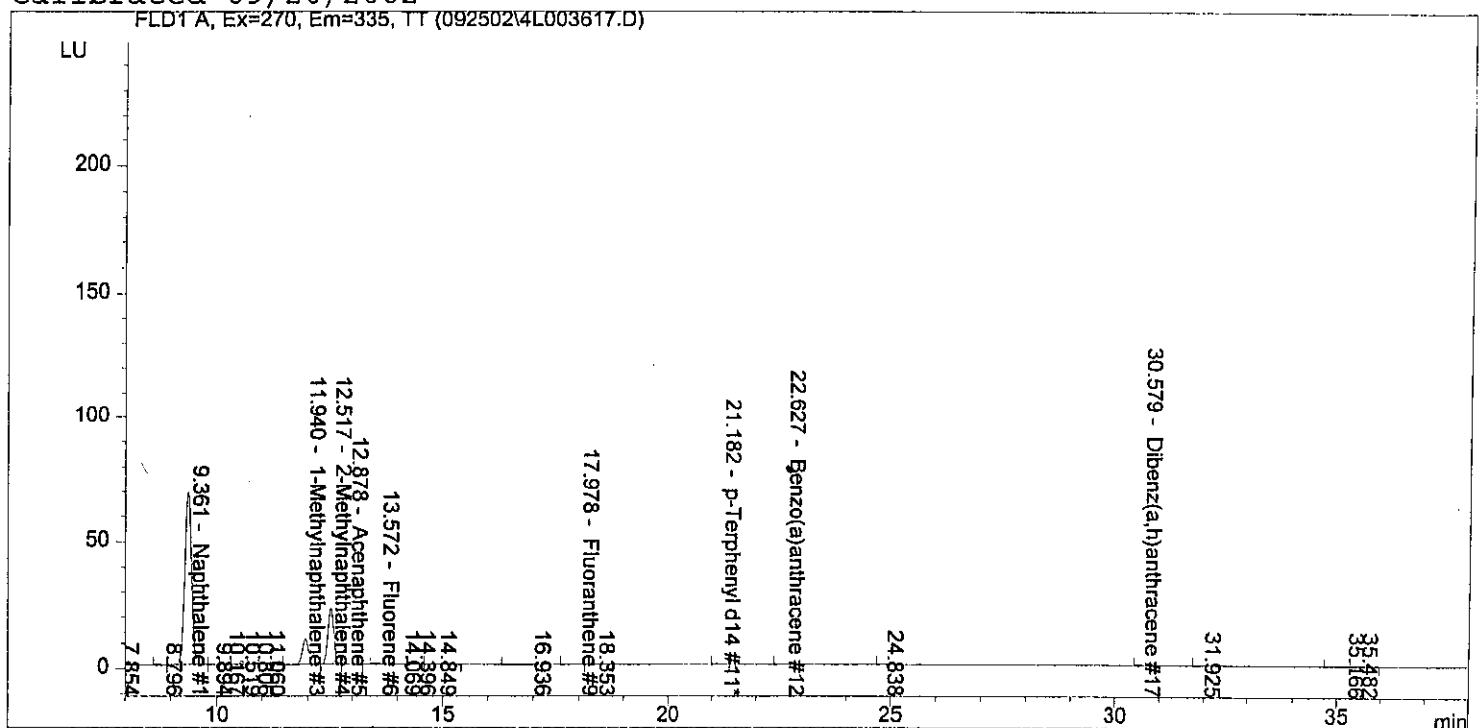
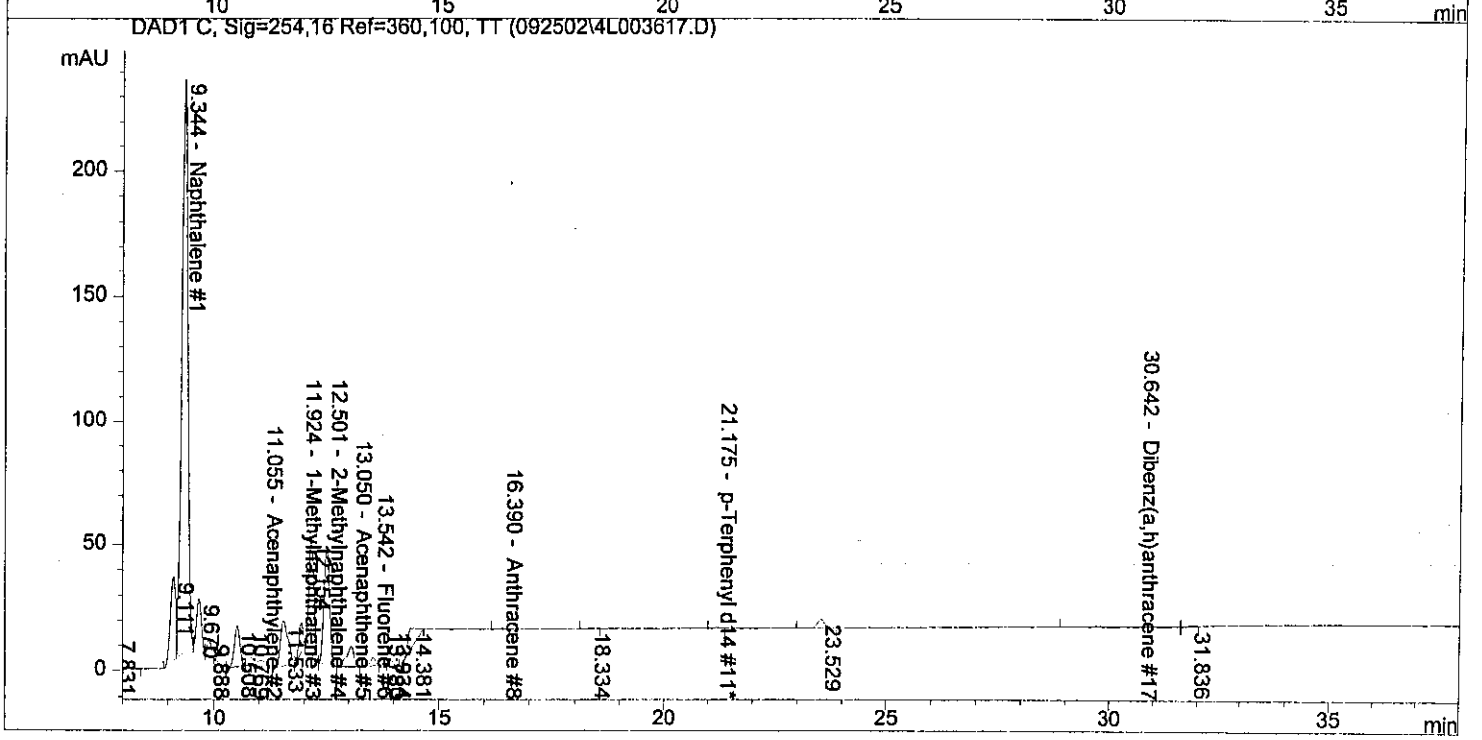
Injection Date : 9/25/2002 5:41:21 PM  Seq. Line : 3
Sample Name : L0209337-01 831W  Vial : 3
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

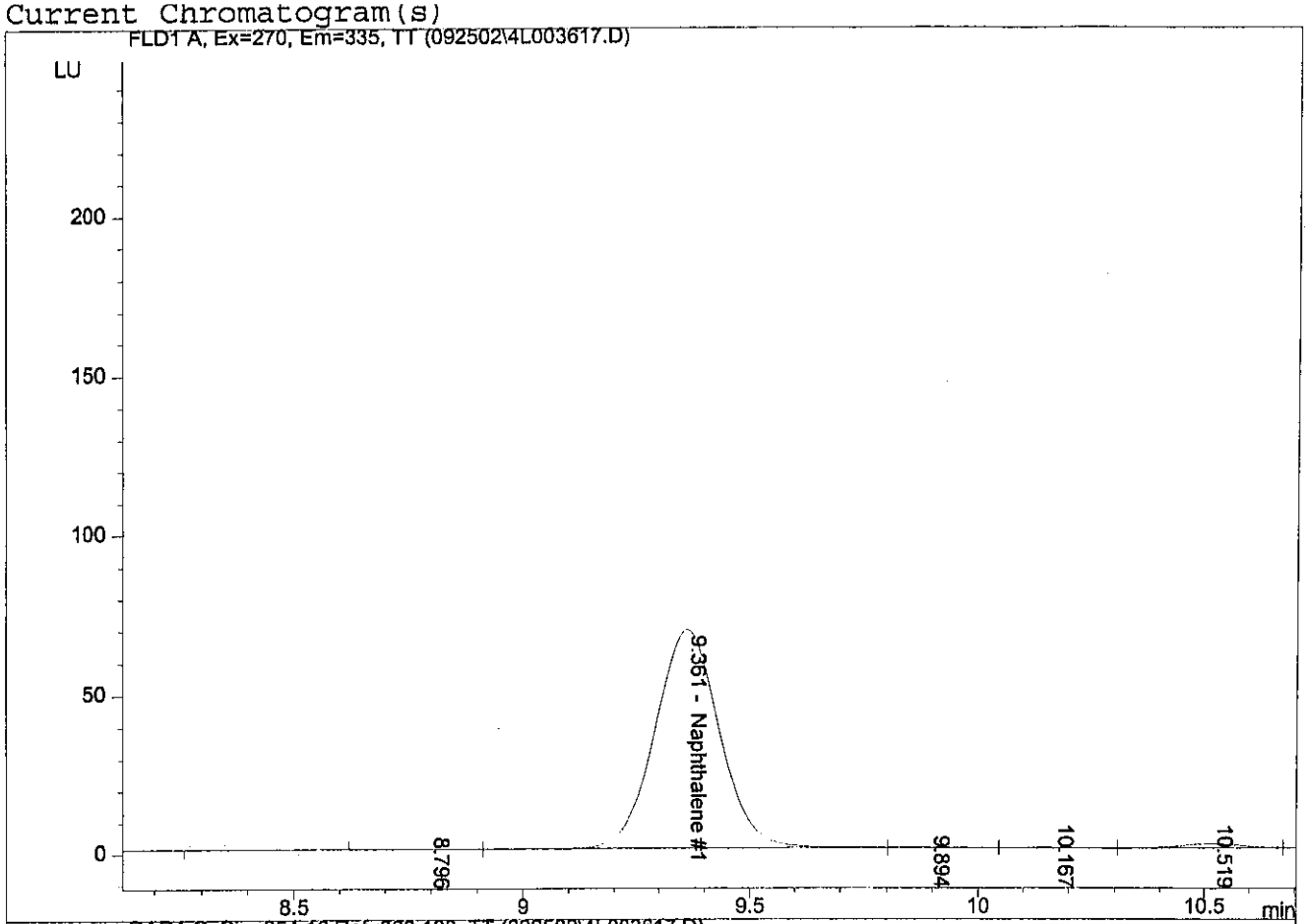
Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/26/2002 2:16:36 PM
(modified after loading)

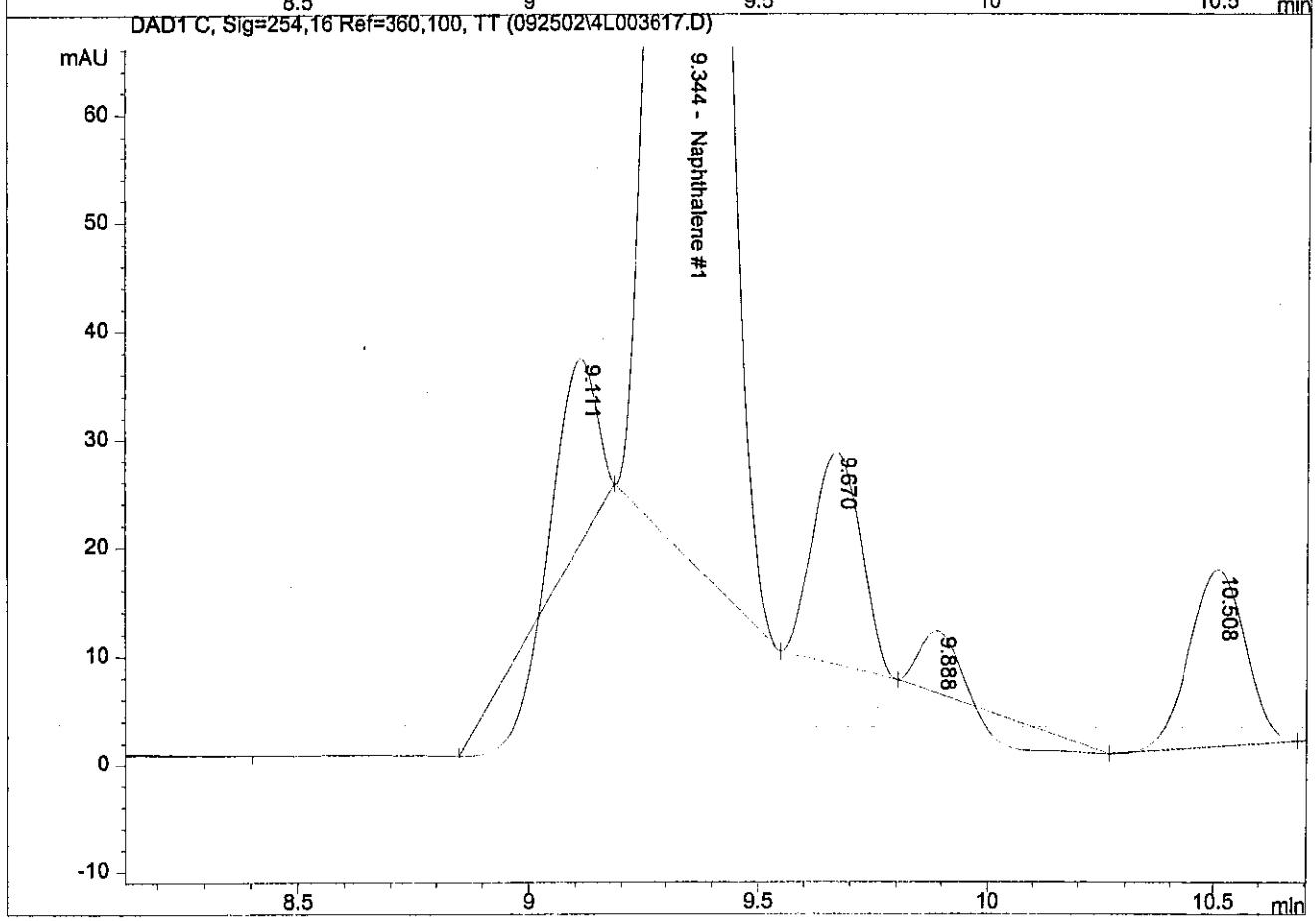
Calibrated 09/20/2002



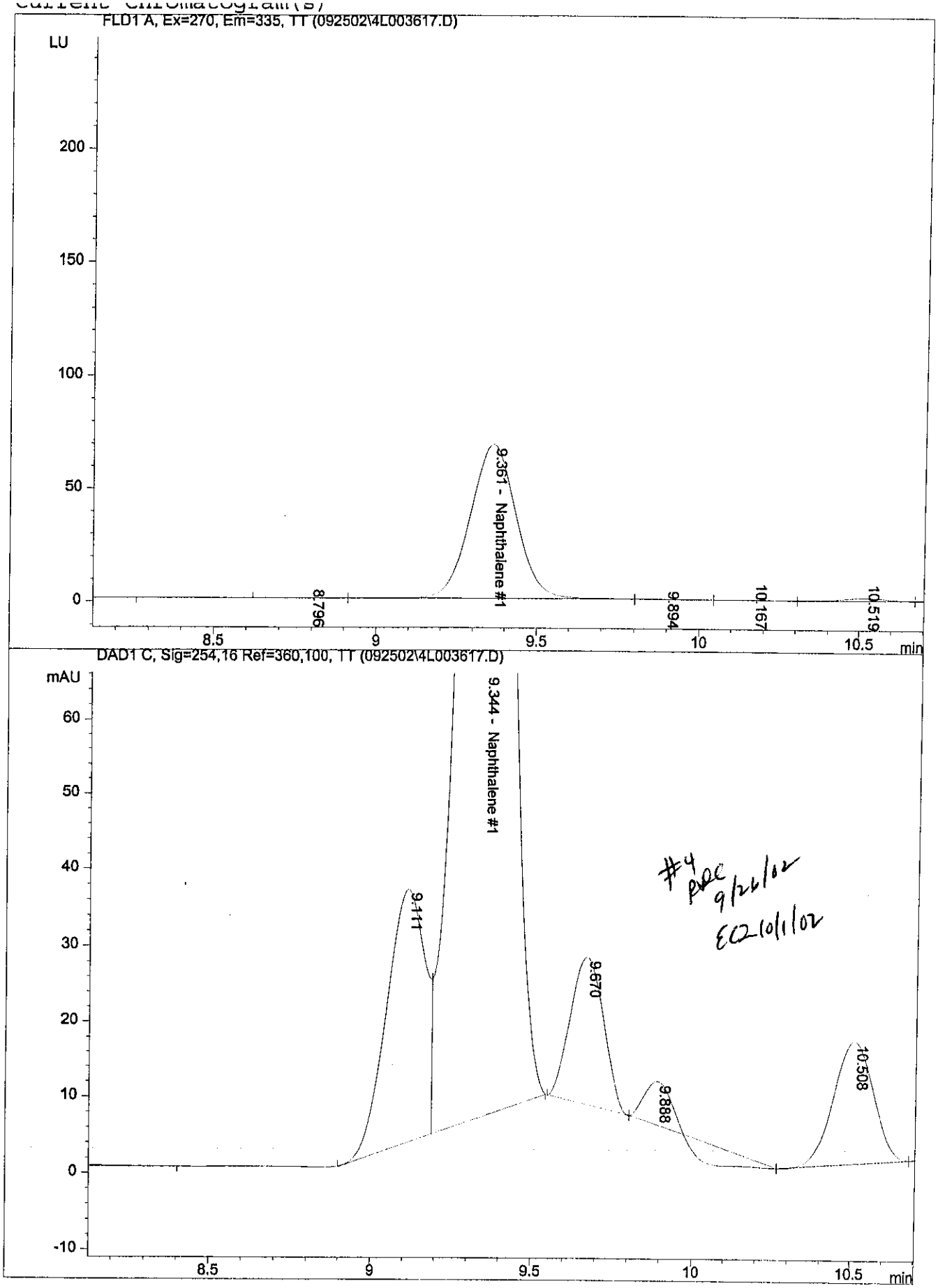



Current Chromatogram(s)



Current Chromatogram(s)




HPLC4 9/26/2002 2:16:57 PM

Page 1 of 1

External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.361 | BB | 679.01440 | 2.58000e-2 | 17.51857 | | Naphthalene #1 |
| 11.940 | BB | 98.90189 | 2.56130e-2 | 2.53317 | | 1-Methylnaphthalene #3 NR |
| 12.517 | BB | 201.87706 | 1.85615e-2 | 3.74714 | | 2-Methylnaphthalene #4 NR |
| 12.878 | BB | 1.67887 | 1.19557e-1 | 2.00721e-1 | | Acenaphthene #5 |
| 13.572 | BB | 5.32306 | 1.46957e-2 | 7.82262e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.978 | BB | 3.95166e-1 | 1.00248e-1 | 3.96146e-2 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.182 | BB | 8.07362e-1 | 6.26435e-1 | 5.05759e-1 | DL | p-Terphenyl d14 #11* |
| 22.627 | BB | 3.00189e-1 | 1.62547e-1 | 4.87948e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.542 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.579 | BB | 2.23287e-1 | 3.33531e-1 | 7.44731e-2 | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 24.74647

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.344 | FM | 2060.97314 | 8.38487e-3 | 17.28099 | | Naphthalene #1 |
| 11.055 | BB | 33.50498 | 4.11008e-2 | 1.37708 | | Acenaphthylene #2 NR |
| 11.924 | BB | 75.73858 | 1.60371e-2 | 1.21463 | | 1-Methylnaphthalene #3 NR |
| 12.501 | BB | 408.85236 | 1.22332e-2 | 5.00157 | | 2-Methylnaphthalene #4 |
| 13.050 | BB | 96.91219 | 2.47612e-2 | 2.39966 | | Acenaphthene #5 |
| 13.542 | BB | 30.96305 | 2.33402e-2 | 7.22683e-1 | | Fluorene #6 |
| 15.030 | | - | - | - | | Phenanthrene #7 |
| 16.390 | BBA | 1.89033 | 1.12372e-2 | 2.12420e-2 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.175 | BBA | 4.09145 | 1.28338e-1 | 5.25087e-1 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | DL | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.642 | BB | 19.70144 | 9.23735e-2 | 1.81989 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 30.36283

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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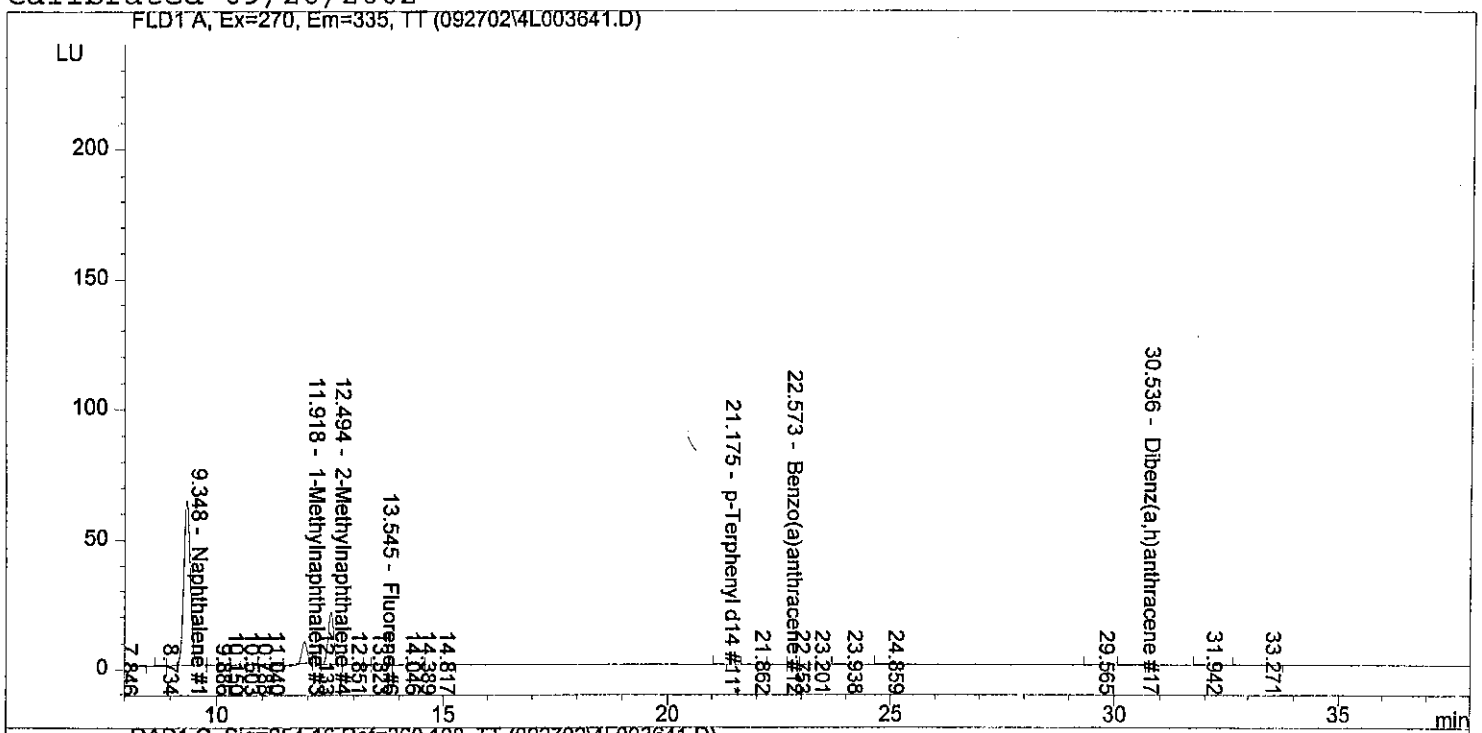
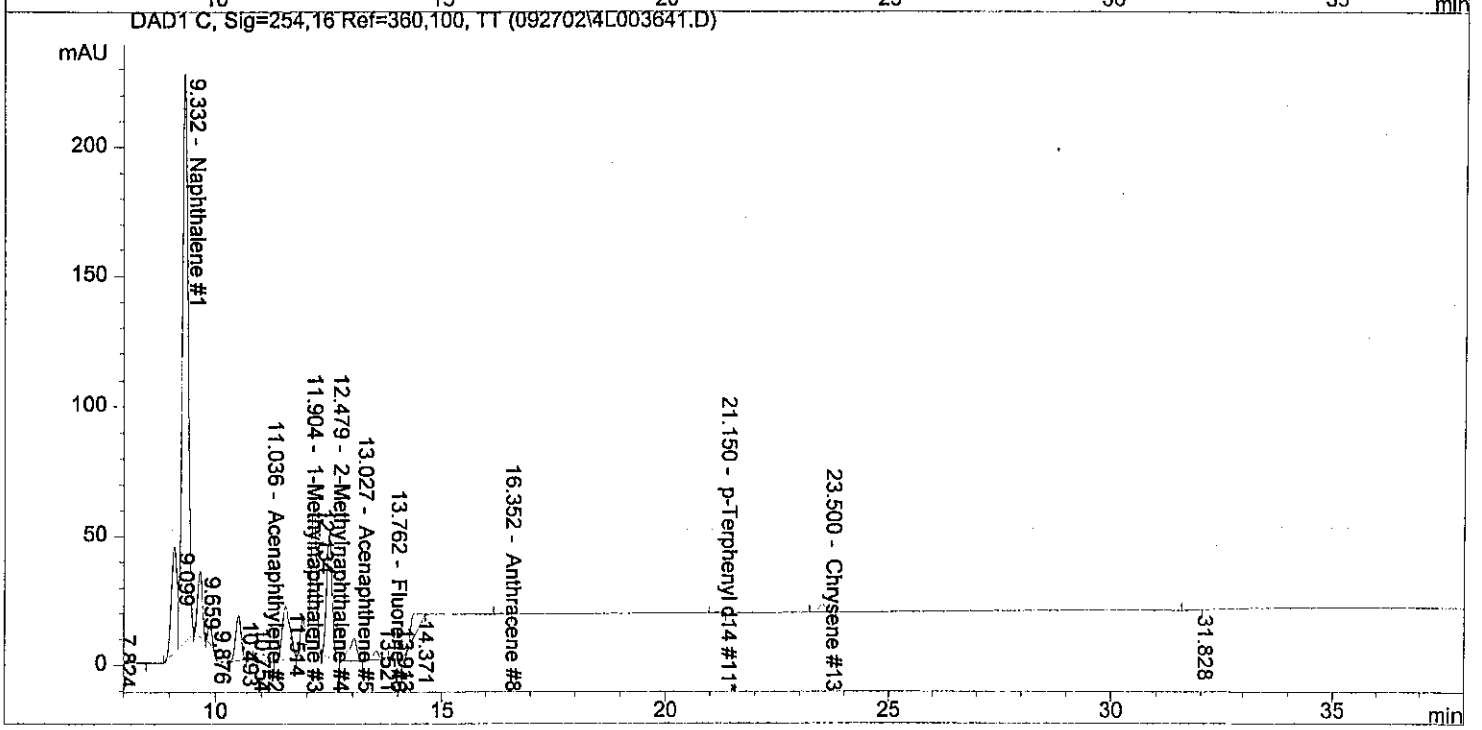
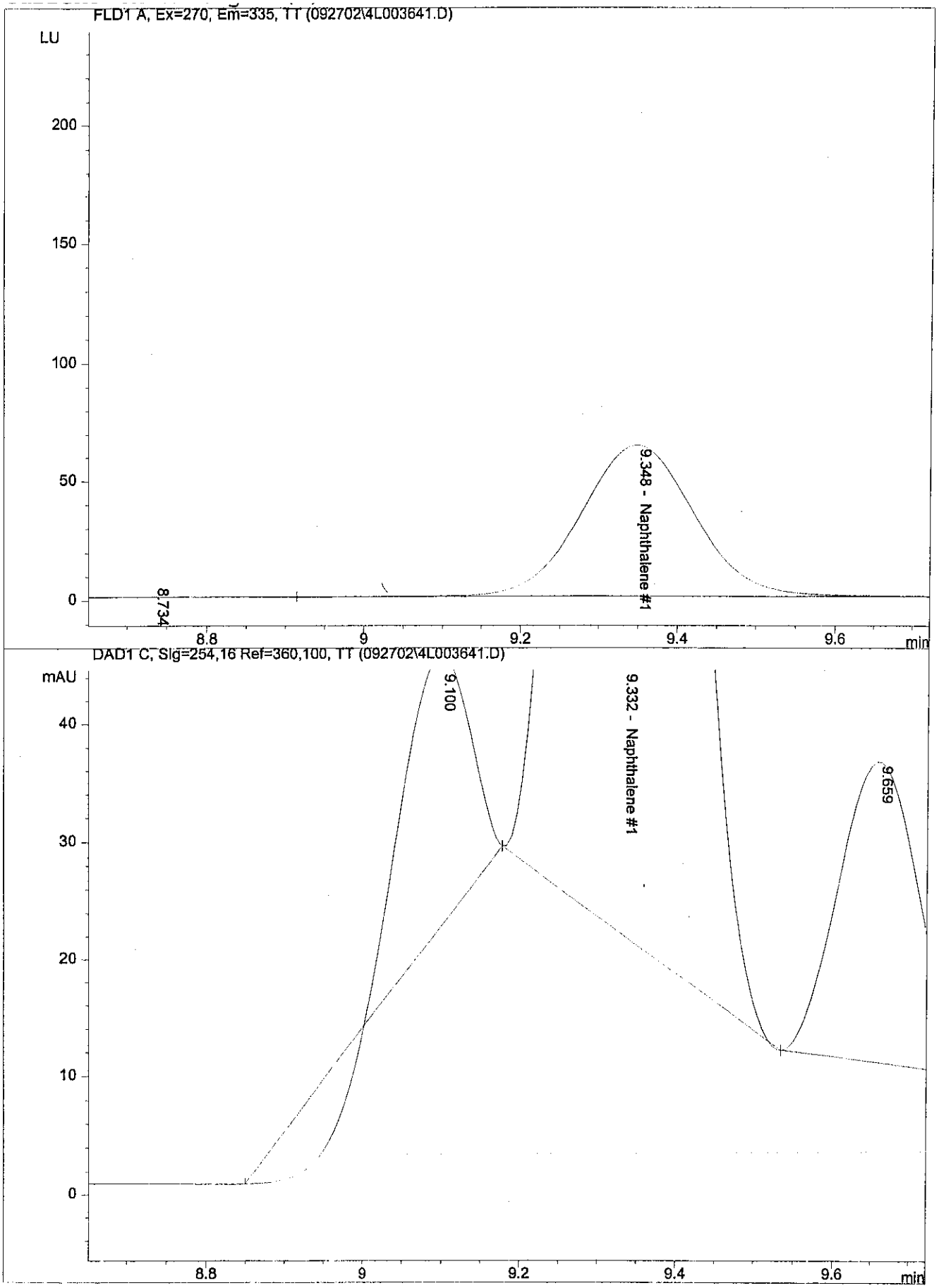
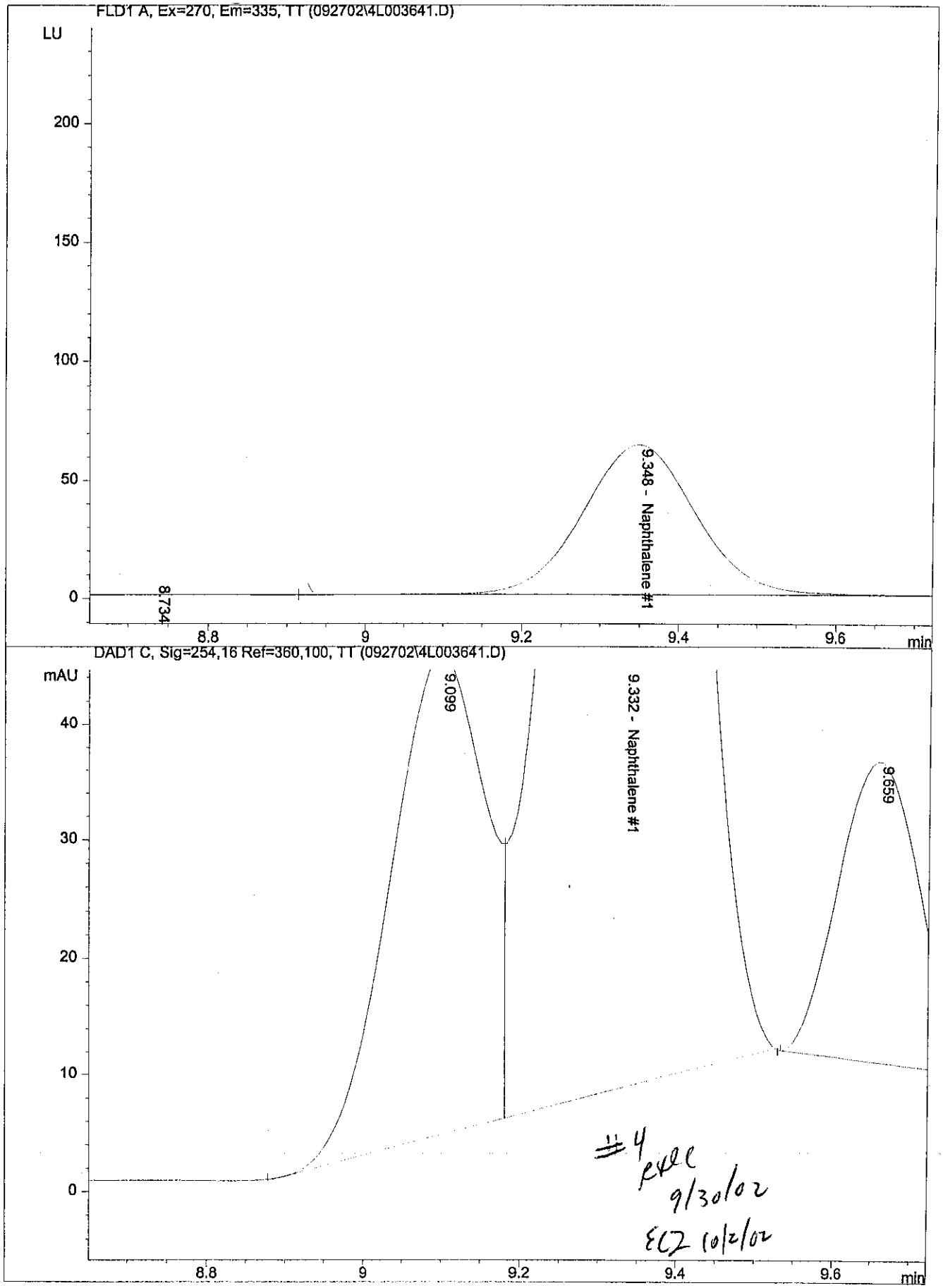
Injection Date : 9/28/2002 1:16:42 PM  Seq. Line : 23
Sample Name : L0209337-01 831W  Vial : 23
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 1:16:58 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002




FLD1 A, Ex=270, Em=335, TT (092702\4L003641.D)
LU
200
150
100
50
0
9.348 - Naphthalene #1
8.734
8.8
9
9.2
9.4
9.6
min
DAD1 C, Sig=254,16 Ref=360,100, TT (092702\4L003641.D)
mAU
40
30
20
10
0
9.100
9.332 - Naphthalene #1
9.659
8.8
9
9.2
9.4
9.6
min




HPLC4 9/30/2002 11:16:58 AM

Page 1 of 1

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.348 | BB | 634.39624 | 2.58366e-2 | 16.39065 | | Naphthalene #1 |
| 11.918 | BB | 67.37766 | 2.72073e-2 | 1.83316 | | 1-Methylnaphthalene #3 |
| 12.494 | BB | 186.07198 | 1.86657e-2 | 3.47317 | | 2-Methylnaphthalene #4 |
| 13.005 | | - | - | - | | Acenaphthene #5 |
| 13.545 | BB | 4.82424 | 1.55194e-2 | 7.48696e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.175 | BB | 6.46272e-1 | 7.07705e-1 | 4.57370e-1 | | p-Terphenyl d14 #11* |
| 22.573 | BB | 1.47385e-1 | 3.22868e-1 | 4.75860e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.542 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.536 | BB | 2.50312e-1 | 3.01703e-1 | 7.55200e-2 | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 22.35233

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.332 | FM | 1967.87439 | 8.38253e-3 | 16.49576 | | Naphthalene #1 |
| 11.036 | BB | 32.03634 | 4.14256e-2 | 1.32712 | | Acenaphthylene #2 |
| 11.904 | BB | 63.17984 | 1.64633e-2 | 1.04015 | | 1-Methylnaphthalene #3 |
| 12.479 | BB | 420.90457 | 1.22294e-2 | 5.14742 | | 2-Methylnaphthalene #4 |
| 13.027 | BB | 104.82060 | 2.45941e-2 | 2.57797 | | Acenaphthene #5 |
| 13.762 | BB | 2.27670 | 9.91676e-2 | 2.25775e-1 | | Fluorene #6 |
| 15.030 | | - | - | - | | Phenanthrene #7 |
| 16.352 | BBA | 2.58367 | 1.11219e-2 | 2.87354e-2 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.150 | BBA | 2.94691 | 1.52512e-1 | 4.49441e-1 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.500 | BBA | 35.19653 | 1.60926e-2 | 5.66402e-1 | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 27.85877

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

==========

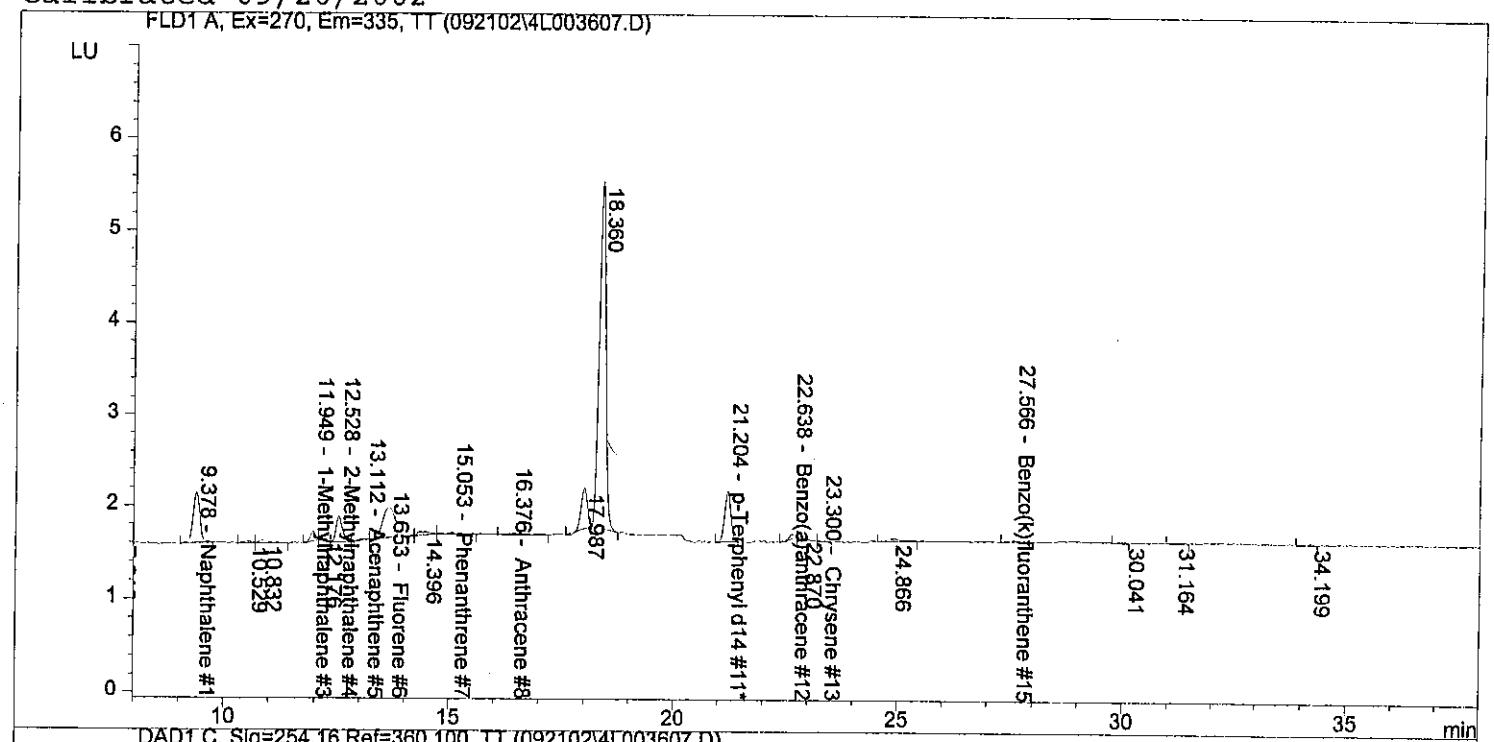
*** End of Report ***

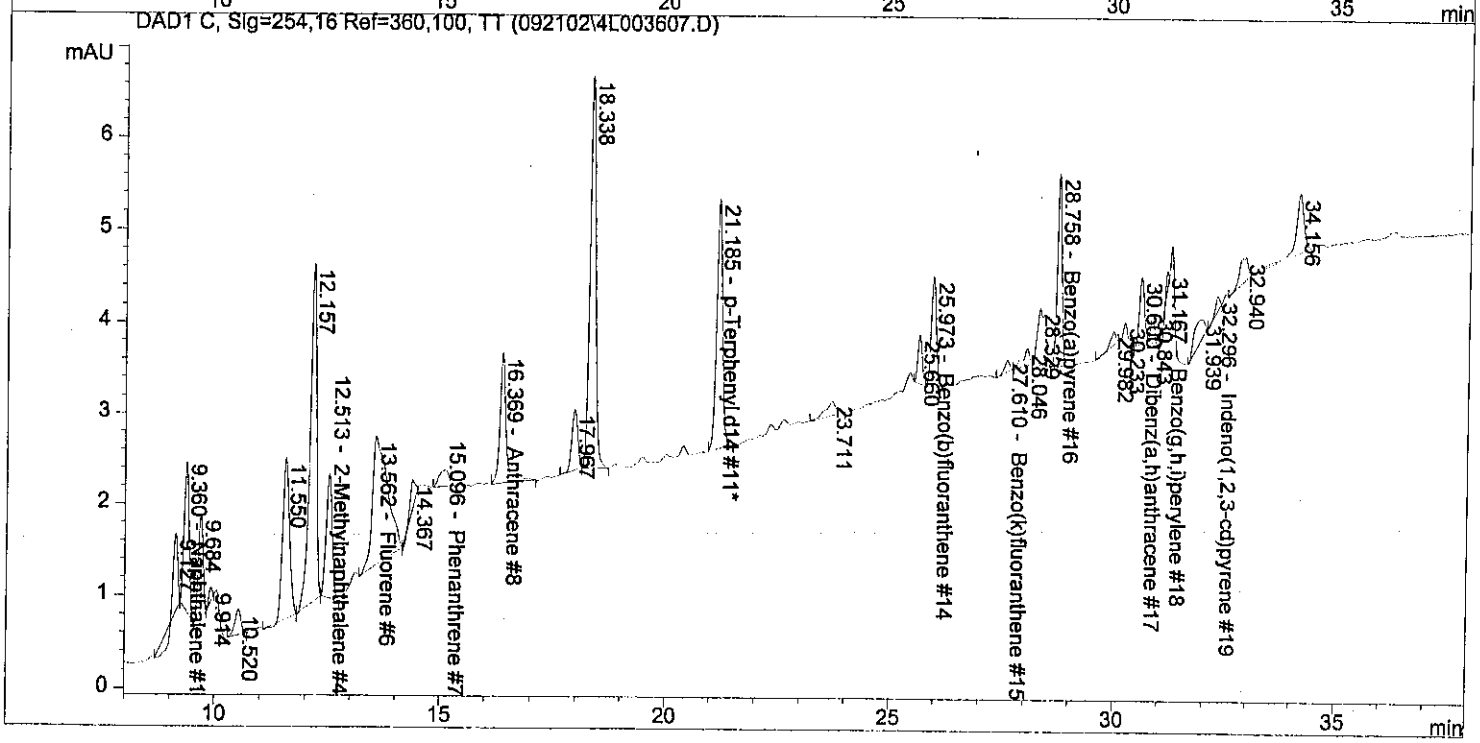
==========

Injection Date : 9/22/2002 6:21:26 PM
Sample Name : L0209337-02 831W
Acq. Operator : RDC

Seq. Line : 30
Vial : 30
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 6:20:58 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.378 | BBA | 5.68332 | 8.74828e-2 | 4.97193e-1 | | Naphthalene #1 |
| 11.949 | BB | 8.35565e-1 | 4.25541e-1 | 3.55567e-1 | | 1-Methylnaphthalene #3 |
| 12.528 | BB | 2.67827 | 1.09840e-1 | 2.94181e-1 | | 2-Methylnaphthalene #4 |
| 13.112 | BB | 1.98939e-1 | 9.05792e-1 | 1.80198e-1 | | Acenaphthene #5 |
| 13.653 | BB | 7.08709 | 1.27128e-2 | 9.00965e-2 | | Fluorene #6 |
| 15.053 | BB | 3.53883e-1 | 1.54798 | 5.47804e-1 | | Phenanthrene #7 |
| 16.376 | BB | 5.39657e-1 | 5.07159e-1 | 2.73692e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.204 | BB | 5.31999 | 3.49871e-1 | 1.86131 | | p-Terphenyl d14 #11* |
| 22.638 | BB | 3.50814e-1 | 1.40232e-1 | 4.91953e-2 | | Benzo(a)anthracene #12 |
| 23.300 | BB | 1.66363e-1 | 2.74150e-1 | 4.56084e-2 | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.566 | PBA | 2.12817e-1 | 6.24632e-2 | 1.32932e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.20814

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.360 | BB | 12.61777 | 3.47457e-4 | 4.38413e-3 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.513 | BB | 12.60339 | 1.63772e-2 | 2.06408e-1 | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.562 | BB | 32.77114 | 2.30082e-2 | 7.54003e-1 | NC | Fluorene #6 |
| 15.096 | PB | 2.82938 | 8.70552e-2 | 2.46313e-1 | | Phenanthrene #7 |
| 16.369 | BBA | 13.98370 | 1.08657e-2 | 1.51943e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.185 | BBA | 24.82326 | 7.63528e-2 | 1.89533 | | *p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.973 | BB | 9.28812 | 2.36484e-2 | 2.19649e-1 | NC | Benzo(b)fluoranthene #14 |
| 27.610 | PB | 9.39358e-1 | 4.50775e-2 | 4.23439e-2 | NC | Benzo(k)fluoranthene #15 |
| 28.758 | BBA | 14.72832 | 2.99570e-2 | 4.41215e-1 | NC | Benzo(a)pyrene #16 |
| 30.600 | BB | 5.39562 | 6.65763e-2 | 3.59220e-1 | NC | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.167 | BB | 8.21197e-2 | 6.19115e-1 | 5.08415e-2 | NC | Benzo(g,h,i)perylene #18 |
| 32.296 | BB | 9.56317e-1 | 7.67555e-2 | 7.34026e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.44505

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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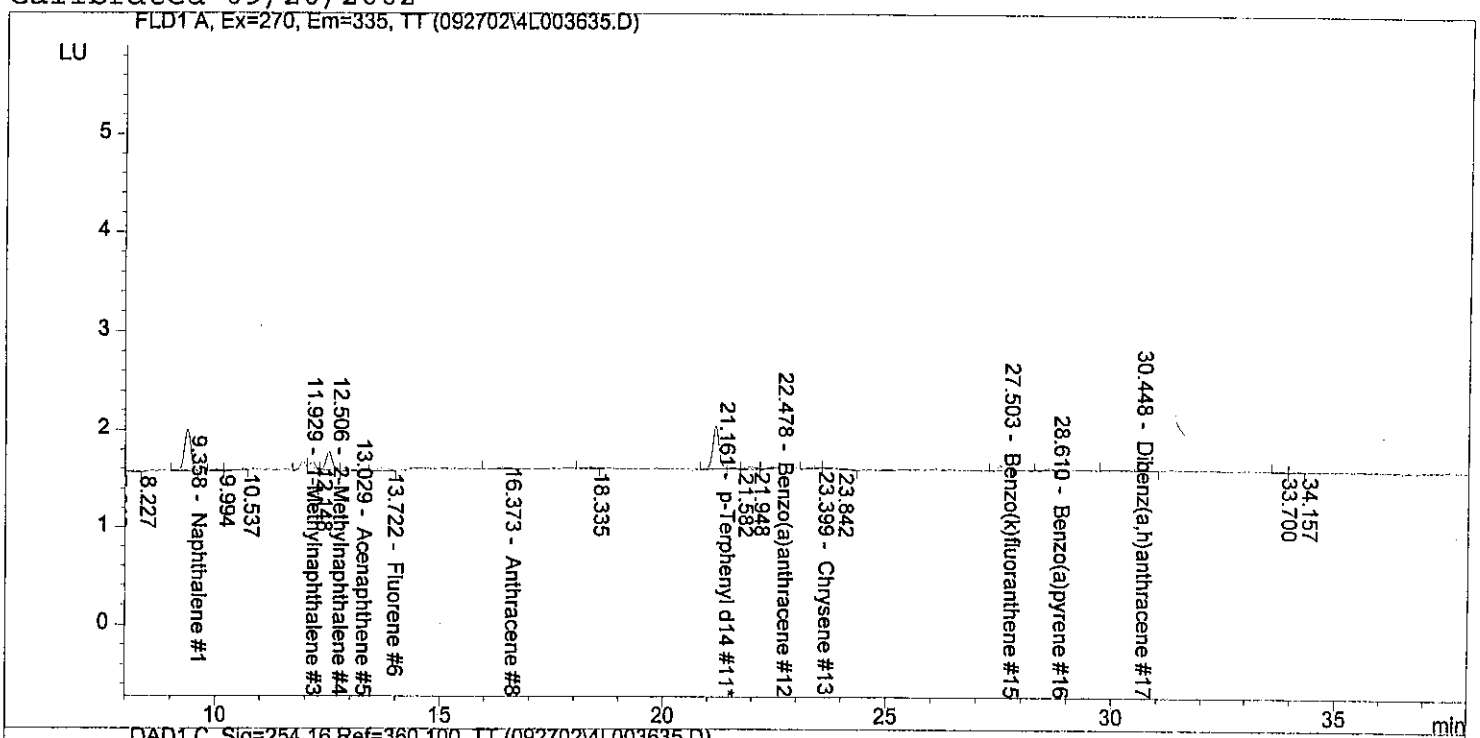
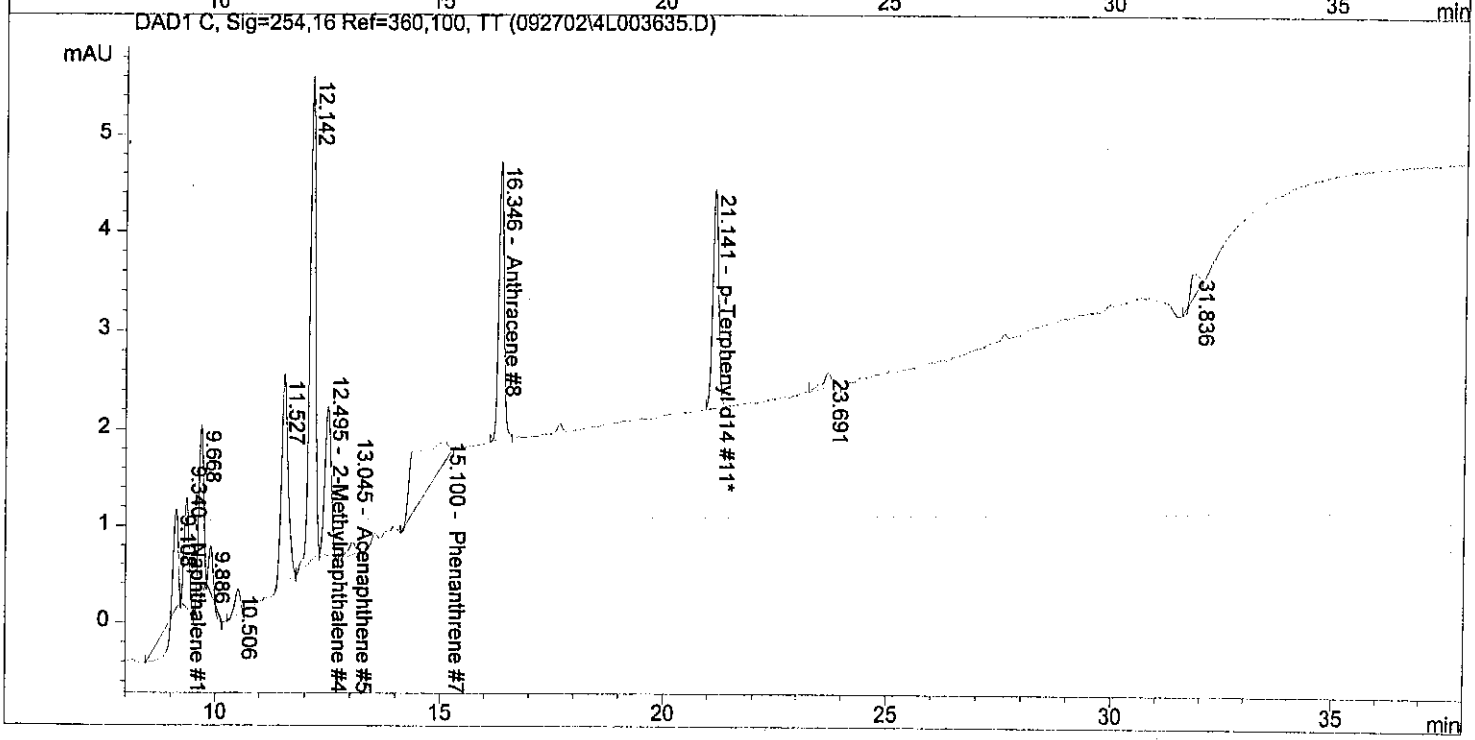
Injection Date : 9/28/2002 7:36:46 AM  Seq. Line : 17
Sample Name : L0209337-02 831W  Vial : 17
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 7:37:00 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | PB | 4.18822 | 1.09688e-1 | 4.59398e-1 | | Naphthalene #1 |
| 11.929 | BB | 4.51570e-1 | 7.68518e-1 | 3.47040e-1 | | 1-Methylnaphthalene #3 |
| 12.506 | BB | 1.85713 | 1.50742e-1 | 2.79948e-1 | | 2-Methylnaphthalene #4 |
| 13.029 | BB | 2.04649e-1 | 8.80909e-1 | 1.80277e-1 | | Acenaphthene #5 |
| 13.722 | BB | 6.17813e-1 | 7.53691e-2 | 4.65640e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.373 | BBA | 2.76029e-1 | 7.00057e-1 | 1.93236e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.161 | BB | 4.52767 | 3.58529e-1 | 1.62330 | | p-Terphenyl d14 #11* |
| 22.478 | BB | 2.45673e-1 | 1.96861e-1 | 4.83635e-2 | | Benzo(a)anthracene #12 |
| 23.399 | BB | 2.36445e-1 | 2.04350e-1 | 4.83175e-2 | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.503 | PBA | 5.30409e-1 | 2.67571e-2 | 1.41922e-2 | | Benzo(k)fluoranthene #15 |
| 28.610 | BBA | 1.67566e-1 | 3.49978e-1 | 5.86443e-2 | | Benzo(a)pyrene #16 |
| 30.448 | BBA | 5.87037e-1 | 1.50866e-1 | 8.85639e-2 | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 3.38785 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.340 | BB | 8.47539 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.495 | BB | 14.12539 | 1.59165e-2 | 2.24826e-1 | | 2-Methylnaphthalene #4 |
| 13.045 | BB | 1.54470 | 1.61525e-1 | 2.49508e-1 | | Acenaphthene #5 |
| 13.645 | | - | - | - | | Fluorene #6 |
| 15.100 | BB | 22.59977 | 2.60783e-2 | 5.89364e-1 | | Phenanthrene #7 |
| 16.346 | PBA | 21.96884 | 1.08446e-2 | 2.38244e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.141 | BBA | 19.81031 | 7.89489e-2 | 1.56400 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

15.6%

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 2.86595

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), (Naphthalene

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*** End of Report ***

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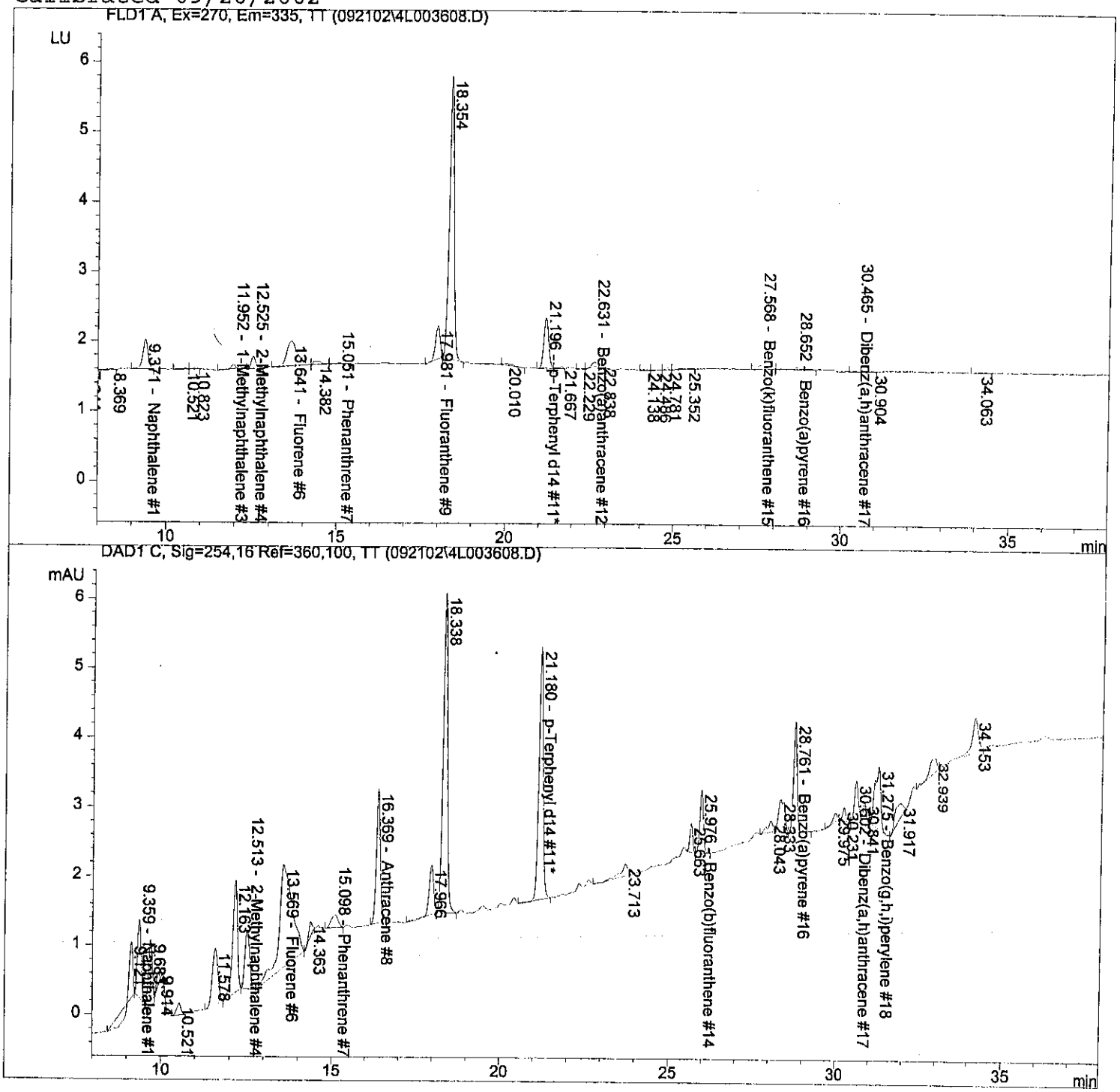
Injection Date : 9/22/2002 7:18:06 PM
Sample Name : L0209337-03 831W
Acq. Operator : RDC

Seq. Line : 31
Vial : 31
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 7:17:38 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | BB | 4.47281 | 1.04317e-1 | 4.66592e-1 | | Naphthalene #1 |
| 11.952 | BB | 5.30104e-1 | 6.57953e-1 | 3.48784e-1 | | 1-Methylnaphthalene #3 |
| 12.525 | BB | 1.87089 | 1.49761e-1 | 2.80186e-1 | | 2-Methylnaphthalene #4 |
| 13.005 | | - | - | - | | Acenaphthene #5 |
| 13.641 | BB | 7.69493 | 1.22401e-2 | 9.41867e-2 | | Fluorene #6 |
| 15.051 | BB | 1.79879e-1 | 2.88420 | 5.18807e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.981 | BB | 4.38781 | 3.21425e-2 | 1.41035e-1 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.196 | BB | 7.15662 | 3.37172e-1 | 2.41301 | | p-Terphenyl d14 #11* |
| 22.631 | BB | 5.89806e-1 | 8.66148e-2 | 5.10859e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.568 | BB | 5.90214e-1 | 2.43327e-2 | 1.43615e-2 | | Benzo(k)fluoranthene #15 |
| 28.652 | BB | 5.18406e-1 | 1.16270e-1 | 6.02752e-2 | | Benzo(a)pyrene #16 |
| 30.465 | BB | 1.79363e-1 | 4.05722e-1 | 7.27717e-2 | RT | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 4.46110 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.359 | BB | 8.77871 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.513 | BB | 8.19600 | 1.86765e-2 | 1.53072e-1 | LMDL | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.569 | BB | 38.46210 | 2.21668e-2 | 8.52583e-1 | NC | Fluorene #6 |
| 15.098 | BB | 2.67181 | 9.11661e-2 | 2.43578e-1 | LMDL | Phenanthrene #7 |
| 16.369 | BBA | 15.64053 | 1.08596e-2 | 1.69850e-1 | ↓ | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - * 213% | | Pyrene #10 |
| 21.180 | BBA | 32.84624 | 7.38469e-2 | 2.42559 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.976 | BBA | 7.12570 | 2.47138e-2 | 1.76103e-1 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.761 | BBA | 11.26806 | 3.11530e-2 | 3.51033e-1 | RT | Benzo(a)pyrene #16 |
| 30.602 | BB | 4.24710 | 5.69688e-2 | 2.41952e-1 | NC | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.275 | BB | 10.87147 | 5.88924e-2 | 6.40247e-1 | NC | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 5.25401

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), (Naphthalene

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*** End of Report ***

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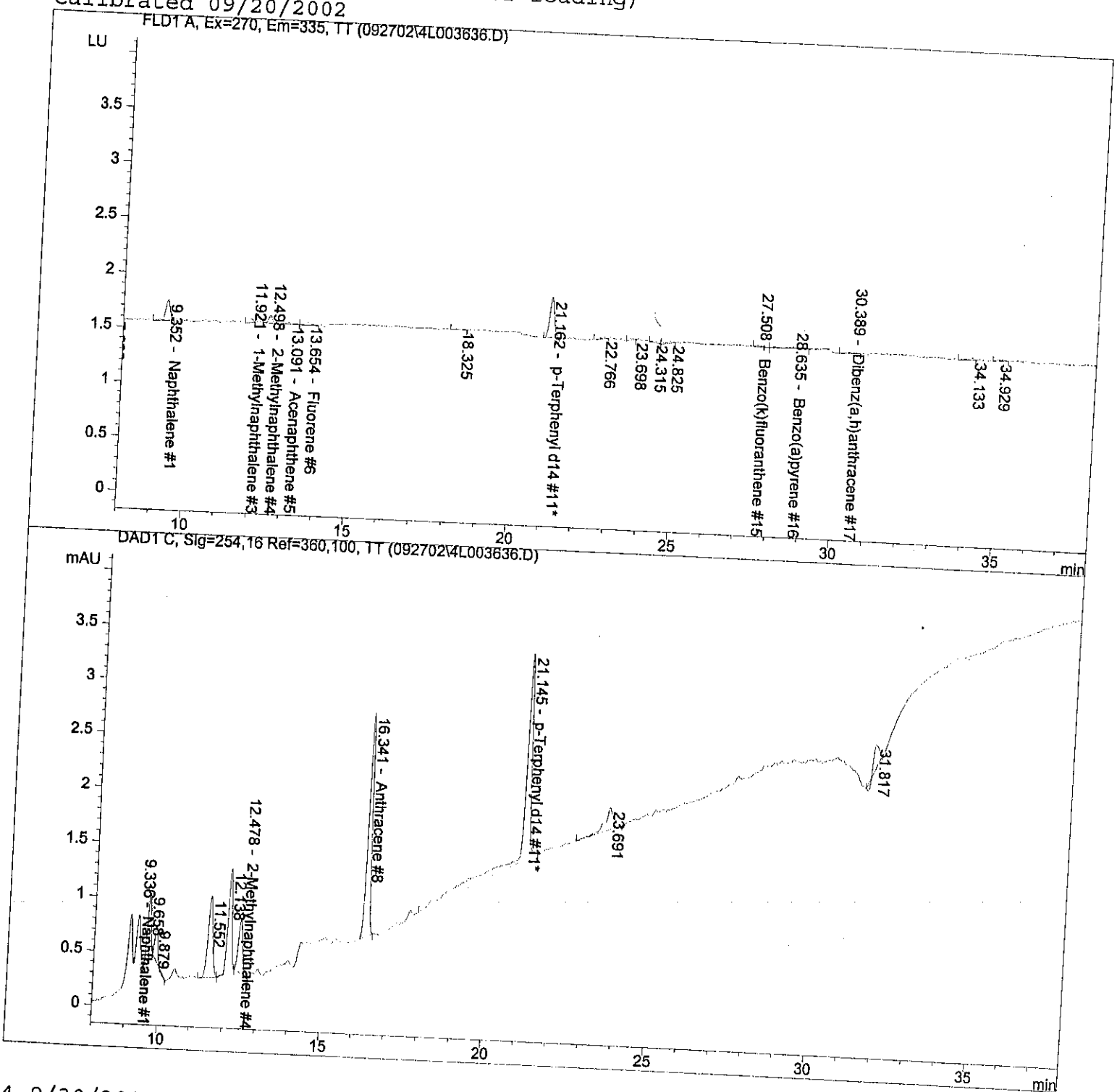
Injection Date : 9/28/2002 8:33:23 AM
Sample Name : L0209337-03 831W
Acq. Operator : RDC

Seq. Line : 18
Vial : 18
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 8:33:38 AM by RDC
(modified after loading)

Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)

Calibrated 09/20/2002




LC4 9/30/2002 11:14:41 AM

External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.352 | BB | 1.89904 | 2.11437e-1 | 4.01529e-1 | | Naphthalene #1 |
| 11.921 | BB | 2.73892e-1 | 1.25266 | 3.43095e-1 | | 1-Methylnaphthalene #3 |
| 12.498 | BB | 6.93331e-1 | 3.74676e-1 | 2.59774e-1 | | 2-Methylnaphthalene #4 |
| 13.091 | BB | 2.61248e-1 | 6.93064e-1 | 1.81062e-1 | | Acenaphthene #5 |
| 13.654 | BB | 3.40551e-1 | 1.31253e-1 | 4.46983e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.162 | BB | 3.67884 | 3.71944e-1 | 1.36832 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.508 | BB | 1.93288e-1 | 6.84881e-2 | 1.32379e-2 | | Benzo(k)fluoranthene #15 |
| 28.635 | BB | 3.71186e-1 | 1.60542e-1 | 5.95909e-2 | | Benzo(a)pyrene #16 |
| 30.389 | PB | 1.94482e-1 | 3.77194e-1 | 7.33573e-2 | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 2.74467 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.336 | BB | 3.53647 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.478 | BB | 4.73551 | 2.34813e-2 | 1.11196e-1 | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.645 | | - | - | - | | Fluorene #6 |
| 15.030 | | - | - | - | | Phenanthrene #7 |
| 16.341 | BBA | 15.74564 | 1.08592e-2 | 1.70986e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.145 | BBA | 26.53774 | 7.56900e-2 | 2.00864 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - 20.1% | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 2.29082 | | |

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), (Naphthalene

==========

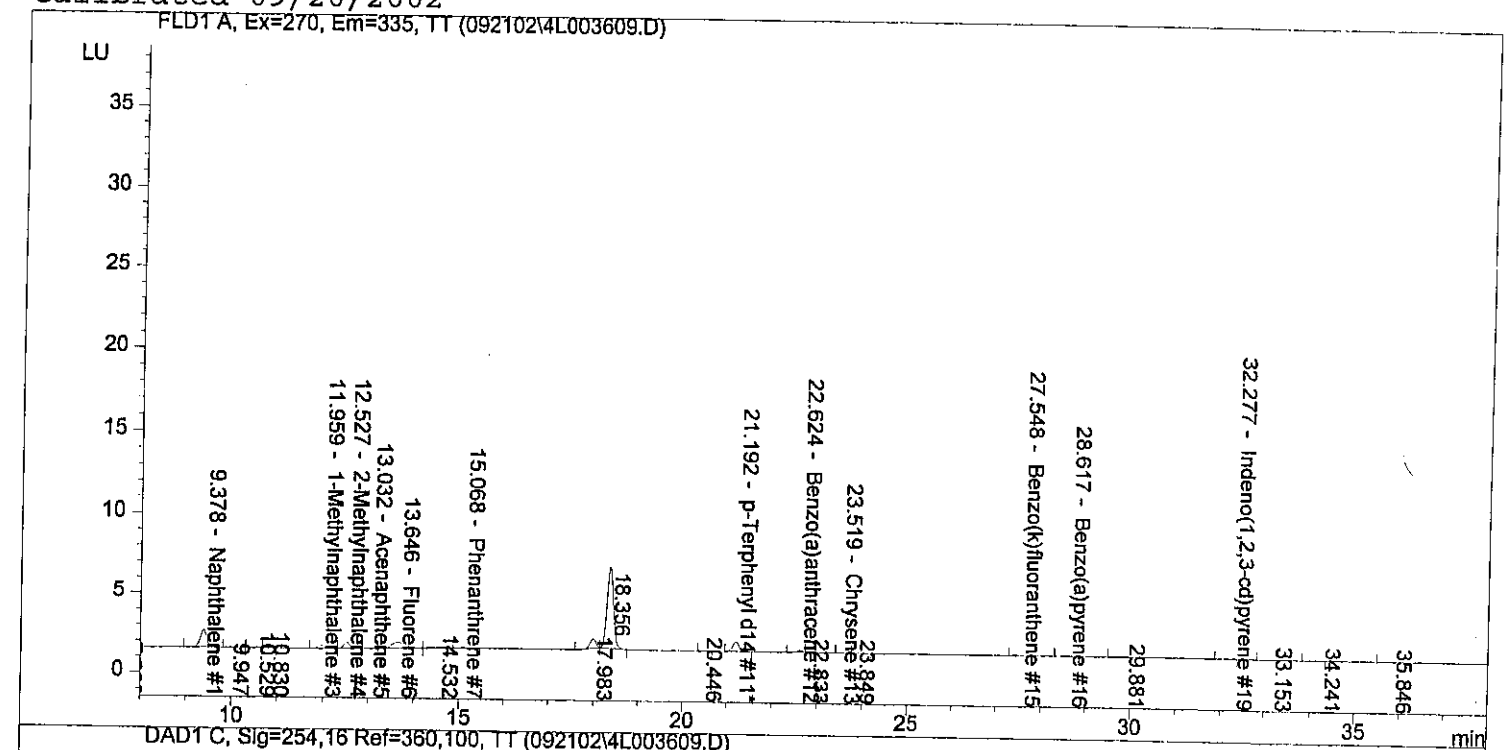
*** End of Report ***

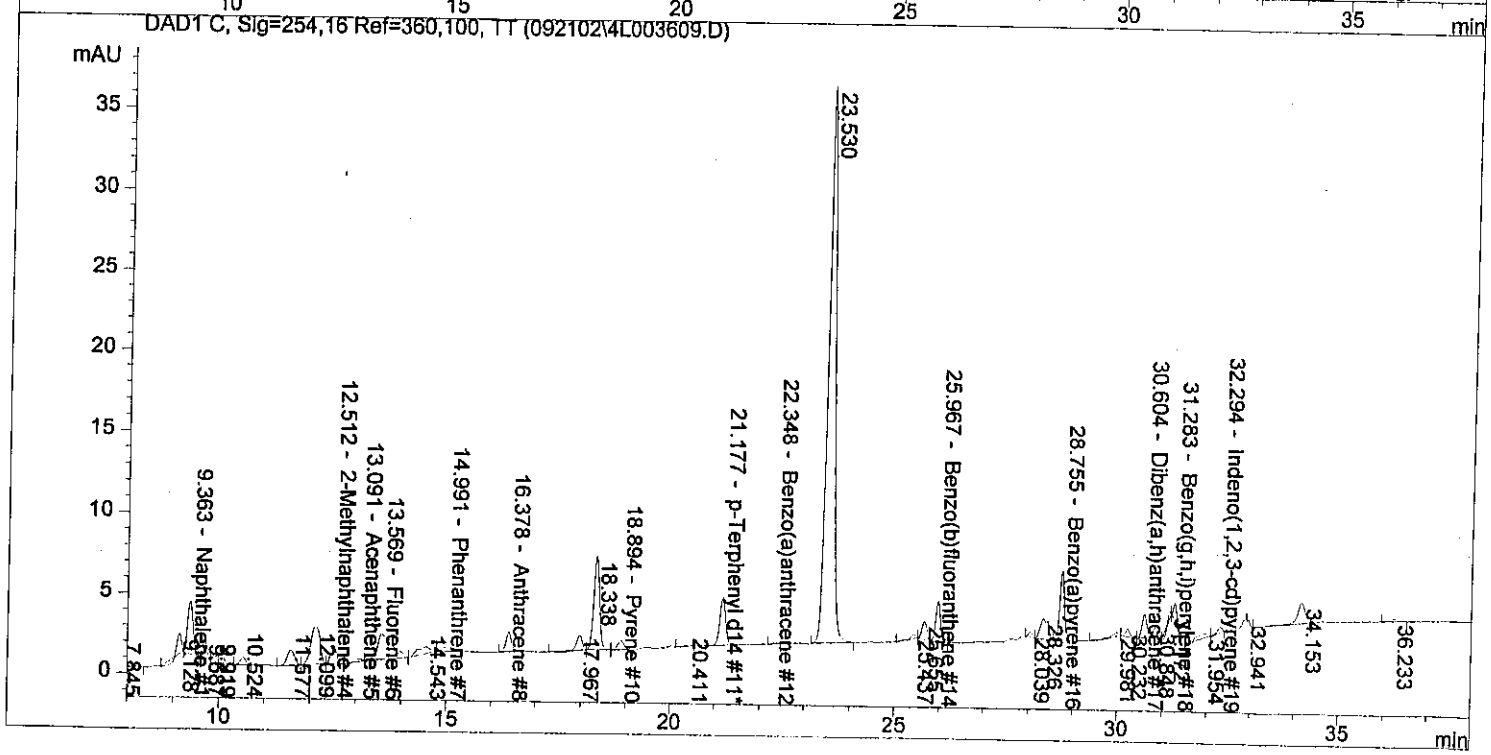
==========

Injection Date : 9/22/2002 8:14:43 PM
Sample Name : L0209337-04 831W
Acq. Operator : RDC

Seq. Line : 32
Vial : 32
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 8:14:19 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.378 | BB | 10.98078 | 5.74740e-2 | 6.31109e-1 | | Naphthalene #1 |
| 11.959 | BB | 2.01693 | 1.89297e-1 | 3.81800e-1 | | 1-Methylnaphthalene #3 |
| 12.527 | BB | 3.71313 | 8.40585e-2 | 3.12120e-1 | | 2-Methylnaphthalene #4 |
| 13.032 | BB | 2.74303e-1 | 6.60740e-1 | 1.81243e-1 | | Acenaphthene #5 |
| 13.646 | BB | 8.12046 | 1.19513e-2 | 9.70502e-2 | | Fluorene #6 |
| 15.068 | BBA | 1.71250e-1 | 3.02112 | 5.17369e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.192 | BB | 6.13968 | 3.43265e-1 | 2.10754 | | p-Terphenyl d14 #11* |
| 22.624 | BB | 7.33949e-1 | 7.11578e-2 | 5.22262e-2 | RT | Benzo(a)anthracene #12 |
| 23.519 | BB | 1.74049e-1 | 2.63750e-1 | 4.59055e-2 | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.548 | BBA | 2.14708e-1 | 6.19381e-2 | 1.32986e-2 | | Benzo(k)fluoranthene #15 |
| 28.617 | BBA | 2.19891e-1 | 2.67804e-1 | 5.88875e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.277 | BB | 1.70124e-1 | 2.21488e-1 | 3.76804e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.43622

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.363 | BB | 26.44032 | 4.57516e-3 | 1.20969e-1 | cmpl | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.512 | BB | 10.68736 | 1.71438e-2 | 1.83221e-1 | | 2-Methylnaphthalene #4 |
| 13.091 | BB | 1.88658 | 1.36340e-1 | 2.57216e-1 | | Acenaphthene #5 |
| 13.569 | BB | 36.70502 | 2.23987e-2 | 8.22147e-1 | NC | Fluorene #6 |
| 14.991 | BB | 4.77145 | 5.86847e-2 | 2.80011e-1 | cmpl | Phenanthrene #7 |
| 16.378 | BBA | 10.69811 | 1.08836e-2 | 1.16434e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.894 | BBA | 5.74280 | 1.68156e-2 | 9.65684e-2 | NC | Pyrene #10 |
| 21.177 | BBA | 27.60836 | 7.53179e-2 | 2.07940 | 20.8% | p-Terphenyl d14 #11* |
| 22.348 | BB | 8.28895e-1 | 6.47903e-2 | 5.37044e-2 | RT | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.967 | BBA | 19.40944 | 2.18176e-2 | 4.23467e-1 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.755 | BBA | 30.40502 | 2.79489e-2 | 8.49786e-1 | NC/RT | Benzo(a)pyrene #16 |
| 30.604 | BB | 11.15447 | 8.49182e-2 | 9.47218e-1 | NC | Dibenz(a,h)anthracene #17 |

| | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.283 | BBA | 2.47324 | 7.33713e-2 | 1.81465e-1 | NC | Benzo(g,h,i)perylene #18 |
| 32.294 | BB | 2.23186 | 4.39864e-2 | 9.81713e-2 | NC | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.50978

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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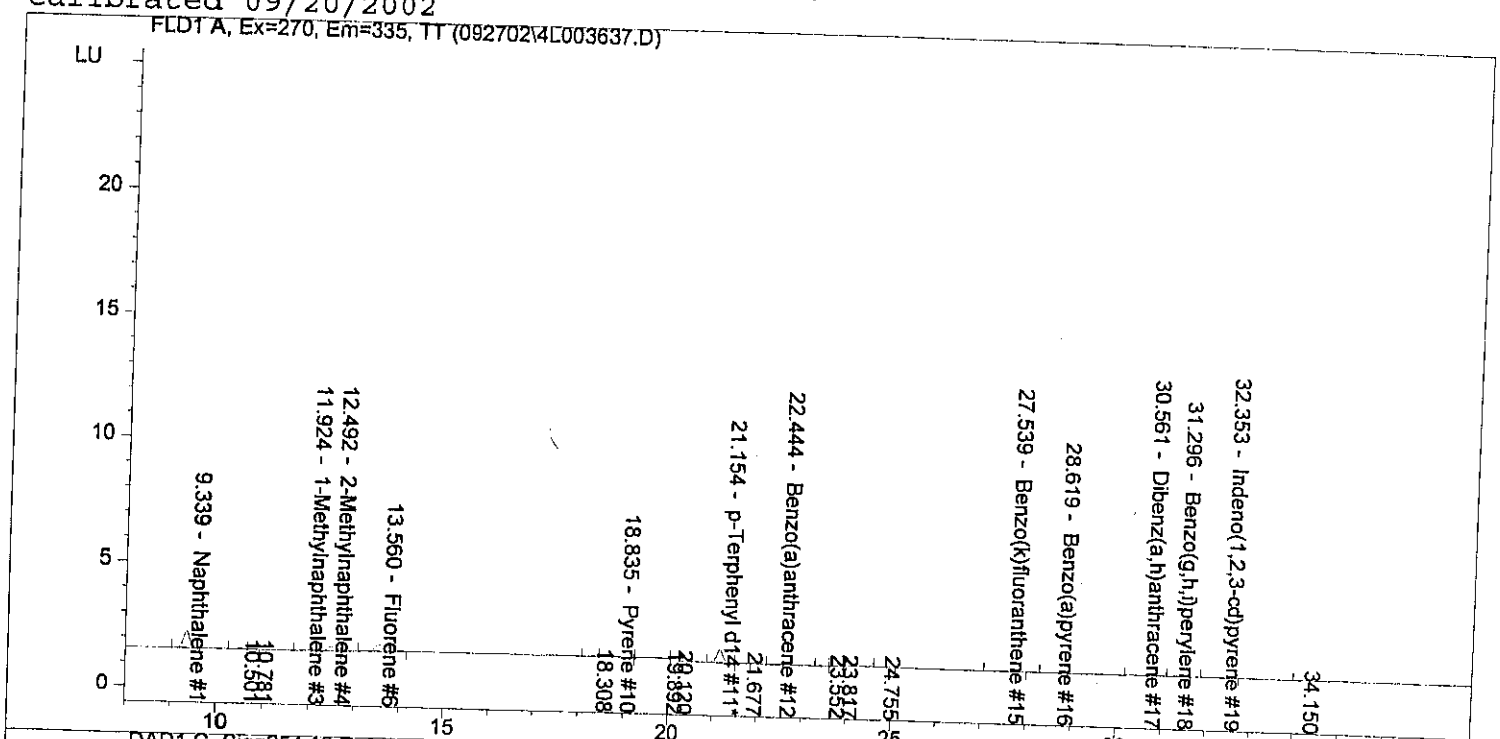
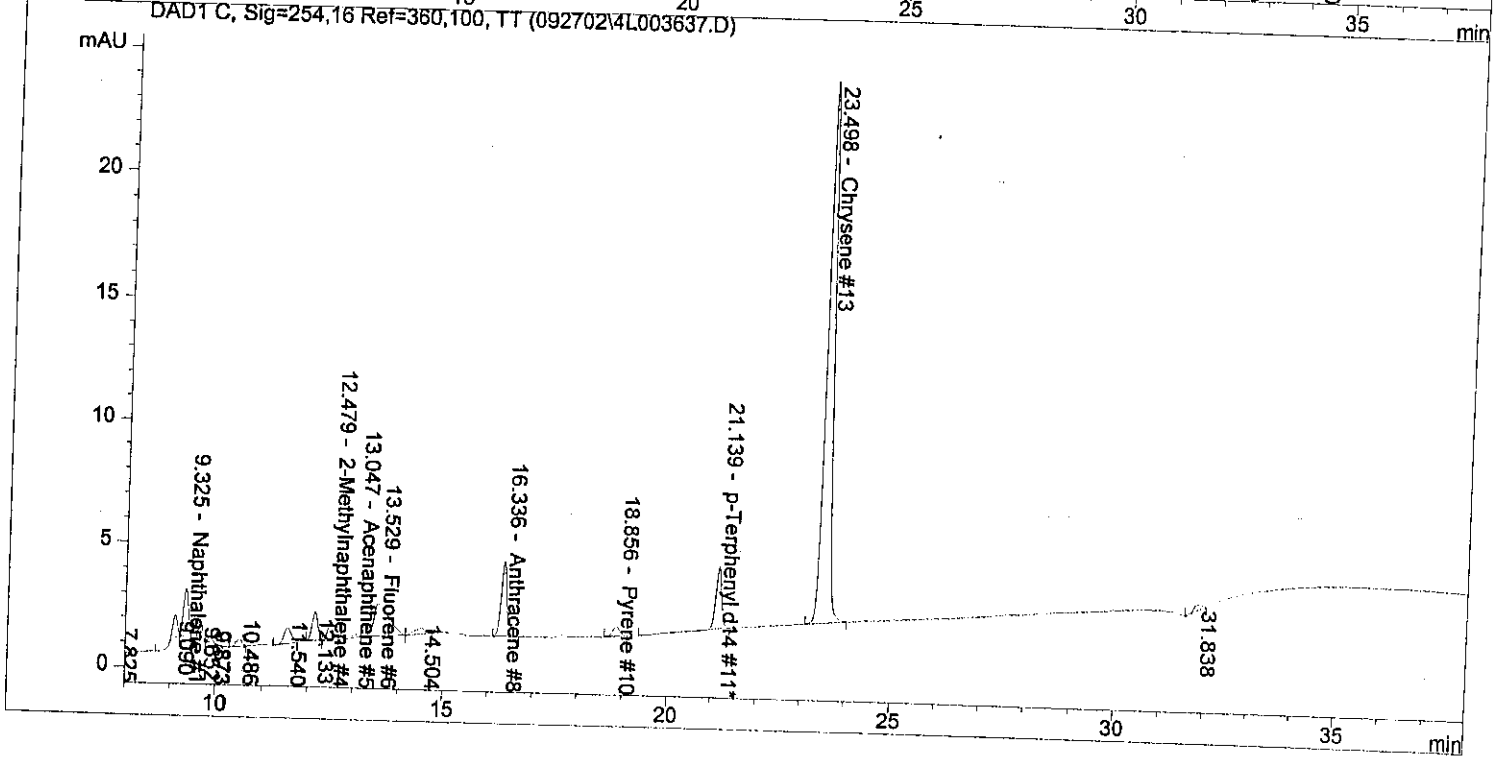
Injection Date : 9/28/2002 9:30:01 AM
Sample Name : L0209337-04 831W
Acq. Operator : RDC

Seq. Line : 19
Vial : 19
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 9:30:16 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002




HPLC4 9/30/2002 11:14:59 AM

External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.339 | BBA | 6.83586 | 7.69952e-2 | 5.26328e-1 | | Naphthalene #1 |
| 11.924 | BB | 6.12852e-1 | 5.72114e-1 | 3.50621e-1 | | 1-Methylnaphthalene #3 |
| 12.492 | BB | 1.78247 | 1.56330e-1 | 2.78653e-1 | | 2-Methylnaphthalene #4 |
| 13.005 | | - | - | - | | Acenaphthene #5 |
| 13.560 | BB | 6.57523 | 1.31786e-2 | 8.66522e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.835 | BB | 2.45550e-1 | 3.24590e-1 | 7.97028e-2 | | Pyrene #10 |
| 21.154 | BB | 5.26028 | 3.50432e-1 | 1.84337 | | p-Terphenyl d14 #11* |
| 22.444 | BB | 3.22272e-1 | 1.51951e-1 | 4.89695e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.539 | PB | 3.29825e-1 | 4.13080e-2 | 1.36244e-2 | | Benzo(k)fluoranthene #15 |
| 28.619 | BB | 3.30251e-1 | 1.79865e-1 | 5.94006e-2 | | Benzo(a)pyrene #16 |
| 30.561 | BB | 1.95325e-1 | 3.75732e-1 | 7.33900e-2 | | Dibenz(a,h)anthracene #17 |
| 31.296 | BB | 2.17609e-1 | 4.17522e-1 | 9.08563e-2 | | Benzo(g,h,i)perylene #18 |
| 32.353 | BB | 3.15856e-1 | 1.25930e-1 | 3.97757e-2 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 3.49135 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.325 | BB | 15.74748 | 1.95468e-3 | 3.07813e-2 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.479 | BB | 5.40206 | 2.20771e-2 | 1.19262e-1 | | 2-Methylnaphthalene #4 |
| 13.047 | BB | 1.22751 | 1.97438e-1 | 2.42357e-1 | | Acenaphthene #5 |
| 13.529 | BB | 30.51261 | 2.34290e-2 | 7.14881e-1 | | Fluorene #6 |
| 15.030 | | - | - | - | | Phenanthrene #7 |
| 16.336 | BBA | 24.19142 | 1.08412e-2 | 2.62265e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.856 | BBA | 4.16697 | 1.90330e-2 | 7.93099e-2 | | Pyrene #10 |
| 21.139 | BBA | 22.45241 | 7.74361e-2 | 1.73863 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.498 | BBA | 234.87454 | 1.52519e-2 | 3.58227 | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

35.8%

| | | [ug/L] | | | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 6.76976 | | |

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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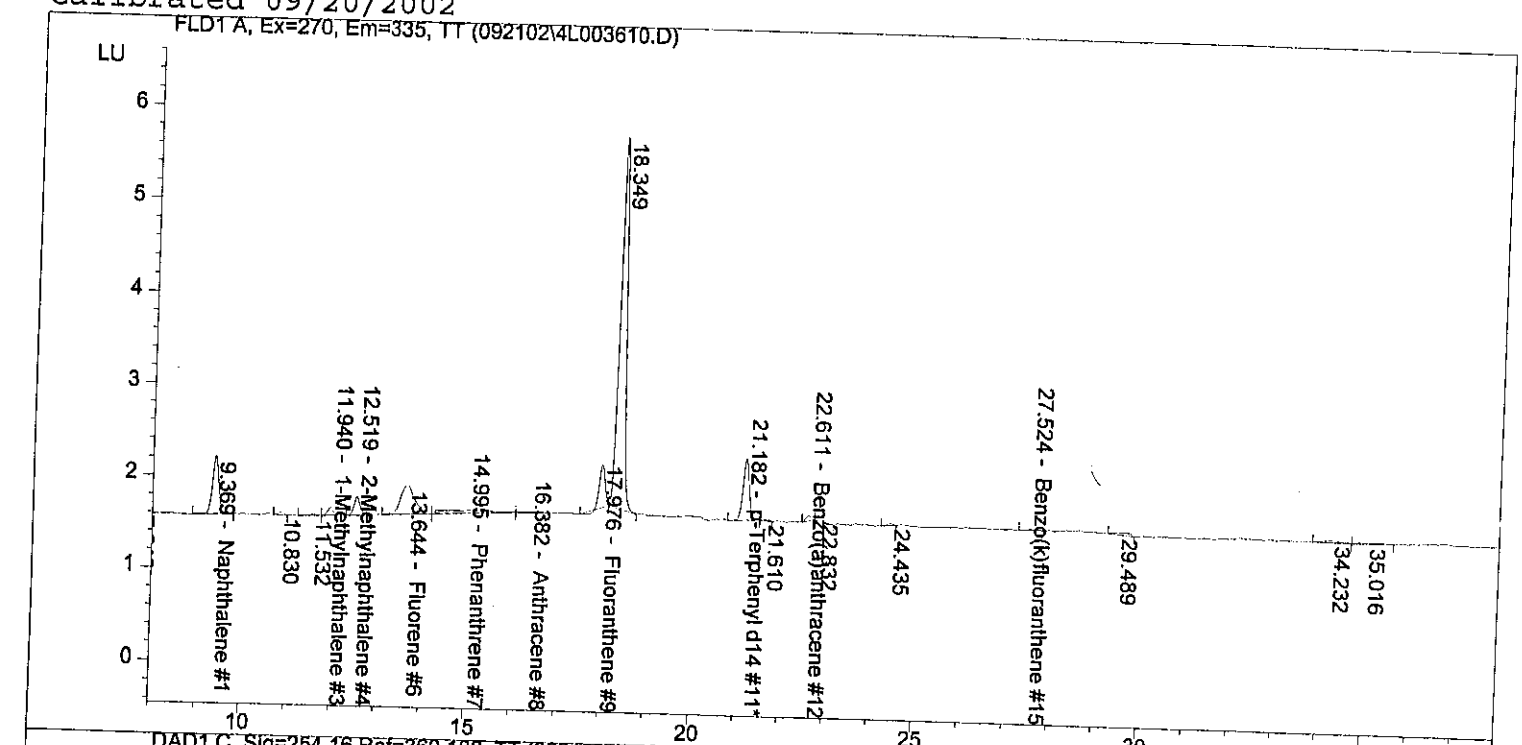
*** End of Report ***

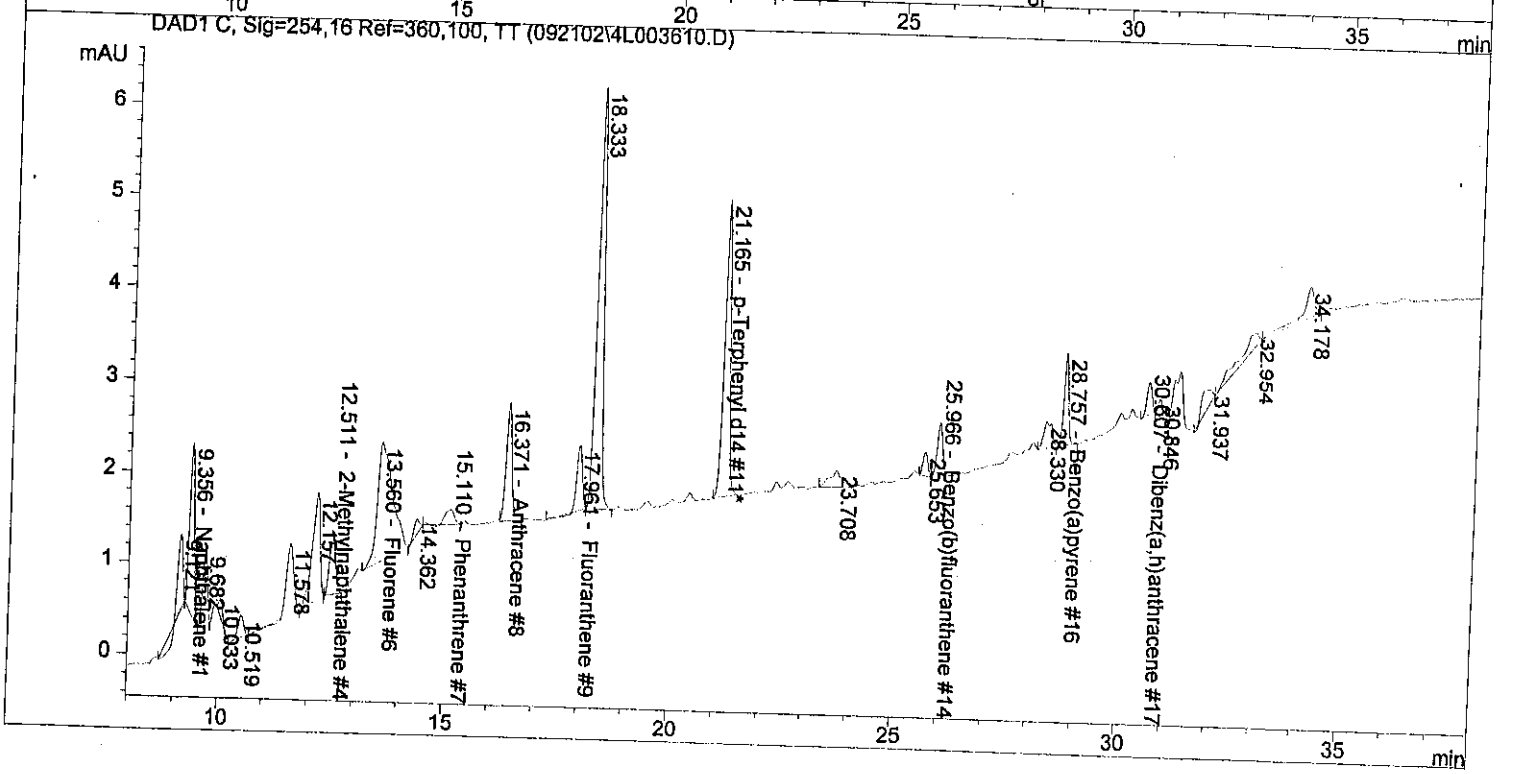
==========

Injection Date : 9/22/2002 9:11:18 PM
Sample Name : L0209337-05 831W
Acq. Operator : RDC

Seq. Line : 33
Vial : 33
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 9:10:57 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002




IPLC4 9/24/2002 4:02:04 PM

External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 | 6.40956 | 8.04349e-2 | 5.15552e-1 | | Naphthalene #1 |
| 11.940 | BB | 7.56113e-1 | 4.67923e-1 | 3.53802e-1 | | 1-Methylnaphthalene #3 |
| 12.519 | BB | 2.12957 | 1.33675e-1 | 2.84670e-1 | | 2-Methylnaphthalene #4 |
| 13.005 | | - | - | - | | Acenaphthene #5 |
| 13.644 | BB | 7.28830 | 1.25476e-2 | 9.14505e-2 | | Fluorene #6 |
| 14.995 | BB | 2.68707 | 3.48567e-1 | 9.36623e-1 | | Phenanthrene #7 |
| 16.382 | BB | 2.40418e-1 | 7.58545e-1 | 1.82368e-1 | | Anthracene #8 |
| 17.976 | BB | 3.97522 | 3.28421e-2 | 1.30554e-1 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.182 | BB | 6.57323 | 3.40437e-1 | 2.23777 | | p-Terphenyl d14 #11* |
| 22.611 | BB | 5.39325e-1 | 9.39815e-2 | 5.06866e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.524 | PBA | 2.12090e-1 | 6.26677e-2 | 1.32912e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 4.79677 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.356 | BB | 14.69125 | 1.48882e-3 | 2.18726e-2 | cmpd | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 6.39253 | 2.05315e-2 | 1.31248e-1 | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.560 | BB | 31.06409 | 2.33206e-2 | 7.24434e-1 | NC | Fluorene #6 |
| 15.110 | BB | 2.38270 | 1.00123e-1 | 2.38562e-1 | cmpd | Phenanthrene #7 |
| 16.371 | BBA | 11.07604 | 1.08810e-2 | 1.20518e-1 | | Anthracene #8 |
| 17.961 | PB | 6.11586 | 2.60026e-2 | 1.59028e-1 | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.165 | BBA | 29.19534 | 7.48165e-2 | 2.18429 | 8 c/l | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - * 21. | | Chrysene #13 |
| 25.966 | BB | 4.86382 | 2.68420e-2 | 1.30555e-1 | NC | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.757 | BB | 7.13787 | 3.40986e-2 | 2.43391e-1 | NC | Benzo(a)pyrene #16 |
| 30.607 | BB | 2.64765 | 2.97032e-2 | 7.86437e-2 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.03254

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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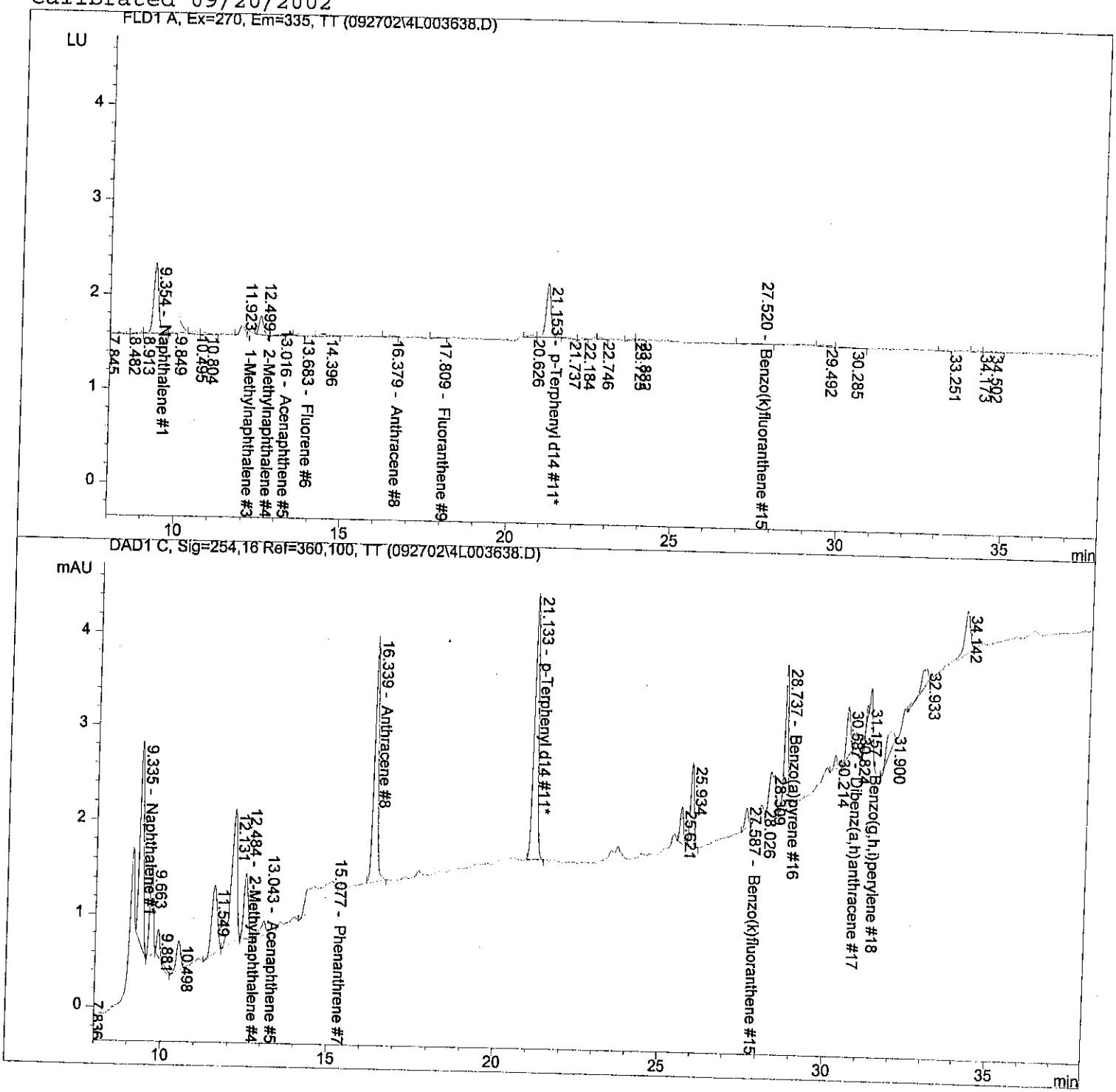
*** End of Report ***

==========

Injection Date : 9/28/2002 10:26:41 AM
Sample Name : L0209337-05 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 : 9/28/2002 10:26:55 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002




HPLC4 9/30/2002 11:15:44 AM

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.354 | BB | 7.50078 | 7.24108e-2 | 5.43137e-1 | | Naphthalene #1 |
| 11.923 | BB | 6.94186e-1 | 5.07685e-1 | 3.52427e-1 | | 1-Methylnaphthalene #3 |
| 12.499 | BB | 1.86858 | 1.49924e-1 | 2.80146e-1 | | 2-Methylnaphthalene #4 |
| 13.016 | BB | 2.03552e-1 | 8.85581e-1 | 1.80262e-1 | | Acenaphthene #5 |
| 13.683 | BB | 2.88384e-1 | 1.53779e-1 | 4.43472e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.379 | PBA | 2.16475e-1 | 8.08689e-1 | 1.75061e-1 | | Anthracene #8 |
| 17.809 | PB | 1.59495e-1 | 2.10841e-1 | 3.36281e-2 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.153 | BB | 5.81499 | 3.45659e-1 | 2.01000 | | p-Terphenyl d14 #11* |
| 22.500 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.520 | BBA | 2.09551e-1 | 6.33927e-2 | 1.32840e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 3.63229

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.335 | BB | 16.83776 | 2.37425e-3 | 3.99771e-2 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.484 | BB | 6.48369 | 2.04129e-2 | 1.32351e-1 | | 2-Methylnaphthalene #4 |
| 13.043 | BB | 1.93425 | 1.33536e-1 | 2.58291e-1 | | Acenaphthene #5 |
| 13.645 | | - | - | - | | Fluorene #6 |
| 15.077 | BB | 9.92284 | 3.72269e-2 | 3.69397e-1 | | Phenanthrene #7 |
| 16.339 | BBA | 21.04543 | 1.08463e-2 | 2.28264e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.133 | BBA | 25.18029 | 7.62073e-2 | 1.91892 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.587 | PB | 1.48618 | 3.69884e-2 | 5.49715e-2 | | Benzo(k)fluoranthene #15 |
| 28.737 | BB | 10.42400 | 3.15652e-2 | 3.29035e-1 | | Benzo(a)pyrene #16 |
| 30.587 | BB | 4.16808 | 5.61132e-2 | 2.33885e-1 | | Dibenz(a,h)anthracene #17 |

19.2%

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.157 | BB | 1.24743e-1 | 4.26236e-1 | 5.31700e-2 | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 3.61826

Results obtained with enhanced integrator!
2 Warnings or Errors :

Warning : Calibrated compound(s) not found
Warning : Elution order of calibrated compounds may have changed

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*** End of Report ***

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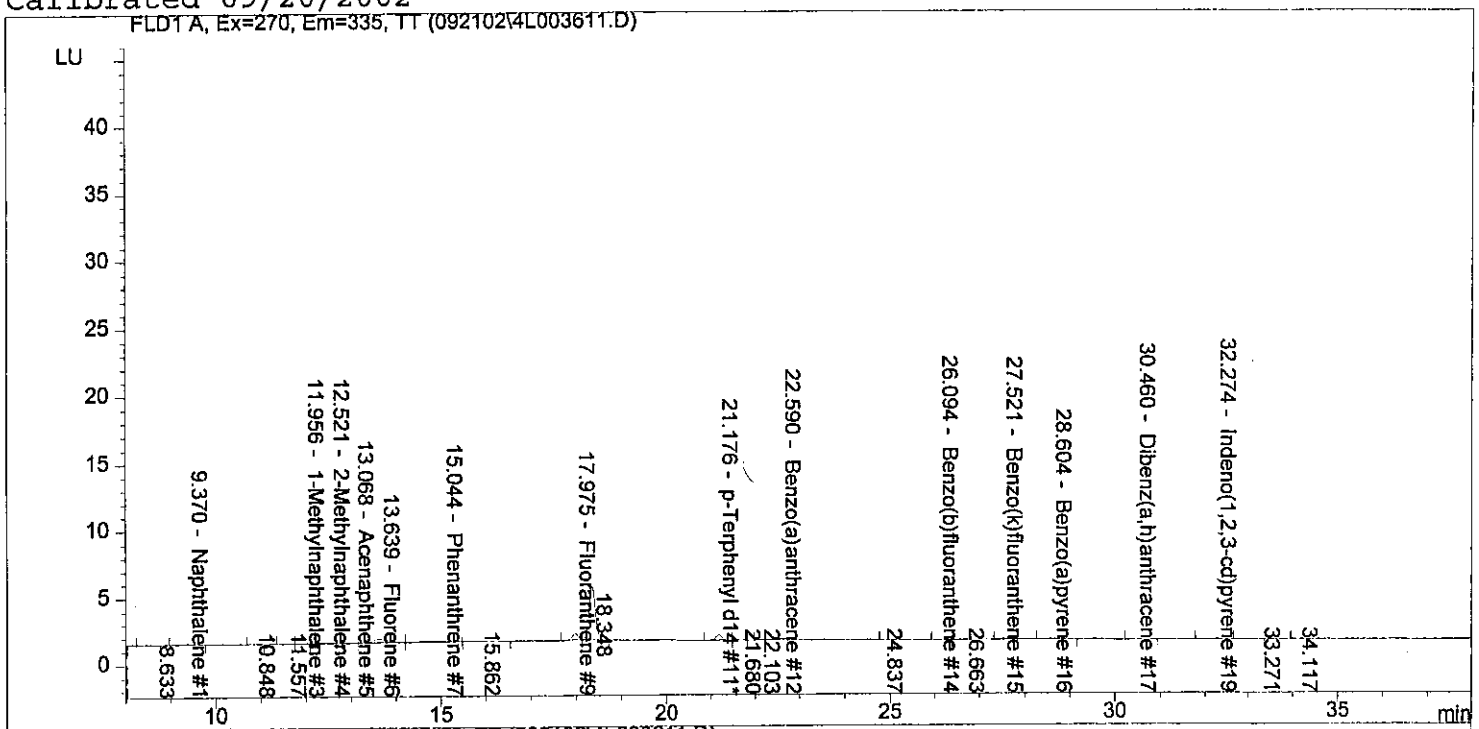
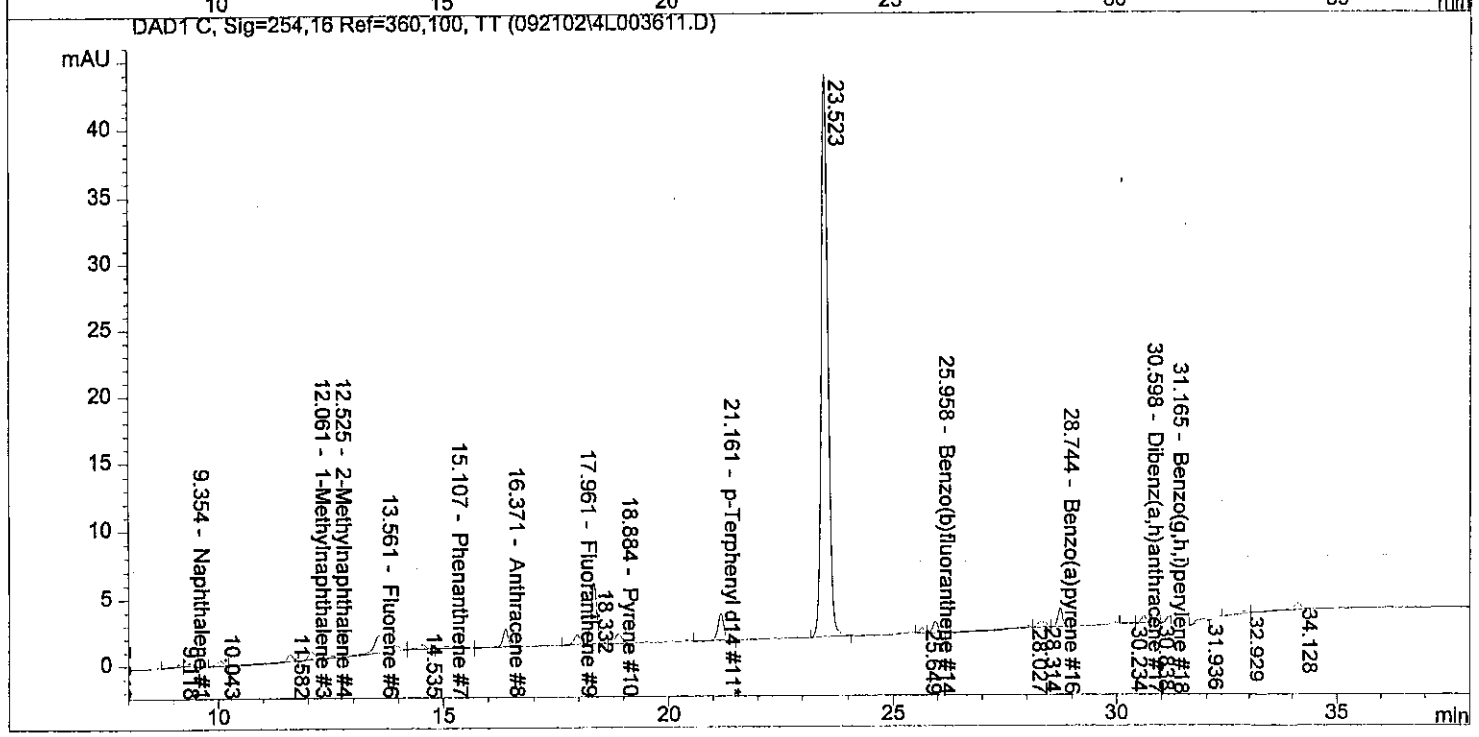
Injection Date : 9/22/2002 10:07:57 PM
Sample Name : L0209337-06 831W
Acq. Operator : RDC

Seq. Line : 34
Vial : 34
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 10:07:33 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.370 | BB | 1.15081 | 3.32474e-1 | 3.82614e-1 | | Naphthalene #1 |
| 11.956 | BB | 2.02070e-1 | 1.69001 | 3.41500e-1 | | 1-Methylnaphthalene #3 |
| 12.521 | BB | 7.63321e-1 | 3.41910e-1 | 2.60987e-1 | | 2-Methylnaphthalene #4 |
| 13.068 | BB | 1.89914e-1 | 9.48180e-1 | 1.80072e-1 | | Acenaphthene #5 |
| 13.639 | BB | 6.47363 | 1.32798e-2 | 8.59685e-2 | | Fluorene #6 |
| 15.044 | BB | 1.98978 | 4.12317e-1 | 8.20422e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.975 | PB | 4.35044 | 3.22004e-2 | 1.40086e-1 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.176 | PB | 4.28762 | 3.61785e-1 | 1.55119 | | p-Terphenyl d14 #11* |
| 22.590 | BB | 7.60342e-1 | 6.89624e-2 | 5.24350e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.094 | BB | 2.10703e-1 | 2.06991e-1 | 4.36135e-2 | | Benzo(b)fluoranthene #14 |
| 27.521 | BB | 9.12018e-1 | 1.67457e-2 | 1.52724e-2 | | Benzo(k)fluoranthene #15 |
| 28.604 | BBA | 6.88128e-1 | 8.87396e-2 | 6.10642e-2 | | Benzo(a)pyrene #16 |
| 30.460 | BB | 3.55715e-1 | 2.23783e-1 | 7.96031e-2 | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.274 | PB | 3.89757e-1 | 1.04779e-1 | 4.08383e-2 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 4.05567 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.354 | BB | 1.89015 | 0.00000 | 0.00000 | LMDL | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 12.061 | BB | 6.52894 | 3.87669e-2 | 2.53106e-1 | | 1-Methylnaphthalene #3 |
| 12.525 | BB | 1.89598 | 4.05244e-2 | 7.68336e-2 | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.561 | BB | 34.22742 | 2.27662e-2 | 7.79229e-1 | NC | Fluorene #6 |
| 15.107 | BB | 3.67317 | 7.10433e-2 | 2.60954e-1 | LMDL | Phenanthrene #7 |
| 16.371 | BBA | 11.70222 | 1.08771e-2 | 1.27286e-1 | ↓ | Anthracene #8 |
| 17.961 | PB | 6.43657 | 2.57384e-2 | 1.65667e-1 | RT | Fluoranthene #9 |
| 18.884 | BBA | 7.40863 | 1.54972e-2 | 1.14813e-1 | NC | Pyrene #10 |
| 21.161 | BB | 18.62226 | 7.97690e-2 | 1.48548 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - * 149% | | Chrysene #13 |
| 25.958 | BBA | 6.79207 | 2.49386e-2 | 1.69385e-1 | RT | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.744 | BBA | 10.32859 | 3.16160e-2 | 3.26549e-1 | RT | Benzo(a)pyrene #16 |
| 30.598 | BB | 3.93097 | 5.33391e-2 | 2.09675e-1 | RT | Dibenz(a,h)anthracene #17 |

PLC4 9/24/2002 4:03:14 PM

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.165 | BB | 2.02440e-1 | 2.83612e-1 | 5.74145e-2 | NC | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.02639

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), (Naphthalene

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*** End of Report ***

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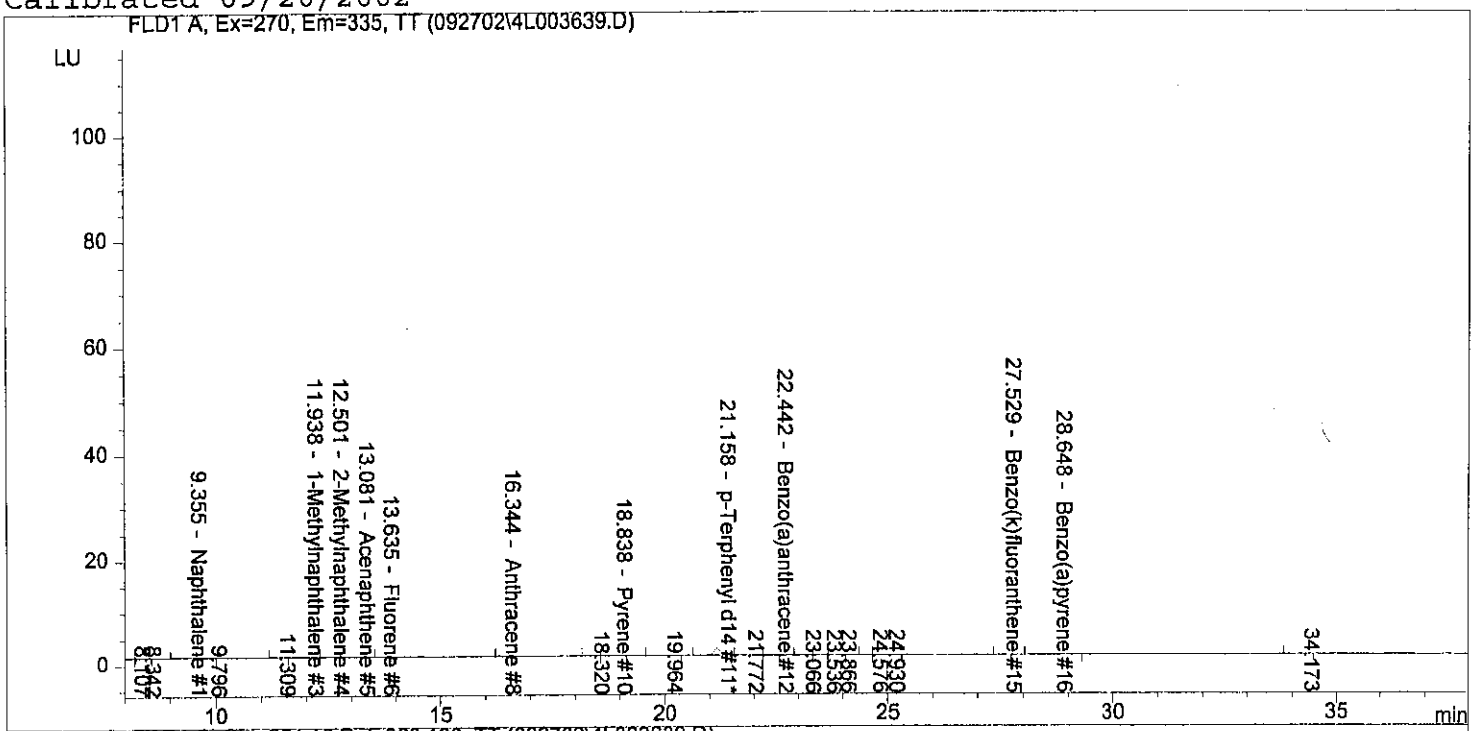
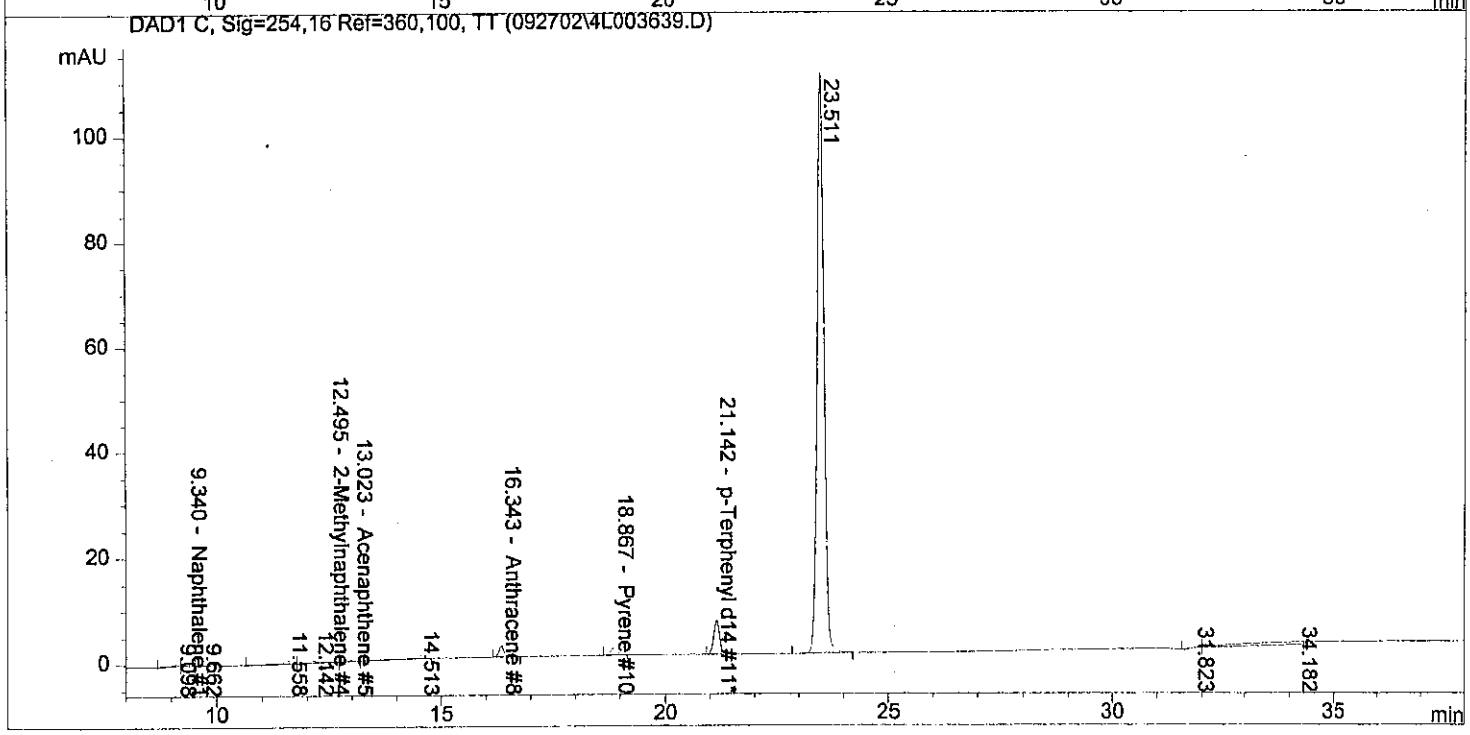
Injection Date : 9/28/2002 11:23:23 AM  Seq. Line : 21
Sample Name : L0209337-06 831W  Vial : 21
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 11:23:35 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)

Calibrated 09/20/2002



Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 1.80947 | 2.20653e-1 | 3.99264e-1 | | Naphthalene #1 |
| 11.938 | PB | 3.44564e-1 | 1.00029 | 3.44664e-1 | | 1-Methylnaphthalene #3 |
| 12.501 | BB | 6.39483e-1 | 4.04766e-1 | 2.58841e-1 | | 2-Methylnaphthalene #4 |
| 13.081 | BB | 2.72315e-1 | 6.65463e-1 | 1.81215e-1 | | Acenaphthene #5 |
| 13.635 | BB | 2.16588e-1 | 2.02523e-1 | 4.38641e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.344 | BBA | 1.52115e-1 | 1.02172 | 1.55419e-1 | | Anthracene #8 |
| 17.831 | | - | - | - | | Fluoranthene #9 |
| 18.838 | BB | 2.79618e-1 | 2.89298e-1 | 8.08928e-2 | | Pyrene #10 |
| 21.158 | BB | 13.49806 | 3.19892e-1 | 4.31792 | | p-Terphenyl d14 #11* |
| 22.442 | BB | 1.64614e-1 | 2.89904e-1 | 4.77223e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.529 | BBA | 1.46121e-1 | 8.96823e-2 | 1.31044e-2 | | Benzo(k)fluoranthene #15 |
| 28.648 | PBA | 5.73168e-1 | 1.05606e-1 | 6.05298e-2 | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 5.90343 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.340 | BB | 3.86471 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.495 | BB | 1.74573 | 4.29707e-2 | 7.50154e-2 | | 2-Methylnaphthalene #4 |
| 13.023 | BB | 2.09948 | 1.24801e-1 | 2.62016e-1 | | Acenaphthene #5 |
| 13.645 | | - | - | - | | Fluorene #6 |
| 15.030 | | - | - | - | | Phenanthrene #7 |
| 16.343 | BBA | 17.85513 | 1.08532e-2 | 1.93784e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.867 | BBA | 15.84470 | 1.30772e-2 | 2.07205e-1 | | Pyrene #10 |
| 21.142 | BBA | 57.13279 | 7.05510e-2 | 4.03078 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

40.3%

| [min] | [mAU s] | | | | |
|---|---|---|---|---|---|
| 31.297 | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.76880

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), (Naphthalene

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*** End of Report ***

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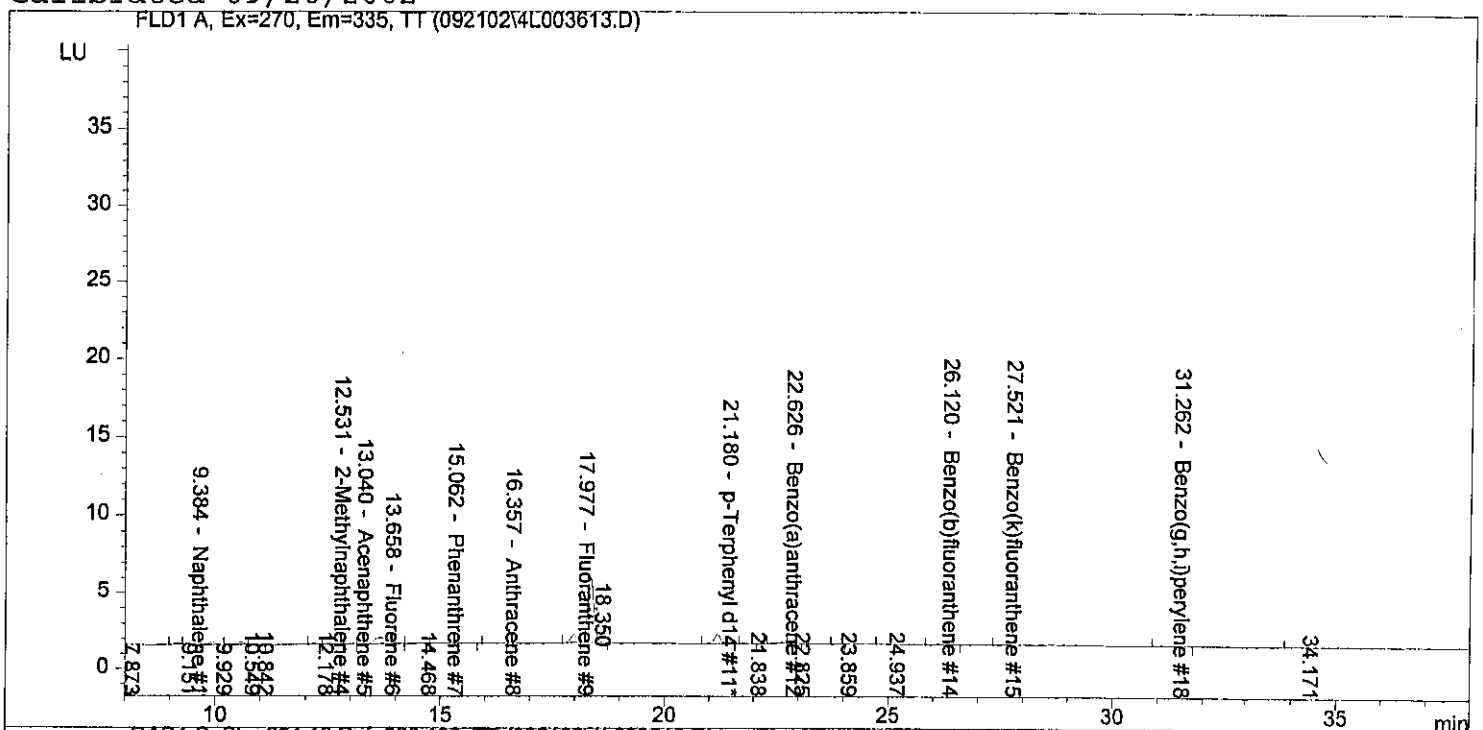
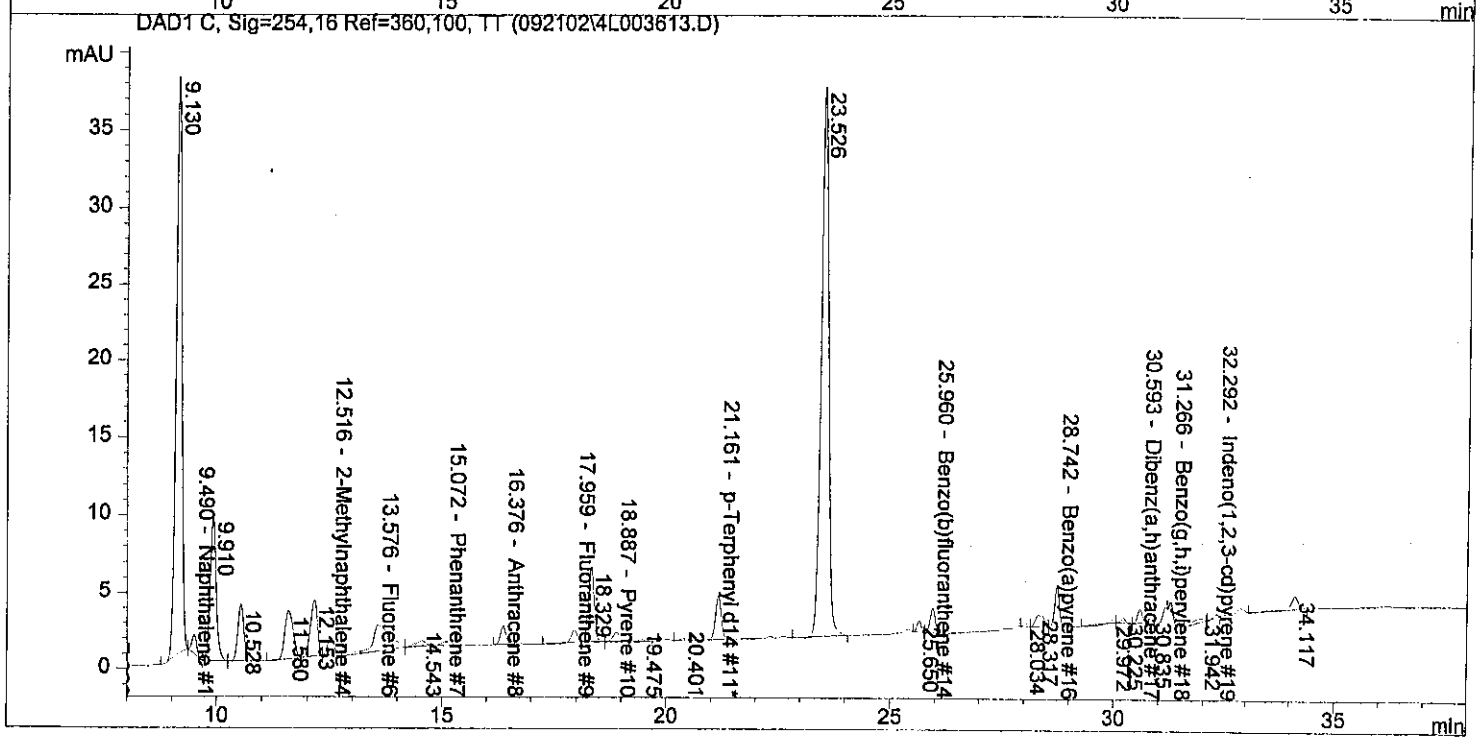
Injection Date : 9/23/2002 12:01:20 AM  Seq. Line : 36
Sample Name : L0209337-07 831W  Vial : 36
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/23/2002 12:00:53 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.384 | BB | 6.07070e-1 | 6.07621e-1 | 3.68869e-1 | | Naphthalene #1 |
| 11.952 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.531 | BB | 1.36331 | 1.99065e-1 | 2.71388e-1 | | 2-Methylnaphthalene #4 |
| 13.040 | BB | 1.58237e-1 | 1.13522 | 1.79633e-1 | | Acenaphthene #5 |
| 13.658 | BB | 8.69209 | 1.16079e-2 | 1.00897e-1 | | Fluorene #6 |
| 15.062 | BBA | 2.96564e-1 | 1.81496 | 5.38252e-1 | | Phenanthrene #7 |
| 16.357 | BBA | 1.46002e-1 | 1.05172 | 1.53553e-1 | | Anthracene #8 |
| 17.977 | PB | 4.81313 | 3.15468e-2 | 1.51839e-1 | | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.180 | BB | 6.47865 | 3.41021e-1 | 2.20936 | | p-Terphenyl d14 #11* |
| 22.626 | BB | 5.88479e-1 | 8.67922e-2 | 5.10754e-2 | | Benzo(a)anthracene #12 |
| 23.376 | | - | - | - | | Chrysene #13 |
| 26.120 | BBA | 1.64962e-1 | 2.59733e-1 | 4.28460e-2 | | Benzo(b)fluoranthene #14 |
| 27.521 | PBA | 2.86221e-1 | 4.71698e-2 | 1.35010e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.262 | BBA | 2.57246e-1 | 3.57061e-1 | 9.18528e-2 | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 4.17306

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.490 | BB | 9.39139 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.516 | BB | 11.36162 | 1.68445e-2 | 1.91381e-1 | LMDL | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.576 | BB | 43.65284 | 2.15907e-2 | 9.42497e-1 | NC | Fluorene #6 |
| 15.072 | BB | 3.36631 | 7.59375e-2 | 2.55629e-1 | LMDL | Phenanthrene #7 |
| 16.376 | BBA | 10.43286 | 1.08855e-2 | 1.13567e-1 | ↓ | Anthracene #8 |
| 17.959 | PB | 6.14713 | 2.59756e-2 | 1.59675e-1 | RT | Fluoranthene #9 |
| 18.887 | BB | 6.34692 | 1.62575e-2 | 1.03185e-1 | NC | Pyrene #10 |
| 21.161 | BBA | 26.79398 | 7.55982e-2 | 2.02558 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | X 20.3% | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.960 | BBA | 12.76190 | 2.26927e-2 | 2.89602e-1 | RT | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.742 | BBA | 19.96196 | 2.89358e-2 | 5.77616e-1 | RT | Benzo(a)pyrene #16 |
| 30.593 | BB | 7.20889 | 7.55125e-2 | 5.44361e-1 | NC | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.266 | BBA | 3.86661e-1 | 1.74515e-1 | 6.74782e-2 | RT | Benzo(g,h,i)perylene #18 |
| 32.292 | BB | 1.44750 | 5.72991e-2 | 8.29405e-2 | NC | Indeno(1,2,3-cd)pyrene #1 |

Totals : 5.35351

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), (Naphthalene

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*** End of Report ***

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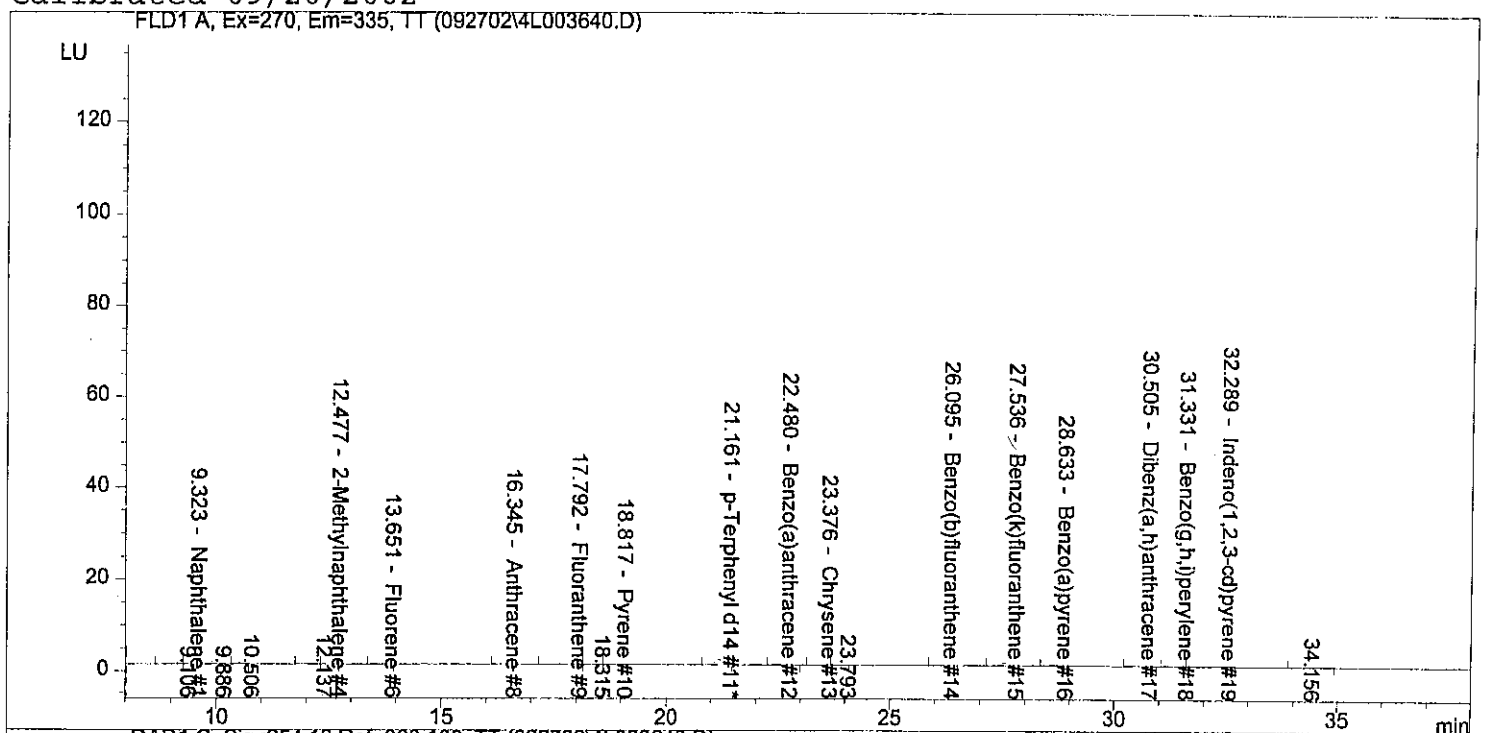
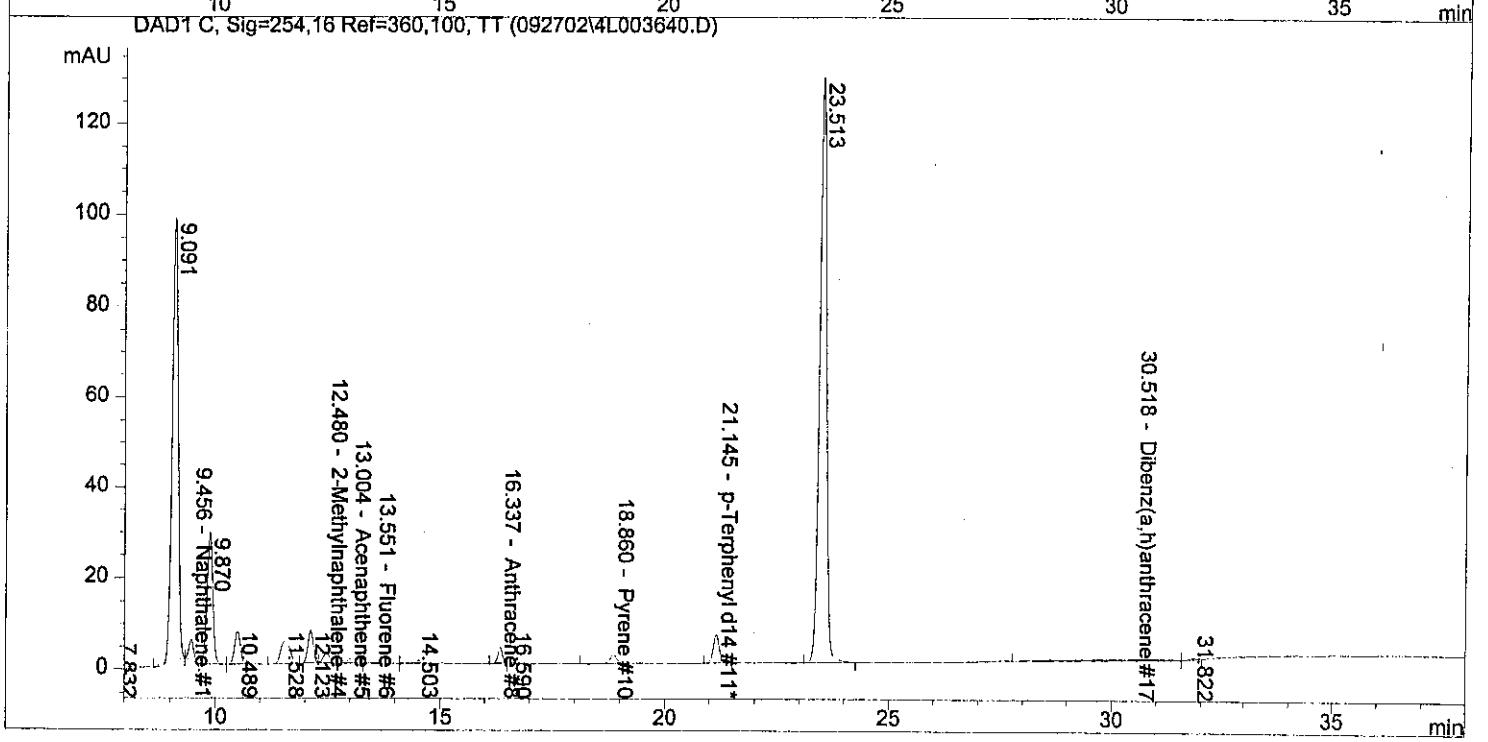
Injection Date : 9/28/2002 12:20:04 PM  Seq. Line : 22
Sample Name : L0209337-07 831W  Vial : 22
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 12:20:18 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002



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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.323 | BB | 1.75647e-1 | 2.03796 | 3.57962e-1 | | Naphthalene #1 |
| 11.952 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.477 | BB | 4.24890e-1 | 6.00440e-1 | 2.55121e-1 | | 2-Methylnaphthalene #4 |
| 13.005 | | - | - | - | | Acenaphthene #5 |
| 13.651 | BB | 6.23562e-1 | 7.47363e-2 | 4.66027e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.345 | BBA | 1.77974e-1 | 9.17610e-1 | 1.63311e-1 | | Anthracene #8 |
| 17.792 | BB | 5.76412e-1 | 7.67134e-2 | 4.42186e-2 | | Fluoranthene #9 |
| 18.817 | BB | 2.85510e-1 | 2.84049e-1 | 8.10986e-2 | | Pyrene #10 |
| 21.161 | BB | 12.65702 | 3.21188e-1 | 4.06528 | | p-Terphenyl d14 #11* |
| 22.480 | BB | 2.03490 | 3.07227e-2 | 6.25177e-2 | | Benzo(a)anthracene #12 |
| 23.376 | BB | 9.09532e-1 | 8.17300e-2 | 7.43360e-2 | | Chrysene #13 |
| 26.095 | PBA | 7.07043e-1 | 7.34645e-2 | 5.19425e-2 | | Benzo(b)fluoranthene #14 |
| 27.536 | PBA | 6.17737 | 4.88501e-3 | 3.01765e-2 | | Benzo(k)fluoranthene #15 |
| 28.633 | BBA | 2.42693 | 2.84918e-2 | 6.91474e-2 | | Benzo(a)pyrene #16 |
| 30.505 | PBA | 6.23702e-1 | 1.44274e-1 | 8.99842e-2 | | Dibenz(a,h)anthracene #17 |
| 31.331 | PB | 4.79476e-1 | 2.03221e-1 | 9.74396e-2 | | Benzo(g,h,i)perylene #18 |
| 32.289 | BB | 1.17351 | 4.44029e-2 | 5.21071e-2 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 5.54124

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.456 | BB | 35.90769 | 5.59268e-3 | 2.00820e-1 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.480 | BB | 20.95328 | 1.46733e-2 | 3.07453e-1 | | 2-Methylnaphthalene #4 |
| 13.004 | BB | 9.11848 | 4.60896e-2 | 4.20267e-1 | | Acenaphthene #5 |
| 13.551 | BB | 2.63485 | 8.80427e-2 | 2.31979e-1 | | Fluorene #6 |
| 15.030 | | - | - | - | | Phenanthrene #7 |
| 16.337 | PB | 26.08685 | 1.08388e-2 | 2.82750e-1 | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.860 | BBA | 20.42342 | 1.26008e-2 | 2.57351e-1 | | Pyrene #10 |
| 21.145 | BBA | 55.84496 | 7.06538e-2 | 3.94566 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - 39.5% | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.518 | BB | 40.17844 | 9.73323e-2 | 3.91066 | | Dibenz(a,h)anthracene #17 |

| [min] | [mAU s] | | | | |
|---|---|---|---|---|---|
| 31.297 | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 9.55694

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 ***

# 2.2.7.3 Standards Data

Calibration Table

==========

HPLC4 8310 CALIBRATION

Calib. Data Modified : 9/21/2002 3:41:57 PM

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=360,100, TT

| RetTime [min] | Sig | Lvl | Amount [ug/L] | Area | Amt/Area | Ref | Grp | Name |
|---|---|---|---|---|---|---|---|---|
| 9.370 | 2 | 1 | 1.00000 | 113.50661 | 8.81006e-3 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 575.15820 | 8.69326e-3 | | | |
| | | 3 | 10.00000 | 1182.50085 | 8.45665e-3 | | | |
| | | 4 | 20.00000 | 2466.37598 | 8.10906e-3 | | | |
| | | 5 | 50.00000 | 5949.45410 | 8.40413e-3 | | | |
| | | 6 | 100.00000 | 1.18503e4 | 8.43861e-3 | | | |
| 9.386 | 1 | 1 | 1.00000 | 36.15768 | 2.76566e-2 | | | Naphthalene #1 |
| | | 2 | 5.00000 | 181.29584 | 2.75792e-2 | | | |
| | | 3 | 10.00000 | 374.62244 | 2.66935e-2 | | | |
| | | 4 | 20.00000 | 783.70270 | 2.55199e-2 | | | |
| | | 5 | 50.00000 | 1921.86047 | 2.60165e-2 | | | |
| | | 6 | 100.00000 | 3962.24902 | 2.52382e-2 | | | |
| 10.990 | 2 | 1 | 1.00000 | 28.32826 | 3.53004e-2 | | | Acenaphthylene #2 |
| | | 2 | 5.00000 | 137.48097 | 3.63687e-2 | | | |
| | | 3 | 10.00000 | 282.83063 | 3.53568e-2 | | | |
| | | 4 | 20.00000 | 588.70093 | 3.39731e-2 | | | |
| | | 5 | 50.00000 | 1437.33740 | 3.47865e-2 | | | |
| | | 6 | 100.00000 | 2944.69458 | 3.39594e-2 | | | |
| 11.936 | 2 | 1 | 1.00000 | 67.43660 | 1.48287e-2 | | | 1-Methylnaphthalene #3 |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000 | 339.69986 | 1.47189e-2 | |
| | | 3 | 10.00000 | 697.62793 | 1.43343e-2 | |
| | | 4 | 20.00000 | 1455.42712 | 1.37417e-2 | |
| | | 5 | 50.00000 | 3540.73169 | 1.41214e-2 | |
| | | 6 | 100.00000 | 7205.42578 | 1.38784e-2 | |
| 11.952 | 1 | 1 | 1.00000 | 41.36844 | 2.41730e-2 | 1-Methylnaphthalene #3 |
| | | 2 | 5.00000 | 208.15732 | 2.40203e-2 | |
| | | 3 | 10.00000 | 426.31619 | 2.34568e-2 | |
| | | 4 | 20.00000 | 890.99243 | 2.24469e-2 | |
| | | 5 | 50.00000 | 2194.00391 | 2.27894e-2 | |
| | | 6 | 100.00000 | 4509.24463 | 2.21767e-2 | |
| 12.511 | 2 | 1 | 1.00000 | 78.89049 | 1.26758e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 394.82016 | 1.26640e-2 | |
| | | 3 | 10.00000 | 811.48065 | 1.23232e-2 | |
| | | 4 | 20.00000 | 1689.06653 | 1.18409e-2 | |
| | | 5 | 50.00000 | 4096.85840 | 1.22045e-2 | |
| | | 6 | 100.00000 | 8267.85547 | 1.20950e-2 | |
| 12.527 | 1 | 1 | 1.00000 | 53.71581 | 1.86165e-2 | 2-Methylnaphthalene #4 |
| | | 2 | 5.00000 | 268.35944 | 1.86317e-2 | |
| | | 3 | 10.00000 | 553.23322 | 1.80756e-2 | |
| | | 4 | 20.00000 | 1155.66101 | 1.73061e-2 | |
| | | 5 | 50.00000 | 2823.16040 | 1.77106e-2 | |
| | | 6 | 100.00000 | 5776.03906 | 1.73129e-2 | |
| 12.989 | 2 | 1 | 1.00000 | 41.25003 | 2.42424e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 207.93272 | 2.40462e-2 | |
| | | 3 | 10.00000 | 427.28159 | 2.34038e-2 | |
| | | 4 | 20.00000 | 891.23303 | 2.24408e-2 | |
| | | 5 | 50.00000 | 2174.84375 | 2.29902e-2 | |
| | | 6 | 100.00000 | 4440.60303 | 2.25195e-2 | |
| 13.005 | 1 | 1 | 1.00000 | 67.56156 | 1.48013e-2 | Acenaphthene #5 |
| | | 2 | 5.00000 | 338.71442 | 1.47617e-2 | |
| | | 3 | 10.00000 | 697.65833 | 1.43337e-2 | |
| | | 4 | 20.00000 | 1456.78040 | 1.37289e-2 | |
| | | 5 | 50.00000 | 3543.34277 | 1.41110e-2 | |
| | | 6 | 100.00000 | 7218.86475 | 1.38526e-2 | |
| 13.645 | 2 | 1 | 1.00000 | 53.42283 | 1.87186e-2 | Fluorene #6 |
| | | 2 | 5.00000 | 271.81696 | 1.83947e-2 | |
| | | 3 | 10.00000 | 558.21259 | 1.79143e-2 | |
| | | 4 | 20.00000 | 1164.00928 | 1.71820e-2 | |
| | | 5 | 50.00000 | 2835.69336 | 1.76324e-2 | |
| | | 6 | 100.00000 | 5779.26465 | 1.73032e-2 | |
| 13.661 | 1 | 1 | 1.00000 | 142.12080 | 7.03627e-3 | Fluorene #6 |
| | | 2 | 5.00000 | 713.18817 | 7.01077e-3 | |
| | | 3 | 10.00000 | 1462.86792 | 6.83589e-3 | |
| | | 4 | 20.00000 | 3039.59375 | 6.57983e-3 | |
| | | 5 | 50.00000 | 7369.04883 | 6.78514e-3 | |
| | | 6 | 100.00000 | 1.48701e4 | 6.72489e-3 | |
| 15.030 | 2 | 1 | 1.00000 | 54.35011 | 1.83992e-2 | Phenanthrene #7 |
| | | 2 | 5.00000 | 271.18774 | 1.84374e-2 | |
| | | 3 | 10.00000 | 557.24799 | 1.79453e-2 | |
| | | 4 | 20.00000 | 1160.96094 | 1.72271e-2 | |
| | | 5 | 50.00000 | 2824.41431 | 1.77028e-2 | |
| | | 6 | 100.00000 | 5771.65283 | 1.73261e-2 | |
| 15.046 | 1 | 1 | 1.00000 | 5.95919 | 1.67808e-1 | Phenanthrene #7 |
| | | 2 | 5.00000 | 26.72914 | 1.87062e-1 | |
| | | 3 | 10.00000 | 55.65540 | 1.79677e-1 | |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 4 | 20.00000 | 116.89686 | 1.71091e-1 | |
| | | 5 | 50.00000 | 289.00418 | 1.73008e-1 | |
| | | 6 | 100.00000 | 601.35211 | 1.66292e-1 | |
| 16.434 | 2 | 1 | 1.00000 | 86.66844 | 1.15382e-2 | Anthracene #8 |
| | | 2 | 5.00000 | 442.03864 | 1.13112e-2 | |
| | | 3 | 10.00000 | 911.06781 | 1.09761e-2 | |
| | | 4 | 20.00000 | 1898.27124 | 1.05359e-2 | |
| | | 5 | 50.00000 | 4625.47705 | 1.08097e-2 | |
| | | 6 | 100.00000 | 9245.92676 | 1.08156e-2 | |
| 16.451 | 1 | 1 | 1.00000 | 3.09896 | 3.22688e-1 | Anthracene #8 |
| | | 2 | 5.00000 | 15.51351 | 3.22300e-1 | |
| | | 3 | 10.00000 | 31.83507 | 3.14119e-1 | |
| | | 4 | 20.00000 | 66.18985 | 3.02161e-1 | |
| | | 5 | 50.00000 | 162.79338 | 3.07138e-1 | |
| | | 6 | 100.00000 | 327.53006 | 3.05315e-1 | |
| 17.814 | 2 | 1 | 1.00000e-1 | 4.45056 | 2.24691e-2 | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 22.06173 | 2.26637e-2 | |
| | | 3 | 1.00000 | 45.92867 | 2.17729e-2 | |
| | | 4 | 2.00000 | 96.07294 | 2.08175e-2 | |
| | | 5 | 5.00000 | 235.31152 | 2.12484e-2 | |
| | | 6 | 10.00000 | 483.72876 | 2.06727e-2 | |
| 17.831 | 1 | 1 | 1.00000e-1 | 3.68034 | 2.71714e-2 | Fluoranthene #9 |
| | | 2 | 5.00000e-1 | 18.38673 | 2.71935e-2 | |
| | | 3 | 1.00000 | 37.53587 | 2.66412e-2 | |
| | | 4 | 2.00000 | 78.17149 | 2.55848e-2 | |
| | | 5 | 5.00000 | 192.03598 | 2.60368e-2 | |
| | | 6 | 10.00000 | 394.27036 | 2.53633e-2 | |
| 18.819 | 2 | 1 | 1.00000e-1 | 8.04064 | 1.24368e-2 | Pyrene #10 |
| | | 2 | 5.00000e-1 | 41.80117 | 1.19614e-2 | |
| | | 3 | 1.00000 | 86.62556 | 1.15439e-2 | |
| | | 4 | 2.00000 | 181.36873 | 1.10273e-2 | |
| | | 5 | 5.00000 | 444.82697 | 1.12403e-2 | |
| | | 6 | 10.00000 | 914.12830 | 1.09394e-2 | |
| 18.835 | 1 | 1 | 1.00000e-1 | 2.49880 | 4.00192e-2 | Pyrene #10 |
| | | 2 | 5.00000e-1 | 12.35667 | 4.04640e-2 | |
| | | 3 | 1.00000 | 25.55995 | 3.91237e-2 | |
| | | 4 | 2.00000 | 54.85559 | 3.64594e-2 | |
| | | 5 | 5.00000 | 136.01701 | 3.67601e-2 | |
| | | 6 | 10.00000 | 286.95029 | 3.48492e-2 | |
| 21.166 | 2 | 1 | 1.00000 | 13.68986 | 7.30468e-2 | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 69.45084 | 7.19934e-2 | |
| | | 3 | 10.00000 | 144.49483 | 6.92066e-2 | |
| | | 4 | 20.00000 | 303.50552 | 6.58967e-2 | |
| | | 5 | 50.00000 | 742.32825 | 6.73556e-2 | |
| | | 6 | 100.00000 | 1513.75256 | 6.60610e-2 | |
| 21.184 | 1 | 1 | 1.00000 | 3.44864 | 2.89969e-1 | p-Terphenyl d14 #11* |
| | | 2 | 5.00000 | 15.59836 | 3.20547e-1 | |
| | | 3 | 10.00000 | 31.67122 | 3.15744e-1 | |
| | | 4 | 20.00000 | 66.96288 | 2.98673e-1 | |
| | | 5 | 50.00000 | 161.49503 | 3.09607e-1 | |
| | | 6 | 100.00000 | 333.88467 | 2.99505e-1 | |
| 22.481 | 2 | 1 | 1.00000e-1 | 4.41380 | 2.26562e-2 | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 21.93929 | 2.27902e-2 | |
| | | 3 | 1.00000 | 44.75309 | 2.23448e-2 | |
| | | 4 | 2.00000 | 94.19716 | 2.12321e-2 | |
| | | 5 | 5.00000 | 231.56067 | 2.15926e-2 | |

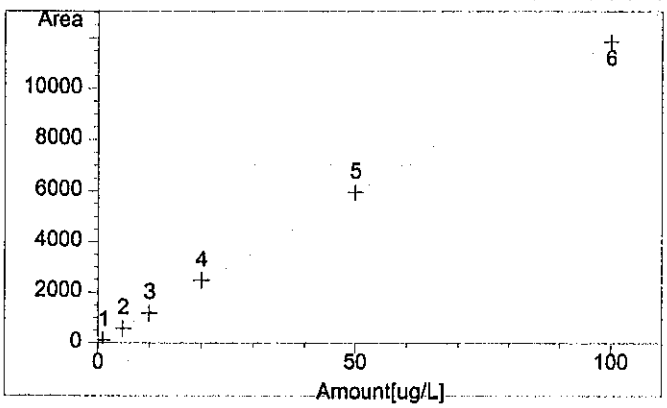
| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 6 | 10.00000 | 477.03839 | 2.09627e-2 | |
| 22.500 | 1 | 1 | 1.00000e-1 | 11.41377 | 8.76135e-3 | Benzo(a)anthracene #12 |
| | | 2 | 5.00000e-1 | 56.93108 | 8.78255e-3 | |
| | | 3 | 1.00000 | 118.36651 | 8.44834e-3 | |
| | | 4 | 2.00000 | 247.33057 | 8.08634e-3 | |
| | | 5 | 5.00000 | 609.34204 | 8.20557e-3 | |
| | | 6 | 10.00000 | 1266.77136 | 7.89408e-3 | |
| 23.359 | 2 | 1 | 1.00000e-1 | 6.12014 | 1.63395e-2 | Chrysene #13 |
| | | 2 | 5.00000e-1 | 30.40728 | 1.64434e-2 | |
| | | 3 | 1.00000 | 62.44849 | 1.60132e-2 | |
| | | 4 | 2.00000 | 131.21184 | 1.52425e-2 | |
| | | 5 | 5.00000 | 322.17139 | 1.55197e-2 | |
| | | 6 | 10.00000 | 662.99872 | 1.50830e-2 | |
| 23.376 | 1 | 1 | 1.00000e-1 | 2.46762 | 4.05248e-2 | Chrysene #13 |
| | | 2 | 5.00000e-1 | 12.35089 | 4.04829e-2 | |
| | | 3 | 1.00000 | 24.32562 | 4.11089e-2 | |
| | | 4 | 2.00000 | 50.90138 | 3.92917e-2 | |
| | | 5 | 5.00000 | 124.39308 | 4.01952e-2 | |
| | | 6 | 10.00000 | 259.63892 | 3.85150e-2 | |
| 26.093 | 2 | 1 | 1.00000e-1 | 4.46468 | 2.23980e-2 | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 22.81914 | 2.19114e-2 | |
| | | 3 | 1.00000 | 47.48998 | 2.10571e-2 | |
| | | 4 | 2.00000 | 98.69814 | 2.02638e-2 | |
| | | 5 | 5.00000 | 241.35190 | 2.07166e-2 | |
| | | 6 | 10.00000 | 497.49078 | 2.01009e-2 | |
| 26.109 | 1 | 1 | 1.00000e-1 | 5.21623 | 1.91709e-2 | Benzo(b)fluoranthene # |
| | | 2 | 5.00000e-1 | 27.46255 | 1.82066e-2 | |
| | | 3 | 1.00000 | 56.03418 | 1.78462e-2 | |
| | | 4 | 2.00000 | 117.52394 | 1.70178e-2 | |
| | | 5 | 5.00000 | 288.37061 | 1.73388e-2 | |
| | | 6 | 10.00000 | 597.08154 | 1.67481e-2 | |
| 27.533 | 2 | 1 | 5.00000e-2 | 1.34447 | 3.71893e-2 | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 10.21462 | 2.44747e-2 | |
| | | 3 | 5.00000e-1 | 20.09780 | 2.48783e-2 | |
| | | 4 | 1.00000 | 43.10554 | 2.31989e-2 | |
| | | 5 | 2.50000 | 104.96660 | 2.38171e-2 | |
| | | 6 | 5.00000 | 216.73499 | 2.30696e-2 | |
| 27.542 | 1 | 1 | 5.00000e-2 | 16.02236 | 3.12064e-3 | Benzo(k)fluoranthene # |
| | | 2 | 2.50000e-1 | 81.89045 | 3.05286e-3 | |
| | | 3 | 5.00000e-1 | 167.50449 | 2.98499e-3 | |
| | | 4 | 1.00000 | 354.43918 | 2.82136e-3 | |
| | | 5 | 2.50000 | 867.17621 | 2.88292e-3 | |
| | | 6 | 5.00000 | 1767.10413 | 2.82949e-3 | |
| 28.623 | 2 | 1 | 1.00000e-1 | 2.62369 | 3.81143e-2 | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 16.64720 | 3.00351e-2 | |
| | | 3 | 1.00000 | 35.49910 | 2.81697e-2 | |
| | | 4 | 2.00000 | 74.54464 | 2.68296e-2 | |
| | | 5 | 5.00000 | 185.12453 | 2.70088e-2 | |
| | | 6 | 10.00000 | 383.82956 | 2.60532e-2 | |
| 28.637 | 1 | 1 | 1.00000e-1 | 18.70416 | 5.34640e-3 | Benzo(a)pyrene #16 |
| | | 2 | 5.00000e-1 | 94.83067 | 5.27256e-3 | |
| | | 3 | 1.00000 | 196.83517 | 5.08039e-3 | |
| | | 4 | 2.00000 | 416.25037 | 4.80480e-3 | |
| | | 5 | 5.00000 | 1032.61243 | 4.84209e-3 | |
| | | 6 | 10.00000 | 2154.75366 | 4.64090e-3 | |
| 30.497 | 2 | 1 | 1.00000e-1 | 4.03842 | 2.47622e-2 | Dibenz(a,h)anthracene |

| [min] | Sig | | [ug/L] | | | |
|---|---|---|---|---|---|---|
| | | 2 | 5.00000e-1 | 9.72626 | 5.14072e-2 | |
| | | 3 | 1.00000 | 10.95264 | 9.13022e-2 | |
| | | 4 | 2.00000 | 20.66441 | 9.67848e-2 | |
| | | 5 | 5.00000 | 49.22962 | 1.01565e-1 | |
| | | 6 | 10.00000 | 100.69902 | 9.93058e-2 | |
| 30.500 | 1 | 1 | 1.00000e-1 | 2.30826 | 4.33227e-2 | Dibenz(a,h)anthracene |
| | | 2 | 5.00000e-1 | 10.82063 | 4.62080e-2 | |
| | | 3 | 1.00000 | 23.52898 | 4.25008e-2 | |
| | | 4 | 2.00000 | 49.56461 | 4.03514e-2 | |
| | | 5 | 5.00000 | 123.53096 | 4.04757e-2 | |
| | | 6 | 10.00000 | 258.50845 | 3.86835e-2 | |
| 31.297 | 2 | 1 | 1.00000e-1 | 1.20689 | 8.28574e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 7.93134 | 6.30410e-2 | |
| | | 3 | 1.00000 | 17.30395 | 5.77903e-2 | |
| | | 4 | 2.00000 | 35.98459 | 5.55793e-2 | |
| | | 5 | 5.00000 | 89.16454 | 5.60761e-2 | |
| | | 6 | 10.00000 | 182.95050 | 5.46596e-2 | |
| 31.330 | 1 | 1 | 1.00000e-1 | 3.25644 | 3.07083e-2 | Benzo(g,h,i)perylene # |
| | | 2 | 5.00000e-1 | 16.79211 | 2.97759e-2 | |
| | | 3 | 1.00000 | 35.19607 | 2.84123e-2 | |
| | | 4 | 2.00000 | 74.49189 | 2.68486e-2 | |
| | | 5 | 5.00000 | 187.63147 | 2.66480e-2 | |
| | | 6 | 10.00000 | 398.71832 | 2.50804e-2 | |
| 32.289 | 2 | 1 | 1.00000e-1 | 4.03389 | 2.47900e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 22.99526 | 2.17436e-2 | |
| | | 3 | 1.00000 | 47.15022 | 2.12088e-2 | |
| | | 4 | 2.00000 | 99.87663 | 2.00247e-2 | |
| | | 5 | 5.00000 | 248.71965 | 2.01030e-2 | |
| | | 6 | 10.00000 | 515.31970 | 1.94054e-2 | |
| 32.292 | 1 | 1 | 1.00000e-1 | 6.42581 | 1.55622e-2 | Indeno(1,2,3-cd)pyrene |
| | | 2 | 5.00000e-1 | 32.39291 | 1.54355e-2 | |
| | | 3 | 1.00000 | 65.71149 | 1.52180e-2 | |
| | | 4 | 2.00000 | 137.54715 | 1.45405e-2 | |
| | | 5 | 5.00000 | 337.52823 | 1.48136e-2 | |
| | | 6 | 10.00000 | 696.87433 | 1.43498e-2 | |

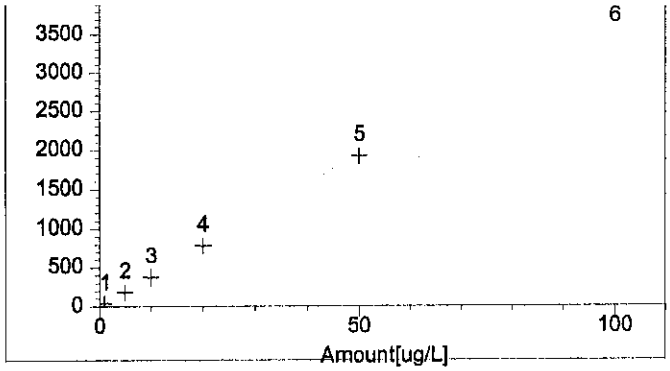
## Peak Sum Table

***No Entries in table***

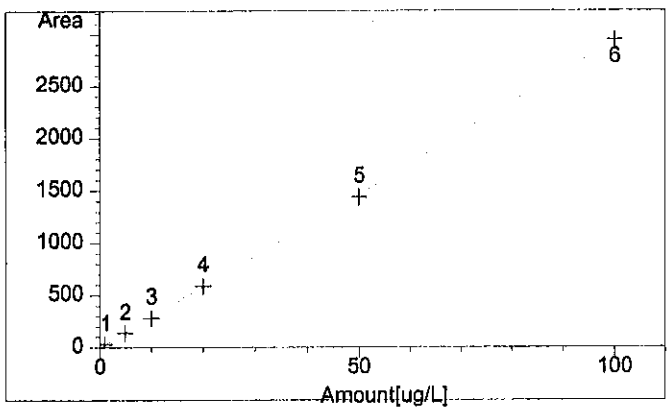
## Calibration Curves



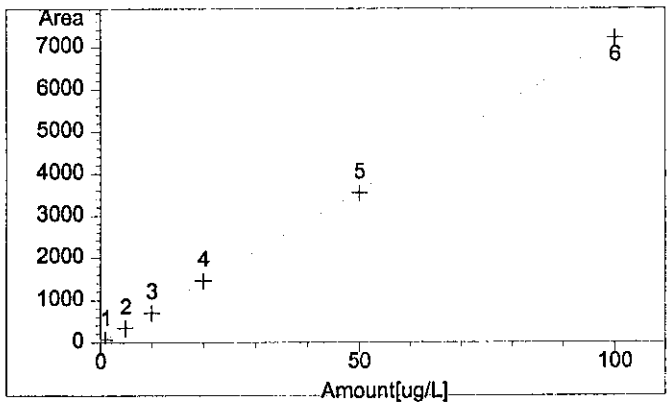

Naphthalene #1 at exp. RT: 9.370
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 42.10085
Formula: y = mx + b
m: 118.56238
b: 12.09798
x: Amount[ug/L]
y: Area



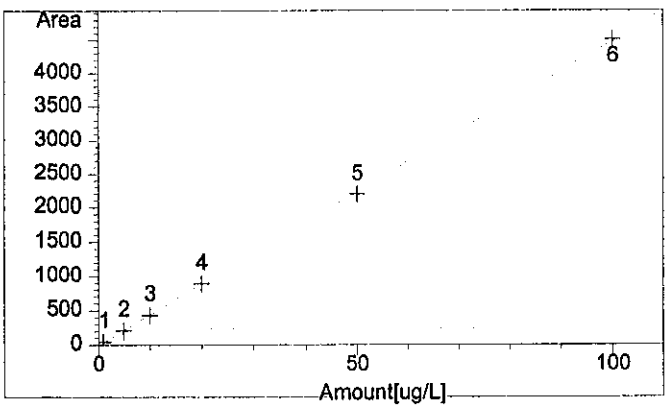

FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99990
Residual Std. Dev.: 22.76520
Formula: y = mx + b
m: 39.55796
b: -13.98462
x: Amount [ug/L]
y: Area



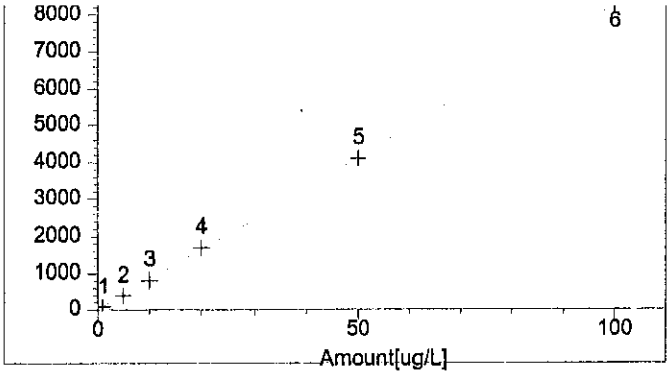

Acenaphthylene #2 at exp. RT: 10.990
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99993
Residual Std. Dev.: 13.87446
Formula: y = mx + b
m: 29.39910
b: -6.97993
x: Amount [ug/L]
y: Area



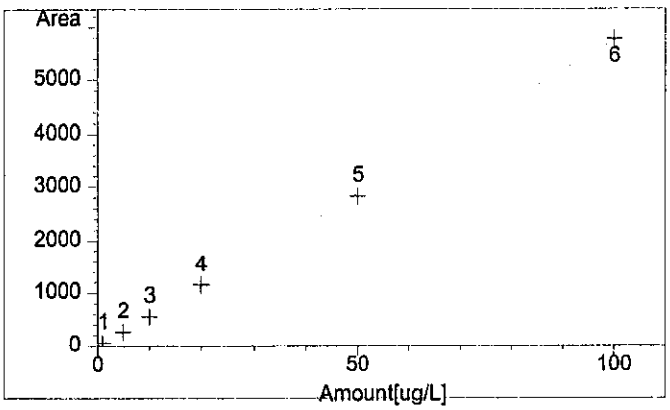

1-Methylnaphthalene #3 at exp. RT: 11.936
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99996
Residual Std. Dev.: 27.06350
Formula: y = mx + b
m: 71.97944
b: -11.68952
x: Amount [ug/L]
y: Area



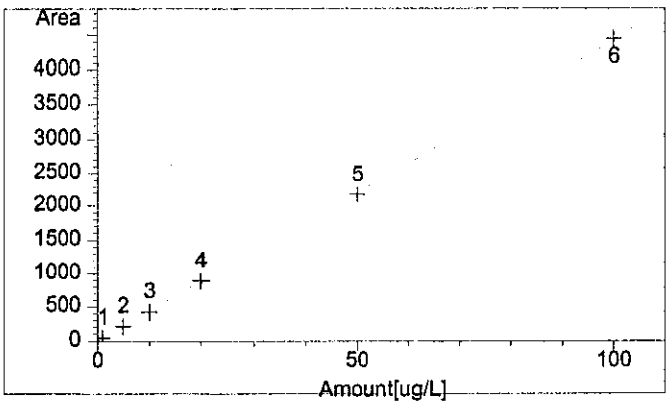

1-Methylnaphthalene #3 at exp. RT: 11.952
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 23.34269
Formula: y = mx + b
m: 45.03399
b: -15.17702
x: Amount [ug/L]
y: Area



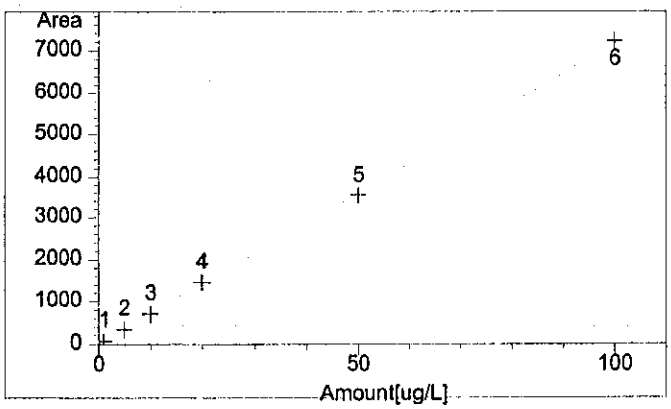

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99997
Residual Std. Dev.: 24.46395
Formula: y = mx + b
m: 82.63518
b: -4.45318
x: Amount[ug/L]
y: Area



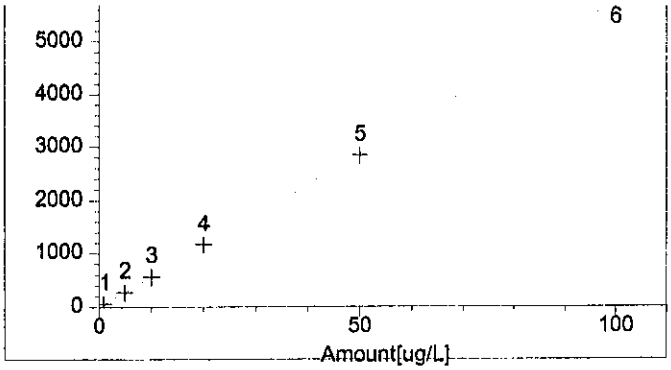

2-Methylnaphthalene #4 at exp. RT: 12.527
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99994
Residual Std. Dev.: 25.92926
Formula: y = mx + b
m: 57.68935
b: -14.29286
x: Amount[ug/L]
y: Area



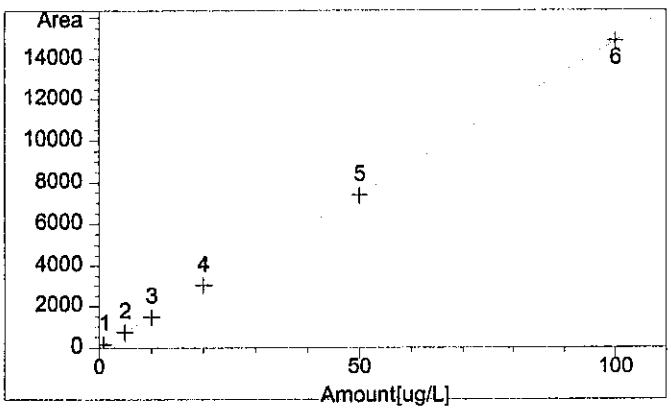

Acenaphthene #5 at exp. RT: 12.989
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 18.49792
Formula: y = mx + b
m: 44.35375
b: -9.52193
x: Amount[ug/L]
y: Area



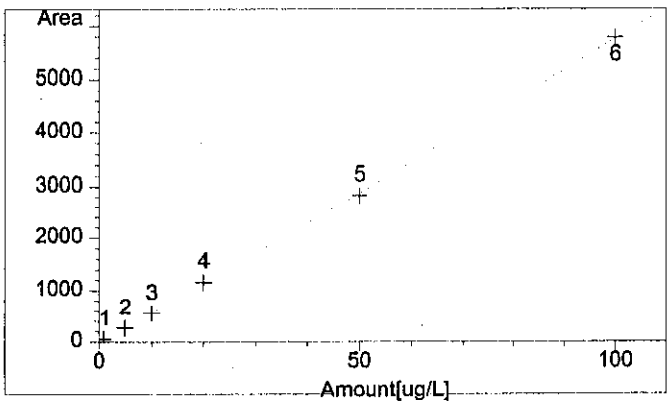

Acenaphthene #5 at exp. RT: 13.005
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 28.42417
Formula: y = mx + b
m: 72.11015
b: -12.79514
x: Amount[ug/L]
y: Area



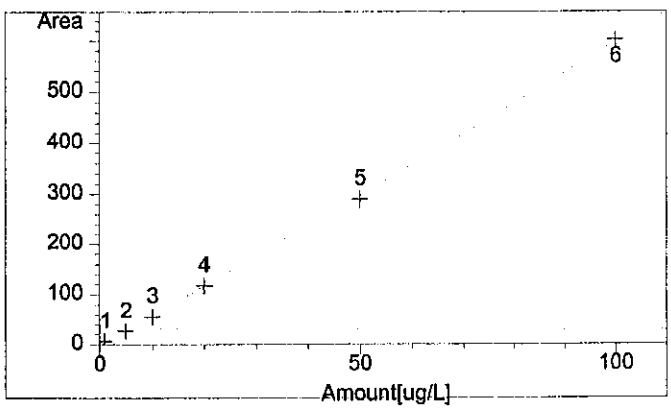

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 22.64515
Formula: y = mx + b
m: 57.72968
b: -10.75723
x: Amount[ug/L]
y: Area



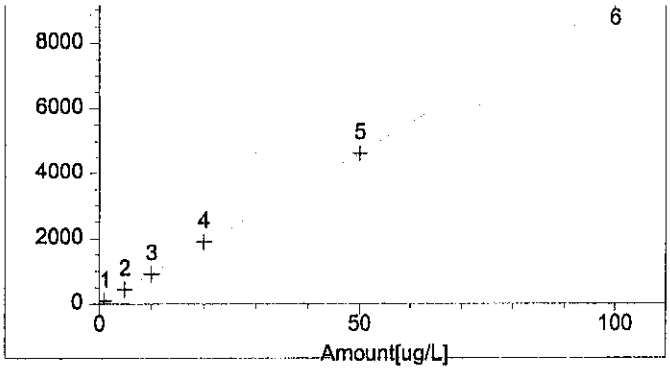

Fluorene #6 at exp. RT: 13.661
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99997
Residual Std. Dev.: 43.79925
Formula: y = mx + b
m: 148.60784
b: -6.30196
x: Amount[ug/L]
y: Area



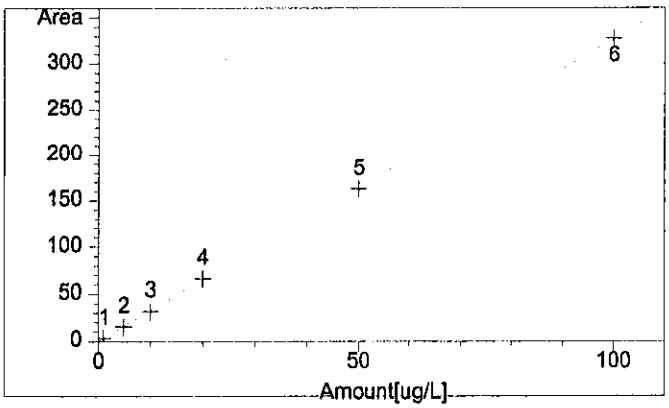

Phenanthrene #7 at exp. RT: 15.030
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99994
Residual Std. Dev.: 25.16007
Formula: y = mx + b
m: 57.63105
b: -11.36587
x: Amount[ug/L]
y: Area



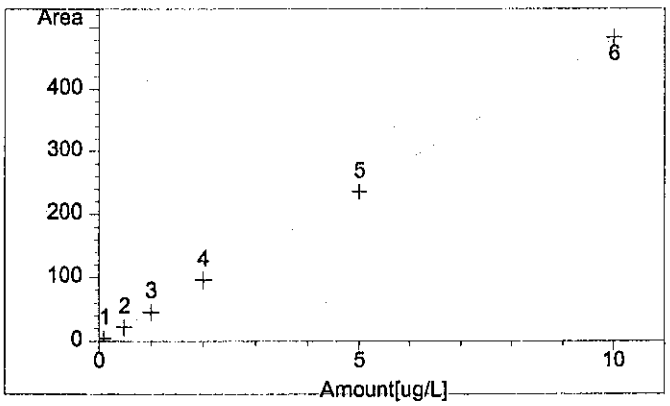

Phenanthrene #7 at exp. RT: 15.046
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99982
Residual Std. Dev.: 4.52698
Formula: y = mx + b
m: 6.00070
b: -2.93332
x: Amount[ug/L]
y: Area



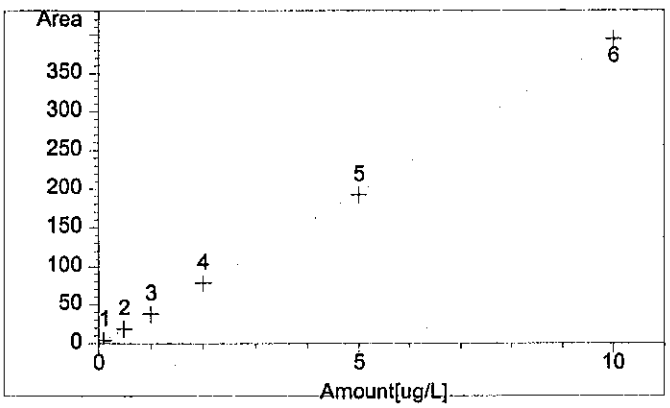

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99998
Residual Std. Dev.: 24.43398
Formula: y = mx + b
m: 92.52675
b: -7.51211e-2
x: Amount [ug/L]
y: Area



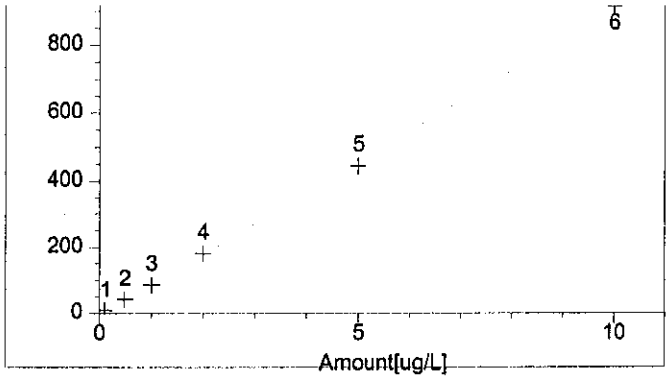

Anthracene #8 at exp. RT: 16.451
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99999
Residual Std. Dev.: 0.67749
Formula: y = mx + b
m: 3.27667
b: -3.57142e-1
x: Amount [ug/L]
y: Area



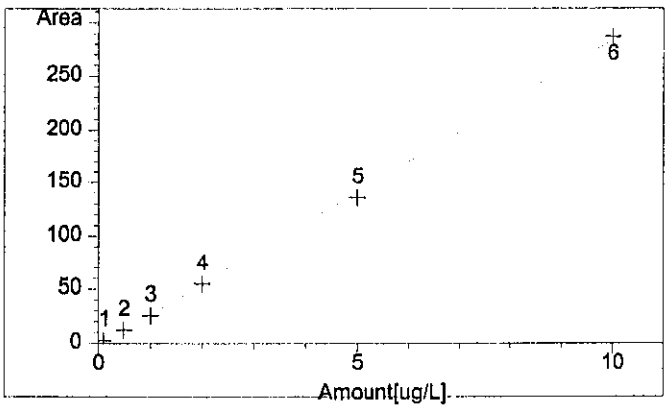

Fluoranthene #9 at exp. RT: 17.814
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 2.54900
Formula: y = mx + b
m: 48.30746
b: -1.56638
x: Amount [ug/L]
y: Area



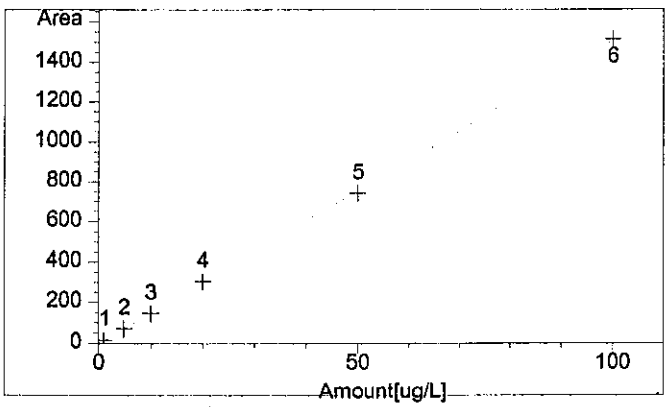

Fluoranthene #9 at exp. RT: 17.831
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99992
Residual Std. Dev.: 1.96619
Formula: y = mx + b
m: 39.36727
b: -1.16435
x: Amount [ug/L]
y: Area



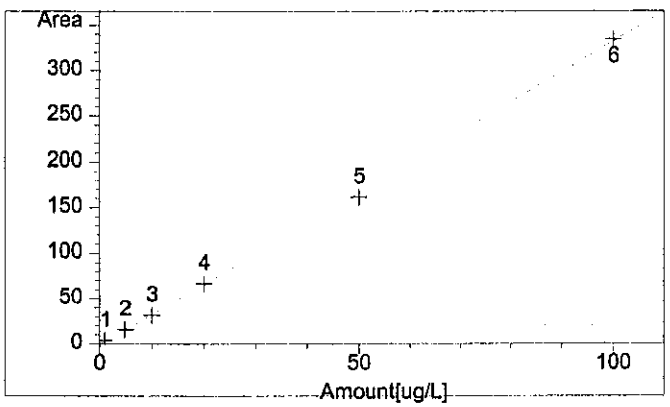

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99992
Residual Std. Dev.: 4.72317
Formula: y = mx + b
m: 91.30718
b: -3.07459
x: Amount[ug/L]
y: Area



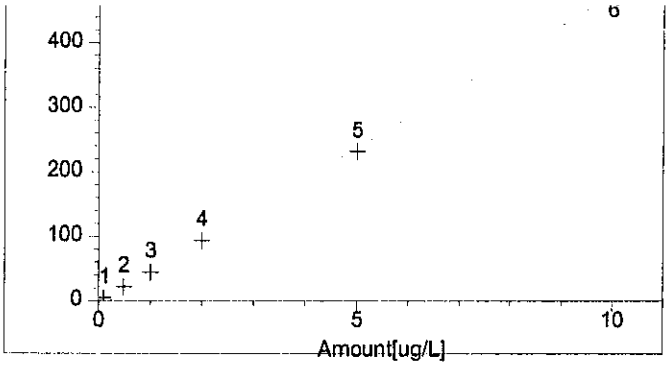

Pyrene #10 at exp. RT: 18.835
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99969
Residual Std. Dev.: 2.87563
Formula: y = mx + b
m: 28.62860
b: -2.03623
x: Amount[ug/L]
y: Area



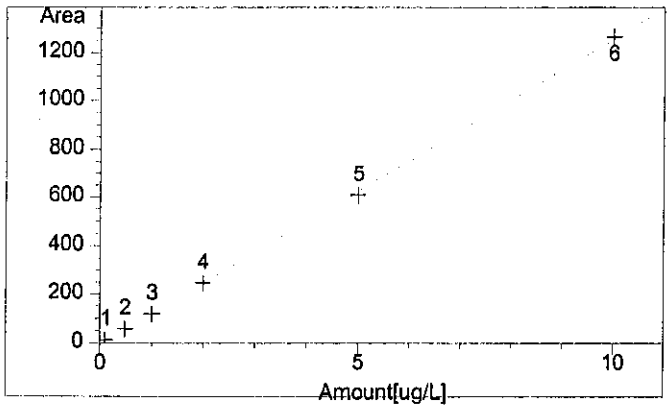

p-Terphenyl d14 #11* at exp. RT: 21.166
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99995
Residual Std. Dev.: 6.08636
Formula: y = mx + b
m: 15.13008
b: -3.85316
x: Amount[ug/L]
y: Area



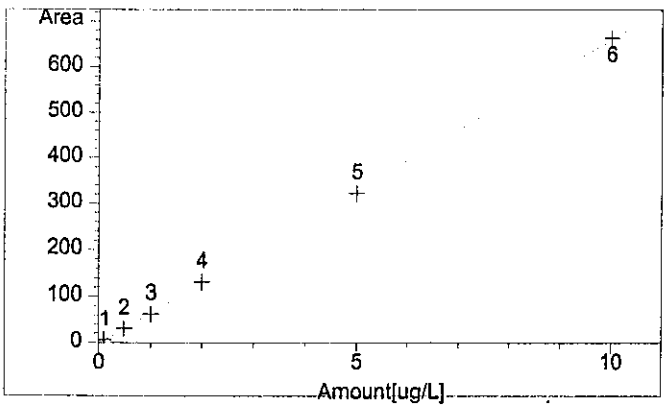

p-Terphenyl d14 #11* at exp. RT: 21.184
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 2.19201
Formula: y = mx + b
m: 3.32901
b: -8.76314e-1
x: Amount[ug/L]
y: Area



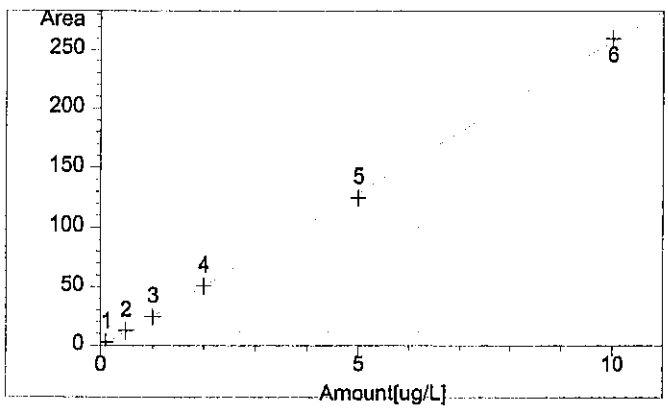

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 2.69756
Formula: y = mx + b
m: 47.63481
b: -1.72930
x: Amount [ug/L]
y: Area



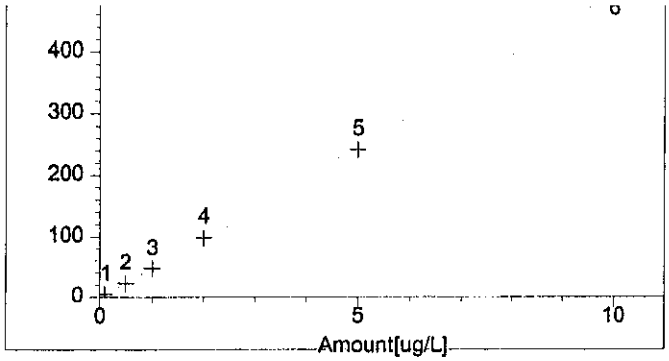

Benzo(a)anthracene #12 at exp. RT: 22.500
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99984
Residual Std. Dev.: 9.13801
Formula: y = mx + b
m: 126.41028
b: -5.86798
x: Amount [ug/L]
y: Area



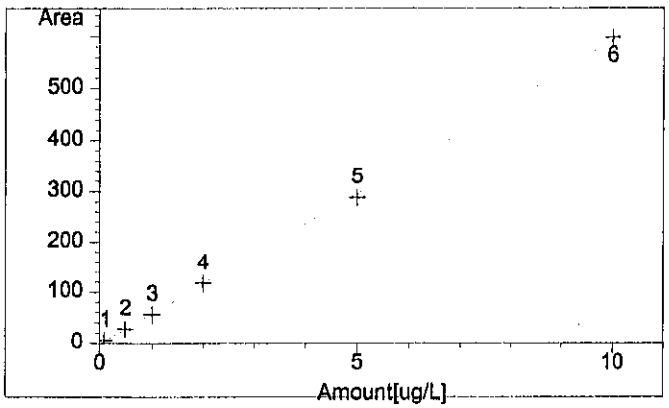

Chrysene #13 at exp. RT: 23.359
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99991
Residual Std. Dev.: 3.62002
Formula: y = mx + b
m: 66.20908
b: -2.30442
x: Amount [ug/L]
y: Area



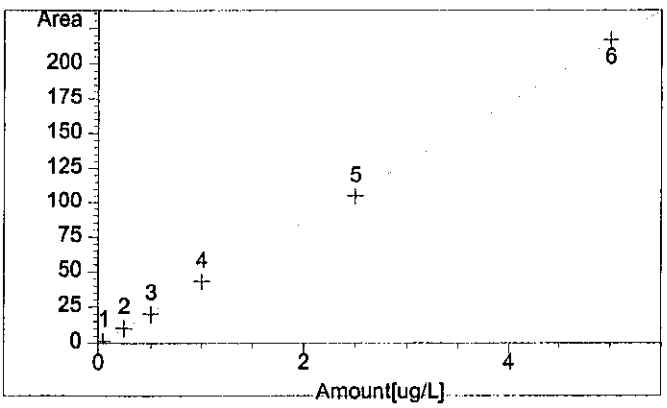

Chrysene #13 at exp. RT: 23.376
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 2.08259
Formula: y = mx + b
m: 25.86946
b: -1.01350
x: Amount [ug/L]
y: Area



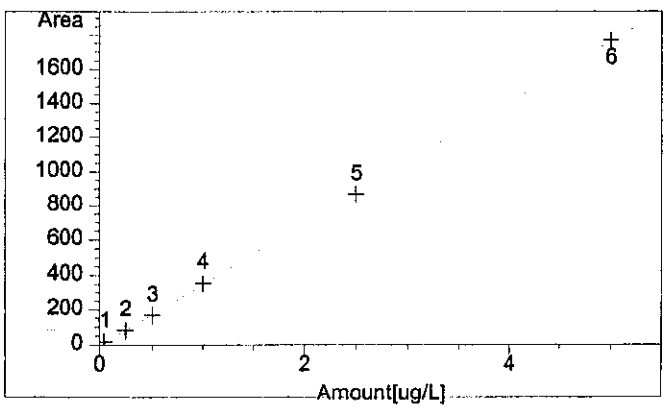

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99990
Residual Std. Dev.: 2.82913
Formula: y = mx + b
m: 49.65860
b: -1.61933
x: Amount [ug/L]
y: Area



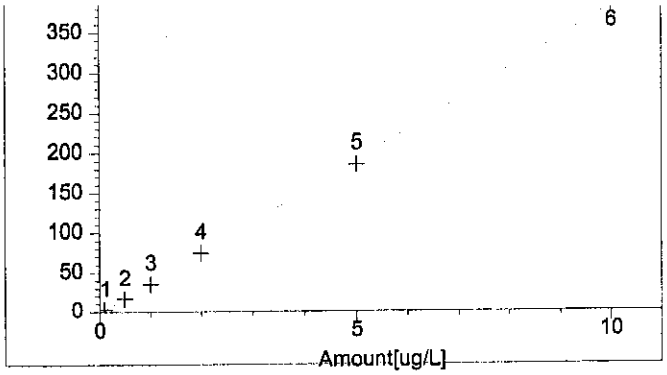

Benzo(b)fluoranthene #14 at exp. RT: 26.1
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99987
Residual Std. Dev.: 3.86702
Formula: y = mx + b
m: 59.59178
b: -2.38831
x: Amount [ug/L]
y: Area



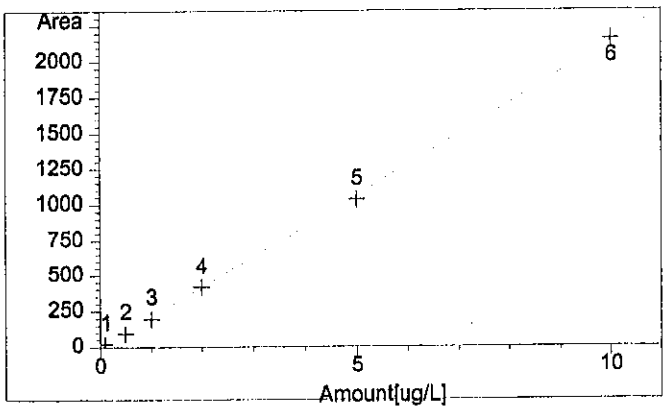

Benzo(k)fluoranthene #15 at exp. RT: 27.5
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99988
Residual Std. Dev.: 1.32598
Formula: y = mx + b
m: 43.30366
b: -8.94286e-1
x: Amount [ug/L]
y: Area



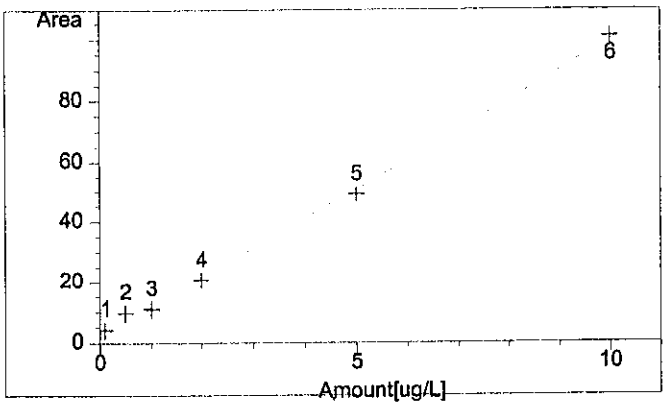

Benzo(k)fluoranthene #15 at exp. RT: 27.5
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99995
Residual Std. Dev.: 7.00765
Formula: y = mx + b
m: 353.28181
b: -4.48344
x: Amount [ug/L]
y: Area



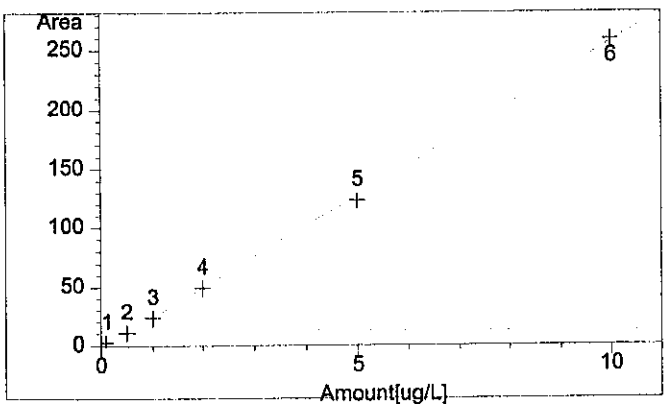

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99986
Residual Std. Dev.: 2.54104
Formula: y = mx + b
m: 38.36965
b: -2.20097
x: Amount [ug/L]
y: Area



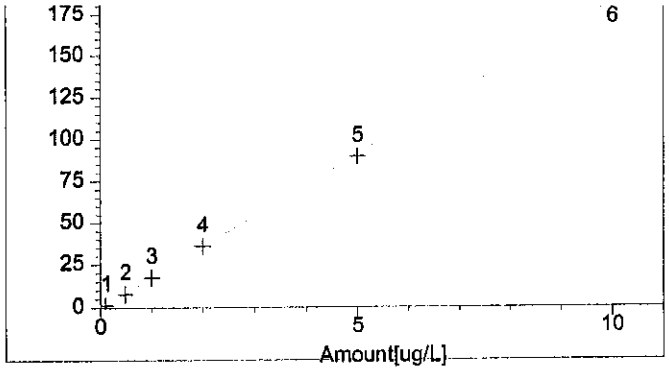

Benzo(a)pyrene #16 at exp. RT: 28.637
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99980
Residual Std. Dev.: 17.16464
Formula: y = mx + b
m: 215.11398
b: -12.44764
x: Amount [ug/L]
y: Area



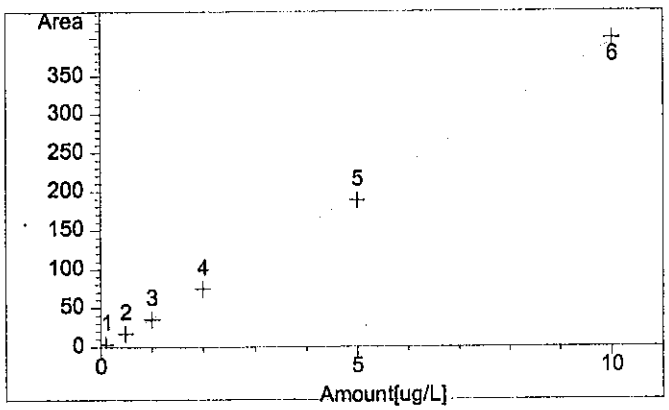

Dibenz(a,h)anthracene #17 at exp. RT: 30.
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99883
Residual Std. Dev.: 1.90720
Formula: y = mx + b
m: 9.79400
b: 1.87742
x: Amount [ug/L]
y: Area



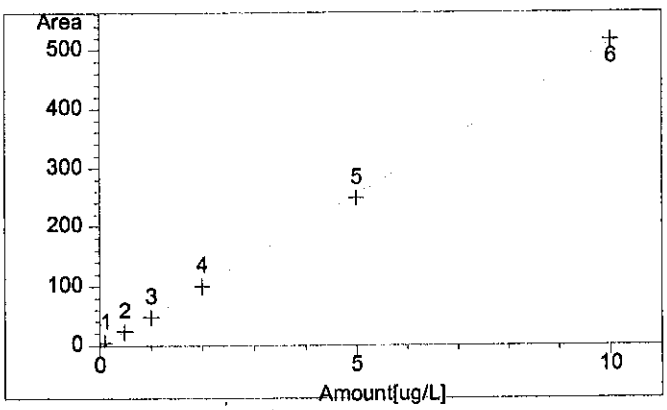

Dibenz(a,h)anthracene #17 at exp. RT: 30.
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99977
Residual Std. Dev.: 2.21658
Formula: y = mx + b
m: 25.81486
b: -1.69923
x: Amount [ug/L]
y: Area



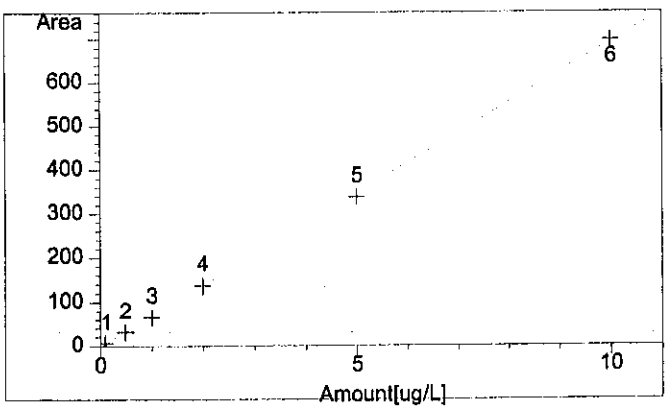

DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99993
Residual Std. Dev.: 0.87515
Formula: y = mx + b
m: 18.30547
b: -8.48559e-1
x: Amount [ug/L]
y: Area




Benzo(g,h,i)perylene #18 at exp. RT: 31.3
FLD1 A, Ex=270, Em=335, TT
Correlation: 0.99960
Residual Std. Dev.: 4.55128
Formula: y = mx + b
m: 39.77749
b: -3.39643
x: Amount [ug/L]
y: Area




Indeno(1,2,3-cd)pyrene #19 at exp. RT: 32
DAD1 C, Sig=254,16 Ref=360,100, TT
Correlation: 0.99986
Residual Std. Dev.: 3.42563
Formula: y = mx + b
m: 51.49794
b: -2.82376
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: 0.99989
Residual Std. Dev.: 4.18223
Formula: y = mx + b
m: 69.55020
b: -2.45055
x: Amount [ug/L]
y: Area

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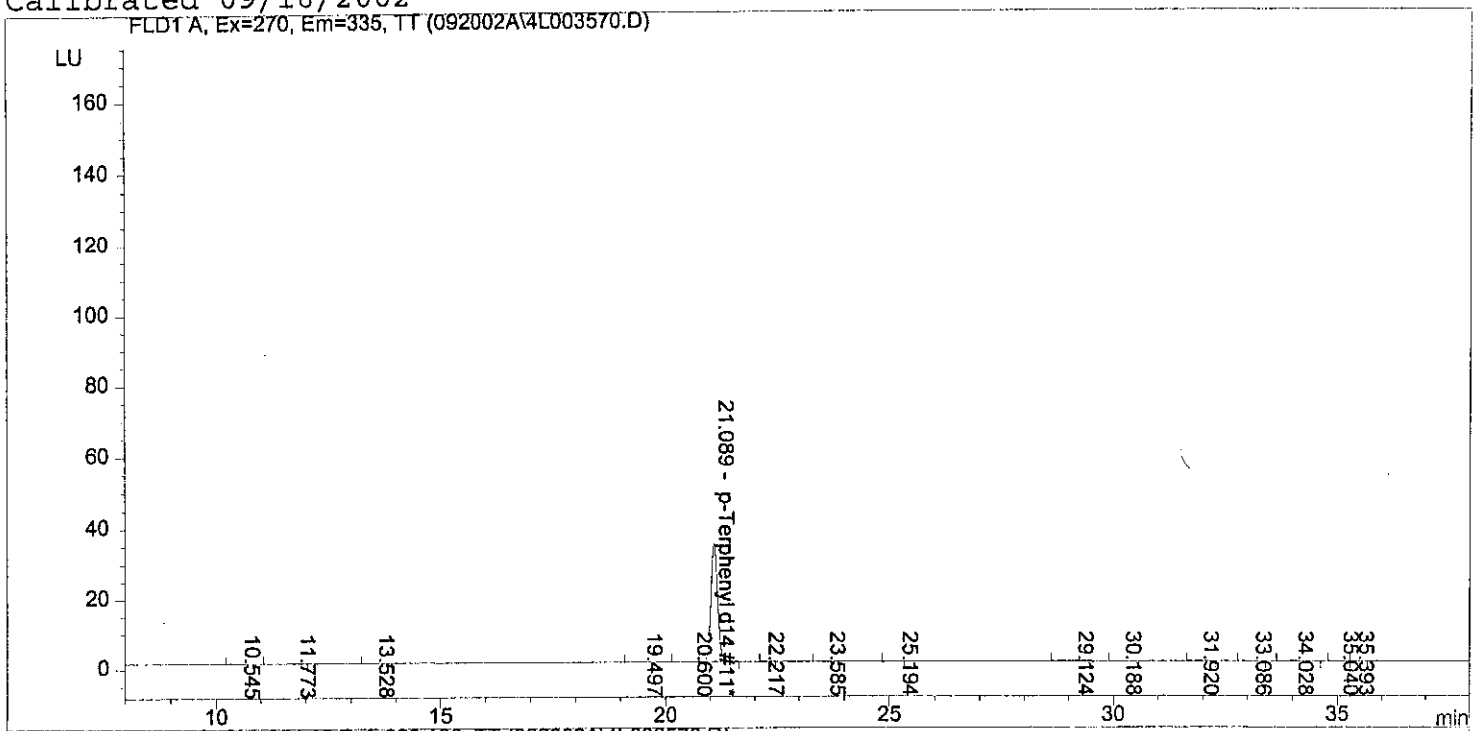
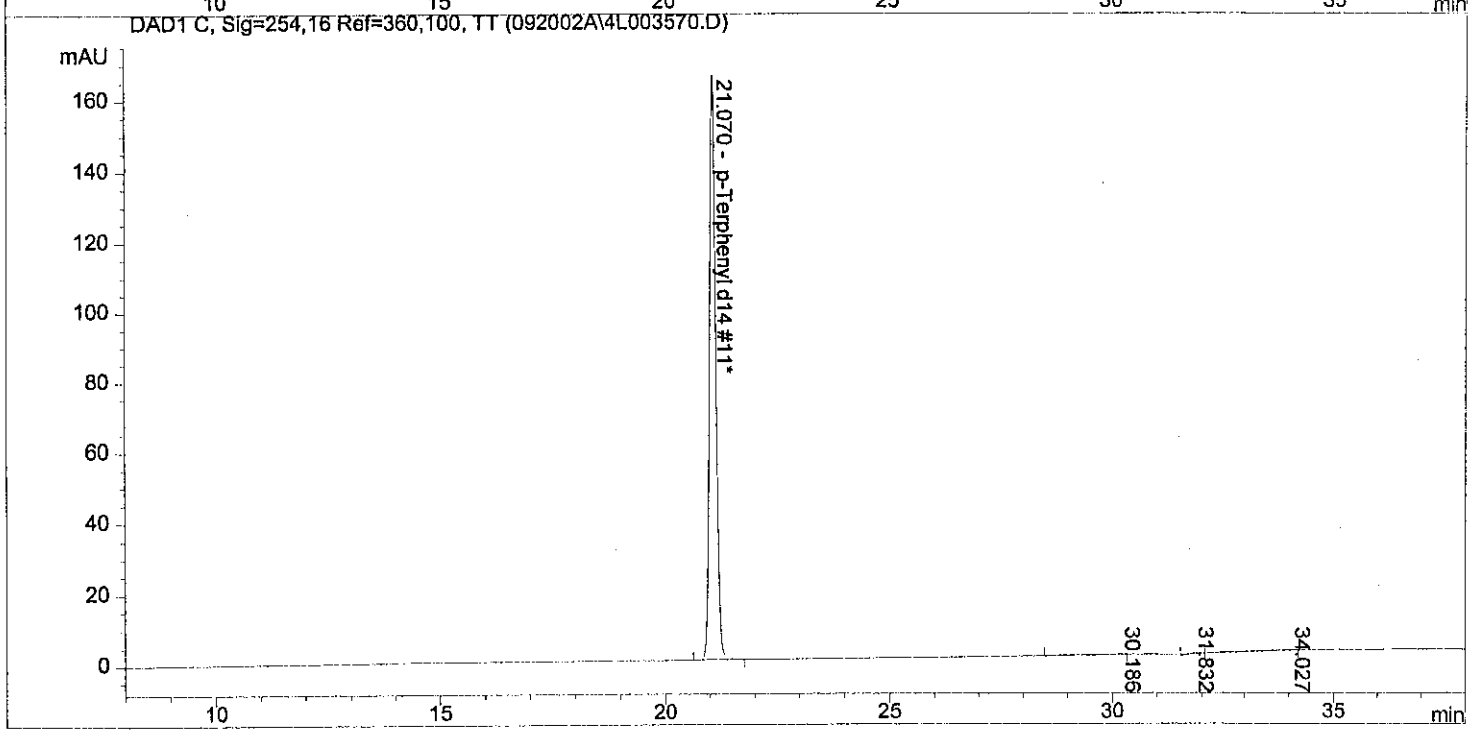
Injection Date : 9/20/2002 4:34:39 PM
Sample Name : WG125711-01 STD6
Acq. Operator : RDC

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:34:17 PM
(modified after loading)

Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:34:12 PM
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 |
|---|---|---|---|---|---|---|
| 9.420 | | - | - | - | | Naphthalene #1 |
| 11.995 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.571 | | - | - | - | | 2-Methylnaphthalene #4 |
| 13.049 | | - | - | - | | Acenaphthene #5 |
| 13.704 | | - | - | - | | Fluorene #6 |
| 15.090 | | - | - | - | | Phenanthrene #7 |
| 16.496 | | - | - | - | | Anthracene #8 |
| 17.880 | | - | - | - | | Fluoranthene #9 |
| 18.884 | | - | - | - | | Pyrene #10 |
| 21.089 | BB | 333.88467 | 3.01192e-1 | 100.56345 | | p-Terphenyl d14 #11* |
| 22.545 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.414 | | - | - | - | | Chrysene #13 |
| 26.127 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.550 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.655 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.523 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.320 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.249 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 100.56345

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.402 | | - | - | - | | Naphthalene #1 |
| 11.028 | | - | - | - | | Acenaphthylene #2 |
| 11.977 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.553 | | - | - | - | | 2-Methylnaphthalene #4 |
| 13.031 | | - | - | - | | Acenaphthene #5 |
| 13.685 | | - | - | - | | Fluorene #6 |
| 15.072 | | - | - | - | | Phenanthrene #7 |
| 16.478 | | - | - | - | | Anthracene #8 |
| 17.861 | | - | - | - | | Fluoranthene #9 |
| 18.865 | | - | - | - | | Pyrene #10 |
| 21.070 | PBA | 1513.75256 | 6.63492e-2 | 100.43631 | | p-Terphenyl d14 #11* |
| 22.526 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.396 | | - | - | - | | Chrysene #13 |
| 26.108 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.531 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.635 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.504 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| [min] | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|
| 31.301 | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.231 | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 100.43631

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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*** End of Report ***

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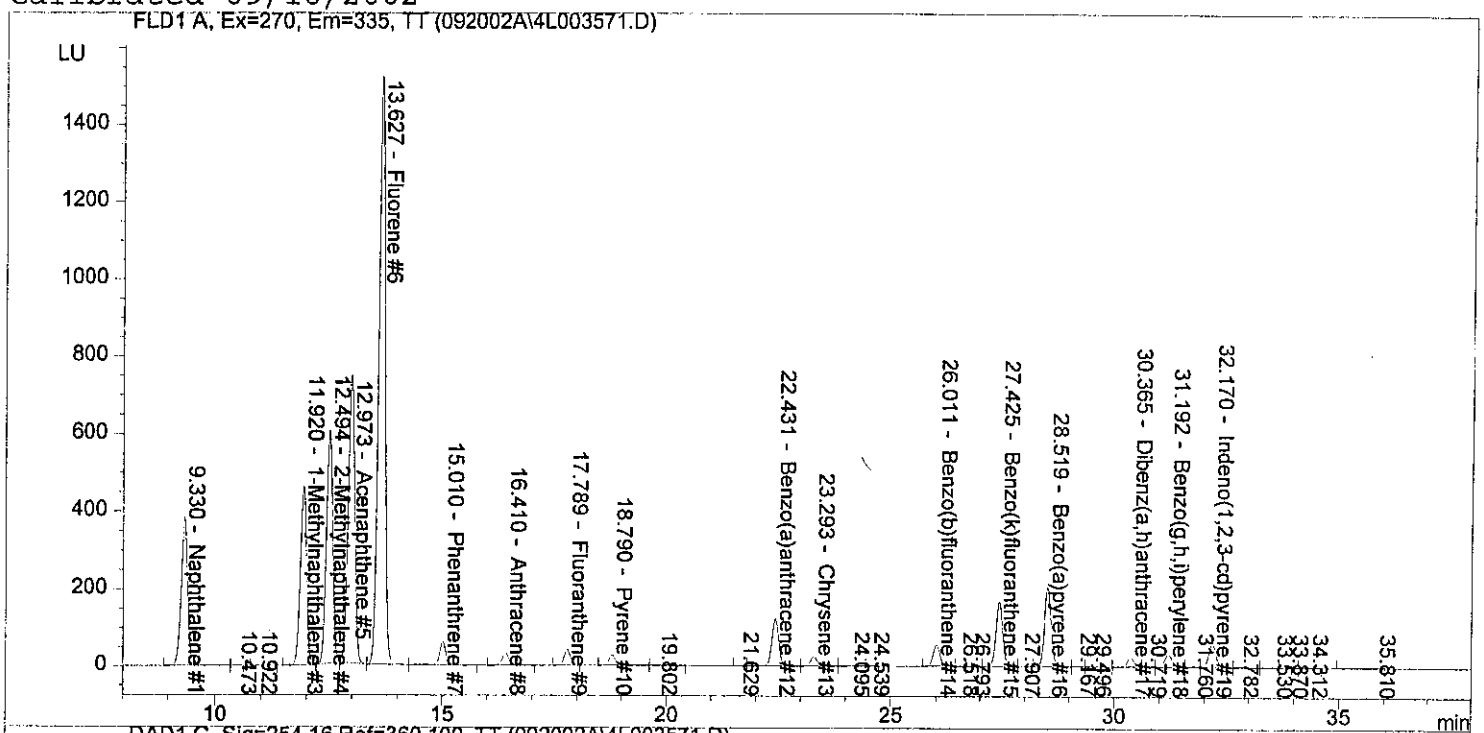
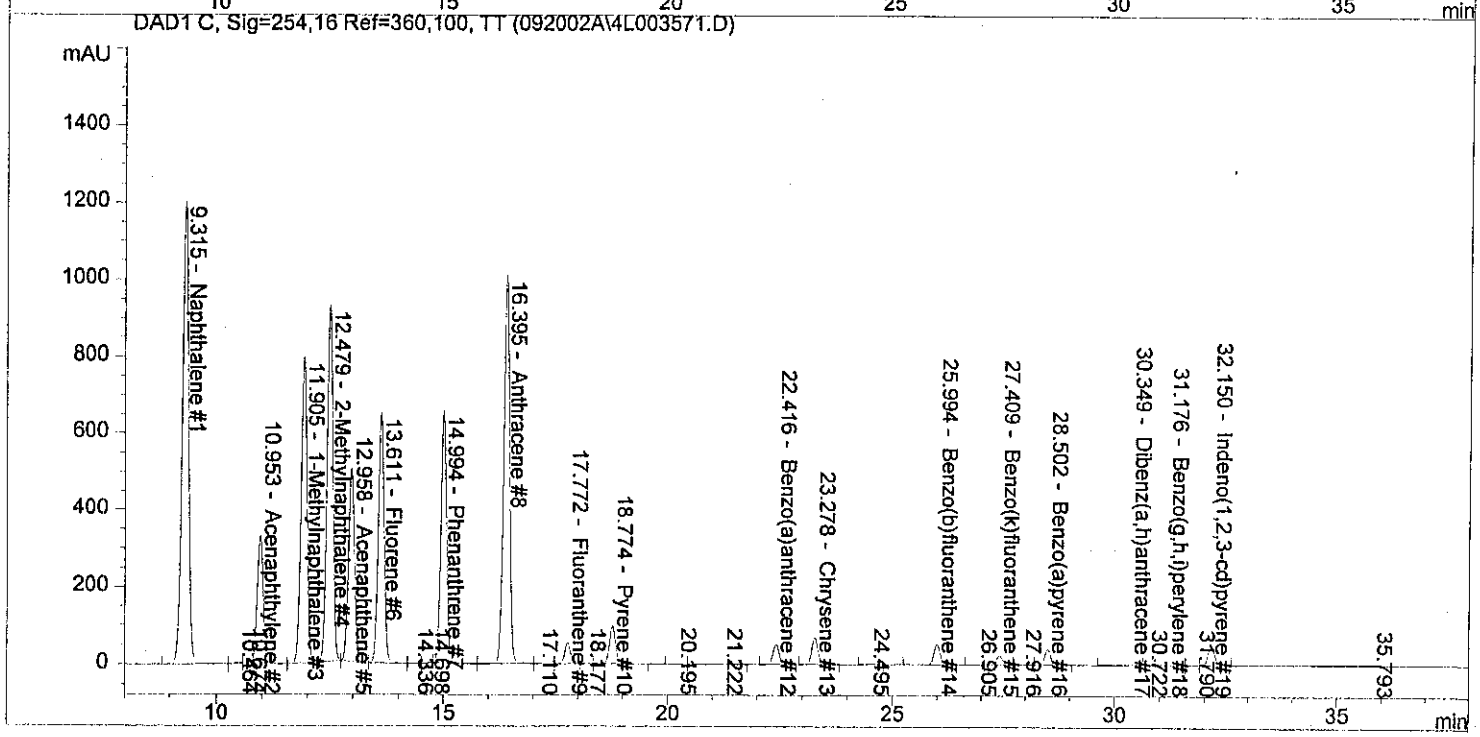
Injection Date : 9/20/2002 5:31:18 PM  Seq. Line : 3
Sample Name : WG125711-02 STD6  Vial : 3
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:36:32 PM
(modified after loading)

Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:36:28 PM
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 | 3962.24902 | 2.55945e-2 | 101.41160 | | Naphthalene #1 |
| 11.920 | BB | 4509.24463 | 2.24599e-2 | 101.27716 | | 1-Methylnaphthalene #3 |
| 12.494 | BB | 5776.03906 | 1.74998e-2 | 101.07977 | | 2-Methylnaphthalene #4 |
| 12.973 | BB | 7218.86475 | 1.39628e-2 | 100.79530 | | Acenaphthene #5 |
| 13.627 | BB | 1.48701e4 | 6.73212e-3 | 100.10741 | | Fluorene #6 |
| 15.010 | BBA | 601.35211 | 1.68802e-1 | 101.50969 | | Phenanthrene #7 |
| 16.410 | BBA | 327.53006 | 3.04758e-1 | 99.81745 | | Anthracene #8 |
| 17.789 | PB | 394.27036 | 2.55326e-2 | 10.06673 | | Fluoranthene #9 |
| 18.790 | BB | 286.95029 | 3.61241e-2 | 10.36583 | | Pyrene #10 |
| 21.089 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.431 | BB | 1266.77136 | 8.01478e-3 | 10.15289 | | Benzo(a)anthracene #12 |
| 23.293 | BB | 259.63892 | 3.91455e-2 | 10.16369 | | Chrysene #13 |
| 26.011 | BB | 597.08154 | 1.69085e-2 | 10.09576 | | Benzo(b)fluoranthene #14 |
| 27.425 | BB | 1767.10413 | 2.84201e-3 | 5.02213 | | Benzo(k)fluoranthene #15 |
| 28.519 | BB | 2154.75366 | 4.70524e-3 | 10.13862 | | Benzo(a)pyrene #16 |
| 30.365 | BB | 258.50845 | 3.94349e-2 | 10.19426 | | Dibenz(a,h)anthracene #17 |
| 31.192 | BB | 398.71832 | 2.59222e-2 | 10.33567 | | Benzo(g,h,i)perylene #18 |
| 32.170 | BB | 696.87433 | 1.44112e-2 | 10.04277 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 802.57673

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.315 | BB | 1.18503e4 | 8.42545e-3 | 99.84407 | | Naphthalene #1 |
| 10.953 | BB | 2944.69458 | 3.40843e-2 | 100.36780 | | Acenaphthylene #2 |
| 11.905 | BB | 7205.42578 | 1.39141e-2 | 100.25704 | | 1-Methylnaphthalene #3 |
| 12.479 | BB | 8267.85547 | 1.21070e-2 | 100.09901 | | 2-Methylnaphthalene #4 |
| 12.958 | BB | 4440.60303 | 2.25901e-2 | 100.31371 | | Acenaphthene #5 |
| 13.611 | BB | 5779.26465 | 1.73560e-2 | 100.30500 | | Fluorene #6 |
| 14.994 | BB | 5771.65283 | 1.73758e-2 | 100.28709 | | Phenanthrene #7 |
| 16.395 | BB | 9245.92676 | 1.07884e-2 | 99.74905 | | Anthracene #8 |
| 17.772 | BB | 483.72876 | 2.07689e-2 | 10.04652 | | Fluoranthene #9 |
| 18.774 | BBA | 914.12830 | 1.09739e-2 | 10.03157 | | Pyrene #10 |
| 21.070 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.416 | BBA | 477.03839 | 2.10514e-2 | 10.04233 | | Benzo(a)anthracene #12 |
| 23.278 | BBA | 662.99872 | 1.51539e-2 | 10.04704 | | Chrysene #13 |
| 25.994 | PBA | 497.49078 | 2.01897e-2 | 10.04420 | | Benzo(b)fluoranthene #14 |
| 27.409 | BB | 216.73499 | 2.31886e-2 | 5.02578 | | Benzo(k)fluoranthene #15 |
| 28.502 | BB | 383.82956 | 2.60557e-2 | 10.00094 | | Benzo(a)pyrene #16 |
| 30.349 | BB | 100.69902 | 1.00574e-1 | 10.12772 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.176 | BB | 182.95050 | 5.47525e-2 | 10.01699 | | Benzo(g,h,i)perylene #18 |
| 32.150 | BBA | 515.31970 | 1.94906e-2 | 10.04390 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 896.64975

Results obtained with enhanced integrator!
1 Warnings or Errors :

Warning : Calibrated compound(s) not found

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*** End of Report ***

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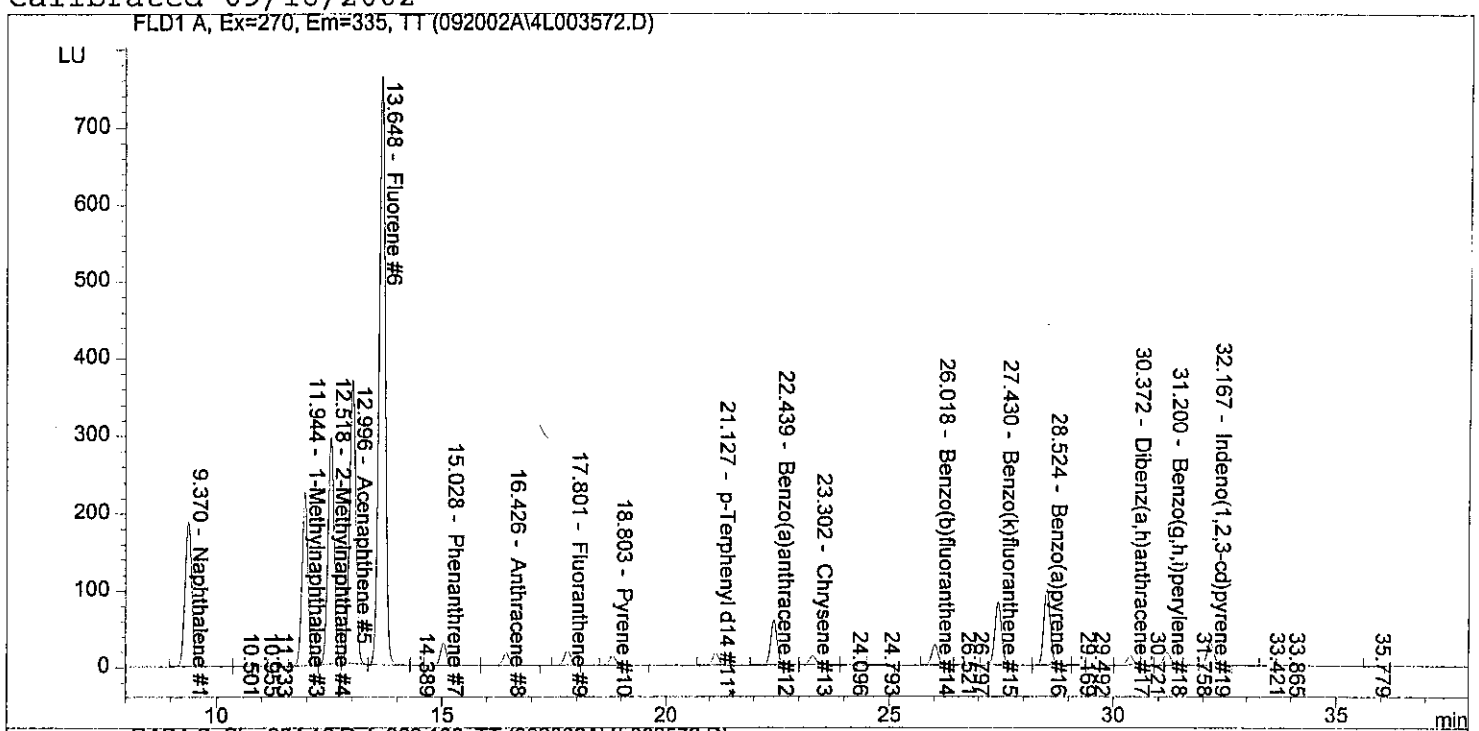
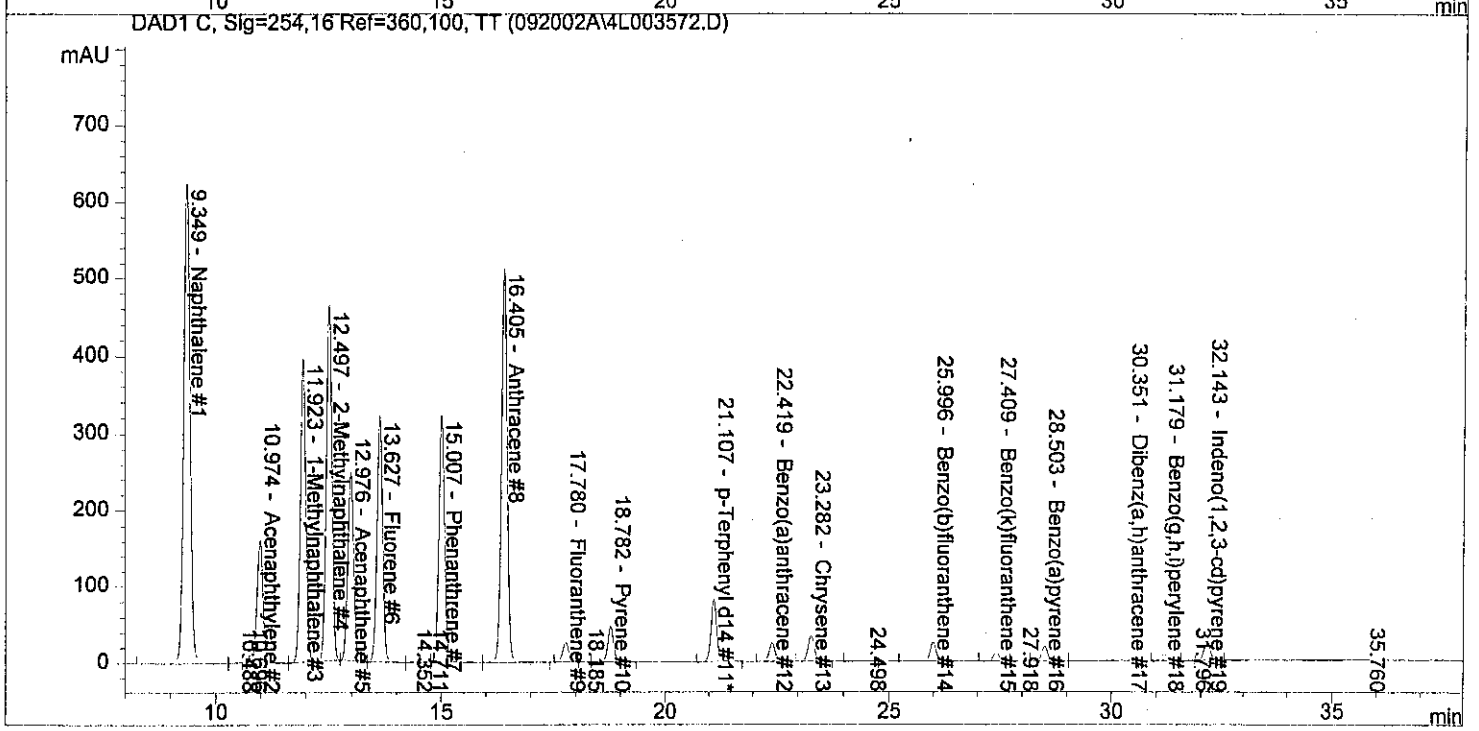
Injection Date : 9/20/2002 6:27:58 PM  Seq. Line : 4
Sample Name : WG125711-03 STD5  Vial : 4
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 6:52:48 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:37:24 PM
(modified after loading)
Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:37:18 PM
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 |
|---|---|---|---|---|---|---|
| 9.370 | PB | 1921.86047 | 2.55698e-2 | 49.14151 | | Naphthalene #1 |
| 11.944 | BB | 2194.00391 | 2.24412e-2 | 49.23609 | | 1-Methylnaphthalene #3 |
| 12.518 | BB | 2823.16040 | 1.74840e-2 | 49.36007 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 3543.34277 | 1.39585e-2 | 49.45973 | | Acenaphthene #5 |
| 13.648 | BB | 7369.04883 | 6.74173e-3 | 49.68014 | | Fluorene #6 |
| 15.028 | BB | 289.00418 | 1.68945e-1 | 48.82568 | | Phenanthrene #7 |
| 16.426 | BBA | 162.79338 | 3.05677e-1 | 49.76214 | | Anthracene #8 |
| 17.801 | PB | 192.03598 | 2.55369e-2 | 4.90400 | | Fluoranthene #9 |
| 18.803 | BBA | 136.01701 | 3.58527e-2 | 4.87658 | | Pyrene #10 |
| 21.127 | PB | 161.49503 | 3.02750e-1 | 48.89261 | | p-Terphenyl d14 #11* |
| 22.439 | BB | 609.34204 | 8.01885e-3 | 4.88622 | | Benzo(a)anthracene #12 |
| 23.302 | BB | 124.39308 | 3.91583e-2 | 4.87102 | | Chrysene #13 |
| 26.018 | BB | 288.37061 | 1.69649e-2 | 4.89216 | | Benzo(b)fluoranthene #14 |
| 27.430 | BB | 867.17621 | 2.84980e-3 | 2.47128 | | Benzo(k)fluoranthene #15 |
| 28.524 | BB | 1032.61243 | 4.71755e-3 | 4.87140 | | Benzo(a)pyrene #16 |
| 30.372 | BB | 123.53096 | 3.94402e-2 | 4.87208 | | Dibenz(a,h)anthracene #17 |
| 31.200 | BB | 187.63147 | 2.57947e-2 | 4.83990 | | Benzo(g,h,i)perylene #18 |
| 32.167 | BB | 337.52823 | 1.44893e-2 | 4.89056 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 440.73317 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.349 | PB | 5949.45410 | 8.42716e-3 | 50.13699 | | Naphthalene #1 |
| 10.974 | BB | 1437.33740 | 3.42055e-2 | 49.16489 | | Acenaphthylene #2 |
| 11.923 | BB | 3540.73169 | 1.39514e-2 | 49.39822 | | 1-Methylnaphthalene #3 |
| 12.497 | BB | 4096.85840 | 1.21250e-2 | 49.67444 | | 2-Methylnaphthalene #4 |
| 12.976 | BB | 2174.84375 | 2.26608e-2 | 49.28364 | | Acenaphthene #5 |
| 13.627 | BB | 2835.69336 | 1.74042e-2 | 49.35301 | | Fluorene #6 |
| 15.007 | BB | 2824.41431 | 1.74341e-2 | 49.24108 | | Phenanthrene #7 |
| 16.405 | BBA | 4625.47705 | 1.08074e-2 | 49.98934 | | Anthracene #8 |
| 17.780 | BB | 235.31152 | 2.08573e-2 | 4.90797 | | Fluoranthene #9 |
| 18.782 | BBA | 444.82697 | 1.10331e-2 | 4.90780 | | Pyrene #10 |
| 21.107 | BBA | 742.32825 | 6.65827e-2 | 49.42620 | | p-Terphenyl d14 #11* |
| 22.419 | BBA | 231.56067 | 2.11516e-2 | 4.89788 | | Benzo(a)anthracene #12 |
| 23.282 | BBA | 322.17139 | 1.52249e-2 | 4.90503 | | Chrysene #13 |
| 25.996 | PBA | 241.35190 | 2.02995e-2 | 4.89931 | | Benzo(b)fluoranthene #14 |
| 27.409 | BB | 104.96660 | 2.32641e-2 | 2.44196 | | Benzo(k)fluoranthene #15 |
| 28.503 | BB | 185.12453 | 2.63143e-2 | 4.87141 | | Benzo(a)pyrene #16 |
| 30.351 | BB | 49.22962 | 9.71795e-2 | 4.78411 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.179 | BB | 89.16454 | 5.50699e-2 | 4.91028 | | Benzo(g,h,i)perylene #18 |
| 32.143 | BB | 248.71965 | 1.96407e-2 | 4.88503 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 492.07859

Results obtained with enhanced integrator!

*** End of Report ***

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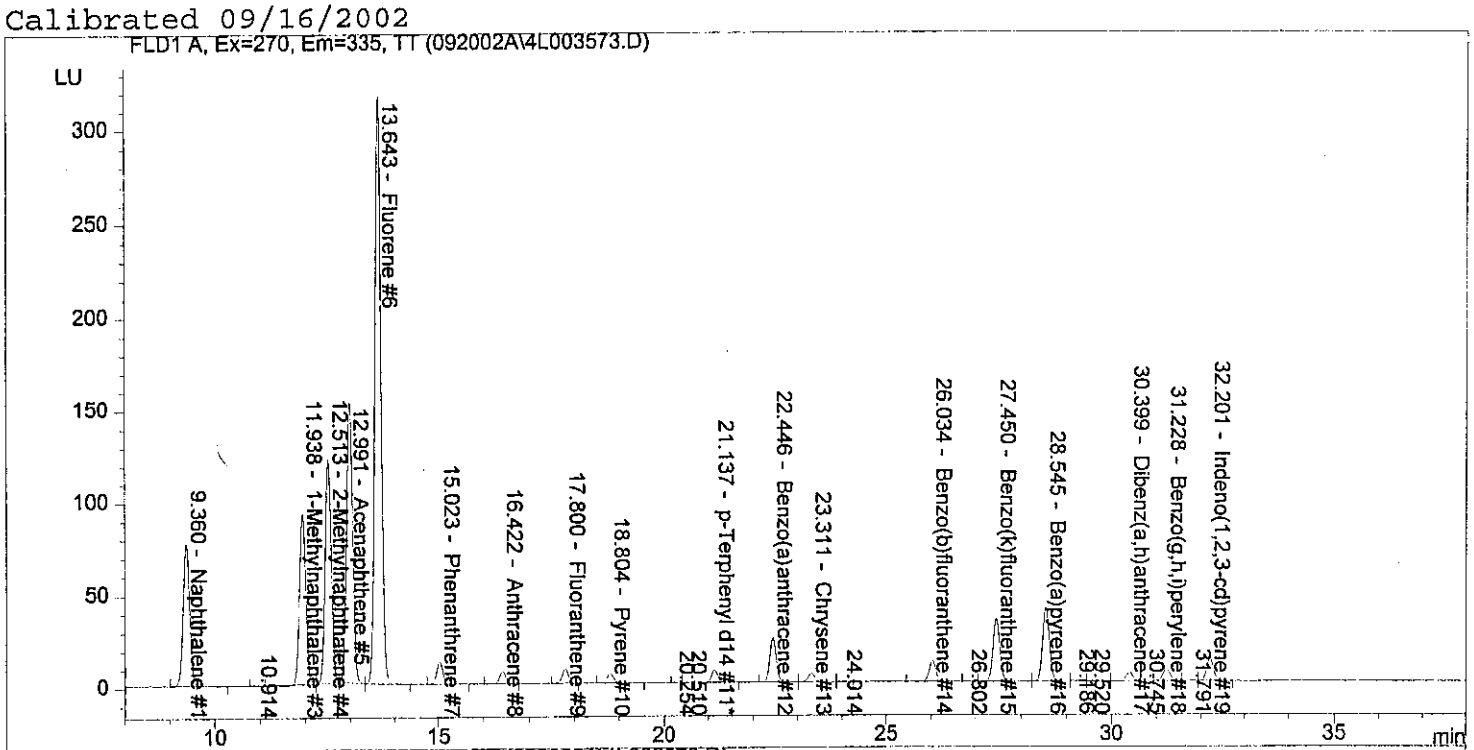
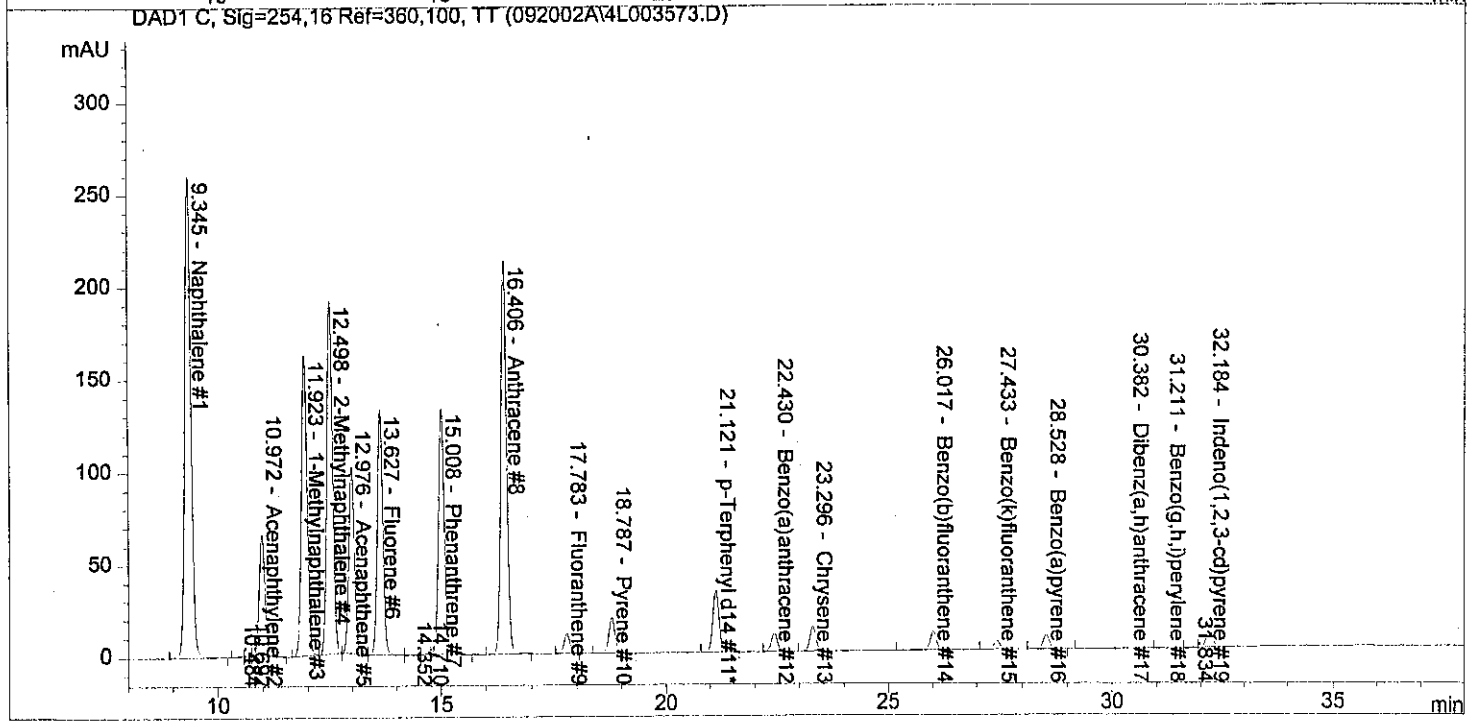
Injection Date : 9/20/2002 7:24:36 PM
Sample Name : WG125711-04 STD4
Acq. Operator : RDC

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 7:23:57 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:38:06 PM
(modified after loading)
Calibrated 09/16/2002



Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:38:03 PM
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 | BBA | 783.70270 | 2.58288e-2 | 20.24208 | | Naphthalene #1 |
| 11.938 | BB | 890.99243 | 2.26626e-2 | 20.19220 | | 1-Methylnaphthalene #3 |
| 12.513 | BB | 1155.66101 | 1.76013e-2 | 20.34109 | | 2-Methylnaphthalene #4 |
| 12.991 | BB | 1456.78040 | 1.40178e-2 | 20.42083 | | Acenaphthene #5 |
| 13.643 | BBA | 3039.59375 | 6.73982e-3 | 20.48632 | | Fluorene #6 |
| 15.023 | BBA | 116.89686 | 1.71196e-1 | 20.01226 | | Phenanthrene #7 |
| 16.422 | BBA | 66.18985 | 3.06109e-1 | 20.26128 | | Anthracene #8 |
| 17.800 | PB | 78.17149 | 2.57240e-2 | 2.01088 | | Fluoranthene #9 |
| 18.804 | BBA | 54.85559 | 3.66865e-2 | 2.01246 | | Pyrene #10 |
| 21.137 | BB | 66.96288 | 3.04531e-1 | 20.39226 | | p-Terphenyl d14 #11* |
| 22.446 | BB | 247.33057 | 8.12807e-3 | 2.01032 | | Benzo(a)anthracene #12 |
| 23.311 | BB | 50.90138 | 3.96364e-2 | 2.01755 | | Chrysene #13 |
| 26.034 | BB | 117.52394 | 1.71551e-2 | 2.01614 | | Benzo(b)fluoranthene #14 |
| 27.450 | BB | 354.43918 | 2.86588e-3 | 1.01578 | | Benzo(k)fluoranthene #15 |
| 28.545 | BB | 416.25037 | 4.79130e-3 | 1.99438 | | Benzo(a)pyrene #16 |
| 30.399 | BB | 49.56461 | 4.01537e-2 | 1.99020 | | Dibenz(a,h)anthracene #17 |
| 31.228 | BB | 74.49189 | 2.64865e-2 | 1.97303 | | Benzo(g,h,i)perylene #18 |
| 32.201 | BB | 137.54715 | 1.46296e-2 | 2.01226 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 181.40131

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.345 | PBA | 2466.37598 | 8.38872e-3 | 20.68973 | | Naphthalene #1 |
| 10.972 | BBA | 588.70093 | 3.43944e-2 | 20.24799 | | Acenaphthylene #2 |
| 11.923 | PB | 1455.42712 | 1.39932e-2 | 20.36608 | | 1-Methylnaphthalene #3 |
| 12.498 | BB | 1689.06653 | 1.21232e-2 | 20.47690 | | 2-Methylnaphthalene #4 |
| 12.976 | BB | 891.23303 | 2.27605e-2 | 20.28489 | | Acenaphthene #5 |
| 13.627 | BB | 1164.00928 | 1.74694e-2 | 20.33453 | | Fluorene #6 |
| 15.008 | BBA | 1160.96094 | 1.74983e-2 | 20.31487 | | Phenanthrene #7 |
| 16.406 | PBA | 1898.27124 | 1.07814e-2 | 20.46599 | | Anthracene #8 |
| 17.783 | PB | 96.07294 | 2.10154e-2 | 2.01901 | | Fluoranthene #9 |
| 18.787 | BBA | 181.36873 | 1.11283e-2 | 2.01832 | | Pyrene #10 |
| 21.121 | PBA | 303.50552 | 6.70109e-2 | 20.33818 | | p-Terphenyl d14 #11* |
| 22.430 | BBA | 94.19716 | 2.13331e-2 | 2.00952 | | Benzo(a)anthracene #12 |
| 23.296 | BBA | 131.21184 | 1.53545e-2 | 2.01469 | | Chrysene #13 |
| 26.017 | PBA | 98.69814 | 2.04860e-2 | 2.02193 | | Benzo(b)fluoranthene #14 |
| 27.433 | BB | 43.10554 | 2.33887e-2 | 1.00818 | | Benzo(k)fluoranthene #15 |
| 28.528 | BBA | 74.54464 | 2.66811e-2 | 1.98893 | | Benzo(a)pyrene #16 |
| 30.382 | BB | 20.66441 | 9.04372e-2 | 1.86883 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.211 | BB | 35.98459 | 5.55109e-2 | 1.99754 | | Benzo(g,h,i)perylene #18 |
| 32.184 | BB | 99.87663 | 1.99387e-2 | 1.99141 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 202.45751

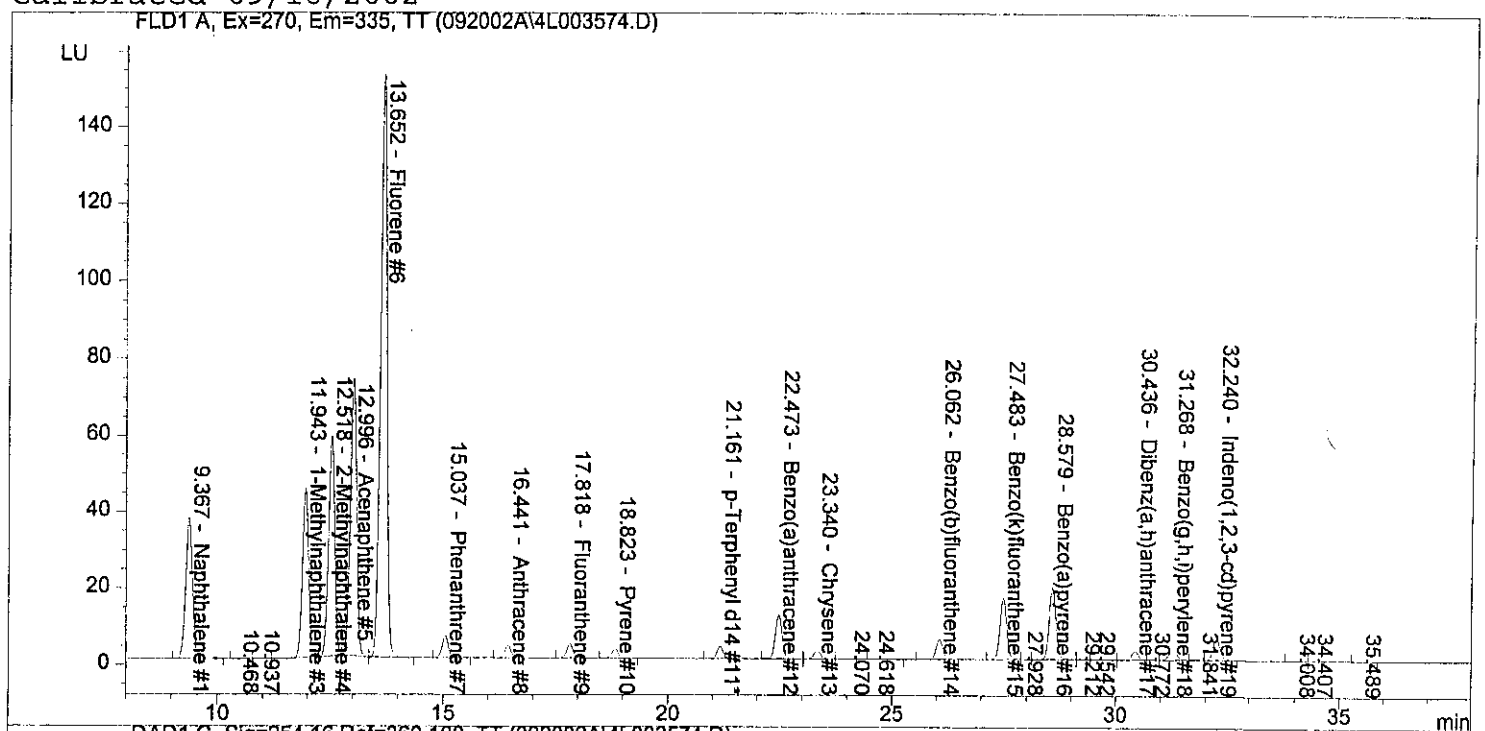
Results obtained with enhanced integrator!

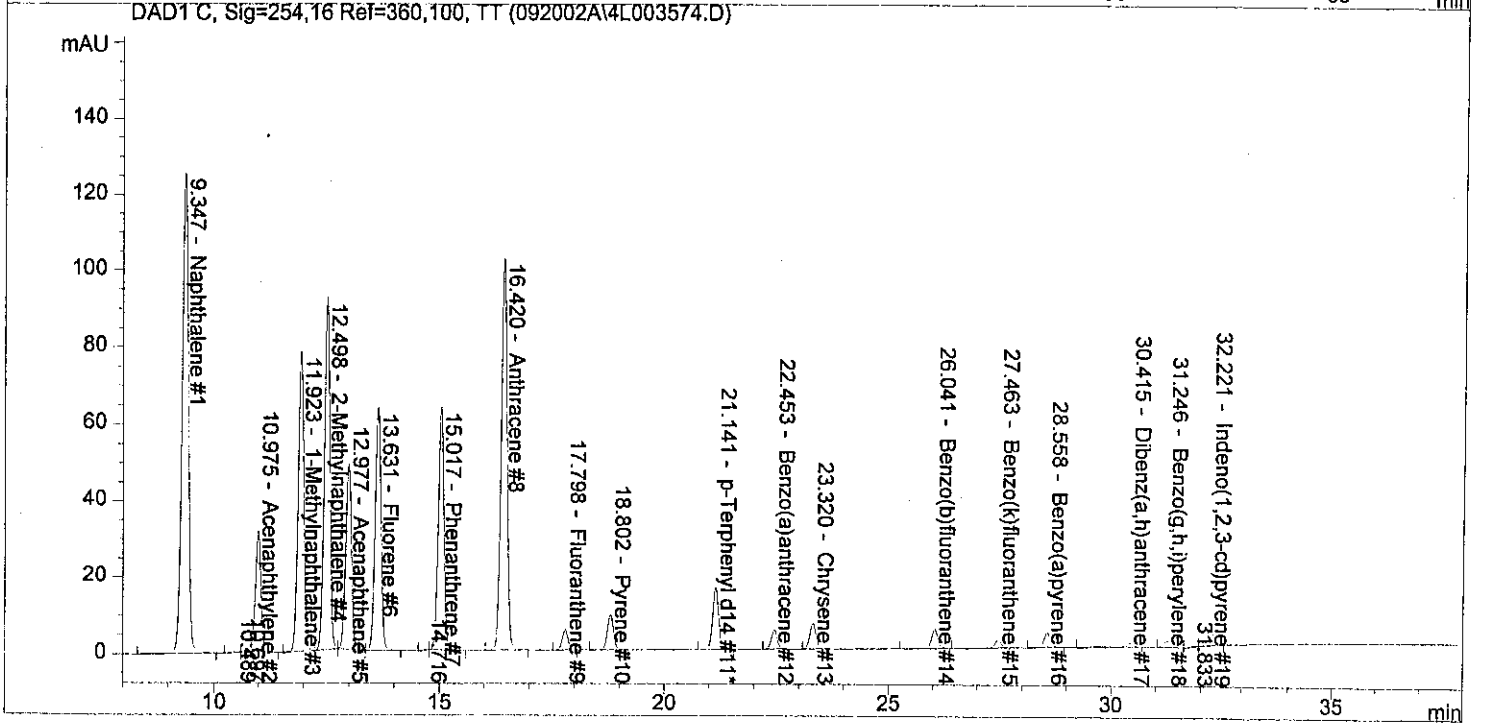
*** End of Report ***

==========

Injection Date : 9/20/2002 8:21:15 PM  Seq. Line : 6
Sample Name : WG125711-05 STD3  Vial : 6
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 8:20:36 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:38:57 PM
(modified after loading)
Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:38:54 PM
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 |
|---|---|---|---|---|---|---|
| 9.367 | BB | 374.62244 | 2.62820e-2 | 9.84581 | | Naphthalene #1 |
| 11.943 | BB | 426.31619 | 2.30538e-2 | 9.82819 | | 1-Methylnaphthalene #3 |
| 12.518 | BB | 553.23322 | 1.78142e-2 | 9.85541 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 697.65833 | 1.41348e-2 | 9.86128 | | Acenaphthene #5 |
| 13.652 | BBA | 1462.86792 | 6.75125e-3 | 9.87618 | | Fluorene #6 |
| 15.037 | BBA | 55.65540 | 1.75480e-1 | 9.76643 | | Phenanthrene #7 |
| 16.441 | PBA | 31.83507 | 3.07540e-1 | 9.79055 | | Anthracene #8 |
| 17.818 | BB | 37.53587 | 2.61954e-2 | 9.83267e-1 | | Fluoranthene #9 |
| 18.823 | BBA | 25.55995 | 3.80850e-2 | 9.73451e-1 | | Pyrene #10 |
| 21.161 | BB | 31.67122 | 3.08813e-1 | 9.78050 | | p-Terphenyl d14 #11* |
| 22.473 | BB | 118.36651 | 8.32061e-3 | 9.84882e-1 | | Benzo(a)anthracene #12 |
| 23.340 | BB | 24.32562 | 4.06214e-2 | 9.88140e-1 | | Chrysene #13 |
| 26.062 | BBA | 56.03418 | 1.75198e-2 | 9.81709e-1 | | Benzo(b)fluoranthene #14 |
| 27.483 | PB | 167.50449 | 2.90620e-3 | 4.86802e-1 | | Benzo(k)fluoranthene #15 |
| 28.579 | BB | 196.83517 | 4.93888e-3 | 9.72145e-1 | | Benzo(a)pyrene #16 |
| 30.436 | BB | 23.52898 | 4.14829e-2 | 9.76050e-1 | | Dibenz(a,h)anthracene #17 |
| 31.268 | BB | 35.19607 | 2.76908e-2 | 9.74608e-1 | | Benzo(g,h,i)perylene #18 |
| 32.240 | BB | 65.71149 | 1.49194e-2 | 9.80374e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 87.90579

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.347 | PBA | 1182.50085 | 8.34292e-3 | 9.86551 | | Naphthalene #1 |
| 10.975 | BBA | 282.83063 | 3.48306e-2 | 9.85117 | | Acenaphthylene #2 |
| 11.923 | PB | 697.62793 | 1.41092e-2 | 9.84296 | | 1-Methylnaphthalene #3 |
| 12.498 | BB | 811.48065 | 1.21518e-2 | 9.86095 | | 2-Methylnaphthalene #4 |
| 12.977 | BB | 427.28159 | 2.30106e-2 | 9.83200 | | Acenaphthene #5 |
| 13.631 | BBA | 558.21259 | 1.76370e-2 | 9.84518 | | Fluorene #6 |
| 15.017 | BBA | 557.24799 | 1.76660e-2 | 9.84432 | | Phenanthrene #7 |
| 16.420 | PBA | 911.06781 | 1.07743e-2 | 9.81609 | | Anthracene #8 |
| 17.798 | PB | 45.92867 | 2.13622e-2 | 9.81136e-1 | | Fluoranthene #9 |
| 18.802 | BBA | 86.62556 | 1.13291e-2 | 9.81386e-1 | | Pyrene #10 |
| 21.141 | PBA | 144.49483 | 6.78088e-2 | 9.79802 | | p-Terphenyl d14 #11* |
| 22.453 | PBA | 44.75309 | 2.17662e-2 | 9.74105e-1 | | Benzo(a)anthracene #12 |
| 23.320 | BBA | 62.44849 | 1.56473e-2 | 9.77150e-1 | | Chrysene #13 |
| 26.041 | PBA | 47.48998 | 2.07801e-2 | 9.86845e-1 | | Benzo(b)fluoranthene #14 |
| 27.463 | BBA | 20.09780 | 2.38100e-2 | 4.78528e-1 | | Benzo(k)fluoranthene #15 |
| 28.558 | BBA | 35.49910 | 2.74628e-2 | 9.74905e-1 | | Benzo(a)pyrene #16 |
| 30.415 | BBA | 10.95264 | 8.43966e-2 | 9.24366e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.246 | BB | 17.30395 | 5.64213e-2 | 9.76311e-1 | | Benzo(g,h,i)perylene #18 |
| 32.221 | BB | 47.15022 | 2.05689e-2 | 9.69826e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 97.78075

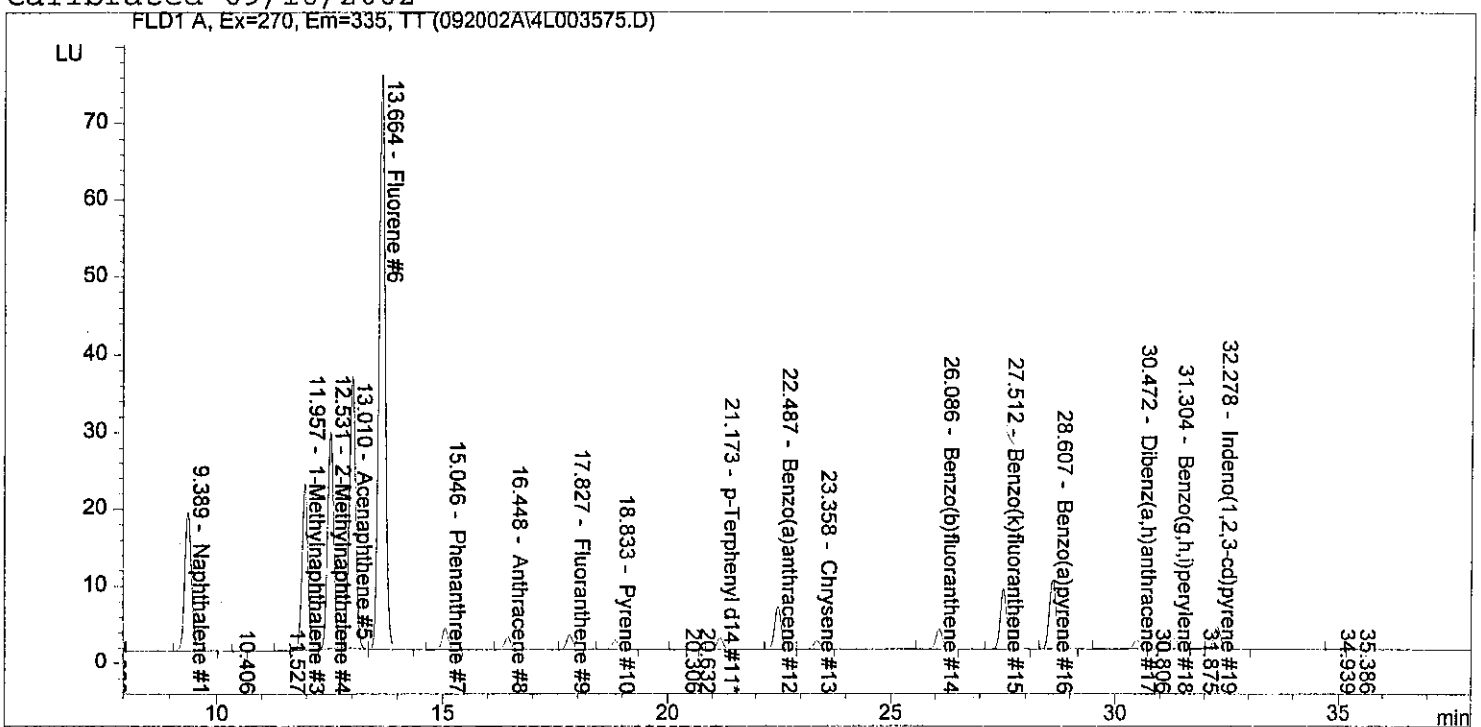
Results obtained with enhanced integrator!

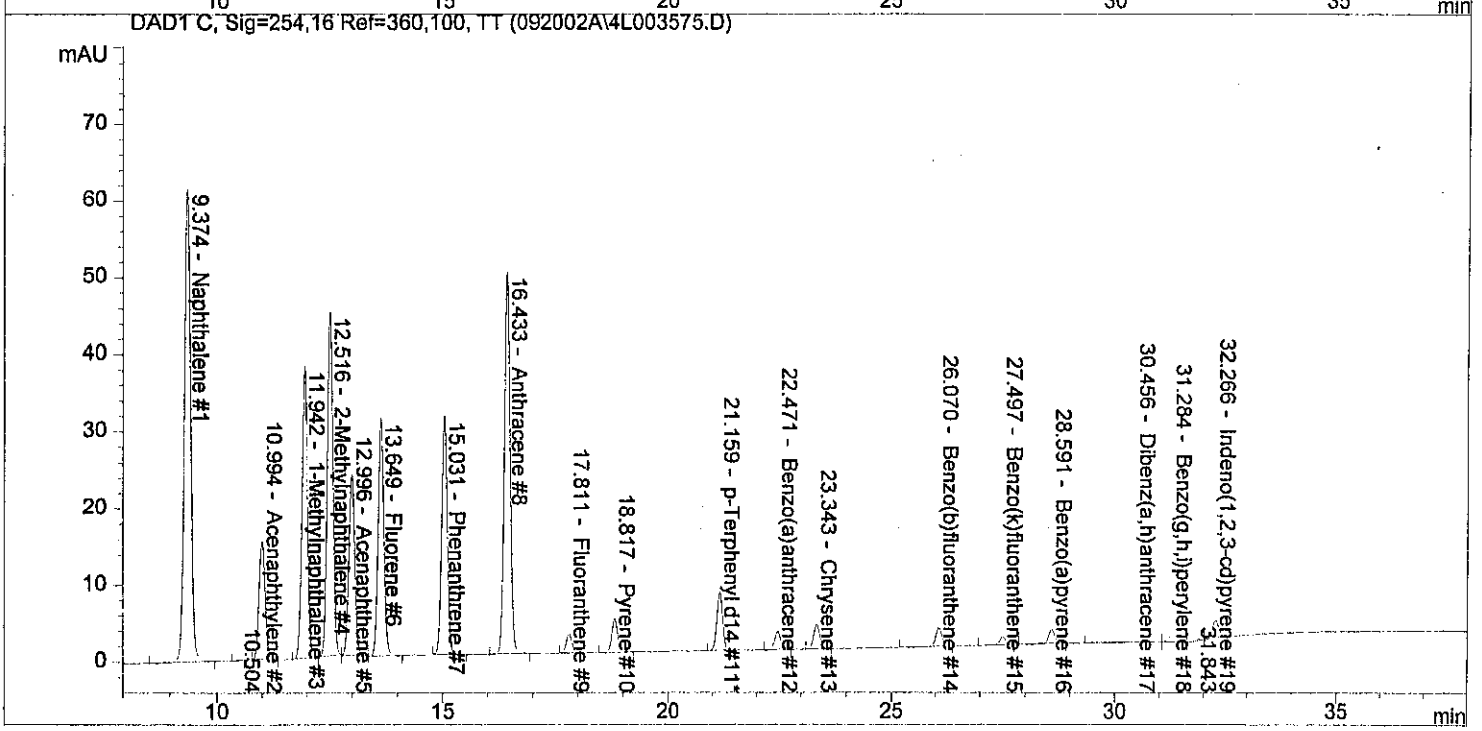
*** End of Report ***

==========

Injection Date : 9/20/2002 9:17:54 PM  Seq. Line : 7
Sample Name : WG125711-06 STD2  Vial : 7
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 9:17:15 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:40:02 PM
(modified after loading)
Calibrated 09/16/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:39:57 PM
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 | BB | 181.29584 | 2.72735e-2 | 4.94456 | | Naphthalene #1 |
| 11.957 | BB | 208.15732 | 2.38580e-2 | 4.96621 | | 1-Methylnaphthalene #3 |
| 12.531 | BB | 268.35944 | 1.82886e-2 | 4.90792 | | 2-Methylnaphthalene #4 |
| 13.010 | BB | 338.71442 | 1.44060e-2 | 4.87953 | | Acenaphthene #5 |
| 13.664 | BBA | 713.18817 | 6.79019e-3 | 4.84268 | | Fluorene #6 |
| 15.046 | PBA | 26.72914 | 1.84772e-1 | 4.93879 | | Phenanthrene #7 |
| 16.448 | BB | 15.51351 | 3.11813e-1 | 4.83731 | | Anthracene #8 |
| 17.827 | BB | 18.38673 | 2.70296e-2 | 4.96986e-1 | | Fluoranthene #9 |
| 18.833 | BBA | 12.35667 | 4.08645e-2 | 5.04949e-1 | | Pyrene #10 |
| 21.173 | BB | 15.59836 | 3.17279e-1 | 4.94903 | | p-Terphenyl d14 #11* |
| 22.487 | BB | 56.93108 | 8.73342e-3 | 4.97203e-1 | | Benzo(a)anthracene #12 |
| 23.358 | BB | 12.35089 | 4.19724e-2 | 5.18396e-1 | | Chrysene #13 |
| 26.086 | BBA | 27.46255 | 1.82416e-2 | 5.00962e-1 | | Benzo(b)fluoranthene #14 |
| 27.512 | BBA | 81.89045 | 2.98589e-3 | 2.44516e-1 | | Benzo(k)fluoranthene #15 |
| 28.607 | PBA | 94.83067 | 5.25798e-3 | 4.98618e-1 | | Benzo(a)pyrene #16 |
| 30.472 | PB | 10.82063 | 4.48692e-2 | 4.85513e-1 | | Dibenz(a,h)anthracene #17 |
| 31.304 | BB | 16.79211 | 3.02670e-2 | 5.08246e-1 | | Benzo(g,h,i)perylene #18 |
| 32.278 | BBA | 32.39291 | 1.54693e-2 | 5.01096e-1 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 44.02253 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.374 | PBA | 575.15820 | 8.25842e-3 | 4.74990 | | Naphthalene #1 |
| 10.994 | BBA | 137.48097 | 3.58358e-2 | 4.92674 | | Acenaphthylene #2 |
| 11.942 | PB | 339.69986 | 1.43758e-2 | 4.88346 | | 1-Methylnaphthalene #3 |
| 12.516 | BB | 394.82016 | 1.22443e-2 | 4.83428 | | 2-Methylnaphthalene #4 |
| 12.996 | BB | 207.93272 | 2.35786e-2 | 4.90277 | | Acenaphthene #5 |
| 13.649 | BBA | 271.81696 | 1.80166e-2 | 4.89722 | | Fluorene #6 |
| 15.031 | BBA | 271.18774 | 1.80540e-2 | 4.89602 | | Phenanthrene #7 |
| 16.433 | PBA | 442.03864 | 1.08016e-2 | 4.77470 | | Anthracene #8 |
| 17.811 | BBA | 22.06173 | 2.22019e-2 | 4.89811e-1 | | Fluoranthene #9 |
| 18.817 | PBA | 41.80117 | 1.17603e-2 | 4.91593e-1 | | Pyrene #10 |
| 21.159 | BBA | 69.45084 | 6.98266e-2 | 4.84952 | | p-Terphenyl d14 #11* |
| 22.471 | BBA | 21.93929 | 2.26293e-2 | 4.96471e-1 | | Benzo(a)anthracene #12 |
| 23.343 | BBA | 30.40728 | 1.62715e-2 | 4.94773e-1 | | Chrysene #13 |
| 26.070 | PBA | 22.81914 | 2.14967e-2 | 4.90536e-1 | | Benzo(b)fluoranthene #14 |
| 27.497 | BBA | 10.21462 | 2.46435e-2 | 2.51724e-1 | | Benzo(k)fluoranthene #15 |
| 28.591 | BBA | 16.64720 | 2.94709e-2 | 4.90608e-1 | | Benzo(a)pyrene #16 |
| 30.456 | PB | 9.72626 | 8.41912e-2 | 8.18865e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.284 | BB | 7.93134 | 5.87829e-2 | 4.66227e-1 | | Benzo(g,h,i)perylene #18 |
| 32.266 | BB | 22.99526 | 2.18271e-2 | 5.01920e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 48.70713

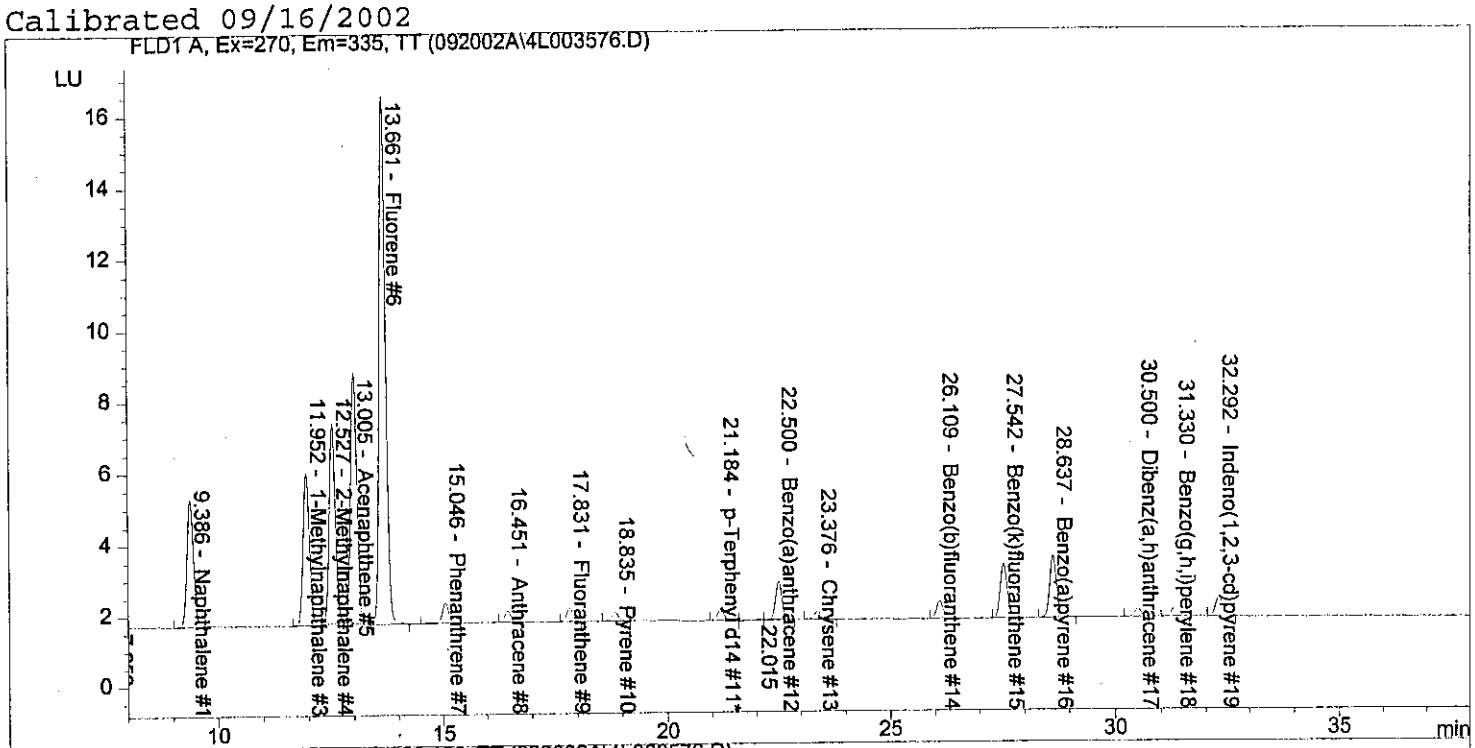
Results obtained with enhanced integrator!

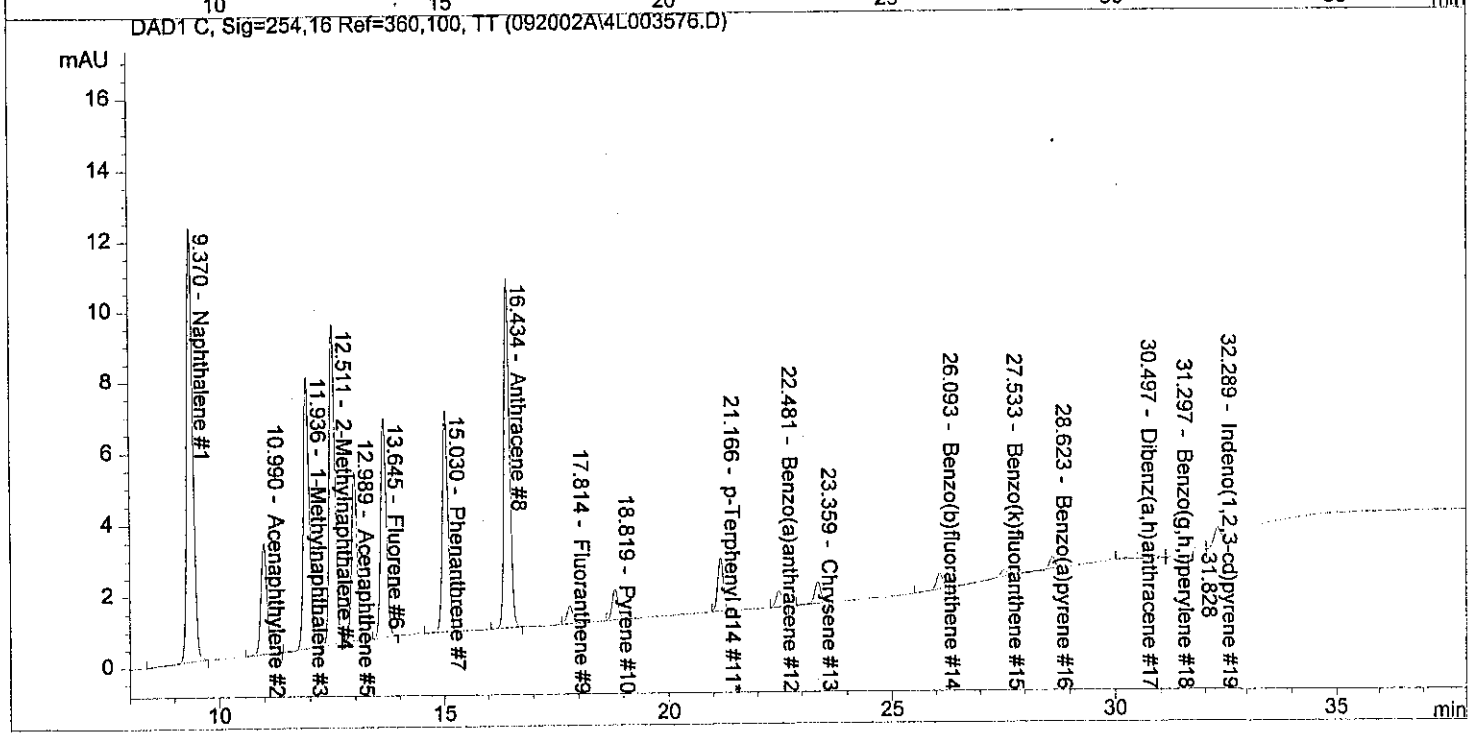
*** End of Report ***

==========

| | | | |
|---|---|---|---|
| Injection Date | : 9/20/2002 10:14:31 PM | Seq. Line : | 8 |
| Sample Name | : WG125711-07 STD1 | Vial : | 8 |
| Acq. Operator | : RDC | Inj : | 1 |
| | | Inj Volume : | 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 10:13:55 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:40:34 PM
(modified after loading)
Calibrated 09/16/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : Saturday, September 21, 2002 3:40:30 PM
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 |
|---|---|---|---|---|---|---|
| 9.386 | BB | 36.15768 | 3.50566e-2 | 1.26757 | | Naphthalene #1 |
| 11.952 | PB | 41.36844 | 3.03521e-2 | 1.25562 | | 1-Methylnaphthalene #3 |
| 12.527 | BB | 53.71581 | 2.19466e-2 | 1.17888 | | 2-Methylnaphthalene #4 |
| 13.005 | BB | 67.56156 | 1.64940e-2 | 1.11436 | | Acenaphthene #5 |
| 13.661 | BBA | 142.12080 | 7.02750e-3 | 9.98755e-1 | | Fluorene #6 |
| 15.046 | BBA | 5.95919 | 2.48677e-1 | 1.48191 | | Phenanthrene #7 |
| 16.451 | BBA | 3.09896 | 3.40359e-1 | 1.05476 | | Anthracene #8 |
| 17.831 | BBA | 3.68034 | 3.34382e-2 | 1.23064e-1 | | Fluoranthene #9 |
| 18.835 | BBA | 2.49880 | 6.33941e-2 | 1.58409e-1 | | Pyrene #10 |
| 21.184 | BB | 3.44864 | 3.76720e-1 | 1.29917 | | p-Terphenyl d14 #11* |
| 22.500 | BB | 11.41377 | 1.19778e-2 | 1.36712e-1 | | Benzo(a)anthracene #12 |
| 23.376 | BB | 2.46762 | 5.45322e-2 | 1.34565e-1 | | Chrysene #13 |
| 26.109 | BBA | 5.21623 | 2.44641e-2 | 1.27611e-1 | | Benzo(b)fluoranthene #14 |
| 27.542 | PBA | 16.02236 | 3.62267e-3 | 5.80437e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | PBA | 18.70416 | 7.74241e-3 | 1.44815e-1 | | Benzo(a)pyrene #16 |
| 30.500 | BB | 2.30826 | 6.72539e-2 | 1.55240e-1 | | Dibenz(a,h)anthracene #17 |
| 31.330 | BBA | 3.25644 | 5.13604e-2 | 1.67252e-1 | | Benzo(g,h,i)perylene #18 |
| 32.292 | BBA | 6.42581 | 1.98613e-2 | 1.27625e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 10.98436

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.370 | PB | 113.50661 | 7.53541e-3 | 8.55319e-1 | | Naphthalene #1 |
| 10.990 | BBA | 28.32826 | 4.23957e-2 | 1.20100 | | Acenaphthylene #2 |
| 11.936 | BB | 67.43660 | 1.63011e-2 | 1.09929 | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 78.89049 | 1.27845e-2 | 1.00857 | | 2-Methylnaphthalene #4 |
| 12.989 | BBA | 41.25003 | 2.77504e-2 | 1.14471 | | Acenaphthene #5 |
| 13.645 | PBA | 53.42283 | 2.08101e-2 | 1.11173 | | Fluorene #6 |
| 15.030 | BBA | 54.35011 | 2.09804e-2 | 1.14029 | | Phenanthrene #7 |
| 16.434 | PBA | 86.66844 | 1.08171e-2 | 9.37497e-1 | | Anthracene #8 |
| 17.814 | BBA | 4.45056 | 2.79864e-2 | 1.24555e-1 | | Fluoranthene #9 |
| 18.819 | BBA | 8.04064 | 1.51399e-2 | 1.21734e-1 | | Pyrene #10 |
| 21.166 | BBA | 13.68986 | 8.46963e-2 | 1.15948 | | p-Terphenyl d14 #11* |
| 22.481 | BBA | 4.41380 | 2.92180e-2 | 1.28962e-1 | | Benzo(a)anthracene #12 |
| 23.359 | BBA | 6.12014 | 2.07907e-2 | 1.27242e-1 | | Chrysene #13 |
| 26.093 | PB | 4.46468 | 2.74413e-2 | 1.22517e-1 | | Benzo(b)fluoranthene #14 |
| 27.533 | BB | 1.34447 | 3.84531e-2 | 5.16991e-2 | | Benzo(k)fluoranthene #15 |
| 28.623 | BB | 2.62369 | 4.79255e-2 | 1.25741e-1 | | Benzo(a)pyrene #16 |
| 30.497 | BB | 4.03842 | 5.46366e-2 | 2.20645e-1 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.297 | BB | 1.20689 | 9.30374e-2 | 1.12286e-1 | | Benzo(g,h,i)perylene #18 |
| 32.289 | BB | 4.03389 | 3.30112e-2 | 1.33164e-1 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 10.92643

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092002A\4L003577.D Sample Name: WG125711-08 ALT
HPLC4 9/21/2002 3:43:44 PM

1,1 SOS0060-26/60-27 LEVEL 4 ALT STD @ 20 ppm

==========

Injection Date : 9/20/2002 11:11:11 PM Seq. Line : 9

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.385 | 20.0 | 18.926 | -5.4 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.738 | -6.3 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 18.427 | -7.9 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.647 | -1.8 |
| Fluorene #6 | 13.660 | 20.0 | 19.693 | -1.5 |
| Phenanthrene #7 | 15.045 | 20.0 | 18.674 | -6.6 |
| Anthracene #8 | 16.447 | 20.0 | 20.326 | 1.6 |
| Fluoranthene #9 | 17.827 | 2.0 | 1.962 | -1.9 |
| Pyrene #10 | 18.833 | 2.0 | 1.737 | -13.1 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.493 | 2.0 | 1.784 | -10.8 |
| Chrysene #13 | 23.365 | 2.0 | 1.845 | -7.7 |
| Benzo(b)fluoranthene #14 | 26.100 | 2.0 | 1.927 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.532 | 1.0 | 0.868 | -13.2 |
| Benzo(a)pyrene #16 | 28.630 | 2.0 | 1.961 | -1.9 |
| Dibenz(a,h)anthracene #1 | 30.502 | 2.0 | 2.097 | 4.9 |
| Benzo(g,h,i)perylene #18 | 31.334 | 2.0 | 1.841 | -8.0 |
| Indeno(1,2,3-cd)pyrene # | 32.307 | 2.0 | 1.875 | -6.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

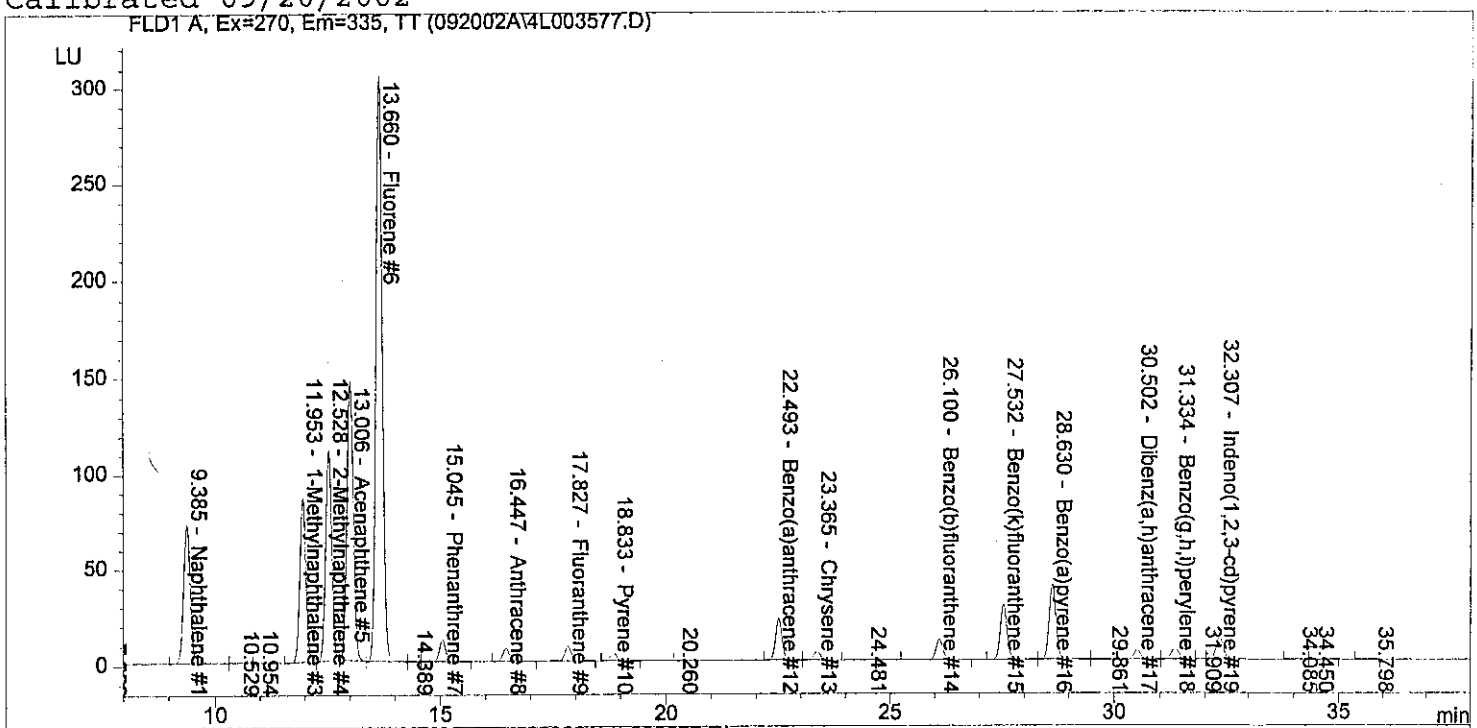
| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.366 | 20.0 | 19.710 | -1.4 |
| Acenaphthylene #2 | 10.988 | 20.0 | 18.672 | -6.6 |
| 1-Methylnaphthalene #3 | 11.934 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.508 | 20.0 | 18.839 | -5.8 |
| Acenaphthene #5 | 12.987 | 20.0 | 19.757 | -1.2 |
| Fluorene #6 | 13.641 | 20.0 | 19.490 | -2.6 |
| Phenanthrene #7 | 15.025 | 20.0 | 19.121 | -4.4 |
| Anthracene #8 | 16.428 | 20.0 | 20.325 | 1.6 |
| Fluoranthene #9 | 17.807 | 2.0 | 1.915 | -4.3 |
| Pyrene #10 | 18.812 | 2.0 | 1.887 | -5.7 |
| p-Terphenyl d14 #11* | Not Found | 20.0 | Not Found | |
| Benzo(a)anthracene #12 | 22.473 | 2.0 | 1.827 | -8.7 |
| Chrysene #13 | 23.346 | 2.0 | 1.899 | -5.1 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.924 | -3.8 |
| Benzo(k)fluoranthene #15 | 27.512 | 1.0 | 0.882 | -11.8 |
| Benzo(a)pyrene #16 | 28.610 | 2.0 | 2.000 | 0.0 |
| Dibenz(a,h)anthracene #1 | 30.481 | 2.0 | 2.086 | 4.3 |
| Benzo(g,h,i)perylene #18 | 31.310 | 2.0 | 1.959 | -2.1 |
| Indeno(1,2,3-cd)pyrene # | 32.291 | 2.0 | 1.885 | -5.7 |

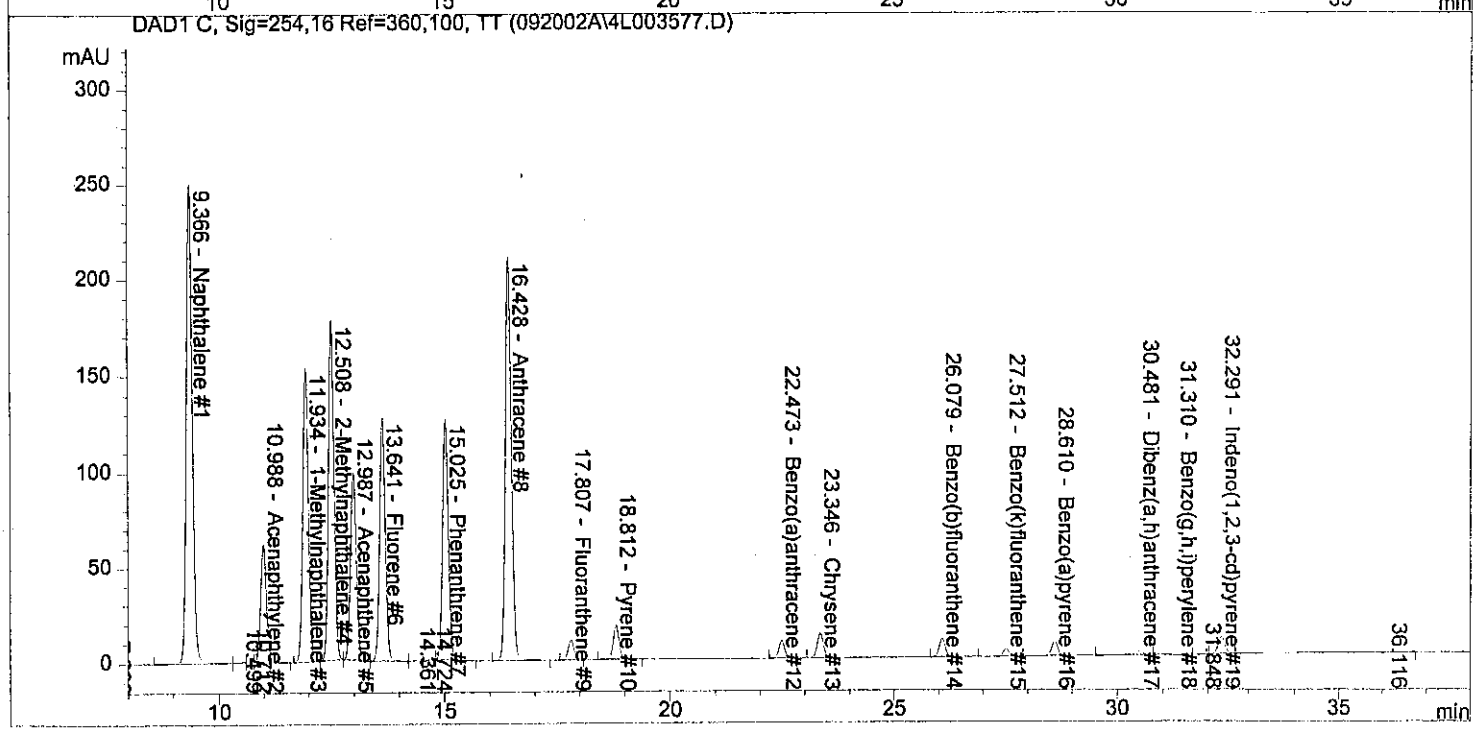
# = Failed 15.0% Criteria

==========

Injection Date : 9/20/2002 11:11:11 PM  Seq. Line : 9
Sample Name : WG125711-08 ALT  Vial : 9
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/20/2002 11:10:33 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.385 | BB | 734.67871 | 2.57606e-2 | 18.92573 | | Naphthalene #1 |
| 11.953 | BB | 828.67181 | 2.26121e-2 | 18.73804 | | 1-Methylnaphthalene #3 |
| 12.528 | BB | 1048.75305 | 1.75705e-2 | 18.42707 | | 2-Methylnaphthalene #4 |
| 13.006 | BB | 1403.95764 | 1.39941e-2 | 19.64706 | | Acenaphthene #5 |
| 13.660 | BB | 2920.24219 | 6.74364e-3 | 19.69307 | | Fluorene #6 |
| 15.045 | BBA | 109.12592 | 1.71127e-1 | 18.67436 | | Phenanthrene #7 |
| 16.447 | PBA | 66.24543 | 3.06833e-1 | 20.32629 | | Anthracene #8 |
| 17.827 | BBA | 76.07307 | 2.57906e-2 | 1.96197 | | Fluoranthene #9 |
| 18.833 | BBA | 47.70423 | 3.64211e-2 | 1.73744 | | Pyrene #10 |
| 21.184 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.493 | BB | 219.61440 | 8.12212e-3 | 1.78373 | | Benzo(a)anthracene #12 |
| 23.365 | BBA | 46.72252 | 3.94941e-2 | 1.84527 | | Chrysene #13 |
| 26.100 | BBA | 112.43198 | 1.71373e-2 | 1.92678 | | Benzo(b)fluoranthene #14 |
| 27.532 | BB | 301.98886 | 2.87263e-3 | 8.67501e-1 | | Benzo(k)fluoranthene #15 |
| 28.630 | BB | 409.46246 | 4.79002e-3 | 1.96133 | | Benzo(a)pyrene #16 |
| 30.502 | BB | 52.44392 | 3.99925e-2 | 2.09736 | | Dibenz(a,h)anthracene #17 |
| 31.334 | BB | 69.82450 | 2.63627e-2 | 1.84076 | | Benzo(g,h,i)perylene #18 |
| 32.307 | BB | 127.98020 | 1.46534e-2 | 1.87535 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 152.32913

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.366 | BB | 2349.01074 | 8.39094e-3 | 19.71041 | | Naphthalene #1 |
| 10.988 | BBA | 541.96777 | 3.44527e-2 | 18.67226 | | Acenaphthylene #2 |
| 11.934 | PB | 1364.93091 | 1.40118e-2 | 19.12519 | | 1-Methylnaphthalene #3 |
| 12.508 | BB | 1552.33252 | 1.21361e-2 | 18.83926 | | 2-Methylnaphthalene #4 |
| 12.987 | BB | 866.78979 | 2.27937e-2 | 19.75733 | | Acenaphthene #5 |
| 13.641 | BB | 1114.37952 | 1.74893e-2 | 19.48975 | | Fluorene #6 |
| 15.025 | BBA | 1090.59619 | 1.75326e-2 | 19.12098 | | Phenanthrene #7 |
| 16.428 | PBA | 1880.51184 | 1.08081e-2 | 20.32479 | | Anthracene #8 |
| 17.807 | PB | 90.93193 | 2.10573e-2 | 1.91478 | | Fluoranthene #9 |
| 18.812 | BBA | 169.21359 | 1.11510e-2 | 1.88691 | | Pyrene #10 |
| 21.166 | | - | - | - | | p-Terphenyl d14 #11* |
| 22.473 | BBA | 85.29520 | 2.14187e-2 | 1.82691 | | Benzo(a)anthracene #12 |
| 23.346 | PBA | 123.40289 | 1.53857e-2 | 1.89864 | | Chrysene #13 |
| 26.079 | BBA | 93.91748 | 2.04847e-2 | 1.92387 | | Benzo(b)fluoranthene #14 |
| 27.512 | BBA | 37.30951 | 2.36463e-2 | 8.82230e-1 | | Benzo(k)fluoranthene #15 |
| 28.610 | BBA | 74.55620 | 2.68316e-2 | 2.00047 | | Benzo(a)pyrene #16 |
| 30.481 | PB | 22.30759 | 9.35102e-2 | 2.08599 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.310 | BB | 35.01012 | 5.59525e-2 | 1.95891 | | Benzo(g,h,i)perylene #18 |
| 32.291 | BB | 94.25724 | 2.00000e-2 | 1.88514 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.30381

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\092102\4L003590.D Sample Name: WG125769-02 CCV
HPLC4 9/24/2002 11:10:42 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/22/2002 2:18:29 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.375 | 20.0 | 18.729 | -6.4 |
| 1-Methylnaphthalene #3 | 11.950 | 20.0 | 18.817 | -5.9 |
| 2-Methylnaphthalene #4 | 12.526 | 20.0 | 18.990 | -5.1 |
| Acenaphthene #5 | 13.004 | 20.0 | 19.217 | -3.9 |
| Fluorene #6 | 13.659 | 20.0 | 19.797 | -1.0 |
| Phenanthrene #7 | 15.046 | 20.0 | 18.551 | -7.2 |
| Anthracene #8 | 16.453 | 20.0 | 19.951 | -0.2 |
| Fluoranthene #9 | 17.832 | 2.0 | 1.942 | -2.9 |
| Pyrene #10 | 18.837 | 2.0 | 1.667 | -16.7 # |
| p-Terphenyl d14 #11* | 21.181 | 20.0 | 19.837 | -0.8 |
| Benzo(a)anthracene #12 | 22.499 | 2.0 | 1.849 | -7.5 |
| Chrysene #13 | 23.372 | 2.0 | 1.826 | -8.7 |
| Benzo(b)fluoranthene #14 | 26.101 | 2.0 | 1.926 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.528 | 1.0 | 0.970 | -3.0 |
| Benzo(a)pyrene #16 | 28.622 | 2.0 | 1.863 | -6.9 |
| Dibenz(a,h)anthracene #1 | 30.487 | 2.0 | 1.801 | -10.0 |
| Benzo(g,h,i)perylene #18 | 31.313 | 2.0 | 1.710 | -14.5 |
| Indeno(1,2,3-cd)pyrene # | 32.275 | 2.0 | 1.937 | -3.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.356 | 20.0 | 20.044 | 0.2 |
| Acenaphthylene #2 | 10.984 | 20.0 | 19.651 | -1.7 |
| 1-Methylnaphthalene #3 | 11.931 | 20.0 | 19.763 | -1.2 |
| 2-Methylnaphthalene #4 | 12.507 | 20.0 | 19.866 | -0.7 |
| Acenaphthene #5 | 12.985 | 20.0 | 19.697 | -1.5 |
| Fluorene #6 | 13.640 | 20.0 | 19.705 | -1.5 |
| Phenanthrene #7 | 15.027 | 20.0 | 19.727 | -1.4 |
| Anthracene #8 | 16.433 | 20.0 | 19.956 | -0.2 |
| Fluoranthene #9 | 17.812 | 2.0 | 1.956 | -2.2 |
| Pyrene #10 | 18.816 | 2.0 | 1.960 | -2.0 |
| p-Terphenyl d14 #11* | 21.162 | 20.0 | 19.775 | -1.1 |
| Benzo(a)anthracene #12 | 22.479 | 2.0 | 1.954 | -2.3 |
| Chrysene #13 | 23.353 | 2.0 | 1.951 | -2.4 |
| Benzo(b)fluoranthene #14 | 26.081 | 2.0 | 1.945 | -2.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.601 | 2.0 | 2.004 | 0.2 |
| Dibenz(a,h)anthracene #1 | 30.467 | 2.0 | 1.922 | -3.9 |
| Benzo(g,h,i)perylene #18 | 31.291 | 2.0 | 1.987 | -0.7 |
| Indeno(1,2,3-cd)pyrene # | 32.258 | 2.0 | 1.970 | -1.5 |

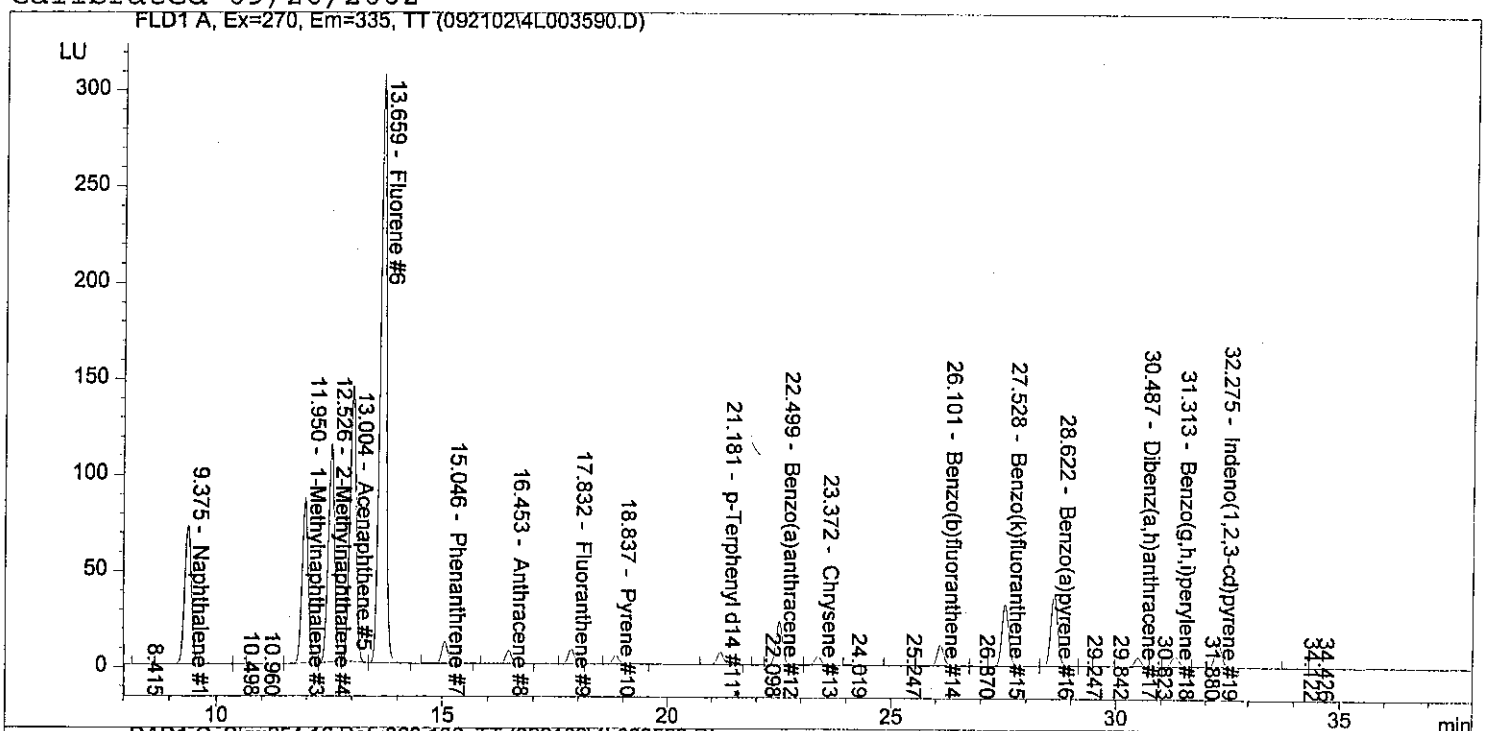
# = Failed 15.0% Criteria

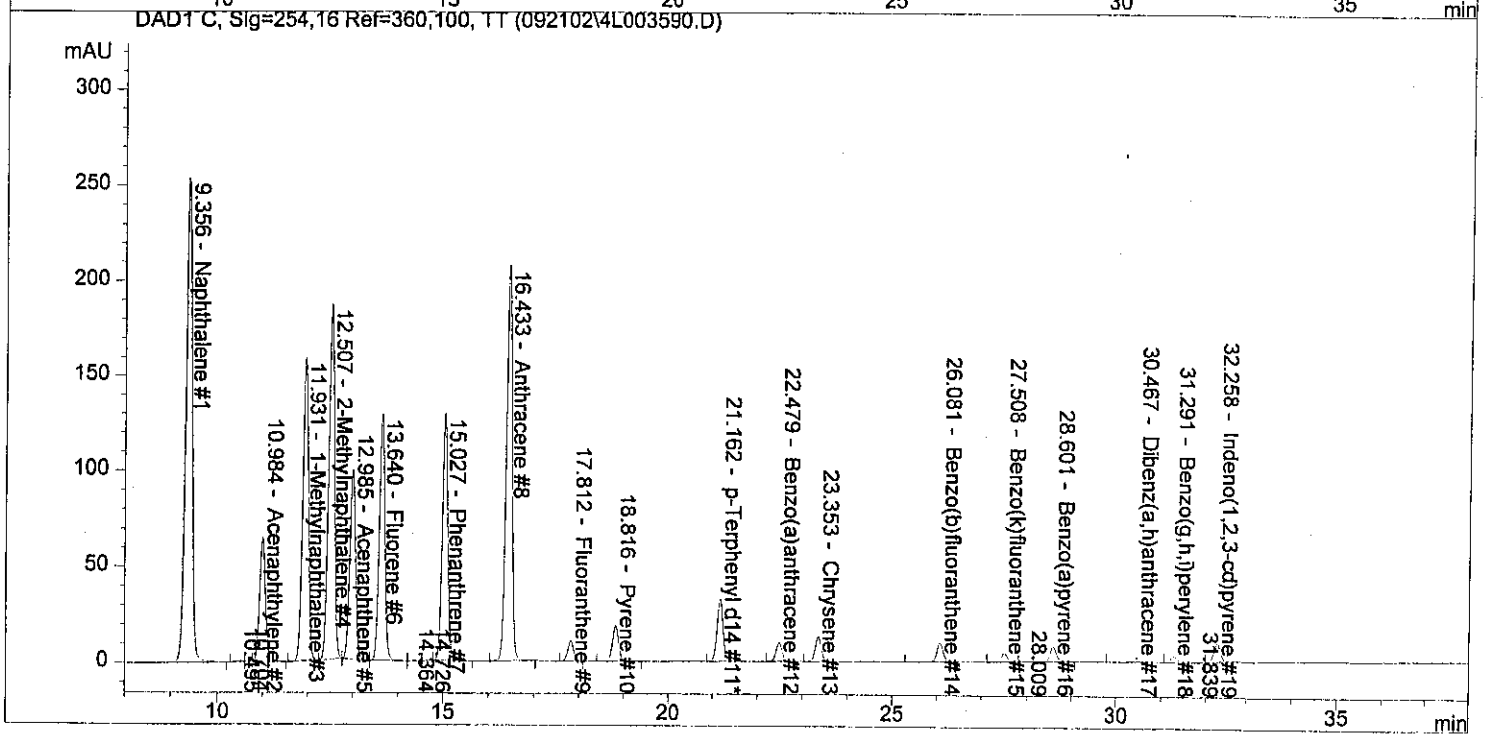
==========

Injection Date : 9/22/2002 2:18:29 AM
Sample Name : WG125769-02 CCV
Acq. Operator : RDC

Seq. Line : 13
Vial : 13
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 2:18:03 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 726.89435 | 2.57657e-2 | 18.72895 | | Naphthalene #1 |
| 11.950 | BB | 832.21014 | 2.26104e-2 | 18.81661 | | 1-Methylnaphthalene #3 |
| 12.526 | BB | 1081.21484 | 1.75634e-2 | 18.98977 | | 2-Methylnaphthalene #4 |
| 13.004 | BB | 1372.93994 | 1.39969e-2 | 19.21692 | | Acenaphthene #5 |
| 13.659 | BBA | 2935.72485 | 6.74357e-3 | 19.79725 | | Fluorene #6 |
| 15.046 | BBA | 108.38628 | 1.71157e-1 | 18.55110 | | Phenanthrene #7 |
| 16.453 | BBA | 65.01572 | 3.06864e-1 | 19.95100 | | Anthracene #8 |
| 17.832 | PB | 75.27028 | 2.57948e-2 | 1.94158 | | Fluoranthene #9 |
| 18.837 | BBA | 45.67979 | 3.64872e-2 | 1.66673 | | Pyrene #10 |
| 21.181 | BB | 65.15961 | 3.04430e-1 | 19.83653 | | p-Terphenyl d14 #11* |
| 22.499 | BB | 227.90266 | 8.11443e-3 | 1.84930 | | Benzo(a)anthracene #12 |
| 23.372 | BB | 46.22641 | 3.95031e-2 | 1.82609 | | Chrysene #13 |
| 26.101 | BB | 112.41154 | 1.71374e-2 | 1.92644 | | Benzo(b)fluoranthene #14 |
| 27.528 | BB | 338.25815 | 2.86812e-3 | 9.70165e-1 | | Benzo(k)fluoranthene #15 |
| 28.622 | BB | 388.25470 | 4.79774e-3 | 1.86274 | | Benzo(a)pyrene #16 |
| 30.487 | BB | 44.78107 | 4.02073e-2 | 1.80052 | | Dibenz(a,h)anthracene #17 |
| 31.313 | BB | 64.63656 | 2.64609e-2 | 1.71034 | | Benzo(g,h,i)perylene #18 |
| 32.275 | BB | 132.28900 | 1.46444e-2 | 1.93730 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 171.37934

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.356 | BB | 2388.52271 | 8.39166e-3 | 20.04367 | | Naphthalene #1 |
| 10.984 | BBA | 570.73981 | 3.44306e-2 | 19.65093 | | Acenaphthylene #2 |
| 11.931 | PB | 1410.81836 | 1.40080e-2 | 19.76270 | | 1-Methylnaphthalene #3 |
| 12.507 | BB | 1637.14282 | 1.21343e-2 | 19.86558 | | 2-Methylnaphthalene #4 |
| 12.985 | BB | 864.11200 | 2.27944e-2 | 19.69696 | | Acenaphthene #5 |
| 13.640 | BB | 1126.81482 | 1.74875e-2 | 19.70515 | | Fluorene #6 |
| 15.027 | BBA | 1125.52759 | 1.75270e-2 | 19.72710 | | Phenanthrene #7 |
| 16.433 | PBA | 1846.42847 | 1.08081e-2 | 19.95643 | | Anthracene #8 |
| 17.812 | PB | 92.91072 | 2.10497e-2 | 1.95575 | | Fluoranthene #9 |
| 18.816 | BBA | 175.86914 | 1.11435e-2 | 1.95980 | | Pyrene #10 |
| 21.162 | BBA | 295.33920 | 6.69558e-2 | 19.77468 | | p-Terphenyl d14 #11* |
| 22.479 | PBA | 91.32729 | 2.13906e-2 | 1.95354 | | Benzo(a)anthracene #12 |
| 23.353 | BBA | 126.87782 | 1.53780e-2 | 1.95113 | | Chrysene #13 |
| 26.081 | BBA | 94.95538 | 2.04809e-2 | 1.94477 | | Benzo(b)fluoranthene #14 |
| 27.508 | BB | 41.54102 | 2.35899e-2 | 9.79947e-1 | | Benzo(k)fluoranthene #15 |
| 28.601 | BBA | 74.70504 | 2.68301e-2 | 2.00434 | | Benzo(a)pyrene #16 |
| 30.467 | BBA | 20.70541 | 9.28453e-2 | 1.92240 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.291 | BB | 35.51602 | 5.59337e-2 | 1.98654 | | Benzo(g,h,i)perylene #18 |
| 32.258 | BB | 98.62656 | 1.99742e-2 | 1.96999 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 196.81140

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092102\4L003612.D Sample Name: WG125769-04 CCV
HPLC4 9/24/2002 11:11:37 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/22/2002 11:04:39 PM Seq. Line : 35

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.382 | 20.0 | 18.743 | -6.3 |
| 1-Methylnaphthalene #3 | 11.953 | 20.0 | 18.861 | -5.7 |
| 2-Methylnaphthalene #4 | 12.528 | 20.0 | 19.047 | -4.8 |
| Acenaphthene #5 | 13.006 | 20.0 | 19.297 | -3.5 |
| Fluorene #6 | 13.661 | 20.0 | 19.973 | -0.1 |
| Phenanthrene #7 | 15.047 | 20.0 | 18.754 | -6.2 |
| Anthracene #8 | 16.452 | 20.0 | 19.826 | -0.9 |
| Fluoranthene #9 | 17.830 | 2.0 | 1.963 | -1.8 |
| Pyrene #10 | 18.835 | 2.0 | 1.663 | -16.8 # |
| p-Terphenyl d14 #11* | 21.179 | 20.0 | 19.881 | -0.6 |
| Benzo(a)anthracene #12 | 22.496 | 2.0 | 1.865 | -6.7 |
| Chrysene #13 | 23.366 | 2.0 | 1.868 | -6.6 |
| Benzo(b)fluoranthene #14 | 26.096 | 2.0 | 1.949 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.524 | 1.0 | 0.980 | -2.0 |
| Benzo(a)pyrene #16 | 28.620 | 2.0 | 1.877 | -6.2 |
| Dibenz(a,h)anthracene #1 | 30.486 | 2.0 | 1.820 | -9.0 |
| Benzo(g,h,i)perylene #18 | 31.304 | 2.0 | 1.706 | -14.7 |
| Indeno(1,2,3-cd)pyrene # | 32.267 | 2.0 | 1.948 | -2.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.367 | 20.0 | 20.216 | 1.1 |
| Acenaphthylene #2 | 10.991 | 20.0 | 19.908 | -0.5 |
| 1-Methylnaphthalene #3 | 11.938 | 20.0 | 19.995 | 0.0 |
| 2-Methylnaphthalene #4 | 12.512 | 20.0 | 20.073 | 0.4 |
| Acenaphthene #5 | 12.990 | 20.0 | 19.950 | -0.3 |
| Fluorene #6 | 13.645 | 20.0 | 19.958 | -0.2 |
| Phenanthrene #7 | 15.031 | 20.0 | 19.976 | -0.1 |
| Anthracene #8 | 16.436 | 20.0 | 20.122 | 0.6 |
| Fluoranthene #9 | 17.814 | 2.0 | 1.984 | -0.8 |
| Pyrene #10 | 18.817 | 2.0 | 1.977 | -1.1 |
| p-Terphenyl d14 #11* | 21.163 | 20.0 | 20.067 | 0.3 |
| Benzo(a)anthracene #12 | 22.480 | 2.0 | 1.976 | -1.2 |
| Chrysene #13 | 23.350 | 2.0 | 1.981 | -1.0 |
| Benzo(b)fluoranthene #14 | 26.079 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.508 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.603 | 2.0 | 2.025 | 1.3 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.798 | -10.1 |
| Benzo(g,h,i)perylene #18 | 31.286 | 2.0 | 1.995 | -0.2 |
| Indeno(1,2,3-cd)pyrene # | 32.253 | 2.0 | 1.968 | -1.6 |

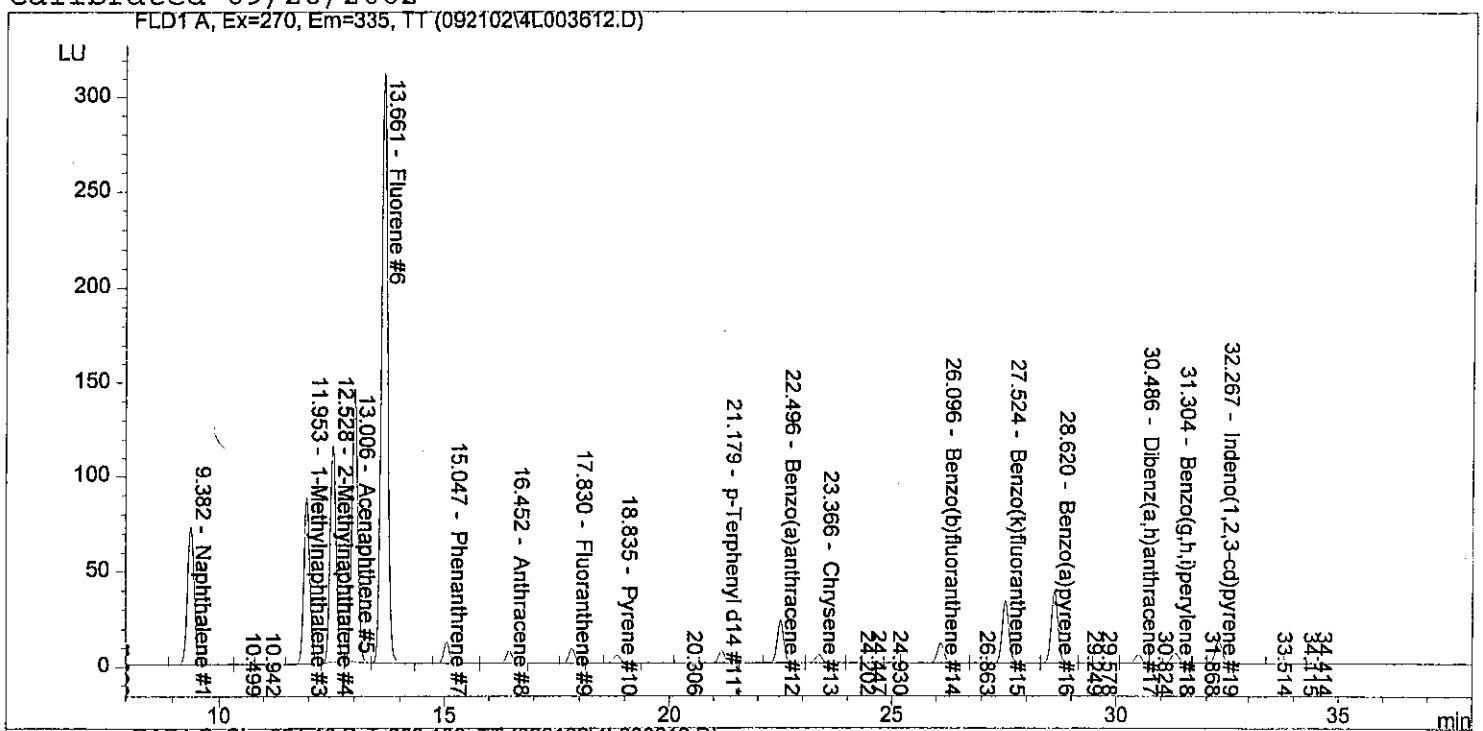
# = Failed 15.0% Criteria

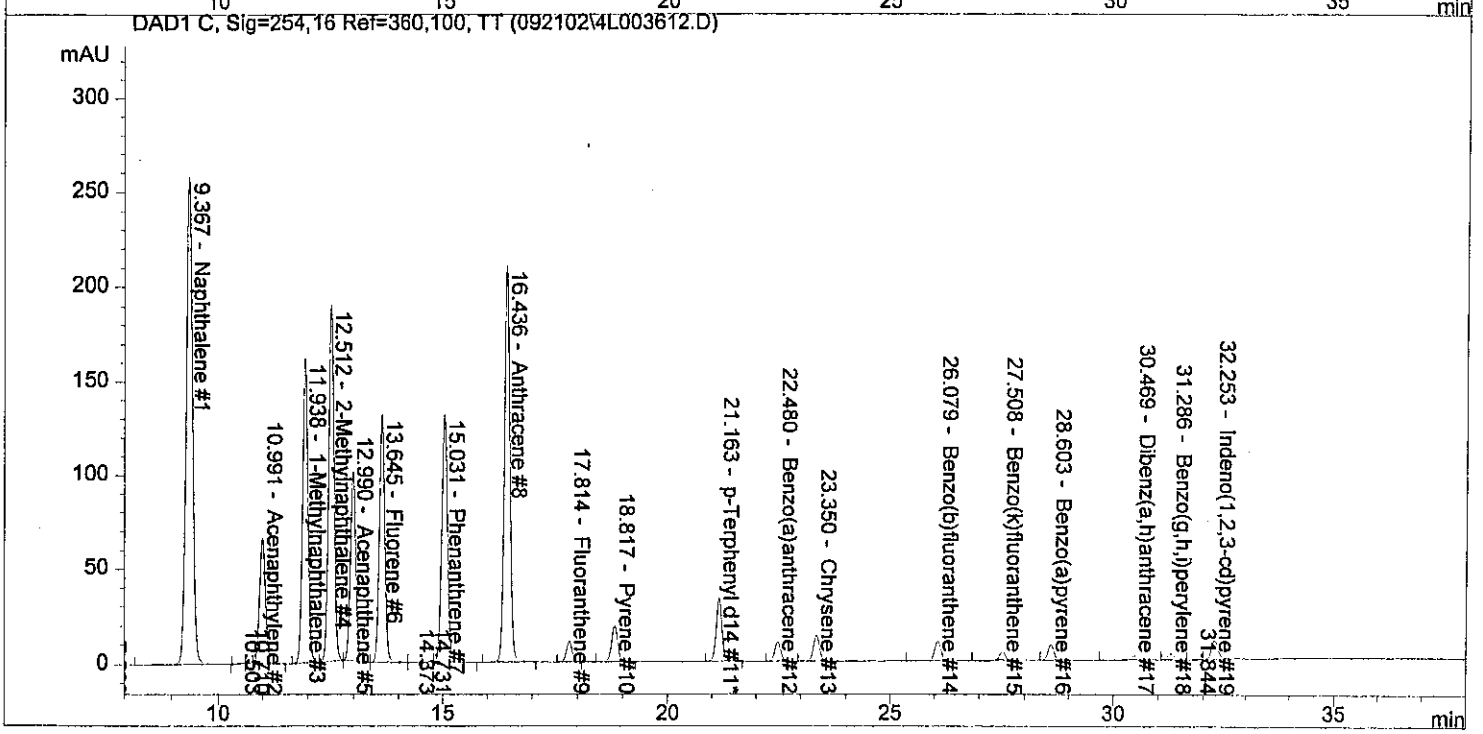
==========

Injection Date : 9/22/2002 11:04:39 PM
Sample Name : WG125769-04 CCV
Acq. Operator : RDC

Seq. Line : 35
Vial : 35
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 11:04:11 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.382 | BB | 727.46289 | 2.57653e-2 | 18.74332 | | Naphthalene #1 |
| 11.953 | PB | 834.22382 | 2.26094e-2 | 18.86133 | | 1-Methylnaphthalene #3 |
| 12.528 | BB | 1084.51404 | 1.75627e-2 | 19.04696 | | 2-Methylnaphthalene #4 |
| 13.006 | BB | 1378.71204 | 1.39964e-2 | 19.29697 | | Acenaphthene #5 |
| 13.661 | BBA | 2961.87817 | 6.74344e-3 | 19.97324 | | Fluorene #6 |
| 15.047 | PB | 109.60204 | 1.71107e-1 | 18.75371 | | Phenanthrene #7 |
| 16.452 | BBA | 64.60617 | 3.06875e-1 | 19.82601 | | Anthracene #8 |
| 17.830 | PB | 76.12203 | 2.57904e-2 | 1.96321 | | Fluoranthene #9 |
| 18.835 | BBA | 45.58105 | 3.64905e-2 | 1.66328 | | Pyrene #10 |
| 21.179 | BB | 65.30884 | 3.04421e-1 | 19.88136 | | p-Terphenyl d14 #11* |
| 22.496 | BB | 229.94376 | 8.11263e-3 | 1.86545 | | Benzo(a)anthracene #12 |
| 23.366 | BB | 47.31254 | 3.94837e-2 | 1.86807 | | Chrysene #13 |
| 26.096 | BB | 113.72723 | 1.71332e-2 | 1.94852 | | Benzo(b)fluoranthene #14 |
| 27.524 | BB | 341.86874 | 2.86772e-3 | 9.80385e-1 | | Benzo(k)fluoranthene #15 |
| 28.620 | BB | 391.30594 | 4.79658e-3 | 1.87693 | | Benzo(a)pyrene #16 |
| 30.486 | BB | 45.28267 | 4.01910e-2 | 1.81996 | | Dibenz(a,h)anthracene #17 |
| 31.304 | BB | 64.46491 | 2.64644e-2 | 1.70602 | | Benzo(g,h,i)perylene #18 |
| 32.267 | BB | 133.02544 | 1.46430e-2 | 1.94789 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 172.02260

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.367 | BBA | 2408.97021 | 8.39202e-3 | 20.21613 | | Naphthalene #1 |
| 10.991 | BBA | 578.30450 | 3.44252e-2 | 19.90824 | | Acenaphthylene #2 |
| 11.938 | PB | 1427.53931 | 1.40066e-2 | 19.99500 | | 1-Methylnaphthalene #3 |
| 12.512 | BB | 1654.29199 | 1.21340e-2 | 20.07311 | | 2-Methylnaphthalene #4 |
| 12.990 | BB | 875.32526 | 2.27913e-2 | 19.94977 | | Acenaphthene #5 |
| 13.645 | BB | 1141.41296 | 1.74854e-2 | 19.95802 | | Fluorene #6 |
| 15.031 | BBA | 1139.87695 | 1.75248e-2 | 19.97609 | | Phenanthrene #7 |
| 16.436 | PBA | 1861.71484 | 1.08081e-2 | 20.12164 | | Anthracene #8 |
| 17.814 | BB | 94.26736 | 2.10447e-2 | 1.98383 | | Fluoranthene #9 |
| 18.817 | BBA | 177.44864 | 1.11418e-2 | 1.97710 | | Pyrene #10 |
| 21.163 | PBA | 299.75797 | 6.69431e-2 | 20.06673 | | p-Terphenyl d14 #11* |
| 22.480 | PBA | 92.41600 | 2.13859e-2 | 1.97640 | | Benzo(a)anthracene #12 |
| 23.350 | BBA | 128.84131 | 1.53738e-2 | 1.98078 | | Chrysene #13 |
| 26.079 | PBA | 95.94950 | 2.04774e-2 | 1.96479 | | Benzo(b)fluoranthene #14 |
| 27.508 | PBA | 42.16855 | 2.35825e-2 | 9.94439e-1 | | Benzo(k)fluoranthene #15 |
| 28.603 | BBA | 75.51116 | 2.68219e-2 | 2.02535 | | Benzo(a)pyrene #16 |
| 30.469 | PBA | 19.48373 | 9.22648e-2 | 1.79766 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.286 | BB | 35.67522 | 5.59279e-2 | 1.99524 | | Benzo(g,h,i)perylene #18 |
| 32.253 | BB | 98.52372 | 1.99748e-2 | 1.96799 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 198.92832

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092102\4L003614.D Sample Name: WG125769-05 CCV
HPLC4 9/24/2002 11:11:58 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========
Injection Date : 9/23/2002 12:57:58 AM Seq. Line : 37

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.373 | 20.0 | 18.801 | -6.0 |
| 1-Methylnaphthalene #3 | 11.948 | 20.0 | 18.985 | -5.1 |
| 2-Methylnaphthalene #4 | 12.524 | 20.0 | 19.123 | -4.4 |
| Acenaphthene #5 | 13.002 | 20.0 | 19.357 | -3.2 |
| Fluorene #6 | 13.658 | 20.0 | 19.998 | 0.0 |
| Phenanthrene #7 | 15.047 | 20.0 | 18.785 | -6.1 |
| Anthracene #8 | 16.455 | 20.0 | 20.056 | 0.3 |
| Fluoranthene #9 | 17.837 | 2.0 | 1.975 | -1.3 |
| Pyrene #10 | 18.844 | 2.0 | 1.673 | -16.3 # |
| p-Terphenyl d14 #11* | 21.194 | 20.0 | 19.910 | -0.4 |
| Benzo(a)anthracene #12 | 22.515 | 2.0 | 1.874 | -6.3 |
| Chrysene #13 | 23.389 | 2.0 | 1.863 | -6.9 |
| Benzo(b)fluoranthene #14 | 26.128 | 2.0 | 1.948 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.565 | 1.0 | 0.982 | -1.8 |
| Benzo(a)pyrene #16 | 28.661 | 2.0 | 1.885 | -5.7 |
| Dibenz(a,h)anthracene #1 | 30.538 | 2.0 | 1.822 | -8.9 |
| Benzo(g,h,i)perylene #18 | 31.361 | 2.0 | 1.722 | -13.9 |
| Indeno(1,2,3-cd)pyrene # | 32.323 | 2.0 | 1.976 | -1.2 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

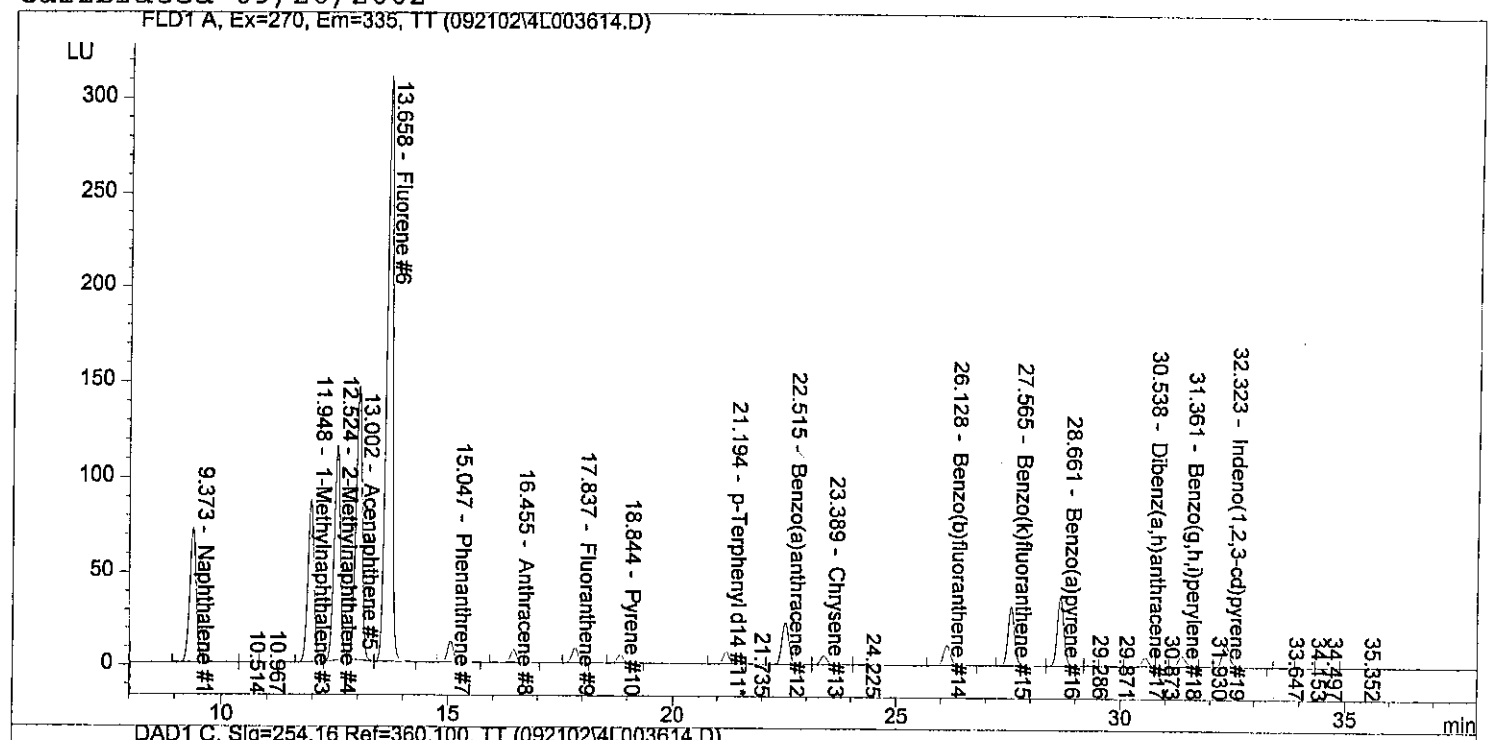
| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.356 | 20.0 | 20.286 | 1.4 |
| Acenaphthylene #2 | 10.984 | 20.0 | 19.939 | -0.3 |
| 1-Methylnaphthalene #3 | 11.931 | 20.0 | 20.036 | 0.2 |
| 2-Methylnaphthalene #4 | 12.507 | 20.0 | 20.119 | 0.6 |
| Acenaphthene #5 | 12.985 | 20.0 | 19.993 | 0.0 |
| Fluorene #6 | 13.640 | 20.0 | 20.000 | 0.0 |
| Phenanthrene #7 | 15.030 | 20.0 | 20.018 | 0.1 |
| Anthracene #8 | 16.438 | 20.0 | 20.147 | 0.7 |
| Fluoranthene #9 | 17.818 | 2.0 | 1.985 | -0.7 |
| Pyrene #10 | 18.825 | 2.0 | 1.983 | -0.8 |
| p-Terphenyl d14 #11* | 21.177 | 20.0 | 20.104 | 0.5 |
| Benzo(a)anthracene #12 | 22.498 | 2.0 | 1.977 | -1.2 |
| Chrysene #13 | 23.372 | 2.0 | 1.981 | -1.0 |
| Benzo(b)fluoranthene #14 | 26.109 | 2.0 | 1.980 | -1.0 |
| Benzo(k)fluoranthene #15 | 27.547 | 1.0 | 1.003 | 0.3 |
| Benzo(a)pyrene #16 | 28.642 | 2.0 | 2.031 | 1.6 |
| Dibenz(a,h)anthracene #1 | 30.520 | 2.0 | 1.796 | -10.2 |
| Benzo(g,h,i)perylene #18 | 31.341 | 2.0 | 1.930 | -3.5 |
| Indeno(1,2,3-cd)pyrene # | 32.310 | 2.0 | 1.996 | -0.2 |

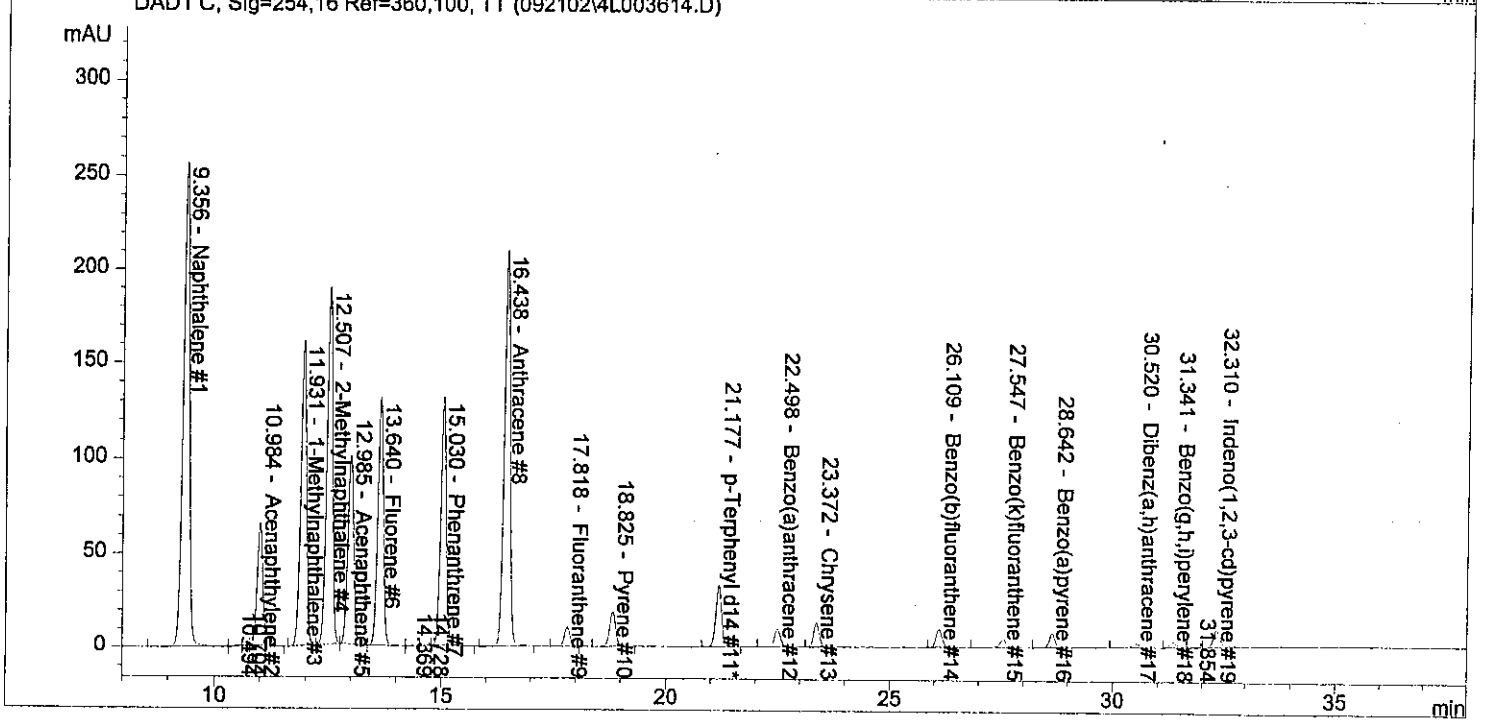
# = Failed 15.0% Criteria

==========

Injection Date : 9/23/2002 12:57:58 AM  Seq. Line : 37
Sample Name : WG125769-05 CCV  Vial : 35
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/23/2002 12:57:35 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.373 | PB | 729.73352 | 2.57638e-2 | 18.80072 | | Naphthalene #1 |
| 11.948 | PB | 839.78094 | 2.26068e-2 | 18.98473 | | 1-Methylnaphthalene #3 |
| 12.524 | BB | 1088.90796 | 1.75617e-2 | 19.12313 | | 2-Methylnaphthalene #4 |
| 13.002 | BB | 1383.00720 | 1.39960e-2 | 19.35653 | | Acenaphthene #5 |
| 13.658 | BBA | 2965.59521 | 6.74342e-3 | 19.99825 | | Fluorene #6 |
| 15.047 | PBA | 109.79067 | 1.71100e-1 | 18.78514 | | Phenanthrene #7 |
| 16.455 | BBA | 65.35880 | 3.06855e-1 | 20.05570 | | Anthracene #8 |
| 17.837 | PB | 76.57845 | 2.57880e-2 | 1.97481 | | Fluoranthene #9 |
| 18.844 | BBA | 45.86281 | 3.64809e-2 | 1.67312 | | Pyrene #10 |
| 21.194 | BB | 65.40453 | 3.04415e-1 | 19.91011 | | p-Terphenyl d14 #11* |
| 22.515 | BB | 230.98463 | 8.11172e-3 | 1.87368 | | Benzo(a)anthracene #12 |
| 23.389 | BB | 47.17173 | 3.94861e-2 | 1.86263 | | Chrysene #13 |
| 26.128 | BBA | 113.69607 | 1.71333e-2 | 1.94799 | | Benzo(b)fluoranthene #14 |
| 27.565 | BB | 342.39218 | 2.86767e-3 | 9.81867e-1 | | Benzo(k)fluoranthene #15 |
| 28.661 | BB | 393.11707 | 4.79589e-3 | 1.88535 | | Benzo(a)pyrene #16 |
| 30.538 | BB | 45.33834 | 4.01892e-2 | 1.82211 | | Dibenz(a,h)anthracene #17 |
| 31.361 | BB | 65.10602 | 2.64513e-2 | 1.72214 | | Benzo(g,h,i)perylene #18 |
| 32.323 | BBA | 135.00352 | 1.46391e-2 | 1.97633 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 172.73434

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.356 | BB | 2417.20508 | 8.39217e-3 | 20.28558 | | Naphthalene #1 |
| 10.984 | BBA | 579.20306 | 3.44246e-2 | 19.93881 | | Acenaphthylene #2 |
| 11.931 | PB | 1430.45959 | 1.40064e-2 | 20.03557 | | 1-Methylnaphthalene #3 |
| 12.507 | BB | 1658.06506 | 1.21339e-2 | 20.11877 | | 2-Methylnaphthalene #4 |
| 12.985 | BB | 877.25958 | 2.27907e-2 | 19.99338 | | Acenaphthene #5 |
| 13.640 | BB | 1143.82812 | 1.74850e-2 | 19.99986 | | Fluorene #6 |
| 15.030 | BBA | 1142.29419 | 1.75244e-2 | 20.01803 | | Phenanthrene #7 |
| 16.438 | PB | 1864.01526 | 1.08081e-2 | 20.14650 | | Anthracene #8 |
| 17.818 | BB | 94.33665 | 2.10445e-2 | 1.98526 | | Fluoranthene #9 |
| 18.825 | BBA | 178.02293 | 1.11412e-2 | 1.98339 | | Pyrene #10 |
| 21.177 | PBA | 300.32233 | 6.69415e-2 | 20.10403 | | p-Terphenyl d14 #11* |
| 22.498 | BBA | 92.42552 | 2.13858e-2 | 1.97660 | | Benzo(a)anthracene #12 |
| 23.372 | BBA | 128.82587 | 1.53738e-2 | 1.98055 | | Chrysene #13 |
| 26.109 | PBA | 96.72038 | 2.04746e-2 | 1.98032 | | Benzo(b)fluoranthene #14 |
| 27.547 | PB | 42.52389 | 2.35784e-2 | 1.00264 | | Benzo(k)fluoranthene #15 |
| 28.642 | BBA | 75.72900 | 2.68197e-2 | 2.03103 | | Benzo(a)pyrene #16 |
| 30.520 | PBA | 19.46430 | 9.22550e-2 | 1.79568 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.341 | PB | 34.47294 | 5.59732e-2 | 1.92956 | | Benzo(g,h,i)perylene #18 |
| 32.310 | BB | 99.97027 | 1.99667e-2 | 1.99608 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 199.30164

Results obtained with enhanced integrator!

*** End of Report ***

==========

Data File C:\HPCHEM\2\DATA\092502\4L003616.D Sample Name: WG125983-01 CCV
HPLC4 9/26/2002 2:14:39 PM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========
Injection Date : 9/25/2002 4:44:42 PM Seq. Line : 2

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.386 | 20.0 | 20.270 | 1.4 |
| 1-Methylnaphthalene #3 | 11.958 | 20.0 | 20.230 | 1.2 |
| 2-Methylnaphthalene #4 | 12.534 | 20.0 | 20.278 | 1.4 |
| Acenaphthene #5 | 13.011 | 20.0 | 20.165 | 0.8 |
| Fluorene #6 | 13.668 | 20.0 | 20.154 | 0.8 |
| Phenanthrene #7 | 15.053 | 20.0 | 19.749 | -1.3 |
| Anthracene #8 | 16.461 | 20.0 | 19.892 | -0.5 |
| Fluoranthene #9 | 17.836 | 2.0 | 2.018 | 0.9 |
| Pyrene #10 | 18.840 | 2.0 | 1.924 | -3.8 |
| p-Terphenyl d14 #11* | 21.183 | 20.0 | 19.656 | -1.7 |
| Benzo(a)anthracene #12 | 22.506 | 2.0 | 1.961 | -2.0 |
| Chrysene #13 | 23.380 | 2.0 | 1.986 | -0.7 |
| Benzo(b)fluoranthene #14 | 26.124 | 2.0 | 1.992 | -0.4 |
| Benzo(k)fluoranthene #15 | 27.564 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.659 | 2.0 | 1.905 | -4.7 |
| Dibenz(a,h)anthracene #1 | 30.539 | 2.0 | 1.881 | -5.9 |
| Benzo(g,h,i)perylene #18 | 31.356 | 2.0 | 1.744 | -12.8 |
| Indeno(1,2,3-cd)pyrene # | 32.323 | 2.0 | 1.969 | -1.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.370 | 20.0 | 20.109 | 0.5 |
| Acenaphthylene #2 | 10.996 | 20.0 | 19.798 | -1.0 |
| 1-Methylnaphthalene #3 | 11.942 | 20.0 | 19.896 | -0.5 |
| 2-Methylnaphthalene #4 | 12.518 | 20.0 | 20.010 | 0.0 |
| Acenaphthene #5 | 12.995 | 20.0 | 19.834 | -0.8 |
| Fluorene #6 | 13.651 | 20.0 | 19.807 | -1.0 |
| Phenanthrene #7 | 15.037 | 20.0 | 19.870 | -0.7 |
| Anthracene #8 | 16.444 | 20.0 | 19.613 | -1.9 |
| Fluoranthene #9 | 17.819 | 2.0 | 1.971 | -1.5 |
| Pyrene #10 | 18.822 | 2.0 | 1.988 | -0.6 |
| p-Terphenyl d14 #11* | 21.166 | 20.0 | 19.872 | -0.6 |
| Benzo(a)anthracene #12 | 22.489 | 2.0 | 1.958 | -2.1 |
| Chrysene #13 | 23.364 | 2.0 | 1.976 | -1.2 |
| Benzo(b)fluoranthene #14 | 26.106 | 2.0 | 1.967 | -1.7 |
| Benzo(k)fluoranthene #15 | 27.547 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.642 | 2.0 | 1.930 | -3.5 |
| Dibenz(a,h)anthracene #1 | 30.522 | 2.0 | 1.758 | -12.1 |
| Benzo(g,h,i)perylene #18 | 31.338 | 2.0 | 1.805 | -9.7 |
| Indeno(1,2,3-cd)pyrene # | 32.311 | 2.0 | 1.941 | -3.0 |

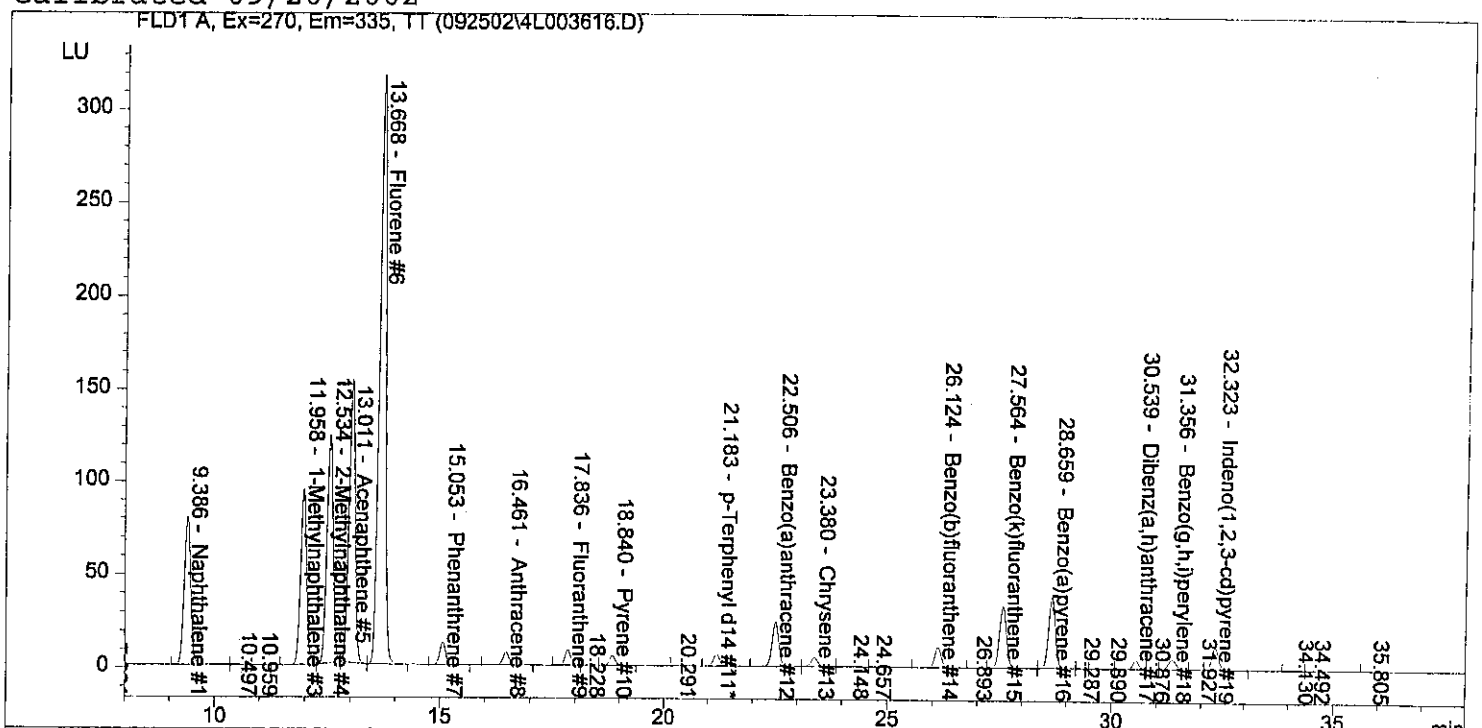
# = Failed 15.0% Criteria

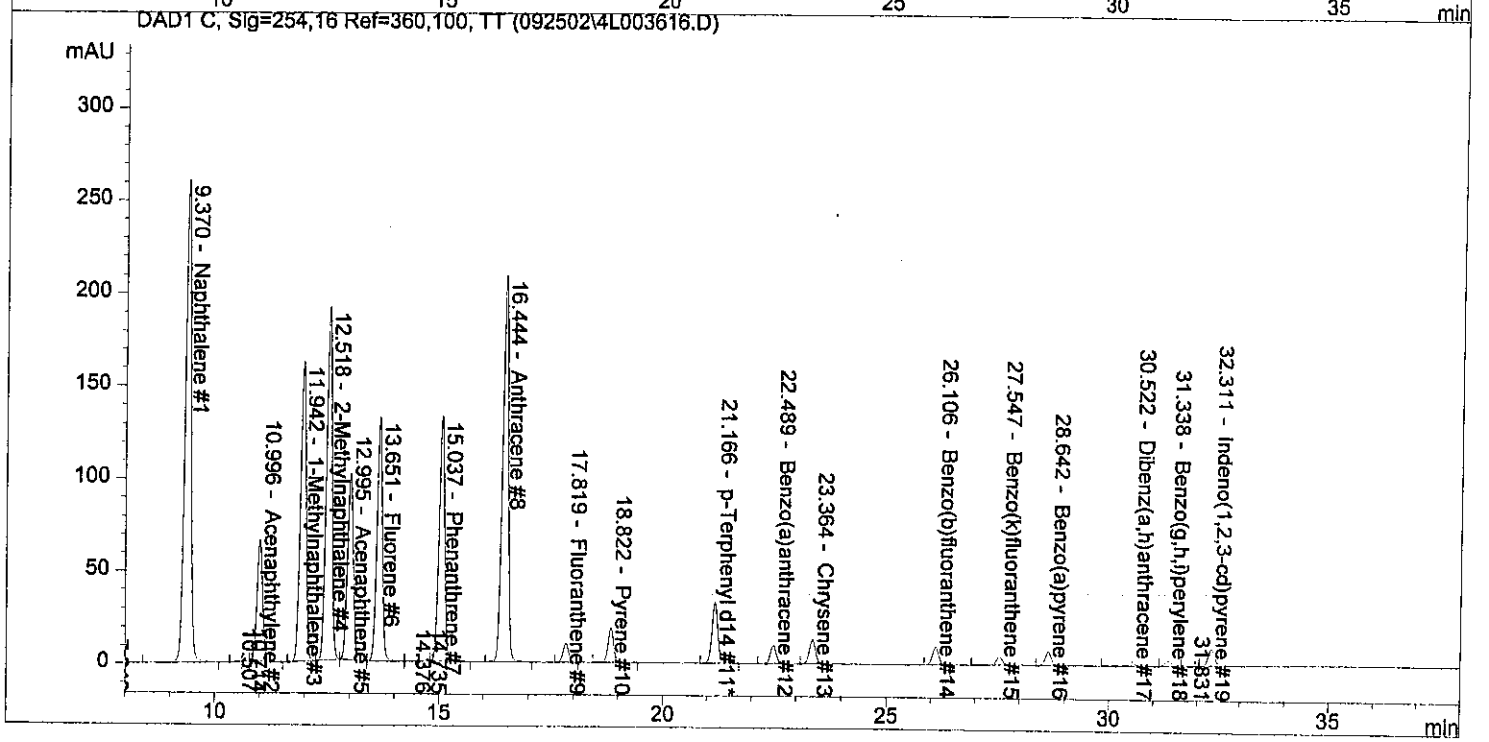
==========

Injection Date : 9/25/2002 4:44:42 PM
Sample Name : WG125983-01 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 : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.386 | BB | 787.86005 | 2.57281e-2 | 20.27012 | | Naphthalene #1 |
| 11.958 | BB | 895.86115 | 2.25816e-2 | 20.23001 | | 1-Methylnaphthalene #3 |
| 12.534 | BB | 1155.53833 | 1.75486e-2 | 20.27811 | | 2-Methylnaphthalene #4 |
| 13.011 | BB | 1441.30005 | 1.39908e-2 | 20.16492 | | Acenaphthene #5 |
| 13.668 | BBA | 2988.76221 | 6.74331e-3 | 20.15415 | | Fluorene #6 |
| 15.053 | PBA | 115.57464 | 1.70877e-1 | 19.74902 | | Phenanthrene #7 |
| 16.461 | BBA | 64.82242 | 3.06869e-1 | 19.89201 | | Anthracene #8 |
| 17.836 | PB | 78.29717 | 2.57796e-2 | 2.01847 | | Fluoranthene #9 |
| 18.840 | BBA | 53.03557 | 3.62712e-2 | 1.92366 | | Pyrene #10 |
| 21.183 | BB | 64.55852 | 3.04468e-1 | 19.65597 | | p-Terphenyl d14 #11* |
| 22.506 | BB | 242.01463 | 8.10256e-3 | 1.96094 | | Benzo(a)anthracene #12 |
| 23.380 | BB | 50.35038 | 3.94337e-2 | 1.98550 | | Chrysene #13 |
| 26.124 | BB | 116.28851 | 1.71255e-2 | 1.99150 | | Benzo(b)fluoranthene #14 |
| 27.564 | BB | 348.54782 | 2.86701e-3 | 9.99291e-1 | | Benzo(k)fluoranthene #15 |
| 28.659 | BB | 397.40662 | 4.79431e-3 | 1.90529 | | Benzo(a)pyrene #16 |
| 30.539 | BB | 46.86175 | 4.01420e-2 | 1.88112 | | Dibenz(a,h)anthracene #17 |
| 31.356 | BB | 65.95934 | 2.64344e-2 | 1.74359 | | Benzo(g,h,i)perylene #18 |
| 32.323 | BBA | 134.49400 | 1.46401e-2 | 1.96900 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 178.77268

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.370 | PBA | 2396.22241 | 8.39180e-3 | 20.10861 | | Naphthalene #1 |
| 10.996 | BBA | 575.05853 | 3.44275e-2 | 19.79783 | | Acenaphthylene #2 |
| 11.942 | PB | 1420.38867 | 1.40072e-2 | 19.89566 | | 1-Methylnaphthalene #3 |
| 12.518 | BB | 1649.04443 | 1.21341e-2 | 20.00961 | | 2-Methylnaphthalene #4 |
| 12.995 | BB | 870.21167 | 2.27927e-2 | 19.83448 | | Acenaphthene #5 |
| 13.651 | BB | 1132.71948 | 1.74866e-2 | 19.80743 | | Fluorene #6 |
| 15.037 | BBA | 1133.74573 | 1.75257e-2 | 19.86970 | | Phenanthrene #7 |
| 16.444 | PBA | 1814.63818 | 1.08081e-2 | 19.61285 | | Anthracene #8 |
| 17.819 | BB | 93.62553 | 2.10471e-2 | 1.97054 | | Fluoranthene #9 |
| 18.822 | BBA | 178.45282 | 1.11407e-2 | 1.98810 | | Pyrene #10 |
| 21.166 | BBA | 296.81808 | 6.69515e-2 | 19.87242 | | p-Terphenyl d14 #11* |
| 22.489 | PBA | 91.53683 | 2.13896e-2 | 1.95794 | | Benzo(a)anthracene #12 |
| 23.364 | BBA | 128.52766 | 1.53745e-2 | 1.97604 | | Chrysene #13 |
| 26.106 | BBA | 96.03784 | 2.04770e-2 | 1.96657 | | Benzo(b)fluoranthene #14 |
| 27.547 | BB | 42.16529 | 2.35825e-2 | 9.94364e-1 | | Benzo(k)fluoranthene #15 |
| 28.642 | BBA | 71.86821 | 2.68604e-2 | 1.93041 | | Benzo(a)pyrene #16 |
| 30.522 | PBA | 19.09406 | 9.20640e-2 | 1.75788 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.338 | BB | 32.20115 | 5.60680e-2 | 1.80546 | | Benzo(g,h,i)perylene #18 |
| 32.311 | BBA | 97.12173 | 1.99828e-2 | 1.94077 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 197.09666

Results obtained with enhanced integrator!

*** End of Report ***

==========

Data File C:\HPCHEM\2\DATA\092502\4L003618.D Sample Name: WG125983-~~01~~ 02 CCV
HPLC4 9/26/2002 2:17:26 PM

RDC 9/26/02

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/25/2002 6:37:58 PM Seq. Line : 4

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.371 | 20.0 | 19.186 | -4.1 |
| 1-Methylnaphthalene #3 | 11.944 | 20.0 | 19.357 | -3.2 |
| 2-Methylnaphthalene #4 | 12.521 | 20.0 | 19.491 | -2.5 |
| Acenaphthene #5 | 12.999 | 20.0 | 19.573 | -2.1 |
| Fluorene #6 | 13.657 | 20.0 | 19.958 | -0.2 |
| Phenanthrene #7 | 15.047 | 20.0 | 19.065 | -4.7 |
| Anthracene #8 | 16.454 | 20.0 | 19.493 | -2.5 |
| Fluoranthene #9 | 17.834 | 2.0 | 1.972 | -1.4 |
| Pyrene #10 | 18.841 | 2.0 | 1.763 | -11.9 |
| p-Terphenyl d14 #11* | 21.193 | 20.0 | 19.532 | -2.3 |
| Benzo(a)anthracene #12 | 22.515 | 2.0 | 1.897 | -5.1 |
| Chrysene #13 | 23.388 | 2.0 | 1.891 | -5.4 |
| Benzo(b)fluoranthene #14 | 26.124 | 2.0 | 1.937 | -3.1 |
| Benzo(k)fluoranthene #15 | 27.565 | 1.0 | 0.982 | -1.8 |
| Benzo(a)pyrene #16 | 28.661 | 2.0 | 1.820 | -9.0 |
| Dibenz(a,h)anthracene #1 | 30.532 | 2.0 | 1.837 | -8.2 |
| Benzo(g,h,i)perylene #18 | 31.350 | 2.0 | 1.671 | -16.4 # |
| Indeno(1,2,3-cd)pyrene # | 32.313 | 2.0 | 1.937 | -3.1 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.352 | 20.0 | 20.169 | 0.8 |
| Acenaphthylene #2 | 10.978 | 20.0 | 19.807 | -1.0 |
| 1-Methylnaphthalene #3 | 11.926 | 20.0 | 19.902 | -0.5 |
| 2-Methylnaphthalene #4 | 12.502 | 20.0 | 20.011 | 0.1 |
| Acenaphthene #5 | 12.981 | 20.0 | 19.844 | -0.8 |
| Fluorene #6 | 13.638 | 20.0 | 19.820 | -0.9 |
| Phenanthrene #7 | 15.028 | 20.0 | 19.855 | -0.7 |
| Anthracene #8 | 16.435 | 20.0 | 19.606 | -2.0 |
| Fluoranthene #9 | 17.815 | 2.0 | 1.967 | -1.7 |
| Pyrene #10 | 18.821 | 2.0 | 1.974 | -1.3 |
| p-Terphenyl d14 #11* | 21.174 | 20.0 | 19.844 | -0.8 |
| Benzo(a)anthracene #12 | 22.496 | 2.0 | 1.961 | -2.0 |
| Chrysene #13 | 23.370 | 2.0 | 1.974 | -1.3 |
| Benzo(b)fluoranthene #14 | 26.105 | 2.0 | 1.960 | -2.0 |
| Benzo(k)fluoranthene #15 | 27.546 | 1.0 | 0.983 | -1.7 |
| Benzo(a)pyrene #16 | 28.641 | 2.0 | 1.917 | -4.1 |
| Dibenz(a,h)anthracene #1 | 30.513 | 2.0 | 2.058 | 2.9 |
| Benzo(g,h,i)perylene #18 | 31.329 | 2.0 | 1.800 | -10.0 |
| Indeno(1,2,3-cd)pyrene # | 32.298 | 2.0 | 1.954 | -2.3 |

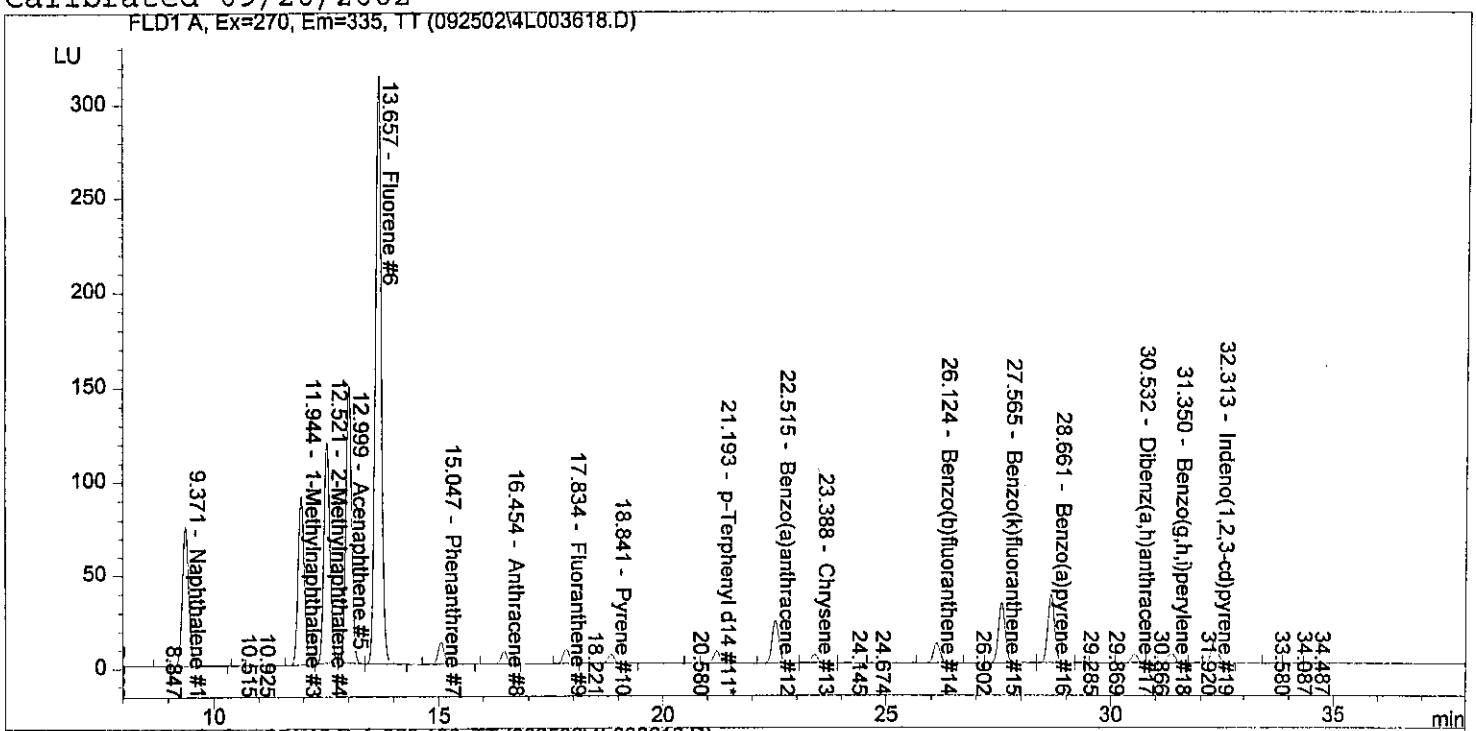
# = Failed 15.0% Criteria

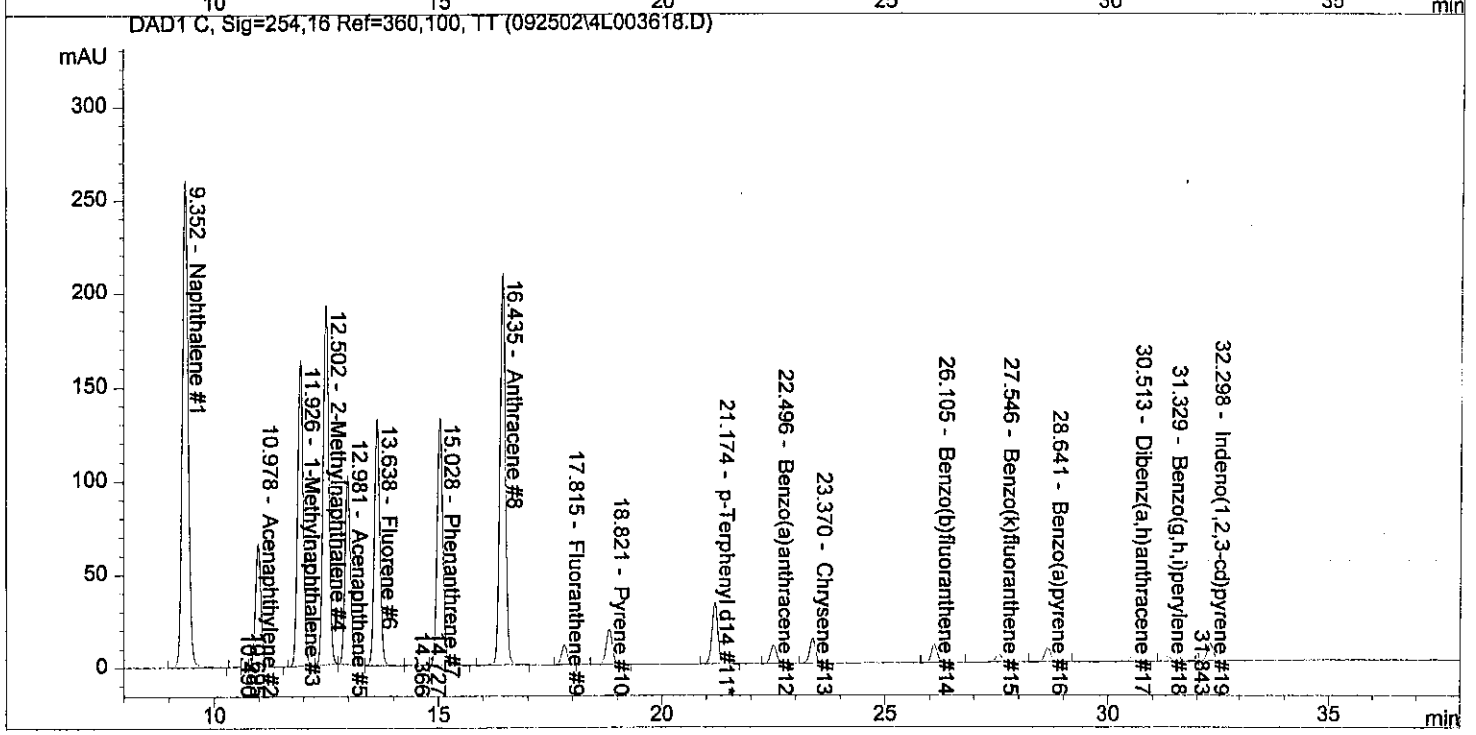
==========

Injection Date : 9/25/2002 6:37:58 PM  Seq. Line : 4
Sample Name : WG125983-~~01~~ 02 CCV  Vial : 2
Acq. Operator : RDC  Inj : 1
RDC 9/26/02  Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/26/2002 2:16:36 PM
(modified after loading)

Calibrated 09/20/2002



9/26/02

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 744.98828 | 2.57539e-2 | 19.18635 | | Naphthalene #1 |
| 11.944 | BB | 856.55133 | 2.25989e-2 | 19.35712 | | 1-Methylnaphthalene #3 |
| 12.521 | BB | 1110.13208 | 1.75574e-2 | 19.49103 | | 2-Methylnaphthalene #4 |
| 12.999 | BB | 1398.62439 | 1.39945e-2 | 19.57310 | | Acenaphthene #5 |
| 13.657 | BBA | 2959.59229 | 6.74345e-3 | 19.95786 | | Fluorene #6 |
| 15.047 | PBA | 111.47117 | 1.71032e-1 | 19.06519 | | Phenanthrene #7 |
| 16.454 | BBA | 63.51618 | 3.06904e-1 | 19.49336 | | Anthracene #8 |
| 17.834 | PB | 76.46427 | 2.57886e-2 | 1.97191 | | Fluoranthene #9 |
| 18.841 | BBA | 48.43249 | 3.63987e-2 | 1.76288 | | Pyrene #10 |
| 21.193 | BB | 64.14486 | 3.04494e-1 | 19.53171 | | p-Terphenyl d14 #11* |
| 22.515 | BB | 233.97942 | 8.10914e-3 | 1.89737 | | Benzo(a)anthracene #12 |
| 23.388 | BB | 47.90747 | 3.94734e-2 | 1.89107 | | Chrysene #13 |
| 26.124 | PBA | 113.06426 | 1.71353e-2 | 1.93739 | | Benzo(b)fluoranthene #14 |
| 27.565 | BB | 342.54761 | 2.86765e-3 | 9.82307e-1 | | Benzo(k)fluoranthene #15 |
| 28.661 | BB | 379.14438 | 4.80132e-3 | 1.82039 | | Benzo(a)pyrene #16 |
| 30.532 | BB | 45.71137 | 4.01774e-2 | 1.83656 | | Dibenz(a,h)anthracene #17 |
| 31.350 | BB | 63.07441 | 2.64936e-2 | 1.67107 | | Benzo(g,h,i)perylene #18 |
| 32.313 | BBA | 132.27760 | 1.46445e-2 | 1.93714 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.36381

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.352 | PBA | 2403.36108 | 8.39192e-3 | 20.16882 | | Naphthalene #1 |
| 10.978 | BBA | 575.32404 | 3.44273e-2 | 19.80686 | | Acenaphthylene #2 |
| 11.926 | PB | 1420.84131 | 1.40072e-2 | 19.90194 | | 1-Methylnaphthalene #3 |
| 12.502 | BB | 1649.16101 | 1.21341e-2 | 20.01102 | | 2-Methylnaphthalene #4 |
| 12.981 | BB | 870.61853 | 2.27926e-2 | 19.84365 | | Acenaphthene #5 |
| 13.638 | BB | 1133.43079 | 1.74865e-2 | 19.81975 | | Fluorene #6 |
| 15.028 | BBA | 1132.92676 | 1.75258e-2 | 19.85549 | | Phenanthrene #7 |
| 16.435 | PBA | 1813.97595 | 1.08081e-2 | 19.60569 | | Anthracene #8 |
| 17.815 | PB | 93.44904 | 2.10477e-2 | 1.96689 | | Fluoranthene #9 |
| 18.821 | BBA | 177.19908 | 1.11421e-2 | 1.97436 | | Pyrene #10 |
| 21.174 | PBA | 296.38452 | 6.69528e-2 | 19.84377 | | p-Terphenyl d14 #11* |
| 22.496 | PBA | 91.67999 | 2.13890e-2 | 1.96095 | | Benzo(a)anthracene #12 |
| 23.370 | BBA | 128.41524 | 1.53747e-2 | 1.97435 | | Chrysene #13 |
| 26.105 | PBA | 95.69083 | 2.04783e-2 | 1.95958 | | Benzo(b)fluoranthene #14 |
| 27.546 | PBA | 41.68924 | 2.35881e-2 | 9.83370e-1 | | Benzo(k)fluoranthene #15 |
| 28.641 | BBA | 71.36209 | 2.68661e-2 | 1.91722 | | Benzo(a)pyrene #16 |
| 30.513 | PBA | 22.02911 | 9.34016e-2 | 2.05755 | | Dibenz(a,h)anthracene #17 |

9/24/02

| | | | | | | |
|---|---|---|---|---|---|---|
| 31.329 | BB | 32.09550 | 5.60728e-2 | 1.79968 | | Benzo(g,h,i)perylene #18 |
| 32.298 | BB | 97.78761 | 1.99790e-2 | 1.95370 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 197.40466

Results obtained with enhanced integrator!

*** End of Report ***

# Level 4 Tracking

| | | | |
|---|---|---|---|
| Account Number: | CCI-FL-677 | L4 Complete: | |
| Project Number: | 677-CECILFIELD C | Data Reviewed: | |
| Collect Date: | 16-SEP-02 | Narrative: | |
| Due Date: | 27-SEP-02 | Forms: | |

| SAMPLE NUMBER | MATRIX # | PRODUCT | STATUS | CLIENT DUE DATE |
|---|---|---|---|---|
| L0209285-01 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-01 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-02 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-02 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-03 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-03 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-04 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-04 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-05 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-05 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-06 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-06 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-07 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-07 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-08 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-08 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-09 | 1 | FLA-PRO | NEED | 30-SEP-02 |
| L0209285-09 | 1 | 8310 | NEED | 30-SEP-02 |
| L0209285-10 | SVS | L4-DRO | NEED | 30-SEP-02 |
| L0209285-10 | SVS | L4-8310 | NEED | 30-SEP-02 |

KEMRON FORMS - Modified 04/02/2002
Version 1.1
Report generated 09/18/2002 09:59

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003620.D Sample Name: WG126189-01 CCV
HPLC4 9/27/2002 10:20:41 PM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/27/2002 5:26:59 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 | 20.246 | 1.2 |
| 1-Methylnaphthalene #3 | 11.912 | 20.0 | 20.310 | 1.5 |
| 2-Methylnaphthalene #4 | 12.489 | 20.0 | 20.328 | 1.6 |
| Acenaphthene #5 | 12.969 | 20.0 | 20.143 | 0.7 |
| Fluorene #6 | 13.628 | 20.0 | 20.062 | 0.3 |
| Phenanthrene #7 | 15.019 | 20.0 | 20.066 | 0.3 |
| Anthracene #8 | 16.433 | 20.0 | 19.431 | -2.8 |
| Fluoranthene #9 | 17.815 | 2.0 | 1.999 | -0.1 |
| Pyrene #10 | 18.821 | 2.0 | 2.068 | 3.4 |
| p-Terphenyl d14 #11* | 21.184 | 20.0 | 19.561 | -2.2 |
| Benzo(a)anthracene #12 | 22.507 | 2.0 | 1.962 | -1.9 |
| Chrysene #13 | 23.387 | 2.0 | 2.011 | 0.5 |
| Benzo(b)fluoranthene #14 | 26.129 | 2.0 | 2.003 | 0.1 |
| Benzo(k)fluoranthene #15 | 27.577 | 1.0 | 0.999 | -0.1 |
| Benzo(a)pyrene #16 | 28.675 | 2.0 | 2.067 | 3.4 |
| Dibenz(a,h)anthracene #1 | 30.560 | 2.0 | 1.999 | 0.0 |
| Benzo(g,h,i)perylene #18 | 31.383 | 2.0 | 2.071 | 3.5 |
| Indeno(1,2,3-cd)pyrene # | 32.361 | 2.0 | 1.908 | -4.6 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.315 | 20.0 | 20.067 | 0.3 |
| Acenaphthylene #2 | 10.944 | 20.0 | 19.750 | -1.3 |
| 1-Methylnaphthalene #3 | 11.894 | 20.0 | 19.828 | -0.9 |
| 2-Methylnaphthalene #4 | 12.471 | 20.0 | 19.961 | -0.2 |
| Acenaphthene #5 | 12.951 | 20.0 | 19.708 | -1.5 |
| Fluorene #6 | 13.608 | 20.0 | 19.749 | -1.3 |
| Phenanthrene #7 | 15.000 | 20.0 | 19.798 | -1.0 |
| Anthracene #8 | 16.414 | 20.0 | 19.468 | -2.7 |
| Fluoranthene #9 | 17.795 | 2.0 | 1.964 | -1.8 |
| Pyrene #10 | 18.801 | 2.0 | 1.946 | -2.7 |
| p-Terphenyl d14 #11* | 21.165 | 20.0 | 19.904 | -0.5 |
| Benzo(a)anthracene #12 | 22.488 | 2.0 | 1.927 | -3.6 |
| Chrysene #13 | 23.369 | 2.0 | 1.985 | -0.7 |
| Benzo(b)fluoranthene #14 | 26.109 | 2.0 | 1.948 | -2.6 |
| Benzo(k)fluoranthene #15 | 27.558 | 1.0 | 0.988 | -1.2 |
| Benzo(a)pyrene #16 | 28.655 | 2.0 | 1.964 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.540 | 2.0 | 1.813 | -9.3 |
| Benzo(g,h,i)perylene #18 | 31.362 | 2.0 | 1.790 | -10.5 |
| Indeno(1,2,3-cd)pyrene # | 32.347 | 2.0 | 1.899 | -5.0 |

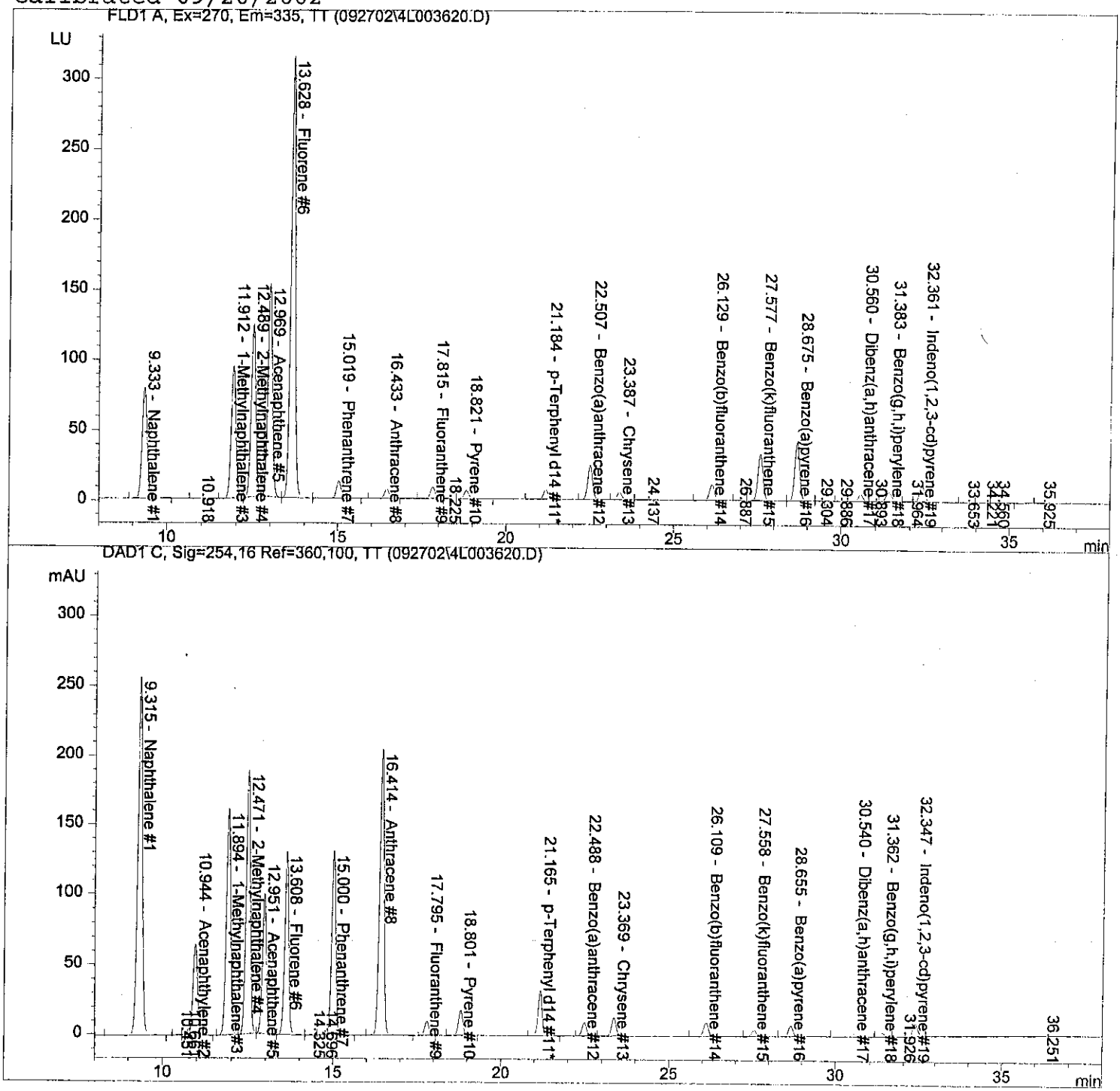
# = Failed 15.0% Criteria

==========

Injection Date : 9/27/2002 5:26:59 PM  Seq. Line : 2
Sample Name : WG126189-01 CCV  Vial : 2
Acq. Operator : RDC  Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/26/2002 2:16:36 PM
(modified after loading)

Calibrated 09/20/2002



External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 786.90051 | 2.57286e-2 | 20.24587 | | Naphthalene #1 |
| 11.912 | BB | 899.44598 | 2.25801e-2 | 20.30962 | | 1-Methylnaphthalene #3 |
| 12.489 | BB | 1158.43542 | 1.75481e-2 | 20.32833 | | 2-Methylnaphthalene #4 |
| 12.969 | BB | 1439.71399 | 1.39909e-2 | 20.14292 | | Acenaphthene #5 |
| 13.628 | BB | 2975.08667 | 6.74337e-3 | 20.06212 | | Fluorene #6 |
| 15.019 | BBA | 117.47395 | 1.70808e-1 | 20.06554 | | Phenanthrene #7 |
| 16.433 | BBA | 63.31028 | 3.06909e-1 | 19.43052 | | Anthracene #8 |
| 17.815 | PB | 77.52129 | 2.57833e-2 | 1.99876 | | Fluoranthene #9 |
| 18.821 | BB | 57.17892 | 3.61740e-2 | 2.06839 | | Pyrene #10 |
| 21.184 | BB | 64.24245 | 3.04488e-1 | 19.56103 | | p-Terphenyl d14 #11* |
| 22.507 | BB | 242.20642 | 8.10240e-3 | 1.96245 | | Benzo(a)anthracene #12 |
| 23.387 | BB | 51.00372 | 3.94237e-2 | 2.01076 | | Chrysene #13 |
| 26.129 | BBA | 116.94890 | 1.71235e-2 | 2.00258 | | Benzo(b)fluoranthene #14 |
| 27.577 | BB | 348.45425 | 2.86702e-3 | 9.99026e-1 | | Benzo(k)fluoranthene #15 |
| 28.675 | BB | 432.26569 | 4.78256e-3 | 2.06734 | | Benzo(a)pyrene #16 |
| 30.560 | PB | 49.91634 | 4.00560e-2 | 1.99945 | | Dibenz(a,h)anthracene #17 |
| 31.383 | BB | 78.96623 | 2.62211e-2 | 2.07058 | | Benzo(g,h,i)perylene #18 |
| 32.361 | BB | 130.23892 | 1.46486e-2 | 1.90782 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 179.23311

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.315 | PBA | 2391.25317 | 8.39171e-3 | 20.06670 | | Naphthalene #1 |
| 10.944 | BBA | 573.64691 | 3.44285e-2 | 19.74982 | | Acenaphthylene #2 |
| 11.894 | PB | 1415.48877 | 1.40076e-2 | 19.82758 | | 1-Methylnaphthalene #3 |
| 12.471 | BB | 1644.99878 | 1.21341e-2 | 19.96065 | | 2-Methylnaphthalene #4 |
| 12.951 | BB | 864.61725 | 2.27943e-2 | 19.70835 | | Acenaphthene #5 |
| 13.608 | BB | 1129.36890 | 1.74871e-2 | 19.74939 | | Fluorene #6 |
| 15.000 | BBA | 1129.61230 | 1.75263e-2 | 19.79798 | | Phenanthrene #7 |
| 16.414 | BBA | 1801.27124 | 1.08081e-2 | 19.46838 | | Anthracene #8 |
| 17.795 | BB | 93.31702 | 2.10482e-2 | 1.96416 | | Fluoranthene #9 |
| 18.801 | BBA | 174.63751 | 1.11449e-2 | 1.94631 | | Pyrene #10 |
| 21.165 | BBA | 297.29660 | 6.69501e-2 | 19.90405 | | p-Terphenyl d14 #11* |
| 22.488 | PBA | 90.06752 | 2.13961e-2 | 1.92710 | | Benzo(a)anthracene #12 |
| 23.369 | BBA | 129.13004 | 1.53732e-2 | 1.98514 | | Chrysene #13 |
| 26.109 | BBA | 95.10111 | 2.04804e-2 | 1.94771 | | Benzo(b)fluoranthene #14 |
| 27.558 | BB | 41.89190 | 2.35857e-2 | 9.88050e-1 | | Benzo(k)fluoranthene #15 |
| 28.655 | BBA | 73.16279 | 2.68463e-2 | 1.96415 | | Benzo(a)pyrene #16 |
| 30.540 | PBA | 19.63749 | 9.23418e-2 | 1.81336 | | Dibenz(a,h)anthracene #17 |

| Rettime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.362 | PB | 31.92082 | 5.60807e-2 | 1.79014 | | Benzo(g,h,i)perylene #18 |
| 32.347 | BB | 94.97542 | 1.99956e-2 | 1.89909 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 196.45811

Results obtained with enhanced integrator!

*** End of Report ***

Check Standard Report

==========

Data File C:\HPCHEM\2\DATA\092702\4L003631.D Sample Name: WG126189-02 CCV
HPLC4 9/30/2002 11:08:25 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/28/2002 3:50:10 AM Seq. Line : 13

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.335 | 20.0 | 18.981 | -5.1 |
| 1-Methylnaphthalene #3 | 11.911 | 20.0 | 19.125 | -4.4 |
| 2-Methylnaphthalene #4 | 12.487 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.966 | 20.0 | 19.432 | -2.8 |
| Fluorene #6 | 13.620 | 20.0 | 19.844 | -0.8 |
| Phenanthrene #7 | 15.006 | 20.0 | 18.905 | -5.5 |
| Anthracene #8 | 16.411 | 20.0 | 19.650 | -1.8 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.959 | -2.1 |
| Pyrene #10 | 18.799 | 2.0 | 1.745 | -12.7 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.340 | -3.3 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.882 | -5.9 |
| Chrysene #13 | 23.344 | 2.0 | 1.870 | -6.5 |
| Benzo(b)fluoranthene #14 | 26.074 | 2.0 | 1.929 | -3.5 |
| Benzo(k)fluoranthene #15 | 27.515 | 1.0 | 0.978 | -2.2 |
| Benzo(a)pyrene #16 | 28.608 | 2.0 | 1.827 | -8.6 |
| Dibenz(a,h)anthracene #1 | 30.469 | 2.0 | 1.857 | -7.1 |
| Benzo(g,h,i)perylene #18 | 31.293 | 2.0 | 1.718 | -14.1 |
| Indeno(1,2,3-cd)pyrene # | 32.261 | 2.0 | 1.940 | -3.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.321 | 20.0 | 20.136 | 0.7 |
| Acenaphthylene #2 | 10.949 | 20.0 | 19.790 | -1.1 |
| 1-Methylnaphthalene #3 | 11.897 | 20.0 | 19.889 | -0.6 |
| 2-Methylnaphthalene #4 | 12.473 | 20.0 | 19.994 | 0.0 |
| Acenaphthene #5 | 12.952 | 20.0 | 19.845 | -0.8 |
| Fluorene #6 | 13.606 | 20.0 | 19.820 | -0.9 |
| Phenanthrene #7 | 14.991 | 20.0 | 19.816 | -0.9 |
| Anthracene #8 | 16.397 | 20.0 | 19.851 | -0.7 |
| Fluoranthene #9 | 17.777 | 2.0 | 1.974 | -1.3 |
| Pyrene #10 | 18.783 | 2.0 | 1.981 | -1.0 |
| p-Terphenyl d14 #11* | 21.140 | 20.0 | 19.659 | -1.7 |
| Benzo(a)anthracene #12 | 22.457 | 2.0 | 1.963 | -1.8 |
| Chrysene #13 | 23.330 | 2.0 | 1.971 | -1.5 |
| Benzo(b)fluoranthene #14 | 26.059 | 2.0 | 1.965 | -1.8 |
| Benzo(k)fluoranthene #15 | 27.500 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.593 | 2.0 | 1.949 | -2.6 |
| Dibenz(a,h)anthracene #1 | 30.455 | 2.0 | 1.865 | -6.7 |
| Benzo(g,h,i)perylene #18 | 31.277 | 2.0 | 1.921 | -4.0 |
| Indeno(1,2,3-cd)pyrene # | 32.249 | 2.0 | 1.955 | -2.3 |

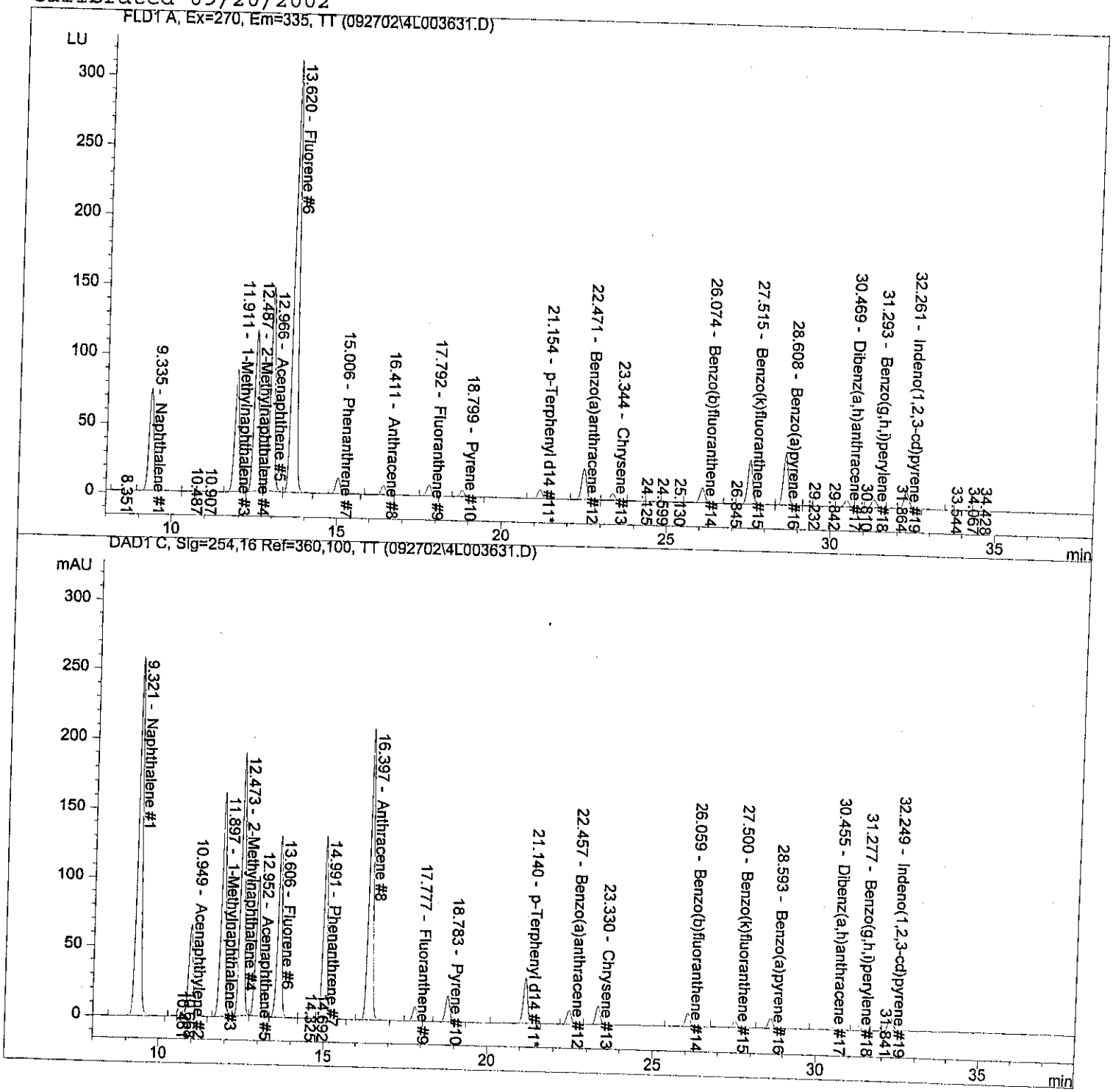
# = Failed 15.0% Criteria

==========

Injection Date : 9/28/2002 3:50:10 AM
Sample Name : WG126189-02 CCV
Acq. Operator : RDC

Seq. Line : 13
Vial : 13
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 3:50:23 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002



External Standard Report

| | | |
|---|---|---|
| Sorted By | : | Signal |
| Calib. Data Modified | : | 9/21/2002 3:41:57 PM |
| 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 |
|---|---|---|---|---|---|---|
| 9.335 | BB | 736.87067 | 2.57591e-2 | 18.98114 | | Naphthalene #1 |
| 11.911 | BB | 846.10565 | 2.26038e-2 | 19.12517 | | 1-Methylnaphthalene #3 |
| 12.487 | BB | 1097.25098 | 1.75600e-2 | 19.26775 | | 2-Methylnaphthalene #4 |
| 12.966 | BB | 1388.41650 | 1.39955e-2 | 19.43154 | | Acenaphthene #5 |
| 13.620 | BB | 2942.69775 | 6.74353e-3 | 19.84417 | | Fluorene #6 |
| 15.006 | BBA | 110.51191 | 1.71071e-1 | 18.90533 | | Phenanthrene #7 |
| 16.411 | BBA | 64.02818 | 3.06890e-1 | 19.64961 | | Anthracene #8 |
| 17.792 | PB | 75.95542 | 2.57912e-2 | 1.95898 | | Fluoranthene #9 |
| 18.799 | BBA | 47.93214 | 3.64140e-2 | 1.74540 | | Pyrene #10 |
| 21.154 | BBA | 63.50793 | 3.04535e-1 | 19.34039 | | p-Terphenyl d14 #11* |
| 22.471 | BB | 231.99622 | 8.11084e-3 | 1.88168 | | Benzo(a)anthracene #12 |
| 23.344 | BB | 47.35949 | 3.94829e-2 | 1.86989 | | Chrysene #13 |
| 26.074 | BBA | 112.56907 | 1.71369e-2 | 1.92908 | | Benzo(b)fluoranthene #14 |
| 27.515 | BB | 341.06305 | 2.86781e-3 | 9.78104e-1 | | Benzo(k)fluoranthene #15 |
| 28.608 | BB | 380.65662 | 4.80071e-3 | 1.82742 | | Benzo(a)pyrene #16 |
| 30.469 | BB | 46.24251 | 4.01608e-2 | 1.85714 | | Dibenz(a,h)anthracene #17 |
| 31.293 | BB | 64.93436 | 2.64548e-2 | 1.71783 | | Benzo(g,h,i)perylene #18 |
| 32.261 | BB | 132.51083 | 1.46440e-2 | 1.94049 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 172.25113

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.321 | PBA | 2399.50342 | 8.39185e-3 | 20.13628 | | Naphthalene #1 |
| 10.949 | BBA | 574.82001 | 3.44277e-2 | 19.78972 | | Acenaphthylene #2 |
| 11.897 | PB | 1419.94165 | 1.40072e-2 | 19.88945 | | 1-Methylnaphthalene #3 |
| 12.473 | BB | 1647.73633 | 1.21341e-2 | 19.99378 | | 2-Methylnaphthalene #4 |
| 12.952 | BB | 870.66028 | 2.27926e-2 | 19.84459 | | Acenaphthene #5 |
| 13.606 | BB | 1133.41846 | 1.74865e-2 | 19.81954 | | Fluorene #6 |
| 14.991 | BBA | 1130.66370 | 1.75262e-2 | 19.81622 | | Phenanthrene #7 |
| 16.397 | BB | 1836.69800 | 1.08081e-2 | 19.85127 | | Anthracene #8 |
| 17.777 | BB | 93.78806 | 2.10465e-2 | 1.97391 | | Fluoranthene #9 |
| 18.783 | BBA | 177.77100 | 1.11415e-2 | 1.98063 | | Pyrene #10 |
| 21.140 | PBA | 293.58472 | 6.69610e-2 | 19.65872 | | p-Terphenyl d14 #11* |
| 22.457 | PBA | 91.79173 | 2.13885e-2 | 1.96329 | | Benzo(a)anthracene #12 |
| 23.330 | BBA | 128.16815 | 1.53752e-2 | 1.97061 | | Chrysene #13 |
| 26.059 | PBA | 95.95579 | 2.04773e-2 | 1.96492 | | Benzo(b)fluoranthene #14 |
| 27.500 | PB | 42.12954 | 2.35829e-2 | 9.93538e-1 | | Benzo(k)fluoranthene #15 |
| 28.593 | BBA | 72.56543 | 2.68528e-2 | 1.94858 | | Benzo(a)pyrene #16 |
| 30.455 | PBA | 20.14636 | 9.25884e-2 | 1.86532 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.277 | BB | 34.31247 | 5.59795e-2 | 1.92079 | | Benzo(g,h,i)perylene #18 |
| 32.249 | BB | 97.84663 | 1.99786e-2 | 1.95484 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 197.33600

Results obtained with enhanced integrator!

*** End of Report ***

==========

Data File C:\HPCHEM\2\DATA\092702\4L003642.D Sample Name: WG126189-03 CCV
HPLC4 9/30/2002 11:17:36 AM

1,1 SOS61-07/59-38 LEVEL 4 STD. 20/2/1 ppm

==========

Injection Date : 9/28/2002 2:13:16 PM Seq. Line : 24

Signal 1: FLD1 A, Ex=270, Em=335, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.345 | 20.0 | 18.913 | -5.4 |
| 1-Methylnaphthalene #3 | 11.923 | 20.0 | 19.090 | -4.6 |
| 2-Methylnaphthalene #4 | 12.500 | 20.0 | 19.268 | -3.7 |
| Acenaphthene #5 | 12.979 | 20.0 | 19.497 | -2.5 |
| Fluorene #6 | 13.636 | 20.0 | 20.038 | 0.2 |
| Phenanthrene #7 | 15.022 | 20.0 | 18.872 | -5.6 |
| Anthracene #8 | 16.429 | 20.0 | 20.146 | 0.7 |
| Fluoranthene #9 | 17.809 | 2.0 | 1.969 | -1.6 |
| Pyrene #10 | 18.816 | 2.0 | 1.702 | -14.9 |
| p-Terphenyl d14 #11* | 21.169 | 20.0 | 19.579 | -2.1 |
| Benzo(a)anthracene #12 | 22.487 | 2.0 | 1.876 | -6.2 |
| Chrysene #13 | 23.359 | 2.0 | 1.873 | -6.3 |
| Benzo(b)fluoranthene #14 | 26.085 | 2.0 | 1.925 | -3.7 |
| Benzo(k)fluoranthene #15 | 27.519 | 1.0 | 0.984 | -1.6 |
| Benzo(a)pyrene #16 | 28.612 | 2.0 | 1.836 | -8.2 |
| Dibenz(a,h)anthracene #1 | 30.480 | 2.0 | 1.843 | -7.8 |
| Benzo(g,h,i)perylene #18 | 31.301 | 2.0 | 1.713 | -14.4 |
| Indeno(1,2,3-cd)pyrene # | 32.268 | 2.0 | 1.960 | -2.0 |

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| Compound | RT | Known Conc. | Cal. Conc. | %D |
|---|---|---|---|---|
| Naphthalene #1 | 9.329 | 20.0 | 20.277 | 1.4 |
| Acenaphthylene #2 | 10.959 | 20.0 | 20.000 | 0.0 |
| 1-Methylnaphthalene #3 | 11.908 | 20.0 | 20.062 | 0.3 |
| 2-Methylnaphthalene #4 | 12.484 | 20.0 | 20.166 | 0.8 |
| Acenaphthene #5 | 12.963 | 20.0 | 20.055 | 0.3 |
| Fluorene #6 | 13.620 | 20.0 | 20.020 | 0.1 |
| Phenanthrene #7 | 15.006 | 20.0 | 20.070 | 0.3 |
| Anthracene #8 | 16.413 | 20.0 | 20.136 | 0.7 |
| Fluoranthene #9 | 17.792 | 2.0 | 1.980 | -1.0 |
| Pyrene #10 | 18.799 | 2.0 | 1.987 | -0.6 |
| p-Terphenyl d14 #11* | 21.154 | 20.0 | 19.911 | -0.4 |
| Benzo(a)anthracene #12 | 22.471 | 2.0 | 1.985 | -0.7 |
| Chrysene #13 | 23.344 | 2.0 | 1.990 | -0.5 |
| Benzo(b)fluoranthene #14 | 26.068 | 2.0 | 1.981 | -0.9 |
| Benzo(k)fluoranthene #15 | 27.502 | 1.0 | 0.994 | -0.6 |
| Benzo(a)pyrene #16 | 28.596 | 2.0 | 1.963 | -1.8 |
| Dibenz(a,h)anthracene #1 | 30.464 | 2.0 | 1.847 | -7.6 |
| Benzo(g,h,i)perylene #18 | 31.283 | 2.0 | 1.993 | -0.4 |
| Indeno(1,2,3-cd)pyrene # | 32.255 | 2.0 | 1.983 | -0.9 |

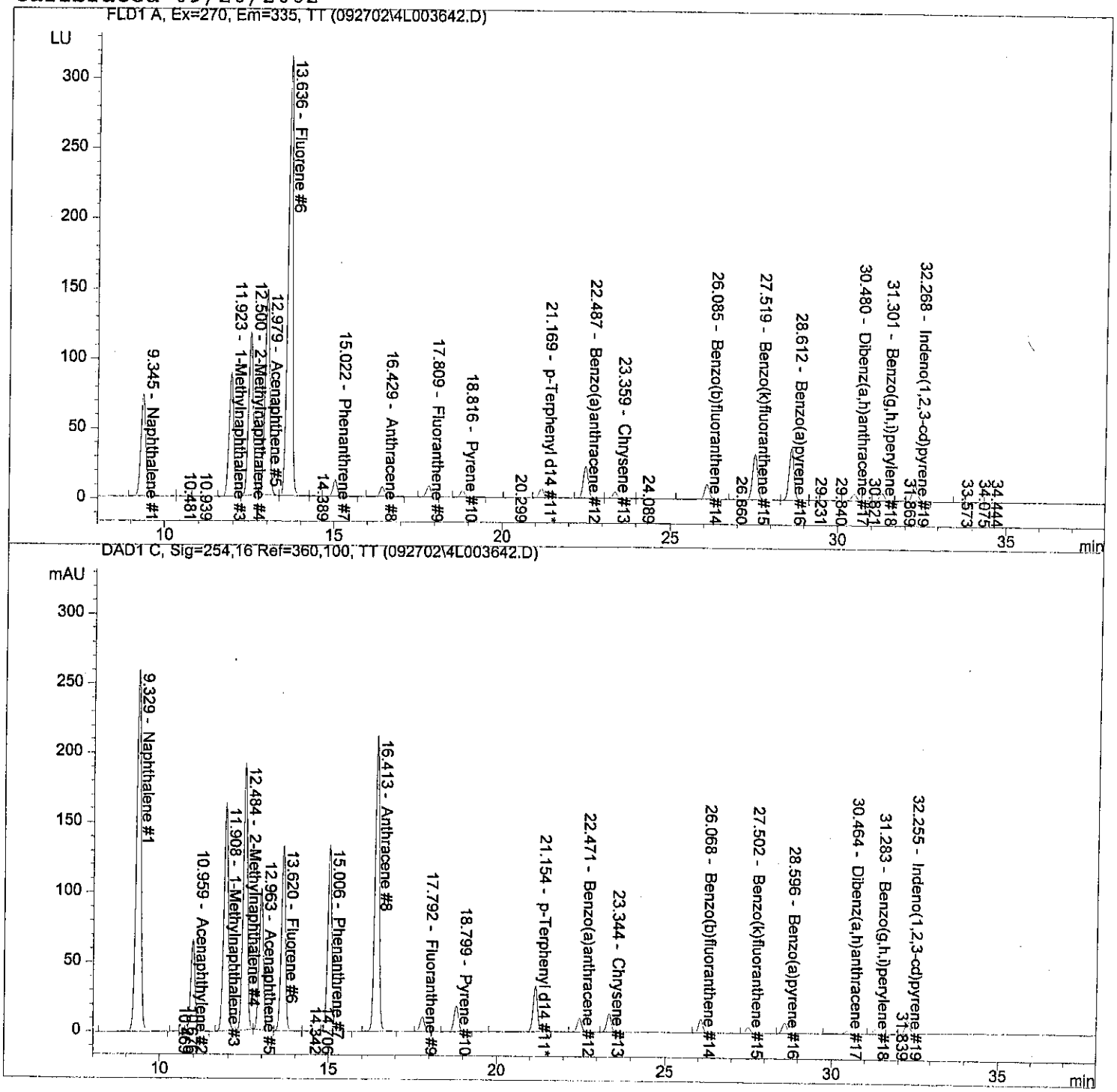
# = Failed 15.0% Criteria

==========

Injection Date : 9/28/2002 2:13:16 PM
Sample Name : WG126189-03 CCV
Acq. Operator : RDC

Seq. Line : 24
Vial : 13
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/28/2002 2:13:37 PM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/30/2002 10:57:44 AM
(modified after loading)
Calibrated 09/20/2002



==========

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 734.18384 | 2.57609e-2 | 18.91322 | | Naphthalene #1 |
| 11.923 | BB | 844.50049 | 2.26045e-2 | 19.08953 | | 1-Methylnaphthalene #3 |
| 12.500 | BB | 1097.27051 | 1.75600e-2 | 19.26809 | | 2-Methylnaphthalene #4 |
| 12.979 | BB | 1393.14941 | 1.39950e-2 | 19.49718 | | Acenaphthene #5 |
| 13.636 | BB | 2971.44165 | 6.74339e-3 | 20.03759 | | Fluorene #6 |
| 15.022 | BBA | 110.30974 | 1.71079e-1 | 18.87164 | | Phenanthrene #7 |
| 16.429 | BBA | 65.65425 | 3.06848e-1 | 20.14587 | | Anthracene #8 |
| 17.809 | PB | 76.33027 | 2.57893e-2 | 1.96850 | | Fluoranthene #9 |
| 18.816 | BBA | 46.70221 | 3.64531e-2 | 1.70244 | | Pyrene #10 |
| 21.169 | BB | 64.30165 | 3.04484e-1 | 19.57881 | | p-Terphenyl d14 #11* |
| 22.487 | BB | 231.30237 | 8.11144e-3 | 1.87620 | | Benzo(a)anthracene #12 |
| 23.359 | BB | 47.45094 | 3.94813e-2 | 1.87342 | | Chrysene #13 |
| 26.085 | BBA | 112.34219 | 1.71376e-2 | 1.92527 | | Benzo(b)fluoranthene #14 |
| 27.519 | BB | 343.05939 | 2.86759e-3 | 9.83755e-1 | | Benzo(k)fluoranthene #15 |
| 28.612 | BB | 382.58804 | 4.79995e-3 | 1.83640 | | Benzo(a)pyrene #16 |
| 30.480 | BB | 45.87802 | 4.01721e-2 | 1.84302 | | Dibenz(a,h)anthracene #17 |
| 31.301 | BB | 64.73683 | 2.64588e-2 | 1.71286 | | Benzo(g,h,i)perylene #18 |
| 32.268 | BB | 133.87988 | 1.46413e-2 | 1.96017 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.08397

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.329 | BBA | 2416.22339 | 8.39215e-3 | 20.27730 | | Naphthalene #1 |
| 10.959 | BBA | 580.99133 | 3.44233e-2 | 19.99964 | | Acenaphthylene #2 |
| 11.908 | PB | 1432.33130 | 1.40062e-2 | 20.06157 | | 1-Methylnaphthalene #3 |
| 12.484 | BB | 1661.97900 | 1.21338e-2 | 20.16613 | | 2-Methylnaphthalene #4 |
| 12.963 | BB | 880.00739 | 2.27900e-2 | 20.05533 | | Acenaphthene #5 |
| 13.620 | BB | 1145.00500 | 1.74849e-2 | 20.02024 | | Fluorene #6 |
| 15.006 | BBA | 1145.26196 | 1.75240e-2 | 20.06953 | | Phenanthrene #7 |
| 16.413 | BBA | 1863.02014 | 1.08081e-2 | 20.13575 | | Anthracene #8 |
| 17.792 | PB | 94.09203 | 2.10453e-2 | 1.98020 | | Fluoranthene #9 |
| 18.799 | BBA | 178.38405 | 1.11408e-2 | 1.98734 | | Pyrene #10 |
| 21.154 | PBA | 297.39642 | 6.69499e-2 | 19.91065 | | p-Terphenyl d14 #11* |
| 22.471 | PBA | 92.82799 | 2.13841e-2 | 1.98505 | | Benzo(a)anthracene #12 |
| 23.344 | BBA | 129.43442 | 1.53726e-2 | 1.98974 | | Chrysene #13 |
| 26.068 | BBA | 96.76061 | 2.04745e-2 | 1.98113 | | Benzo(b)fluoranthene #14 |
| 27.502 | BBA | 42.15440 | 2.35826e-2 | 9.94112e-1 | | Benzo(k)fluoranthene #15 |
| 28.596 | BBA | 73.13522 | 2.68466e-2 | 1.96343 | | Benzo(a)pyrene #16 |
| 30.464 | PBA | 19.97178 | 9.25052e-2 | 1.84749 | | Dibenz(a,h)anthracene #17 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 31.283 | BB | 35.62944 | 5.59295e-2 | 1.99274 | | Benzo(g,h,i)perylene #18 |
| 32.255 | BBA | 99.29555 | 1.99705e-2 | 1.98298 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 199.40035

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 |

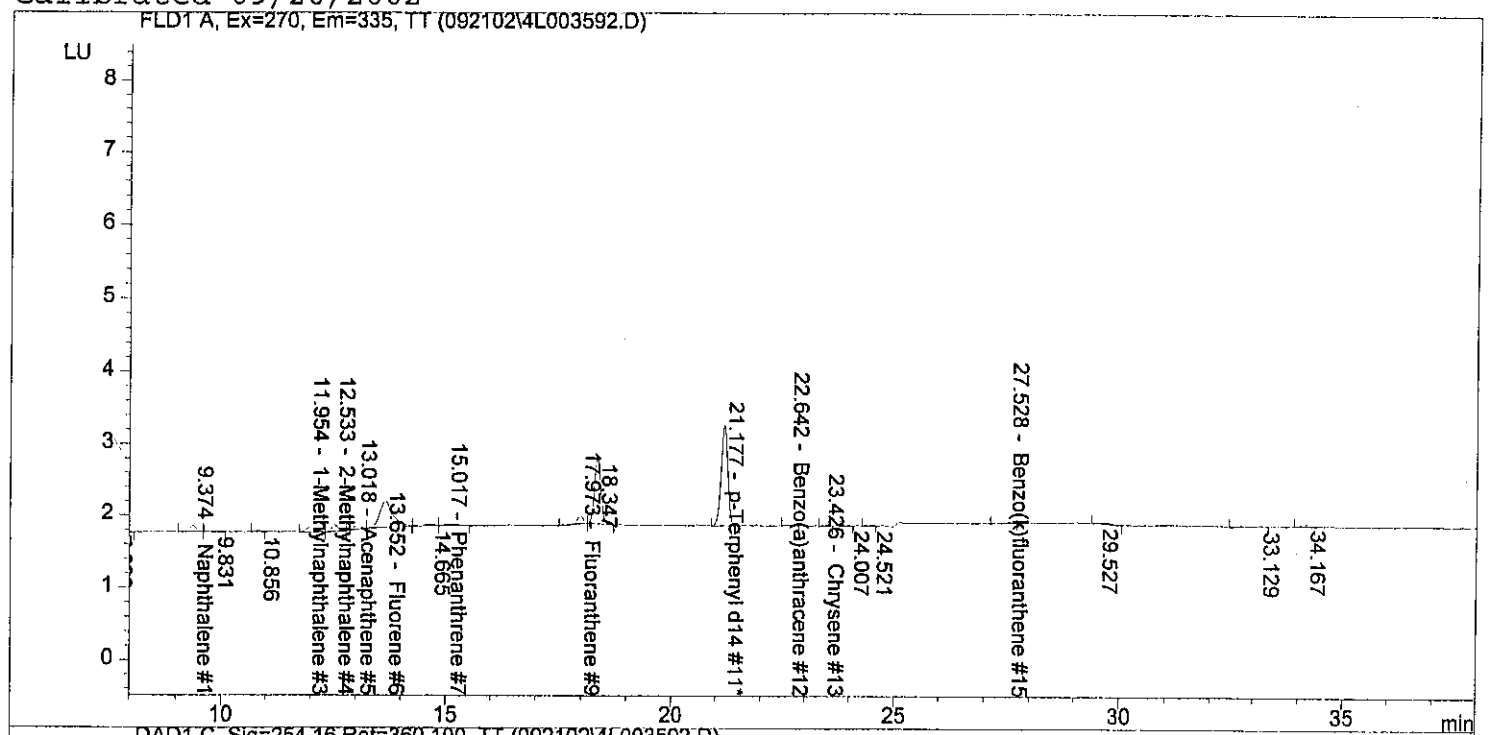
# 2.2.7.4 Raw QC Data

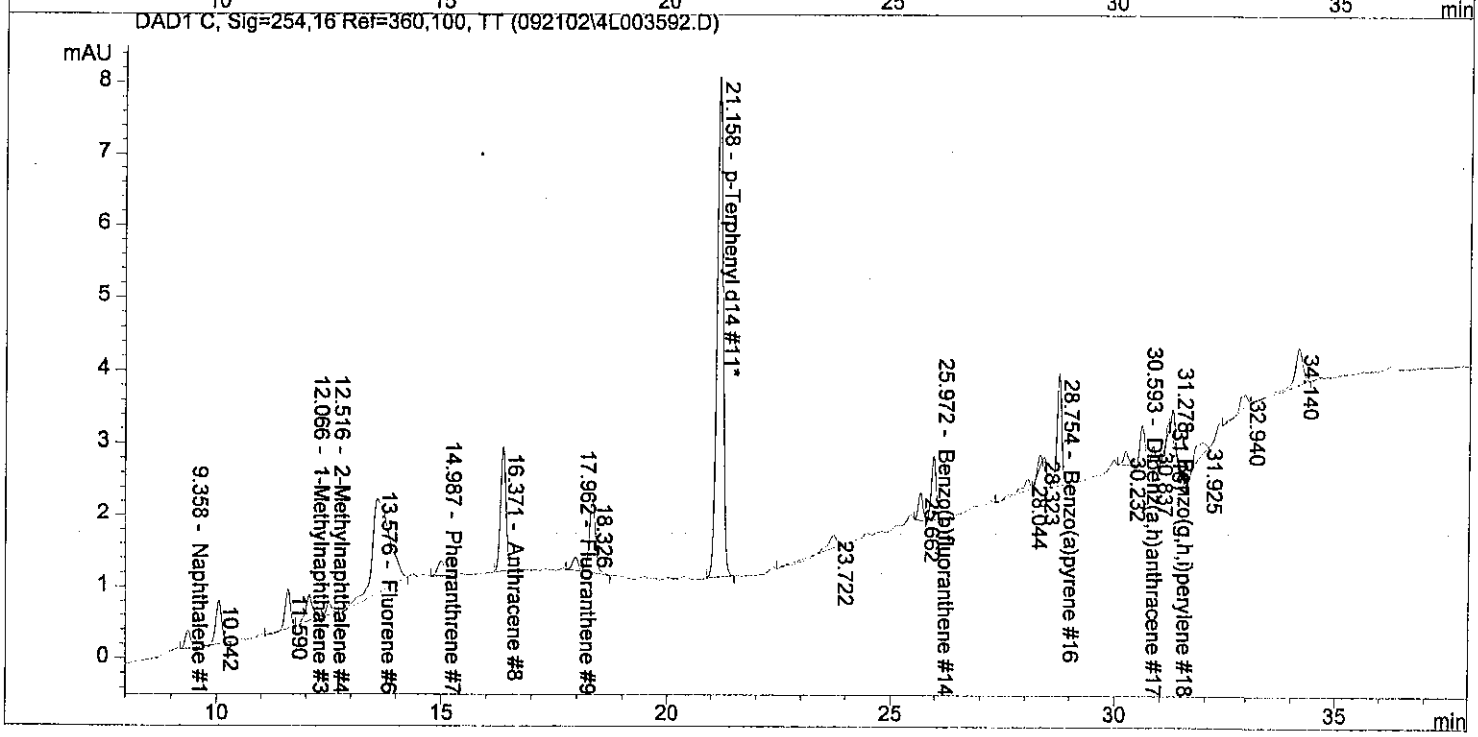
==========

Injection Date : 9/22/2002 4:11:48 AM
Sample Name : WG125616-02 WBLK
Acq. Operator : RDC

Seq. Line : 15
Vial : 15
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 4:11:16 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.374 | BB | 9.20602e-1 | 4.09291e-1 | 3.76794e-1 | | Naphthalene #1 |
| 11.954 | BB | 6.64957e-1 | 5.29024e-1 | 3.51778e-1 | | 1-Methylnaphthalene #3 |
| 12.533 | BB | 8.86726e-1 | 2.96739e-1 | 2.63126e-1 | | 2-Methylnaphthalene #4 |
| 13.018 | BB | 5.65273e-1 | 3.27767e-1 | 1.85278e-1 | | Acenaphthene #5 |
| 13.652 | BB | 7.59753 | 1.23108e-2 | 9.35313e-2 | | Fluorene #6 |
| 15.017 | BBA | 2.59779e-1 | 2.04837 | 5.32122e-1 | | Phenanthrene #7 |
| 16.451 | | - | - | - | | Anthracene #8 |
| 17.973 | PB | 1.05906 | 5.33292e-2 | 5.64786e-2 | P | Fluoranthene #9 |
| 18.835 | | - | - | - | | Pyrene #10 |
| 21.177 | BBA | 13.98228 | 3.19216e-1 | 4.46337 44.66 | | p-Terphenyl d14 #11* |
| 22.642 | BB | 3.04496e-1 | 1.60360e-1 | 4.88289e-2 | | Benzo(a)anthracene #12 |
| 23.426 | BB | 1.77524e-1 | 2.59344e-1 | 4.60398e-2 | | Chrysene #13 |
| 26.109 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.528 | BB | 2.49354e-1 | 5.37255e-2 | 1.33966e-2 | | Benzo(k)fluoranthene #15 |
| 28.637 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.500 | | - | - | - | | Dibenz(a,h)anthracene #17 |
| 31.330 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.292 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.43075

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.358 | BB | 2.25756 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 12.066 | BB | 4.18840 | 5.26668e-2 | 2.20590e-1 cmol | | 1-Methylnaphthalene #3 |
| 12.516 | BB | 1.46516 | 4.88822e-2 | 7.16200e-2 ↓ | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.576 | BB | 35.22351 | 2.26123e-2 | 7.96483e-1 NC | | Fluorene #6 |
| 14.987 | PB | 2.84047 | 8.67833e-2 | 2.46505e-1 cmol | | Phenanthrene #7 |
| 16.371 | BBA | 14.28379 | 1.08645e-2 | 1.55187e-1 ↓ | | Anthracene #8 |
| 17.962 | BB | 1.68250 | 3.99728e-2 | 6.72541e-2 | P | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.158 | BBA | 62.98908 | 7.01366e-2 | 4.41784 44.26 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 25.972 | BB | 7.03358 | 2.47737e-2 | 1.74248e-1 NC | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.754 | BB | 10.93023 | 3.13103e-2 | 3.42229e-1 NC | | Benzo(a)pyrene #16 |
| 30.593 | BB | 3.84991 | 5.23124e-2 | 2.01398e-1 ↓ | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | [ug/L] | | | |
|---|---|---|---|---|---|---|
| 31.278 | BB | 1.09436 | 9.69868e-2 | 1.06139e-1 | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.79949

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), (Naphthalene

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*** End of Report ***

1,1 V191P51 BLK 092602 @ 14:00

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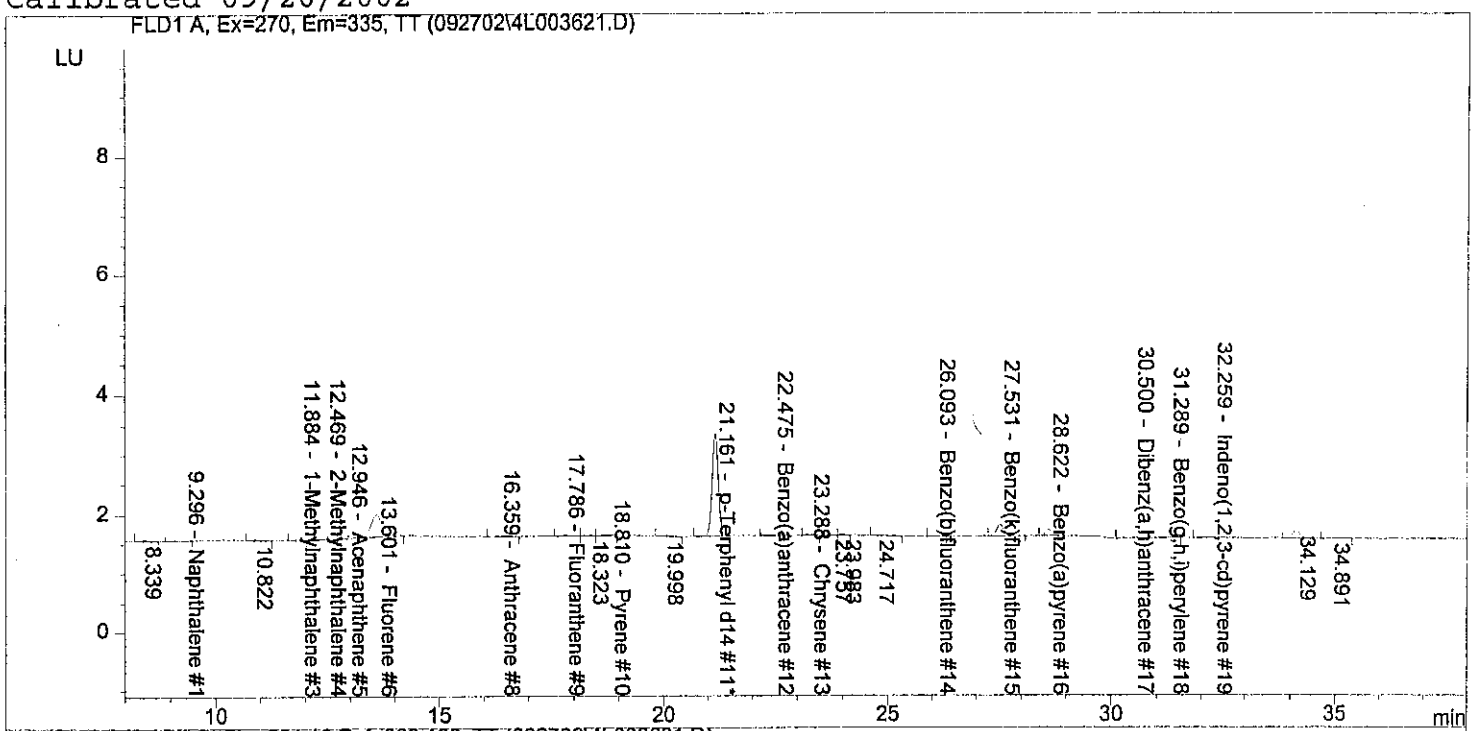
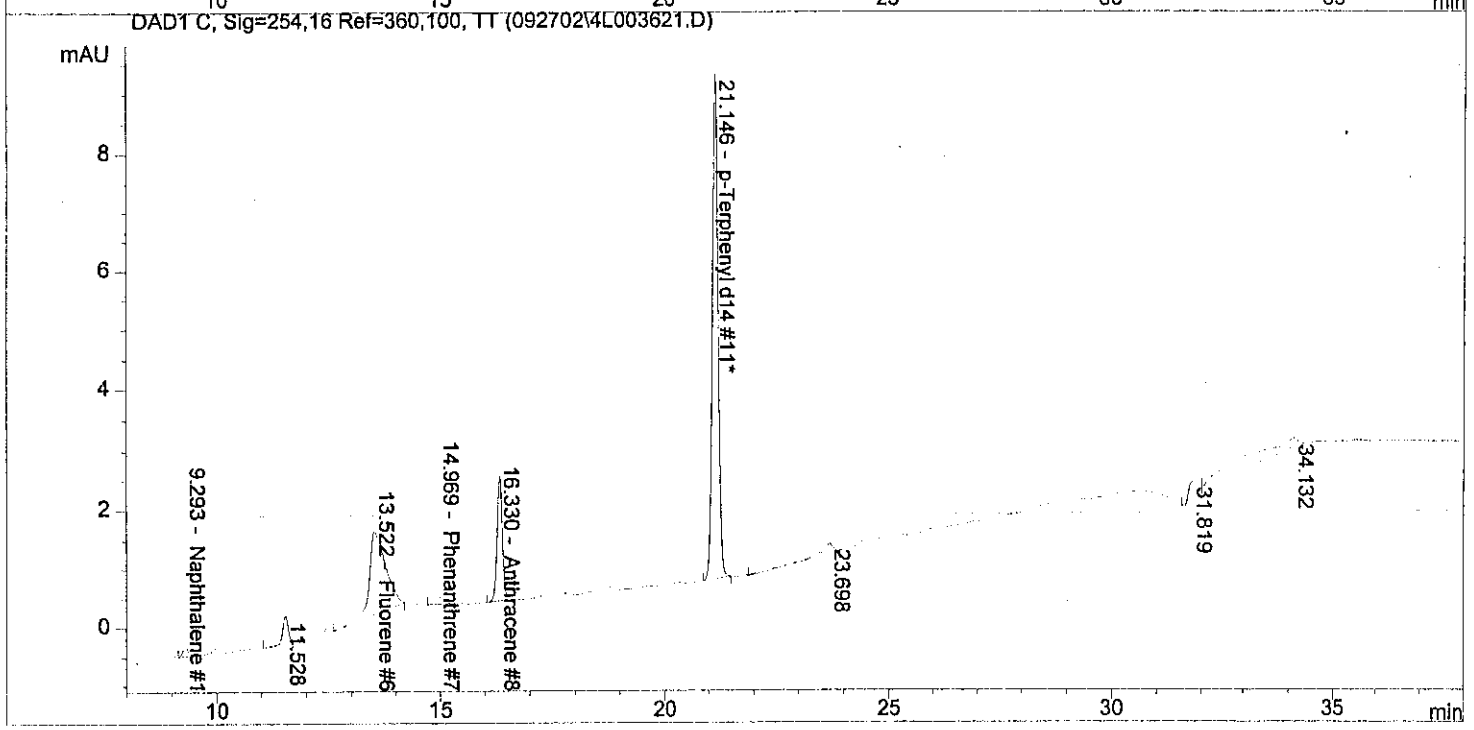
| | | | |
|---|---|---|---|
| Injection Date | : 9/27/2002 6:23:42 PM | Seq. Line : | 3 |
| Sample Name | : WG126062-02 WBLK | Vial : | 3 |
| Acq. Operator | : RDC | Inj : | 1 |
| | | Inj Volume : | 8 µl |

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/16/2002 10:40:15 PM by RDC
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/26/2002 2:16:36 PM
(modified after loading)

Calibrated 09/20/2002



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 |
|---|---|---|---|---|---|---|
| 9.296 | BB | 5.98393e-1 | 6.16065e-1 | 3.68649e-1 | | Naphthalene #1 |
| 11.884 | BB | 3.97275e-1 | 8.70517e-1 | 3.45834e-1 | | 1-Methylnaphthalene #3 |
| 12.469 | BB | 6.45484e-1 | 4.01163e-1 | 2.58945e-1 | | 2-Methylnaphthalene #4 |
| 12.946 | BB | 4.09960e-1 | 4.46688e-1 | 1.83124e-1 | | Acenaphthene #5 |
| 13.601 | BB | 7.70816 | 1.22307e-2 | 9.42758e-2 | | Fluorene #6 |
| 15.046 | | - | - | - | | Phenanthrene #7 |
| 16.359 | PBA | 3.34105e-1 | 6.31418e-1 | 2.10960e-1 | | Anthracene #8 |
| 17.786 | BB | 3.33034e-1 | 1.14212e-1 | 3.80363e-2 | | Fluoranthene #9 |
| 18.810 | BB | 2.37528e-1 | 3.34372e-1 | 7.94226e-2 | | Pyrene #10 |
| 21.161 | BB | 17.08326 | 3.15799e-1 | 5.39488 | | p-Terphenyl d14 #11* |
| 22.475 | BB | 1.06010 | 5.16991e-2 | 5.48063e-2 | | Benzo(a)anthracene #12 |
| 23.288 | BB | 3.26393e-1 | 1.58687e-1 | 5.17944e-2 | | Chrysene #13 |
| 26.093 | BBA | 3.95097e-1 | 1.18219e-1 | 4.67078e-2 | | Benzo(b)fluoranthene #14 |
| 27.531 | BBA | 2.18594 | 8.63625e-3 | 1.88784e-2 | | Benzo(k)fluoranthene #15 |
| 28.622 | BBA | 1.03742 | 6.04271e-2 | 6.26880e-2 | | Benzo(a)pyrene #16 |
| 30.500 | PB | 2.47942e-1 | 3.04217e-1 | 7.54282e-2 | | Dibenz(a,h)anthracene #17 |
| 31.289 | BB | 3.53517e-1 | 2.66671e-1 | 9.42730e-2 | | Benzo(g,h,i)perylene #18 |
| 32.259 | BB | 5.56830e-1 | 7.76547e-2 | 4.32405e-2 | | Indeno(1,2,3-cd)pyrene #1 |
| Totals : | | | | 7.42194 | | |

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.293 | BB | 1.32572 | 0.00000 | 0.00000 | | Naphthalene #1 |
| 10.990 | | - | - | - | | Acenaphthylene #2 |
| 11.936 | | - | - | - | | 1-Methylnaphthalene #3 |
| 12.511 | | - | - | - | | 2-Methylnaphthalene #4 |
| 12.989 | | - | - | - | | Acenaphthene #5 |
| 13.522 | BB | 36.46761 | 2.24318e-2 | 8.18034e-1 NC | | Fluorene #6 |
| 14.969 | PB | 1.52260 | 1.46879e-1 | 2.23638e-1 cmoL | | Phenanthrene #7 |
| 16.330 | PBA | 17.42477 | 1.08543e-2 | 1.89133e-1 cmoL | | Anthracene #8 |
| 17.814 | | - | - | - | | Fluoranthene #9 |
| 18.819 | | - | - | - | | Pyrene #10 |
| 21.146 | PBA | 76.42993 | 6.94256e-2 | 5.30619 | | p-Terphenyl d14 #11* |
| 22.481 | | - | - | - | 53.1% | Benzo(a)anthracene #12 |
| 23.359 | | - | - | - | | Chrysene #13 |
| 26.093 | | - | - | - | | Benzo(b)fluoranthene #14 |
| 27.533 | | - | - | - | | Benzo(k)fluoranthene #15 |
| 28.623 | | - | - | - | | Benzo(a)pyrene #16 |
| 30.497 | | - | - | - | | Dibenz(a,h)anthracene #17 |

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.297 | | - | - | - | | Benzo(g,h,i)perylene #18 |
| 32.289 | | - | - | - | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 6.53700

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), (Naphthalene

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*** End of Report ***

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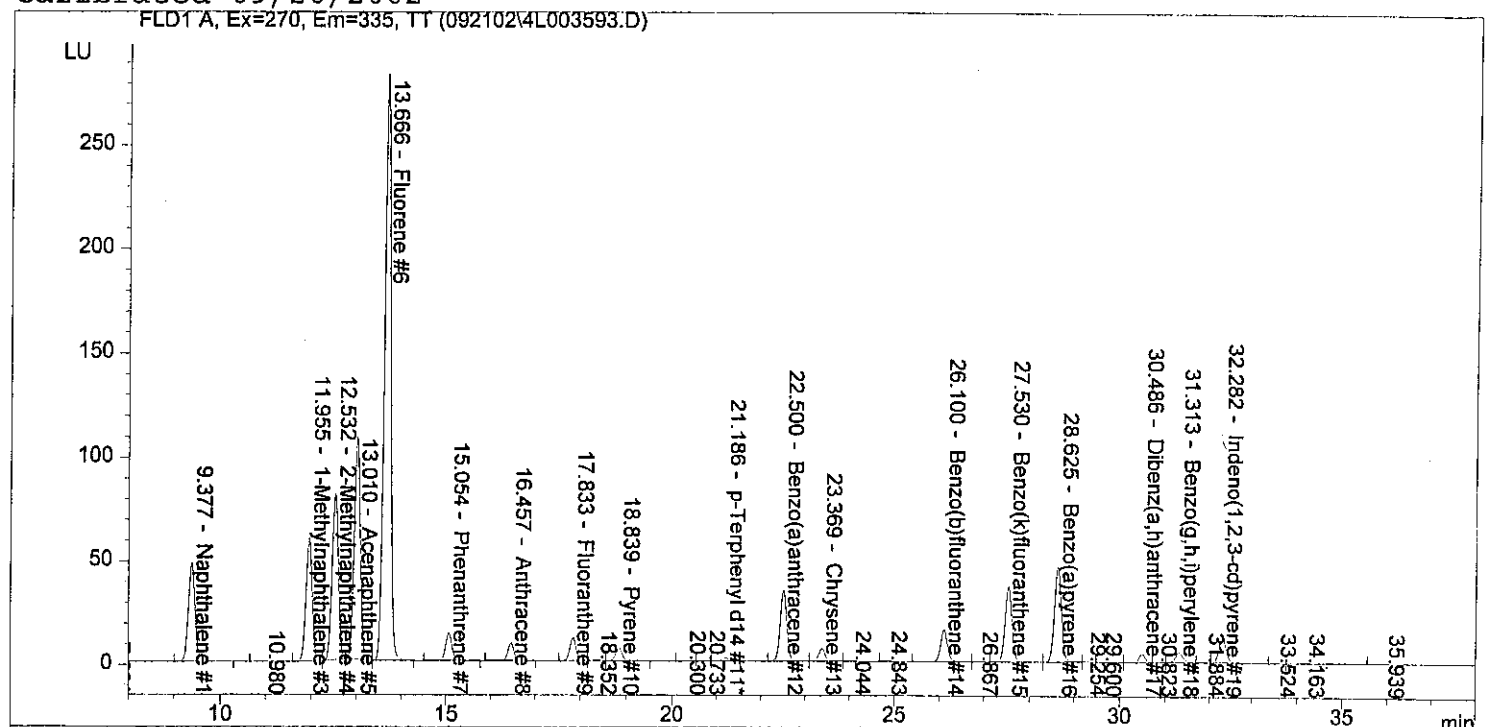
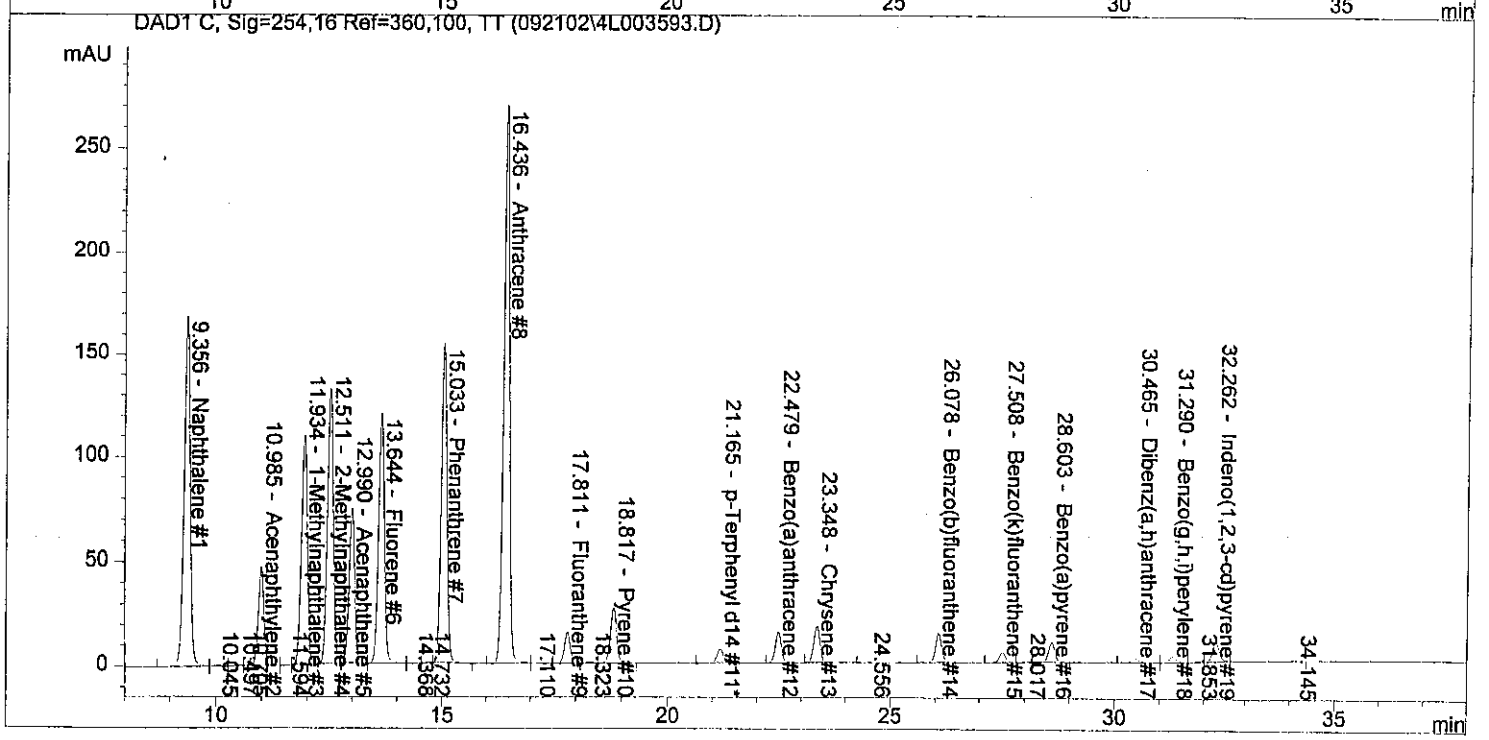
Injection Date : 9/22/2002 5:08:25 AM
Sample Name : WG125616-03 WLCS
Acq. Operator : RDC

Seq. Line : 16
Vial : 16
Inj : 1
Inj Volume : 8 µl

Acq. Method : C:\HPCHEM\2\METHODS\8310.M
Last changed : 9/22/2002 5:07:56 AM by RDC
(modified after loading)
Analysis Method : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M
Last changed : 9/21/2002 3:43:00 PM
Calibrated 09/20/2002



External Standard Report

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Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | 481.33789 | 2.60138e-2 | 12.52144 | | Naphthalene #1 |
| 11.955 | BB | 575.39679 | 2.27912e-2 | 13.11396 | | 1-Methylnaphthalene #3 |
| 12.532 | BB | 765.44128 | 1.76579e-2 | 13.51608 | | 2-Methylnaphthalene #4 |
| 13.010 | BB | 1024.97144 | 1.40408e-2 | 14.39141 | | Acenaphthene #5 |
| 13.666 | BBA | 2710.42554 | 6.74477e-3 | 18.28119 | | Fluorene #6 |
| 15.054 | BBA | 129.29434 | 1.70428e-1 | 22.03537 | | Phenanthrene #7 |
| 16.457 | BBA | 83.99226 | 3.06485e-1 | 25.74241 | | Anthracene #8 |
| 17.833 | PB | 109.94381 | 2.56708e-2 | 2.82235 | | Fluoranthene #9 |
| 18.839 | BBA | 65.85987 | 3.60101e-2 | 2.37162 | | Pyrene #10 |
| 21.186 | BB | 13.65544 | 3.19667e-1 | 4.36520 43.7% | | p-Terphenyl d14 #11* |
| 22.500 | BB | 348.97888 | 8.04377e-3 | 2.80710 | | Benzo(a)anthracene #12 |
| 23.369 | BB | 62.05806 | 3.92869e-2 | 2.43807 | | Chrysene #13 |
| 26.100 | BB | 163.08620 | 1.70266e-2 | 2.77680 | | Benzo(b)fluoranthene #14 |
| 27.530 | BB | 382.44406 | 2.86378e-3 | 1.09524 | | Benzo(k)fluoranthene #15 |
| 28.625 | BB | 480.71851 | 4.76907e-3 | 2.29258 | | Benzo(a)pyrene #16 |
| 30.486 | BB | 39.92503 | 4.03861e-2 | 1.61241 | | Dibenz(a,h)anthracene #17 |
| 31.313 | BB | 56.99602 | 2.66379e-2 | 1.51826 | | Benzo(g,h,i)perylene #18 |
| 32.282 | BB | 137.08499 | 1.46351e-2 | 2.00626 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 145.70774

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.356 | PB | 1589.58997 | 8.37019e-3 | 13.30517 | | Naphthalene #1 |
| 10.985 | BB | 421.01111 | 3.45786e-2 | 14.55796 | | Acenaphthylene #2 |
| 11.934 | BB | 974.23767 | 1.40596e-2 | 13.69734 | | 1-Methylnaphthalene #3 |
| 12.511 | BB | 1163.12378 | 1.21477e-2 | 14.12930 | | 2-Methylnaphthalene #4 |
| 12.990 | BB | 647.83862 | 2.28774e-2 | 14.82086 | | Acenaphthene #5 |
| 13.644 | BB | 1070.72839 | 1.74961e-2 | 18.73362 | | Fluorene #6 |
| 15.033 | BBA | 1341.24805 | 1.74988e-2 | 23.47023 | | Phenanthrene #7 |
| 16.436 | BB | 2406.98706 | 1.08080e-2 | 26.01477 | | Anthracene #8 |
| 17.811 | BB | 135.24704 | 2.09405e-2 | 2.83214 | | Fluoranthene #9 |
| 18.817 | BBA | 253.11058 | 1.10851e-2 | 2.80575 | | Pyrene #10 |
| 21.165 | BBA | 62.74049 | 7.01526e-2 | 4.40141 44.0% | | p-Terphenyl d14 #11* |
| 22.479 | PBA | 140.56660 | 2.12513e-2 | 2.98723 | | Benzo(a)anthracene #12 |
| 23.348 | PBA | 168.73589 | 1.53099e-2 | 2.58334 | | Chrysene #13 |
| 26.078 | BBA | 138.66808 | 2.03727e-2 | 2.82504 | | Benzo(b)fluoranthene #14 |
| 27.508 | BB | 47.22672 | 2.35300e-2 | 1.11125 | | Benzo(k)fluoranthene #15 |
| 28.603 | BBA | 92.45966 | 2.66827e-2 | 2.46707 | | Benzo(a)pyrene #16 |
| 30.465 | BB | 19.48624 | 9.22661e-2 | 1.79792 | | Dibenz(a,h)anthracene #17 |

| [min] | | [mAU*s] | | [ug/L] | | |
|---|---|---|---|---|---|---|
| 31.290 | BB | 31.34413 | 5.61074e-2 | 1.75864 | | Benzo(g,h,i)perylene #18 |
| 32.262 | BB | 102.58334 | 1.99528e-2 | 2.04682 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 166.34583

Results obtained with enhanced integrator!

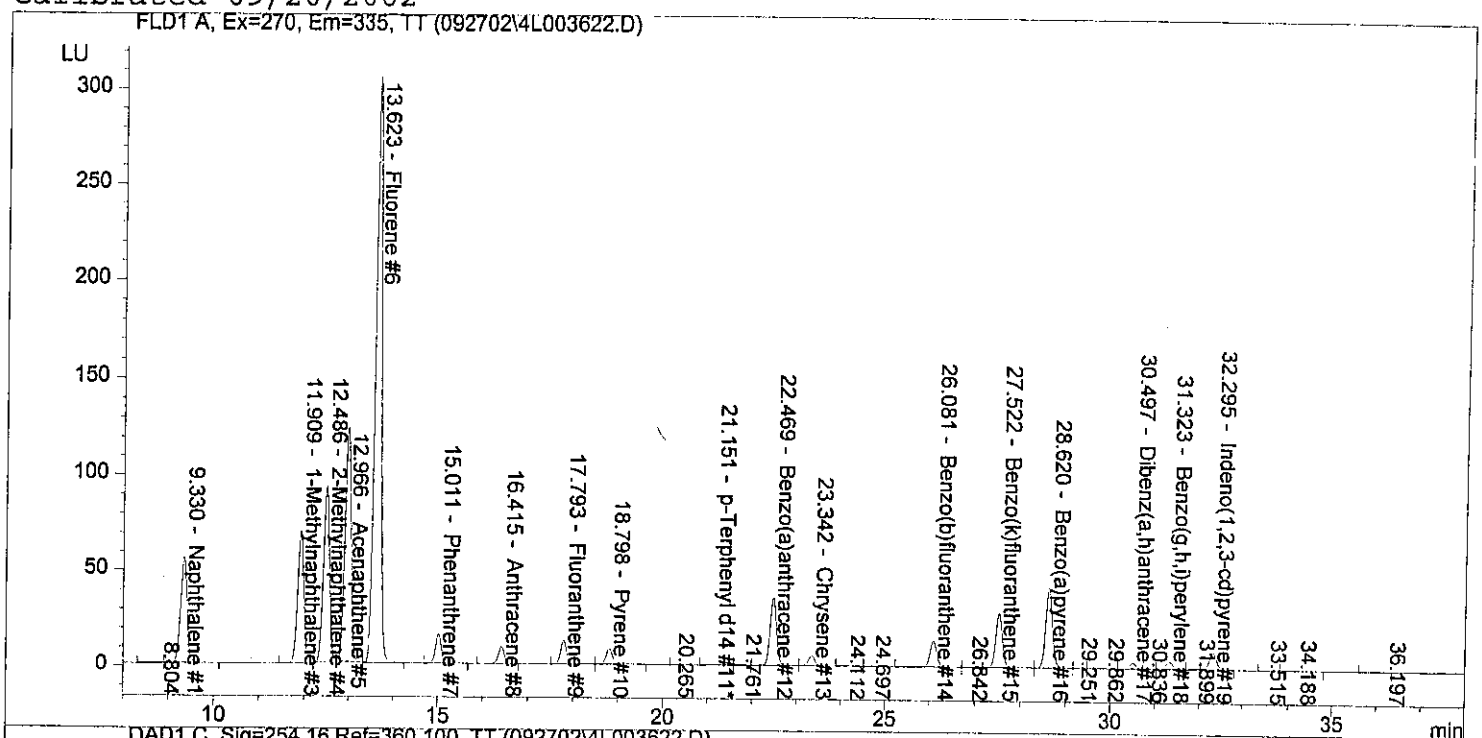
*** End of Report ***

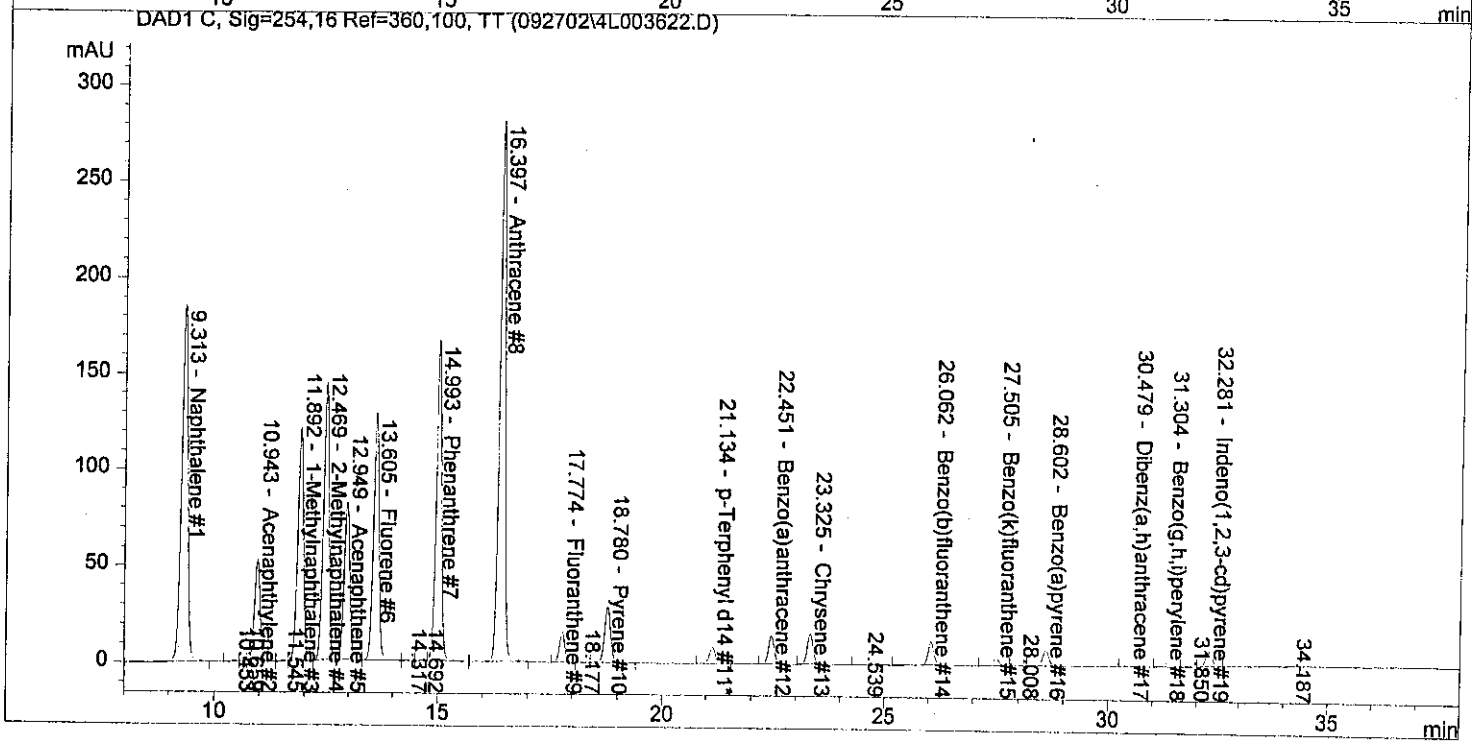
1,1 V191P51 LCS 092602 @ 14:00

==========

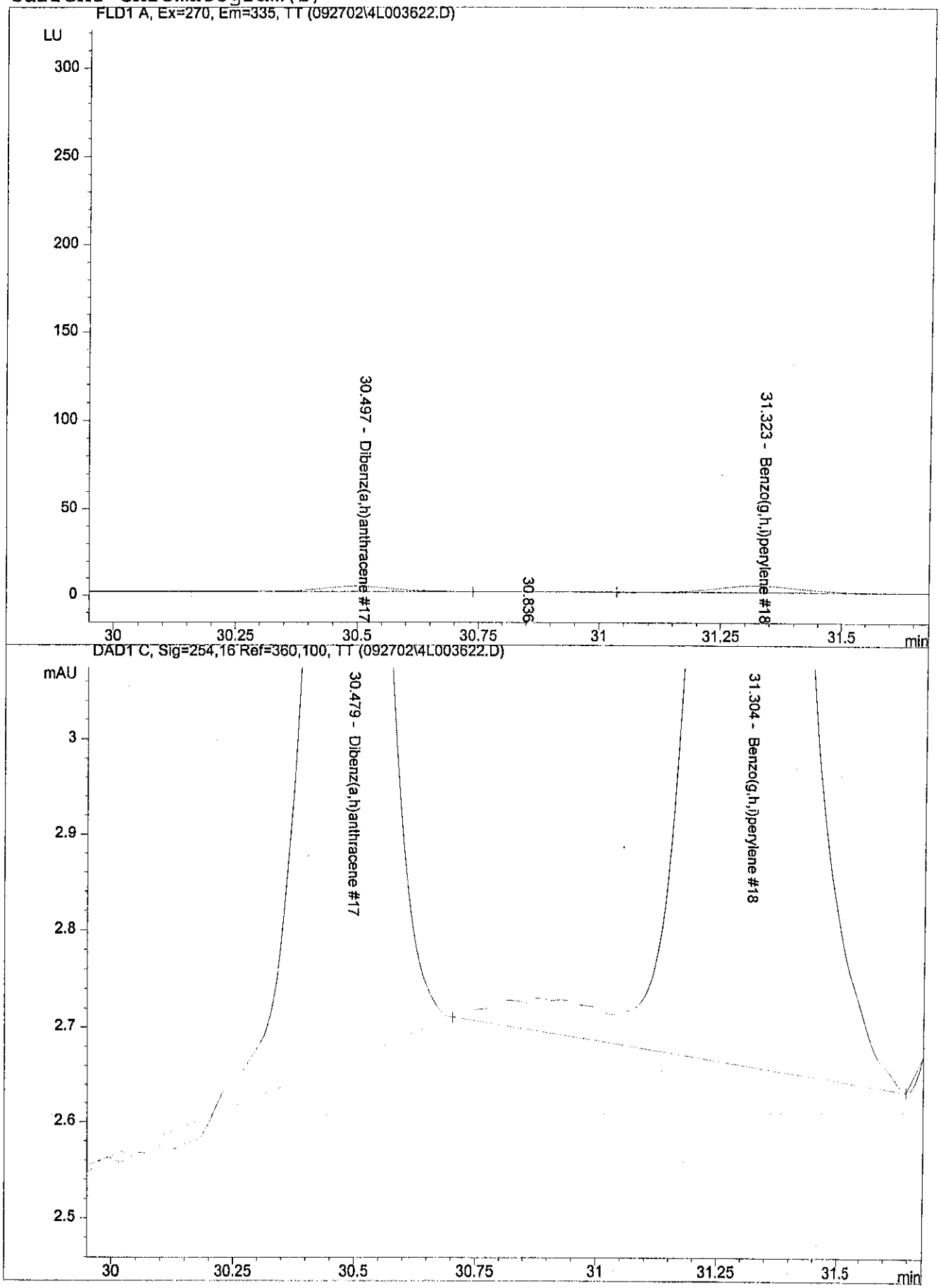
| | | | |
|---|---|---|---|
| Injection Date | : 9/27/2002 7:20:25 PM | Seq. Line | : 4 |
| Sample Name | : WG126062-03 WLCS | Vial | : 4 |
| Acq. Operator | : RDC | Inj | : 1 |
| | | Inj Volume | : 8 µl |
| Acq. Method | : C:\HPCHEM\2\METHODS\8310.M | | |
| Last changed | : 9/16/2002 10:40:15 PM by RDC | | |
| Analysis Method | : C:\HPCHEM\2\METHODS\8310DATA.M\8310DATA.M | | |
| Last changed | : 9/26/2002 2:16:36 PM (modified after loading) | | |

Calibrated 09/20/2002

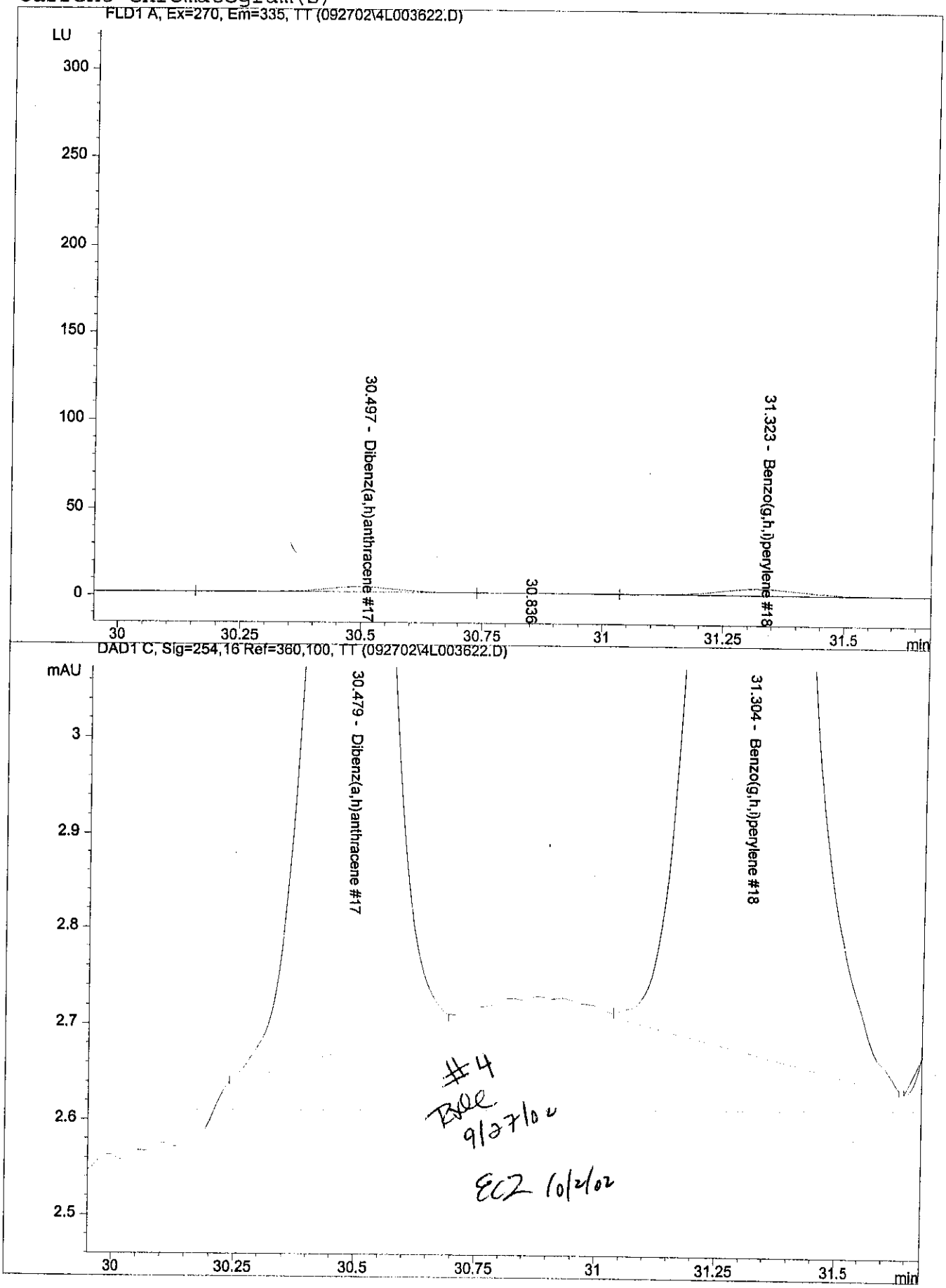


Current Chromatogram(s)



Current Chromatogram(s)




HPLC4 9/27/2002 10:23:20 PM

External Standard Report

Sorted By : Signal
Calib. Data Modified : 9/21/2002 3:41:57 PM
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 | BBA | 556.29346 | 2.59149e-2 | 14.41627 | | Naphthalene #1 |
| 11.909 | BB | 663.57037 | 2.27133e-2 | 15.07189 | | 1-Methylnaphthalene #3 |
| 12.486 | BB | 869.79761 | 1.76191e-2 | 15.32502 | | 2-Methylnaphthalene #4 |
| 12.966 | BB | 1163.09644 | 1.40202e-2 | 16.30688 | | Acenaphthene #5 |
| 13.623 | BB | 2887.73145 | 6.74381e-3 | 19.47430 | | Fluorene #6 |
| 15.011 | BBA | 146.70108 | 1.69979e-1 | 24.93616 | | Phenanthrene #7 |
| 16.415 | BBA | 86.21117 | 3.06452e-1 | 26.41959 | | Anthracene #8 |
| 17.793 | PB | 120.98444 | 2.56463e-2 | 3.10280 | | Fluoranthene #9 |
| 18.798 | BBA | 85.88283 | 3.57583e-2 | 3.07102 | | Pyrene #10 |
| 21.151 | BB | 16.44490 | 3.16397e-1 | 5.20312 | | p-Terphenyl d14 #11* |
| 22.469 | BB | 361.67130 | 8.03910e-3 | 2.90751 | | Benzo(a)anthracene #12 |
| 23.342 | BB | 58.58308 | 3.93244e-2 | 2.30374 | | Chrysene #13 |
| 26.081 | BB | 143.87227 | 1.70594e-2 | 2.45437 | | Benzo(b)fluoranthene #14 |
| 27.522 | BB | 302.88528 | 2.87250e-3 | 8.70038e-1 | | Benzo(k)fluoranthene #15 |
| 28.620 | BB | 439.98453 | 4.78022e-3 | 2.10322 | | Benzo(a)pyrene #16 |
| 30.497 | BB | 31.11422 | 4.08529e-2 | 1.27111 | | Dibenz(a,h)anthracene #17 |
| 31.323 | BB | 47.25027 | 2.69469e-2 | 1.27325 | | Benzo(g,h,i)perylene #18 |
| 32.295 | BB | 102.50812 | 1.47218e-2 | 1.50911 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 158.01940

Results obtained with enhanced integrator!

Signal 2: DAD1 C, Sig=254,16 Ref=360,100, TT

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 9.313 | BB | 1711.46191 | 8.37476e-3 | 14.33308 | | Naphthalene #1 |
| 10.943 | BB | 462.78119 | 3.45277e-2 | 15.97876 | | Acenaphthylene #2 |
| 11.892 | BB | 1056.18018 | 1.40466e-2 | 14.83576 | | 1-Methylnaphthalene #3 |
| 12.469 | BB | 1248.84497 | 1.21445e-2 | 15.16664 | | 2-Methylnaphthalene #4 |
| 12.949 | BB | 704.50922 | 2.28507e-2 | 16.09855 | | Acenaphthene #5 |
| 13.605 | BB | 1125.12170 | 1.74877e-2 | 19.67582 | | Fluorene #6 |
| 14.993 | BB | 1430.84131 | 1.74896e-2 | 25.02483 | | Phenanthrene #7 |
| 16.397 | BBA | 2471.05225 | 1.08080e-2 | 26.70717 | | Anthracene #8 |
| 17.774 | PB | 142.89407 | 2.09277e-2 | 2.99044 | | Fluoranthene #9 |
| 18.780 | BBA | 270.15265 | 1.10767e-2 | 2.99240 | | Pyrene #10 |
| 21.134 | BBA | 76.16551 | 6.94371e-2 | 5.28872 | | p-Terphenyl d14 #11* |
| 22.451 | PBA | 135.10806 | 2.12617e-2 | 2.87263 | | Benzo(a)anthracene #12 |
| 23.325 | PB | 147.17972 | 1.53402e-2 | 2.25776 | | Chrysene #13 |
| 26.062 | BBA | 117.01661 | 2.04162e-2 | 2.38903 | | Benzo(b)fluoranthene #14 |
| 27.505 | BB | 36.73861 | 2.36549e-2 | 8.69047e-1 | | Benzo(k)fluoranthene #15 |
| 28.602 | BB | 77.03605 | 2.68069e-2 | 2.06510 | | Benzo(a)pyrene #16 |
| 30.479 | MM | 11.98877 | 8.61141e-2 | 1.03240 | | Dibenz(a,h)anthracene #17 |

52.96

| RetTime [min] | Type | Area [mAU*s] | Amt/Area | Amount [ug/L] | Grp | Name |
|---|---|---|---|---|---|---|
| 31.304 | MM | 21.80879 | 5.67540e-2 | 1.23774 | | Benzo(g,h,i)perylene #18 |
| 32.281 | BB | 75.29875 | 2.01465e-2 | 1.51700 | | Indeno(1,2,3-cd)pyrene #1 |

Totals : 173.33287

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 | WG125711-01 STD6 | 8310 | 1 | Sample | | |
| 3 | 3 | WG125711-02 STD6 | 8310 | 1 | Sample | | |
| 4 | 4 | WG125711-03 STD5 | 8310 | 1 | Sample | | |
| 5 | 5 | WG125711-04 STD4 | 8310 | 1 | Sample | | |
| 6 | 6 | WG125711-05 STD3 | 8310 | 1 | Sample | | |
| 7 | 7 | WG125711-06 STD2 | 8310 | 1 | Sample | | |
| 8 | 8 | WG125711-07 STD1 | 8310 | 1 | Sample | | |
| 9 | 9 | WG125711-08 ALT | 8310 | 1 | Sample | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003569 | 01:01 ✓ | | accn blk |
| No | 2 | 2 | 8310 | 4L003570 | 02:01 ✓ | SOS 61-07 | WG125711-01 ST |
| No | 3 | 3 | 8310 | 4L003571 | 03:01 ✓ | SOS 59-38 | WG125711-02 ST |
| No | 4 | 4 | 8310 | 4L003572 | 04:01 ✓ | DIL'N OF SOS 61-07/59-38 | WG125711-03 ST |
| No | 5 | 5 | 8310 | 4L003573 | 05:01 ✓ | | WG125711-04 ST |
| No | 6 | 6 | 8310 | 4L003574 | 06:01 ✓ | | WG125711-05 ST |
| No | 7 | 7 | 8310 | 4L003575 | 07:01 ✓ | | WG125711-06 ST |
| No | 8 | 8 | 8310 | 4L003576 | 08:01 ✓ | | WG125711-07 ST |
| No | 9 | 9 | 8310 | 4L003577 | 09:01 ✓ | DIL'N OF SOS 60-26/60-27 | WG125711-08 AL |

RJC 9/21/02

validation

## HPLC Laboratory Maintenance Log

Analysis Date/Time Sept. 20, 200 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092002 A
Analyst Initials RDE SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**

- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**

Yes ____ No ____

**Additional Maintenance**

Problem: _____

Action Taken: _____

**Comments**

NOTE: ACCN in JTBaker Lot #X32823

Reviewed By: [illegible]

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG125769-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG125546-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG125546-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG125546-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG125546-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG125546-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG125769-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | WG125616-02 WBLK | 8310 | 1 | Sample | | |
| 16 | 16 | WG125616-03 WLCS | 8310 | 1 | Sample | | |
| 17 | 17 | L0209310-01 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 19 | 19 | WG125616-01 WREF | 8310 | 1 | Sample | | |
| 20 | 20 | WG125616-04 WMS | 8310 | 1 | Sample | | |
| 21 | 21 | WG125616-05 WMSD | 8310 | 1 | Sample | | |
| 22 | 22 | L0209310-06 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209310-07 831W | 8310 | 1 | Sample | | |
| 24 | 24 | WG125769-03 CCV | 8310 | 1 | Sample | | |
| 25 | 25 | L0209310-08 831W | 8310 | 1 | Sample | | |
| 26 | 26 | L0209310-09 831W | 8310 | 1 | Sample | | |
| 27 | 27 | L0209310-10 831W | 8310 | 1 | Sample | | |
| 28 | 28 | L0209310-11 831W | 8310 | 1 | Sample | | |
| 29 | 29 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 30 | 30 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 31 | 31 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 32 | 32 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 33 | 33 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 34 | 34 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 35 | 35 | WG125769-04 CCV | 8310 | 1 | Sample | | |
| 36 | 36 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 37 | 35 | WG125769-05 CCV | 8310 | 1 | Sample | | |

| | | | | | | | Sample Name |
|---|---|---|---|---|---|---|---|
| | | | | | | | 9/24/02 |
| No | 1 | 1 | 8310 | 4L003578 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003579 | 02:01 | SOS 61-07/59-38 | WG125769-01 CC |
| No | 3 | 3 | 8310 | 4L003580 | 03:01 | | WG125546-02 WB |
| No | 4 | 4 | 8310 | 4L003581 | 04:01 | | WG125546-03 WL |
| No | 5 | 5 | 8310 | 4L003582 | 05:01 | RE, surr. low, LCS | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003583 | 06:01 | RE, same | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003584 | 07:01 | RE, same | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003585 | 08:01 | RE, LCS low | WG125546-01 WR |
| No | 9 | 9 | 8310 | 4L003586 | 09:01 | RE, surr + LCS low | WG125546-04 WM |
| No | 10 | 10 | 8310 | 4L003587 | 10:01 | RE, same | WG125546-05 WM |
| No | 11 | 11 | 8310 | 4L003588 | 11:01 | RE, same | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003589 | 12:01 | RE, ~~surr +~~ LCS low 2nd [illegible] | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003590 | 13:01 | SOS 61-07/59-38 | WG125769-02 CC |
| No | 14 | 14 | 8310 | 4L003591 | 14:01 | RE, LCS low | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003592 | 15:01 | | WG125616-02 WB |
| No | 16 | 16 | 8310 | 4L003593 | 16:01 | | WG125616-03 WL |
| No | 17 | 17 | 8310 | 4L003594 | 17:01 | | L0209310-01 83 |
| No | 18 | 18 | 8310 | 4L003595 | 18:01 | RE, low surr. | L0209310-02 83 |
| No | 19 | 19 | 8310 | 4L003596 | 19:01 | | WG125616-01 WR |
| No | 20 | 20 | 8310 | 4L003597 | 20:01 | | WG125616-04 WM |
| No | 21 | 21 | 8310 | 4L003598 | 21:01 | | WG125616-05 WM |
| No | 22 | 22 | 8310 | 4L003599 | 22:01 | | L0209310-06 83 |
| No | 23 | 23 | 8310 | 4L003600 | 23:01 | | L0209310-07 83 |
| No | 24 | 24 | 8310 | 4L003601 | 24:01 | SOS 61-07/59-37 | WG125769-03 CC |
| No | 25 | 25 | 8310 | 4L003602 | 25:01 | | L0209310-08 83 |
| No | 26 | 26 | 8310 | 4L003603 | 26:01 | | L0209310-09 83 |
| No | 27 | 27 | 8310 | 4L003604 | 27:01 | | L0209310-10 83 |
| No | 28 | 28 | 8310 | 4L003605 | 28:01 | | L0209310-11 83 |
| No | 29 | 29 | 8310 | 4L003606 | 29:01 | RE, low surr. | L0209337-01 83 |
| No | 30 | 30 | 8310 | 4L003607 | 30:01 | RE, same | L0209337-02 83 |
| No | 31 | 31 | 8310 | 4L003608 | 31:01 | RE, same | L0209337-03 83 |
| No | 32 | 32 | 8310 | 4L003609 | 32:01 | RE, same | L0209337-04 83 |
| No | 33 | 33 | 8310 | 4L003610 | 33:01 | RE, same | L0209337-05 83 |
| No | 34 | 34 | 8310 | 4L003611 | 34:01 | RE, same | L0209337-06 83 |
| No | 35 | 35 | 8310 | 4L003612 | 35:01 | SOS 61-07/59-38 | WG125769-04 CC |
| No | 36 | 36 | 8310 | 4L003613 | 36:01 | RE, low surr. | L0209337-07 83 |
| No | 37 | 35 | 8310 | 4L003614 | 37:01 | SOS 61-07/59-38 | WG125769-05 CC |

RQC
9/26/02

EQ 10/1/02

KEMRON ENVIRONMENTAL SERVICES

# HPLC Laboratory Maintenance Log

Analysis Date/Time Sept. 21, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092102
Analyst Initials [illegible] SOP # HPLC01 Rev. # 3 ✓ 8310 SOP # HPLC02 Rev. # ___ ___ 8330

**Daily Check**

- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**

Yes ____ No ____

**Additional Maintenance**

Problem: _____

Action Taken: _____

**Comments**

WG 125769-02 (4L003590) – CCV
-03 (4L003601)
-04 (4L003612)
-05 (4L003613
} pyrene %D >15% for confirming f/. detector / no pyrene detected by UV requires conf.

SDG L0209285 – all sent for RE due to low LCS & surr. on some, in SDG

L0209310-02, L0209337-01 – 07 > sent for RE due to low surr.

Reviewed By: EC 10/1/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG125983-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 4 | 2 | WG125983-~~01~~ 02 CCV | 8310 | 1 | Sample | | |

RAC 9/26/02

RAC 9/26/02

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003615 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003616 | 02:01 | SOS 61-07/59-38 | WG125983-01 CC |
| No | 3 | 3 | 8310 | 4L003617 | 03:01 | | L0209337-01 83 |
| No | 4 | 2 | 8310 | 4L003618 | 04:01 | SOS61-07/59-38 | WG125983-~~01~~ 02 CC |

RPC 9/26/02

RPC 9/26/02

ECZ 10/1/02

REMKON ENVIRONMENTAL SERVICES

# HPLC Laboratory Maintenance Log

Analysis Date/Time Sept. 25, 2002 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092502
Analyst Initials RDC SOP # HPLC01 Rev. # 2 / 8310 SOP # HPLC02 Rev. # ___ / 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure _____
- ☑ Waste container

**Returned to Control?**
Yes ____ No _____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Ending CCV failed low for benzo(g,h,i) perylene by FLD. Analyte was not needed. RDC

Reviewed By: EC 10/1/02

Sequence Table:

Method and Injection Info Part:

| Line | Vial | SampleName | Method | Inj | SampleType | InjVolume | DataFile |
|---|---|---|---|---|---|---|---|
| 1 | 1 | accn blk | 8310 | 1 | Sample | | |
| 2 | 2 | WG126189-01 CCV | 8310 | 1 | Sample | | |
| 3 | 3 | WG126062-02 WBLK | 8310 | 1 | Sample | | |
| 4 | 4 | WG126062-03 WLCS | 8310 | 1 | Sample | | |
| 5 | 5 | L0209285-01 831W | 8310 | 1 | Sample | | |
| 6 | 6 | L0209285-02 831W | 8310 | 1 | Sample | | |
| 7 | 7 | L0209285-03 831W | 8310 | 1 | Sample | | |
| 8 | 8 | WG126062-01 WREF | 8310 | 1 | Sample | | |
| 9 | 9 | WG126062-04 WMS | 8310 | 1 | Sample | | |
| 10 | 10 | WG126062-05 WMSD | 8310 | 1 | Sample | | |
| 11 | 11 | L0209285-07 831W | 8310 | 1 | Sample | | |
| 12 | 12 | L0209285-08 831W | 8310 | 1 | Sample | | |
| 13 | 13 | WG126189-02 CCV | 8310 | 1 | Sample | | |
| 14 | 14 | L0209285-09 831W | 8310 | 1 | Sample | | |
| 15 | 15 | L0209310-02 831W | 8310 | 1 | Sample | | |
| 16 | 16 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 17 | 17 | L0209337-02 831W | 8310 | 1 | Sample | | |
| 18 | 18 | L0209337-03 831W | 8310 | 1 | Sample | | |
| 19 | 19 | L0209337-04 831W | 8310 | 1 | Sample | | |
| 20 | 20 | L0209337-05 831W | 8310 | 1 | Sample | | |
| 21 | 21 | L0209337-06 831W | 8310 | 1 | Sample | | |
| 22 | 22 | L0209337-07 831W | 8310 | 1 | Sample | | |
| 23 | 23 | L0209337-01 831W | 8310 | 1 | Sample | | |
| 24 | 13 | WG126189-03 CCV | 8310 | 1 | Sample | | |

Pall 9/27/02

| Set | Run | Vial | Method | Datafile | Seqtable | Calib.Kf.Kt | Sample Name |
|---|---|---|---|---|---|---|---|
| No | 1 | 1 | 8310 | 4L003619 | 01:01 | | accn blk |
| No | 2 | 2 | 8310 | 4L003620 | 02:01 | SOS 61-07/59-38 | WG126189-01 CC |
| No | 3 | 3 | 8310 | 4L003621 | 03:01 | | WG126062-02 WB |
| No | 4 | 4 | 8310 | 4L003622 | 04:01 | | WG126062-03 WL |
| No | 5 | 5 | 8310 | 4L003623 | 05:01 | | L0209285-01 83 |
| No | 6 | 6 | 8310 | 4L003624 | 06:01 | | L0209285-02 83 |
| No | 7 | 7 | 8310 | 4L003625 | 07:01 | | L0209285-03 83 |
| No | 8 | 8 | 8310 | 4L003626 | 08:01 | | WG126062-01 WR |
| No | 9 | 9 | 8310 | 4L003627 | 09:01 | | WG126062-04 WM |
| No | 10 | 10 | 8310 | 4L003628 | 10:01 | | WG126062-05 WM |
| No | 11 | 11 | 8310 | 4L003629 | 11:01 | | L0209285-07 83 |
| No | 12 | 12 | 8310 | 4L003630 | 12:01 | | L0209285-08 83 |
| No | 13 | 13 | 8310 | 4L003631 | 13:01 | SOS 61-07/59-38 | WG126189-02 CC |
| No | 14 | 14 | 8310 | 4L003632 | 14:01 | | L0209285-09 83 |
| No | 15 | 15 | 8310 | 4L003633 | 15:01 | | L0209310-02 83 |
| No | 16 | 16 | 8310 | 4L003634 | 16:01 | | L0209337-01 83 |
| No | 17 | 17 | 8310 | 4L003635 | 17:01 | | L0209337-02 83 |
| No | 18 | 18 | 8310 | 4L003636 | 18:01 | | L0209337-03 83 |
| No | 19 | 19 | 8310 | 4L003637 | 19:01 | | L0209337-04 83 |
| No | 20 | 20 | 8310 | 4L003638 | 20:01 | | L0209337-05 83 |
| No | 21 | 21 | 8310 | 4L003639 | 21:01 | | L0209337-06 83 |
| No | 22 | 22 | 8310 | 4L003640 | 22:01 | | L0209337-07 83 |
| No | 23 | 23 | 8310 | 4L003641 | 23:01 | | L0209337-01 83 |
| No | 24 | 13 | 8310 | 4L003642 | 24:01 | SOS 61-07/59-38 | WG126189-03 CC |

RJRC 9/30/02

EC2 10/2/02

**KEMRON ENVIRONMENTAL SERVICES**
**HPLC Laboratory Maintenance Log**

Analysis Date/Time Sept. 27/02 Instrument ID HPLC4 Column ID LC-PAH Data Subdirectory 092702
Analyst Initials RJC SOP # HPLC01 Rev. # 2 ✓ 8310 SOP # HPLC02 Rev. # ____ 8330

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 110 bar
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
Problem: _____

Action Taken: _____

**Comments**

Re-extracts out of hold — not uploaded

Reviewed By: ECZ 10/2/02

Volume 191
Page 15

Parameter: 8310 - $H_2O$ SOP #: EXHPLCL Revision #: 6
Extraction Analyst(s): DP TV/KD Analyst(s): CAF, DP
Date/Time Extracted: 09/19/02@1120 Date TV/KD: 09/19/02
Spike/Surrogate Analyst: DP Witness: CAF
Surrogate #: ESS0042-21 Earliest Hold Date: 09/24/02
Spike #: A = ESS004279 Spike #: B = —

Extraction Work Group WG 125616
Analytical Work Group WG 125710

Extract Relinquished By: DCM
Extract Received By & Date: CAF 9/20/02

| | Sample ID | Test Code | pH a <2 | pH a N | pH a >12 | Initial Vol / Wt | Amount Surrogate | Amount Spike | Final Volume | Extract Color | Emulsions a A | Emulsions a BN | Emulsions a N | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Blank | | | ✓ | | 1000 mL | 100 µL | | 1 mL | T | | | | WG125616-02 |
| 2 | LCS | | | ✓ | | ⊥ | ⊥ | 500 µL | ⊥ | ⊥ | | | | WG ⊥ -03 |
| 3 | 09-310-01 | 8310 | | ✓ | | 960 mL | | | | | | | | |
| 4 | -02 | ⊥ | | ✓ | | 970 mL | | | | | | | | |
| 5 | -03 | | | ✓ | | 1000 mL | | | | | | | | WG125616-01 |
| 6 | -04/MS | | | ✓ | | 960 mL | | 500 µL | | | | | | ⊥ -04 ✓ |
| 7 | -05/MSD | | | ✓ | | 1000 mL | | ⊥ | | | | | | ⊥ -05 ✓ |
| 8 | -06 | | | ✓ | | 950 mL | | | | | | | | |
| 9 | -07 | | | ✓ | | 960 mL | | | | | | | | |
| 10 | -08 | | | ✓ | | 960 mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950 mL | | | | | | | | |
| 12 | -10 | | | ✓ | | 1000 mL | | | | ⊥ | | | | |
| 13 | ⊥ -11 | ⊥ | | ✓ | | 920 mL | | | | C | | | | |
| 14 | 09-337-01 | 8310 | | ✓ | | 1000 mL | | | | T | | | | * |
| 15 | -02 | | | ✓ | | 940 mL | | | | | | | | * |
| 16 | -03 | | | ✓ | | 930 mL | | | | | | | | * |
| 17 | -04 | | | ✓ | | 1000 mL | | | | | | | | * |
| 18 | -05 | | | ✓ | | 960 mL | | | | | | | | * |
| 19 | -06 | | | ✓ | | 1000 mL | | | | | | | | * |
| 20 | -07 | ⊥ | | ✓ | | 940 mL | ⊥ | | ⊥ | ⊥ | | | | * |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

9/26

9/26

DP 09/19/02

Methylene Chloride Lot #: 42084
Hexane Lot #: —
Ether Lot #: —
Methanol Lot #: —
Solvent: Acetonitrile Lot #: 41264
Reagent: Fortified Lot #: CR2254
Reagent: — Lot #: —
Reagent: — Lot #: —
Acid: — Lot #: —
Florisil Lot #: —
Silica Gel Lot #: —
IR Analyst / Date / Time: —
Dried $Na_2SO_4$ Lot #: CR2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: [signature] Date: 9/20/02

Extraction Notes For Volume # 191 Page # 015

General Comments: * ~~Extract~~ Sample required pH adjustment (increase) to achieve a pH in the desired neutral range (5-9). Sample changed color when NaOH was added to raise the pH. 1N NaOH → ER 2255

* MS, MSD OE 09-310-03

Extraction Anomalies: None

Concentration Anomalies: None

Clean-Up Anomalies: — NA —

Supervisor Review: _____ Date: _____

Parameter: 8310 HPLC SOP #: EXHPLC1 Revision #: 6
Extraction Analyst(s): RCH TV/KD Analyst(s): DDP
Date/Time Extracted: 9/26/02 1400 Date TV/KD: 09/26/02
Spike/Surrogate Analyst: RCH Witness: DDP
Surrogate #: ES00042-21 Earliest Hold Date: OCT
Spike #: A = ES00042-19 Spike #: B = —

Extraction Work Group WG 126062
Analytical Work Group WG 126254
Extract Relinquished By: RCH
Extract Received By & Date: EC 9/27/02

| | 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 | | | ✓ | | 1000mL | 100ul | | 1mL | T | | | | WG 126062-02 |
| 2 | LCS | | | ✓ | | ⊥ | | 500ul | | | | | | WG ⊥ -03 |
| 3 | 09-285-01 | 8310 | | ✓ | | 940mL | | | | | | | | Re-ext ocr/hrD |
| 4 | -02 | | | ✓ | | 970mL | | | | | | | | |
| 5 | -03 | | | ✓ | | 915 mL | | | | | | | | |
| 6 | -04 | | | ✓ | | 975mL | | | | | | | | |
| 7 | -05MS | | | ✓ | | 950 mL | | 500ul | | | | | | WG 126062-01 |
| 8 | -06MSD | | | ✓ | | 950mL | | ⊥ | | | | | | ⊥ -04 |
| 9 | -07 | | | ✓ | | 950mL | | | | | | | | ⊥ -05 |
| 10 | -08 | | | ✓ | | 925mL | | | | | | | | |
| 11 | -09 | | | ✓ | | 950mL | | | | | | | | |
| 12 | 09-31002 | | | ✓ | | 1000mL | | | | ⊥ | | | | * |
| 13 | 09-337-01 | | | ✓ | | 970mL | | | | C | | | | |
| 14 | -02 | | | ✓ | | ⊥ | | | | T | | | | *⊗ |
| 15 | -03 | | | ✓ | | 950mL | | | | | | | | *⊗ |
| 16 | -04 | | | ✓ | | 960mL | | | | | | | | *⊗ |
| 17 | -05 | | | ✓ | | 950mL | | | | | | | | *⊗ |
| 18 | -06 | | | ✓ | | 970mL | | | | | | | | |
| 19 | -07 | ⊥ | | | | 960mL | ⊥ | | ⊥ | ⊥ | | | | ⊥ |
| 20 | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | |
| 22 | | | | | | | | DDP 09/26/02 | | | | | | |
| 23 | | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | | |

ethylene Chloride Lot #: 42084
xane Lot #: —
ner Lot #: —
ethanol Lot #: —
lvent: CH3CN Lot #: 41264
agent: Fuor. Sol. Lot #: EL 2254
agent: — Lot #: —
agent: — Lot #: —
id: — Lot #: —
risil Lot #: —
ca Gel Lot #: —
Analyst / Date / Time: —
ed $Na_2SO_4$ Lot #: EL2211

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 3665A | | N/A | ✓ |
| Sulfur 3660B | | | |

Peer Reviewed By: _____ Date: _____

Extraction Notes For Volume # 191 Page # 51

General Comments: None

Extraction Anomalies: 9/36 Sample ~~# Extract~~ required pH adjustment to achieve a neutral pH (5 to 9). (*) 9 Sample changed color when 10N NaOH (SR2262) was added to adjust ~~the~~ the pH.

Concentration Anomalies: None

Clean-Up Anomalies: N/A

Supervisor Review: _____ Date: _____

Run Date: 20-Sep-02

Analyst: RDC

Instrument: HPLC4

Workorders: Due Date: Priority:

RECALIBRATION....

| | | 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 | |
| | 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: | |

Primary Reviewer: RDC 9/26/02

Secondary Reviewer: [illegible] 9/26/02

Supervisor Review: [illegible] 9/26/02

√
NA

# Semi-Volatile 8310 Checklist

Run Date: 21-Sep-02

Analyst: RDC

Instrument: HPLC4

| Workorders: | Due Date: | Priority: |
|---|---|---|
| WG125709 09-285 | 9/27/2002 | |
| WG125710 09-310 | 9/30/2002 | |
| WG125710 09-337 | 9/26/2002 | |

| | | 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 | √ |
| | Excel Spreadsheet | √ |
| Samples: | TCL Hits | √ |
| | Surrogates | √ |
| | Correct Factors | √ |
| | Dilutions | √ |
| | Check Sample Histories | NA |
| | Corrective Action | √ |
| Data Package: | Level 2 | |
| | Level 3 | |
| | Level 4 | |
| | Case narrative | |

All L029285 SDG sent for RE due to low LCS and low surrogates on some fractions.

L0209310-02 and all of SDG L0209337 sent for re-ext. due to low surr.

L0209337-01 needs 10X....

| | 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: | |

Primary Reviewer: TQC 9/30/02

Secondary Reviewer: ECR 10/1/02

Supervisor Review: [illegible]

√
NA

Run Date: 25-Sep-02

Analyst: RDC

Instrument: HPLC4

(dil'n)

| Workorders: | Due Date: | Priority: |
|---|---|---|
| WG125710 09-337 | 9/26/2002 | |

| | | 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 | NA |
| | Surrogates | NA |
| Laboratory Control Sample: | Quant Report/Chromatogram | NA |
| | Surrogates | NA |
| | Spike Compounds | NA |
| | MS/MSD | NA |
| | Excel Spreadsheet | NA |
| Samples: | TCL Hits | √ |
| | Surrogates | √ |
| | Correct Factors | √ |
| | Dilutions | √ |
| | 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: | |

Primary Reviewer: RDC 9/30/02

Secondary Reviewer: EQ 10/1/02

Supervisor Review: [illegible]

√
NA

Run Date: 27-Sep-02

Analyst: RDC

Instrument: HPLC4

| Workorders: | Due Date: | Priority: |
|---|---|---|
| WG126256 09-285 | 9/27/2002 | |
| WG126256 09-310 | 9/30/2002 | |
| WG126256 09-337 | 9/26/2002 | |

| | | 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 | NA |
| Samples: | TCL Hits | √ |
| | Surrogates | √ |
| | Correct Factors | √ |
| | Dilutions | √ |
| | 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: | |

Re-extractions out of holding time.....

LCS and BLANK met all acceptance criteria.

Several samples yet failed surrogate low....

Primary Reviewer: TRC 10/1/02

Secondary Reviewer: ECZ 10/2/02

Supervisor Review: [illegible] 10/2/02

√

NA

**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.: L0209337**

**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 of the samples were initially screened at dilutions to rule out matrix interference that result in poor orthophoshate recovery. The samples were then reanalyzed at lesser dilutions if possible. The dilution reported is the safest most undiluted result that would not affect the integrity of the analytical column.

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: dlh DATE: 9/26/02

Rev. 7/14/00

**ANIONS (9056)**

**Login Number** L0209337

**A. QC Summary**

✓ Method Blank Summary
✓ Method Blank Results
✓ Laboratory Control Sample (LCS)
NA Matrix Spike/Matrix Spike Duplicate (MS/MSD)
NA 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: 9/26/02

# 2.4.5.1 QC Summary

KEMRON ENVIRONMENTAL SERVICES

METHOD BLANK SUMMARY

Login Number: L0209337
Blank File ID: 091902.11
Date Analyzed: 09/19/02
Time Analyzed: 13:34
Analyst: JWR

Work Group: WG125720
Blank Sample ID: WG125720-01
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 | WG125720-02 | 091902.12 | 09/19/02 13:45 | 01 |
| DUP | WG125720-04 | 091902.17 | 09/19/02 14:43 | 01 |
| 062-CEF46-6D-Q3-02-20 | L0209337-03 | 091902.33 | 09/19/02 17:48 | DL01 |
| 062-CEF46-5I-Q3-02-20 | L0209337-02 | 091902.34 | 09/19/02 18:00 | DL01 |
| 062-CEF46-26I-Q3-02-20 | L0209337-07 | 091902.35 | 09/19/02 18:11 | DL01 |
| 062-CEF46-25I-Q3-02-20 | L0209337-06 | 091902.36 | 09/19/02 18:23 | DL01 |
| 062-CEF46-21I-Q3-02-20 | L0209337-04 | 091902.37 | 09/19/02 18:34 | DL01 |
| 062-CEF46-24D-Q3-02-20 | L0209337-05 | 091902.38 | 09/19/02 18:46 | 01 |
| 062-CEF46-1S-Q3-02-20 | L0209337-01 | 091902.39 | 09/19/02 18:57 | 01 |

KEMRON ENVIRONMENTAL SERVICES
BLANK REPORT

Login Number: L0209337
Run Date: 09/19/2002
Sample ID: WG125720-01
Instrument ID: IC2
Run Time: 13:34
Method: 9056
File ID: 091902.11
Analyst: JWR
Matrix: Water
Workgroup (AAB#): WG125720
Units: mg/L
Contract #:
Cal ID: IC2-

| Analytes | MDL | RDL | 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 |

* Analyte detected above RDL

ND Not detected at or above the reporting limit

KEMRON FORMS - Modified 09/10/2002
Version 1.2
Report generated 09/24/2002 16:58

KEMRON ENVIRONMENTAL SERVICES
LABORATORY CONTROL SAMPLE

Login Number: L0209337
Run Date: 09/19/2002
Sample ID: WG125720-02
Instrument ID: IC2
Run Time: 13:45
Method: 9056
File ID: 091902.12
Analyst: JWR
Matrix: Water
Workgroup (AAB#): WG125720
Units: mg/L
Contract #:
Cal ID: IC2

| Analytes | Expected | Found | % Rec | LCS Limits | Q |
|---|---|---|---|---|---|
| Nitrate | 4.07 | 4.35 | 107 | 90 - 110 | |
| Nitrite | 3.65 | 3.65 | 99.8 | 90 - 110 | |
| Phosphate | 9.78 | 10.1 | 103 | 90 - 110 | |

KEMRON FORMS - Modified 09/10/2002
Version 1.3
Report generated 09/24/2002 16:59

KEMRON ENVIRONMENTAL SERVICES
HOLDING TIMES
EQUIVALENT TO AFCEE FORM 8

Analytical Method: 9056

Login Number: L0209337

AAB#: WG125720

Contract #: Bill Canelos

| 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-CEF46-1S-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 2 | 1.41 | 09/19/02 | 2 | 1.41 | |
| 062-CEF46-21I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 2 | 1.33 | 09/19/02 | 2 | 1.33 | |
| 062-CEF46-24D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 2 | 1.37 | 09/19/02 | 2 | 1.37 | |
| 062-CEF46-25I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 2 | 1.27 | 09/19/02 | 2 | 1.27 | |
| 062-CEF46-26I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 2 | 1.2 | 09/19/02 | 2 | 1.2 | |
| 062-CEF46-5I-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 2 | 1.4 | 09/19/02 | 2 | 1.4 | |
| 062-CEF46-6D-Q3-02-20 | 09/18/02 | 09/19/02 | 09/19/02 | 2 | 1.37 | 09/19/02 | 2 | 1.37 | |

* EXT = MISSED EXTRACTION HOLD TIME

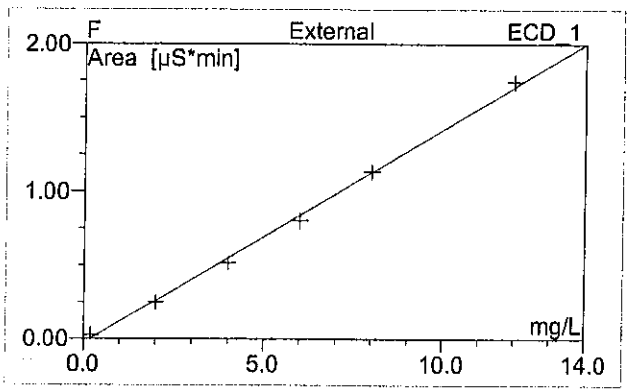
*ANAL = MISSED ANALYITICAL HOLD TIME

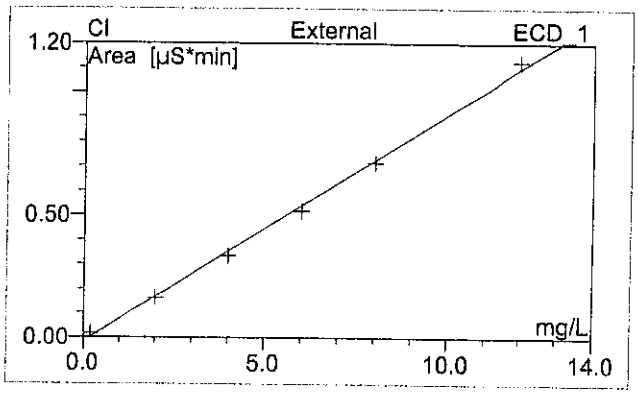
KEMRON FORMS - Modified 05/28/2002
Version 1.1
Report generated 09/24/2002 16:57

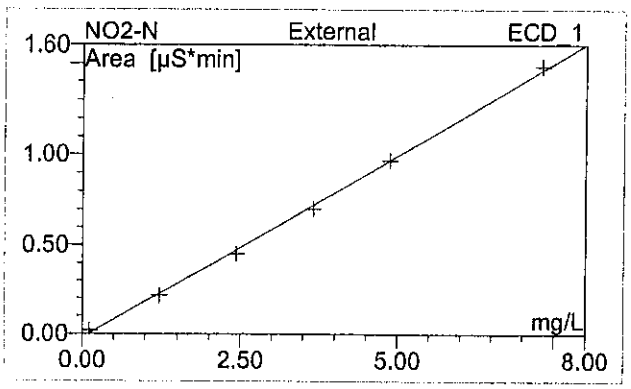
# 1 ANION STD #1

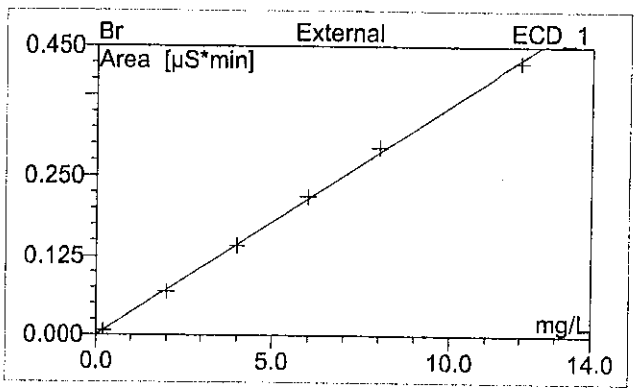
## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:02** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |



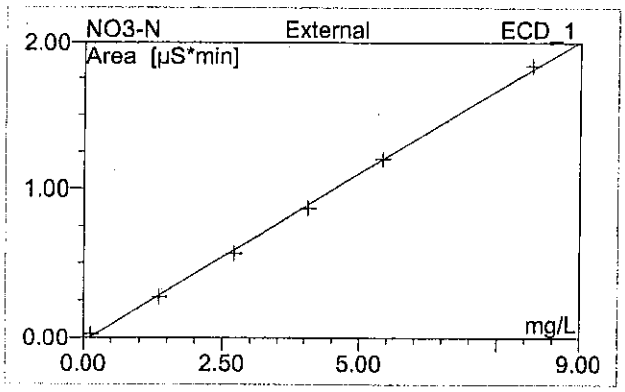



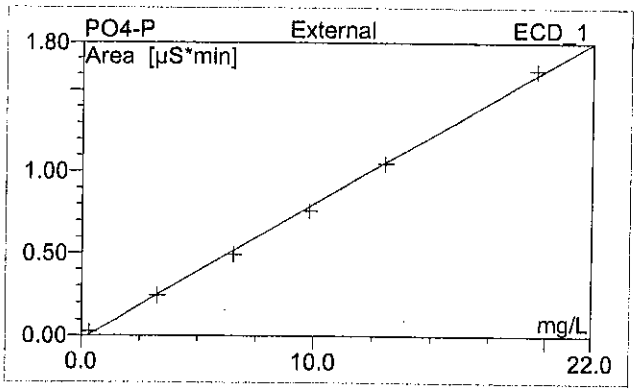

| No. | Ret.Time min | Peak Name | Cal.Type | Points | Corr.Coeff. % | Offset | Slope | Curve |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.72 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 4 | 2.09 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 5 | 3.20 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 6 | 3.71 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 7 | 6.26 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 8 | 8.36 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

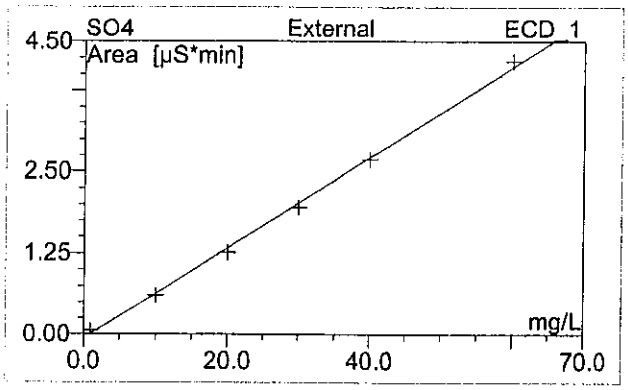
# 1 ANION STD #1

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:02** | *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 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.72 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 4 | 2.09 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 5 | 3.20 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 6 | 3.71 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 7 | 6.26 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 8 | 8.36 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

# 8 ANION ALT STD

## 1,1 JWR ANION ALT STD SOS0060-31

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:56** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| ANION ALT STD | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 5.8796 | -2.01 | PASS |
| Cl | 6 | 5.9275 | -1.21 | PASS |
| NO2-N | 3.65 | 3.5402 | -3.01 | PASS |
| Br | 6 | 6.0765 | 1.27 | PASS |
| NO3-N | 4.07 | 4.0147 | -1.36 | PASS |
| PO4-P | 9.78 | 9.7018 | -0.80 | PASS |
| SO4 | 30 | 29.4057 | -1.98 | PASS |

Login Number: L0209337
File ID: 091902.10
CCV ID: WG125723-01
Units: mg/L

Instrument ID: IC2
Run Date: 09/19/2002
Run Time: 13:21
Analyst: JWR
Cal ID: IC2 -

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| SO4 | 30 | 30.9 | 0 | 3.0 | |
| PO4-P | 9.78 | 10.1 | 0 | 3.3 | |
| NO3-N | 4.07 | 4.32 | 0 | 6.1 | |
| Br | 6 | 6.45 | 0 | 7.5 | |
| NO2-N | 3.65 | 3.57 | 0 | 2.2 | |
| Cl | 6 | 6.08 | 0 | 1.3 | |
| F | 6 | 5.99 | 0 | 0.2 | |

* Exceeds %D Limit

Login Number: L0209337
File ID: 091902.21
CCV ID: WG125723-02
Units: mg/L

Instrument ID: IC2
Run Date: 09/19/2002
Run Time: 15:31
Analyst: JWR
Cal ID: IC2

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| SO4 | 30 | 31.0 | 0 | 3.3 | |
| PO4-P | 9.78 | 10.5 | 0 | 7.4 | |
| NO3-N | 4.07 | 4.33 | 0 | 6.4 | |
| Br | 6 | 6.42 | 0 | 7.0 | |
| NO2-N | 3.65 | 3.71 | 0 | 1.6 | |
| Cl | 6 | 6.28 | 0 | 4.7 | |
| F | 6 | 6.08 | 0 | 1.3 | |

* Exceeds %D Limit

Login Number: L0209337
File ID: 091902.32
CCV ID: WG125723-03
Units: mg/L

Instrument ID: IC2
Run Date: 09/19/2002
Run Time: 17:37
Analyst: JWR
Cal ID: IC2 -

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| SO4 | 30 | 31.2 | 0 | 4.0 | |
| PO4-P | 9.78 | 10.2 | 0 | 4.3 | |
| NO3-N | 4.07 | 4.38 | 0 | 7.6 | |
| Br | 6 | 6.50 | 0 | 8.3 | |
| NO2-N | 3.65 | 3.75 | 0 | 2.7 | |
| Cl | 6 | 6.32 | 0 | 5.3 | |
| F | 6 | 6.10 | 0 | 1.7 | |

* Exceeds %D Limit

Login Number: L0209337
File ID: 091902.43
CCV ID: WG125723-04
Units: mg/L

Instrument ID: IC2
Run Date: 09/19/2002
Run Time: 19:43
Analyst: JWR
Cal ID: IC2 -

| Analyte | Expected | Found | RF | %D | Q |
|---|---|---|---|---|---|
| SO4 | 30 | 30.9 | 0 | 3.0 | |
| PO4-P | 9.78 | 10.3 | 0 | 5.3 | |
| NO3-N | 4.07 | 4.36 | 0 | 7.1 | |
| Br | 6 | 6.48 | 0 | 8.0 | |
| NO2-N | 3.65 | 3.66 | 0 | 0.3 | |
| Cl | 6 | 6.28 | 0 | 4.7 | |
| F | 6 | 6.09 | 0 | 1.5 | |

* Exceeds %D Limit

KEMRON FORMS - Modified 07/10/2002
Version 1.2
Report generated 09/24/2002 16:59

Operator: Analyst

Printed: 9/20/2002 13:13:03

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 44

Created: 9/19/2002 12:57:09 by Analyst
Last Update: 9/20/2002 13:12:43 by Analyst

1384 psi

| No. | Name | Type | Pos. | Inj. Vol. | Program | Method | Status | Inj. Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | ANION STD #1 | Standard | 1 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:02:57 |
| 2 | ANION STD #2 | Standard | 2 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:20:52 |
| 3 | ANION STD #3 | Standard | 3 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:32:22 |
| 4 | ANION STD #4 | Standard | 5 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:43:52 |
| 5 | ANION STD #5 | Standard | 5 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:55:22 |
| 6 | ANION STD #6 | Standard | 6 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 23:06:52 |
| 7 | ELUENT BLANK | Unknown | 7 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 23:18:22 |
| 8 | ANION ALT STD | Unknown | 36 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 23:56:16 |
| 9 | ELUENT BLANK | Unknown | 45 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:09:38 ✓ |
| 10 | WG125723-01 ANION CCV | Unknown | 46 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:21:08 |
| 11 | WG125720-01 ANION BLANK | Unknown | 47 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:34:26 |
| 12 | WG125720-02 ANION LCS | Unknown | 46 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:45:56 |
| 13 | WG125720-03 DUP-REF | Unknown | 47 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:57:25 |
| 14 | L0209336-03 | Unknown | 48 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:08:55 |
| 15 | L0209336-05 | Unknown | 49 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:20:25 |
| 16 | WG125720-05 MS/MSD-REF | Unknown | 49 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:31:54 |
| 17 | WG125720-04 DUP | Unknown | 49 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:43:24 |
| 18 | WG125720-06 MS | Unknown | 48 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:54:54 |
| 19 | WG125720-07 MSD | Unknown | 48 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:06:23 |
| 20 | L0209336-01 RR 1/4 SO4 | Unknown | 46 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:17:53 |
| 21 | WG125723-02 ANION CCV | Unknown | 47 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:31:00 |
| 22 | L0209337-01 1/10 | Unknown | 51 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:42:30 |
| 23 | L0209337-05 1/10 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:54:00 |
| 24 | L0209337-04 1/20 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:05:30 |
| 25 | L0209337-06 1/20 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:17:00 |
| 26 | L0209337-07 1/100 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:28:29 |
| 27 | L0209337-02 1/200 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:39:59 |
| 28 | L0209337-03 1/200 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:51:29 |
| 29 | PO4 REC CHECK | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:02:59 |
| 30 | PO4 REC CHECK | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:14:28 |
| 31 | PO4 REC CHECK | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:25:58 |
| 32 | WG125723-03 ANION CCV | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:37:28 |
| 33 | L0209337-03 RR @ 1/20 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:48:58 |
| 34 | L0209337-02 RR @ 1/20 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:00:27 |
| 35 | L0209337-07 RR @ 1/10 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:11:57 |
| 36 | L0209337-06 RR @ 1/2 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:23:27 |
| 37 | L0209337-04 RR @ 1/2 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:34:57 |
| 38 | L0209337-05 RR No Dilution | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:46:27 |
| 39 | L0209337-01 RR No Dilution | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:57:57 |
| 40 | PO4 REC CHECK | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:09:26 |
| 41 | PO4 REC CHECK | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:20:56 |
| 42 | PO4 REC CHECK | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:32:26 |

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Operator: Analyst Printed: 9/20/2002 13:13:03

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320 Created: 9/19/2002 12:57:09 by Analyst
#Samples: 44 Last Update: 9/20/2002 13:12:43 by Analyst

| No. | Name | Dil. Factor | Sample ID | Comment |
|---|---|---|---|---|
| 1 | ANION STD #1 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 2 | ANION STD #2 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 3 | ANION STD #3 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 4 | ANION STD #4 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 5 | ANION STD #5 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 6 | ANION STD #6 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 7 | ELUENT BLANK | 1.0000 | | 1,1 JWR |
| 8 | ANION ALT STD | 1.0000 | | 1,1 JWR ANION ALT STD SOS0060-31 |
| 9 | ELUENT BLANK | 1.0000 | | 1,1 JWR |
| 10 | WG125723-01 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 11 | WG125720-01 ANION BLANK | 1.0000 | | 1,1 JWR ✓ |
| 12 | WG125720-02 ANION LCS | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 13 | WG125720-03 DUP-REF | 1.0000 | | 1,1 JWR L0209336-01 DUP-REF ✓ RR SO4 1/4 ✓ |
| 14 | L0209336-03 | 1.0000 | | 1,1 JWR ✓ |
| 15 | L0209336-05 | 1.0000 | | 1,1 JWR ✓ |
| 16 | WG125720-05 MS/MSD-REF | 1.0000 | | 1,1 JWR L0209336-07 MS/MSD-REF ✓ |
| 17 | WG125720-04 DUP | 1.0000 | | 1,1 JWR L0209336-01 DUP ✓ |
| 18 | WG125720-06 MS | 1.0000 | | 1,1 JWR L0209336-07 MS ✓ |
| 19 | WG125720-07 MSD | 1.0000 | | 1,1 JWR L0209336-07 MSD ✓ |
| 20 | L0209336-01 RR 1/4 SO4 | 1.0000 | | 1,4 JWR ✓ |
| 21 | WG125723-02 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 22 | L0209337-01 1/10 | 1.0000 | | 1,10 JWR Initial PO4 Interference Screen |
| 23 | L0209337-05 1/10 | 1.0000 | | 1,10 JWR Initial PO4 Interference Screen |
| 24 | L0209337-04 1/20 | 1.0000 | | 1,20 JWR Initial PO4 Interference Screen |
| 25 | L0209337-06 1/20 | 1.0000 | | 1,20 JWR Initial PO4 Interference Screen |
| 26 | L0209337-07 1/100 | 1.0000 | | 1,100 JWR Initial PO4 Interference Screen |
| 27 | L0209337-02 1/200 | 1.0000 | | 1,200 JWR Initial PO4 Interference Screen |
| 28 | L0209337-03 1/200 | 1.0000 | | 1,200 JWR Initial PO4 Interference Screen |
| 29 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Rec. Check After Screens |
| 30 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Rec. Check After Screens |
| 31 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Rec. Check After Screens |
| 32 | WG125723-03 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 33 | L0209337-03 RR @ 1/20 | 1.0000 | | 1,20 JWR Initial Dilution Screen was OK ✓ |
| 34 | L0209337-02 RR @ 1/20 | 1.0000 | | 1,20 JWR Initial Dilution Screen was OK ✓ |
| 35 | L0209337-07 RR @ 1/10 | 1.0000 | | 1,10 JWR Initial Dilution Screen was OK ✓ |
| 36 | L0209337-06 RR @ 1/2 | 1.0000 | | 1,2 JWR Initial Dilution Screen was OK ✓ |
| 37 | L0209337-04 RR @ 1/2 | 1.0000 | | 1,2 JWR Initial Dilution Screen was OK ✓ |
| 38 | L0209337-05 RR No Dilution | 1.0000 | | 1,1 JWR Initial Dilution Screen was OK ✓ |
| 39 | L0209337-01 RR No Dilution | 1.0000 | | 1,1 JWR Initial Dilution Screen was OK ✓ |
| 40 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Check After Undiluted Run |
| 41 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Check After Undiluted Run |
| 42 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Check After Undiluted Run |

1384 ps.
R324287

JWR 09/20/02

PeakNet © Dionex Corporation, Version 6.30 SP1 Build 587

Operator: Analyst

Printed: 9/20/2002 13:13:03

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 44

Created: 9/19/2002 12:57:09 by Analyst
Last Update: 9/20/2002 13:12:43 by Analyst

| No. | Name | Type | Pos. | Inj. Vol. | Program | Method | Status | Inj. Date/Time |
|---|---|---|---|---|---|---|---|---|
| 43 | WG125723-04 ANION CCV | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:43:55 |
| 44 | END | Unknown | 44 | 25.0 | DX-320 OFF | 9056 | Finished | 9/19/2002 19:55:25 |

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| | | | |
|---|---|---|---|
| Operator: | Analyst | | Printed: 9/20/2002 13:13:03 |
| Title: | | | |
| Datasource: | IC DELL_local | | |
| Location: | DX-320\DX-320 Sequence Files | | |
| Timebase: | DX-320 | Created: | 9/19/2002 12:57:09 by Analyst |
| #Samples: | 44 | Last Update: | 9/20/2002 13:12:43 by Analyst |

| No. | Name | Dil. Factor | Sample ID | Comment |
|---|---|---|---|---|
| 43 | WG125723-04 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 44 | END | 1.0000 | | 1,1 JWR |

JWR/09/20/02
RDC 9/25/02

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**KEMRON ENVIRONMENTAL SERVICES**
**IC Laboratory Maintenance Log**

**Analysis Date/Time** 09/19/02 **Instrument ID** IC2 **Column ID** AG4A-SC **Data Subdirectory** 091902
**Analyst Initials** JWR **SOP # IC01 Rev. #** 2 V 9056 AS4A-SC **SOP # IC02 Rev. #** ____ 314.0

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 1384 psi
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
**Problem:** _____

Action Taken: _____

**Comments**

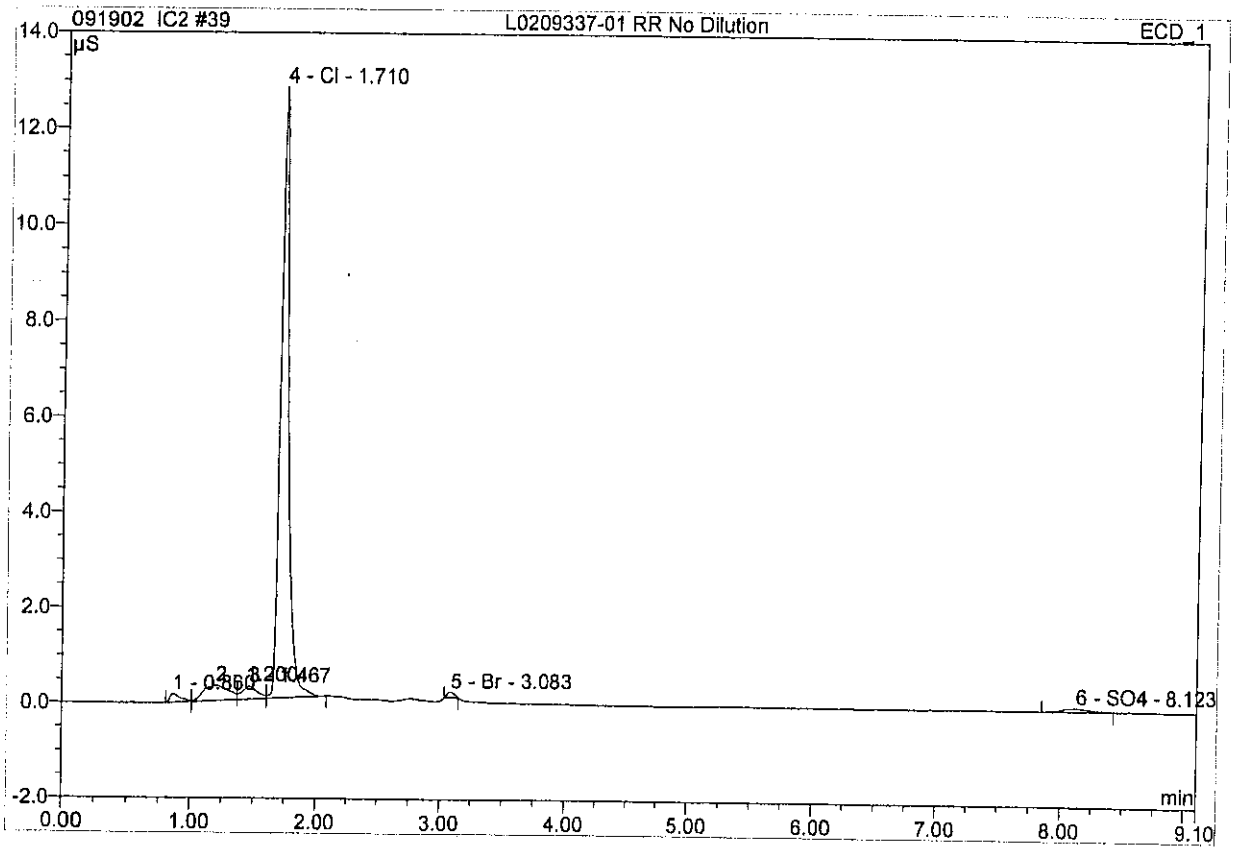
**Reviewed By:** RWC 9/25/02

# 2.4.5.2 Sample Data

# 39 L0209337-01 RR No Dilution

## 1,1 JWR Initial Dilution Screen was OK

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209337-01 RR No Dilution** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **54** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 18:57** | *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 | 0.86 | n.a. | 0.178 | 0.017 | 1.47 | n.a. | BM |
| 2 | 1.20 | n.a. | 0.323 | 0.074 | 6.54 | n.a. | M |
| 3 | 1.47 | n.a. | 0.277 | 0.039 | 3.43 | n.a. | M |
| 4 | 1.71 | Cl | 12.769 | 0.972 | 86.31 | 10.660 | MB |
| 5 | 3.08 | Br | 0.114 | 0.008 | 0.68 | 0.213 | BMB |
| 6 | 8.12 | SO4 | 0.070 | 0.018 | 1.56 | 1.180 | BMB |
| **Total:** | | | 13.731 | 1.126 | 100.00 | 12.053 | |

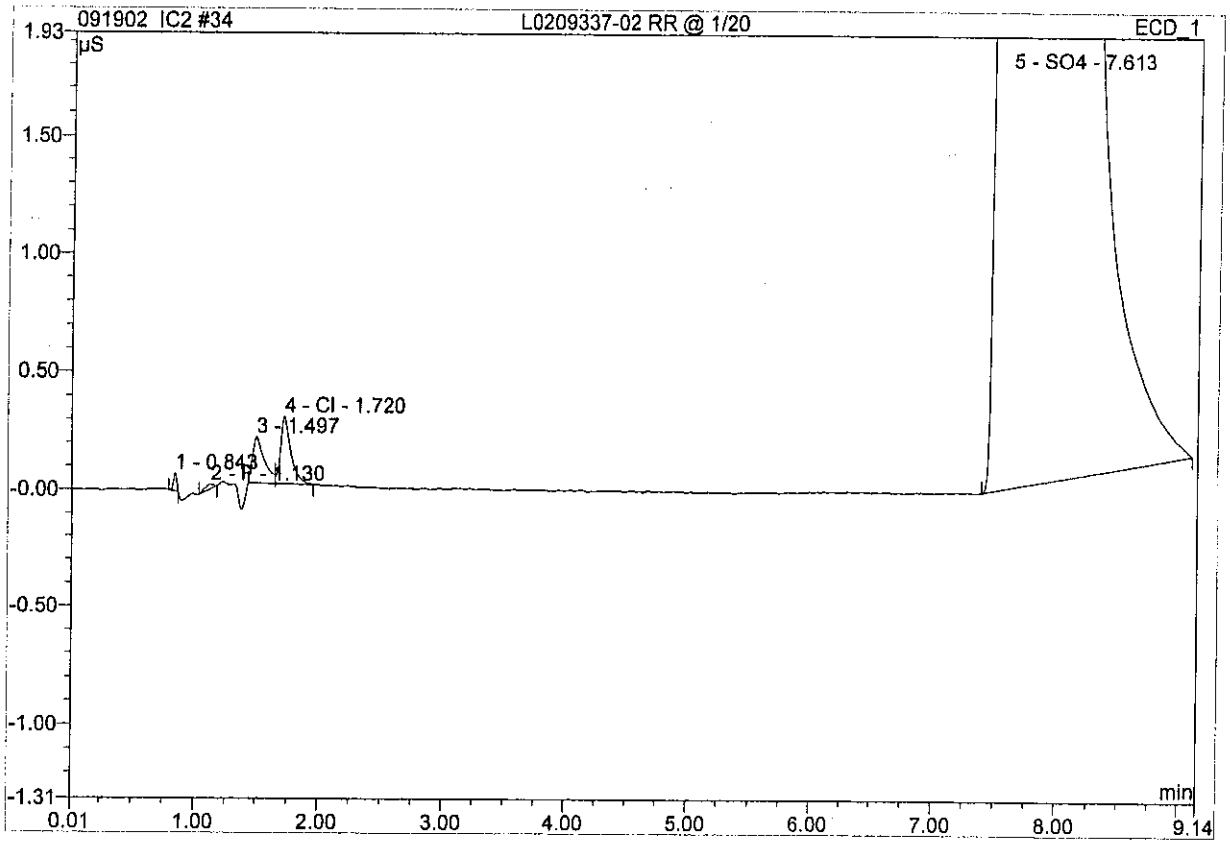
IC/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.30 SP1 Build 587

# 34 L0209337-02 RR @ 1/20

## 1,20 JWR Initial Dilution Screen was OK

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209337-02 RR @ 1/20** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **54** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 18:00** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

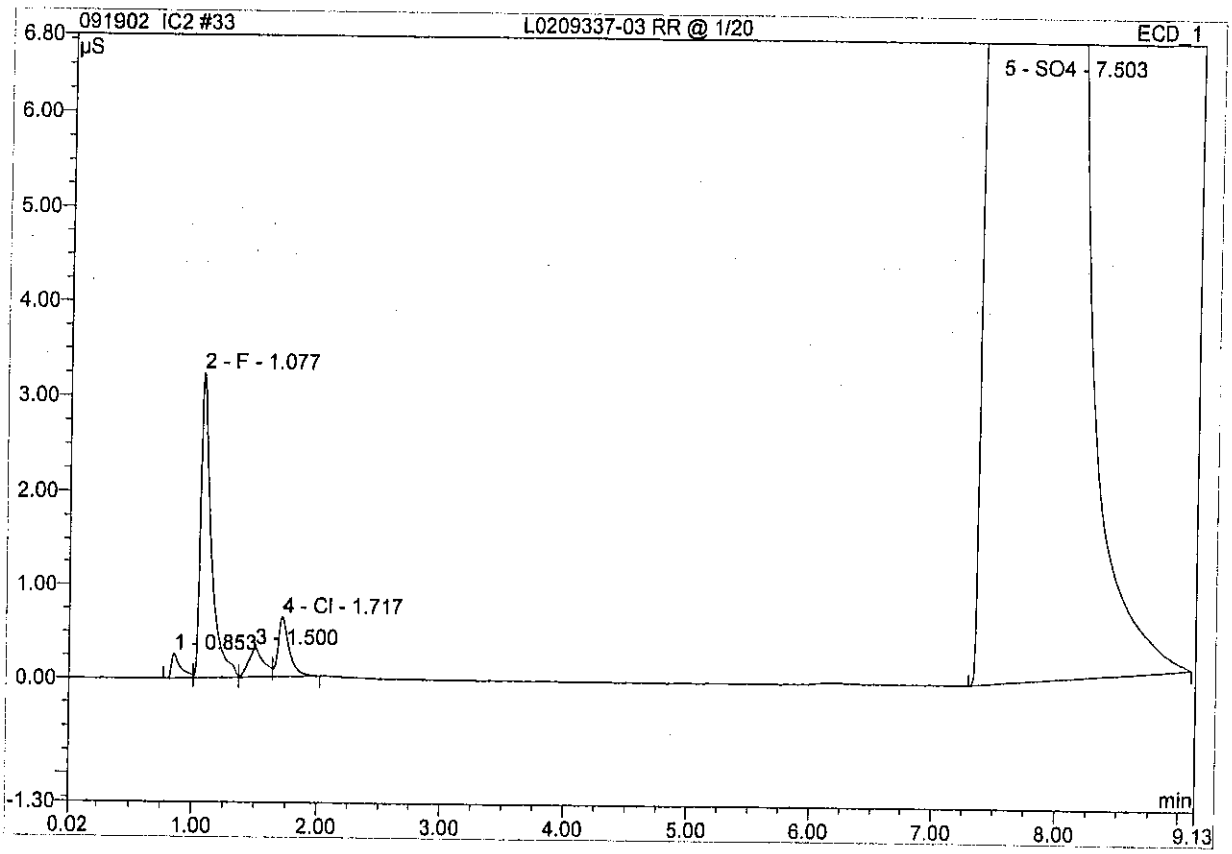



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.84 | n.a. | 0.073 | 0.002 | 0.01 | n.a. | BMB |
| 2 | 1.13 | F | 0.018 | 0.002 | 0.01 | 0.213 | BMB |
| 3 | 1.50 | n.a. | 0.198 | 0.022 | 0.08 | n.a. | BM |
| 4 | 1.72 | Cl | 0.287 | 0.028 | 0.10 | 0.490 | MB |
| 5 | 7.61 | SO4 | 75.182 | 28.967 | 99.81 | 417.367 | BMB |
| **Total:** | | | 75.759 | 29.021 | 100.00 | 418.069 | |

# 33 L0209337-03 RR @ 1/20

## 1,20 JWR Initial Dilution Screen was OK

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209337-03 RR @ 1/20** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **53** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 17:48** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

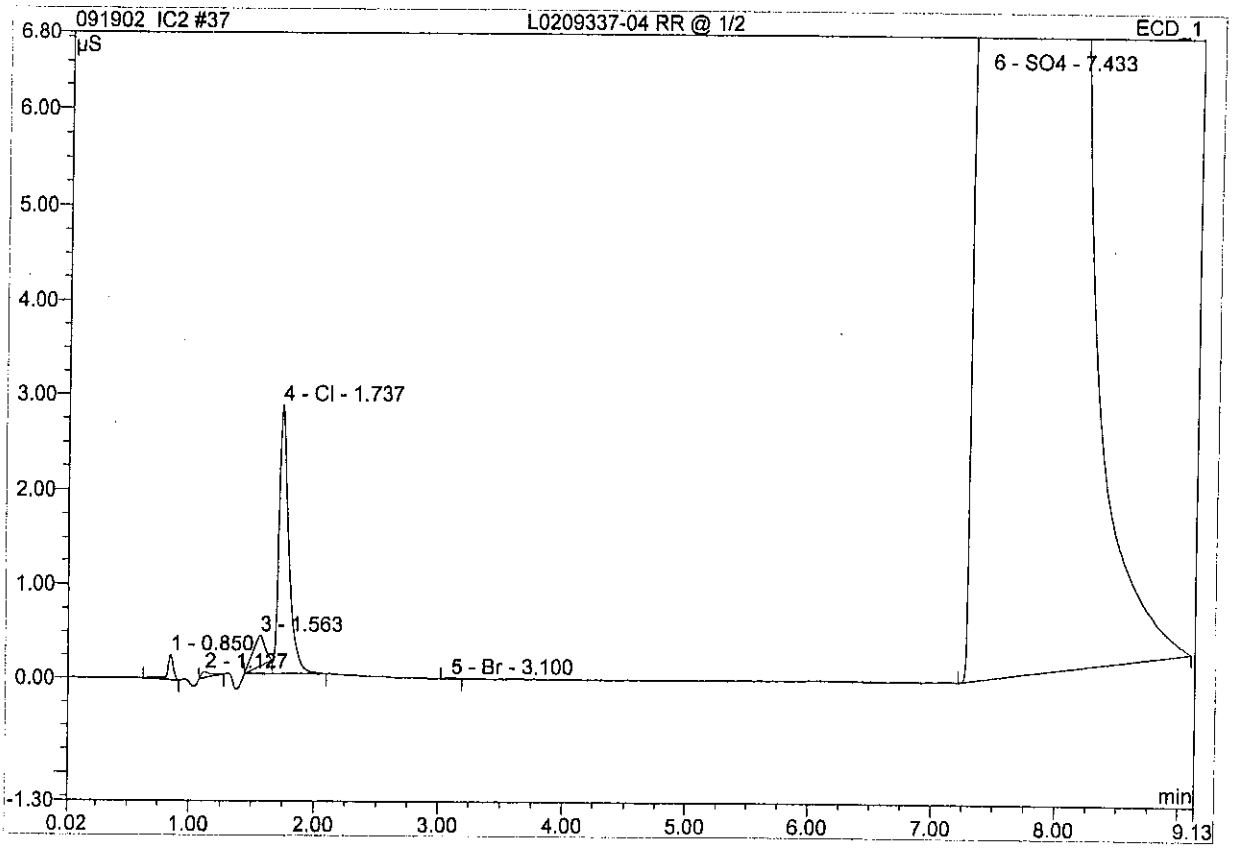



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.263 | 0.023 | 0.06 | n.a. | BM |
| 2 | 1.08 | F | 3.236 | 0.317 | 0.77 | 2.386 | M |
| 3 | 1.50 | n.a. | 0.308 | 0.043 | 0.10 | n.a. | M |
| 4 | 1.72 | Cl | 0.638 | 0.064 | 0.16 | 0.879 | MB |
| 5 | 7.50 | SO4 | 94.170 | 40.564 | 98.91 | 584.096 | BMB |
| **Total:** | | | 98.615 | 41.011 | 100.00 | 587.361 | |

# 37 L0209337-04 RR @ 1/2

## 1,2 JWR Initial Dilution Screen was OK

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209337-04 RR @ 1/2** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **54** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 18:34** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

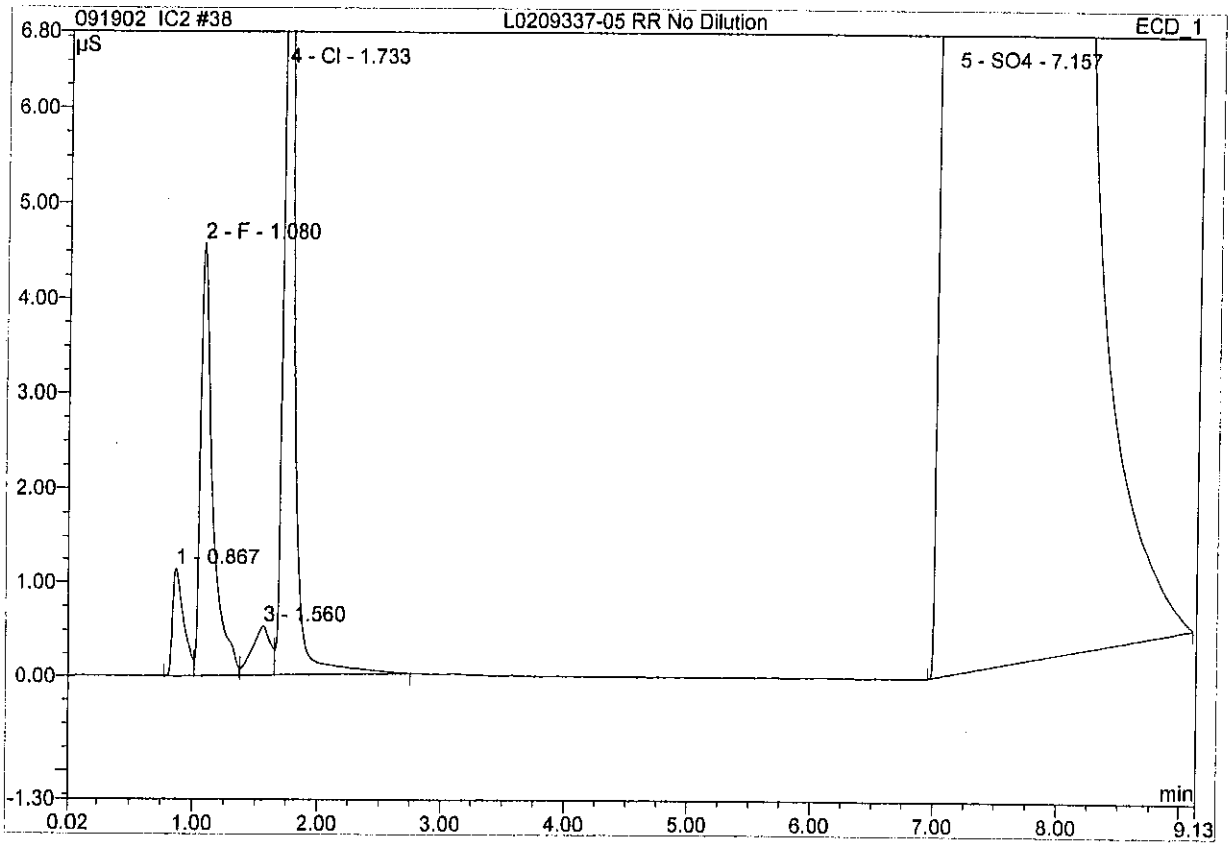



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.272 | 0.015 | 0.03 | n.a. | BMB |
| 2 | 1.13 | n.a. | 0.060 | 0.005 | 0.01 | n.a. | BMB |
| 3 | 1.56 | n.a. | 0.333 | 0.037 | 0.07 | n.a. | Ru |
| 4 | 1.74 | Cl | 2.846 | 0.275 | 0.52 | 3.154 | BMB |
| 5 | 3.10 | Br | 0.012 | 0.001 | 0.00 | 0.031 | BMB |
| 6 | 7.43 | SO4 | 111.942 | 52.767 | 99.37 | 759.533 | BMB |
| **Total:** | | | 115.465 | 53.101 | 100.00 | 762.719 | |

# 38 L0209337-05 RR No Dilution

## 1,1 JWR Initial Dilution Screen was OK

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209337-05 RR No Dilution** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **54** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 18:46** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

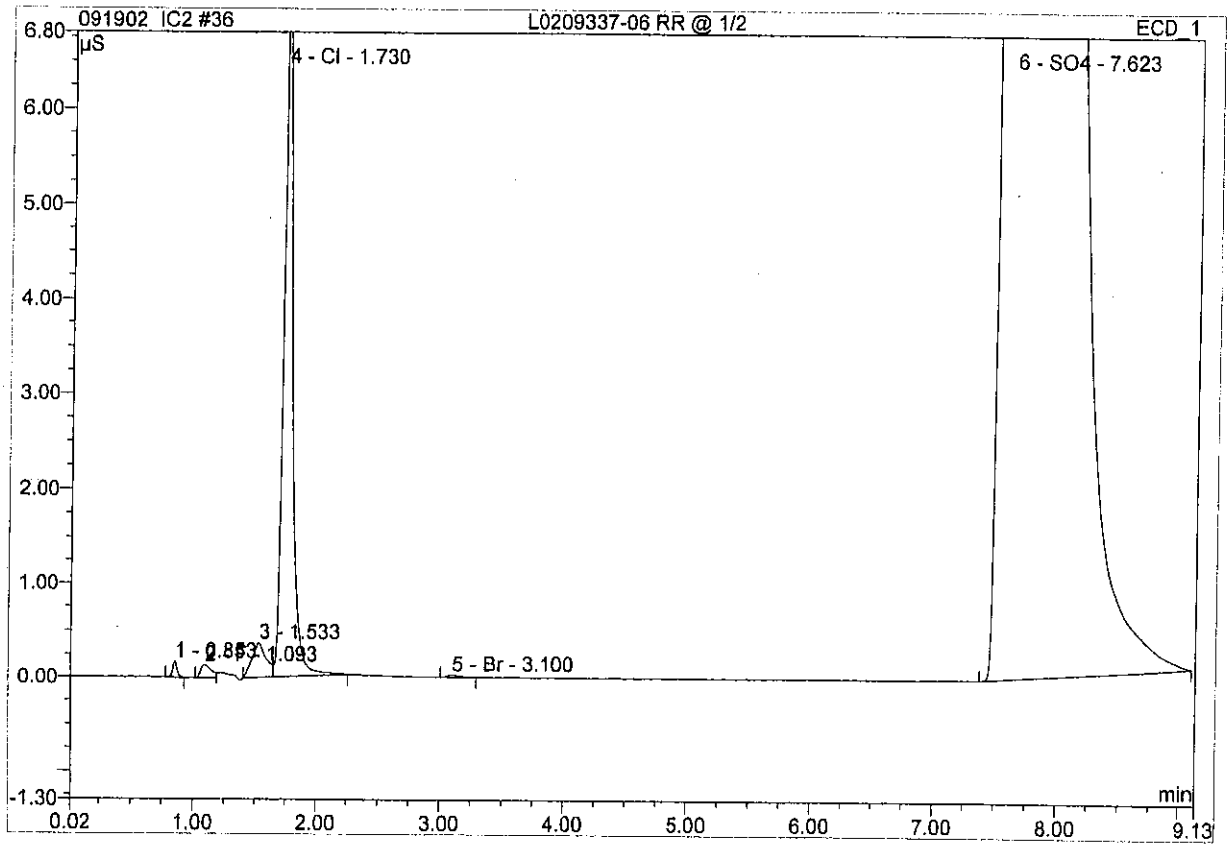



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.87 | n.a. | 1.156 | 0.121 | 0.12 | n.a. | BM |
| 2 | 1.08 | F | 4.582 | 0.511 | 0.49 | 3.728 | M |
| 3 | 1.56 | n.a. | 0.537 | 0.089 | 0.09 | n.a. | M |
| 4 | 1.73 | Cl | 11.736 | 1.020 | 0.98 | 11.177 | MB |
| 5 | 7.16 | SO4 | 169.864 | 102.527 | 98.33 | 1474.896 | BMB |
| **Total:** | | | 187.876 | 104.268 | 100.00 | 1489.801 | |

# 36 L0209337-06 RR @ 1/2

## 1,2 JWR Initial Dilution Screen was OK

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209337-06 RR @ 1/2** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **54** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 18:23** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

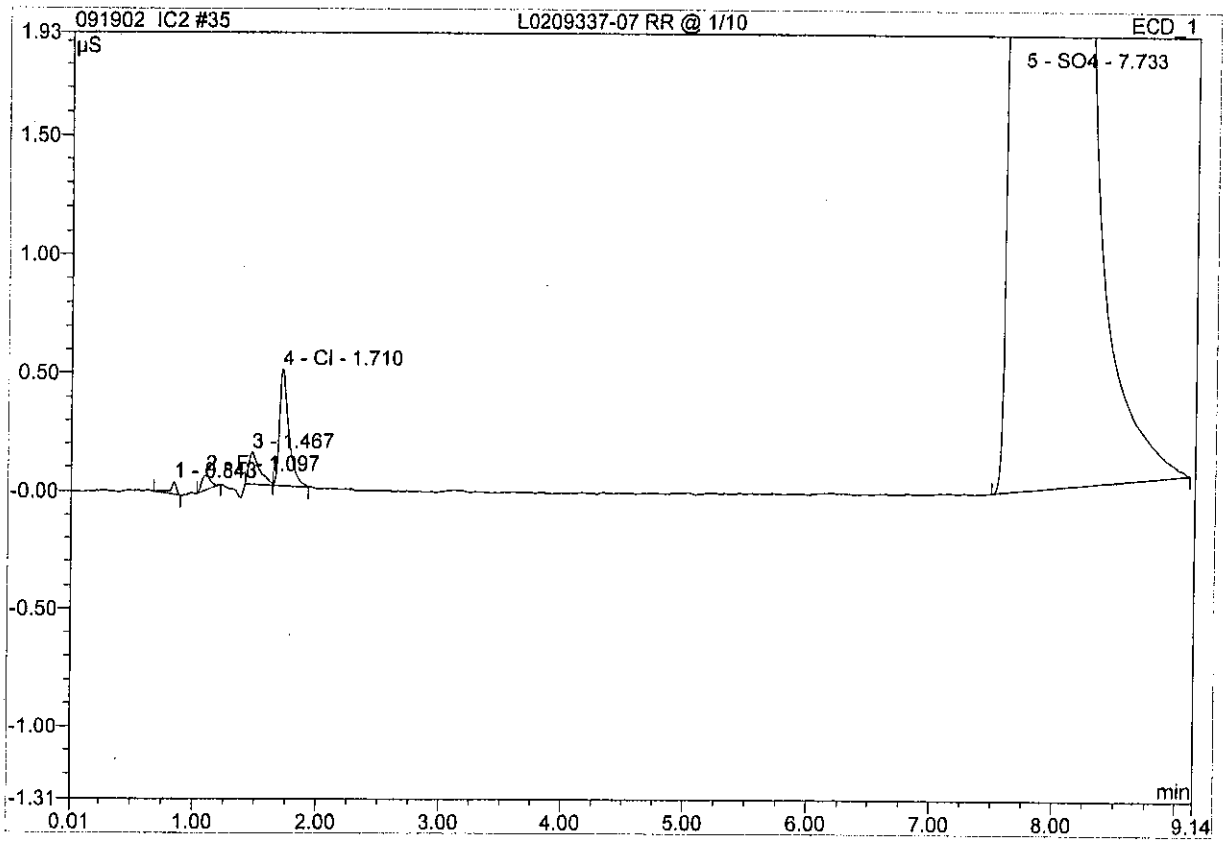



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.173 | 0.008 | 0.03 | n.a. | BMB |
| 2 | 1.09 | F | 0.145 | 0.014 | 0.05 | 0.298 | BM |
| 3 | 1.53 | n.a. | 0.367 | 0.050 | 0.17 | n.a. | BM |
| 4 | 1.73 | Cl | 7.521 | 0.627 | 2.14 | 6.938 | MB |
| 5 | 3.10 | Br | 0.028 | 0.003 | 0.01 | 0.091 | BMB |
| 6 | 7.62 | SO4 | 74.673 | 28.518 | 97.60 | 410.916 | BMB |
| **Total:** | | | 82.908 | 29.220 | 100.00 | 418.243 | |

# 35 L0209337-07 RR @ 1/10

## 1,10 JWR Initial Dilution Screen was OK

| | | | |
|---|---|---|---|
| *Sample Name:* | **L0209337-07 RR @ 1/10** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **54** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 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 | 0.84 | n.a. | 0.052 | 0.003 | 0.02 | n.a. | BMB |
| 2 | 1.10 | F | 0.061 | 0.005 | 0.03 | 0.237 | BMB |
| 3 | 1.47 | n.a. | 0.134 | 0.013 | 0.08 | n.a. | BM |
| 4 | 1.71 | Cl | 0.494 | 0.044 | 0.26 | 0.666 | MB |
| 5 | 7.73 | SO4 | 51.935 | 17.102 | 99.62 | 246.789 | BMB |
| **Total:** | | | 52.675 | 17.167 | 100.00 | 247.692 | |

# 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

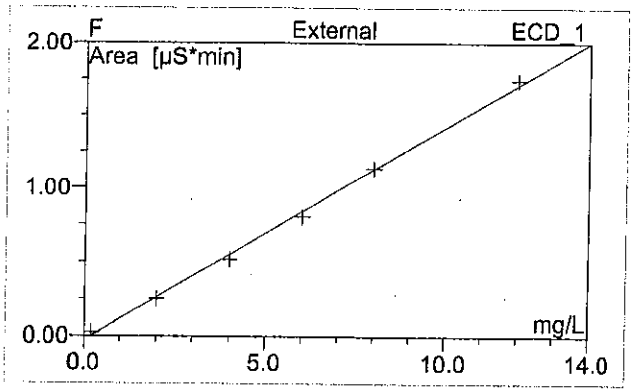
Primary Intermediate Std. Conc Br, Cl, and F are at 100 mg/L
NO2 is at 200 mg/L
NO3 is at 300 mg/L
PO4 and SO4 are at 500 mg/L

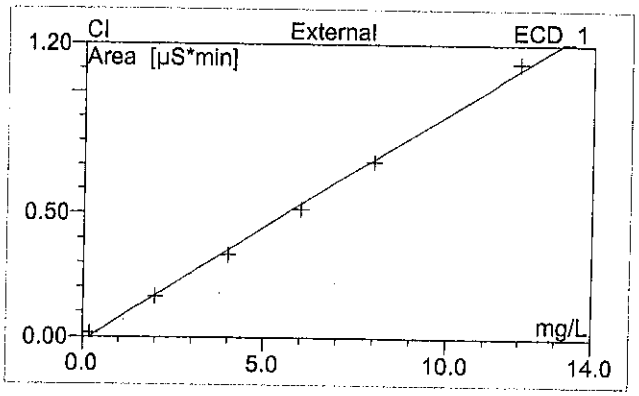
Alternate intermediate standard concentrations are twice the amount of the primary standard.

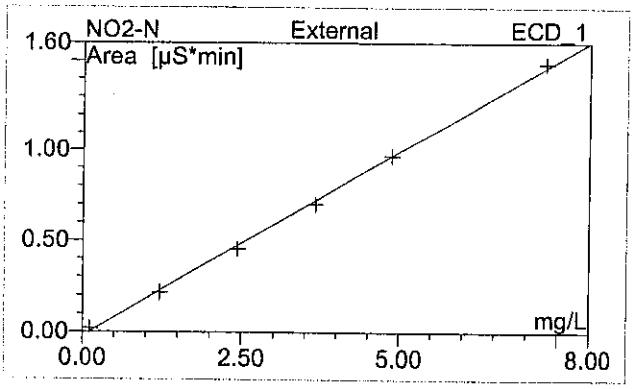
# 1 ANION STD #1

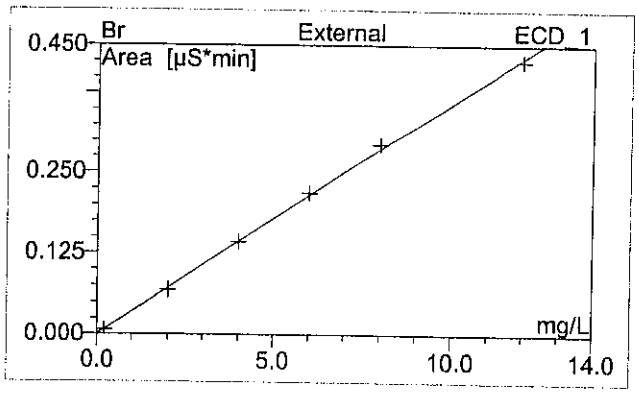
## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:02** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |



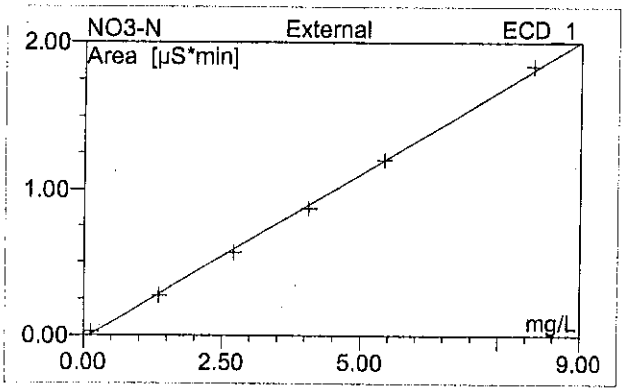



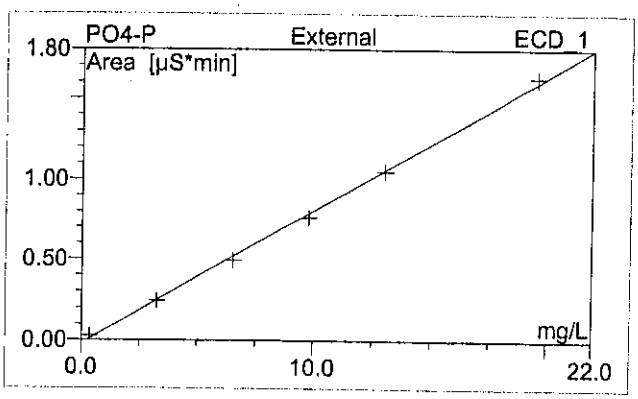

| No. | Ret.Time min | Peak Name | Cal.Type | Points | Corr.Coeff. % | Offset | Slope | Curve |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.72 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 4 | 2.09 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 5 | 3.20 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 6 | 3.71 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 7 | 6.26 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 8 | 8.36 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

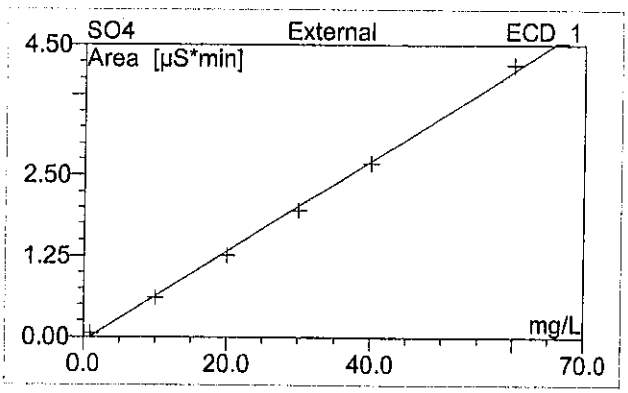
# 1 ANION STD #1

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:02** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |



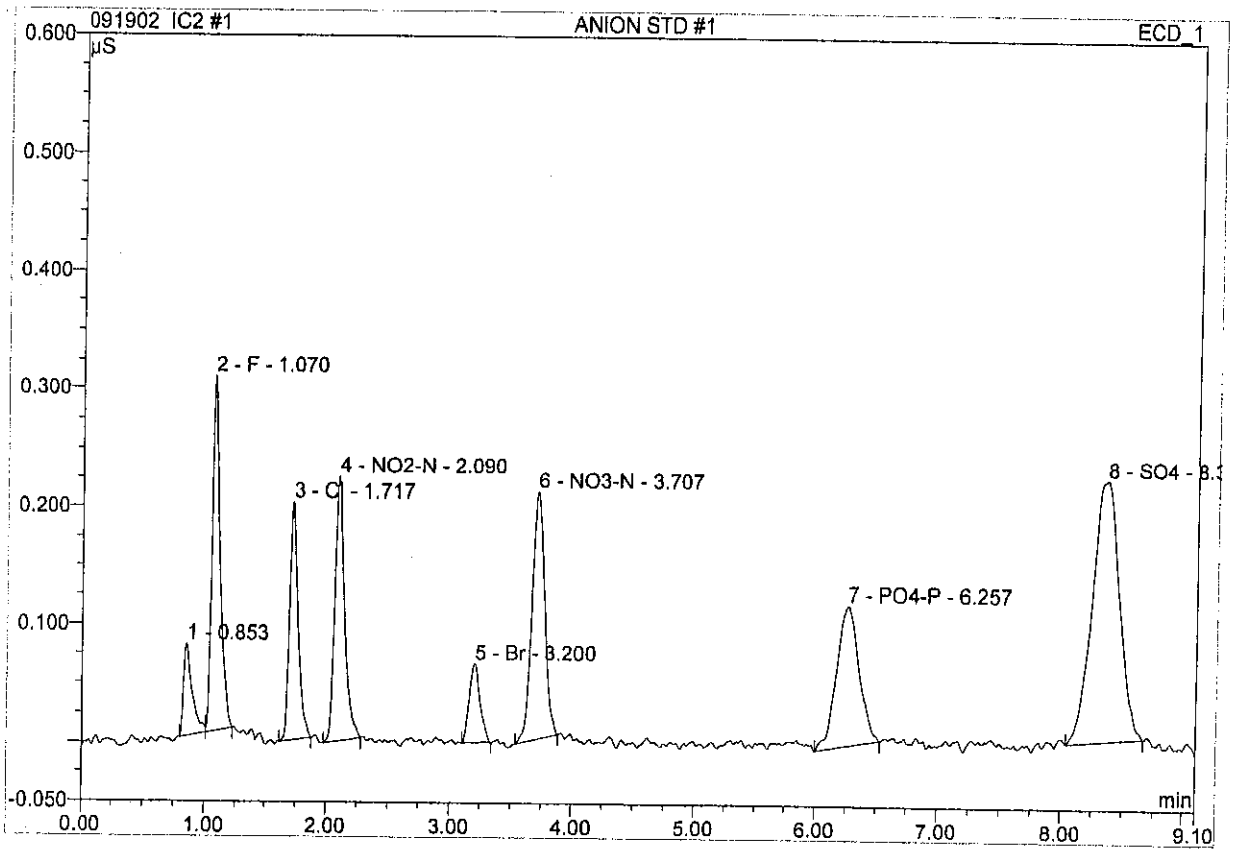




| No. | Ret.Time min | Peak Name | Cal.Type | Points | Corr.Coeff. % | Offset | Slope | Curve |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| 2 | 1.07 | F | 0LOff | 6 | 99.9001 | -0.0292 | 0.1450 | 0.0000 |
| 3 | 1.72 | Cl | 0LOff | 6 | 99.8875 | -0.0178 | 0.0929 | 0.0000 |
| 4 | 2.09 | NO2-N | 0LOff | 6 | 99.9456 | -0.0198 | 0.2031 | 0.0000 |
| 5 | 3.20 | Br | 0LOff | 6 | 99.9582 | 0.0000 | 0.0358 | 0.0000 |
| 6 | 3.71 | NO3-N | 0LOff | 6 | 99.9533 | -0.0224 | 0.2258 | 0.0000 |
| 7 | 6.26 | PO4-P | 0LOff | 6 | 99.9270 | -0.0202 | 0.0827 | 0.0000 |
| 8 | 8.36 | SO4 | 0LOff | 6 | 99.9108 | -0.0645 | 0.0696 | 0.0000 |
| **Average:** | | | | | 99.9261 | -0.0248 | 0.1221 | 0.0000 |

# 1 ANION STD #1

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:02** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

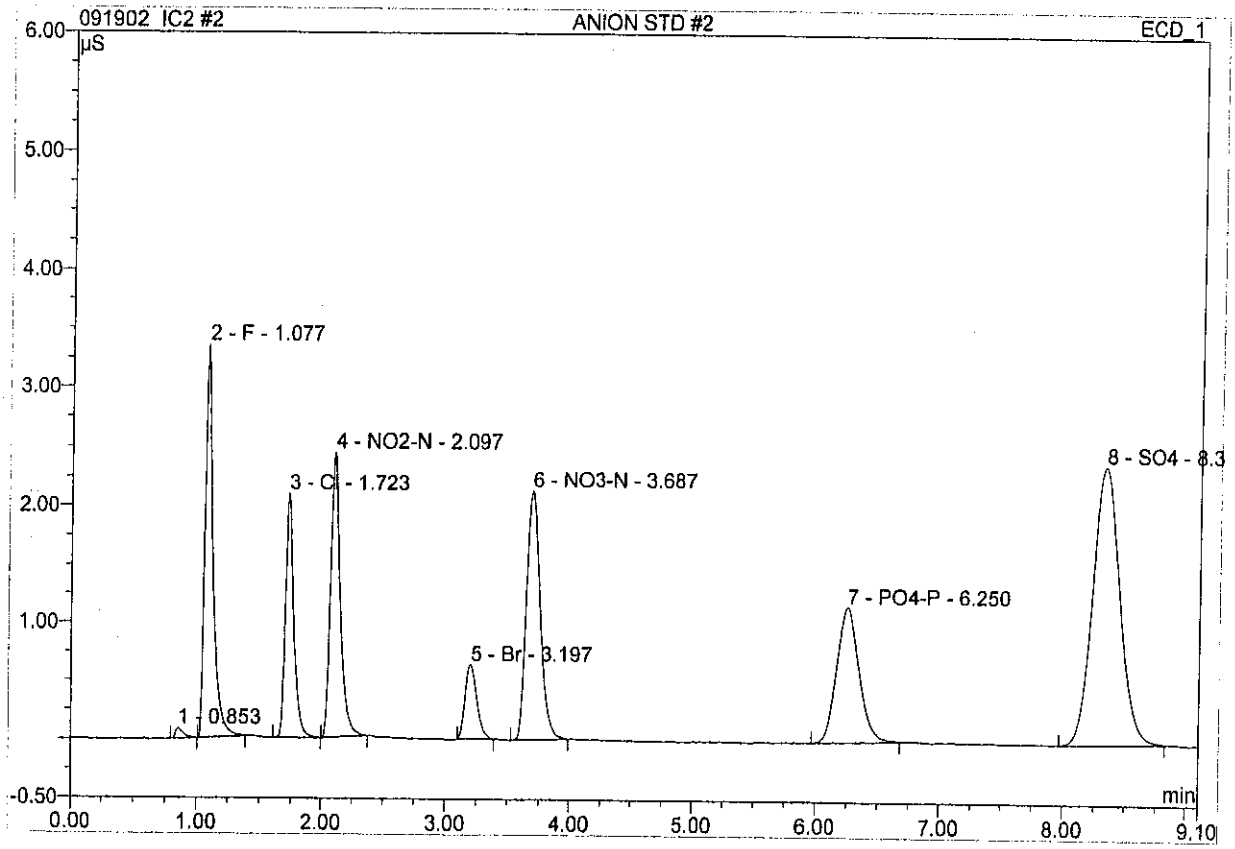



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.078 | 0.006 | 3.51 | n.a. | BM |
| 2 | 1.07 | F | 0.301 | 0.023 | 12.59 | 0.358 | MB |
| 3 | 1.72 | Cl | 0.202 | 0.016 | 8.84 | 0.363 | BMB |
| 4 | 2.09 | NO2-N | 0.224 | 0.021 | 11.38 | 0.199 | BMB |
| 5 | 3.20 | Br | 0.066 | 0.007 | 3.79 | 0.190 | BMB |
| 6 | 3.71 | NO3-N | 0.210 | 0.026 | 14.20 | 0.213 | BMB |
| 7 | 6.26 | PO4-P | 0.118 | 0.026 | 14.27 | 0.556 | BMB |
| 8 | 8.36 | SO4 | 0.221 | 0.057 | 31.42 | 1.743 | BMB |
| **Total:** | | | 1.420 | 0.181 | 100.00 | 3.623 | |

# 2 ANION STD #2

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:20** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

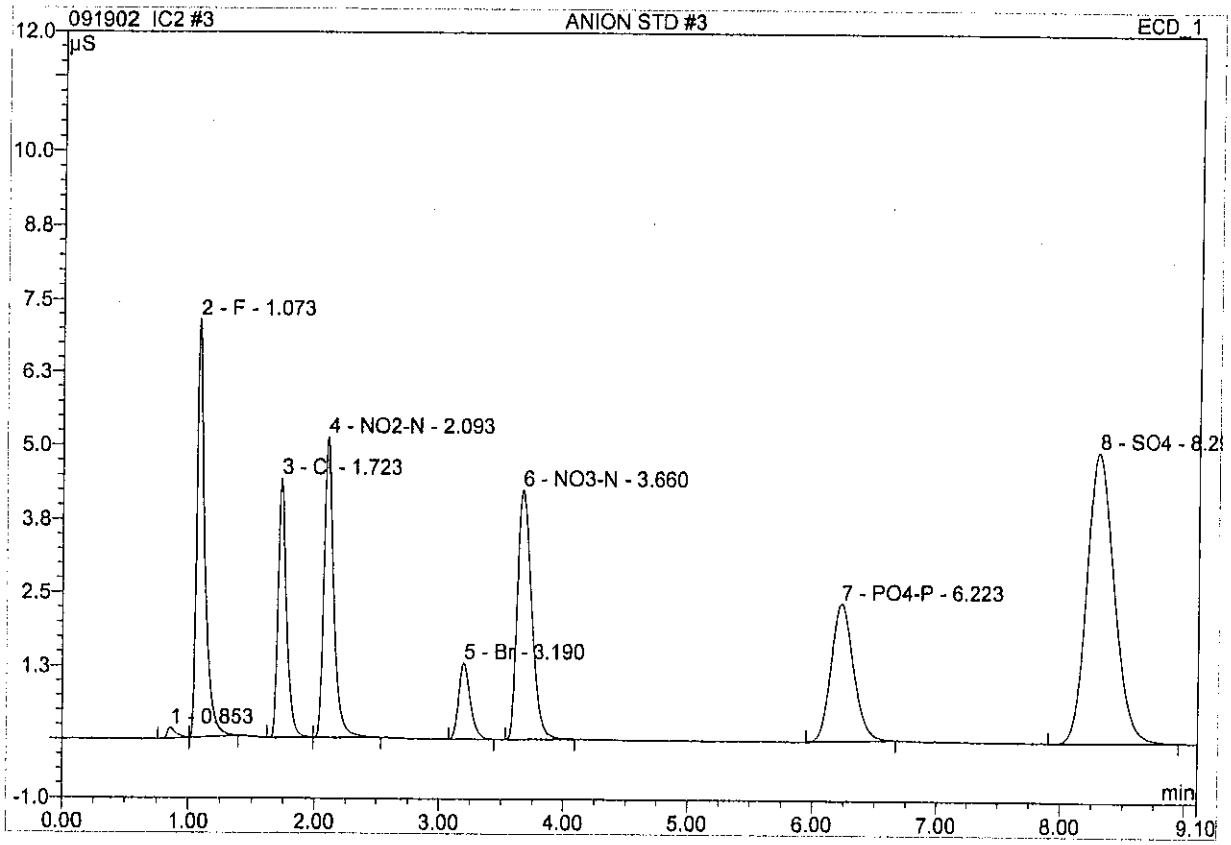



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.084 | 0.006 | 0.34 | n.a. | BMB |
| 2 | 1.08 | F | 3.342 | 0.248 | 13.63 | 1.915 | BMB |
| 3 | 1.72 | Cl | 2.087 | 0.163 | 8.92 | 1.943 | BMB |
| 4 | 2.10 | NO2-N | 2.432 | 0.216 | 11.87 | 1.163 | BMB |
| 5 | 3.20 | Br | 0.633 | 0.069 | 3.76 | 1.913 | BMB |
| 6 | 3.69 | NO3-N | 2.126 | 0.272 | 14.93 | 1.304 | BMB |
| 7 | 6.25 | PO4-P | 1.150 | 0.243 | 13.33 | 3.184 | BMB |
| 8 | 8.33 | SO4 | 2.372 | 0.606 | 33.22 | 9.635 | BMB |
| **Total:** | | | 14.225 | 1.823 | 100.00 | 21.057 | |

# 3 ANION STD #3

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:32** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

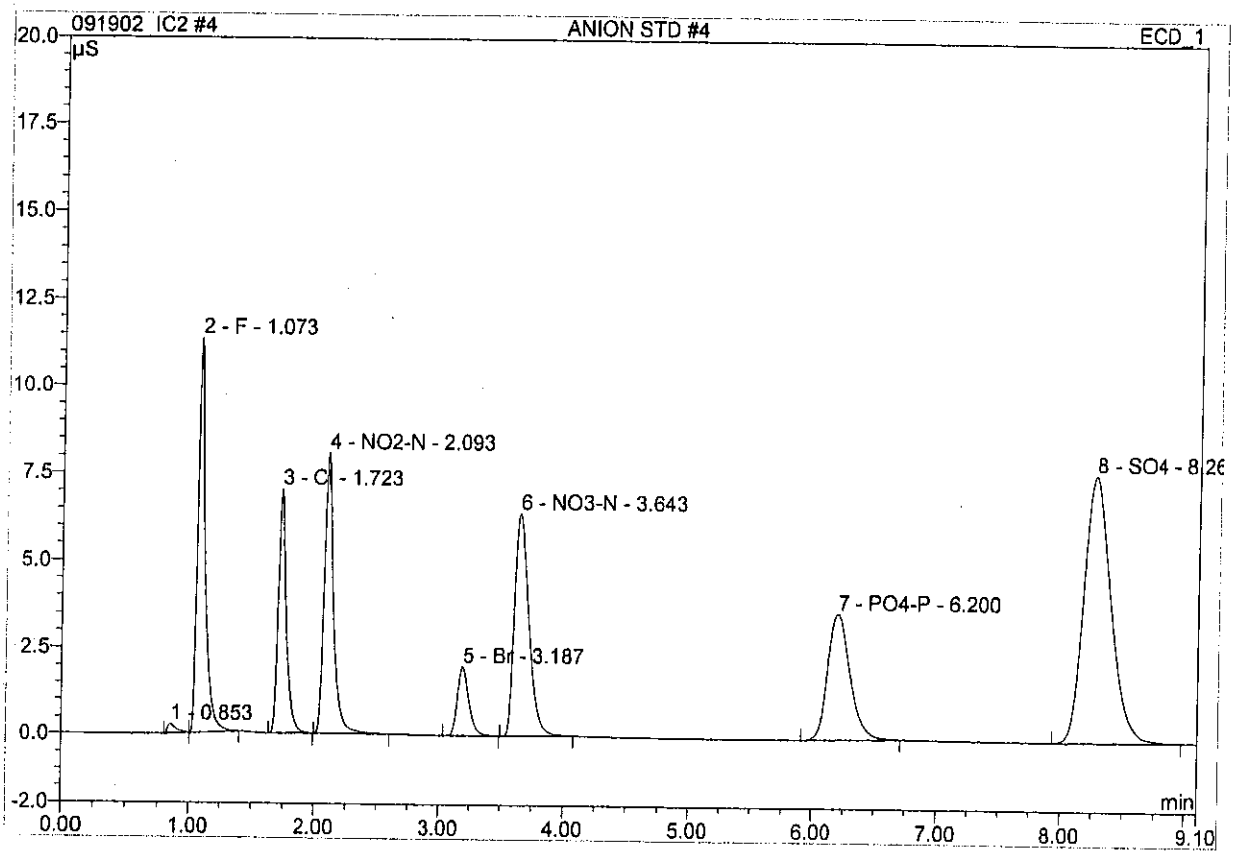



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.181 | 0.014 | 0.38 | n.a. | BM |
| 2 | 1.07 | F | 7.141 | 0.516 | 13.68 | 3.760 | MB |
| 3 | 1.72 | Cl | 4.412 | 0.334 | 8.85 | 3.786 | BM |
| 4 | 2.09 | NO2-N | 5.117 | 0.452 | 11.99 | 2.323 | MB |
| 5 | 3.19 | Br | 1.303 | 0.142 | 3.76 | 3.962 | BMB |
| 6 | 3.66 | NO3-N | 4.248 | 0.564 | 14.95 | 2.597 | BMB |
| 7 | 6.22 | PO4-P | 2.343 | 0.493 | 13.06 | 6.204 | BMB |
| 8 | 8.30 | SO4 | 4.947 | 1.258 | 33.34 | 19.006 | BMB |
| **Total:** | | | 29.692 | 3.772 | 100.00 | 41.639 | |

# 4 ANION STD #4

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:43** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

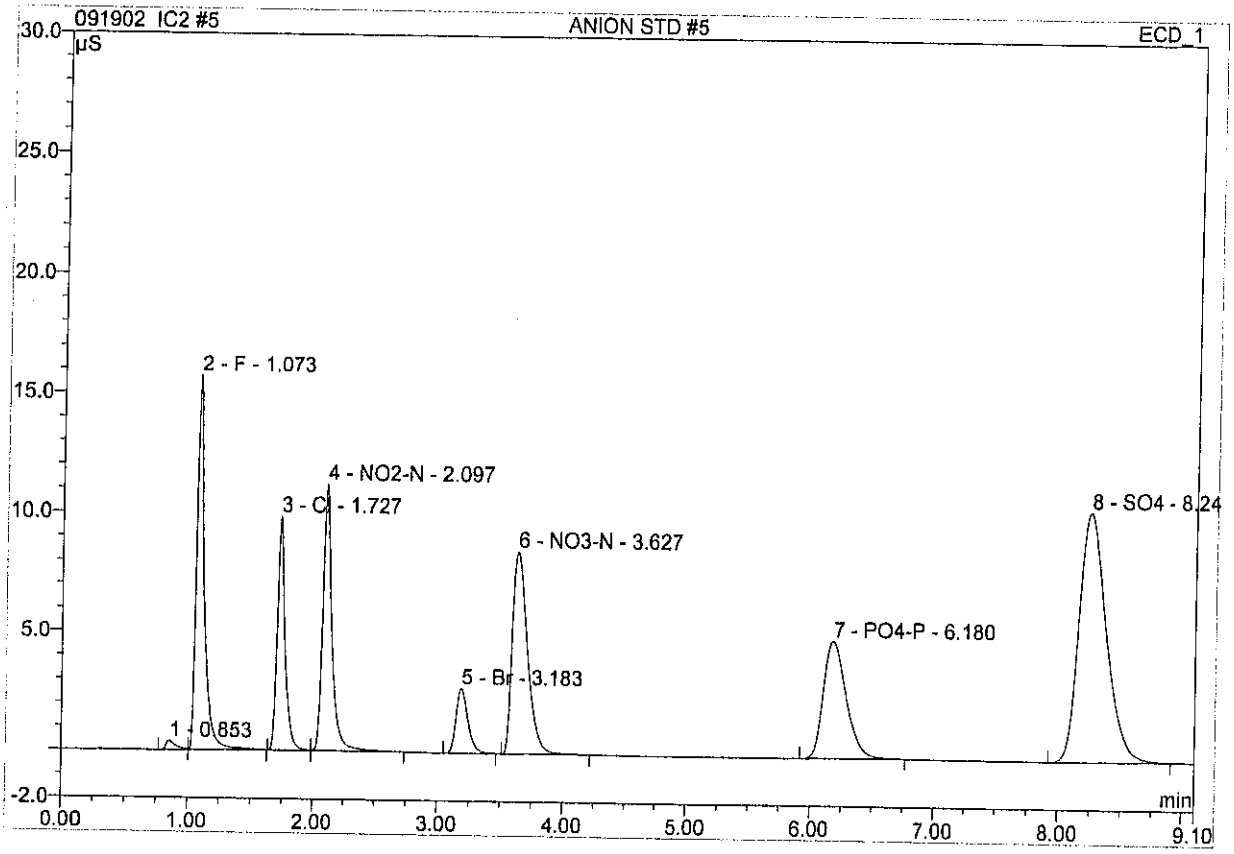



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.279 | 0.021 | 0.37 | n.a. | BM |
| 2 | 1.07 | F | 11.336 | 0.802 | 13.72 | 5.732 | MB |
| 3 | 1.72 | Cl | 7.018 | 0.517 | 8.85 | 5.758 | BMB |
| 4 | 2.09 | NO2-N | 8.062 | 0.701 | 12.00 | 3.548 | BMB |
| 5 | 3.19 | Br | 2.001 | 0.218 | 3.73 | 6.087 | BMB |
| 6 | 3.64 | NO3-N | 6.383 | 0.871 | 14.90 | 3.955 | BMB |
| 7 | 6.20 | PO4-P | 3.614 | 0.762 | 13.05 | 9.466 | BMB |
| 8 | 8.27 | SO4 | 7.646 | 1.951 | 33.39 | 28.972 | BMB |
| **Total:** | | | 46.338 | 5.843 | 100.00 | 63.518 | |

# 5 ANION STD #5

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 22:55** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

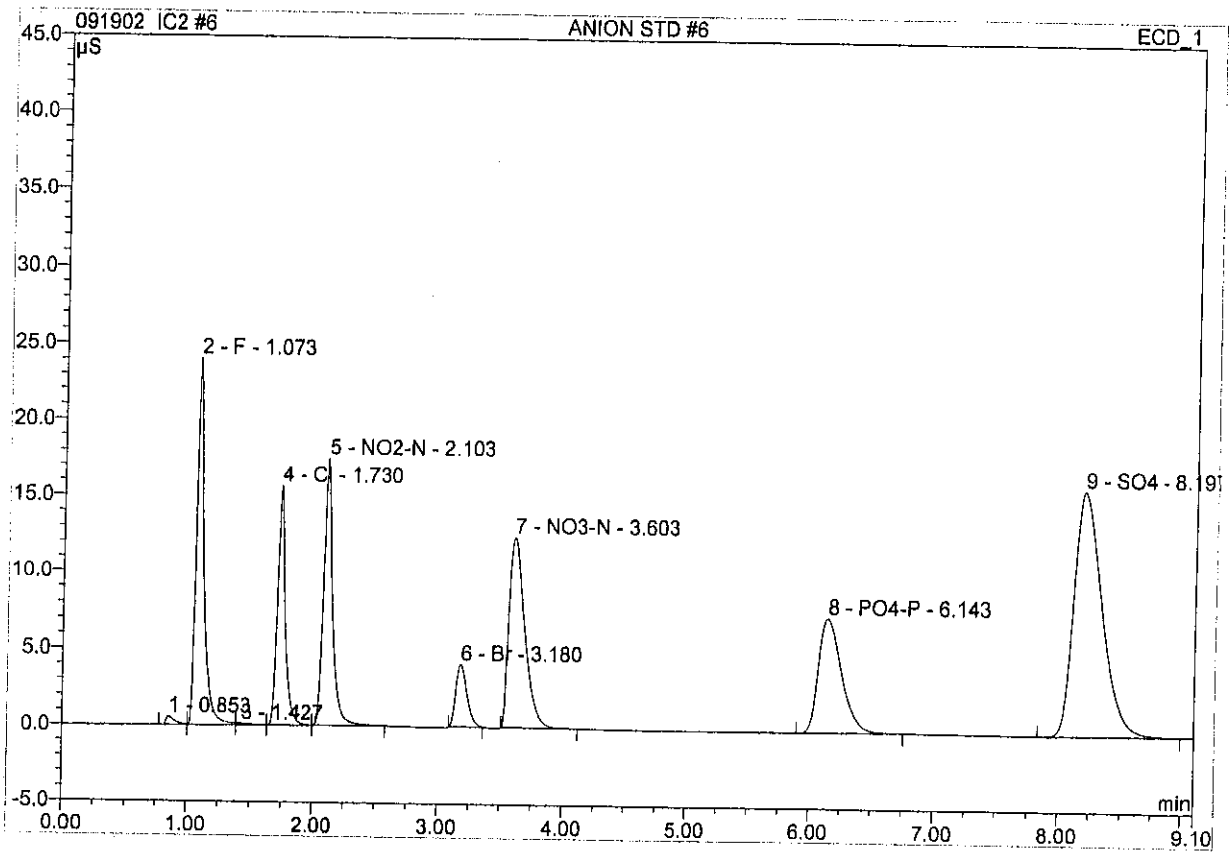



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| 1 | 0.85 | n.a. | 0.378 | 0.032 | 0.39 | n.a. | BM |
| 2 | 1.07 | F | 15.721 | 1.134 | 14.05 | 8.024 | MB |
| 3 | 1.73 | Cl | 9.820 | 0.714 | 8.84 | 7.878 | BM |
| 4 | 2.10 | NO2-N | 11.177 | 0.970 | 12.01 | 4.872 | MB |
| 5 | 3.18 | Br | 2.717 | 0.294 | 3.64 | 8.196 | BMB |
| 6 | 3.63 | NO3-N | 8.498 | 1.201 | 14.87 | 5.418 | BMB |
| 7 | 6.18 | PO4-P | 4.918 | 1.050 | 13.00 | 12.943 | BMB |
| 8 | 8.24 | SO4 | 10.455 | 2.681 | 33.20 | 39.466 | BMB |
| **Total:** | | | 63.684 | 8.074 | 100.00 | 86.796 | |

# 6 ANION STD #6

## 1,1 JWR CS-03-37-19 07/30/02

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:06** | *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 | 0.85 | n.a. | 0.563 | 0.048 | 0.38 | n.a. | BM |
| 2 | 1.07 | F | 24.053 | 1.741 | 13.93 | 12.210 | M |
| 3 | 1.43 | n.a. | 0.135 | 0.020 | 0.16 | n.a. | M |
| 4 | 1.73 | Cl | 15.625 | 1.123 | 8.98 | 12.281 | M |
| 5 | 2.10 | NO2-N | 17.457 | 1.484 | 11.87 | 7.404 | MB |
| 6 | 3.18 | Br | 4.075 | 0.425 | 3.40 | 11.854 | BM |
| 7 | 3.60 | NO3-N | 12.414 | 1.837 | 14.70 | 8.236 | BMB |
| 8 | 6.14 | PO4-P | 7.448 | 1.626 | 13.01 | 19.911 | BMB |
| 9 | 8.20 | SO4 | 15.947 | 4.196 | 33.57 | 61.250 | BMB |
| **Total:** | | | 97.717 | 12.499 | 100.00 | 133.145 | |

# 8 ANION ALT STD

## 1,1 JWR ANION ALT STD SOS0060-31

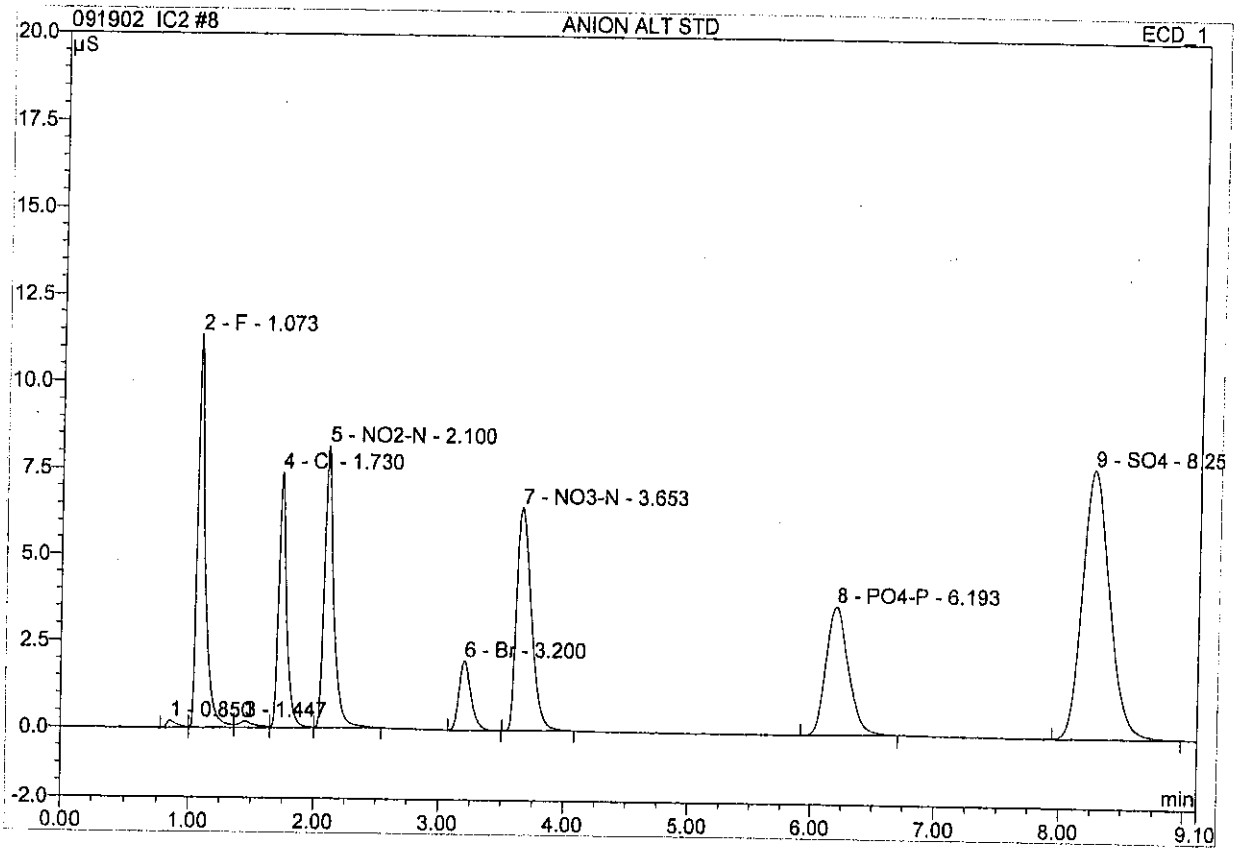
| | | | |
|---|---|---|---|
| *Sample Name:* | **ANION ALT STD** | | *Injection Volume:* |
| *Vial Number:* | **36** | | *Channel:* |
| *Sample Type:* | **unknown** | | *Wavelength:* |
| *Control Program:* | **9056** | | *Bandwidth:* |
| *Quantif. Method:* | **9056** | | *Dilution Factor:* |
| *Recording Time:* | **7/30/2002 23:56** | | *Sample Weight:* |
| *Run Time (min):* | **9.10** | | *Sample Amount:* |

| ANION ALT STD | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 5.8796 | -2.01 | PASS |
| Cl | 6 | 5.9275 | -1.21 | PASS |
| NO2-N | 3.65 | 3.5402 | -3.01 | PASS |
| Br | 6 | 6.0765 | 1.27 | PASS |
| NO3-N | 4.07 | 4.0147 | -1.36 | PASS |
| PO4-P | 9.78 | 9.7018 | -0.80 | PASS |
| SO4 | 30 | 29.4057 | -1.98 | PASS |

# 8 ANION ALT STD

## 1,1 JWR ANION ALT STD SOS0060-31

| | | | |
|---|---|---|---|
| *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:* | **7/30/2002 23:56** | *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 | 0.85 | n.a. | 0.205 | 0.018 | 0.31 | n.a. | BM |
| 2 | 1.07 | F | 11.357 | 0.823 | 13.80 | 5.880 | M |
| 3 | 1.45 | n.a. | 0.196 | 0.027 | 0.45 | n.a. | M |
| 4 | 1.73 | Cl | 7.381 | 0.533 | 8.93 | 5.928 | M |
| 5 | 2.10 | NO2-N | 8.144 | 0.699 | 11.72 | 3.540 | MB |
| 6 | 3.20 | Br | 2.007 | 0.218 | 3.65 | 6.076 | BMB |
| 7 | 3.65 | NO3-N | 6.447 | 0.884 | 14.82 | 4.015 | BMB |
| 8 | 6.19 | PO4-P | 3.684 | 0.782 | 13.10 | 9.702 | BMB |
| 9 | 8.26 | SO4 | 7.765 | 1.981 | 33.21 | 29.406 | BMB |
| **Total:** | | | 47.185 | 5.965 | 100.00 | 64.546 | |

# 10 WG125723-01 ANION CCV

## 1,1 JWR CS-03-37-19

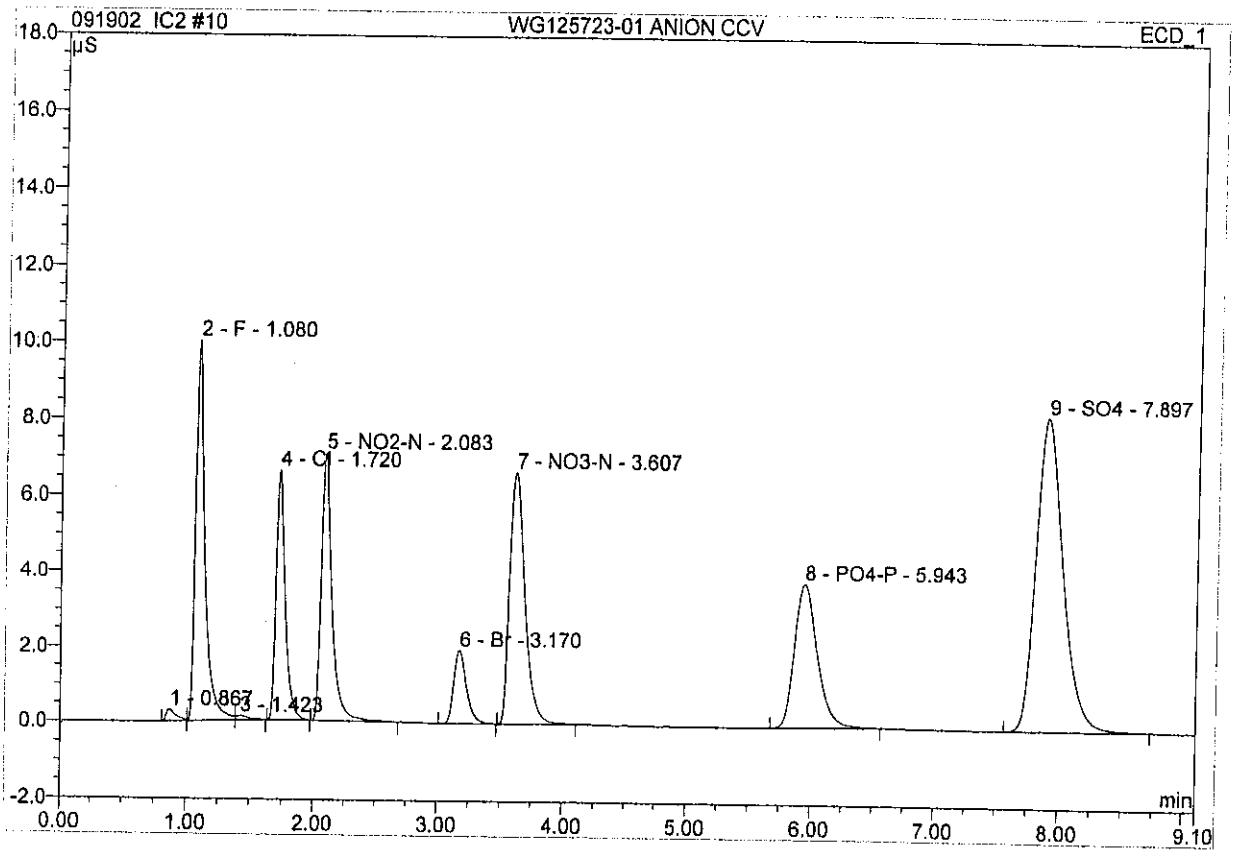
| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-01 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **46** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/19/2002 13:21** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125723-01 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 5.9927 | -0.12 | PASS |
| Cl | 6 | 6.0822 | 1.37 | PASS |
| NO2-N | 3.65 | 3.5734 | -2.10 | PASS |
| Br | 6 | 6.4511 | 7.52 | PASS |
| NO3-N | 4.07 | 4.3156 | 6.04 | PASS |
| PO4-P | 9.78 | 10.1320 | 3.60 | PASS |
| SO4 | 30 | 30.9286 | 3.10 | PASS |

# 10 WG125723-01 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-01 ANION 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:* | **9/19/2002 13:21** | *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 | 0.87 | n.a. | 0.308 | 0.027 | 0.43 | n.a. | BM |
| 2 | 1.08 | F | 10.016 | 0.840 | 13.50 | 5.993 | M |
| 3 | 1.42 | n.a. | 0.117 | 0.014 | 0.23 | n.a. | MB |
| 4 | 1.72 | Cl | 6.605 | 0.547 | 8.79 | 6.082 | BMB |
| 5 | 2.08 | NO2-N | 7.081 | 0.706 | 11.35 | 3.573 | BMB |
| 6 | 3.17 | Br | 1.955 | 0.231 | 3.72 | 6.451 | BMB |
| 7 | 3.61 | NO3-N | 6.649 | 0.952 | 15.30 | 4.316 | BMB |
| 8 | 5.94 | PO4-P | 3.819 | 0.817 | 13.14 | 10.132 | BMB |
| 9 | 7.90 | SO4 | 8.260 | 2.087 | 33.55 | 30.929 | BMB |
| **Total:** | | | 44.810 | 6.221 | 100.00 | 67.476 | |

# 21 WG125723-02 ANION CCV

## 1,1 JWR CS-03-37-19

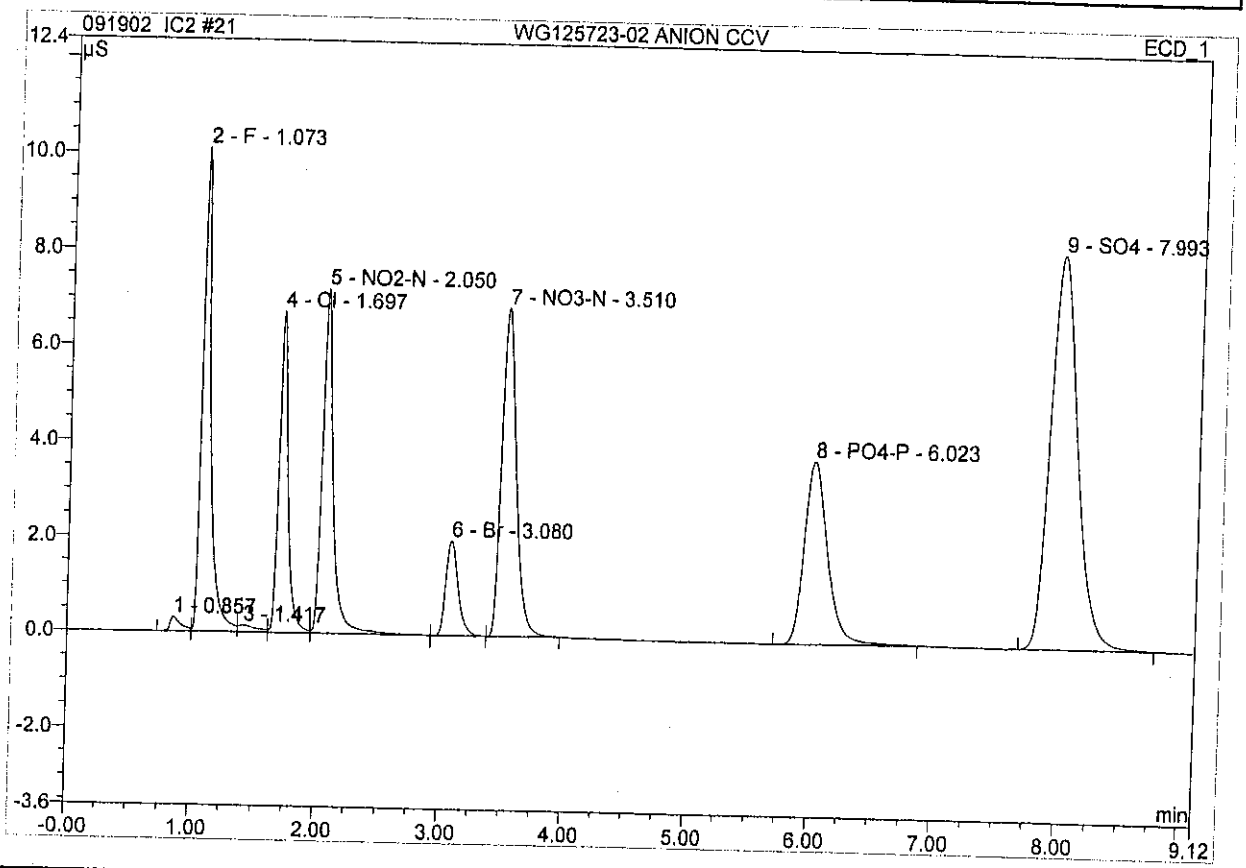
| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-02 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **47** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/19/2002 15:31** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125723-02 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0782 | 1.30 | PASS |
| Cl | 6 | 6.2795 | 4.66 | PASS |
| NO2-N | 3.65 | 3.7107 | 1.66 | PASS |
| Br | 6 | 6.4229 | 7.05 | PASS |
| NO3-N | 4.07 | 4.3310 | 6.41 | PASS |
| PO4-P | 9.78 | 10.4696 | 7.05 | PASS |
| SO4 | 30 | 30.9600 | 3.20 | PASS |

# 21 WG125723-02 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-02 ANION CCV** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **47** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 15:31** | *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 | 0.86 | n.a. | 0.309 | 0.030 | 0.47 | n.a. | BM |
| 2 | 1.07 | F | 10.114 | 0.852 | 13.47 | 6.078 | M |
| 3 | 1.42 | n.a. | 0.153 | 0.024 | 0.38 | n.a. | M |
| 4 | 1.70 | Cl | 6.736 | 0.565 | 8.94 | 6.279 | M |
| 5 | 2.05 | NO2-N | 7.212 | 0.734 | 11.60 | 3.711 | M |
| 6 | 3.08 | Br | 2.000 | 0.230 | 3.64 | 6.423 | MB |
| 7 | 3.51 | NO3-N | 6.875 | 0.955 | 15.11 | 4.331 | BMB |
| 8 | 6.02 | PO4-P | 3.837 | 0.845 | 13.36 | 10.470 | BMB |
| 9 | 7.99 | SO4 | 8.235 | 2.089 | 33.03 | 30.960 | BMB |
| **Total:** | | | 45.470 | 6.325 | 100.00 | 68.252 | |

# 32 WG125723-03 ANION CCV

## 1,1 JWR CS-03-37-19

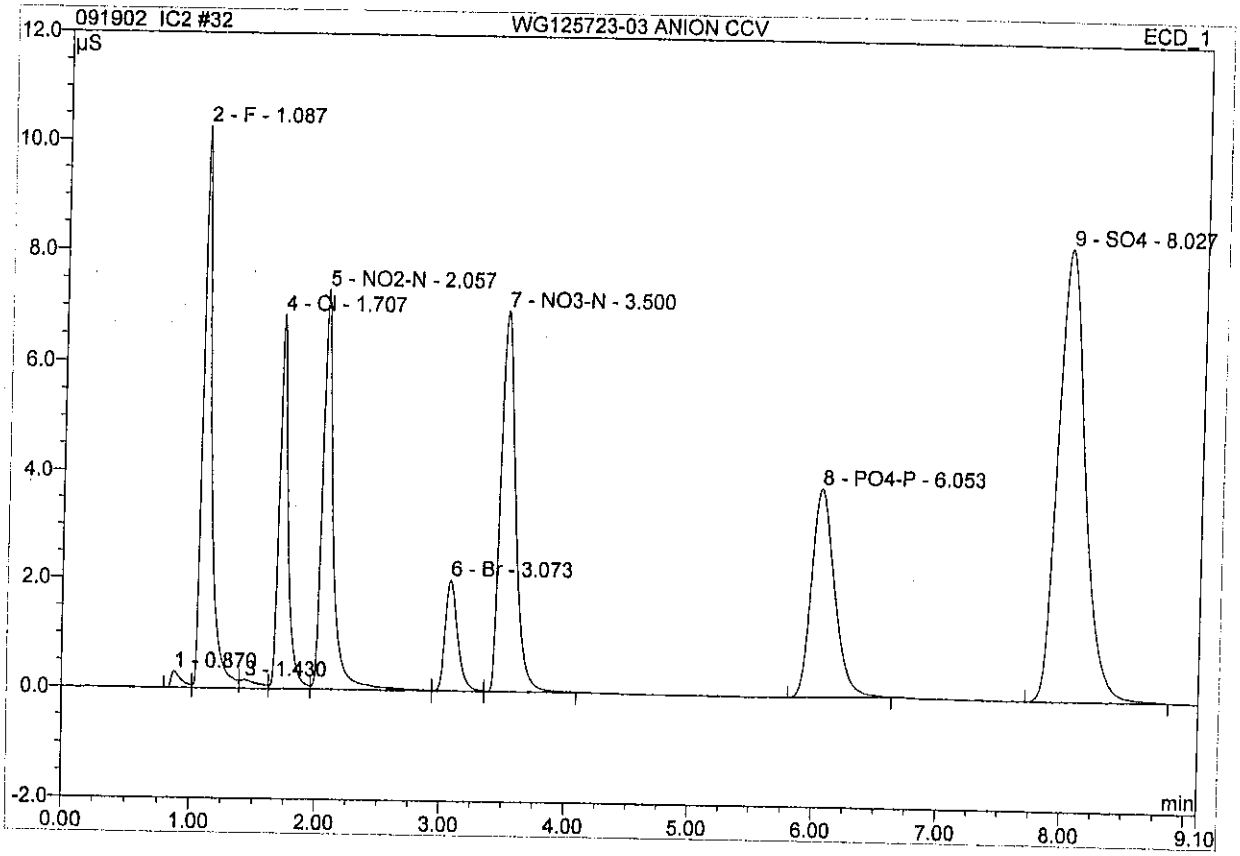
| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-03 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **52** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/19/2002 17:37** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125723-03 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.1020 | 1.70 | PASS |
| Cl | 6 | 6.3243 | 5.40 | PASS |
| NO2-N | 3.65 | 3.7482 | 2.69 | PASS |
| Br | 6 | 6.5042 | 8.40 | PASS |
| NO3-N | 4.07 | 4.3826 | 7.68 | PASS |
| PO4-P | 9.78 | 10.2360 | 4.66 | PASS |
| SO4 | 30 | 31.1752 | 3.92 | PASS |

# 32 WG125723-03 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-03 ANION CCV** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **52** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 17:37** | *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 | 0.87 | n.a. | 0.299 | 0.028 | 0.44 | n.a. | BM |
| 2 | 1.09 | F | 10.269 | 0.855 | 13.47 | 6.102 | M |
| 3 | 1.43 | n.a. | 0.155 | 0.025 | 0.39 | n.a. | M |
| 4 | 1.71 | Cl | 6.861 | 0.569 | 8.97 | 6.324 | M |
| 5 | 2.06 | NO2-N | 7.315 | 0.741 | 11.68 | 3.748 | M |
| 6 | 3.07 | Br | 2.025 | 0.233 | 3.67 | 6.504 | M |
| 7 | 3.50 | NO3-N | 6.972 | 0.967 | 15.23 | 4.383 | MB |
| 8 | 6.05 | PO4-P | 3.832 | 0.826 | 13.01 | 10.236 | BMB |
| 9 | 8.03 | SO4 | 8.268 | 2.104 | 33.14 | 31.175 | BMB |
| **Total:** | | | 45.996 | 6.349 | 100.00 | 68.473 | |

# 43 WG125723-04 ANION CCV

## 1,1 JWR CS-03-37-19

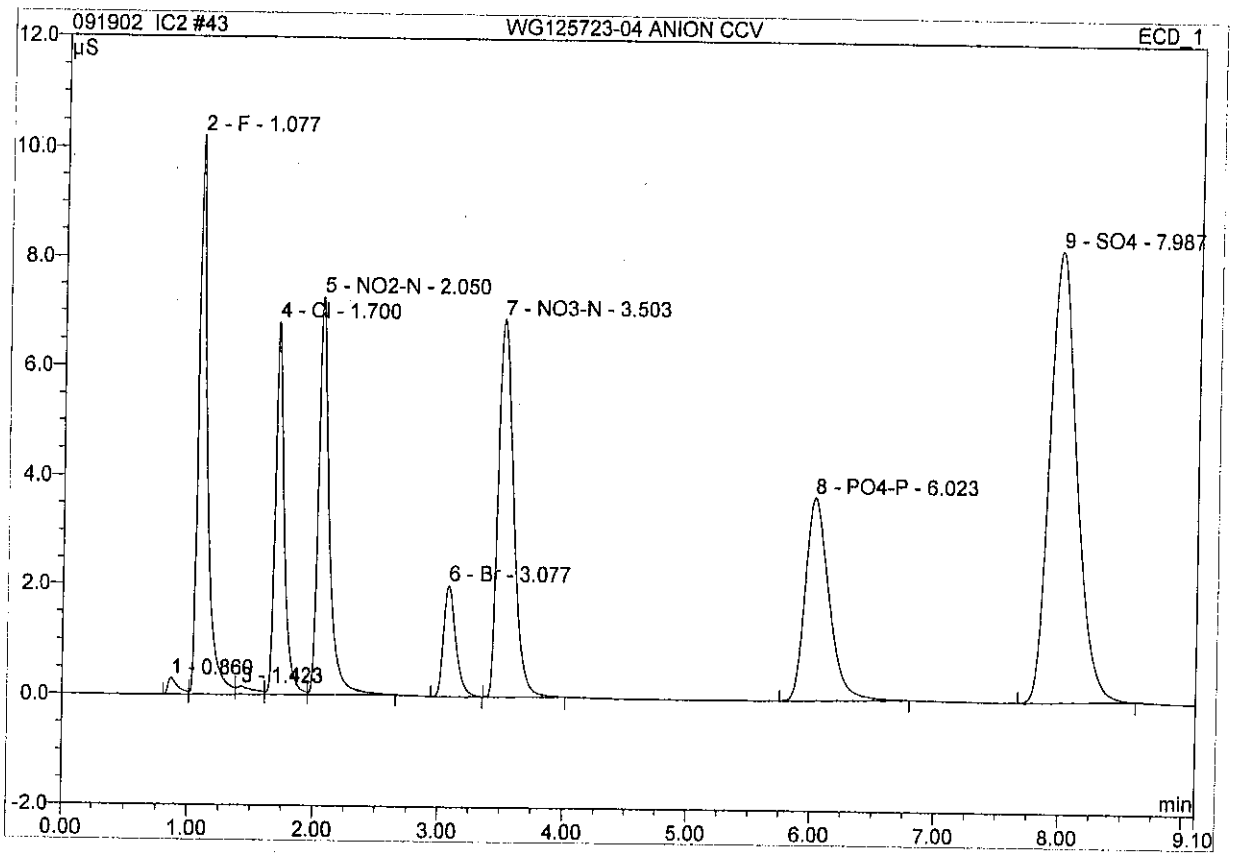
| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-04 ANION CCV** | *Injection Volume:* | |
| *Vial Number:* | **54** | *Channel:* | |
| *Sample Type:* | **unknown** | *Wavelength:* | |
| *Control Program:* | **9056** | *Bandwidth:* | |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | |
| *Recording Time:* | **9/19/2002 19:43** | *Sample Weight:* | |
| *Run Time (min):* | **9.10** | *Sample Amount:* | |

| WG125723-04 ANI( | Actual mg/L | Recoved mg/L | %Difference | |
|---|---|---|---|---|
| F | 6.00 | 6.0920 | 1.53 | PASS |
| Cl | 6 | 6.2781 | 4.63 | PASS |
| NO2-N | 3.65 | 3.6634 | 0.37 | PASS |
| Br | 6 | 6.4781 | 7.97 | PASS |
| NO3-N | 4.07 | 4.3576 | 7.07 | PASS |
| PO4-P | 9.78 | 10.2601 | 4.91 | PASS |
| SO4 | 30 | 30.9253 | 3.08 | PASS |

# 43 WG125723-04 ANION CCV

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125723-04 ANION CCV** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **54** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 19:43** | *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 | 0.86 | n.a. | 0.296 | 0.027 | 0.43 | n.a. | BM |
| 2 | 1.08 | F | 10.215 | 0.854 | 13.55 | 6.092 | M |
| 3 | 1.42 | n.a. | 0.148 | 0.023 | 0.36 | n.a. | M |
| 4 | 1.70 | Cl | 6.806 | 0.565 | 8.97 | 6.278 | M |
| 5 | 2.05 | NO2-N | 7.269 | 0.724 | 11.49 | 3.663 | MB |
| 6 | 3.08 | Br | 2.017 | 0.232 | 3.68 | 6.478 | BMB |
| 7 | 3.50 | NO3-N | 6.892 | 0.961 | 15.26 | 4.358 | BMB |
| 8 | 6.02 | PO4-P | 3.716 | 0.828 | 13.14 | 10.260 | BMB |
| 9 | 7.99 | SO4 | 8.251 | 2.087 | 33.11 | 30.925 | BMB |
| **Total:** | | | 45.610 | 6.302 | 100.00 | 68.055 | |

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 |

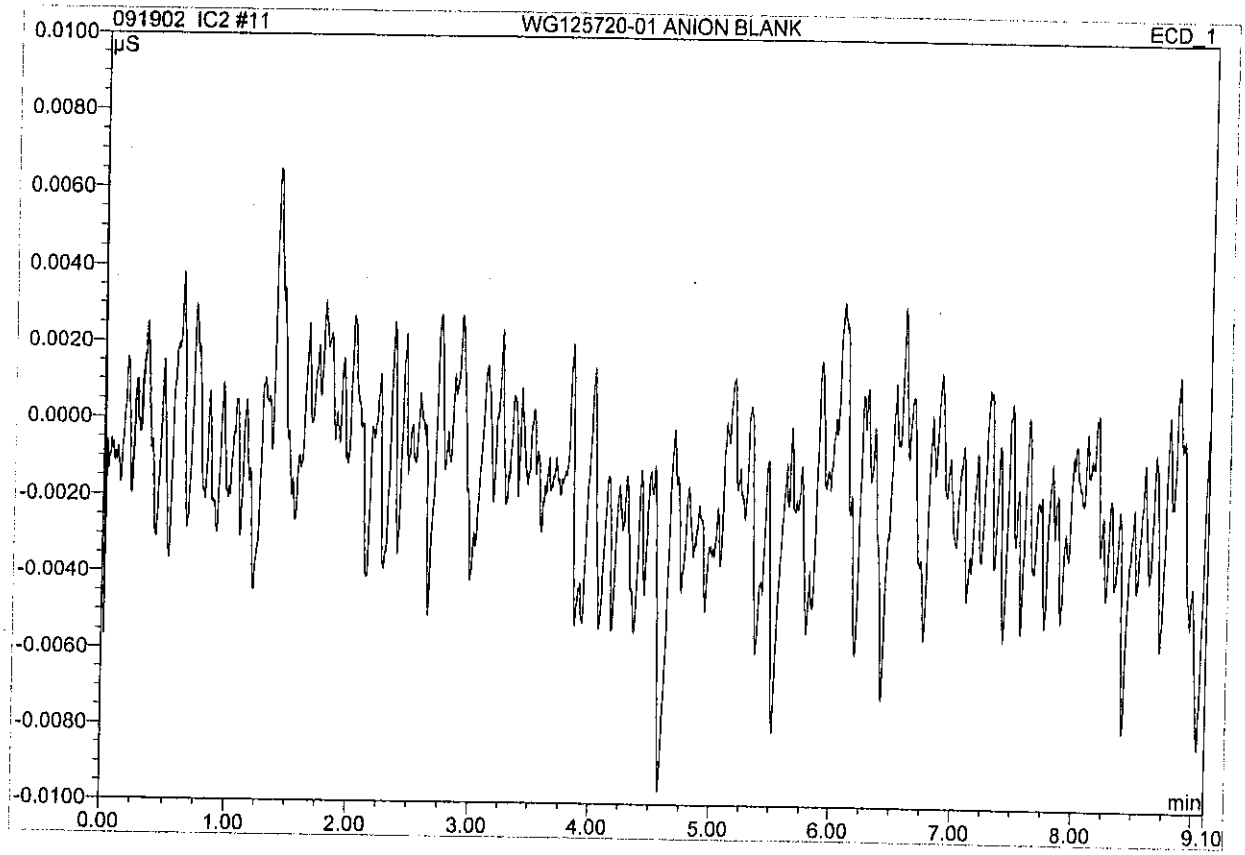
| COMPOUND | STD #1 RT | STD #2 RT | STD #3 RT | RT WIN |
|---|---|---|---|---|
| F | 1.07 | 1.07 | 1.08 | 0.017 |
| Cl | 1.69 | 1.69 | 1.70 | 0.017 |
| NO2-N | 2.05 | 2.04 | 2.06 | 0.030 |
| Br | 3.12 | 3.11 | 3.16 | 0.079 |
| NO3-N | 3.55 | 3.53 | 3.58 | 0.075 |
| PO4-P | 5.85 | 5.83 | 5.76 | 0.142 |
| SO4 | 7.59 | 7.58 | 7.51 | 0.131 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

# 2.4.5.4 Raw Data

# 11 WG125720-01 ANION BLANK

## 1,1 JWR

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125720-01 ANION BLANK** | *Injection Volume:* | **25.0** |
| *Vial Number:* | **47** | *Channel:* | **ECD_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **9056** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **9056** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **9/19/2002 13:34** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **9.10** | *Sample Amount:* | **1.0000** |

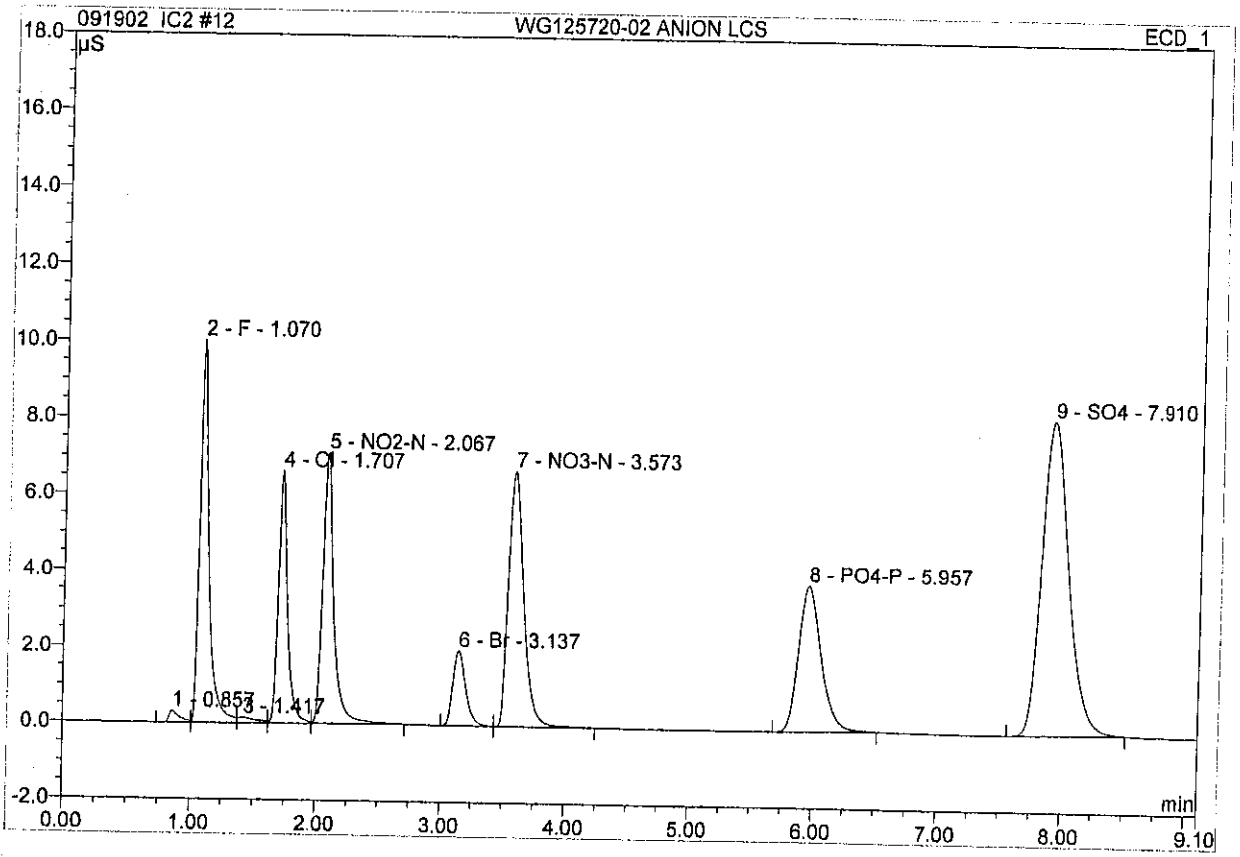



| No. | Ret.Time min | Peak Name | Height µS | Area µS*min | Rel.Area % | Amount mg/L | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# 12 WG125720-02 ANION LCS

## 1,1 JWR CS-03-37-19

| | | | |
|---|---|---|---|
| *Sample Name:* | **WG125720-02 ANION LCS** | *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:* | **9/19/2002 13:45** | *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 | 0.86 | n.a. | 0.307 | 0.029 | 0.46 | n.a. | BM |
| 2 | 1.07 | F | 10.025 | 0.847 | 13.54 | 6.041 | M |
| 3 | 1.42 | n.a. | 0.149 | 0.023 | 0.38 | n.a. | M |
| 4 | 1.71 | Cl | 6.624 | 0.561 | 8.98 | 6.237 | M |
| 5 | 2.07 | NO2-N | 7.107 | 0.721 | 11.52 | 3.646 | MB |
| 6 | 3.14 | Br | 1.971 | 0.231 | 3.69 | 6.443 | BM |
| 7 | 3.57 | NO3-N | 6.699 | 0.960 | 15.34 | 4.350 | MB |
| 8 | 5.96 | PO4-P | 3.812 | 0.815 | 13.02 | 10.100 | BMB |
| 9 | 7.91 | SO4 | 8.227 | 2.068 | 33.07 | 30.662 | BMB |
| **Total:** | | | 44.921 | 6.254 | 100.00 | 67.478 | |

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 44

Created: 9/19/2002 12:57:09 by Analyst
Last Update: 9/20/2002 13:12:43 by Analyst

1384 psi

| No. | Name | Type | Pos. | Inj. Vol. | Program | Method | Status | Inj. Date/Time |
|---|---|---|---|---|---|---|---|---|
| 1 | ANION STD #1 | Standard | 1 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:02:57 |
| 2 | ANION STD #2 | Standard | 2 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:20:52 |
| 3 | ANION STD #3 | Standard | 3 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:32:22 |
| 4 | ANION STD #4 | Standard | 5 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:43:52 |
| 5 | ANION STD #5 | Standard | 5 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 22:55:22 |
| 6 | ANION STD #6 | Standard | 6 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 23:06:52 |
| 7 | ELUENT BLANK | Unknown | 7 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 23:18:22 |
| 8 | ANION ALT STD | Unknown | 36 | 25.0 | 9056 | 9056 | Finished | 7/30/2002 23:56:16 |
| 9 | ELUENT BLANK | Unknown | 45 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:09:38 ✓ |
| 10 | WG125723-01 ANION CCV | Unknown | 46 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:21:08 |
| 11 | WG125720-01 ANION BLANK | Unknown | 47 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:34:26 |
| 12 | WG125720-02 ANION LCS | Unknown | 46 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:45:56 |
| 13 | WG125720-03 DUP-REF | Unknown | 47 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 13:57:25 |
| 14 | L0209336-03 | Unknown | 48 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:08:55 |
| 15 | L0209336-05 | Unknown | 49 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:20:25 |
| 16 | WG125720-05 MS/MSD-REF | Unknown | 49 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:31:54 |
| 17 | WG125720-04 DUP | Unknown | 49 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:43:24 |
| 18 | WG125720-06 MS | Unknown | 48 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 14:54:54 |
| 19 | WG125720-07 MSD | Unknown | 48 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:06:23 |
| 20 | L0209336-01 RR 1/4 SO4 | Unknown | 46 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:17:53 |
| 21 | WG125723-02 ANION CCV | Unknown | 47 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:31:00 |
| 22 | L0209337-01 1/10 | Unknown | 51 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:42:30 |
| 23 | L0209337-05 1/10 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 15:54:00 |
| 24 | L0209337-04 1/20 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:05:30 |
| 25 | L0209337-06 1/20 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:17:00 |
| 26 | L0209337-07 1/100 | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:28:29 |
| 27 | L0209337-02 1/200 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:39:59 |
| 28 | L0209337-03 1/200 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 16:51:29 |
| 29 | PO4 REC CHECK | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:02:59 |
| 30 | PO4 REC CHECK | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:14:28 |
| 31 | PO4 REC CHECK | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:25:58 |
| 32 | WG125723-03 ANION CCV | Unknown | 52 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:37:28 |
| 33 | L0209337-03 RR @ 1/20 | Unknown | 53 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 17:48:58 |
| 34 | L0209337-02 RR @ 1/20 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:00:27 |
| 35 | L0209337-07 RR @ 1/10 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:11:57 |
| 36 | L0209337-06 RR @ 1/2 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:23:27 |
| 37 | L0209337-04 RR @ 1/2 | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:34:57 |
| 38 | L0209337-05 RR No Dilution | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:46:27 |
| 39 | L0209337-01 RR No Dilution | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 18:57:57 |
| 40 | PO4 REC CHECK | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:09:26 |
| 41 | PO4 REC CHECK | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:20:56 |
| 42 | PO4 REC CHECK | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:32:26 |

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Operator: Analyst

Printed: 9/20/2002 13:13:03

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 44

Created: 9/19/2002 12:57:09 by Analyst
Last Update: 9/20/2002 13:12:43 by Analyst

1384 ps.
R324287

| No. | Name | Dil. Factor | Sample ID | Comment |
|---|---|---|---|---|
| 1 | ANION STD #1 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 2 | ANION STD #2 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 3 | ANION STD #3 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 4 | ANION STD #4 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 5 | ANION STD #5 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 6 | ANION STD #6 | 1.0000 | | 1,1 JWR CS-03-37-19 07/30/02 |
| 7 | ELUENT BLANK | 1.0000 | | 1,1 JWR |
| 8 | ANION ALT STD | 1.0000 | | 1,1 JWR ANION ALT STD SOS0060-31 |
| 9 | ELUENT BLANK | 1.0000 | | 1,1 JWR |
| 10 | WG125723-01 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 11 | WG125720-01 ANION BLANK | 1.0000 | | 1,1 JWR ✓ |
| 12 | WG125720-02 ANION LCS | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 13 | WG125720-03 DUP-REF | 1.0000 | | 1,1 JWR L0209336-01 DUP-REF ✓ RR SO4 1/4 ✓ |
| 14 | L0209336-03 | 1.0000 | | 1,1 JWR ✓ |
| 15 | L0209336-05 | 1.0000 | | 1,1 JWR ✓ |
| 16 | WG125720-05 MS/MSD-REF | 1.0000 | | 1,1 JWR L0209336-07 MS/MSD-REF ✓ |
| 17 | WG125720-04 DUP | 1.0000 | | 1,1 JWR L0209336-01 DUP ✓ |
| 18 | WG125720-06 MS | 1.0000 | | 1,1 JWR L0209336-07 MS ✓ |
| 19 | WG125720-07 MSD | 1.0000 | | 1,1 JWR L0209336-07 MSD ✓ |
| 20 | L0209336-01 RR 1/4 SO4 | 1.0000 | | 1,4 JWR ✓ |
| 21 | WG125723-02 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 22 | L0209337-01 1/10 | 1.0000 | | 1,10 JWR Initial PO4 Interference Screen |
| 23 | L0209337-05 1/10 | 1.0000 | | 1,10 JWR Initial PO4 Interference Screen |
| 24 | L0209337-04 1/20 | 1.0000 | | 1,20 JWR Initial PO4 Interference Screen |
| 25 | L0209337-06 1/20 | 1.0000 | | 1,20 JWR Initial PO4 Interference Screen |
| 26 | L0209337-07 1/100 | 1.0000 | | 1,100 JWR Initial PO4 Interference Screen |
| 27 | L0209337-02 1/200 | 1.0000 | | 1,200 JWR Initial PO4 Interference Screen |
| 28 | L0209337-03 1/200 | 1.0000 | | 1,200 JWR Initial PO4 Interference Screen |
| 29 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Rec. Check After Screens |
| 30 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Rec. Check After Screens |
| 31 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Rec. Check After Screens |
| 32 | WG125723-03 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 33 | L0209337-03 RR @ 1/20 | 1.0000 | | 1,20 JWR Initial Dilution Screen was OK ✓ |
| 34 | L0209337-02 RR @ 1/20 | 1.0000 | | 1,20 JWR Initial Dilution Screen was OK ✓ |
| 35 | L0209337-07 RR @ 1/10 | 1.0000 | | 1,10 JWR Initial Dilution Screen was OK ✓ |
| 36 | L0209337-06 RR @ 1/2 | 1.0000 | | 1,2 JWR Initial Dilution Screen was OK ✓ |
| 37 | L0209337-04 RR @ 1/2 | 1.0000 | | 1,2 JWR Initial Dilution Screen was OK ✓ |
| 38 | L0209337-05 RR No Dilution | 1.0000 | | 1,1 JWR Initial Dilution Screen was OK ✓ |
| 39 | L0209337-01 RR No Dilution | 1.0000 | | 1,1 JWR Initial Dilution Screen was OK ✓ |
| 40 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Check After Undiluted Run |
| 41 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Check After Undiluted Run |
| 42 | PO4 REC CHECK | 1.0000 | | 1,1 JWR PO4 Check After Undiluted Run |

JWR 09/20/02

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Operator: Analyst

Printed: 9/20/2002 13:13:03

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 44

Created: 9/19/2002 12:57:09 by Analyst
Last Update: 9/20/2002 13:12:43 by Analyst

| No. | Name | Type | Pos. | Inj. Vol. | Program | Method | Status | Inj. Date/Time |
|---|---|---|---|---|---|---|---|---|
| 43 | WG125723-04 ANION CCV | Unknown | 54 | 25.0 | 9056 | 9056 | Finished | 9/19/2002 19:43:55 |
| 44 | END | Unknown | 44 | 25.0 | DX-320 OFF | 9056 | Finished ✓ | 9/19/2002 19:55:25 |

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Operator: Analyst

Printed: 9/20/2002 13:13:03

Title:
Datasource: IC DELL_local
Location: DX-320\DX-320 Sequence Files
Timebase: DX-320
#Samples: 44

Created: 9/19/2002 12:57:09 by Analyst
Last Update: 9/20/2002 13:12:43 by Analyst

| No. | Name | Dil. Factor | Sample ID | Comment |
|---|---|---|---|---|
| 43 | WG125723-04 ANION CCV | 1.0000 | | 1,1 JWR CS-03-37-19 ✓ |
| 44 | END | 1.0000 | | 1,1 JWR |

JWR/09/20/02
RDC 9/25/02

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**KEMRON ENVIRONMENTAL SERVICES**
**IC Laboratory Maintenance Log**

**Analysis Date/Time** 09/19/02 **Instrument ID** IC2 **Column ID** AG4A-SC **Data Subdirectory** 091902
**Analyst Initials** JWR **SOP # IC01 Rev. #** 2 ✓ 9056 AS4A-SC **SOP # IC02 Rev. #** ____ 314.0

**Daily Check**
- ☑ Mobile phase reservoir
- ☑ System pressure 1384psi
- ☑ Waste container

**Returned to Control?**
Yes ____ No ____

**Additional Maintenance**
**Problem:** _____

Action Taken: _____

**Comments**

**Reviewed By:** RPC 9/25/02

# Semi-Volatile 9056 Checklist

Run Date: 09/19/02

Analyst: JWR

Instrument: IC2

| Workorders: | Due Date: | Priority: |
|---|---|---|
| L0209336 | 09/26/02 | |
| L0209337 | 09/26/02 | |
| WG125720 | | |

| | | 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 09-336,337 | |
| | | |
| Case Narrative: | | |
| Corrective Action: | | NA |
| 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

Sample hold times for L0209336 do not reflect time zone changes. All samples and serums were run "in hold".

L0209337 samples were screened at high dilutions and reran at lower dilutions due to sample matrix interferences with PO4 recoveries in the past. The dilutions reported on these samples were chosen as the safest, most "undiluted," concentrations useable that would not affect the integrity of the analytical column.

Primary Reviewer: JWR/09/24/02

Secondary Reviewer: RQC 9/25/02

Supervisor Review: RQC 9/25/02 / dlh 9/25/02

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