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NAS KEY WEST
5090.3a

FINAL SUPPLEMENTAL SITE ASSESSMENT REPORT FOR BUILDING A-902 TRUCK FILL STAND SITE WITH TRANSMITTAL LETTER NAS KEY WEST FL
2/8/2001
BLASLAND, BOUCK AND LEE

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Transmitted Via UPS Next Day Air

February 8, 2001

Mr. Robert Courtright
Department of the Navy
Naval Air Station, Key West
NAS Building A-629
Key West, FL 33040

Re: N62467-99-D-2745
Indefinite Quantity A/E Contract for Environmental Management Services for
Multi-Media Regulatory Compliance at the Naval Air Station Complex, Key West, Florida
Supplemental Site Assessment Report at Building A-902, Truck Fill Stand Site
NAS Key West, FL
BBL Project #: 88012.005

Dear Mr. Courtright:

Blasland, Bouck & Lee, Inc. (BBL) has prepared this FINAL Supplemental Site Assessment Report for Building A-902, Truck Fill Stand Site at Naval Air Station Key West, Florida. We are providing the Navy with the corrected cover page, geologist seal page, and corrected Section 2.4 page to be inserted in the DRAFT copy already received, as well as, one additional final copy. As you requested, we are submitting one final copy along with a CD-ROM copy of the report to the Florida Department of Environmental Protection (FDEP).

Should you have any questions or need additional information, please contact us.

Very truly yours,

BLASLAND, BOUCK & LEE, INC.

Amanda Shearer, P.G.
Manager, Hydrogeology

ASF/clk
04211130.DOC

cc: J.R. Bair, Contacts Officer, NAS Key West (w/o attachments)
Jorge Caspary, P.G., FDEP–Tallahassee (w/one final copy; one copy on CD-ROM)

3350 Buschwood Park Drive • Suite 100 • Tampa, Fl 33618-4447 • Tel (813) 933-0697 • Fax (813) 932-9514 • Offices Nationwide

Statement of Geologic Review

In accordance with Chapter 492.111 (3) of the Florida Statutes, this Supplemental Site Assessment Report prepared for Building A-902, Truck Fill Stand Site located at Naval Air Station Key West, Boca Chica Key, Florida has been reviewed by a Professional Geologist registered in the state of Florida.

Approved for Submittal:

Amanda Shearer, P.G.
License No. 0001116
February 8, 2001

John C. Alonso
Principal Scientist

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1. Introduction

The U.S. Navy authorized Blasland, Bouck, & Lee, Inc. (BBL) to perform this project pursuant to Contract Number N62467-99-D-2745, under Task Order 001. BBL prepared this Supplemental Site Assessment Report (SSAR) to further define the extent of petroleum hydrocarbon impacts to the soil and ground water at the Truck Fill Stand, Building A-902 (site) at U.S. Naval Air Station (NAS) Key West, on Boca Chica Key, Key West, Florida. This project was conducted in accordance with the procedures in Chapter 62-770, Florida Administrative Code (FAC). The Florida Department of Environmental Protection (FDEP) Facility Identification Number for the site is 449400050.

1.1 Site Location

The Truck Fill Stand is located at NAS Key West, on Boca Chica Key, Florida. The site is specifically located in Section 29, Township 67 South, Range 29 East, as referenced on the Key West, Florida U. S. Geological Survey topographic quadrangle map (**Figure 1-1**).

The Truck Fill Stand is an active facility used to fill tanker trucks for aircraft refueling. Fuel from the Boca Chica Tank Farm, located approximately 4,000 feet southwest, is transmitted to the Truck Fill Stand via pipelines. A 1,000-gallon underground storage tank (UST) A-935 (a.k.a. A-902B), used for storage of used oil generated from the truck fill rack filters, was removed from the site in 1995. Currently on site is one 250-gallon aboveground storage tank (AST) A-935-R, used for the same purpose.

1.2 Background and Purpose

A Site Assessment Report (SAR) was submitted to the FDEP by Southern Division Naval Facilities Engineering Command (SOUTHDIV) in April 1999. According to the SAR (TtNUS, 1999), the source of the petroleum hydrocarbons in the site media is uncertain. There may have been tanker truck spills in the past. The UST closure report for tank A-935 indicated the tank to be in excellent condition, although there was free product in the ground water in the tank excavation (OES, 1995). The SAR recommended an Initial Remedial Action (IRA) to address soil impacts followed by completion of a supplemental assessment. The FDEP approved the SAR on May 10, 1999.

In late January 2000, a release of less than 25 gallons of fuel was discharged into a catch basin that was under repair (**Figure 1-2**). The Navy excavated the impacted soil then collected soil samples for organic vapor analysis to confirm that all impacted soil had been removed. In late February or early March 2000, another release occurred in the same area of approximately 100 gallons. However, the catch basin had been repaired and all fuel was reportedly contained within the catch basin and pumped out.

In March 2000, construction workers at the new POL Lab Building adjacent to the Truck Fill Stand discovered soil with strong petroleum odor and discoloration in trenches excavated for the building footers. At the Navy's request, BBL installed two monitoring wells on the north and south sides of the building (MW-9 and MW-10) and sampled the ground water on March 29, 2000, for petroleum hydrocarbons. Sampling of the ground water was performed to determine if the ground-water quality exceeded Chapter 62-777, FAC target levels. The analytical results indicated that benzene was detected in the ground-water samples from both wells above the target level of one microgram per liter (ug/L). BBL concluded that the plume was not defined near the new POL Lab building and

further assessment would be necessary. In addition, on March 29, 2000, ground-water levels were measured in the wells at the Truck Fill Stand. MW-1 contained 1.92 inches of free product.

In April 2000, approximately 3,500 gallons of JP-5 was reportedly spilled to the west of the Truck Fill Stand due to contractor error during maintenance of the fuel filters (**Figure 1-2**). Excessively contaminated soil was excavated and free product pumped from the excavation.

Because these events may have changed the findings presented in the SAR, the Navy has requested that BBL conduct further assessment to define the extent of petroleum hydrocarbon impacts to site media. The following summarizes the supplemental assessment investigation, findings, and recommendations.

2. Supplemental Site Assessment

Figure 2-1 shows the sampling locations for the assessment described below.

2.1 Soil Sampling and Analysis

On March 28, 2000, BBL collected soil samples for organic vapor analysis during monitoring well installation. Because it rained hard a few hours before well installation, the soils were saturated from land surface to the natural water table at the location of MW-9. Therefore, organic vapor analysis was not performed at that location. The saturated soils at MW-9 did not have a noticeable odor. Soils were collected in the vadose zone at location MW-10 and analyzed for headspace organic vapor readings in accordance with the requirements in Chapter 62-770, FAC., using a TVA 1000® organic vapor analyzer/flame ionization detector (OVA/FID). The TVA 1000® was calibrated on site prior to sampling. At a depth of 1.5 feet below land surface (BLS), the soils had an OVA reading of 20.23 parts per million (ppm) and at 2.5 feet BLS 45.60 ppm. Both samples had a strong petroleum odor. The water table was at approximately 3 feet BLS.

Soil samples were collected on October 17 and 18, 2000, at locations SB-1 through SB-12 and MW-11 through MW-14 at 1-foot intervals to the water table using a decontaminated stainless steel hand auger or post-hole digger. The soil samples were analyzed for headspace organic vapor readings using a Foxboro 128 (OVA/FID), in accordance with the procedure in Chapter 62-770, FAC. Five of the sample locations had net OVA readings above 50 ppm: SB-2, SB-4, SB-10, MW-12, and MW-13. OVA readings are recorded in **Table 2-1** and are shown on **Figure 2-2**.

Because jet fuel was discharged at the site, the petroleum contaminants at the site are classified as constituents of the Kerosene Analytical Group, as defined in Chapter 62-770, FAC. Three soil samples were collected based on low, medium, and high OVA readings on October 17, 2000, for laboratory analysis of:

EPA Method 8021 (Volatile Aromatic Hydrocarbons [VOAs]),
EPA Method 8310 (Polynuclear Aromatic Hydrocarbons [PAHs]), and
FL-PRO (Total Recoverable Petroleum Hydrocarbons [TRPH]).

Samples SB-2 (1-2) from boring SB-2, SB-4 (1-2) from boring SB-4 and SB-8 (1-2) from boring SB-8 (with the numbers in parentheses being the sample depth interval) were analyzed. The laboratory analyses of SB-2 (1-2) indicated that benzo(a) pyrene with a concentration of 710 micrograms per kilogram (ug/kg) and TRPH with a concentration of 4,900 milligrams per kilogram (mg/kg) were above Chapter 62-777, FAC target levels for Commercial/Industrial Direct Exposure Use Assumptions (**Table 2-3**).

The estimated extent of petroleum contaminated soils on site is shown on **Figure 2-2**, with an estimated depth of approximately 1.5 feet. The complete laboratory analytical report with chain-of-custody and field sampling logs is provided in **Appendix A**.

2.2 Sediment Sampling and Analysis

BBL collected sediment samples SD-1 and SD-2 at the locations shown on **Figure 2-1** on August 22, 2000. The samples were collected within the upper six inches of sediment with a glass jar attached to an aluminum rod. Proper decontamination procedures were followed during sampling. The samples were placed in laboratory-prepared (appropriately preserved) sample containers, stored under ice, and shipped via overnight courier in sealed coolers to PC&B Environmental Laboratories, Inc. The samples were analyzed for PAHs by EPA Method 8310.

The analytical results are summarized on **Table 2-3**. The results indicated several PAHs well above the FDEP Sediment Quality Assessment Guidelines (SQAGs) Probable Effect Level (PEL) in sample SD-1. SQAGs provide the basis for assessing potential effects of sediment-associated contaminants. The PEL defines the lower limit of the range of contaminant concentrations that are usually or always associated with adverse biological effects. Acenaphthene and naphthalene were above the SQAGs in sample SD-2. The sampling results indicate a considerable increase in PAH concentrations from the results of a sediment sample collected in the same vicinity as SD-2 as presented in the SAR (see sample SD01, Table 3-3, **Appendix B**). The complete laboratory report, chain-of-custody record, and field sampling logs are provided in **Appendix C**.

2.3 Monitoring Well Installation

The rationale for the placement of the monitoring wells was based on the observations made in the field by construction personnel, soil samples, and ground-water sample results from the existing monitoring wells.

Precision Drilling, Inc., under the observation of a BBL geologist, installed monitoring wells MW-9 and MW-10 on March 28, 2000 (**Figure 2-1**). The wells were installed using a 6.25-inch inside diameter hollow-stem auger to a depth of 12 feet below land surface (BLS). Each well was constructed of a 2-foot section of 2-inch diameter, Schedule 40 PVC solid casing connected flush to 10 feet of 2-inch diameter, 0.010-inch mill-slotted screen. The annular space around the well screens was filled to 1 foot above the screened interval using 30/45 graded silica sand filter media during auger removal. Approximately 0.5 feet of bentonite chips were used as a plug to prevent grout from seeping into the filter pack. The remaining annular space was grouted to land surface with neat cement slurry (Portland, Type I). The wells were fitted with a locking cap and lock and contained within flush-mounted, bolt down, traffic-bearing manholes. Decontamination procedures outlined in BBL's FDEP approved CompQAP were followed prior to and during the drilling events.

On October 17, 2000, four additional shallow monitoring wells (MW-11 through MW-14) were installed at the site to further define the extent of hydrocarbon impacts to ground water (**Figure 2-1**). The wells were installed under the observation of BBL geologists and were constructed to allow for representative sampling of ground water and free product, if present, at the site.

The four new monitor wells were installed with a 6.25-inch inside diameter (I.D.) hollow-stem auger to a depth of 11 feet BLS. The wells were constructed with a 1-foot section of 2-inch diameter, Schedule 40 PVC solid casing connected flush to 10 feet of 2-inch diameter, 0.010-inch slot, Schedule 40 PVC mill-slotted screen. The annular space around the well screens was filled to 0.5 feet above the screened interval using 30/45 graded silica sand filter media during auger removal. Approximately 0.5 feet of bentonite was used as a plug to prevent grout from seeping into the filter pack. The remaining annular space in each well was then grouted to land surface with a neat cement slurry (Portland, Type I). All wells were fitted with locking caps and locks and contained within flush-mounted, bolt-down, traffic-bearing manholes.

A monitoring well completion summary is included in **Table 2-4**. Decontamination procedures outlined in BBL's FDEP-approved CompQAP were followed prior to and during each drilling event. Representative monitoring well construction details for all of the wells installed for this SSAR are provided in **Appendix D**.

All wells were developed by purging and surging using a centrifugal pump and reinforced hose to remove fine-grained sediments. The hose was properly decontaminated and steam-cleaned prior to placement in each well. The wells were developed until the purge water was visually free of sand and silt. Based on the low OVA readings and field observations, development water was discharged onto the source area.

Free product was not detected in any of the new monitoring wells installed on site for this SSAR.

2.4 Ground-Water Sampling and Analysis

On March 29, 2000, BBL sampled wells MW-9 and MW-10. To ensure the presence of formation water in the wells, the water levels were measured in the wells, then the monitoring wells were purged of three to five well volumes until the pH, specific conductance, and temperature had stabilized as measured using a Hydac® water quality instrument. Dissolved oxygen and turbidity were also measured prior to sampling. The Hydac® was calibrated according to the manufacturer's directions prior to sampling. Purging was accomplished using pre-cleaned, dedicated polyethylene tubing and a peristaltic pump operating at a low flow rate. Purge water was discharged onto the pavement to evaporate in the vicinity of the well and not allowed to flow off site.

Once purging was completed, samples were collected using pre-cleaned, dedicated disposable Teflon® bailers. Copies of the field water sampling logs are included in **Appendix E**. All sampling was performed and equipment was decontaminated in accordance with BBL's FDEP approved CompQAP.

The samples were placed in laboratory-prepared (appropriately preserved) sample containers, stored under ice, and shipped via overnight courier in sealed coolers to STL Precision laboratory. The samples were analyzed for the following analyses:

EPA Method 8021 (VOAs),
EPA Method 8310 (PAHs), and
FL-PRO.

For quality assurance/quality control, a trip blank was prepared by the laboratory and transported to and from the site in the sample cooler. The trip blank was analyzed for VOAs only.

Ground-water laboratory analytical results indicated both wells had benzene concentrations exceeding the Chapter 62-777, FAC target level of 1 ug/L; with MW-9 at 1.61 ug/L and MW-10 at 9.81 ug/L.

On August 22, 2000, BBL sampled wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, and MW-10. Sampling was performed in the same manner described above. Monitor well MW-4 contained 6 inches of free product and was therefore not sampled. Vertical extent well, MWD-8D, was filled to the near top of casing with sand. MW-9 was sampled in March 2000 and was not resampled. (MW-10 was resampled to determine if concentrations in the vicinity of the POL Lab Building had changed significantly since March).

The samples were placed in laboratory-prepared (appropriately preserved) sample containers, stored under ice, and shipped via overnight courier in sealed coolers to PC&B Environmental Laboratories, Inc. The samples were analyzed for the following:

EPA Method 8021 (VOAs) and
EPA Method 8310 (PAHs).

For quality assurance/quality control, a duplicate sample was collected from MW-5 (labeled DUP-1) and a trip blank was prepared by the laboratory and transported to and from the site in the sample cooler.

Ground-water laboratory analytical results for the August 2000 sampling event indicated benzene above the Chapter 62-777, FAC target level in the samples from wells MW-2, MW-6, MW-9, and MW-10. Some PAHs were detected above target levels in the samples from wells MW-1 (naphthalene) and MW-2 (naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)pyrene, and benzo(b)fluoranthene). MW-4 contained free product and was presumed to exceed target levels for all parameters analyzed. The analytical results for MW-10 indicated a slight increase from the March 2000 sampling event results.

On October 18, 2000, BBL sampled wells MW-11, MW-12, MW-13, MW-14 and piezometer PZ-2A. Sampling was performed in the same manner described above. Monitor well MW-4 contained 12 inches of free product.

The samples were placed in laboratory-prepared (appropriately preserved) sample containers, stored under ice, and shipped via overnight courier in sealed coolers to Analytical Environmental Services, Inc. laboratory. The samples were analyzed for the following:

EPA Method 8021 (VOAs),
EPA Method 8310 (PAHs), and
FL-PRO.

Ground-water laboratory analytical results for the October 2000 sampling event indicated benzene above the Chapter 62-777, FAC target level in the samples from wells MW-12 (22 ug/L) and PZ-2A (4 ug/L).

Tables 2-5 and **2-6** summarize the laboratory analytical results for the March 29, 2000, August 22, 2000, and October 18, 2000 sampling events and **Figures 2-3** and **2-4** illustrate the analytical results. The estimated extent of benzene greater than 1 ug/L is shown on **Figure 2-3**, and the estimated extent of naphthalene greater than 20 ug/L is shown on **Figure 2-4**. The complete laboratory reports, chain-of-custody records and field sampling logs are provided in **Appendices A, C,** and **E**.

2.5 Surface Water Sampling and Analysis

BBL collected surface water samples SW-1 and SW-2 on August 22, 2000, at the locations directly above sediment sample location SD-1 and SD-2 as shown on **Figure 2-1**. The samples were collected just below the surface with a glass jar attached to an aluminum rod. Proper decontamination procedures were followed during sampling. The samples were placed in laboratory-prepared (appropriately preserved) sample containers, stored under ice, and shipped via overnight courier in sealed coolers to PC&B Environmental Laboratories, Inc. The samples were analyzed for the following:

EPA Method 8021 (VOAs) and
EPA Method 8310 (PAHs).

The analytical results are summarized on **Table 2-7**. The results indicated benzo(a)pyrene above the Chapter 62-777, FAC target level for surface water in both samples and benzo(b)fluoranthene above the target level in the

sample from SW-1. The complete laboratory report, chain-of-custody record and field sampling logs are provided in **Appendix C**.

2.6 Ground-Water Flow

Before each sampling event, BBL measured water levels in all of the wells on site, including the four compliance wells at nearby site A-902C (**Figure 2-1**). The top of casing of the new wells and the wells at A-902C were surveyed relative to existing monitor wells located at the Truck Fill Stand. Measurements were recorded within an accuracy of 0.01 feet with a product interface probe. Ground-water elevations were determined by subtracting the depth to ground water from the relative top-of-casing elevation. **Table 2-8** presents the ground-water elevation data and ground-water contour maps are provided as **Figures 2-5** through **2-8**. The ground-water flow maps show a that the ground-water flow direction varies with the tide, being more easterly during low tide and westerly during high.

3. Conclusions and Recommendations

3.1 Conclusions

Dissolved petroleum hydrocarbons in excess of Chapter 62-777, FAC target levels are present in the ground water in the vicinity of the new POL Lab Building, around the Truck Fill Stand and AST, and in the surface water. Sediments in the wetland also exceed SQAGs.

The analytical results from the March, August, and October 2000 sampling events, indicate that petroleum hydrocarbon concentrations have increased in the area west of the Truck Fill Stand since preparation of the SAR. **Appendix B** includes two tables from the SAR for comparison. Free product is now present on site. Free product was not detected during the site assessment (TtNUS, 1999).

3.2 Recommendations

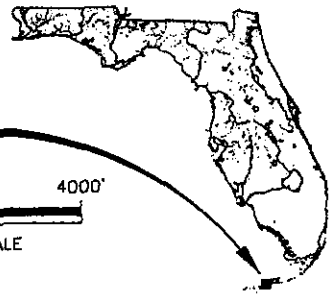
The extent of petroleum hydrocarbons in the ground water, soil, and sediments is adequately defined to proceed with preparation of a Remedial Action Plan (RAP) for the site. The ultimate solution for this site will consider the overall impacts to the ecosystem.

Figures

BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

consultants with focus

SOURCE: USGS 7.5 MIN. TOPOGRAPHIC
QUADRANGLE: BOCA CHICA KEY
REVISION: 1971
COUNTY: MONROE
TOWNSHIP: 67S
RANGE: 26E
SECTION: 29



0 2000' 4000'

APPROXIMATE GRAPHIC SCALE

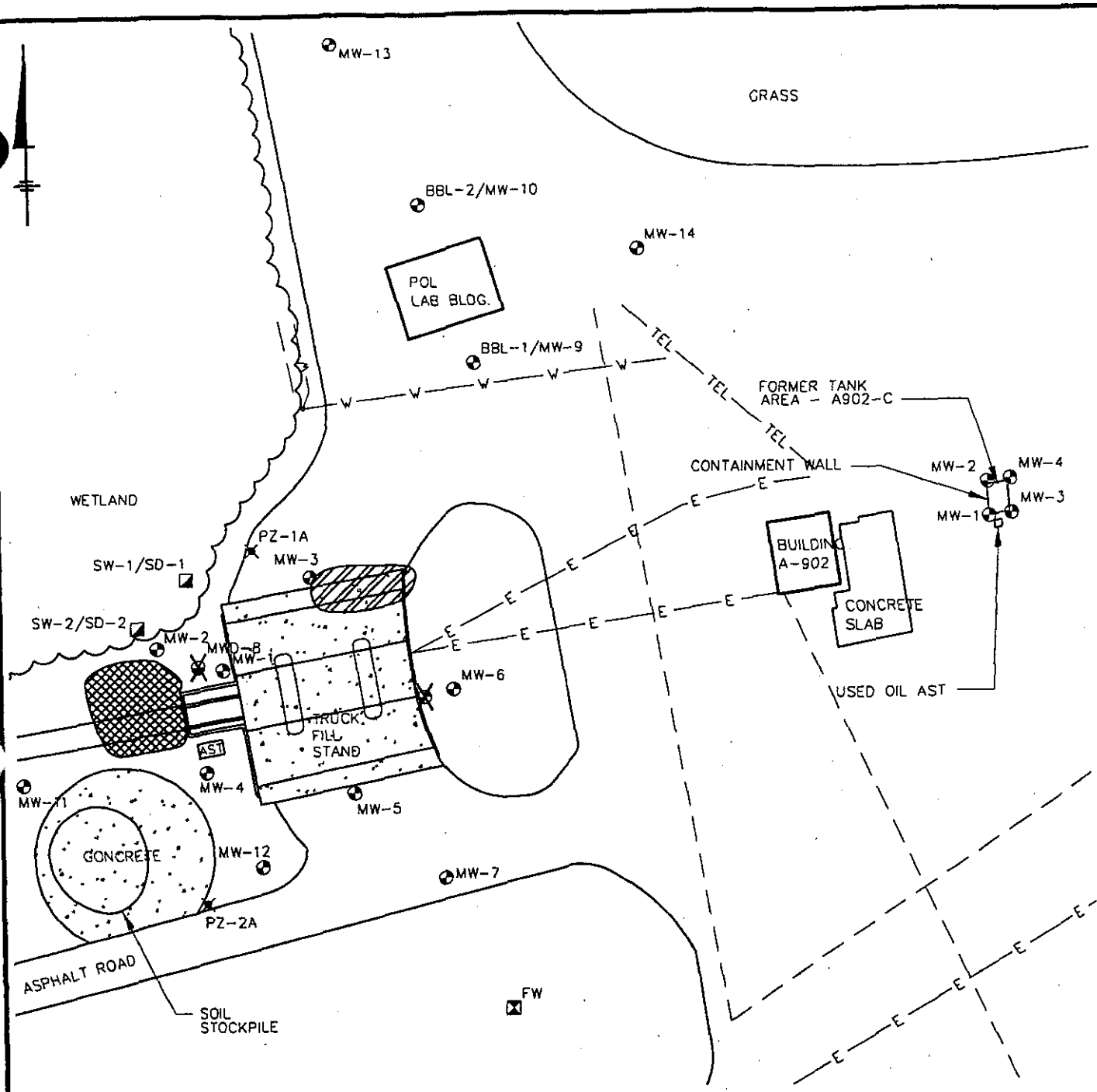
X: NAS-TP.JPG
P: STD-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012N02.DWG

NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG-902
TRUCK FILL STAND

SITE LOCATION

BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

FIGURE 1-1



LEGEND

MW-1 SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)

MWD-8 DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)

BBL-1/MW-9 MONITORING WELL LOCATION (INSTALLED BY BBL)

SW-1/SD-1 SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)

PZ-1A PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)

APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA

APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA

UTILITY LINE

W UNDERGROUND WATER LINE

E UNDERGROUND ELECTRIC LINE

TEL UNDERGROUND TELEPHONE LINE

0 60' 120'

GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

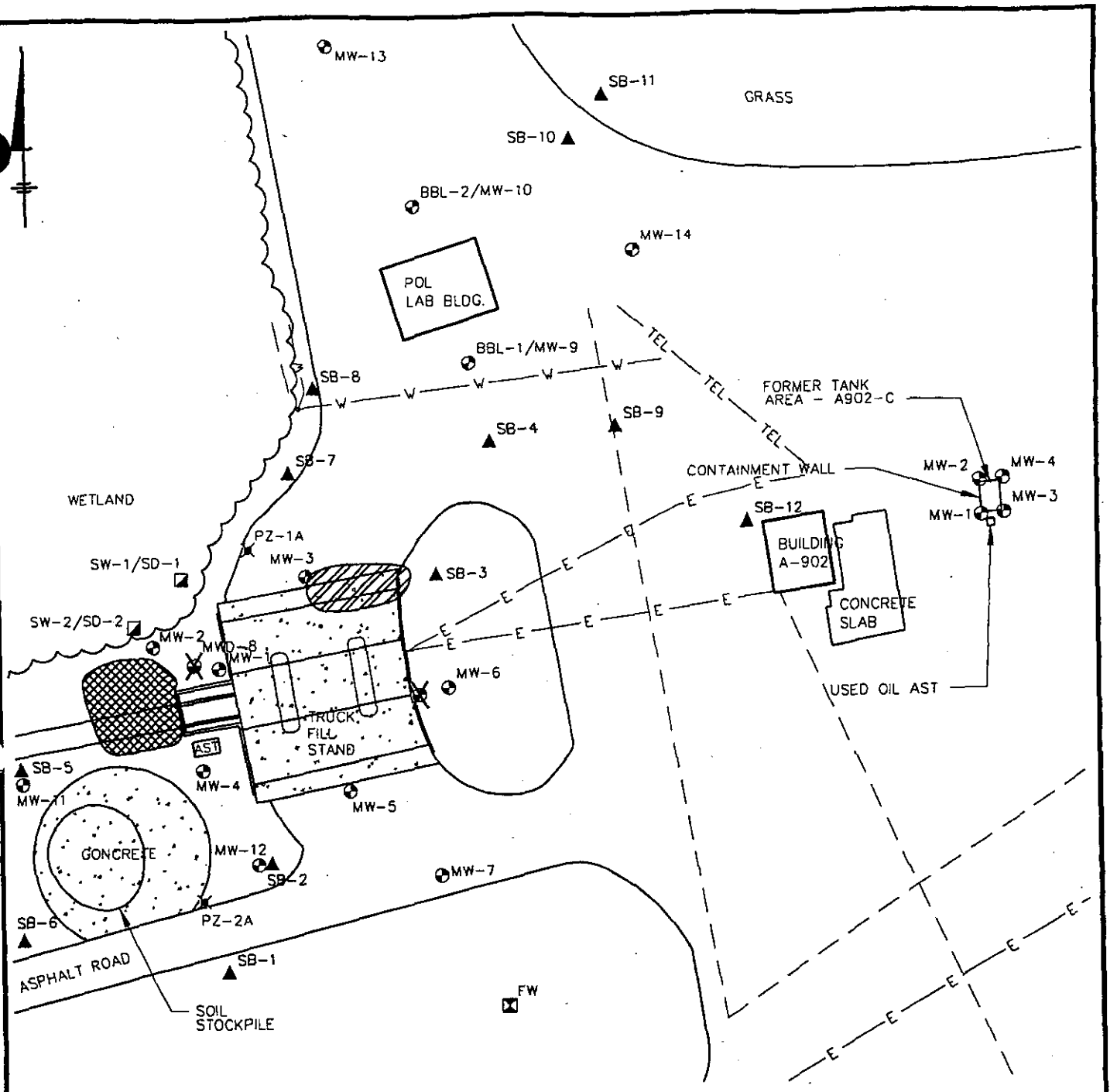
NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902 TRUCK FILL STAND

SITE LAYOUT

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 1-2

P: STD-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012801.DWG



LEGEND

MW-1 SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)

MWD-8 DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)

BBL-1/MW-9 MONITORING WELL LOCATION (INSTALLED BY BBL)

SB-2 SOIL SAMPLING LOCATION (BBL)

SW-1/SD-1 SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)

PZ-1A PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)

APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA

APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA

UTILITY LINE

W UNDERGROUND WATER LINE

E UNDERGROUND ELECTRIC LINE

TEL UNDERGROUND TELEPHONE LINE

0 60' 120'

GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

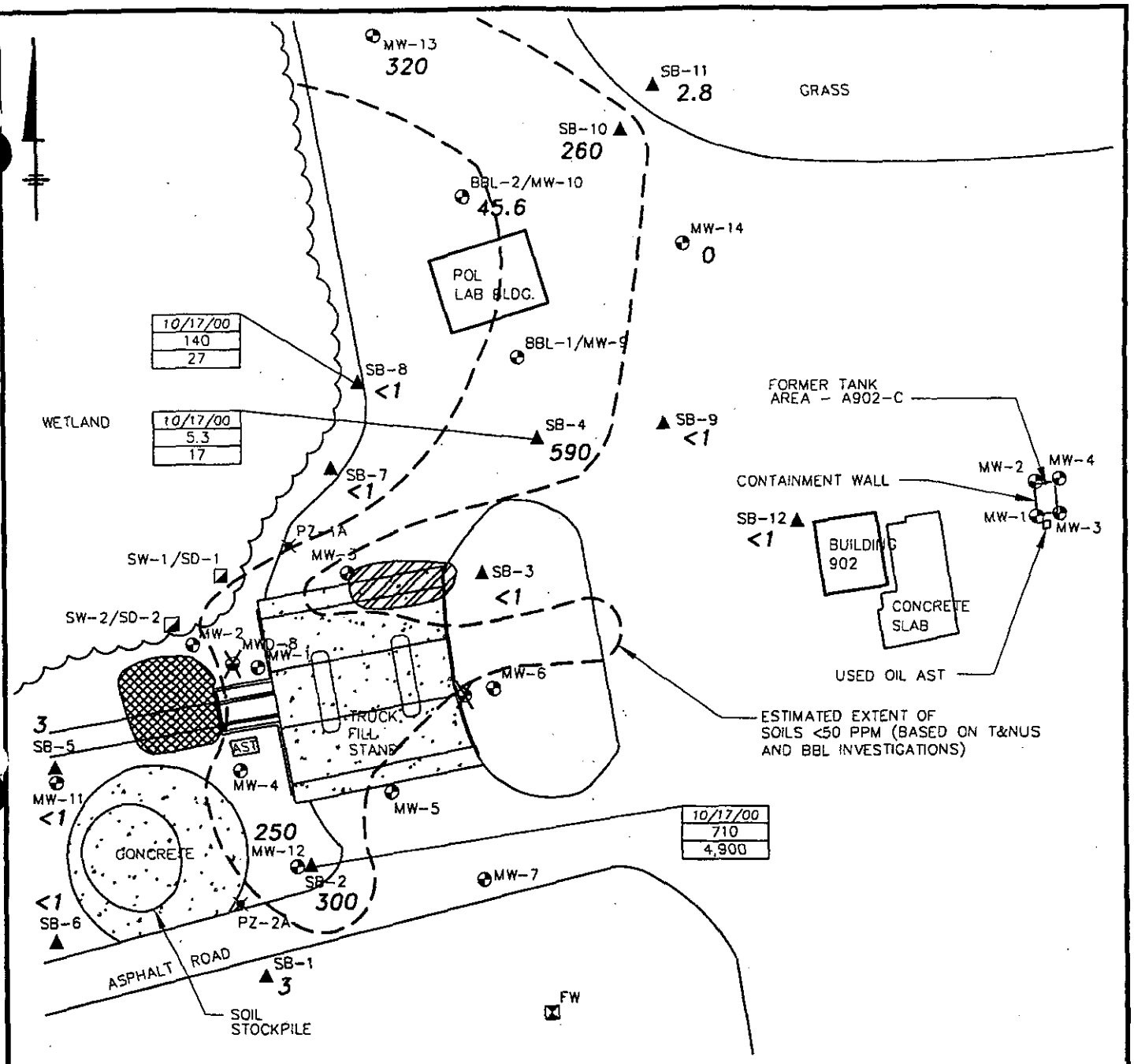
NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

SAMPLE LOCATIONS

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-1

P: STO-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012602.DWG



LEGEND

MW-1 SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)

MWD-8 DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)

BBL-1/MW-9 MONITORING WELL LOCATION (INSTALLED BY BBL)

SB-2 SOIL SAMPLING LOCATION (BBL)

SW-1/SD-1 SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)

PZ-1A PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)

APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA

APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA

300 HIGHEST ORGANIC VAPOR ANALYZER READING IN PARTS PER MILLION (10/17-18/00) EXCEPT BBL-2 (3/28/00)

10/17/00
5.3
17

SAMPLE DATE
BENZO(A)PYRENE (ug/kg)
TRPH (mg/kg)

0 60' 120'
GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

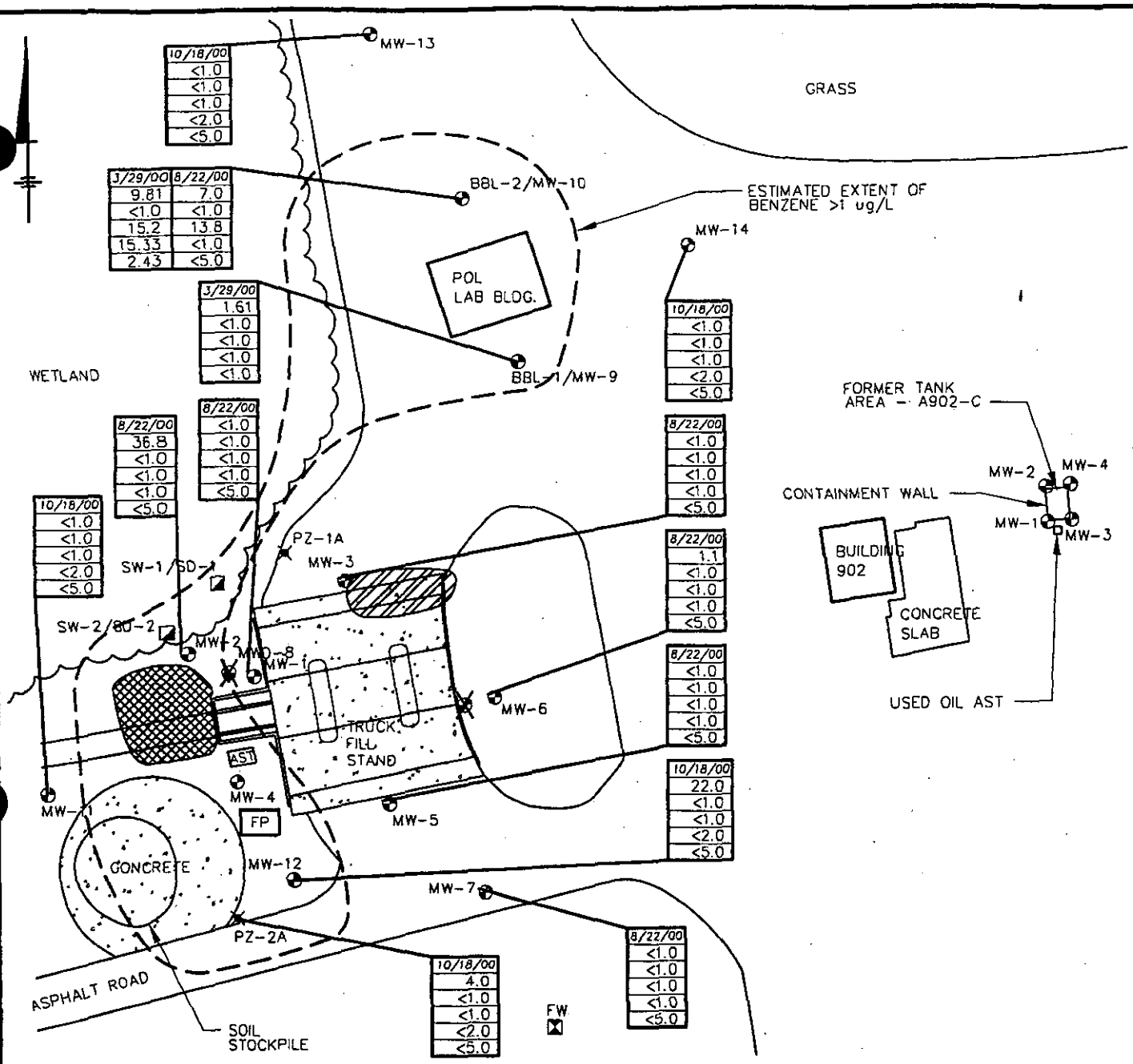
NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

SOIL ASSESSMENT

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-2

P: STD-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\B8012C01.DWG



LEGEND

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SW-1/SD-1 SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)

PZ-1A PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)

APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA

APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA

3/29/00	SAMPLE DATE
9.81	BENZENE (µg/L)
<1.0	TOLUENE (µg/L)
15.2	ETHYLBENZENE (µg/L)
15.33	TOTAL XYLENE (µg/L)
2.93	MTBE (µg/L)

FP FREE PRODUCT IN WELL

(µg/L) = MICROGRAMS PER LITER

VOAs = VOLATILE ORGANIC AROMATICS

0 60' 120'

GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

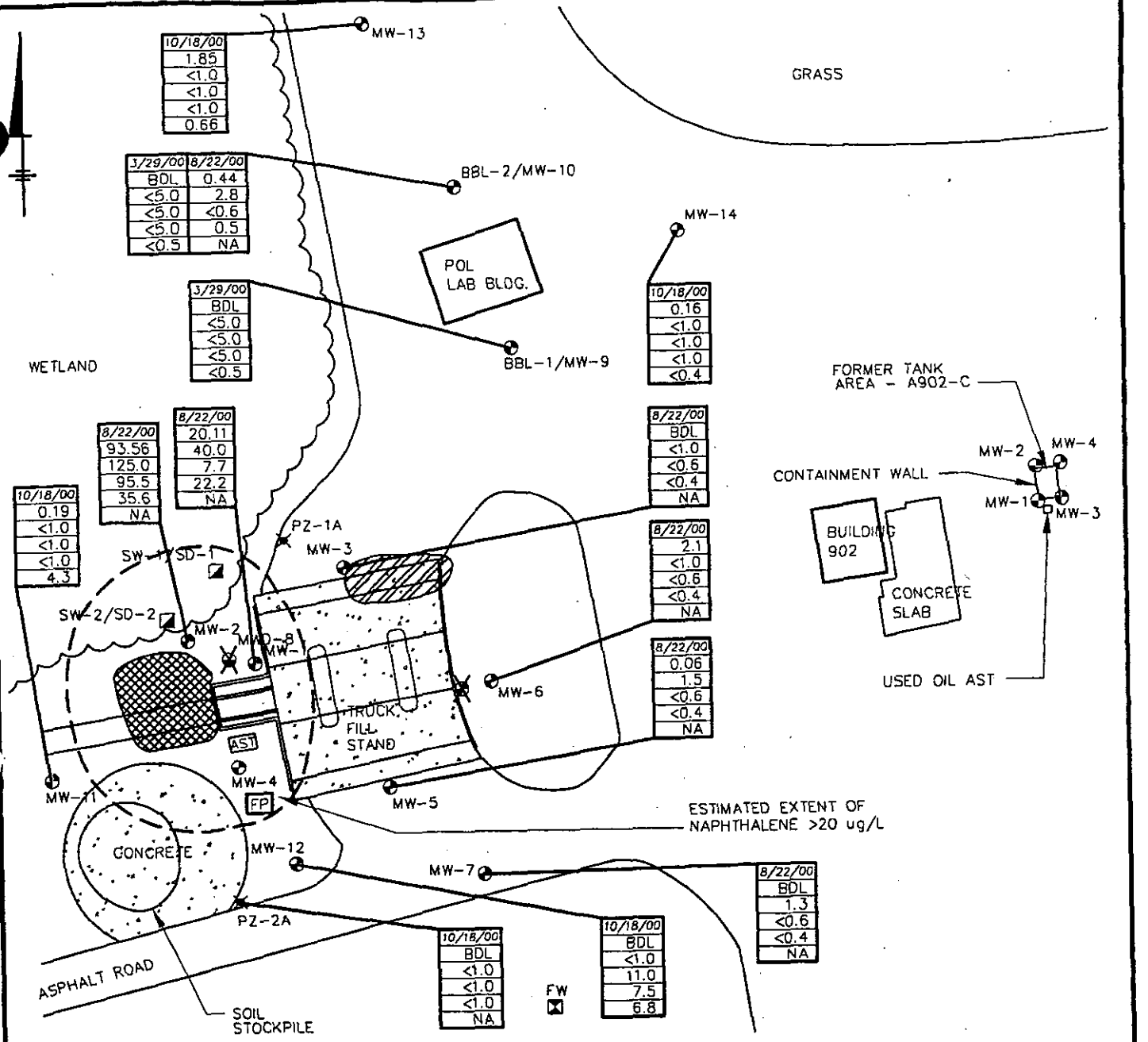
NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

GROUND-WATER ANALYTICAL RESULTS - VOAs

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-3

P: STO-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012C02.DWG



LEGEND

MW-1 SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)

MW0-8 DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)

BBL-1/MW-9 MONITORING WELL LOCATION (INSTALLED BY BBL)

SW-1/SD-1 SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)

PZ-1A PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)

APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA

APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA

8/22/00	SAMPLE DATE
BDL	TOTAL PAHs(μg/L) (EXCEPT NAPHTHALENES)
1.3	NAPHTHALENE(μg/L)
<0.6	1-METHYLNAPHTHALENE(μg/L)
<0.4	2-METHYLNAPHTHALENE(μg/L)
NA	TRPH(mg/L)
FP	FREE PRODUCT IN WELL

(μg/L) = MICROGRAMS PER LITER
(mg/L) = MILLIGRAMS PER LITER
BDL = BELOW DETECTION LIMITS (VARIES)
PAHs = POLYNUCLEAR AROMATICS HYDROCARBONS

0 60' 120'
GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

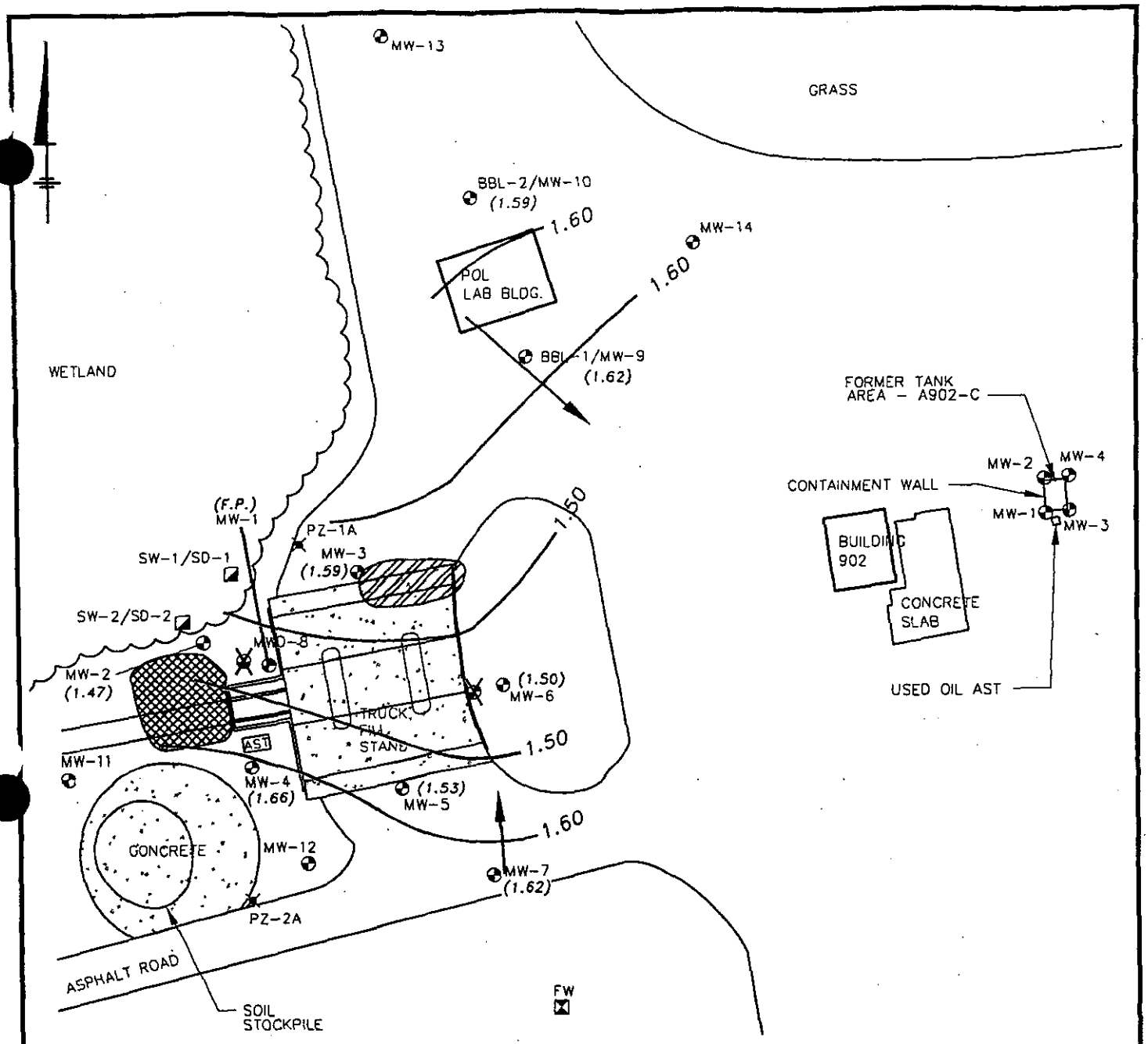
NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

GROUND-WATER ANALYTICAL RESULTS - PAHs

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-4

P: STD-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012C03.DWG



LEGEND

- MW-1 — SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- MWD-8 — DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- BBL-1/MW-9 — MONITORING WELL LOCATION (INSTALLED BY BBL)
- SW-1/SD-1 — SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)
- PZ-1A — PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)
- APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA
- APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA
- (2.05) — RELATIVE GROUND-WATER ELEVATION (NGVD)
- (F.P.) — CONTAINED FREE PRODUCT
- ESTIMATED DIRECTION OF GROUND WATER FLOW

0 60' 120'

GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

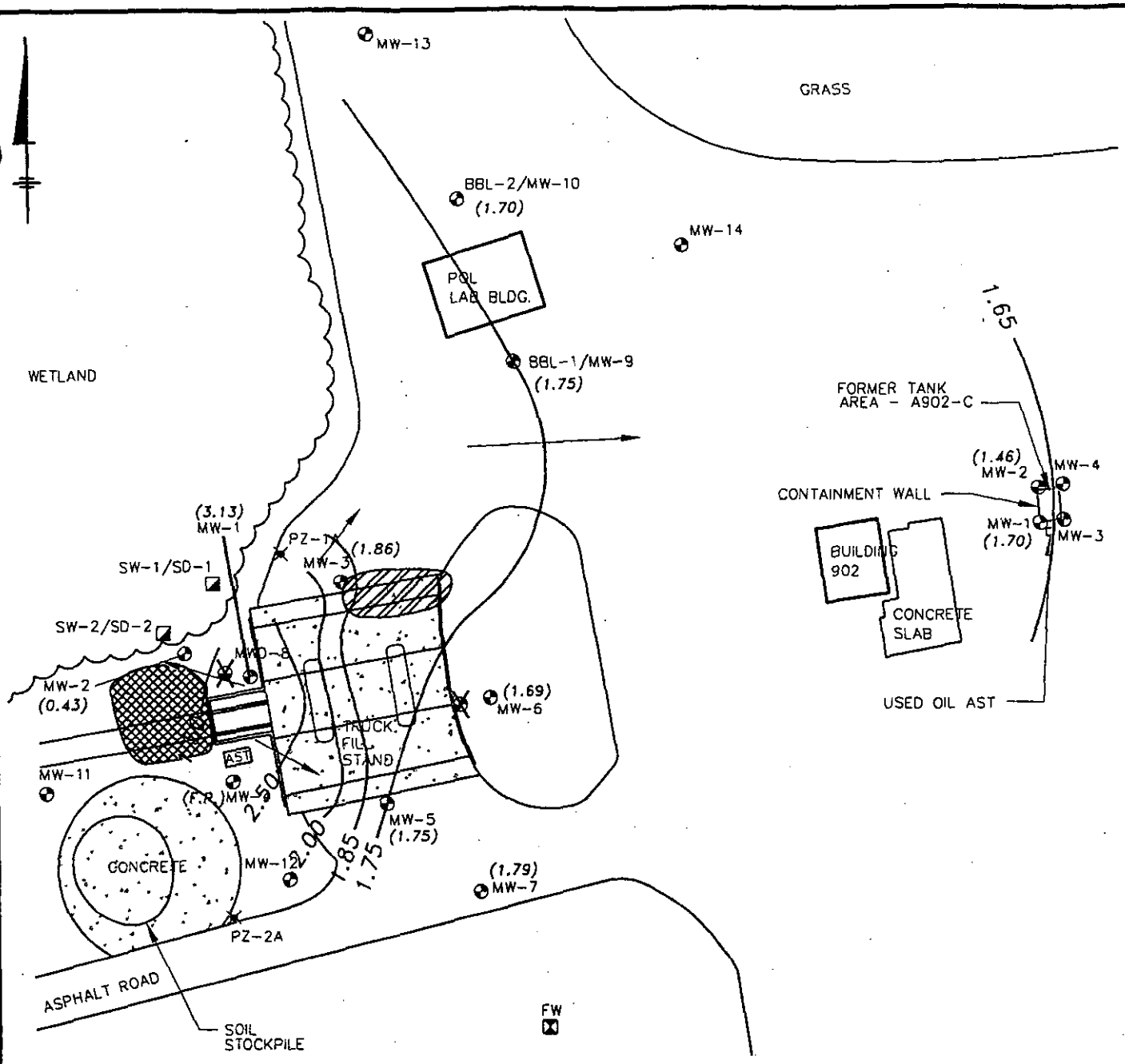
HYDRAULIC GRADIENT

3/29/00 4:00 PM (HIGH TIDE)

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-5

P: STD-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012W01.DWG



LEGEND

- MW-1 — SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- MWD-8 — DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- BBL-1/MW-9 — MONITORING WELL LOCATION (INSTALLED BY BBL)
- SW-1/SD-1 — SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)
- PZ-1A — PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)
- APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA
- APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA
- (2.05) — RELATIVE GROUND-WATER ELEVATION (NGVD)
- (F.P.) — CONTAINED FREE PRODUCT
- ESTIMATED DIRECTION OF GROUND WATER FLOW

0 60' 120'

GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

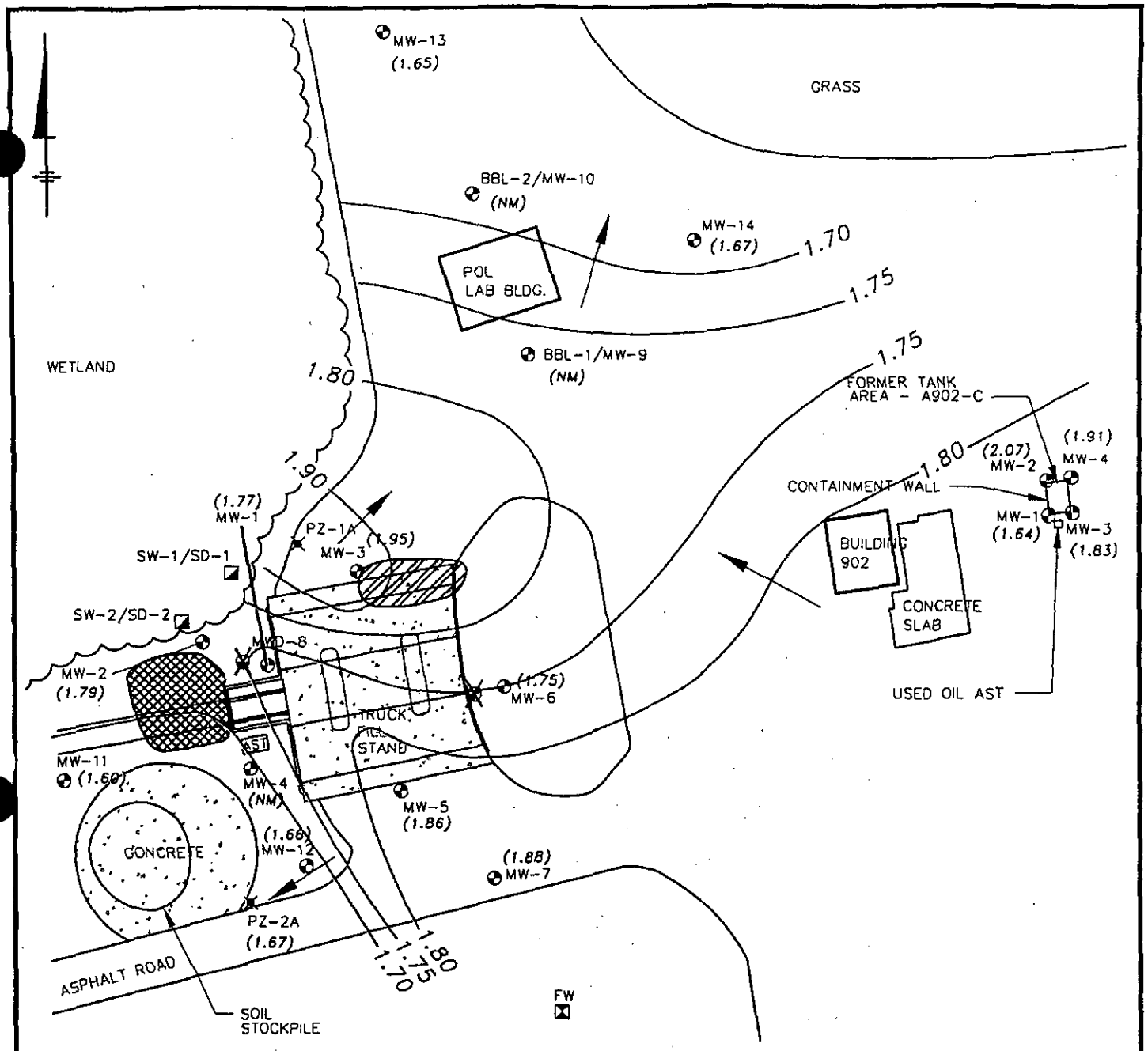
NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

HYDRAULIC GRADIENT
8/22/00 9:45 AM (LOW TIDE)

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-6

P: STD-PC2\AP
1/19/01 TAM-54-JAR
680\68012\002\68012W01.DWG



LEGEND

- MW-1 — SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- MWD-8 — DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- BBL-1/MW-9 — MONITORING WELL LOCATION (INSTALLED BY BBL)
- SW-1/SD-1 — SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)
- PZ-1A — PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)
- APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA
- APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA
- (2.05) — RELATIVE GROUND-WATER ELEVATION (NGVD)
- (F.P.) — CONTAINED FREE PRODUCT
- ESTIMATED DIRECTION OF GROUND WATER FLOW

0 60' 120'

GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

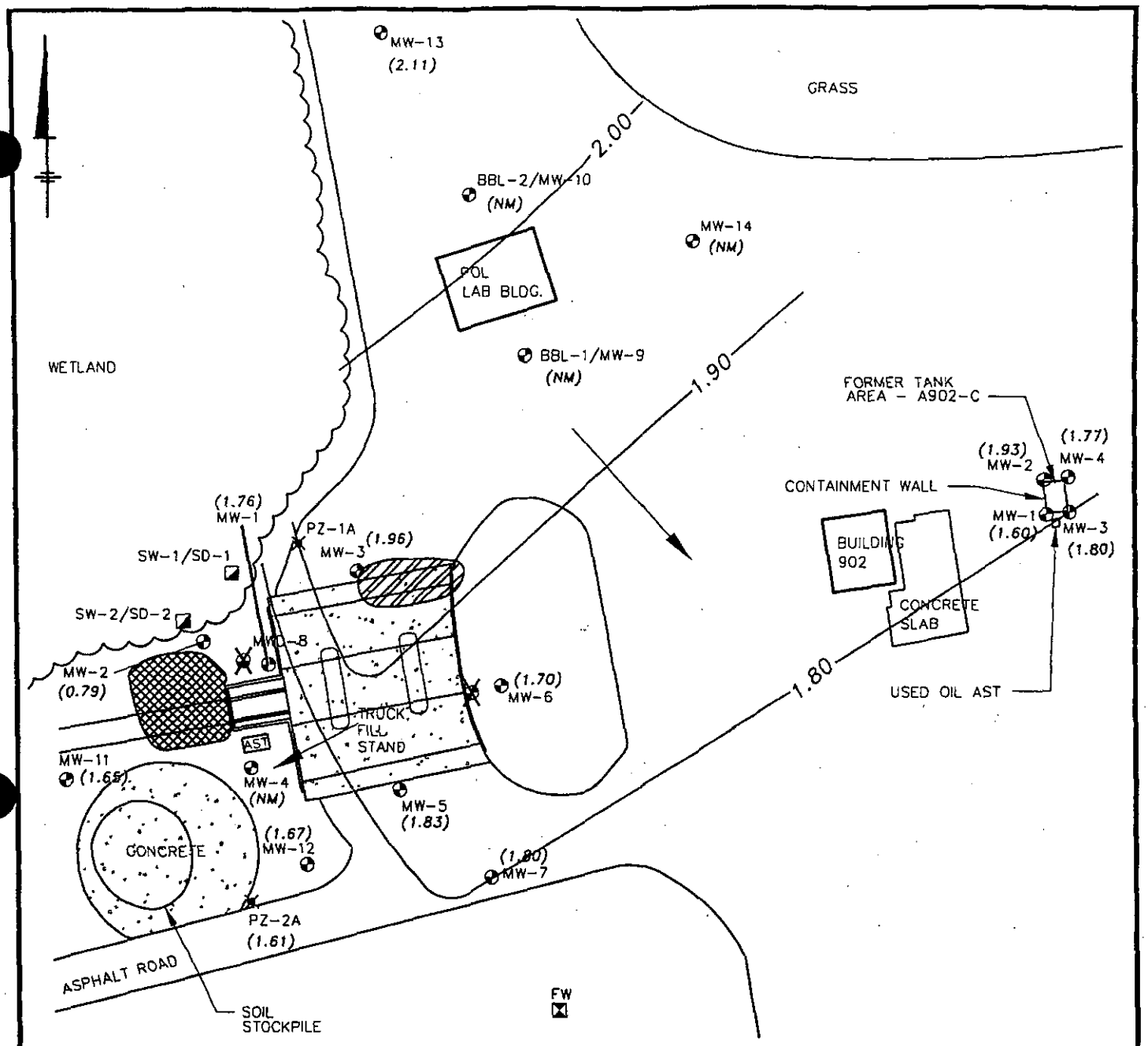
HYDRAULIC GRADIENT

10/18/00 4:20 PM (HIGH TIDE)

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-7

P: STD-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012W01.DWG



LEGEND

- MW-1 — SHALLOW MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- MWD-8 — DESTROYED DEEP MONITORING WELL LOCATION (INSTALLED BY T&NUS)
- BBL-1/MW-9 — MONITORING WELL LOCATION (INSTALLED BY BBL)
- SW-1/SD-1 — SURFACE WATER AND SEDIMENT SAMPLING LOCATON (BY BBL)
- PZ-1A — PIEZOMETER (1-INCH DIAMETER) LOCATION (INSTALLED BY T&NUS)
- APPROXIMATE AREA OF APRIL 2000 SPILL/SOIL IRA AREA
- APPROXIMATE AREA OF JANUARY 2000 SPILL/SOIL IRA AREA
- (2.05) — RELATIVE GROUND-WATER ELEVATION (NGVD)
- (F.P.) — CONTAINED FREE PRODUCT
- ESTIMATED DIRECTION OF GROUND WATER FLOW

0 60' 120'

GRAPHIC SCALE

SOURCE: Base map digitized from SITE PLAN (7586GM03.DWG) provided by TETRA TECH NUS, INC., 1311 Executive Center Dr., Tallahassee, FL., Date 12/23/98, scale1"=40'.

NAVAL AIR STATION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

HYDRAULIC GRADIENT

10/18/00 10:20 AM (LOW TIDE)

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

FIGURE 2-8

P: STD-PC2\AP
1/19/01 TAM-54-JAR
880\88012\002\88012W01.DWG

Tables

BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

consultants with focus

Summary of Organic Vapor Analysis

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Soil Boring ID	Sampling Depth (ft bls)	OVA Reading Unfiltered (ppm)	OVA Reading Filtered (ppm)	Reading (ppm)	Lithology
Sample Date: March 28, 2000					
MW-10	1.5	--	--	20.23	Fill/gray sand with limerock
	2.5	--	--	45.60	Fill/gray sand with limerock
Sample Date: October 17-18, 2000					
SB-1	0-1	<1	--	<1	Tan, oolitic lime sand
	1-2	32	29	3	Tan, clayey, oolitic lime sand
	2-3	105	78	27	Tan, clayey, oolitic lime sand, wet
SB-2	0-1	<1	--	<1	Sand, fine-medium grained, limestone/rock fill, dry
	1-2	340	40	300	Sand, fine-medium grained, limestone/rock fill, dry, odor
	2-2.5	470	80	390	Sand, fine-medium grained, limestone/rock fill, wet, odor
SB-3	0-1	<1	--	<1	Sand, minor silt, limerock fill
	1-2	40	20	20	Sand, minor silt, limerock fill, moist
SB-4	0-1	8	1.8	6.2	Tan, oolitic lime sand with clay
	1-2	950	360	590	Gray, clay, with lime sand, slight petroleum odor
	2-	300	160	140	Gray, clayey, lime sand, wet
SB-5	0-1	5	2	3	Tan, oolitic, lime sand
	1-2	10	3.2	6.8	Tan, clayey, oolitic lime sand, wet
SB-6	0-1	<1	--	<1	Sand, fine-medium grained limestone/rock fill, dry
	1-2	<1	--	<1	Sand, fine-medium grained limestone/rock fill, dry
	2-2.5	<1	--	<1	Sand, fine-medium grained limestone/rock fill, wet
SB-7	0-1	<1	--	<1	Sand, minor silt, limerock (fill material)
	1-2	<1	--	<1	Sand, minor silt, limerock (fill material), wet
SB-8	0-1	<1	--	<1	Clayey sand/clay, gray, tight, organic odor
	1-2	180	60	120	Clayey sand/clay, gray, tight, organic odor, moist
SB-9	0-1	<1	--	<1	Sand, minor silt, limerock (fill material)
	1-2	<1	--	<1	Sand, minor silt, limerock (fill material), wet
SB-10	0-1	800	540	260	Clayey sand/clay, gray, tight, organic odor
	1-2	640	540	100	Clayey sand/clay, gray, tight, organic odor, moist
	2-2.5	700	700	0	Clayey sand/clay, gray, tight, organic odor, wet
SB-11	0-1	2.8	--	2.8	Sand, minor silt, limerock fill
	1-2	0	--	0	Sand, minor silt, limerock fill, moist
SB-12	0-1	<1	--	<1	Tan, oolitic lime sand
	1-2	<1	--	<1	Tan, oolitic lime sand, wet
MW-11	0-8"	<1	--	<1	Sand, fine-medium grained limestone/rock fill

Ta -2

Summary of Selected Soil Analytical Data

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Sample Number	Sample Date	Benzene	Toluene	Benzo(a) Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(g,h,i) Perylene	Benzo(k) Fluoranthene	Chrysene	Dibenzo(a,h) Anthracene
SB-2 (1-2)	10/17/00	1.2	2.5	300	**710**	750	510	260	<21	83
SB-4 (1-2)	10/17/00	1.5	1.7	<4.4	5.3	5.9	<23	<4.0	<23	<4.4
SB-8 (1-2)	10/17/00	2.5	3.7	82	140	130	72	57	110	<4.2
62-777, FAC Target Level		16,000	2,600,000	5,000	500	4,800	41,000,000	52,000	450,000	500

Sample Number	Sample Date	Fluoranthene	Ethylbenzene	Indeno(1,2,3)-cd Pyrene	Phenanthrene	Pyrene	Total Xylenes	1-Methyl naphthalene	2-Methyl naphthalene	TRPH
SB-2 (1-2)	10/17/00	480	<1.2	810	<21	<21	<2.4	640	780	**4,900**
SB-4 (1-2)	10/17/00	<23	5.6	9.2	<23	<23	2.7	<23	<23	17
SB-8 (1-2)	10/17/00	150	<1.2	140	48	110	<2.4	<22	<22	27
62-777, FAC Target Level		48,000,000	8,400,000	53,000	30,000,000	37,000,000	40,000,000	470,000	560,000	2,500

Notes: All results in micrograms per kilogram (ug/Kg), except Total Recoverable Petroleum Hydrocarbons (TRPH) in mg/kg.
Target = Chapter 62-777, FAC, Direct Exposure, Commercial/Industrial Use.
Concentrations in bold exceed Target.
Sources: Blasland, Bouck & Lee, Inc., 2000; Analytical Environmental Services, Inc., 2000.

Ta -3

Summary of Sediment Analytical Data

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Sample Number	Sample Date	Acenaphthene	Anthracene	Benzo(a) Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Benzo(g,h,i) Perylene	Benzo(k) Fluoranthene	Chrysene	Dibenzo(a,h) Anthracene
SD-1	8/22/00	**2,870**	**4,380**	**8,730**	**7,210**	10,930	4,970	875	**9,100**	<100
SD-2	8/22/00	**265**	3	130	250	215	370	165	220	25
SQAG		88.9	245	693	763	NE	NE	NE	846	135

Sample Number	Sample Date	Fluoranthene	Fluorene	Indeno(1,2,3)-cd Pyrene	Phenanthrene	Pyrene	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene
SD-1	8/22/00	**19,200**	**2,660**	6,130	**19,650**	**17,760**	**945**	630	**590**
SD-2	8/22/00	280	9	235	155	180	**715**	145	<100
SQAG		1,494	144	NE	544	1,398	391	NE	201

Notes: All results in micrograms per kilogram (ug/Kg).
SQAG = Florida Department of Environmental Protection Sediment Quality Assessment Guidelines Probable Effect Level equivalents in ug/Kg.
NE = Not established.
Concentrations in bold exceed SQAG.
Sources: Blasland, Bouck & Lee, Inc., 2000; PC&B Environmental Laboratories, Inc., 2000.

Ta[illegible]-4

Monitoring Well Completion Summary

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Well No.	Date Installed	Installation Method	Consultant	Total Well Depth (ft)	Screened Interval (FBLS)	Well Diameter (in)	Sand Pack	Lithology
MW-1	8/26/98	HSA	TtNUS	11.90	1.90-11.90	2	20/30	Oolitic Limestone
MW-2	8/26/98	HSA	TtNUS	11.95	1.95-11.95	2	20/30	Oolitic Limestone
MW-3	8/26/98	HSA	TtNUS	11.50	1.50-11.50	2	20/30	Oolitic Limestone
MW-4	8/26/98	HSA	TtNUS	11.97	1.97-11.97	2	20/30	Oolitic Limestone
MW-5	8/26/98	HSA	TtNUS	11.95	1.95-11.95	2	20/30	Oolitic Limestone
MW-6	8/26/98	HSA	TtNUS	11.94	1.94-11.94	2	20/30	Oolitic Limestone
MW-7	8/26/98	HSA	TtNUS	11.95	1.95-11.95	2	20/30	Oolitic Limestone
MW-8D	8/25/98	HSA	TtNUS	35.10	30.10-35.10	2	20/30	Oolitic Limestone
MW-9	3/28/00	HSA	BBL	12	2-12	2	30/45	Oolitic Limestone
MW-10	3/28/00	HSA	BBL	12	2-12	2	30/45	Oolitic Limestone
MW-11	10/17/00	HSA	BBL	11	1-11	2	30/45	Oolitic Limestone
MW-12	10/17/00	HSA	BBL	11	1-11	2	30/45	Oolitic Limestone
MW-13	10/17/00	HSA	BBL	11	1-11	2	30/45	Oolitic Limestone
MW-14	10/17/00	HSA	BBL	11	1-11	2	30/45	Oolitic Limestone
A-902C-MW-1	1997	HSA	PWC	11	1-11	2	20/30	Oolitic Limestone
A-902C-MW-2	1997	HSA	PWC	11	1-11	2	20/30	Oolitic Limestone
A-902C-MW-3	1997	HSA	PWC	11	1-11	2	20/30	Oolitic Limestone
A-902C-MW-4	1997	HSA	PWC	11	1-11	2	20/30	Oolitic Limestone

Notes:
FBLS = Feet below land surface
HSA = Hollow stem auger
TtNUS = Tetra-TechNUS, Inc., BBL = Blasland, Bouck & Lee, Inc, PWC = Public Works Center Pensacola
Sources: Blasland, Bouck & Lee, Inc., 2000.

Table 2-5

Summary of Ground Water Analytical Data
Volatile Organic Aromatics and TRPH

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Well No.	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE(1)	TRPH(2)
Sample Date: March 29, 2000						
BBL-1/MW-9	**1.61**	<1.0	<1.0	<1.0	<1.0	<0.5
BBL-2/MW-10	**9.81**	<1.0	15.2	15.33	2.43	<0.5
Sample Date: August 22, 2000						
MW-1	<1.0	<1.0	<1.0	<1.0	<5.0	NA
MW-2	**36.8**	<1.0	<1.0	<1.0	<5.0	NA
MW-3	<1.0	<1.0	<1.0	<1.0	<5.0	NA
MW-4*	NA	NA	NA	NA	NA	NA
MW-5	<1.0	<1.0	<1.0	<1.0	<5.0	NA
DUP-1 (MW-5)	<1.0	<1.0	<1.0	<1.0	<5.0	NA
MW-6	**1.1**	<1.0	<1.0	<1.0	<5.0	NA
MW-7	<1.0	<1.0	<1.0	<1.0	<5.0	NA
MWD-8**	NA	NA	NA	NA	NA	NA
BBL-1/MW-9	NA	NA	NA	NA	NA	NA
BBL-2/MW-10	**7.0**	<1.0	13.8	<1.0	<5.0	NA
Sample Date: October 18, 2000						
MW-11	<1.0	<1.0	<1.0	<2.0	<5.0	4.3
MW-12	**22**	<1.0	<1.0	<2.0	<5.0	6.8
MW-13	<1.0	<1.0	<1.0	<2.0	<5.0	0.66
MW-14	<1.0	<1.0	<1.0	<2.0	<5.0	<0.4
PZ-2A	**4.0**	<1.0	<1.0	<2.0	<5.0	NA
62-777, FAC Target Level	1	40	30	20	50	15

Notes:
All results in micrograms per liter (ug/L), except TRPH in milligrams per liter (mg/L)
(1) Methyl tert-butyl ether
(2) Total Recoverable Petroleum Hydrocarbons
NA = not analyzed
* Free product present
** Well destroyed
Concentrations in bold are above the target level.
Sources: Blasland, Bouck & Lee, Inc., 2000; STL Precision, 2000; PC&B Environmental Laboratories, Inc., 2000; Analytical Environmental Services, Inc., 2000.

Summary of Ground Water Analytical Data
Polynuclear Aromatic Hydrocarbons

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Well No.	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) Pyrene	Benzo(b) Fluoranthene	Fluoranthene	Fluorene	Phenanthrene	Pyrene	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene
Sample Date: March 29, 2000												
BBL-1/MW-9	<3.0	<3.0	<0.3	<0.2	<0.2	<0.3	<5.0	<5.0	<0.3	<5.0	<5.0	<5.0
BBL-2/MW-10	<3.0	<3.0	<0.3	<0.2	<0.2	<0.3	<5.0	<5.0	<0.3	<5.0	<5.0	<5.0
Sample Date: August 22, 2000												
MW-1	9.5	2.6	0.63	<0.06	<0.07	2.2	1.2	2.88	1.1	**40.0**	7.7	**22.2**
MW-2	16.6	17.4	<0.04	**8.08**	**13.28**	<0.5	38.2	<0.18	<0.5	**125**	**95.5**	**35.6**
MW-3	<1.4	<0.2	<0.02	<0.06	<0.07	<0.3	<0.2	<0.09	<0.2	<1.0	<0.6	<0.4
MW-4*	NA*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	<1.4	<0.2	0.06	<0.06	<0.07	<0.3	<0.2	<0.09	<0.2	1.5	<0.6	<0.4
DUP-1 (MW-5)	<1.4	<0.2	0.05	<0.06	<0.07	<0.3	<0.2	<0.09	<0.2	1.4	<0.6	<0.4
MW-6	2.1	<0.2	<0.02	<0.06	<0.07	<0.3	<0.2	<0.09	<0.2	<1.0	<0.6	<0.4
MW-7	<1.4	<0.2	<0.02	<0.06	<0.07	<0.3	<0.2	<0.09	<0.2	1.3	<0.6	<0.4
MWD-8**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BBL-1/MW-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BBL-2/MW-10	<1.4	<0.2	.03	<0.06	<0.07	<0.3	0.3	0.11	<0.2	2.8	<0.6	0.5
Sample Date: October 18, 2000												
MW-11	<1.0	<1.0	<1.0	<0.10	<0.20	<0.20	<0.20	0.19	<0.10	<1.0	<1.0	<1.0
MW-12	<1.0	<1.0	<1.0	<0.10	<0.20	<0.20	<0.20	<1.0	<0.10	<1.0	11	7.5
MW-13	<1.0	1.5	<1.0	<0.10	<0.20	<0.20	<0.20	0.35	<0.10	<1.0	<1.0	<1.0
MW-14	<1.0	<1.0	<1.0	<0.10	<0.20	<0.20	<0.20	0.16	<0.10	<1.0	<1.0	<1.0
PZ-2A	<1.0	<1.0	<1.0	<0.10	<0.20	<0.20	<0.20	<1.0	<0.10	<1.0	<1.0	<1.0
62-777, FAC Target Level	20	210	2100	0.2	4	280	280	210	210	20	20	20

Notes:
All results in micrograms per liter (ug/L)
NA = not analyzed
* Free product present
** Well destroyed
Concentrations in bold are above the target level.
Sources: Blasland, Bouck & Lee, Inc., 2000; STL Precision, 2000; PC&B Environmental Laboratories, Inc., 2000; Analytical Environmental Services, Inc., 2000.

Ta .-7

Summary of Surface Water Analytical Data

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Sample Number	Sample Date	Total Volatile Organic Aromatics	Benzo(a)pyrene (ugL)	Benzo(b)fluoranthene (ug/L)
SW-1	8/22/00	BDL	**0.39**	**0.72**
SW-2	8/22/00	BDL	**0.13**	<0.07
62-777, FAC Target Level		NA	0.031	0.031

BDL = below laboratory detection limits
ug/L = micrograms per liter
Concentrations in bold exceed target level.
Sources: Blasland, Bouck & Lee, Inc., 2000; PC&B Environmental Laboratories, Inc., 2000.

Tal .-8

Ground-Water Elevations

Building A-902
Truck Fill Stand
Boca Chica
NAS Key West, Florida

Well	TOC Elevation (ft MSL)	Depth to Water (ft) 3/29/00 4:00 pm	Depth to Water (ft) 8/22/00 9:45 am	Depth to Water (ft) 10/18/00 10:20 am	Depth to Water (ft) 10/18/00 4:20 pm	Water Table Elevation 3/29/00 4:00 pm	Water Table Elevation 8/22/00 9:45 am	Water Table Elevation 10/18/00 10:20 am	Water Table Elevation 10/18/00 4:20 pm	Free Product (in) 3/29/00 4:00 pm	Free Product (in) 8/22/00 9:45 am	Free Product (in) 10/18/00
MW-1	4.41	3.05	1.27	2.65	2.64	1.36	3.13	1.76	1.77	1.92	ND	NA
MW-2	2.98	1.51	2.55	2.19	1.19	1.47	0.43	0.79	1.79	ND	ND	NA
MW-3	4.25	2.66	2.39	2.29	2.30	1.59	1.86	1.96	1.95	ND	ND	NA
MW-4	2.63	0.97	1.21	NA	NA	1.66	1.42	NA	NA	ND	6.0	12
MW-5	4.46	2.93	2.71	2.63	2.60	1.53	1.75	1.83	1.86	ND	ND	NA
MW-6	4.00	2.55	2.31	2.30	2.25	1.45	1.69	1.70	1.75	ND	ND	NA
MW-7	4.22	2.60	2.43	2.42	2.34	1.62	1.79	1.80	1.88	ND	ND	NA
MW-8D	4.11	*	*	*	*	NA	NA	NA	NA	NA	NA	NA
BBL-1/MW-9	3.00	1.38	1.25	**	**	1.62	1.75	NA	NA	ND	ND	NA
BBL-2/MW-10	2.79	1.20	1.09	**	**	1.59	1.70	NA	NA	ND	ND	NA
MW-11	2.42	NA	NA	0.77	0.82	NA	NA	1.65	1.60	NA	NA	NA
MW-12	3.61	NA	NA	1.94	1.95	NA	NA	1.67	1.66	NA	NA	NA
MW-13	2.50	NA	NA	0.39	0.85	NA	NA	2.11	1.65	NA	NA	NA
MW-14	2.43	NA	NA	NM	0.76	NA	NA	NM	1.67	NA	NA	NA
PZ-2A	3.41	NA	NA	1.80	1.74	NA	NA	1.61	1.67	NA	NA	NA
A902C-MW-1	2.47	NA	1.01	0.87	0.83	NA	1.46	1.60	1.64	NA	ND	NA
A902C-MW-2	2.66	NA	0.83	0.73	0.59	NA	1.83	1.93	2.07	NA	ND	NA
A902C-MW-3	2.65	NA	1.01	0.85	0.82	NA	1.64	1.80	1.83	NA	ND	NA
A902C-MW-4	2.66	NA	1.01	0.89	0.75	NA	1.65	1.77	1.91	NA	ND	NA

Notes:
All depth to water measurements taken from top of casing in feet.
Ft MSL = feet mean sea level (relative)
ND = Not Detected; NA = Not Applicable; NM = Not Measured
TOC = top of casing
*Well destroyed; **Well buried
Benchmark assumed 5.00 ft MSL
MW8D filled with sand/rock.
Tides for Key West: 3/29/00: Low – 10:19 am; 12:12 am High – 6:09 am; 4:47 pm
8/22/00: Low – 9:51 am; 9:11 pm High – 3:02 am; 4:20 pm
Sources: Blasland, Bouck, & Lee, Inc., 2000; Tetra Tech NUS, Inc., 1999, Site Assessment Report Building A-902, Truck Fill Stand; Marine Lab, Sarasota, 2000.

Appendix A

BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

consultants with focus

AES Lab Report dated October 23, 2000

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- Laboratory Report Summary Sheets
- Sample Receipt Check List
- Chain of Custody
- Case Narrative

- **BTEX Fraction – Aqueous Samples**

- Method Blank
- Laboratory Control Spike
- Matrix Spike/Matrix Spike Duplicate
- Initial Calibration Data
- Continuing Calibration Data
- Raw Data

- **BTEX Fraction – Soil Samples**

- Method Blank
- Laboratory Control Spike
- Matrix Spike/Matrix Spike Duplicate
- Initial Calibration Data
- Continuing Calibration Data
- Raw Data

- **PAH Fraction- Aqueous Samples**

- Method Blank
- Laboratory Control Spike/Laboratory Control Spike Duplicate
- Initial Calibration Data
- Continuing Calibration Data
- Raw Data

- **PAH Fraction- Soil Samples**

- Method Blank
- Laboratory Control Spike

- Initial Calibration Data
- Continuing Calibration Data
- Raw Data

- **FL-PRO Fraction- Aqueous Samples**

- Method Blank
- Laboratory Control Spike/Laboratory Control Spike Duplicate
- Initial Calibration Data
- Continuing Calibration Data
- Raw Data

- **FL-PRO Fraction- Soil Samples**

- Method Blank
- Laboratory Control Spike
- Initial Calibration Data
- Continuing Calibration Data
- Raw Data

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	SB-2(1-2)
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/17/00 10:25:00 AM
Lab ID:	0010401-001A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	5.9		µg/Kg-dry	1	10/20/00 6:14:00 PM
Benzene	1.2	1.2		µg/Kg-dry	1	10/20/00 6:14:00 PM
Toluene	2.5	1.2		µg/Kg-dry	1	10/20/00 6:14:00 PM
Ethylbenzene	BRL	1.2		µg/Kg-dry	1	10/20/00 6:14:00 PM
Xylenes, Total	BRL	2.4		µg/Kg-dry	1	10/20/00 6:14:00 PM
Surr: 4-Bromofluorobenzene	64.4	50-150		%REC	1	10/20/00 6:14:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	SB-2(1-2)
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/17/00 10:25:00 AM
Lab ID:	0010401-001B	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	21		µg/Kg-dry	1	10/24/00 11:53:32 AM
Acenaphthylene	BRL	41		µg/Kg-dry	1	10/24/00 11:53:32 AM
1-Methylnaphthalene	640	210		µg/Kg-dry	10	10/24/00 8:26:46 AM
2-Methylnaphthalene	780	210		µg/Kg-dry	10	10/24/00 8:26:46 AM
Acenaphthene	BRL	21		µg/Kg-dry	1	10/24/00 11:53:32 AM
Fluorene	BRL	21		µg/Kg-dry	1	10/24/00 11:53:32 AM
Phenanthrene	BRL	21		µg/Kg-dry	1	10/24/00 11:53:32 AM
Anthracene	BRL	21		µg/Kg-dry	1	10/24/00 11:53:32 AM
Fluoranthene	480	210		µg/Kg-dry	10	10/24/00 8:26:46 AM
Pyrene	BRL	21		µg/Kg-dry	1	10/24/00 11:53:32 AM
Benz(a)anthracene	300	41		µg/Kg-dry	10	10/24/00 8:26:46 AM
Chrysene	BRL	21		µg/Kg-dry	1	10/24/00 11:53:32 AM
Benzo(b)fluoranthene	750	93		µg/Kg-dry	25	10/24/00 7:34:55 AM
Benzo(k)fluoranthene	260	37		µg/Kg-dry	10	10/24/00 8:26:46 AM
Benzo(a)pyrene	710	62		µg/Kg-dry	25	10/24/00 7:34:55 AM
Dibenz(a,h)anthracene	83	41		µg/Kg-dry	10	10/24/00 8:26:46 AM
Benzo(g,h,i)perylene	510	210		µg/Kg-dry	10	10/24/00 8:26:46 AM
Indeno(1,2,3-cd)pyrene	810	53		µg/Kg-dry	25	10/24/00 7:34:55 AM
Surr: 4-terphenyl-d14	344	20-140	S	%REC	1	10/24/00 11:53:32 AM
PETROLEUM RANGE ORGANICS		**FL-PRO**				Analyst: **ARH**
Petroleum Range Organics	4,900	50		mg/Kg-dry	10	10/21/00 7:21:28 AM
Surr: Dioctylphthalate	91.5	50-150		%REC	10	10/21/00 7:21:28 AM
Surr: o-Terphenyl	73.1	45-111		%REC	10	10/21/00 7:21:28 AM
PERCENT MOISTURE		**D2216**				Analyst: **LO**
Percent Moisture	17.0	0		wt%	1	10/20/00 4:40:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	SB-4(1-2)
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/17/00 1:45:00 PM
Lab ID:	0010401-002A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	6.0		µg/Kg-dry	1	10/20/00 5:16:00 PM
Benzene	1.5	1.2		µg/Kg-dry	1	10/20/00 5:16:00 PM
Toluene	1.7	1.2		µg/Kg-dry	1	10/20/00 5:16:00 PM
Ethylbenzene	5.6	1.2		µg/Kg-dry	1	10/20/00 5:16:00 PM
Xylenes, Total	2.7	2.4		µg/Kg-dry	1	10/20/00 5:16:00 PM
Surr: 4-Bromofluorobenzene	119	50-150		%REC	1	10/20/00 5:16:00 PM

Qualifiers:

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J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	SB-4(1-2)
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/17/00 1:45:00 PM
Lab ID:	0010401-002B	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Acenaphthylene	BRL	44		µg/Kg-dry	1	10/24/00 5:51:34 AM
1-Methylnaphthalene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
2-Methylnaphthalene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Acenaphthene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Fluorene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Phenanthrene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Anthracene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Fluoranthene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Pyrene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Benz(a)anthracene	BRL	4.4		µg/Kg-dry	1	10/24/00 5:51:34 AM
Chrysene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Benzo(b)fluoranthene	5.9	4.0		µg/Kg-dry	1	10/24/00 5:51:34 AM
Benzo(k)fluoranthene	BRL	4.0		µg/Kg-dry	1	10/24/00 5:51:34 AM
Benzo(a)pyrene	5.3	2.7		µg/Kg-dry	1	10/24/00 5:51:34 AM
Dibenz(a,h)anthracene	BRL	4.4		µg/Kg-dry	1	10/24/00 5:51:34 AM
Benzo(g,h,i)perylene	BRL	23		µg/Kg-dry	1	10/24/00 5:51:34 AM
Indeno(1,2,3-cd)pyrene	9.2	2.3		µg/Kg-dry	1	10/24/00 5:51:34 AM
Surr: 4-terphenyl-d14	99.9	20-140		%REC	1	10/24/00 5:51:34 AM
PETROLEUM RANGE ORGANICS		**FL-PRO**				Analyst: **ARH**
Petroleum Range Organics	17	5.3		mg/Kg-dry	1	10/21/00 12:51:34 PM
Surr: Dioctylphthalate	103	50-150		%REC	1	10/21/00 12:51:34 PM
Surr: o-Terphenyl	80.2	45-111		%REC	1	10/21/00 12:51:34 PM
PERCENT MOISTURE		**D2216**				Analyst: **LO**
Percent Moisture	24.8	0		wt%	1	10/20/00 4:40:00 PM

Qualifiers:

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B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	SB-8(1-2)
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/17/00 4:40:00 PM
Lab ID:	0010401-003A	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	6.0		µg/Kg-dry	1	10/20/00 5:45:00 PM
Benzene	2.5	1.2		µg/Kg-dry	1	10/20/00 5:45:00 PM
Toluene	3.7	1.2		µg/Kg-dry	1	10/20/00 5:45:00 PM
Ethylbenzene	BRL	1.2		µg/Kg-dry	1	10/20/00 5:45:00 PM
Xylenes, Total	BRL	2.4		µg/Kg-dry	1	10/20/00 5:45:00 PM
Surr: 4-Bromofluorobenzene	111	50-150		%REC	1	10/20/00 5:45:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	SB-8(1-2)
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/17/00 4:40:00 PM
Lab ID:	0010401-003B	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
Acenaphthylene	BRL	42		µg/Kg-dry	1	10/24/00 11:01:47 AM
1-Methylnaphthalene	BRL	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
2-Methylnaphthalene	BRL	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
Acenaphthene	BRL	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
Fluorene	BRL	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
Phenanthrene	BRL	86		µg/Kg-dry	4	10/24/00 6:43:15 AM
Phenanthrene	48	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
Anthracene	BRL	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
Fluoranthene	150	86		µg/Kg-dry	4	10/24/00 6:43:15 AM
Pyrene	110	86		µg/Kg-dry	4	10/24/00 6:43:15 AM
Benz(a)anthracene	82	17		µg/Kg-dry	4	10/24/00 6:43:15 AM
Chrysene	110	86		µg/Kg-dry	4	10/24/00 6:43:15 AM
Benzo(b)fluoranthene	130	15		µg/Kg-dry	4	10/24/00 6:43:15 AM
Benzo(k)fluoranthene	57	15		µg/Kg-dry	4	10/24/00 6:43:15 AM
Benzo(a)pyrene	140	10		µg/Kg-dry	4	10/24/00 6:43:15 AM
Dibenz(a,h)anthracene	BRL	4.2		µg/Kg-dry	1	10/24/00 11:01:47 AM
Benzo(g,h,i)perylene	72	22		µg/Kg-dry	1	10/24/00 11:01:47 AM
Indeno(1,2,3-cd)pyrene	140	8.6		µg/Kg-dry	4	10/24/00 6:43:15 AM
Surr: 4-terphenyl-d14	135	20-140		%REC	1	10/24/00 11:01:47 AM
PETROLEUM RANGE ORGANICS		**FL-PRO**				Analyst: **ARH**
Petroleum Range Organics	27	5.1		mg/Kg-dry	1	10/21/00 1:57:47 PM
Surr: Dioctylphthalate	96.2	50-150		%REC	1	10/21/00 1:57:47 PM
Surr: o-Terphenyl	74.1	45-111		%REC	1	10/21/00 1:57:47 PM
PERCENT MOISTURE		**D2216**				Analyst: **LO**
Percent Moisture	21.5	0		wt%	1	10/20/00 4:40:00 PM

Qualifiers:

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J - Analyte detected below quantitation limits
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• - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-11
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 11:05:00 AM
Lab ID:	0010401-004A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	5.0		µg/L	1	10/21/00 1:27:00 AM
Benzene	BRL	1.0		µg/L	1	10/21/00 1:27:00 AM
Toluene	BRL	1.0		µg/L	1	10/21/00 1:27:00 AM
Ethylbenzene	BRL	1.0		µg/L	1	10/21/00 1:27:00 AM
Xylenes, Total	BRL	2.0		µg/L	1	10/21/00 1:27:00 AM
Surr: 4-Bromofluorobenzene	74.5	50-150		%REC	1	10/21/00 1:27:00 AM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-11
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 11:05:00 AM
Lab ID:	0010401-004B	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PETROLEUM RANGE ORGANICS		**FL-PRO**				Analyst: **ARH**
Petroleum Range Organics	4.3	0.40		mg/L	1	10/21/00 3:03:51 PM
Surr: Dioctylphthalate	80.2	50-150		%REC	1	10/21/00 3:03:51 PM
Surr: o-Terphenyl	73.9	45-111		%REC	1	10/21/00 3:03:51 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-11
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 11:05:00 AM
Lab ID:	0010401-004C	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	1.0		µg/L	1	10/23/00 10:06:39 PM
Acenaphthylene	BRL	1.0		µg/L	1	10/23/00 10:06:39 PM
1-Methylnaphthalene	BRL	1.0		µg/L	1	10/23/00 10:06:39 PM
2-Methylnaphthalene	BRL	1.0		µg/L	1	10/23/00 10:06:39 PM
Acenaphthene	BRL	1.0		µg/L	1	10/23/00 10:06:39 PM
Fluorene	BRL	0.20		µg/L	1	10/23/00 10:06:39 PM
Phenanthrene	0.19	0.10		µg/L	1	10/23/00 10:06:39 PM
Anthracene	BRL	1.0		µg/L	1	10/23/00 10:06:39 PM
Fluoranthene	BRL	0.20		µg/L	1	10/23/00 10:06:39 PM
Pyrene	BRL	0.10		µg/L	1	10/23/00 10:06:39 PM
Benz(a)anthracene	BRL	0.10		µg/L	1	10/23/00 10:06:39 PM
Chrysene	BRL	0.10		µg/L	1	10/23/00 10:06:39 PM
Benzo(b)fluoranthene	BRL	0.20		µg/L	1	10/23/00 10:06:39 PM
Benzo(k)fluoranthene	BRL	0.10		µg/L	1	10/23/00 10:06:39 PM
Benzo(a)pyrene	BRL	0.10		µg/L	1	10/23/00 10:06:39 PM
Dibenz(a,h)anthracene	BRL	0.20		µg/L	1	10/23/00 10:06:39 PM
Benzo(g,h,i)perylene	BRL	0.20		µg/L	1	10/23/00 10:06:39 PM
Indeno(1,2,3-cd)pyrene	BRL	0.10		µg/L	1	10/23/00 10:06:39 PM
Surr: 4-terphenyl-d14	75.4	20-140		%REC	1	10/23/00 10:06:39 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-12
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 11:40:00 AM
Lab ID:	0010401-005A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	5.0		µg/L	1	10/21/00 1:56:00 AM
Benzene	22	1.0		µg/L	1	10/21/00 1:56:00 AM
Toluene	BRL	1.0		µg/L	1	10/21/00 1:56:00 AM
Ethylbenzene	BRL	1.0		µg/L	1	10/21/00 1:56:00 AM
Xylenes, Total	BRL	2.0		µg/L	1	10/21/00 1:56:00 AM
Surr: 4-Bromofluorobenzene	77.1	50-150		%REC	1	10/21/00 1:56:00 AM

Qualifiers:

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B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-12
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 11:40:00 AM
Lab ID:	0010401-005B	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PETROLEUM RANGE ORGANICS		**FL-PRO**				Analyst: **ARH**
Petroleum Range Organics	6.8	0.40		mg/L	1	10/21/00 4:09:58 PM
Surr: Dioctylphthalate	87.5	50-150		%REC	1	10/21/00 4:09:58 PM
Surr: o-Terphenyl	83.2	45-111		%REC	1	10/21/00 4:09:58 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

*- Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	*Blasland, Bouck & Lee*	*Client Sample ID:*	*MW-12*
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 11:40:00 AM
Lab ID:	0010401-005C	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	1.0		µg/L	1	10/23/00 10:58:14 PM
Acenaphthylene	BRL	1.0		µg/L	1	10/23/00 10:58:14 PM
1-Methylnaphthalene	11	1.0		µg/L	1	10/23/00 10:58:14 PM
2-Methylnaphthalene	7.5	1.0		µg/L	1	10/23/00 10:58:14 PM
Acenaphthene	BRL	1.0		µg/L	1	10/23/00 10:58:14 PM
Fluorene	BRL	0.20		µg/L	1	10/23/00 10:58:14 PM
Phenanthrene	BRL	0.10		µg/L	1	10/23/00 10:58:14 PM
Anthracene	BRL	1.0		µg/L	1	10/23/00 10:58:14 PM
Fluoranthene	BRL	0.20		µg/L	1	10/23/00 10:58:14 PM
Pyrene	BRL	0.10		µg/L	1	10/23/00 10:58:14 PM
Benz(a)anthracene	BRL	0.10		µg/L	1	10/23/00 10:58:14 PM
Chrysene	BRL	0.10		µg/L	1	10/23/00 10:58:14 PM
Benzo(b)fluoranthene	BRL	0.20		µg/L	1	10/23/00 10:58:14 PM
Benzo(k)fluoranthene	BRL	0.10		µg/L	1	10/23/00 10:58:14 PM
Benzo(a)pyrene	BRL	0.10		µg/L	1	10/23/00 10:58:14 PM
Dibenz(a,h)anthracene	BRL	0.20		µg/L	1	10/23/00 10:58:14 PM
Benzo(g,h,i)perylene	BRL	0.20		µg/L	1	10/23/00 10:58:14 PM
Indeno(1,2,3-cd)pyrene	BRL	0.10		µg/L	1	10/23/00 10:58:14 PM
Surr: 4-terphenyl-d14	82.1	20-140		%REC	1	10/23/00 10:58:14 PM

Qualifiers:

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-13
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 12:50:00 PM
Lab ID:	0010401-006A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	5.0		µg/L	1	10/21/00 12:01:00 AM
Benzene	BRL	1.0		µg/L	1	10/21/00 12:01:00 AM
Toluene	BRL	1.0		µg/L	1	10/21/00 12:01:00 AM
Ethylbenzene	BRL	1.0		µg/L	1	10/21/00 12:01:00 AM
Xylenes, Total	BRL	2.0		µg/L	1	10/21/00 12:01:00 AM
Surr: 4-Bromofluorobenzene	64.0	50-150		%REC	1	10/21/00 12:01:00 AM

Qualifiers:

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J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

• - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-13
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 12:50:00 PM
Lab ID:	0010401-006B	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PETROLEUM RANGE ORGANICS		**FL-PRO**				Analyst: **ARH**
Petroleum Range Organics	0.66	0.40		mg/L	1	10/21/00 5:15:56 PM
Surr: Dioctylphthalate	83.6	50-150		%REC	1	10/21/00 5:15:56 PM
Surr: o-Terphenyl	82.8	45-111		%REC	1	10/21/00 5:15:56 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

• - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-13
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 12:50:00 PM
Lab ID:	0010401-006C	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	1.0		µg/L	1	10/23/00 11:49:49 PM
Acenaphthylene	1.5	1.0		µg/L	1	10/23/00 11:49:49 PM
1-Methylnaphthalene	BRL	1.0		µg/L	1	10/23/00 11:49:49 PM
2-Methylnaphthalene	BRL	1.0		µg/L	1	10/23/00 11:49:49 PM
Acenaphthene	BRL	1.0		µg/L	1	10/23/00 11:49:49 PM
Fluorene	BRL	0.20		µg/L	1	10/23/00 11:49:49 PM
Phenanthrene	0.35	0.10		µg/L	1	10/23/00 11:49:49 PM
Anthracene	BRL	1.0		µg/L	1	10/23/00 11:49:49 PM
Fluoranthene	BRL	0.20		µg/L	1	10/23/00 11:49:49 PM
Pyrene	BRL	0.10		µg/L	1	10/23/00 11:49:49 PM
Benz(a)anthracene	BRL	0.10		µg/L	1	10/23/00 11:49:49 PM
Chrysene	BRL	0.10		µg/L	1	10/23/00 11:49:49 PM
Benzo(b)fluoranthene	BRL	0.20		µg/L	1	10/23/00 11:49:49 PM
Benzo(k)fluoranthene	BRL	0.10		µg/L	1	10/23/00 11:49:49 PM
Benzo(a)pyrene	BRL	0.10		µg/L	1	10/23/00 11:49:49 PM
Dibenz(a,h)anthracene	BRL	0.20		µg/L	1	10/23/00 11:49:49 PM
Benzo(g,h,i)perylene	BRL	0.20		µg/L	1	10/23/00 11:49:49 PM
Indeno(1,2,3-cd)pyrene	BRL	0.10		µg/L	1	10/23/00 11:49:49 PM
Surr: 4-terphenyl-d14	93.4	20-140		%REC	1	10/23/00 11:49:49 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-14
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 12:20:00 PM
Lab ID:	0010401-007A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	5.0		µg/L	1	10/21/00 12:30:00 AM
Benzene	BRL	1.0		µg/L	1	10/21/00 12:30:00 AM
Toluene	BRL	1.0		µg/L	1	10/21/00 12:30:00 AM
Ethylbenzene	BRL	1.0		µg/L	1	10/21/00 12:30:00 AM
Xylenes, Total	BRL	2.0		µg/L	1	10/21/00 12:30:00 AM
Surr: 4-Bromofluorobenzene	63.6	50-150		%REC	1	10/21/00 12:30:00 AM

Qualifiers:

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J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

• - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-14
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 12:20:00 PM
Lab ID:	0010401-007B	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PETROLEUM RANGE ORGANICS		**FL-PRO**				Analyst: **ARH**
Petroleum Range Organics	BRL	0.40		mg/L	1	10/21/00 6:21:44 PM
Surr: Dioctylphthalate	85.2	50-150		%REC	1	10/21/00 6:21:44 PM
Surr: o-Terphenyl	72.3	45-111		%REC	1	10/21/00 6:21:44 PM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	MW-14
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00 12:20:00 PM
Lab ID:	*0010401-007C*	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	1.0		µg/L	1	10/24/00 12:41:33 AM
Acenaphthylene	BRL	1.0		µg/L	1	10/24/00 12:41:33 AM
1-Methylnaphthalene	BRL	1.0		µg/L	1	10/24/00 12:41:33 AM
2-Methylnaphthalene	BRL	1.0		µg/L	1	10/24/00 12:41:33 AM
Acenaphthene	BRL	1.0		µg/L	1	10/24/00 12:41:33 AM
Fluorene	BRL	0.20		µg/L	1	10/24/00 12:41:33 AM
Phenanthrene	0.16	0.10		µg/L	1	10/24/00 12:41:33 AM
Anthracene	BRL	1.0		µg/L	1	10/24/00 12:41:33 AM
Fluoranthene	BRL	0.20		µg/L	1	10/24/00 12:41:33 AM
Pyrene	BRL	0.10		µg/L	1	10/24/00 12:41:33 AM
Benz(a)anthracene	BRL	0.10		µg/L	1	10/24/00 12:41:33 AM
Chrysene	BRL	0.10		µg/L	1	10/24/00 12:41:33 AM
Benzo(b)fluoranthene	BRL	0.20		µg/L	1	10/24/00 12:41:33 AM
Benzo(k)fluoranthene	BRL	0.10		µg/L	1	10/24/00 12:41:33 AM
Benzo(a)pyrene	BRL	0.10		µg/L	1	10/24/00 12:41:33 AM
Dibenz(a,h)anthracene	BRL	0.20		µg/L	1	10/24/00 12:41:33 AM
Benzo(g,h,i)perylene	BRL	0.20		µg/L	1	10/24/00 12:41:33 AM
Indeno(1,2,3-cd)pyrene	BRL	0.10		µg/L	1	10/24/00 12:41:33 AM
Surr: 4-terphenyl-d14	115	20-140		%REC	1	10/24/00 12:41:33 AM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: 25-Oct-00

CLIENT:	Blasland, Bouck & Lee	Client Sample ID:	~~MW~~-2A
Lab Order:	0010401	Tag Number:	
Project:	Navy Truck Fill Stand	Collection Date:	10/18/00 2:00:00 PM
Lab ID:	0010401-008A	Matrix:	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	5.0		µg/L	1	10/21/00 12:58:00 AM
Benzene	4.0	1.0		µg/L	1	10/21/00 12:58:00 AM
Toluene	BRL	1.0		µg/L	1	10/21/00 12:58:00 AM
Ethylbenzene	BRL	1.0		µg/L	1	10/21/00 12:58:00 AM
Xylenes, Total	BRL	2.0		µg/L	1	10/21/00 12:58:00 AM
Surr: 4-Bromofluorobenzene	69.4	50-150		%REC	1	10/21/00 12:58:00 AM

Qualifiers:

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* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	Client Sample ID:	~~MW~~-2A
Lab Order:	0010401	Tag Number:	
Project:	Navy Truck Fill Stand	Collection Date:	10/18/00 2:00:00 PM
Lab ID:	0010401-008B	Matrix:	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYAROMATIC HYDROCARBONS BY HPLC		**SW8310**				Analyst: **RS**
Naphthalene	BRL	1.0		µg/L	1	10/24/00 1:33:10 AM
Acenaphthylene	BRL	1.0		µg/L	1	10/24/00 1:33:10 AM
1-Methylnaphthalene	BRL	1.0		µg/L	1	10/24/00 1:33:10 AM
2-Methylnaphthalene	BRL	1.0		µg/L	1	10/24/00 1:33:10 AM
Acenaphthene	BRL	1.0		µg/L	1	10/24/00 1:33:10 AM
Fluorene	BRL	0.20		µg/L	1	10/24/00 1:33:10 AM
Phenanthrene	BRL	0.10		µg/L	1	10/24/00 1:33:10 AM
Anthracene	BRL	1.0		µg/L	1	10/24/00 1:33:10 AM
Fluoranthene	BRL	0.20		µg/L	1	10/24/00 1:33:10 AM
Pyrene	BRL	0.10		µg/L	1	10/24/00 1:33:10 AM
Benz(a)anthracene	BRL	0.10		µg/L	1	10/24/00 1:33:10 AM
Chrysene	BRL	0.10		µg/L	1	10/24/00 1:33:10 AM
Benzo(b)fluoranthene	BRL	0.20		µg/L	1	10/24/00 1:33:10 AM
Benzo(k)fluoranthene	BRL	0.10		µg/L	1	10/24/00 1:33:10 AM
Benzo(a)pyrene	BRL	0.10		µg/L	1	10/24/00 1:33:10 AM
Dibenz(a,h)anthracene	BRL	0.20		µg/L	1	10/24/00 1:33:10 AM
Benzo(g,h,i)perylene	BRL	0.20		µg/L	1	10/24/00 1:33:10 AM
Indeno(1,2,3-cd)pyrene	BRL	0.10		µg/L	1	10/24/00 1:33:10 AM
Surr: 4-terphenyl-d14	68.9	20-140		%REC	1	10/24/00 1:33:10 AM

Qualifiers:

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT:	Blasland, Bouck & Lee	**Client Sample ID:**	Trip Blank
Lab Order:	0010401	**Tag Number:**	
Project:	Navy Truck Fill Stand	**Collection Date:**	10/18/00
Lab ID:	0010401-009A	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS		**SW8260B**				Analyst: **JC**
Methyl tert-butyl ether	BRL	5.0		µg/L	1	10/20/00 11:33:00 PM
Benzene	BRL	1.0		µg/L	1	10/20/00 11:33:00 PM
Toluene	BRL	1.0		µg/L	1	10/20/00 11:33:00 PM
Ethylbenzene	BRL	1.0		µg/L	1	10/20/00 11:33:00 PM
Xylenes, Total	BRL	2.0		µg/L	1	10/20/00 11:33:00 PM
Surr: 4-Bromofluorobenzene	63.8	50-150		%REC	1	10/20/00 11:33:00 PM

Qualifiers:

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J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 24, 2000

Amanda Shearer
Blasland, Bouck & Lee
15741 Vinola Court
Montverde, FL 34756
TEL: (407) 469-3165
FAX (407) 469-3165

RE: Navy Truck Fill Stand

Order No.: 0010401

Dear Amanda Shearer:

Analytical Environmental Services, Inc. received 9 samples on 10/20/00 10:00:00 AM for the analyses presented in the following report.

No problems were encountered during analyses. Additionally, all results for the associated quality control samples were within EPA and/or AES established limits except where noted in the project Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

for Art Humpreys

3781 PRESIDENTIAL PARKWAY, SUITE 111 • ATLANTA, GEORGIA 30340 • TEL: (770) 457-8177 • FAX: (770) 457-8188

Analytical Environmental Services, Inc.

Sample Receipt Checklist

Client Name BLASLAND-BOUCK

Date and Time Received 10/20/00 10:00:00 AM

Work Order Number 0010401

Received by MH

Checklist completed by: M. Kararic (Signature) 10/20/00 (Date)

Reviewed by [illegible] (Initials) 10/20/00 11:30 (Date)

Matrix:

Carrier name FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Presen ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Presen ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Presen ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
amples received within holding time?	Yes ☑	No ☐	
ontainer/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	

Adjusted? _____ Checked b _____

Any No and/or NA (not applicable) response must be detailed in the comments section bel

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3781 Presidential Parkway, Suite 111, Atlanta GA 30340-0370

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: _____

Date: 10/18/00 Page 1 of 1

COMPANY: Blasland Bouck + Lee

ADDRESS: 15741 Vinola Ct Montverde FL 34756

PHONE: 407-469-3165

FAX: 407-469-3392

SAMPLED BY: Dan Press A. Shearer

SIGNATURE: [signature]

ANALYSIS REQUESTED

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	ENCORE 8021	FL-PRO	8310	% Moisture	DEX/MTBE								REMARKS	No # of Containers
	SB-2 (1-2)	10/17/00	1025	✓		SO	3	1	1	1										
	SB-4 (1-2)	10/17/00	1345	✓		SO	3	1	1	1										
	SB-8 (1-2)	10/17/00	1640	✓		SO	3	1	1	1										
	MW-11	10/18/00	1105	✓		GW		1	1		2									
	MW-12	10/18/00	1140	✓		GW		1	1		2									
	MW-13	10/18/00	1250	✓		GW		1	1		2									
	MW-14	10/18/00	1220	✓		GW		1	1		2									
	MW-2A	10/18/00	1400	✓		GW			1		2									

PRESERVATION

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:		1: [signature]	10/12/00
2: [signature]	10/18/00	2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: TRUCK FILL STAND

PROJECT #: 880.12

FAC ID#:

SITE ADDRESS: NAS Key West

PROJECT MANAGER: Amanda Shearer

INVOICE TO: BBL
(IF DIFFERENT FROM ABOVE)
3350 Buschwood Park Dr. 100
Tampa FL 33618

RECEIPT

Total # of Containers

Turnaround Time Request

- ● Standard 3-5 Business Days
- ○ Same Day Rush (auth req.)
- ○ Next Business Day Rush
- ○ 2 Business Day Rush
- ○ Other _____

PROGRAM (see codes): _____

DATA PACKAGE: I II (III) IV

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD

OUT / / VIA:

IN / / VIA:

CLIENT (FedEx) UPS MAIL COURIER

GREYHOUND OTHER _____

PO#:

QUOTE/CONTRACT #: BBL

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) O = Other (specify)

PRESERVATIVE CODES: H = Hydrochloric acid + ice I = Ice only N = Nitric acid + ice S = Sulfuric acid + ice O = Other (specify) NA = None

PROGRAM: FLUST FLDC ALUST TNUST MSUST NCUST SCUST GAUST GACONV FLCONV

[signature] 10/20/00 10:00 am

White Copy - ORIGINAL; Yellow Copy - LAB; Pink Copy - CLIENT

CLIENT: Blasland, Bouck & Lee
Project: Navy Truck Fill Stand
Lab Order: 0010401

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Physical/Chemical Methods, SW846, 4th Edition

All method blanks and laboratory spikes met quality assurance objectives.

BTEX Method 8260B

Batch 7843 contained low spike recoveries and high %RPDs for all analytes due to sample matrix interference. The initial calibrations NMBXW817 and MBXS7070 list six points on the initial calibration summary sheets. Both calibrations contain eight points, and all eight should be used to calculate the %RSDs.

PAH Method 8310

Laboratory sample 0010401-001B exhibited high surrogate recovery for 4-terphenyl-d14 due to sample matrix interference. Batch 7867 exhibited high spike recovery on the LCS for fluoranthene.

BTEX Analysis
SW846 8260B

Water Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 3:16:35 P**
Prep End Date: **10/26/00 3:15:00 P**

Prep Batch **7870** Prep Code: **5030** Technician: **Josh Crain**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-004A	Aqueous			5	0		0	5	1
0010401-005A	Aqueous			5	0		0	5	1
0010401-006A	Aqueous			5	0		0	5	1
0010401-007A	Aqueous			5	0		0	5	1
0010401-007AMS	Aqueous			5	0		0	5	1
0010401-007AMSD	Aqueous			5	0		0	5	1
0010401-008A	Aqueous			5	0		0	5	1
0010401-009A	Aqueous			5	0		0	5	1
0010407-001A	Aqueous			5	0		0	5	1
0010407-002A	Aqueous			5	0		0	5	1
0010416-005A	Aqueous			5	0		0	5	1
0010417-002A	Aqueous			5	0		0	5	1
0010422-001A	Aqueous			5	0		0	5	1
0010422-002A	Aqueous			5	0		0	5	1
0010422-003A	Aqueous			5	0		0	5	1
0010422-004A	Aqueous			5	0		0	5	1
0010426-002A	Aqueous			5	0		0	5	1
0010427-001A	Aqueous			5	0		0	5	1
0010427-002A	Aqueous			5	0		0	5	1
0010427-003A	Aqueous			5	0		0	5	1
0010428-001A	Aqueous			5	0		0	5	1
0010428-002A	Aqueous			5	0		0	5	1
LCS-7870				5	0		0	5	1
MB-7870				5	0		0	5	1

Analytical Environmental Services, Inc.

Date: *24-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7870** Batch ID: **7870** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **10/20/00 10:35:00 PM** Prep Date: **10/20/00**
Client ID: Run ID: **MS-4(VOLATILES)_0010** SeqNo: **155079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	BRL	5									
Benzene	BRL	1									
Toluene	BRL	1									
Ethylbenzene	BRL	1									
Xylenes, Total	BRL	2									
Surr: 4-Bromofluorobenzene	32.44	0	50	0	64.9	50	150	0			

Sample ID: **MB-7870** Batch ID: **7870** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **10/23/00 12:11:00 PM** Prep Date: **10/20/00**
Client ID: Run ID: **MS-4(VOLATILES)_0010** SeqNo: **155185**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	BRL	5									
Benzene	BRL	1									
Toluene	BRL	1									
Ethylbenzene	BRL	1									
Xylenes, Total	BRL	2									
Surr: 4-Bromofluorobenzene	32.26	0	50	0	64.5	50	150	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

000129

Analytical Environmental Services, Inc.

Date: *24-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7870** Batch ID: **7870** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **10/20/00 11:04:00 PM** Prep Date: **10/20/00**
Client ID: Run ID: **MS-4(VOLATILES)_0010** SeqNo: **155080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	50.72	5	50	0	101	80	120	0			
Benzene	42.2	1	50	0	84.4	80	120	0			
Toluene	42.28	1	50	0	84.6	80	120	0			
Ethylbenzene	44.32	1	50	0	88.6	80	120	0			
Xylenes, Total	136.6	2	150	0	91	80	120	0			
Surr: 4-Bromofluorobenzene	36.18	0	50	0	72.4	50	150	0			

Sample ID: **LCS-7870** Batch ID: **7870** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **10/23/00 12:40:00 PM** Prep Date: **10/20/00**
Client ID: Run ID: **MS-4(VOLATILES)_0010** SeqNo: **155186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	51.55	5	50	0	103	80	120	0			
Benzene	43.04	1	50	0	86.1	80	120	0			
Toluene	42.69	1	50	0	85.4	80	120	0			
Ethylbenzene	45.58	1	50	0	91.2	80	120	0			
Xylenes, Total	138.7	2	150	0	92.4	80	120	0			
Surr: 4-Bromofluorobenzene	37	0	50	0	74	50	150	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

010120

Analytical Environmental Services, Inc.

Date: *24-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: **0010401-007AMS** Batch ID: **7870** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **10/23/00 1:37:00 PM** Prep Date: **10/20/00**

Client ID: **MW-14** Run ID: **MS-4(VOLATILES)_0010** SeqNo: **155207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	50.28	5	50	0	101	60	120	0			
Benzene	43.35	1	50	0	86.7	58	121	0			
Toluene	43.08	1	50	0	86.2	60	121	0			
Ethylbenzene	45.82	1	50	0	91.6	55	130	0			
Xylenes, Total	139.1	2	150	0	92.8	60	144	0			
Surr: 4-Bromofluorobenzene	37.01	0	50	0	74	50	150	0			

Sample ID: **0010401-007AMSD** Batch ID: **7870** Test Code: **SW8260B** Units: **µg/L** Analysis Date: **10/23/00 2:35:00 PM** Prep Date: **10/20/00**

Client ID: **MW-14** Run ID: **MS-4(VOLATILES)_0010** SeqNo: **155208**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	49.45	5	50	0	98.9	60	120	50.28	1.66	20	
Benzene	42.87	1	50	0	85.7	58	121	43.35	1.11	20	
Toluene	42.74	1	50	0	85.5	60	121	43.08	0.792	20	
Ethylbenzene	45.35	1	50	0	90.7	55	130	45.82	1.03	20	
Xylenes, Total	138.8	2	150	0	92.5	60	144	139.1	0.237	20	
Surr: 4-Bromofluorobenzene	37.51	0	50	0	75	50	150	37.01	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

00003

INITIAL CALIBRATION

Response Factor Report GC/MS VOA

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration

Calibration Files

1	=V401345.D	5	=V401346.D	10	=V401347.D
20	=V401348.D	50	=V401349.D	100	=V401350.D

		Compound	1	5	10	20	50	100	Avg	%RS
1)	I	Fluorobenzene	----------ISTD----------							
2)		MtBE	0.656	0.524	0.537	0.540	0.561	0.551	0.555	7.64
3)		Benzene	1.479	1.263	1.229	1.299	1.337	1.310	1.313	5.66
4)		Toluene	1.922	1.275	1.210	1.294	1.347	1.356	1.387	16.00
5)		Ethylbenzene	1.356	1.083	1.070	1.172	1.303	1.355	1.262	10.55
6)		m+p Xylene	0.534	0.397	0.403	0.435	0.499	0.528	0.486	13.35
7)	M	o-Xylene	0.579	0.427	0.425	0.474	0.532	0.559	0.521	13.32
8)	S	BFB	0.335	0.364	0.387	0.411	0.417	0.407	0.387	8.24
9)		Naphthalene	0.279	0.104	0.105	0.121	0.151	0.199	0.190	43.17

(#) = Out of Range ### Number of calibration levels exceeded format ###

Data File : C:\TEMP\V401345.D
Acq On : 25 Jun 2000 14:38
Sample : VSTD 001 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 12:29 2000

Vial: 10
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:28:35 2000
Response via : Initial Calibration
DataAcq Meth : 8260

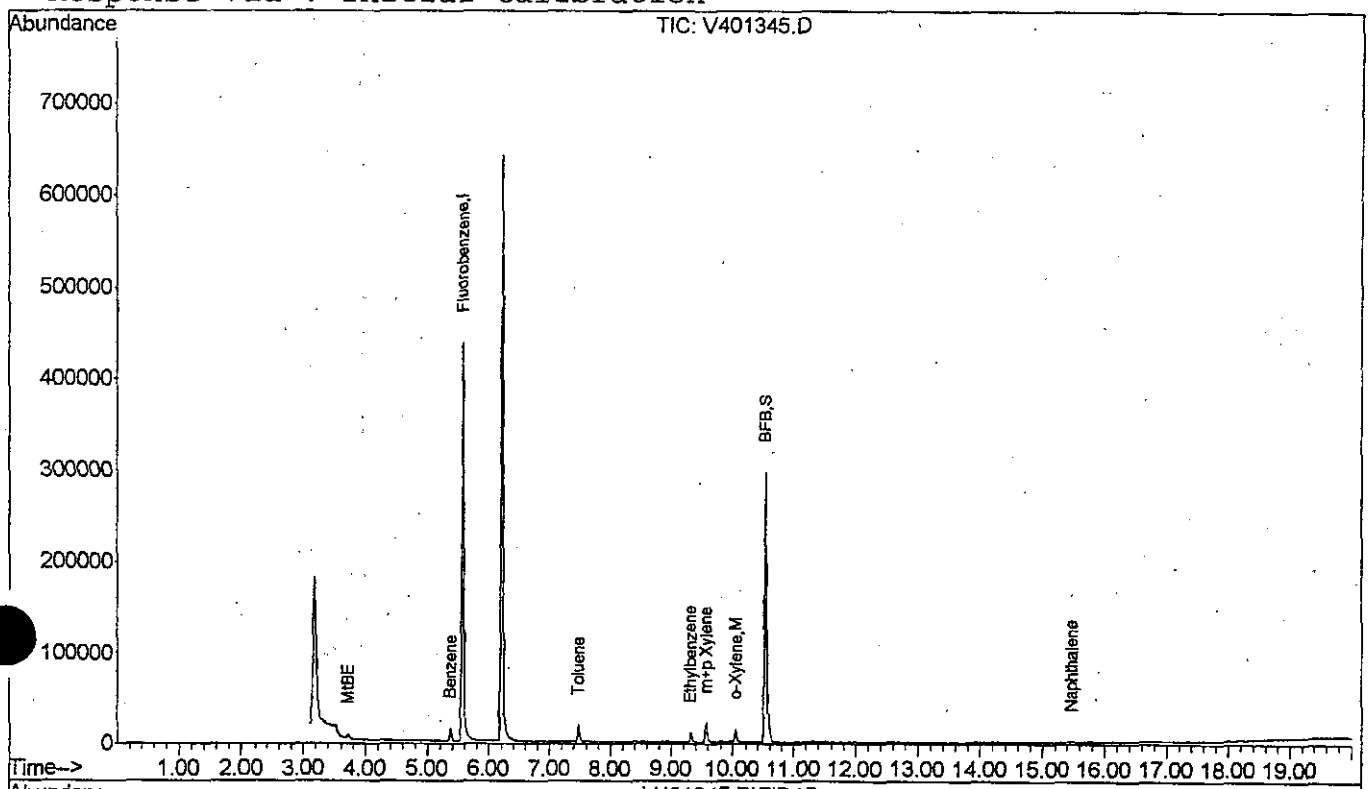
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.57	96	512242	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.53	95	164699	42.62 ug/L	0.00
Spiked Amount 50.000			Recovery	= 85.24%	
Target Compounds					Qvalue
2) MtBE	3.71	73	6724	1.18 ug/L	86
3) Benzene	5.37	78	15155	1.13 ug/L	100
4) Toluene	7.47	91	19132m	1.93 ug/L	
5) Ethylbenzene	9.32	91	13890	1.07 ug/L	98
6) m+p Xylene	9.57	106	10948	2.20 ug/L	87
7) o-Xylene	10.04	106	5935	1.11 ug/L	85
9) Naphthalene	15.47	128	2859	12.25 ug/L #	77

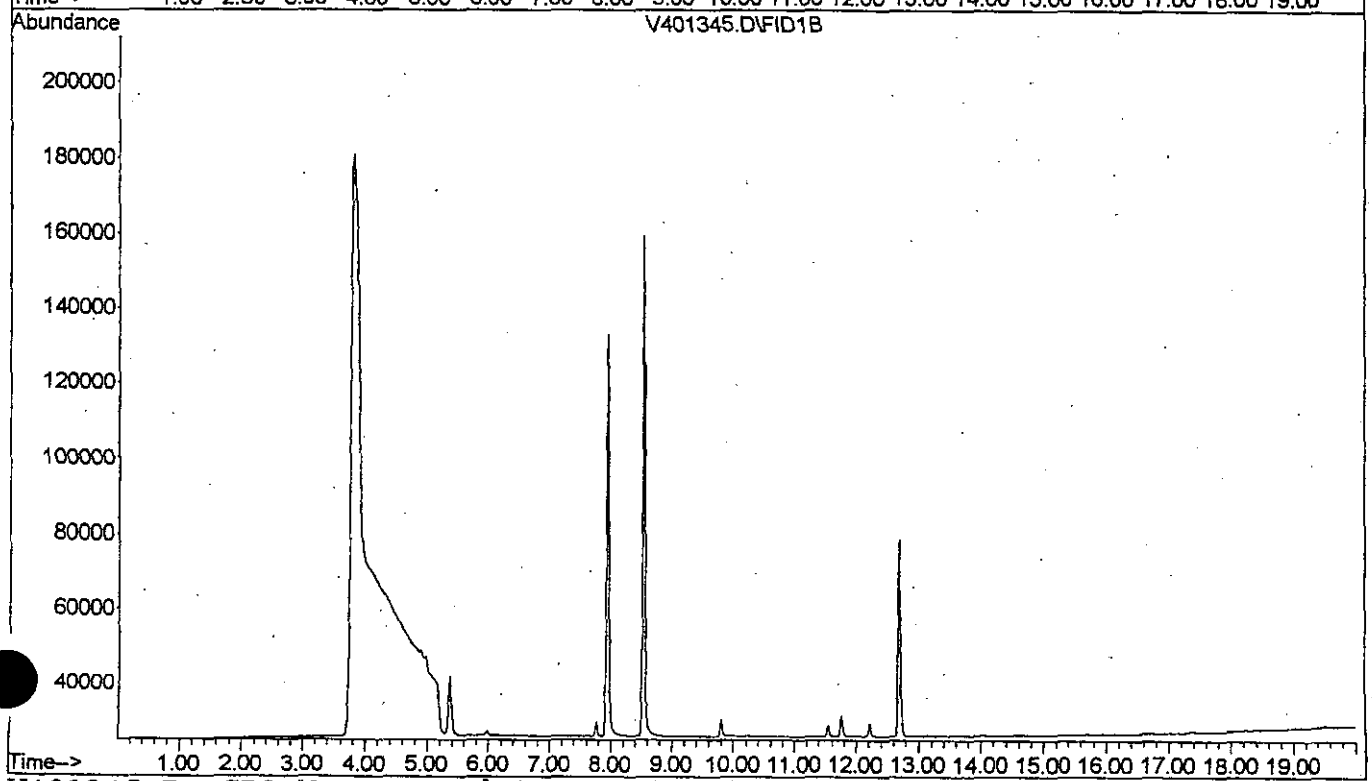
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401345.D
Acq On : 25 Jun 2000 14:38
Sample : VSTD 001 W
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jun 26 12:29 2000

Vial: 10
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V401346.D
Acq On : 25 Jun 2000 15:07
Sample : VSTD 005 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 12:29 2000

Vial: 11
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:29:46 2000
Response via : Initial Calibration
DataAcq Meth : 8260

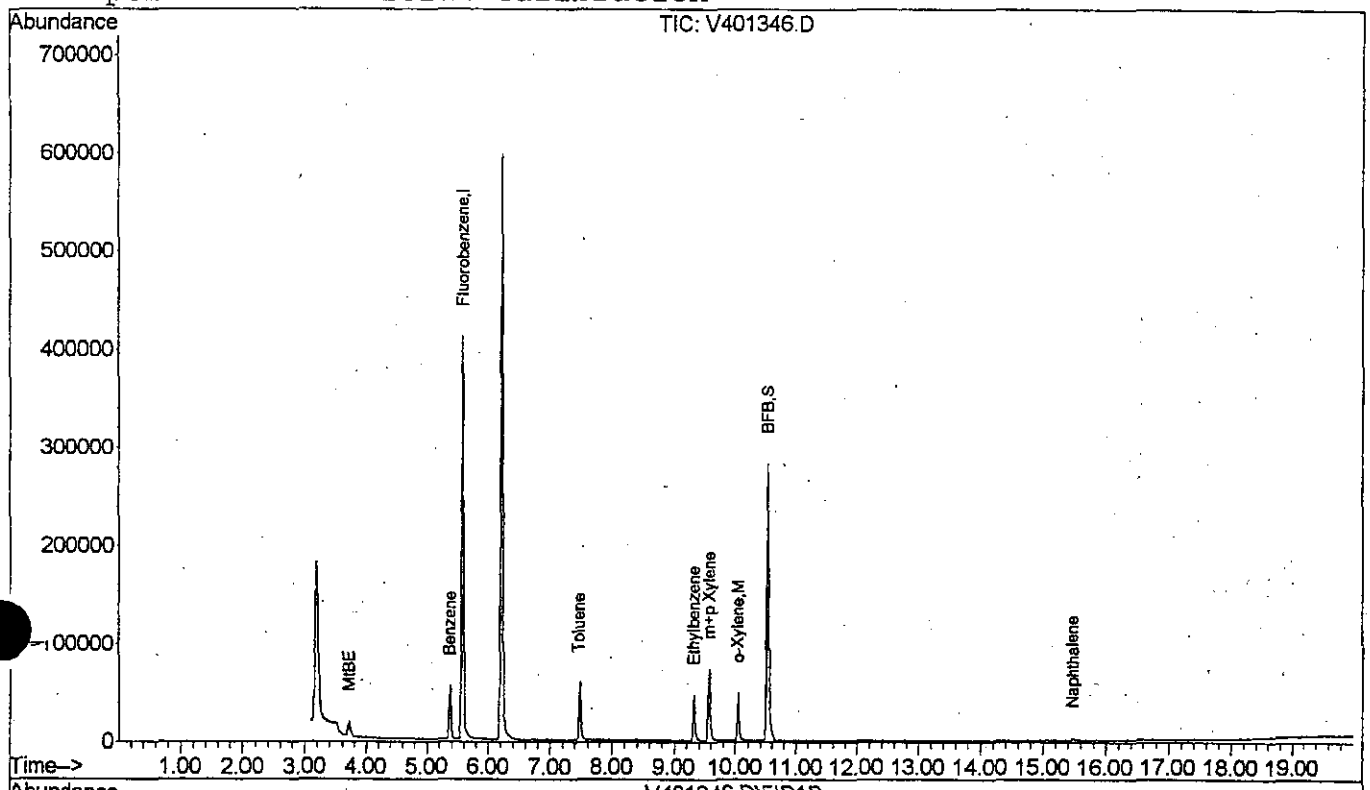
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.57	96	471025	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.53	95	155769	43.84 ug/L	0.00
Spiked Amount 50.000			Recovery =	87.68%	
Target Compounds					Qvalue
2) MtBE	3.72	73	24691	4.72 ug/L	91
3) Benzene	5.37	78	59472	4.81 ug/L	100
4) Toluene	7.47	91	60035	5.25 ug/L	98
5) Ethylbenzene	9.32	91	51009	4.29 ug/L	100
6) m+p Xylene	9.57	106	37405	8.17 ug/L	92
7) o-Xylene	10.05	106	20112	4.10 ug/L	91
9) Naphthalene	15.47	128	4919	13.07 ug/L #	100

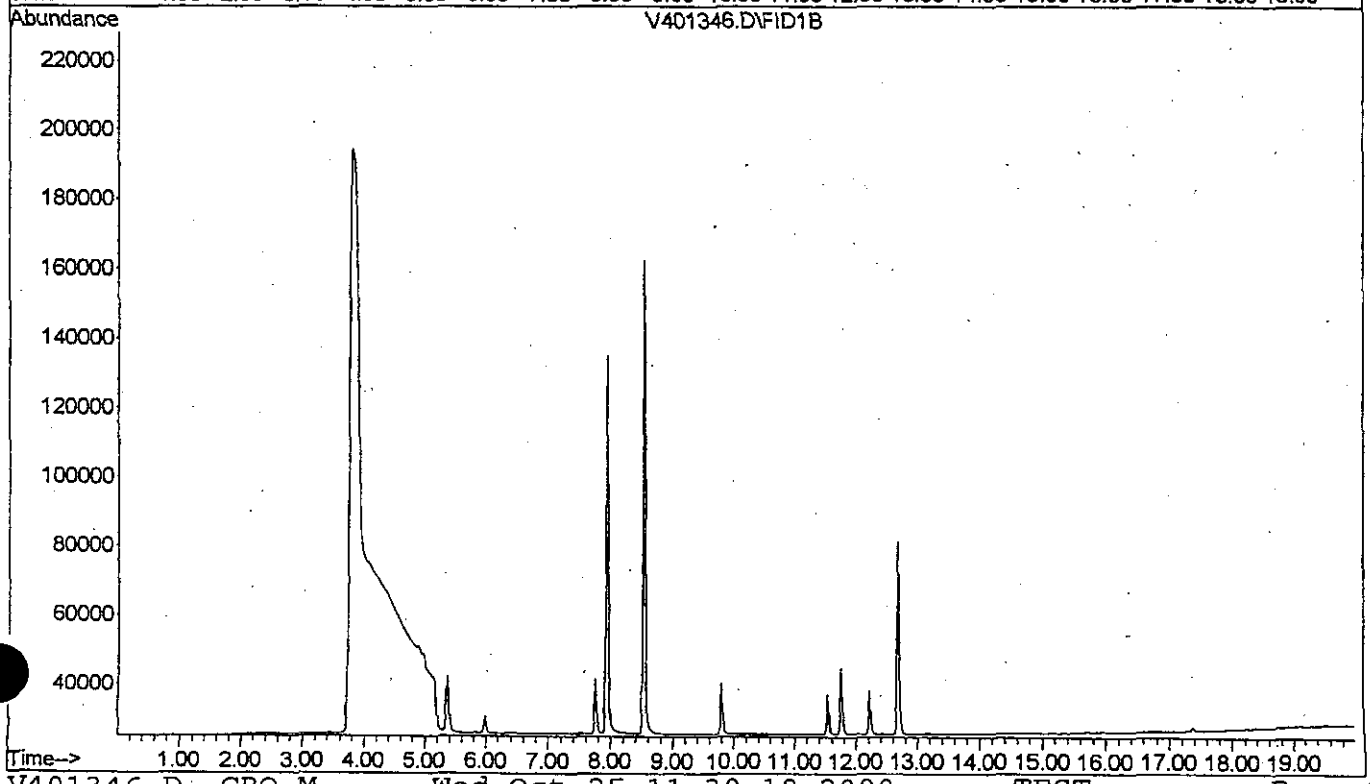
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401346.D
Acq On : 25 Jun 2000 15:07
Sample : VSTD 005 W
Misc : INITIAL STD
IS Integration Params: RTEINT2.P
Quant Time: Jun 26 12:29 2000

Vial: 11
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V401347.D
Acq On : 25 Jun 2000 15:36
Sample : VSTD 010 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 13:00 2000

Vial: 12
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:33:37 2000
Response via : Initial Calibration
DataAcq Meth : 8260

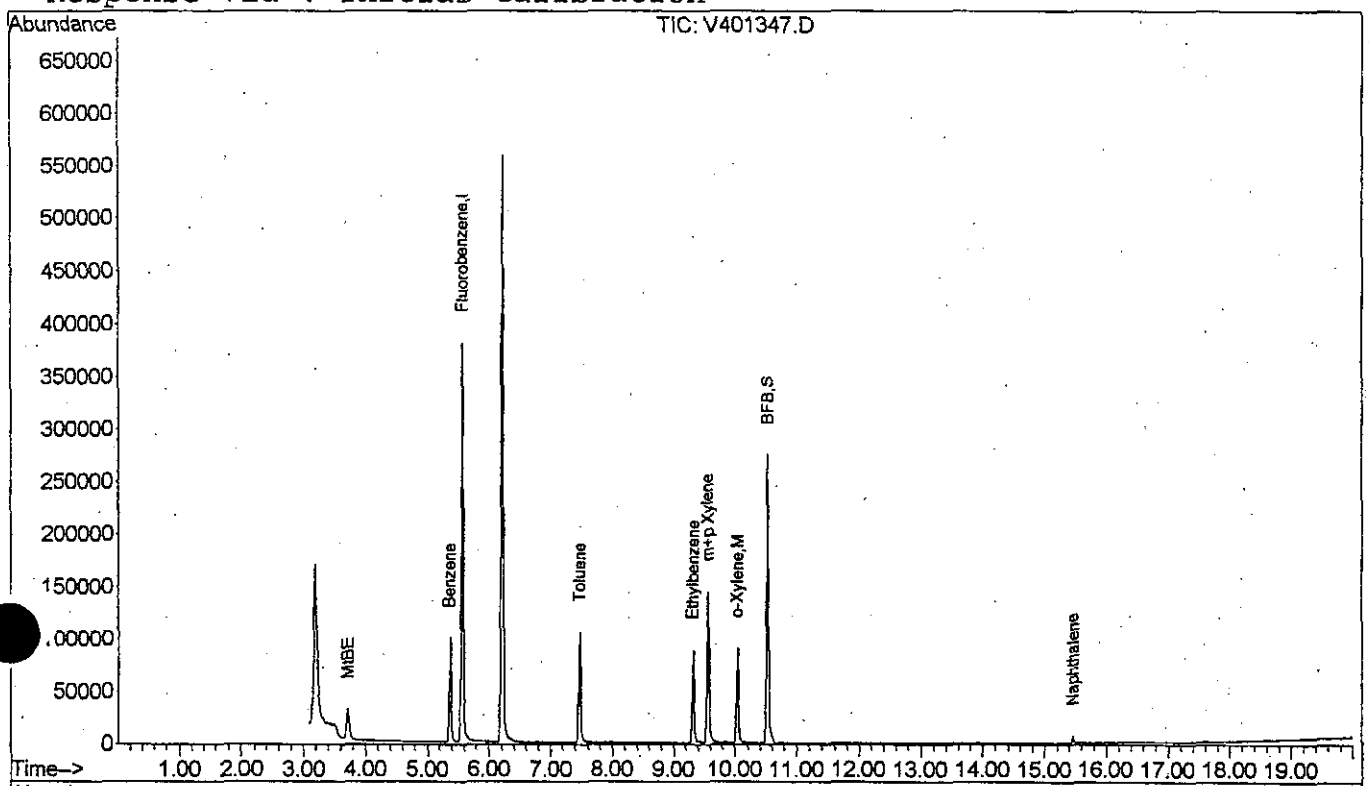
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.57	96	443453	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.53	95	147156	44.89 ug/L	0.00
Spiked Amount 50.000			Recovery	= 89.78%	
Target Compounds					Qvalue
2) MtBE	3.72	73	47665	9.68 ug/L	98
3) Benzene	5.37	78	109023	9.36 ug/L	100
4) Toluene	7.47	91	107299	8.76 ug/L	100
5) Ethylbenzene	9.32	91	94923	8.48 ug/L	99
6) m+p Xylene	9.56	106	71533	16.59 ug/L	96
7) o-Xylene	10.04	106	37734	8.17 ug/L	99
9) Naphthalene	15.48	128	9302	8.97 ug/L #	80

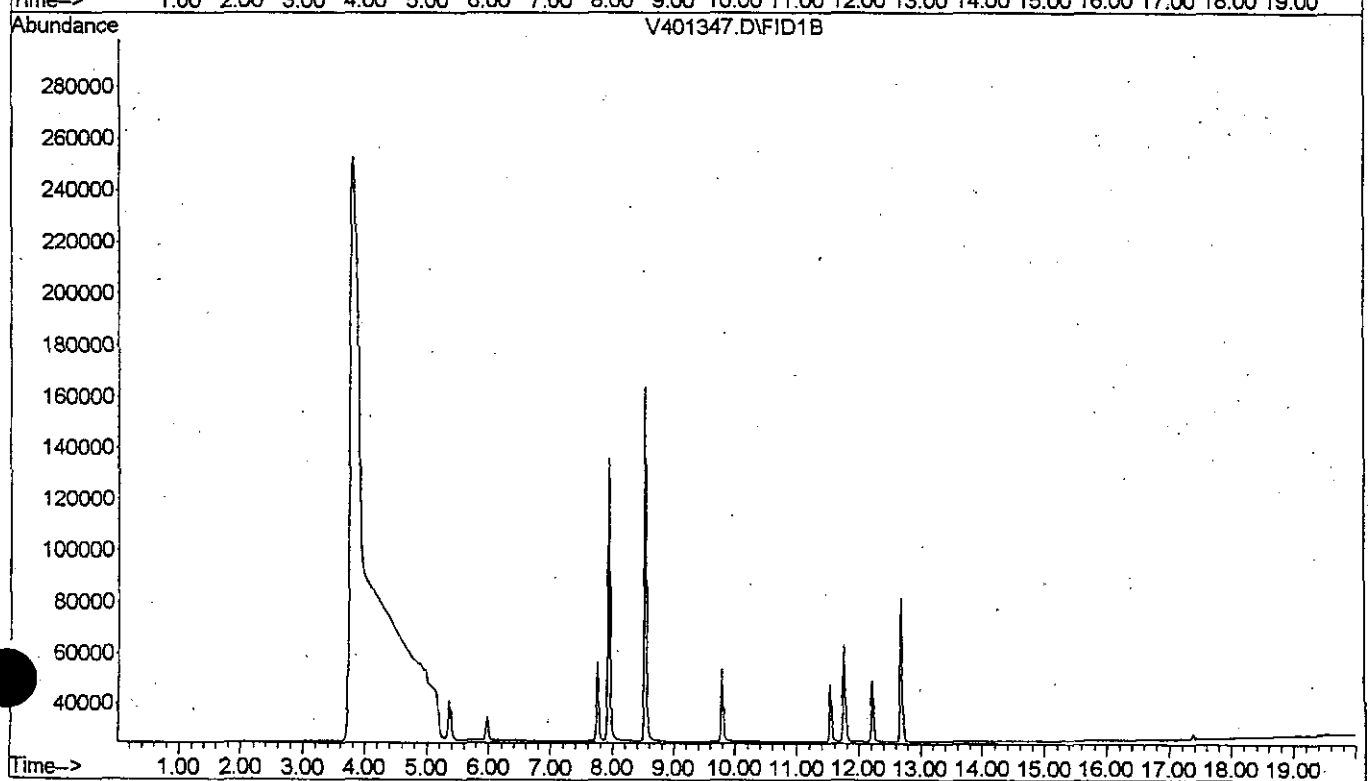
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401347.D
Acq On : 25 Jun 2000 15:36
Sample : VSTD 010 W
Misc : INITIAL STD
IS Integration Params: RTEINT2.P
Quant Time: Jun 26 13:00 2000

Vial: 12
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V401348.D
Acq On : 25 Jun 2000 16:05
Sample : VSTD 020 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 13:01 2000

Vial: 13
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:33:37 2000
Response via : Initial Calibration
DataAcq Meth : 8260

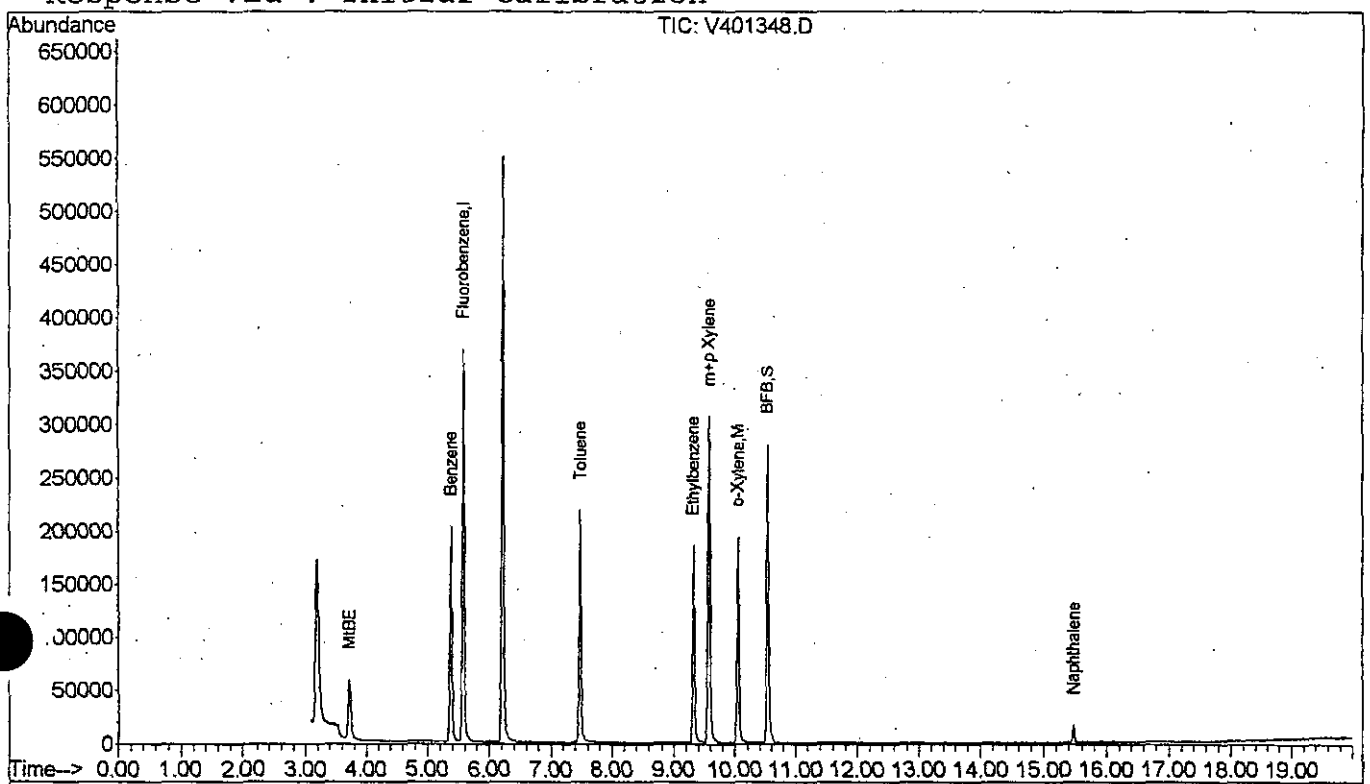
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.57	96	417473	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.52	95	151581	49.11 ug/L	0.00
Spiked Amount 50.000			Recovery =	98.22%	
Target Compounds					Qvalue
2) MtBE	3.72	73	90163	19.45 ug/L	100
3) Benzene	5.37	78	216929	19.78 ug/L	100
4) Toluene	7.47	91	216001	18.74 ug/L	100
5) Ethylbenzene	9.32	91	195651	18.57 ug/L	100
6) m+p Xylene	9.57	106	145362	35.81 ug/L	100
7) o-Xylene	10.04	106	79193	18.21 ug/L	100
9) Naphthalene	15.47	128	20174	20.59 ug/L	100

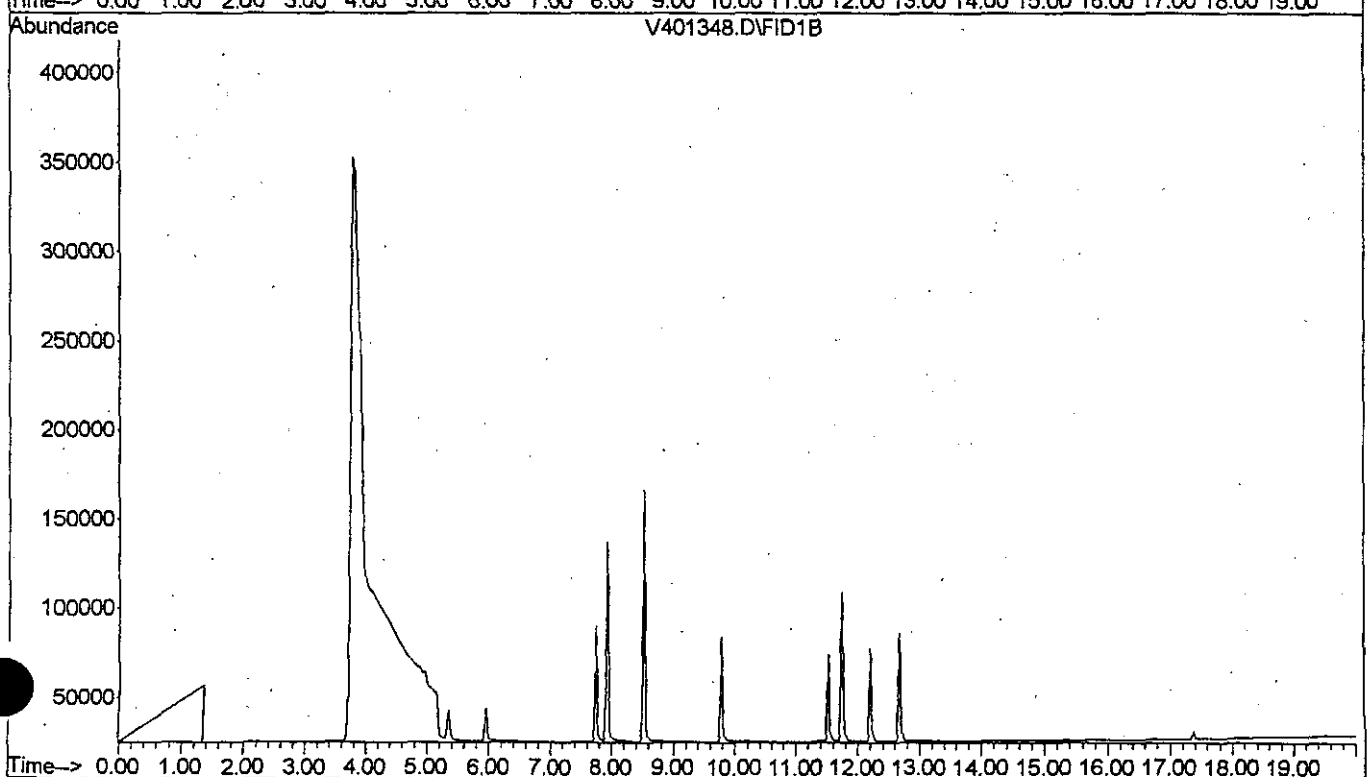
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401348.D
Acq On : 25 Jun 2000 16:05
Sample : VSTD 020 W
Misc : INITIAL STD
IS Integration Params: RTEINT2.P
Quant Time: Jun 26 13:01 2000

Vial: 13
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





000041

Data File : C:\TEMP\V401349.D
Acq On : 25 Jun 2000 16:33
Sample : VSTD 050 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 13:01 2000

Vial: 14
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:33:37 2000
Response via : Initial Calibration
DataAcq Meth : 8260

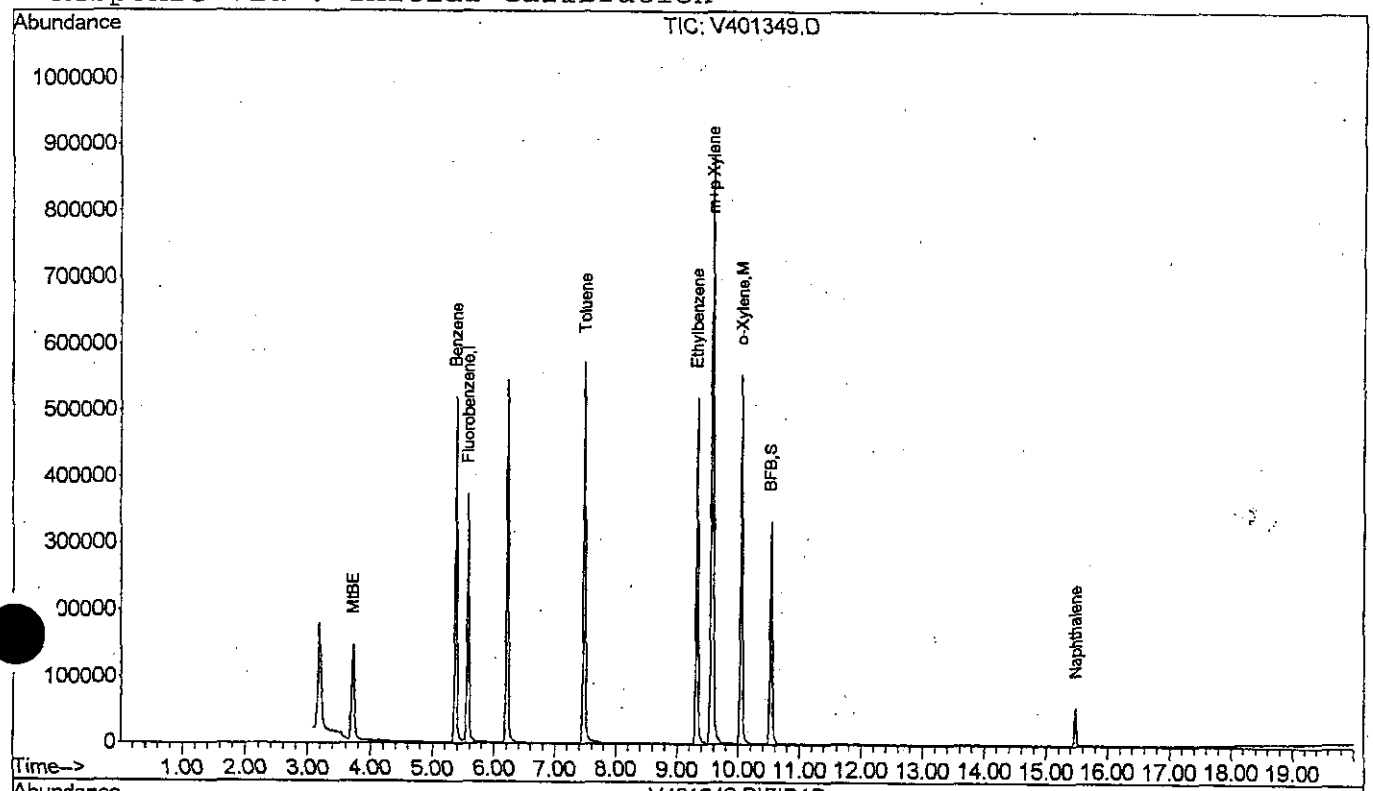
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.57	96	411736	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.52	95	170598	56.05 ug/L	0.00
Spiked Amount 50.000			Recovery	= 112.10%	
Target Compounds					Qvalue
2) MtBE	3.72	73	230841	50.49 ug/L	99
3) Benzene	5.37	78	550394	50.89 ug/L	100
4) Toluene	7.47	91	554529	48.77 ug/L	100
5) Ethylbenzene	9.32	91	536628	51.66 ug/L	99
6) m+p Xylene	9.57	106	410788	102.60 ug/L	97
7) o-Xylene	10.04	106	219121	51.09 ug/L	98
9) Naphthalene	15.47	128	62168	51.61 ug/L	98

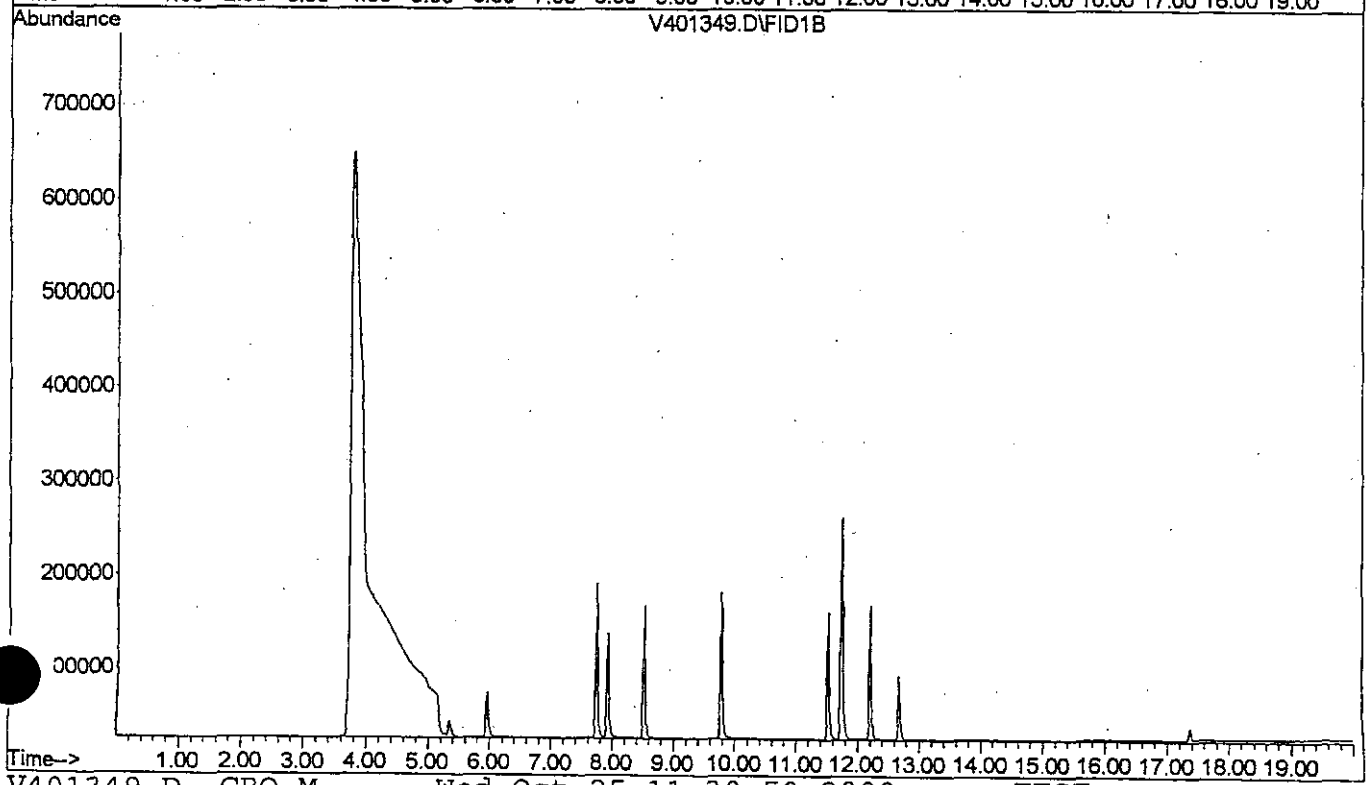
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401349.D
Acq On : 25 Jun 2000 16:33
Sample : VSTD 050 W
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jun 26 13:01 2000

Vial: 14
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V401350.D
Acq On : 25 Jun 2000 17:02
Sample : VSTD 100 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 13:02 2000

Vial: 15
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:33:37 2000
Response via : Initial Calibration
DataAcq Meth : 8260

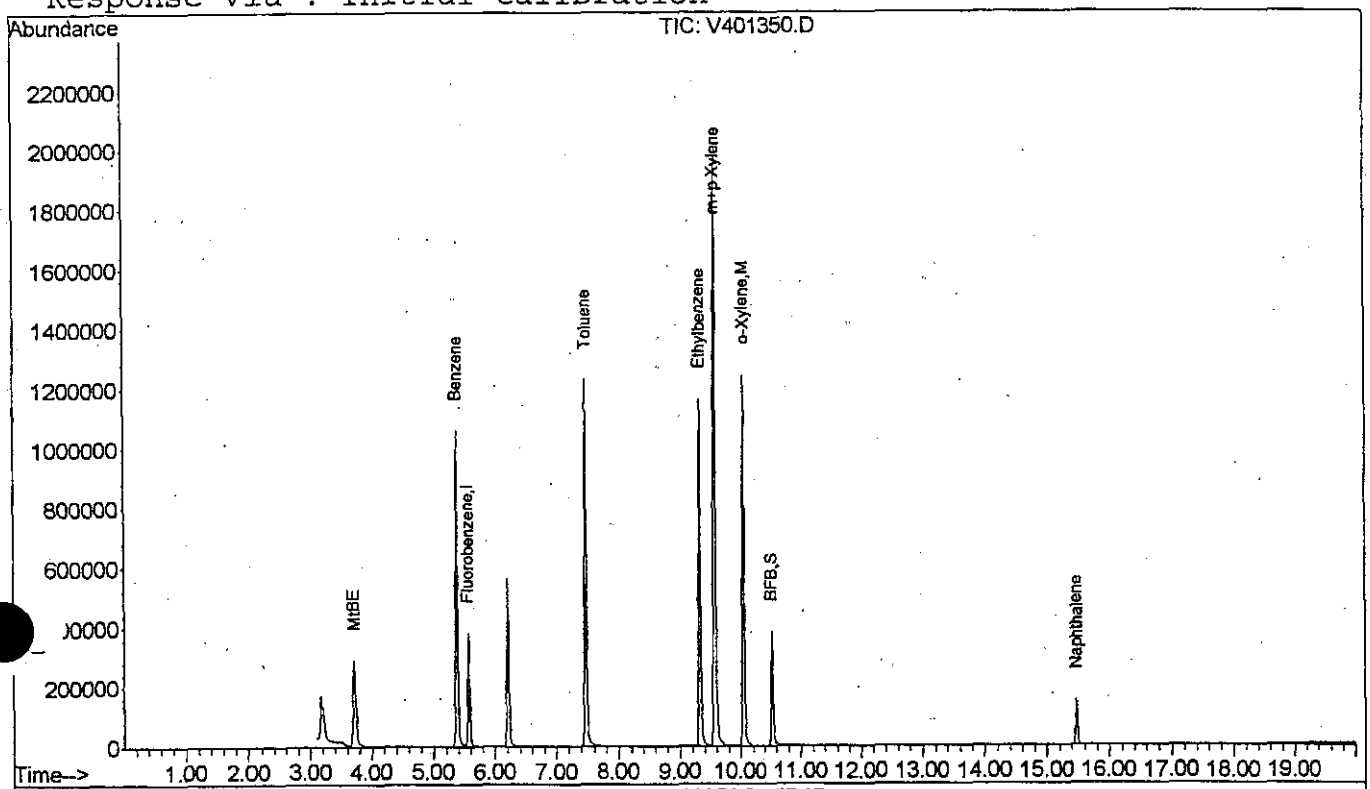
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.57	96	421752	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.52	95	192472	61.73 ug/L	0.00
Spiked Amount 50.000			Recovery	= 123.46%	
Target Compounds					Qvalue
2) MtBE	3.71	73	465115	99.31 ug/L	100
3) Benzene	5.37	78	1104863	99.73 ug/L	100
4) Toluene	7.47	91	1143508	98.19 ug/L	100
5) Ethylbenzene	9.32	91	1142770	107.39 ug/L	99
6) m+p Xylene	9.57	106	890877	217.22 ug/L	96
7) o-Xylene	10.04	106	471915	107.42 ug/L	98
9) Naphthalene	15.48	128	167737	100.09 ug/L	97

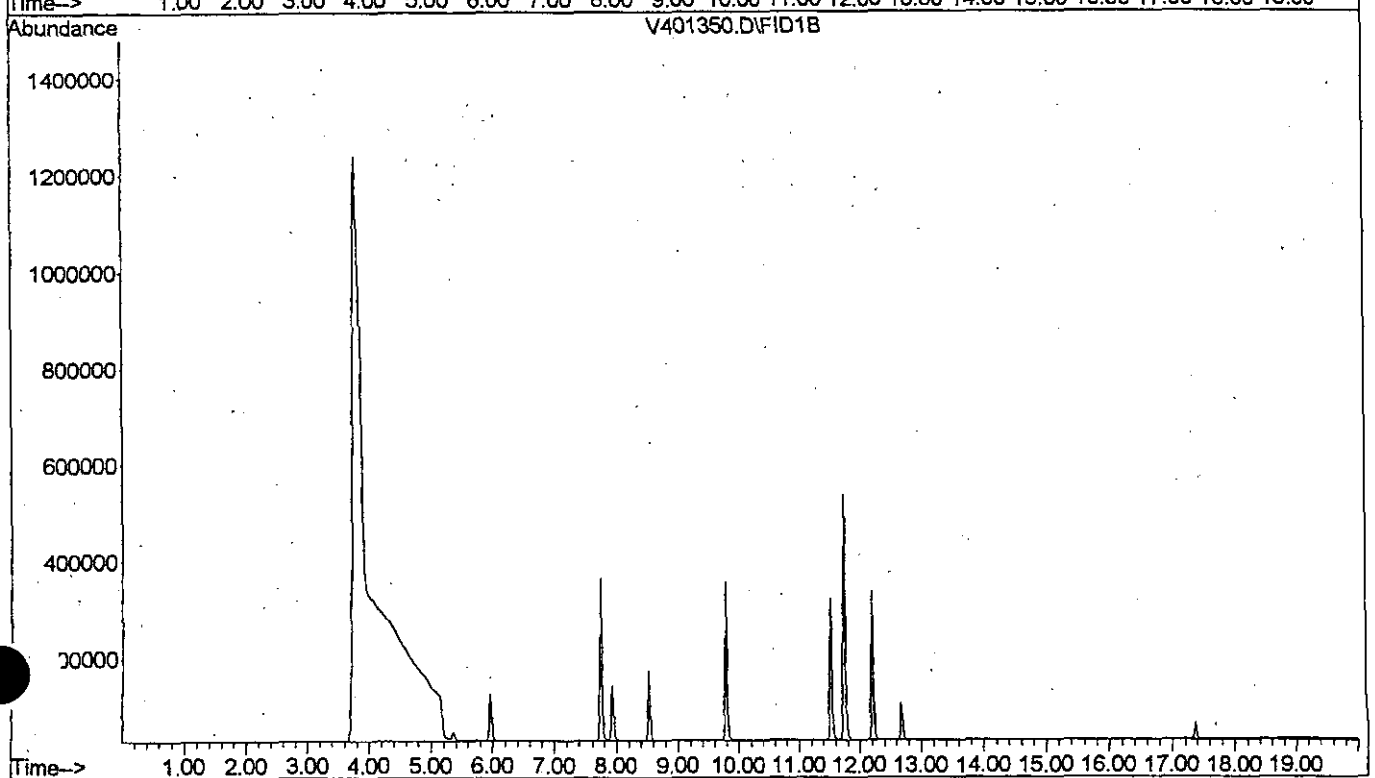
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401350.D
Acq On : 25 Jun 2000 17:02
Sample : VSTD 100 W
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jun 26 13:02 2000

Vial: 15
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V401351.D
Acq On : 25 Jun 2000 17:31
Sample : VSTD 150 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 13:02 2000

Vial: 16
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:33:37 2000
Response via : Initial Calibration
DataAcq Meth : 8260

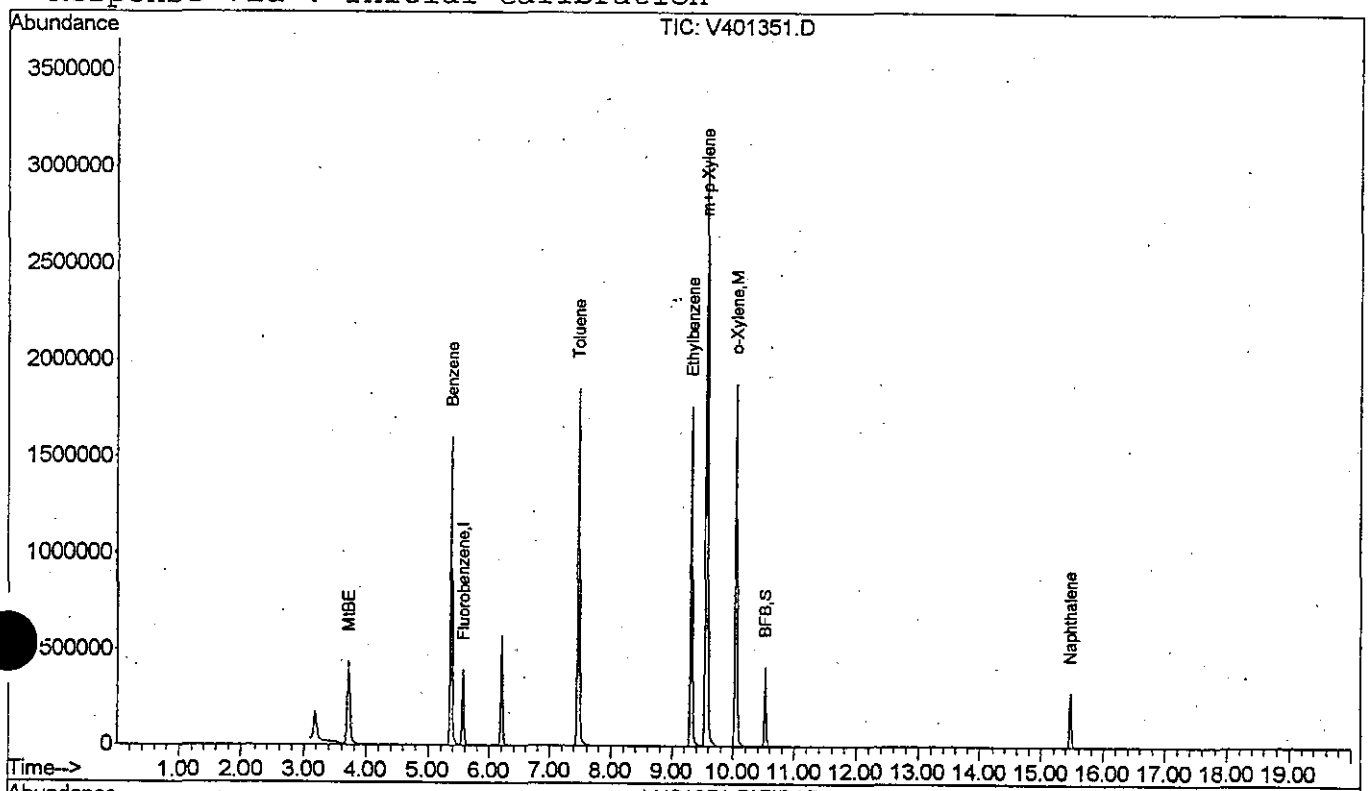
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	424944	50.00	ug/L	0.00
System Monitoring Compounds						
8) BFB	10.53	95	203452	64.76	ug/L	0.00
Spiked Amount 50.000			Recovery	=	129.52%	
Target Compounds						Qvalue
2) MtBE	3.71	73	690381	146.30	ug/L	100
3) Benzene	5.37	78	1641868	147.09	ug/L	100
4) Toluene	7.47	91	1697516	144.67	ug/L	99
5) Ethylbenzene	9.32	91	1720249	160.44	ug/L	100
6) m+p Xylene	9.56	106	1349736	326.62	ug/L	95
7) o-Xylene	10.04	106	725096	163.82	ug/L	97
9) Naphthalene	15.47	128	320667	149.17	ug/L	97

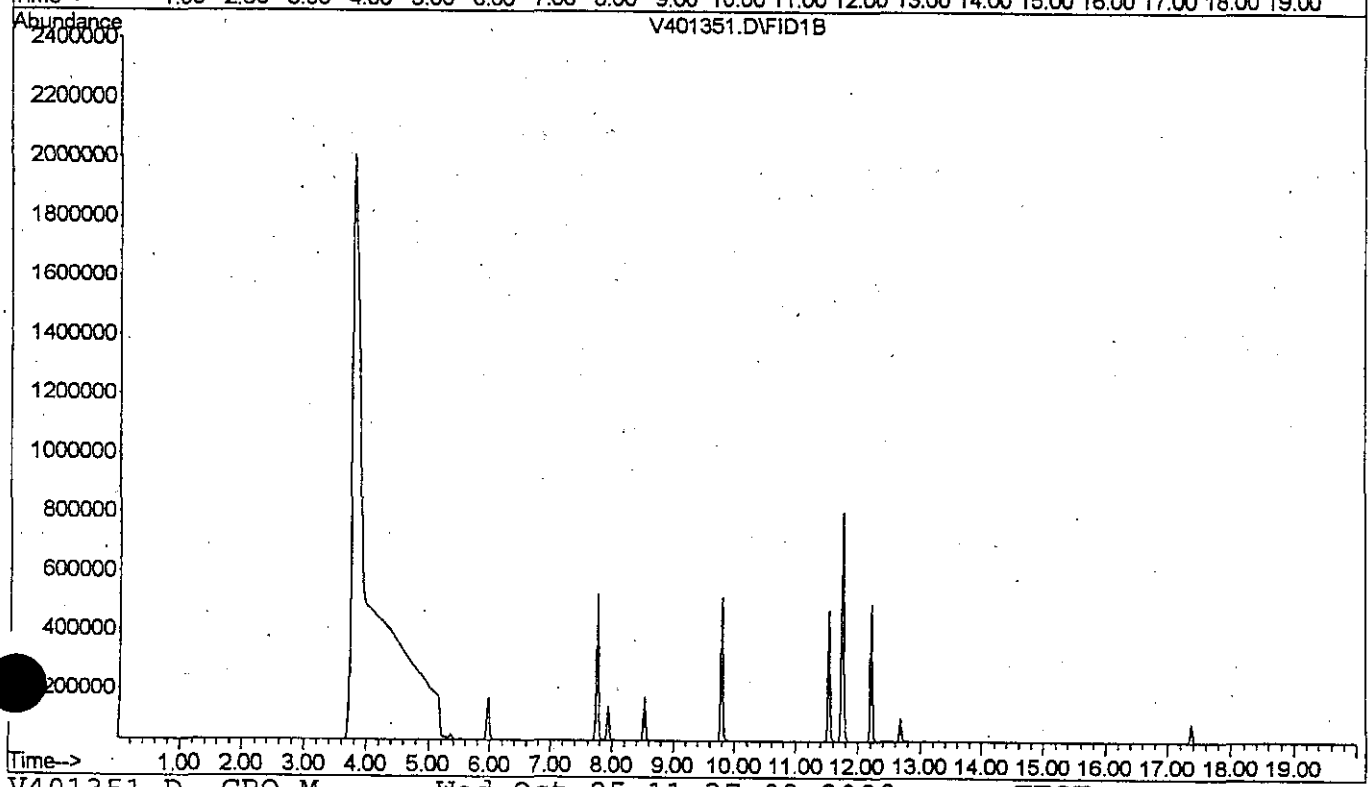
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401351.D
Acq On : 25 Jun 2000 17:31
Sample : VSTD 150 W
Misc : INITIAL STD
.S Integration Params: RTEINT2.P
Quant Time: Jun 26 13:02 2000

Vial: 16
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V401352.D
Acq On : 25 Jun 2000 18:00
Sample : VSTD 200 W
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jun 26 13:03 2000

Vial: 17
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW625.M (RTE Integrator)
Title : BTEX
Last Update : Mon Jun 26 12:33:37 2000
Response via : Initial Calibration
DataAcq Meth : 8260

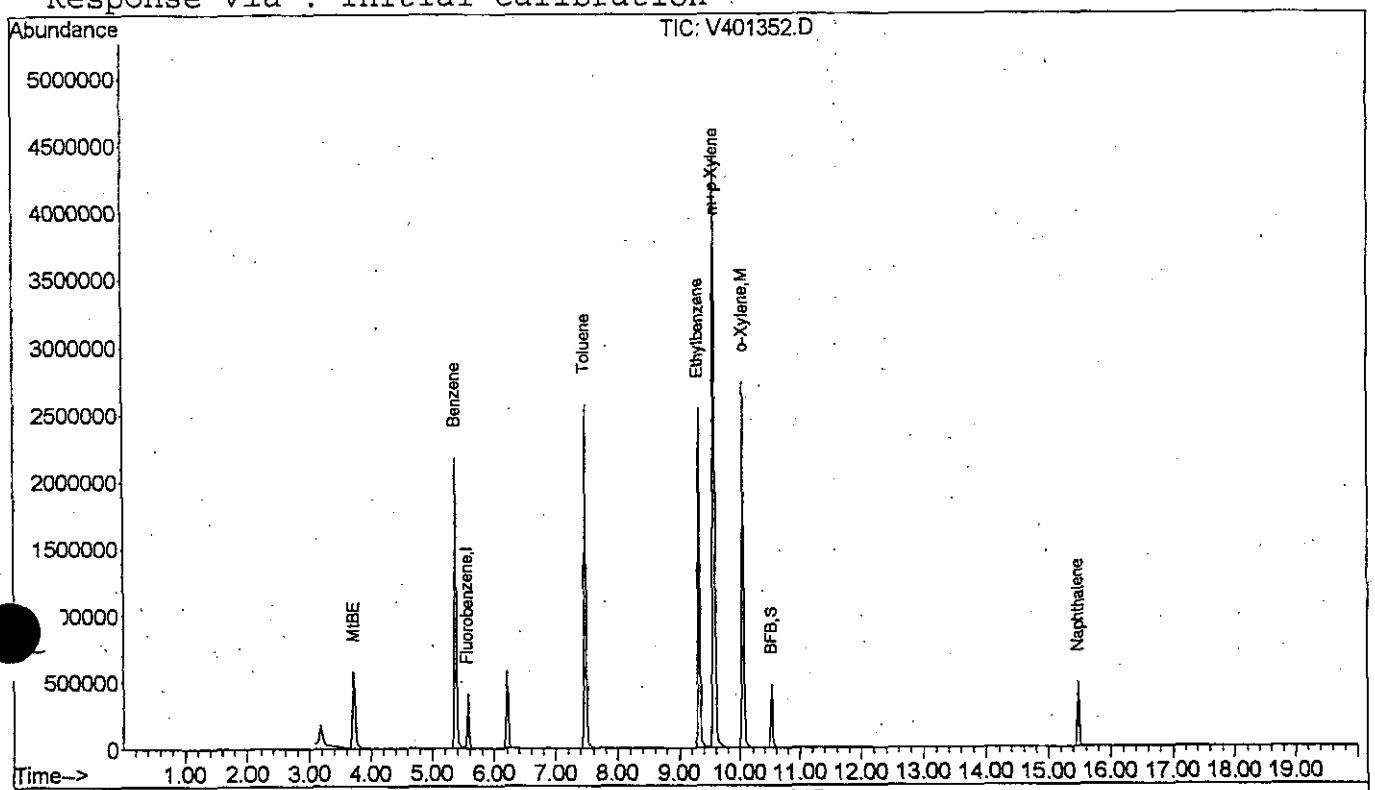
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.57	96	430066	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.52	95	219165	68.93 ug/L	0.00
Spiked Amount 50.000			Recovery	= 137.86%	
Target Compounds					Qvalue
2) MtBE	3.71	73	912422	191.05 ug/L	100
3) Benzene	5.37	78	2241037	198.37 ug/L	100
4) Toluene	7.47	91	2349549	197.85 ug/L	99
5) Ethylbenzene	9.32	91	2415882	222.64 ug/L	100
6) m+p Xylene	9.56	106	1939139	463.67 ug/L	94
7) o-Xylene	10.04	106	1032186	230.42 ug/L	96
9) Naphthalene	15.47	128	533891	200.32 ug/L	97

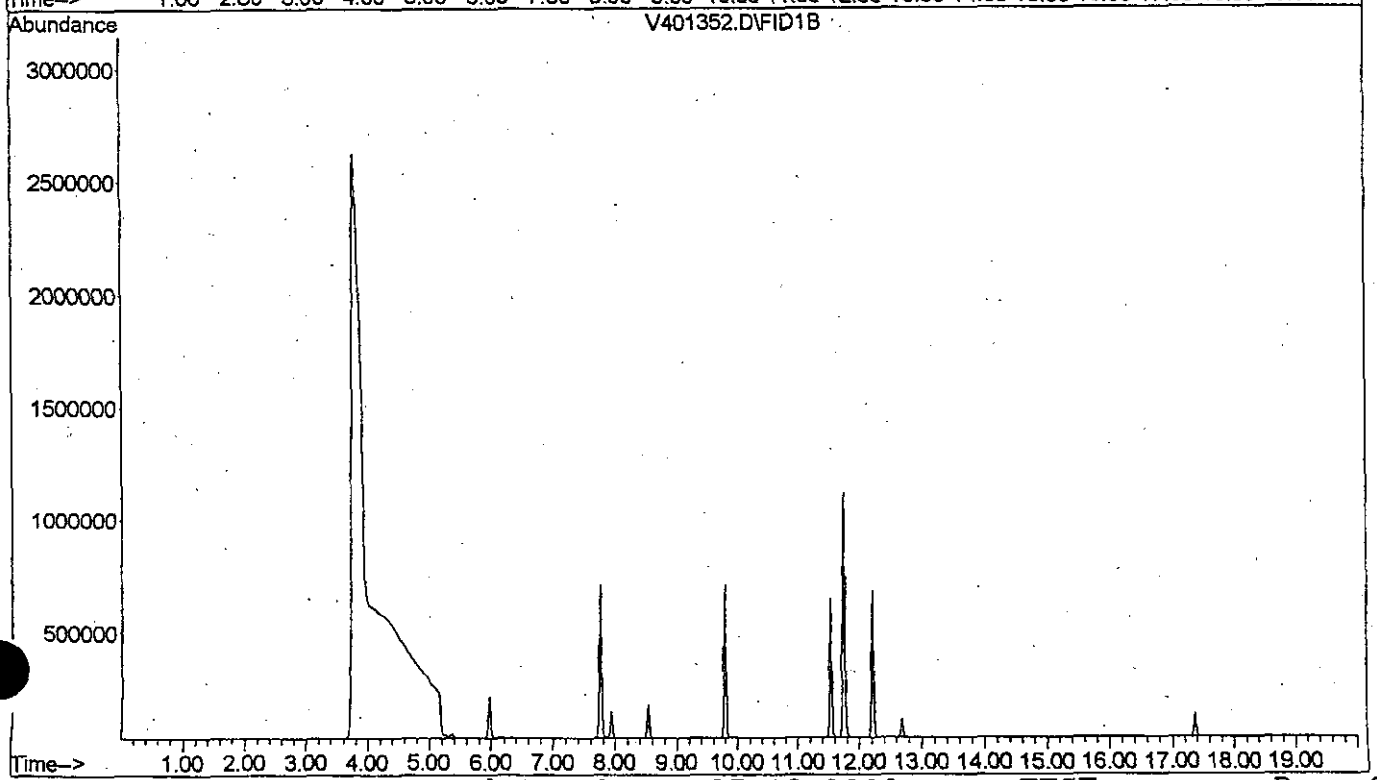
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V401352.D
Acq On : 25 Jun 2000 18:00
Sample : VSTD 200 W
Misc : INITIAL STD
IS Integration Params: RTEINT2.P
Quant Time: Jun 26 13:03 2000

Vial: 17
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW625.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





CONTINUING CALIBRATION

AES, Inc
3781 Presidential Pkwy
Suite 111
Atlanta, GA 30340

AES 6890 MS/FID ANALYSIS LOG SHEET

Date: 10/20/00
Method: 8260
Column ID: DB-VRX

IS ID: 004-0-0178
Std ID: 004-0-0150
Batch ID: 7870

Instrument: MS/FID-1

Int.Std	CCC Area	(-50% to + 100%)
FB	744177	372088-1488354

	Method Criteria Met			
	8260	8015	BTEX	
5 pts:	Y/N	Y/N	Y/N	Y/N
BFB:	Y/N	Y/N	Y/N	Y/N
CCC:	Y/N	Y/N	Y/N	Y/N

NO	File ID	Lab ID	Sample Vol/Wt	DF	pH	Status	Comments/Preparation
1	V42583.D	BFB Tune	5ml	1	~~N/A~~	OK/RIN	
2	84.D	BTEX 50 ppb		1		OK/RIN	
3	85.D	MB-7870		1		OK/RIN	
4	86.D	LCS-7870		1		OK/RIN	
5	87.D	00104001-009A		1		OK/RIN	
6	88.D	-006A		1		OK/RIN	
7	89.D	-007A		1		OK/RIN	
8	90.D	-008A		1		OK/RIN	
9	91.D	-004A		1		OK/RIN	
10	92.D	-005A		1		OK/RIN	
11	93.D	00104001-002A		1		OK/RIN	
	94.D	-003A		1		OK/RIN	
13	95.D	-004A		1		OK/RIN	
14	96.D	-005A		1		OK/RIN	
15	97.D	-008A		1		OK/RIN	
16	98.D	-011A		1		OK/RIN	
17	99.D	-013A		1		OK/RIN	
18	V42600.D	-001A		1		OK/RIN	
19	01.D	-006A		1		OK/RIN	
20	02.D	-007A		1		OK/RIN	
21	03.D	-009A		1		OK/RIN	
22	04.D	-010A		1		OK/RIN	R/L 10X
23	05.D	-012A		1		OK/RIN	
24						~~OK/RIN~~	
25						OK/RIN	
26						OK/RIN	
27						OK/RIN	
28						OK/RIN	
29						OK/RIN	
30						OK/RIN	
						OK/RIN	
32						OK/RIN	

10/20/00

Comments:

000051

Analyst: NC

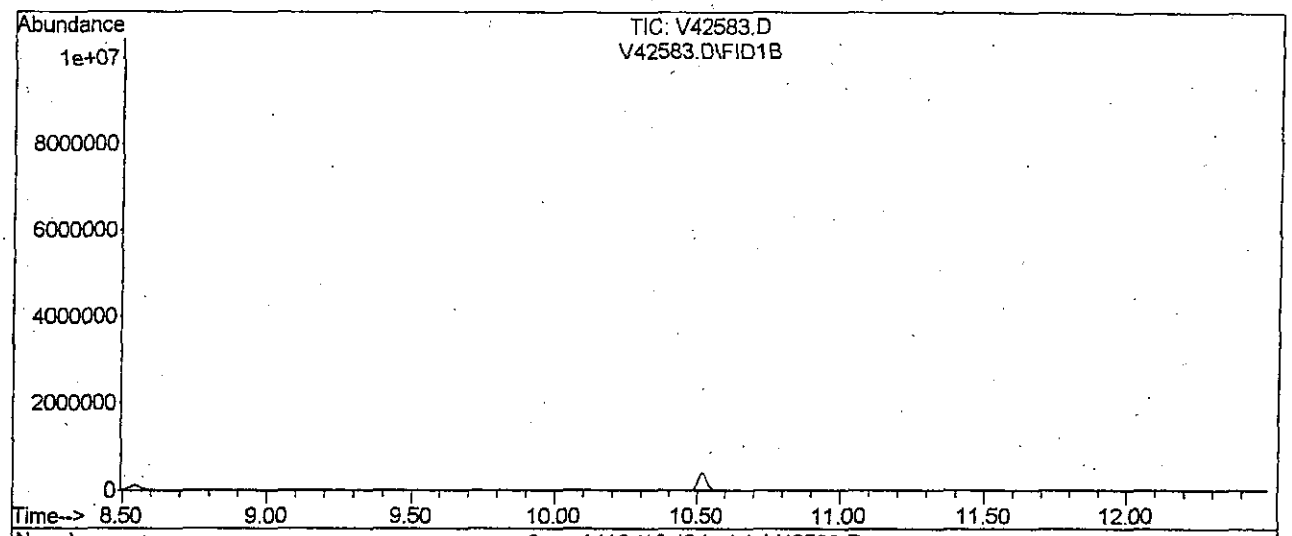
Date: 10/20/00

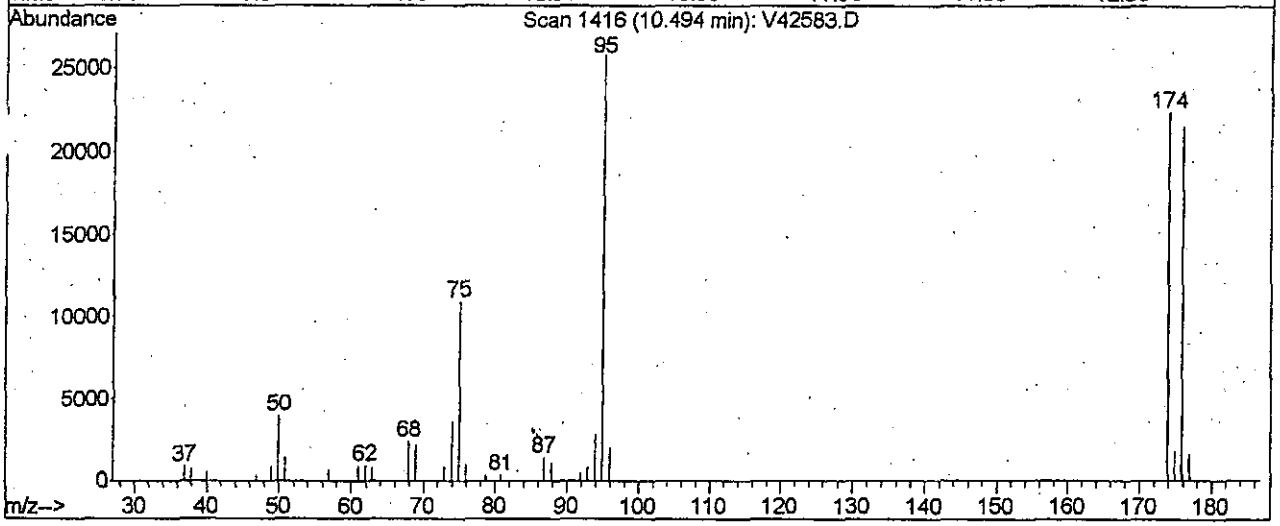
000020

BFB

Data File : C:\HPCHEM\1\DATA\OCT20\V42583.D
Acq On : 20 Oct 2000 21:38
Sample : BFB TUNE
Misc : TUNE
MS Integration Params: RTEINT2.P
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX

Vial: 26
Operator: JC
Inst : GC/MS VO
Multiplr: 1.00
GC Integration Params: rteint2.





Spectrum Information: Scan 1416

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.4	3964	PASS
75	95	30	60	42.3	10921	PASS
95	95	100	100	100.0	25824	PASS
96	95	5	9	7.9	2038	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	86.5	22344	PASS
175	174	5	9	8.1	1812	PASS
176	174	95	101	96.7	21600	PASS
177	176	5	9	7.6	1642	PASS

Data File : C:\HPCHEM\1\DATA\OCT20\V42584.D Vial: 27
Acq On : 20 Oct 2000 22:07 Operator: JC
Sample : BTEX 50 PPB W Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	181#	0.00
2		MtBE	0.555	0.558	-0.5	180#	0.00
3		Benzene	1.313	1.113	15.2	151#	0.00
4		Toluene	1.387	1.153	16.9	155#	-0.01
5		Ethylbenzene	1.262	1.142	9.5	158#	0.00
6		m+p Xylene	0.486	0.457	6.0	165#	0.00
7	M	o-Xylene	0.521	0.470	9.8	160#	0.00
8	S	BFB	0.387	0.283	26.9#	123	0.00
9		Naphthalene	0.190	0.254	-33.7#	304#	0.00

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

Data File : C:\HPCHEM\1\DATA\OCT20\V42584.D Vial: 27
Acq On : 20 Oct 2000 22:07 Operator: JC
Sample : BTEX 50 PPB W Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 9:03 2000 Quant Results File: NMBXW817.RES

Quant Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration
DataAcq Meth : 8260

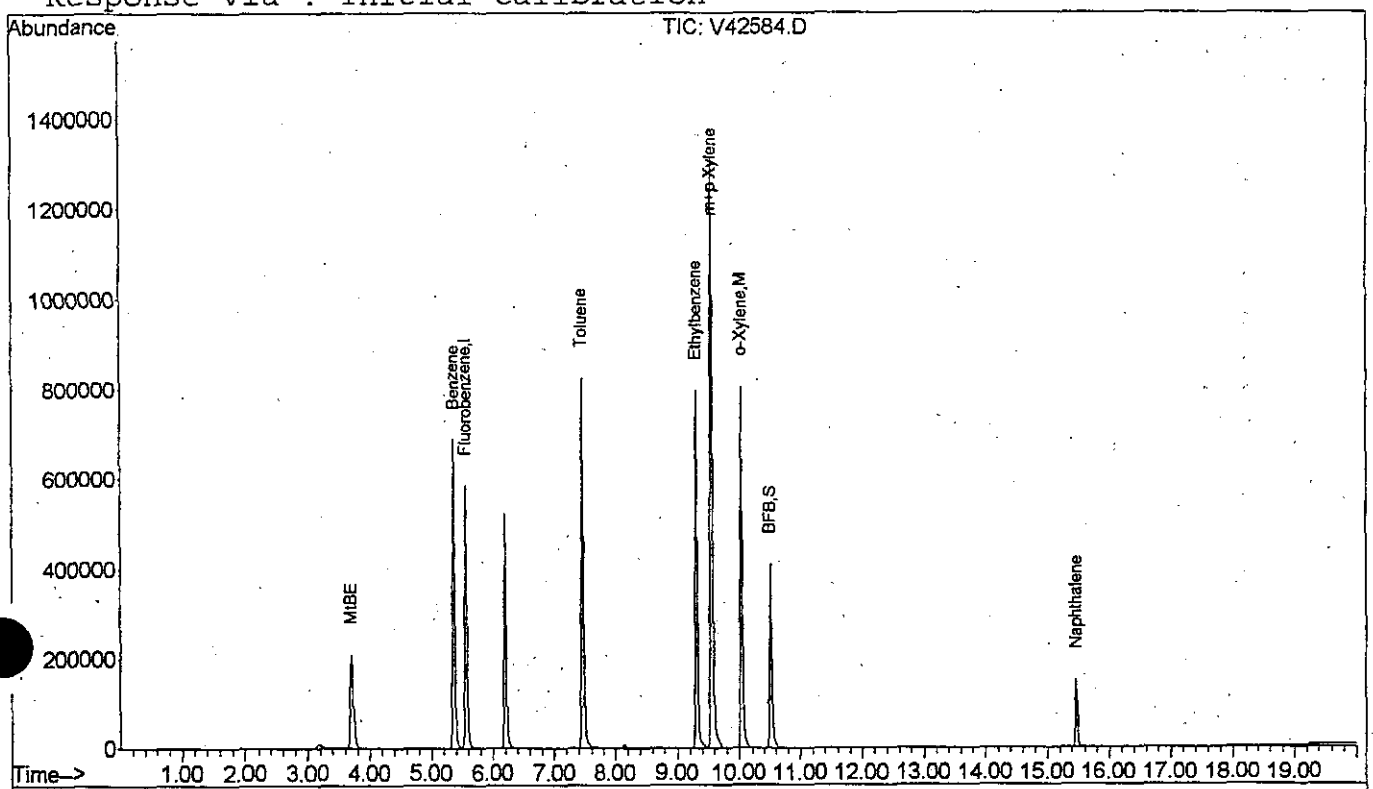
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.56	96	744177	50.00	ug/L	0.00
System Monitoring Compounds						
8) BFB	10.52	95	210732	36.60	ug/L	0.00
Spiked Amount 50.000			Recovery =	73.20%		
Target Compounds						Qvalue
2) MtBE	3.70	73	414880	50.20	ug/L	99
3) Benzene	5.36	78	828470	42.38	ug/L	100
4) Toluene	7.46	91	858139	43.00	ug/L	99
5) Ethylbenzene	9.31	91	850033	45.27	ug/L	98
6) m+p Xylene	9.55	106	679764	93.93	ug/L	95
7) o-Xylene	10.03	106	350010	45.15	ug/L	95
9) Naphthalene	15.46	128	188843	54.29	ug/L	97

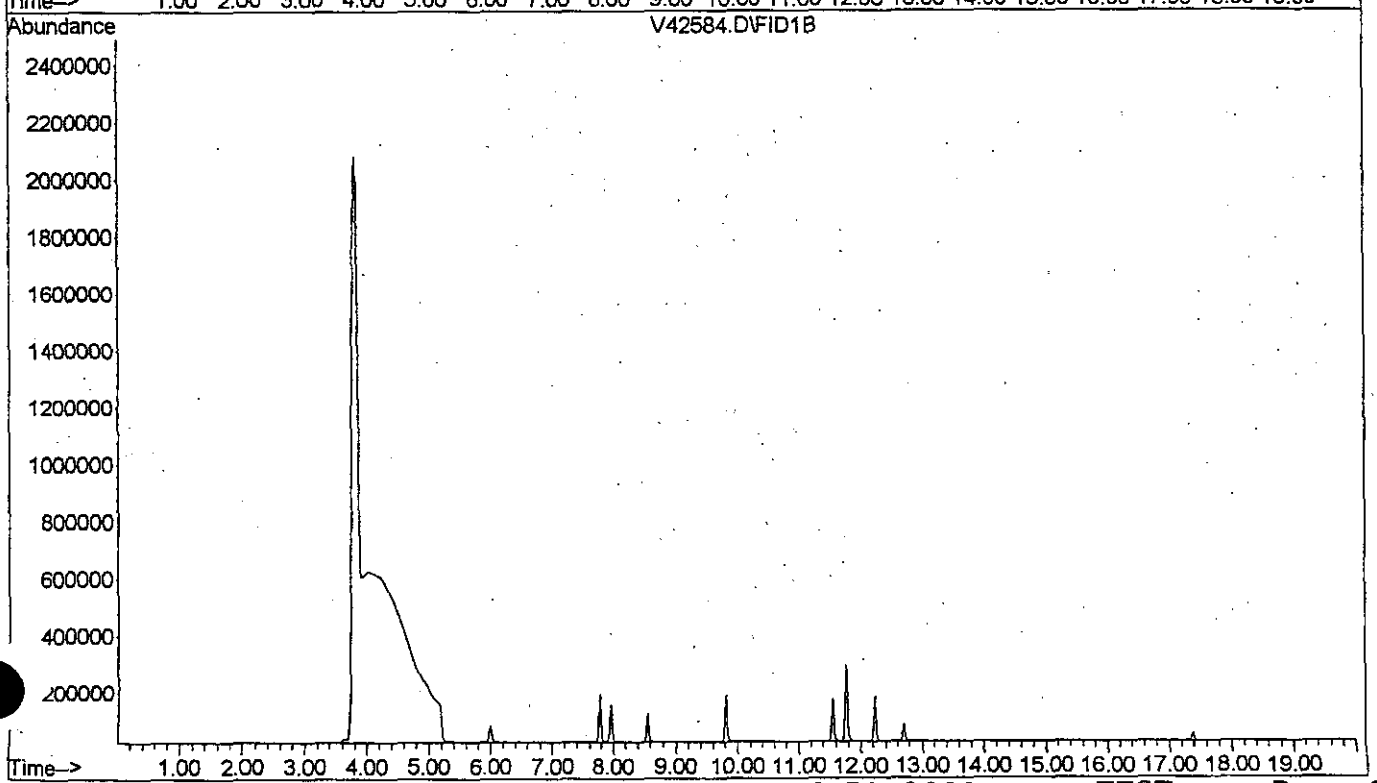
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\OCT20\V42584.D
Acq On : 20 Oct 2000 22:07
Sample : BTEX 50 PPB W
Misc : CON. CAL
IS Integration Params: RTEINT2.P
Quant Time: Oct 23 9:03 2000

Vial: 27
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration





AES, Inc
3781 Presidential Pkwy
Suite 111
Atlanta, GA 30340

AES 6890 MS/FID ANALYSIS LOG SHEET

Date: 10/23/00
Method: 8260
Column ID: DB-VRX

IS ID: VOA-0-0182
Std ID: VOA-0-0150
Batch ID: 7870

Instrument: MS/FID-1

Int.Std	CCC Area	(-50% to + 100%)
FB	707145	353572-1414280

Method Criteria Met	8260	8015	BTEX	
5 pts:	Y/N	Y/N	Y/N	Y/N
BFB:	Y/N	Y/N	Y/N	Y/N
CCC:	Y/N	Y/N	Y/N	Y/N

NO	File ID	Lab ID	Sample Vol/Wt	DF	pH	Status	Comments/Preparation
1	V42606.D	BFB Tune	5 ml	1	~~N/A~~ 2 11/01	OK/RIN	
2	07.D	BTEX 50 ppbw		1		OK/RIN	
3	08.D	BTEX 01 ppbw		1		OK/RIN	
4	09.D	MB-7870		1		OK/RIN	
5	10.D	LCS-7870		1		OK/RIN	
6	11.D	0010400-003AMS		1		OK/RIN	
7	12.D	0010401-007AMS		1		OK/RIN	
8	13.D	0010400-003AMSD		1		OK/RIN	
9	14.D	0010401-007AMSD		1		OK/RIN	
10	15.D	0010407-001A		1		OK/RIN	R/R 10X
11	16.D	0010426-007A		1		OK/RIN	
12	17.D	0010427-001A		1		OK/RIN	
13	18.D	↓ -003A		1		OK/RIN	
14	19.D	0010428-001A		1		OK/RIN	
15	20.D	↓ -007A		1		OK/RIN	
16	21.D	0010417-002A		1		OK/RIN	
17	22.D	0010422-001A		1		OK/RIN	
18	23.D	↓ -004A		1		OK/RIN	
19	24.D	0010400-010A	.5 ml	10X		OK/RIN	
20	25.D	↓ -012A	.5 ml	10X		OK/RIN	
21	26.D	0010407-002A	5 ml	1		OK/RIN	R/R 100X
22	27.D	0010427-002A		1		OK/RIN	R/R 50X
23	28.D	0010422-002A		1		OK/RIN	↓
24	29.D	↓ -003A		1		OK/RIN	R/R 100X
25						OK/RIN	
26						OK/RIN	
27						OK/RIN	
28						OK/RIN	
29						OK/RIN	
30						OK/RIN	
						OK/RIN	
32						OK/RIN	

JC 10/23/00

000056

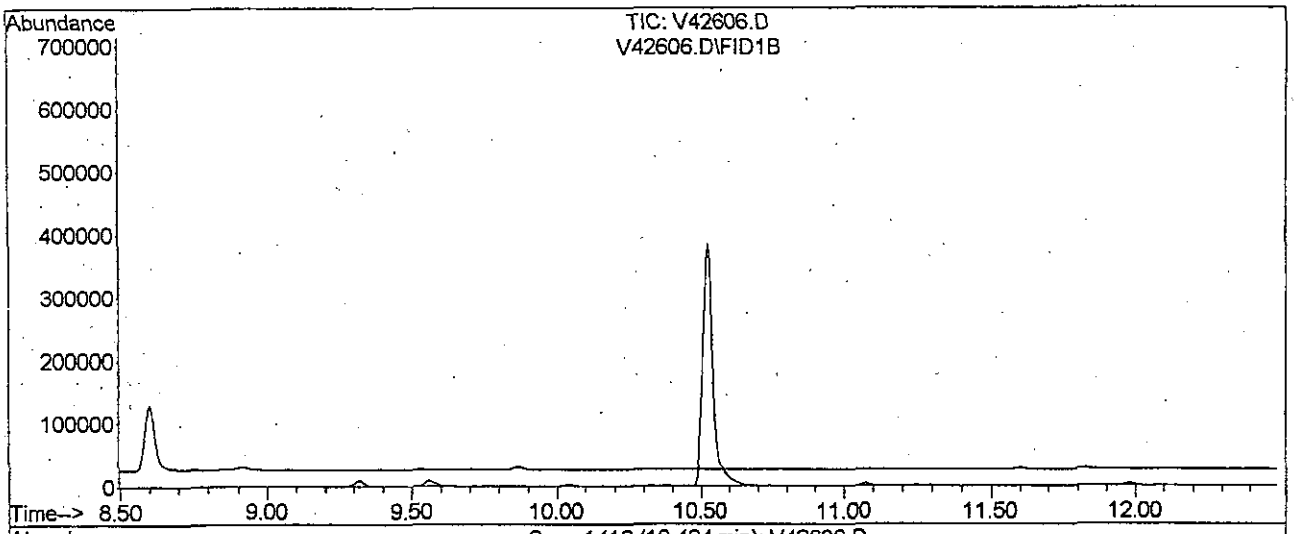
Comments:

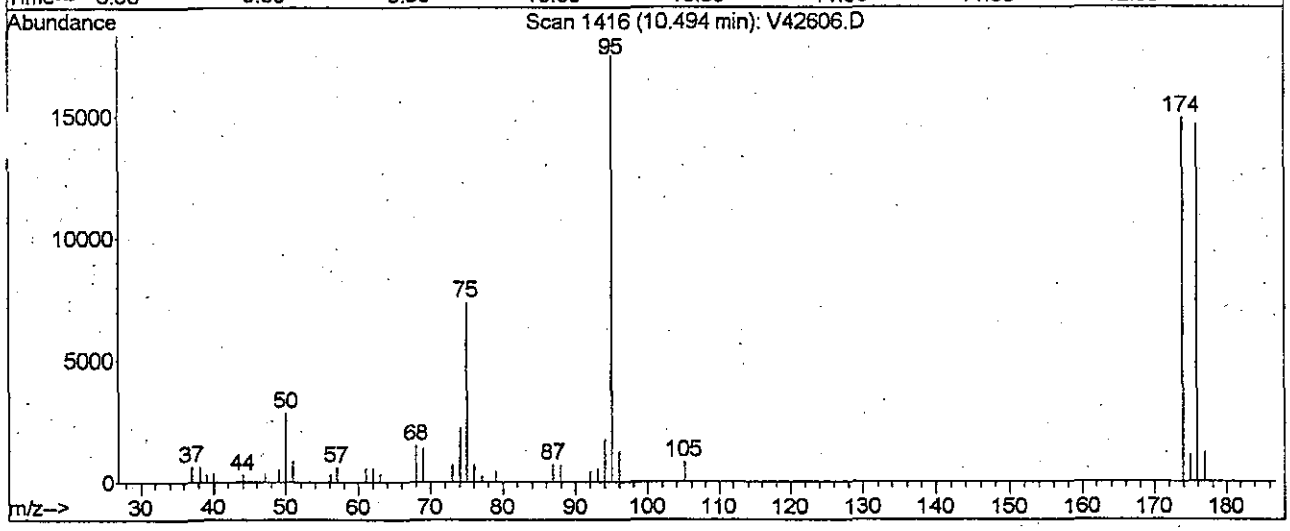
Analyst: JC
Date: 10/23/00
Reviewed By:
Date:

000021

Data File : C:\HPCHEM\1\DATA\OCT23\V42606.D
Acq On : 23 Oct 2000 10:45
Sample : BFB TUNE
Misc : TUNE
MS Integration Params: RTEINT2.P
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX

Vial: 1
Operator: JC
Inst : GC/MS VO
Multiplr: 1.00
GC Integration Params: rteint2.





Spectrum Information: Scan 1416

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.2	2840	PASS
75	95	30	60	42.0	7351	PASS
95	95	100	100	100.0	17496	PASS
96	95	5	9	7.2	1261	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	85.3	14917	PASS
175	174	5	9	7.6	1129	PASS
176	174	95	101	98.4	14674	PASS
177	176	5	9	8.3	1223	PASS

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration

Continuing Calibration File: V42607.D

Min. RRF : 0.000 Min. Rel. Area : 50%
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%
1	I	Fluorobenzene	1.000	1.000	0.0	100
2		MtBE	0.555	0.561	-1.0	100
3		Benzene	1.313	1.337	-1.8	100
4		Toluene	1.387	1.347	2.9	100
5		Ethylbenzene	1.262	1.303	-3.3	100
6		m+p Xylene	0.486	0.998	-105.2#	100
7	M	o-Xylene	0.521	0.532	-2.2	100
8	S	BFB	0.387	0.417	-7.7	100
9		Naphthalene	0.190	0.151	20.6	100

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

Data File : C:\HPCHEM\1\DATA\OCT23\V42607.D Vial: 2
Acq On : 23 Oct 2000 11:14 Operator: JC
Sample : BTEX 50 PPB W Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 11:36 2000 Quant Results File: NMBXW817.RES

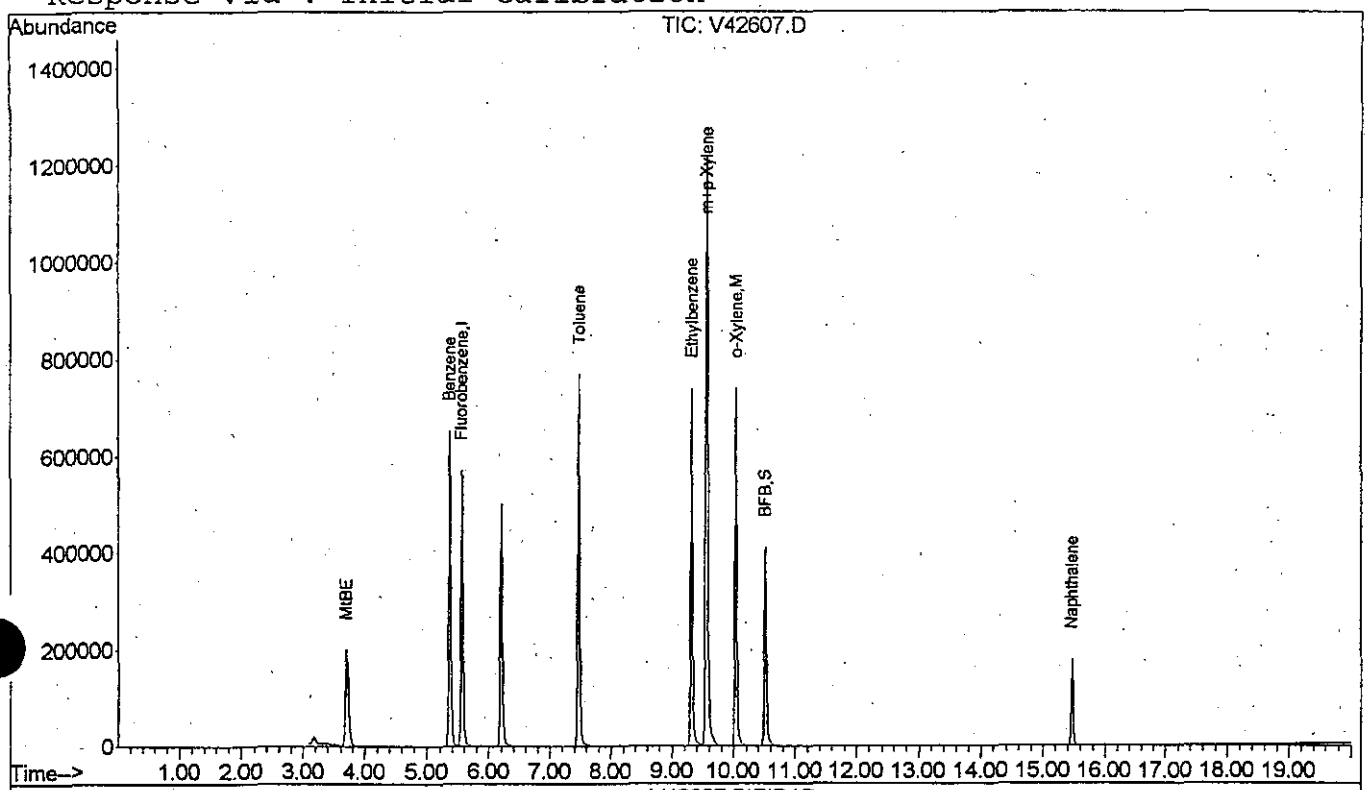
Quant Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration
DataAcq Meth : 8260

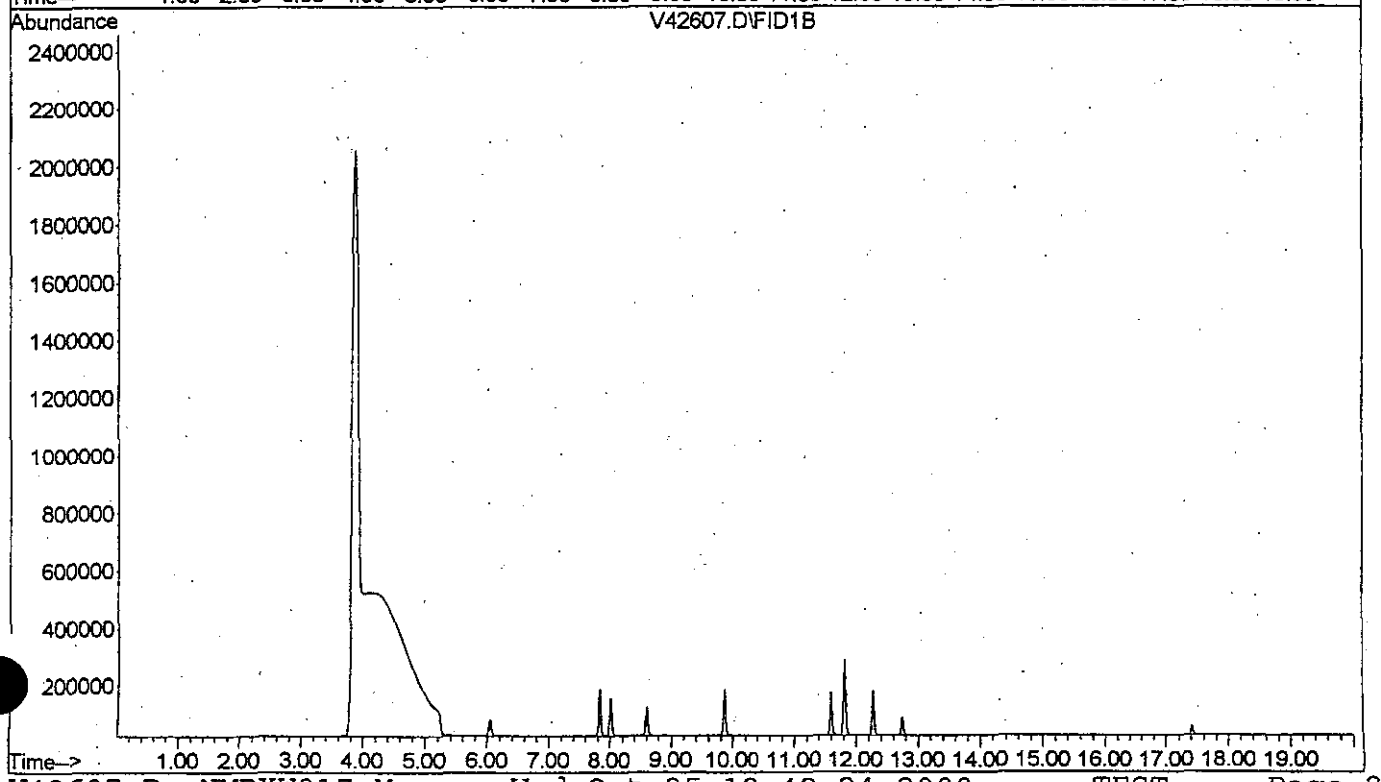
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.56	96	707145	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.52	95	204480	37.37 ug/L	0.00
Spiked Amount 50.000			Recovery =	74.74%	
Target Compounds					Qvalue
2) MtBE	3.71	73	402652	51.28 ug/L	98
3) Benzene	5.36	78	772561	41.59 ug/L	100
4) Toluene	7.46	91	797823	42.08 ug/L	99
5) Ethylbenzene	9.31	91	794416	44.52 ug/L	99
6) m+p Xylene	9.55	106	632876	92.03 ug/L	96
7) o-Xylene	10.03	106	325021	44.13 ug/L	95
9) Naphthalene	15.47	128	217947	63.52 ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\OCT23\V42607.D Vial: 2
Acq On : 23 Oct 2000 11:14 Operator: JC
Sample : BTEX 50 PPB W Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 11:36 2000 Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration



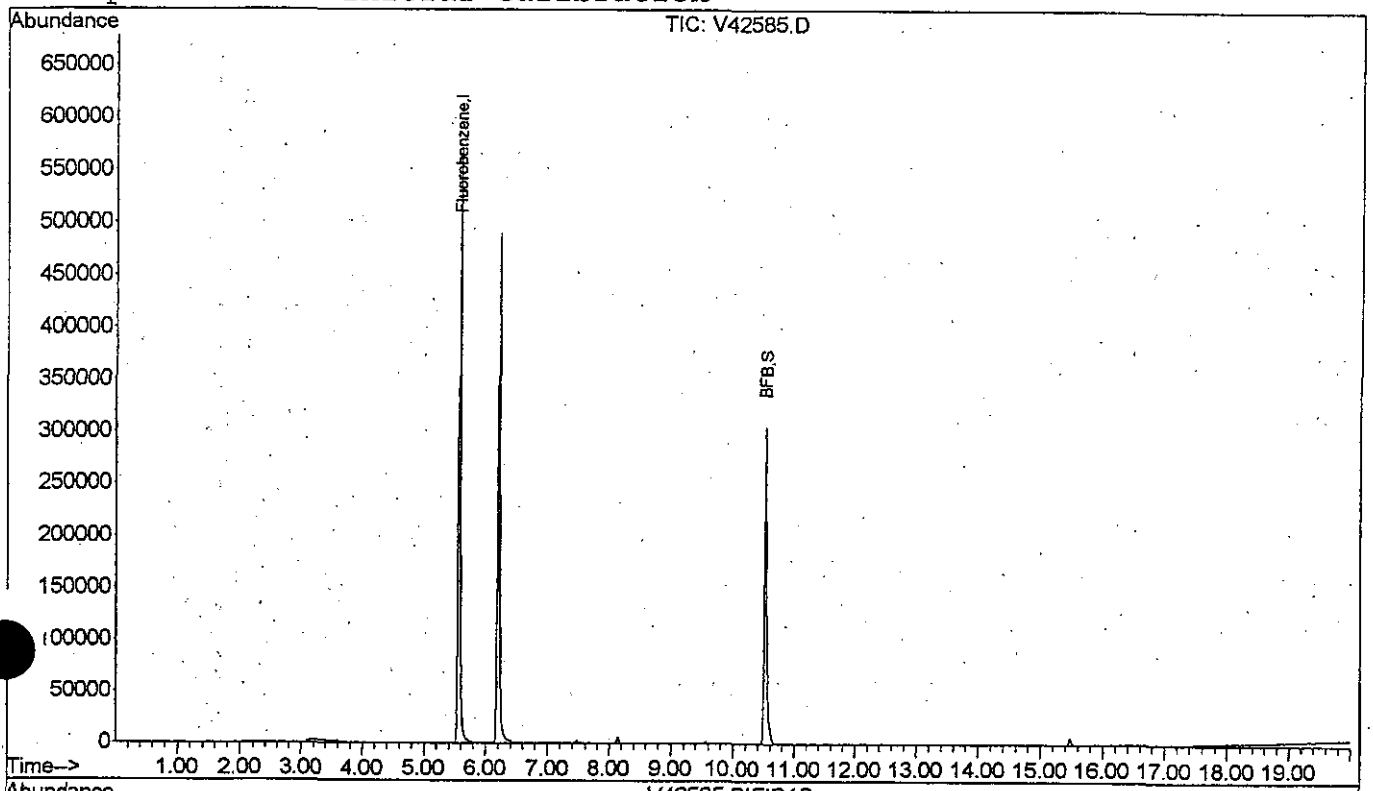


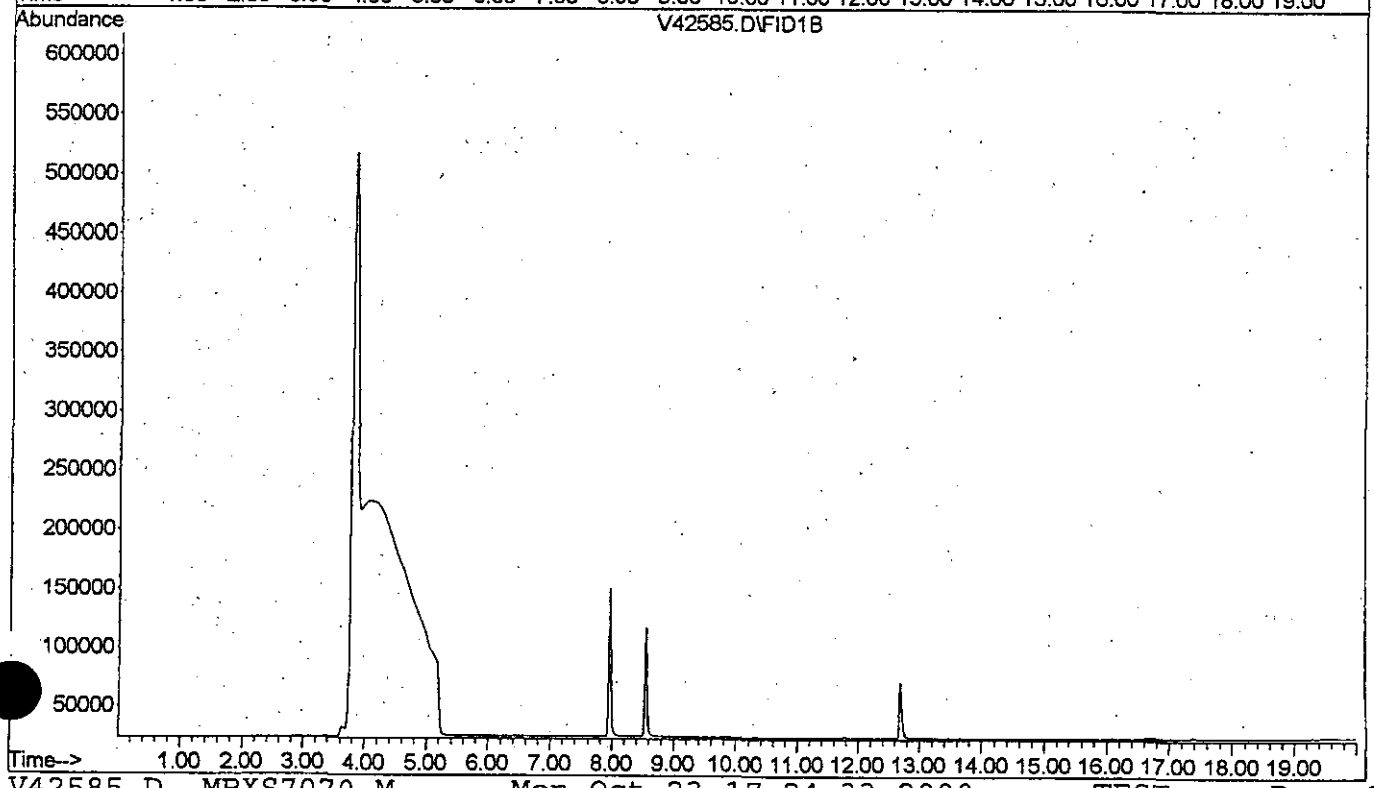
RAW DATA

Data File : C:\HPCHEM\1\DATA\OCT20\V42585.D
Acq On : 20 Oct 2000 22:35
Sample : MB-7870
Misc : MBLK BTEX_W-MS
MS Integration Params: RTEINT2.P
Quant Time: Oct 23 17:24 2000

Vial: 28
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

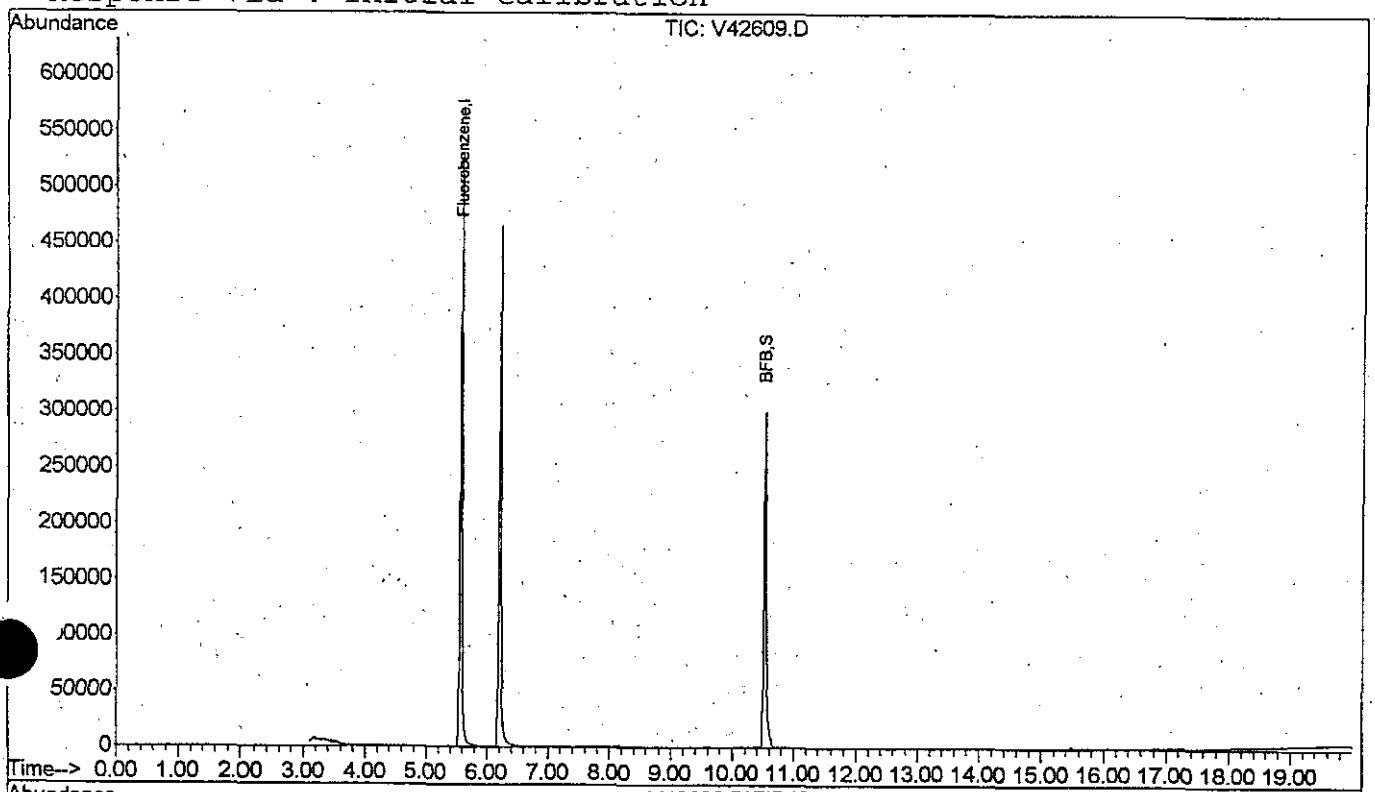


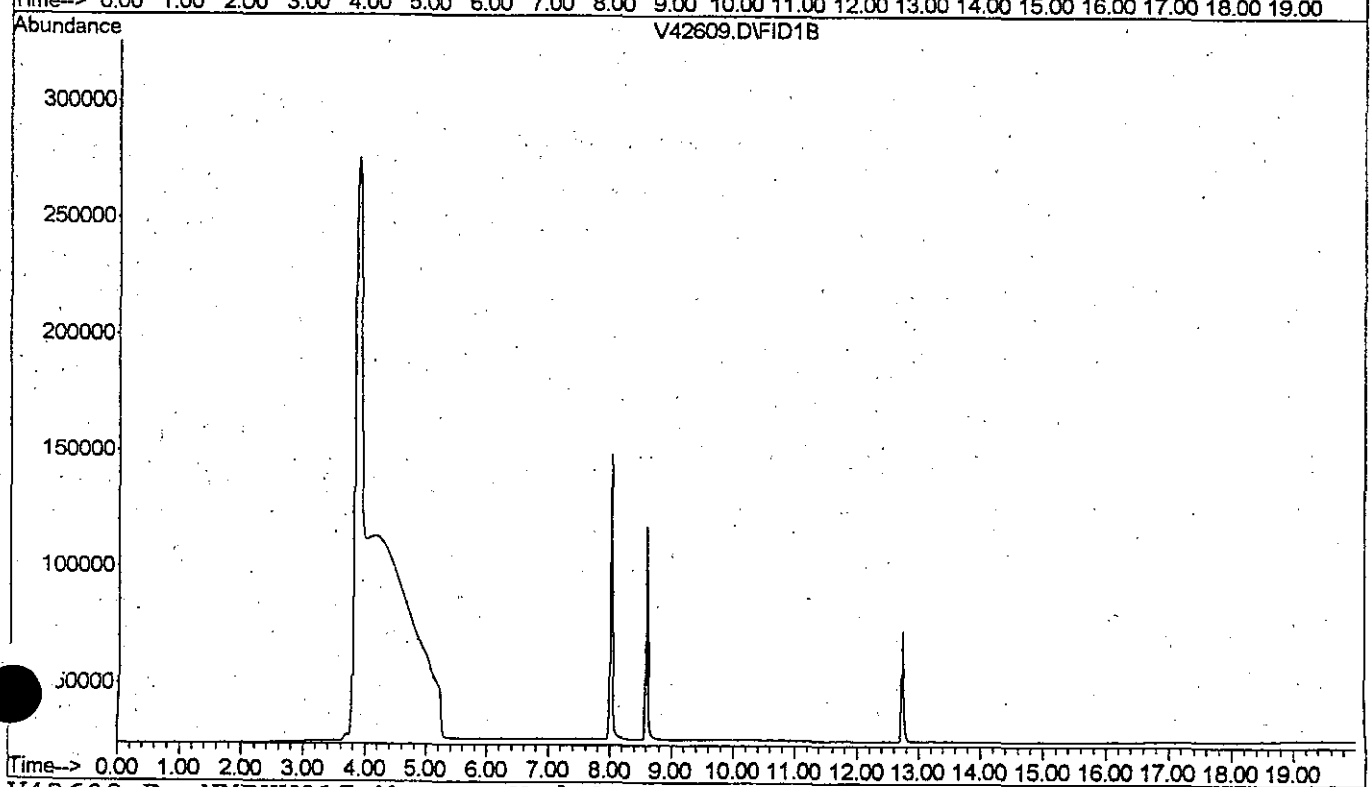


Data File : C:\HPCHEM\1\DATA\OCT23\V42609.D
Acq On : 23 Oct 2000 12:11
Sample : MB-7870
Misc : MBLK BTEX_W-MS
S Integration Params: RTEINT2.P
Quant Time: Oct 23 12:33 2000

Vial: 4
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration

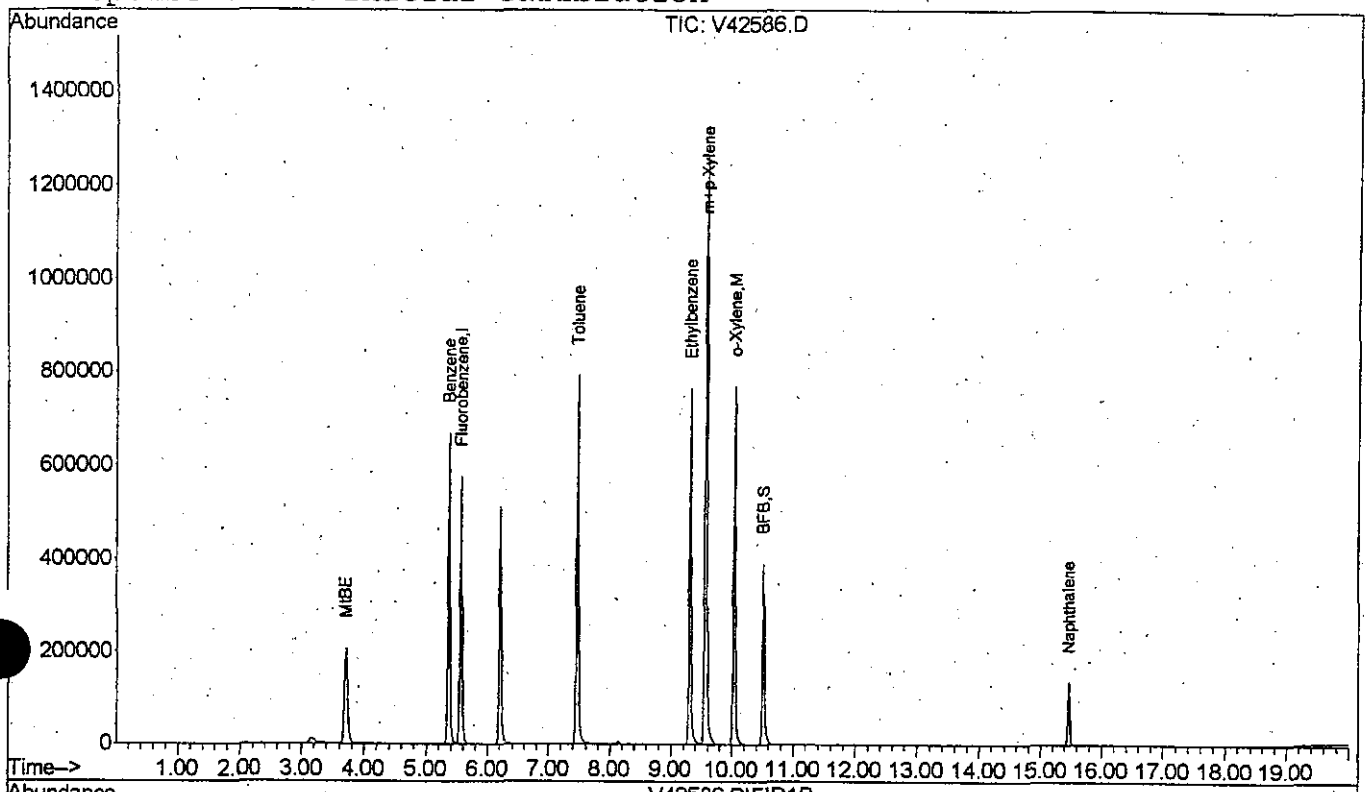


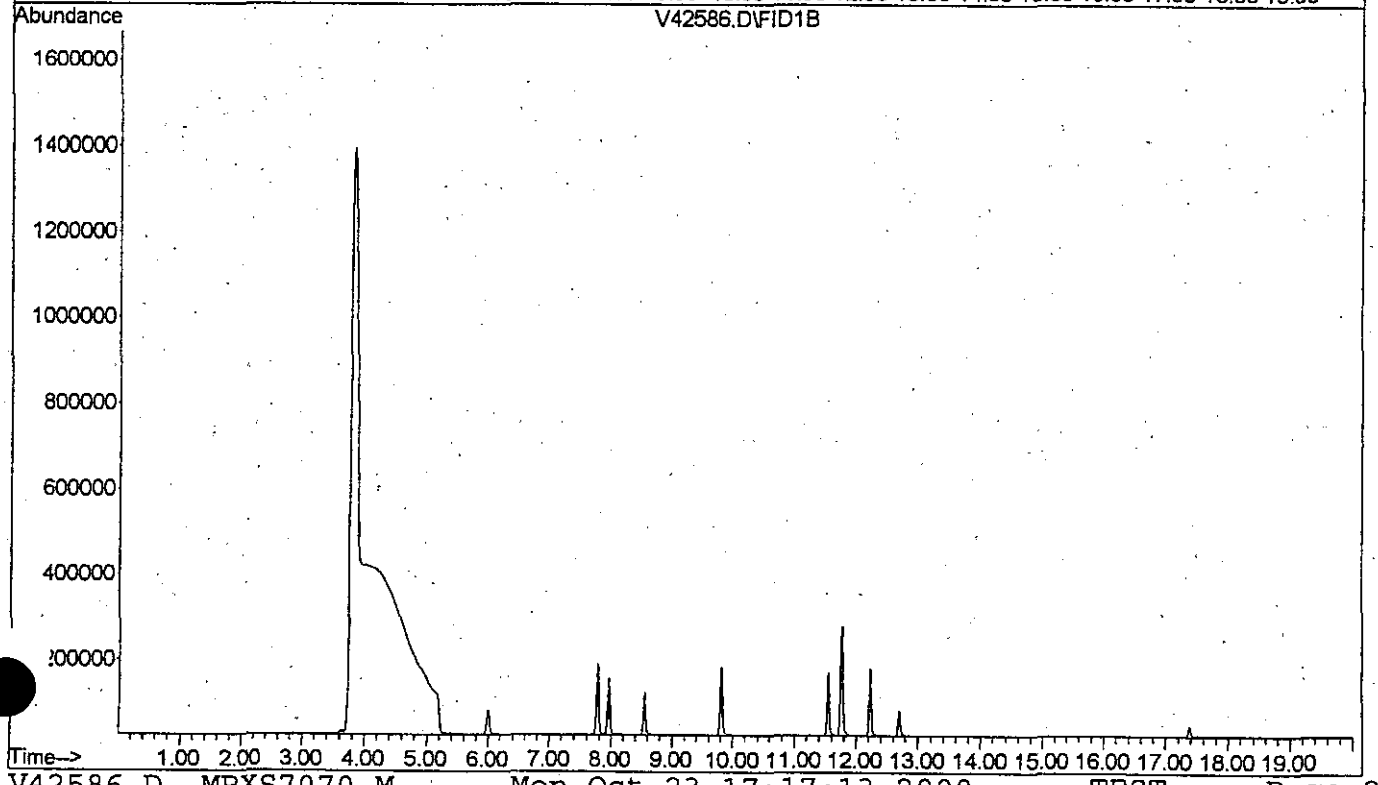


Data File : C:\HPCHEM\1\DATA\OCT20\V42586.D
Acq On : 20 Oct 2000 23:04
Sample : LCS-7870
Misc : LCS BTEX_W-MS
MS Integration Params: RTEINT2.P
Quant Time: Oct 23 9:04 2000

Vial: 29
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW817.R

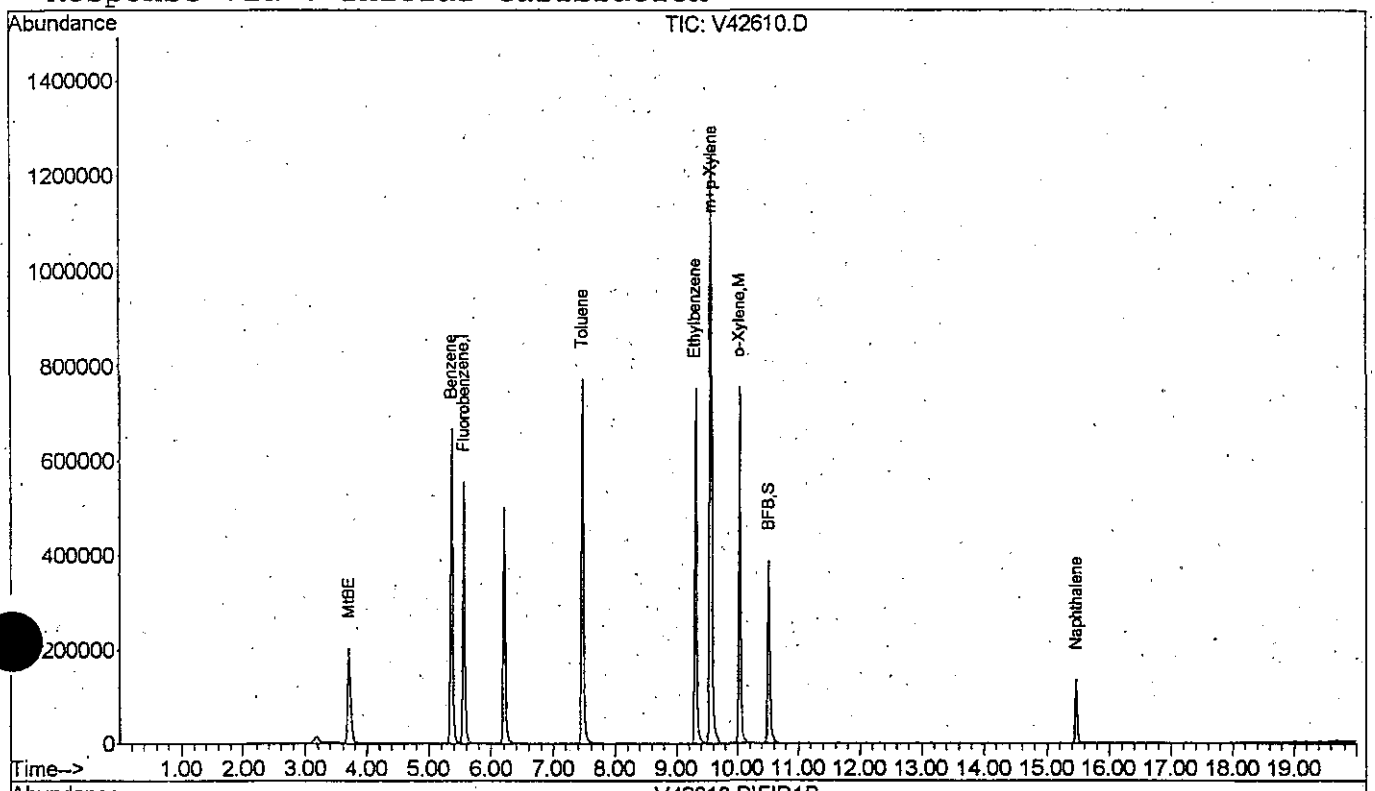
Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

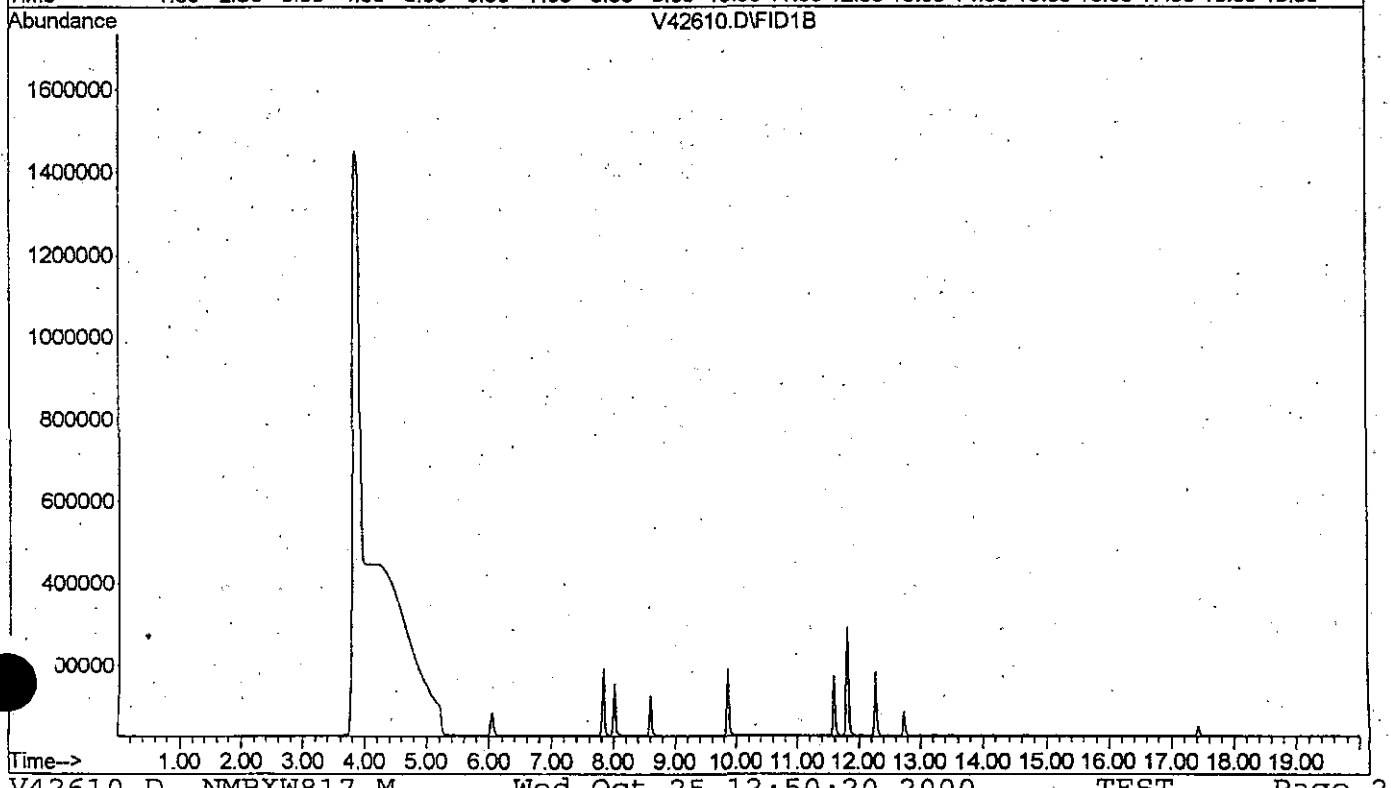




Data File : C:\HPCHEM\1\DATA\OCT23\V42610.D Vial: 5
Acq On : 23 Oct 2000 12:40 Operator: JC
Sample : LCS-7870 Inst : GC/MS VOA
Misc : LCS BTEX_W-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 13:01 2000 Quant Results File: NMBXW817.R

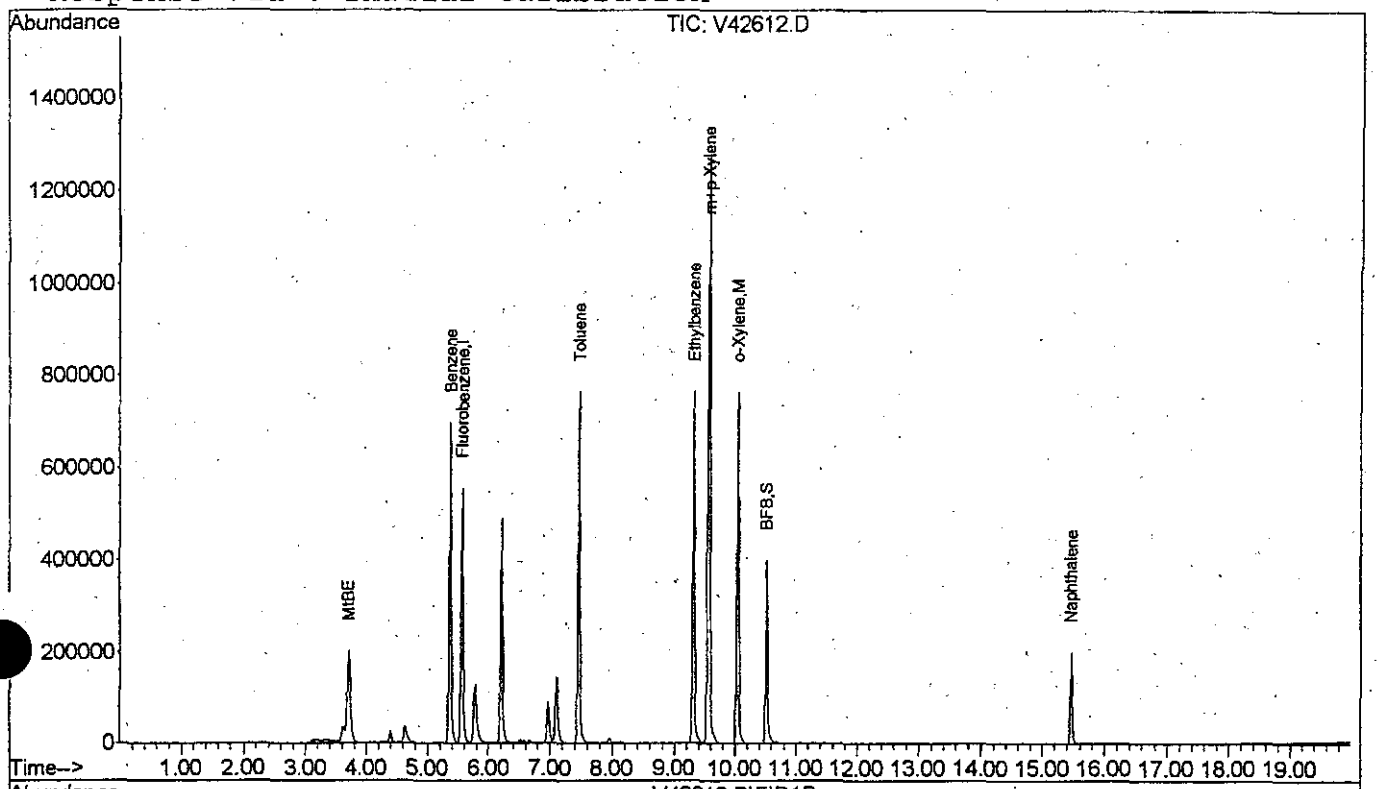
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration

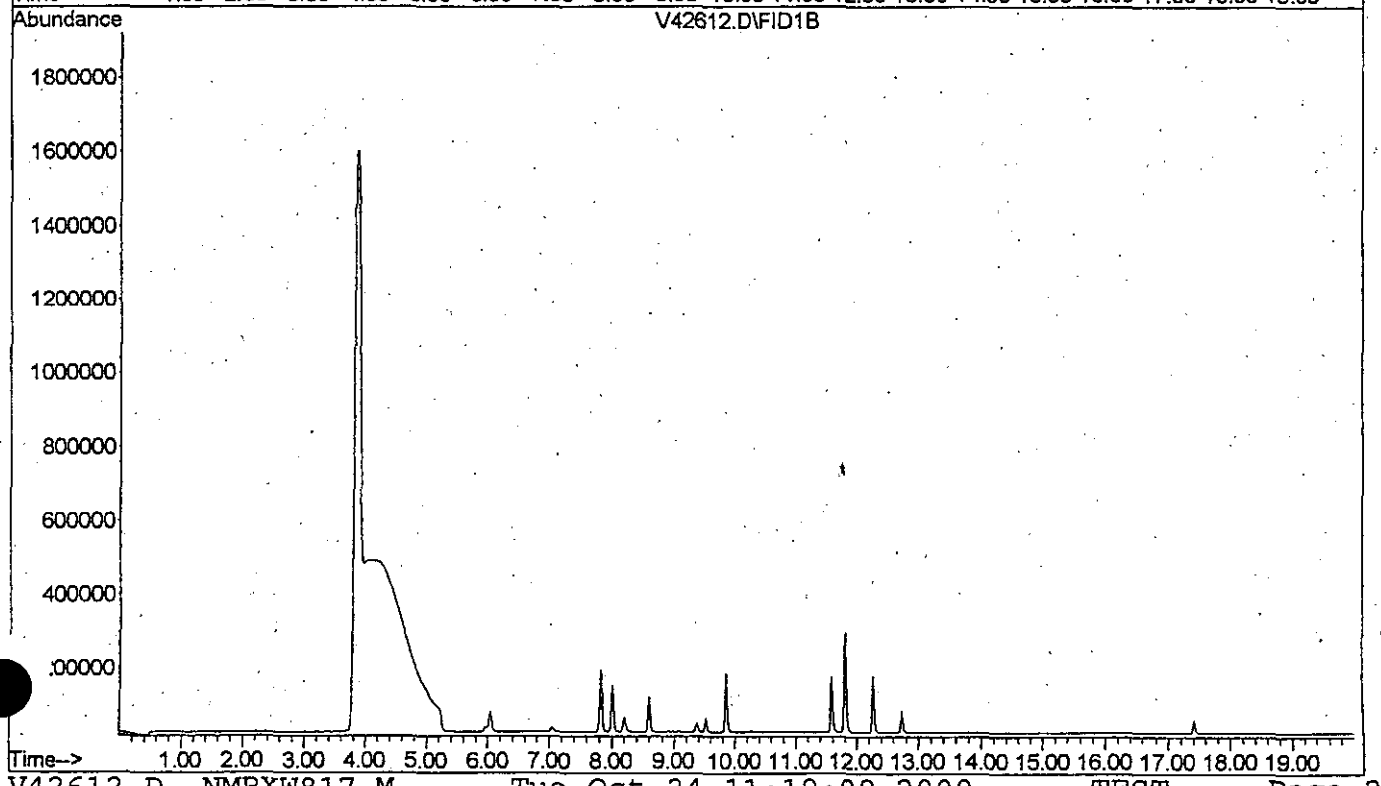




Data File : C:\HPCHEM\1\DATA\OCT23\V42612.D Vial: 7
Acq On : 23 Oct 2000 13:37 Operator: JC
Sample : 0010401-007AMS Inst : GC/MS VOA
Misc : MS BTEX_W-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 14:07 2000 Quant Results File: NMBXW817.R

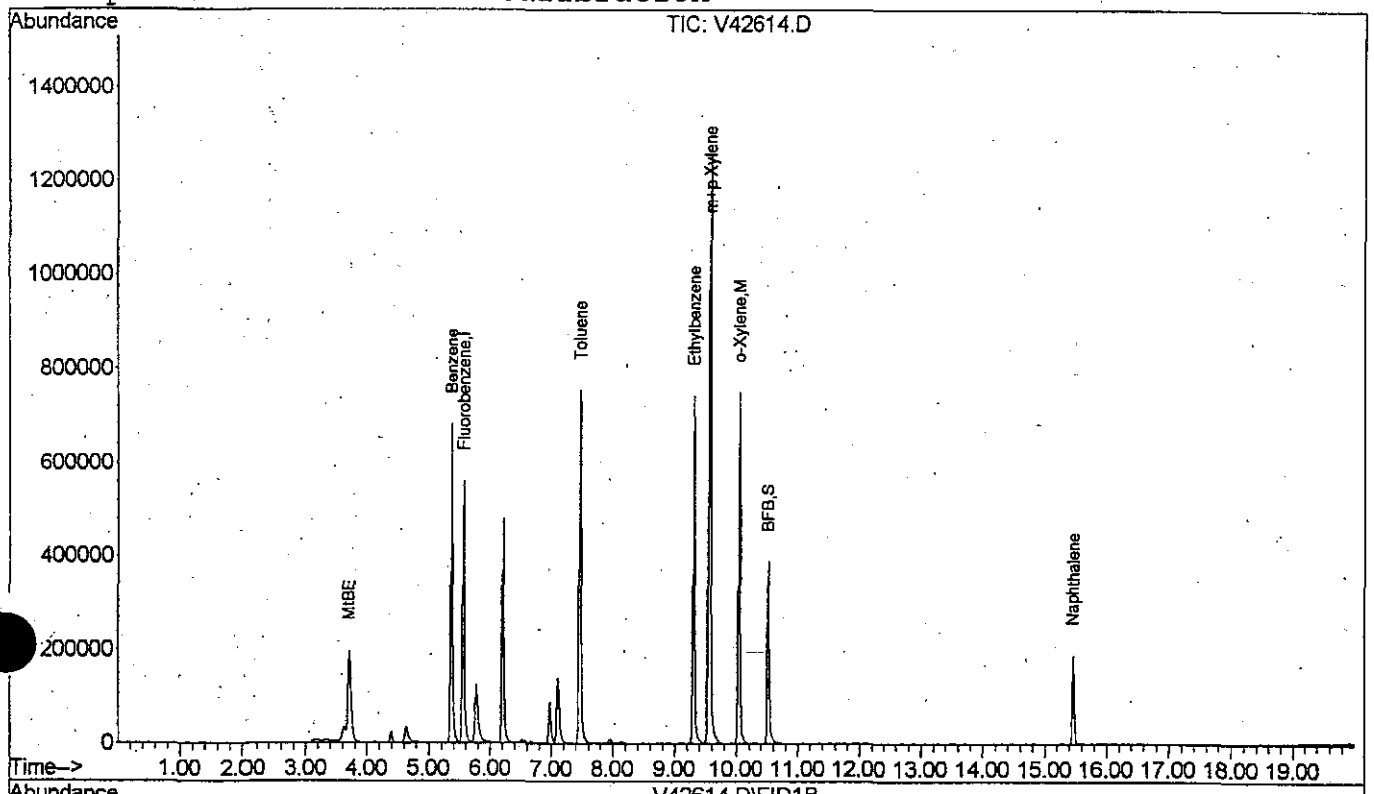
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration





Data File : C:\HPCHEM\1\DATA\OCT23\V42614.D Vial: 9
Acq On : 23 Oct 2000 14:35 Operator: JC
Sample : 0010401-007AMSD Inst : GC/MS VOA
Misc : MSD BTEX_W-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 14:57 2000 Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration

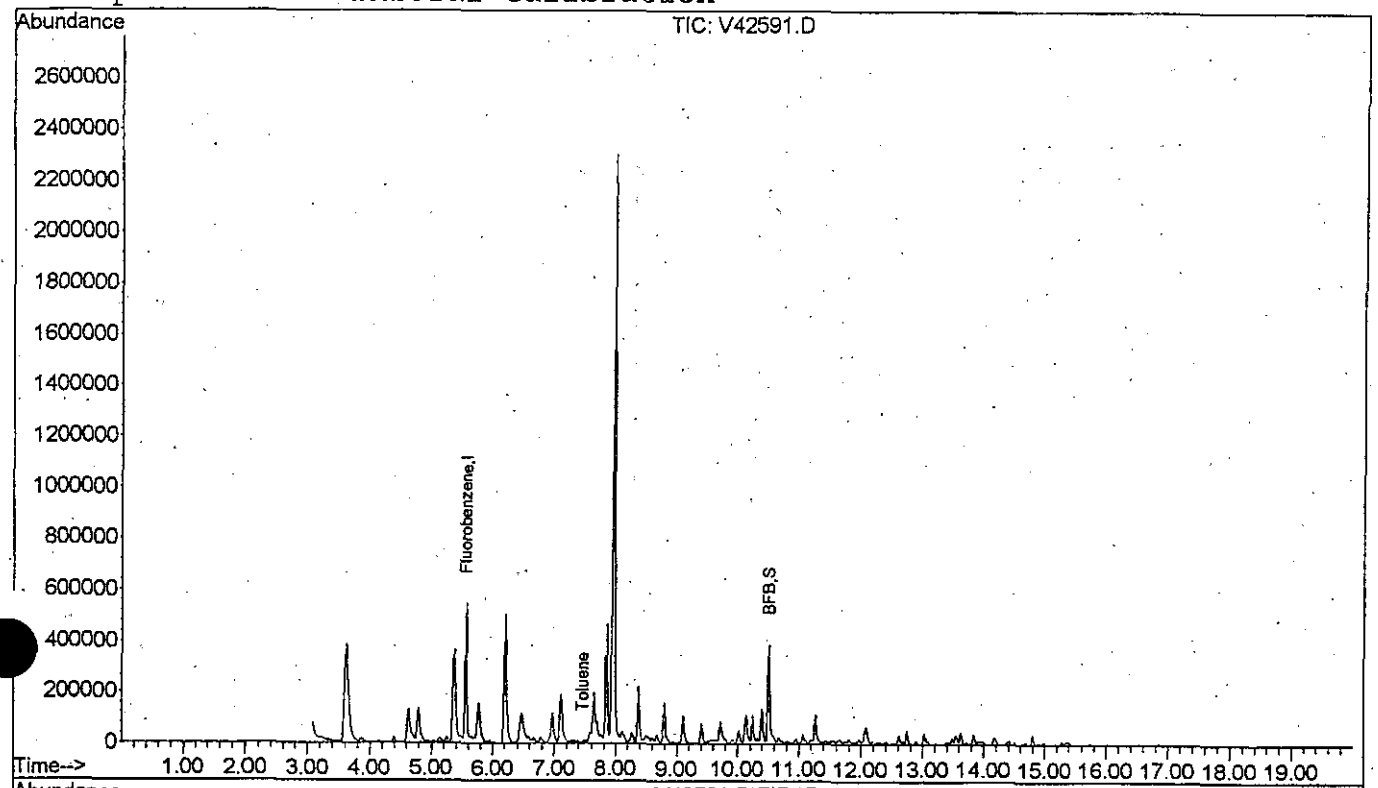


000067

Data File : C:\HPCHEM\1\DATA\OCT20\V42591.D
Acq On : 21 Oct 2000 1:27
Sample : 0010401-004A
Misc : SAMP BTEX_W-MS
MS Integration Params: RTEINT2.P
Quant Time: Oct 23 9:07 2000

Vial: 34
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration

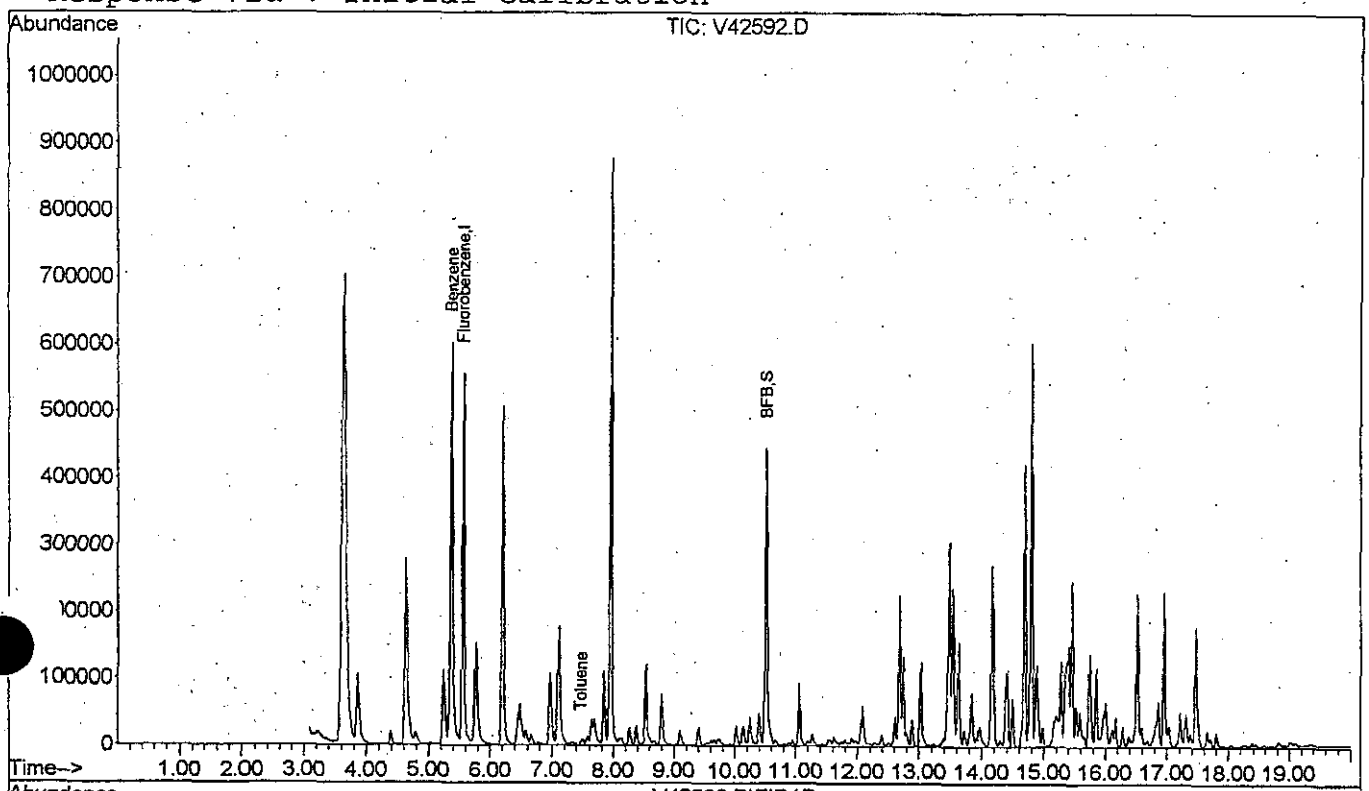


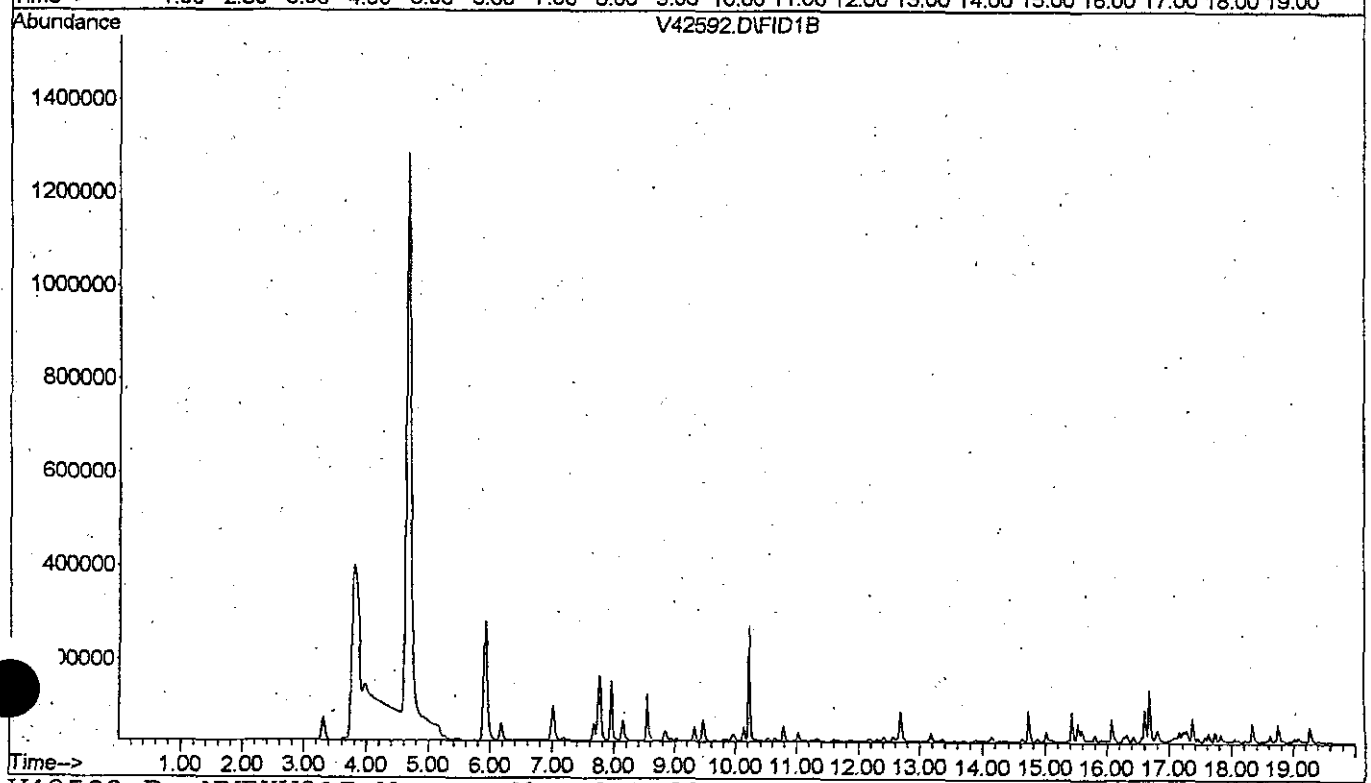
000068

Data File : C:\HPCHEM\1\DATA\OCT20\V42592.D
Acq On : 21 Oct 2000 1:56
Sample : 0010401-005A
Misc : SAMP BTEX_W-MS
MS Integration Params: RTEINT2.P
Quant Time: Oct 23 9:08 2000

Vial: 35
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW817.R

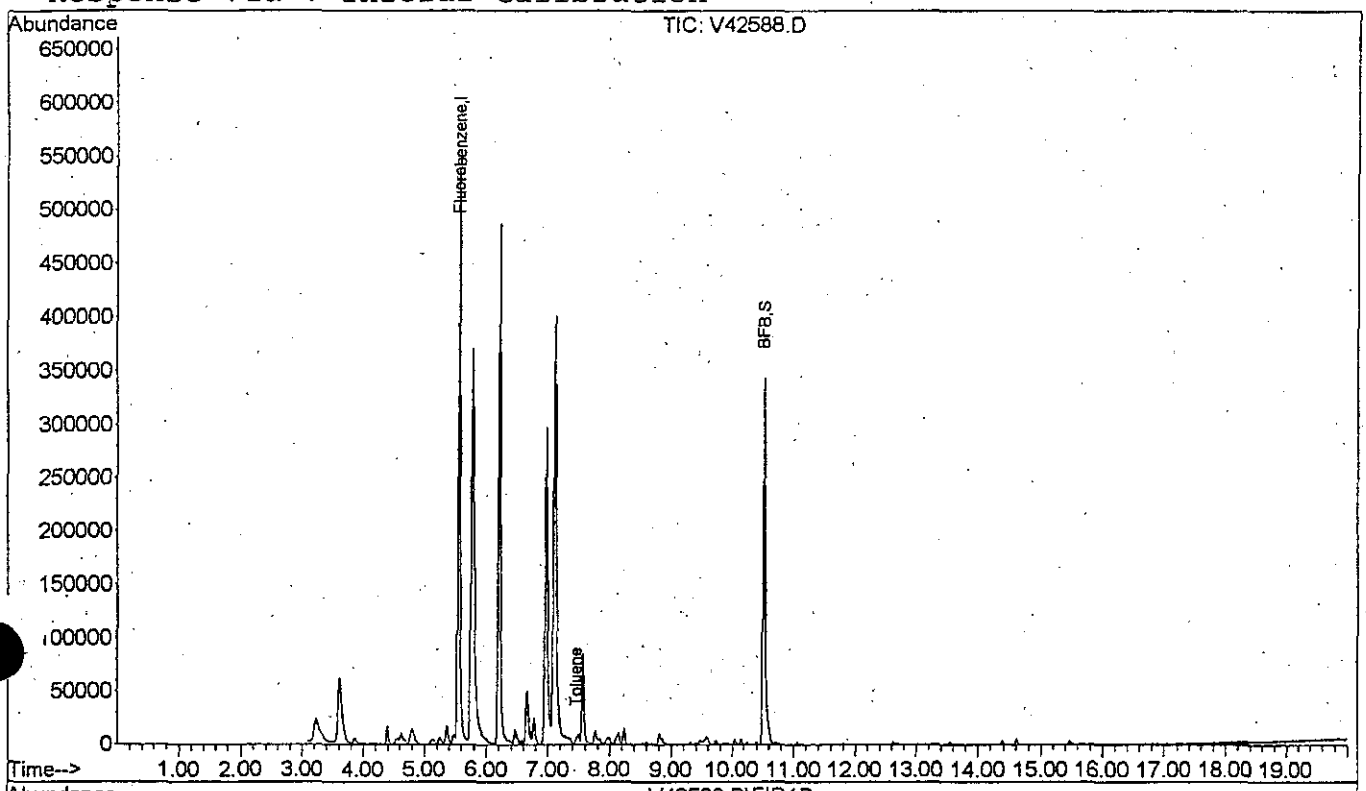
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration

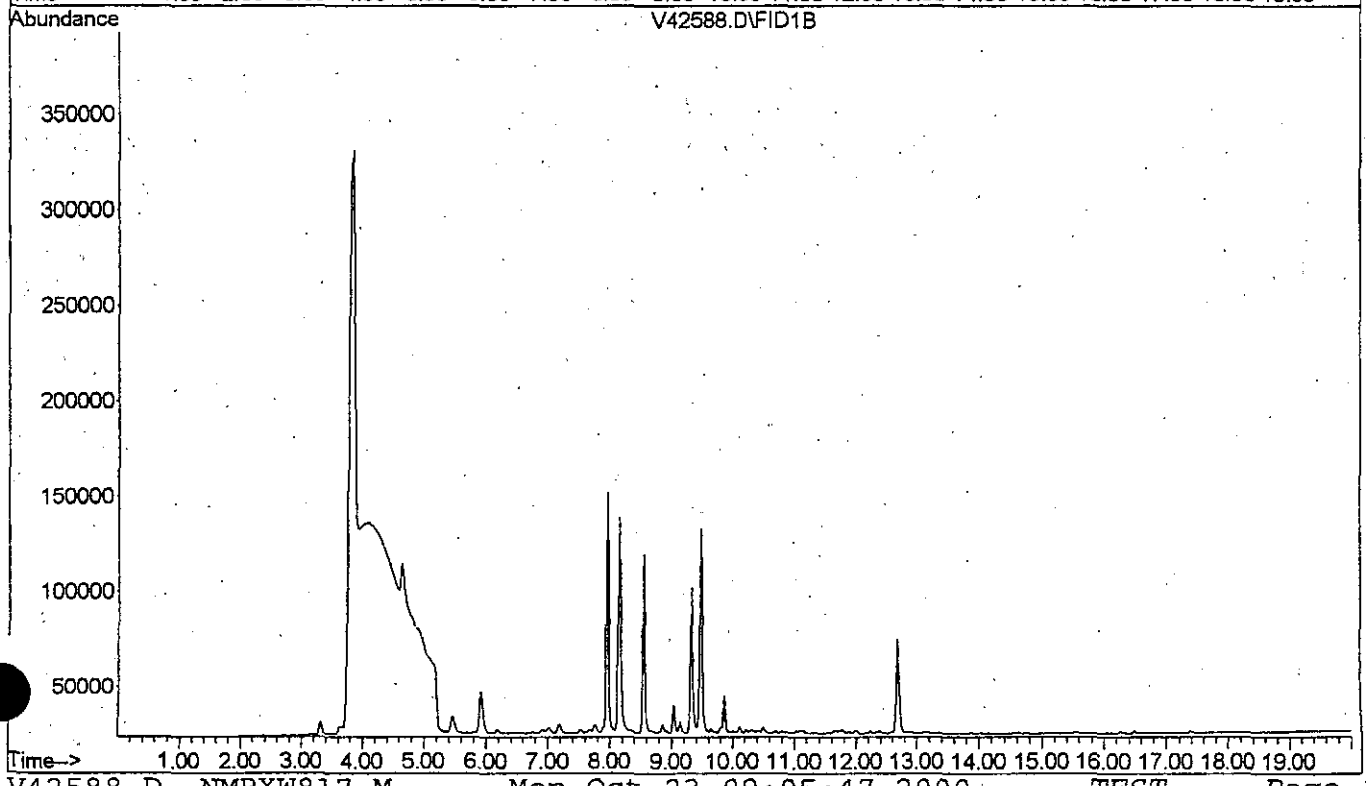




Data File : C:\HPCHEM\1\DATA\OCT20\V42588.D Vial: 31
Acq On : 21 Oct 2000 00:01 Operator: JC
Sample : 0010401-006A Inst : GC/MS VOA
Misc : SAMP BTEX_W-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 9:05 2000 Quant Results File: NMBXW817.R

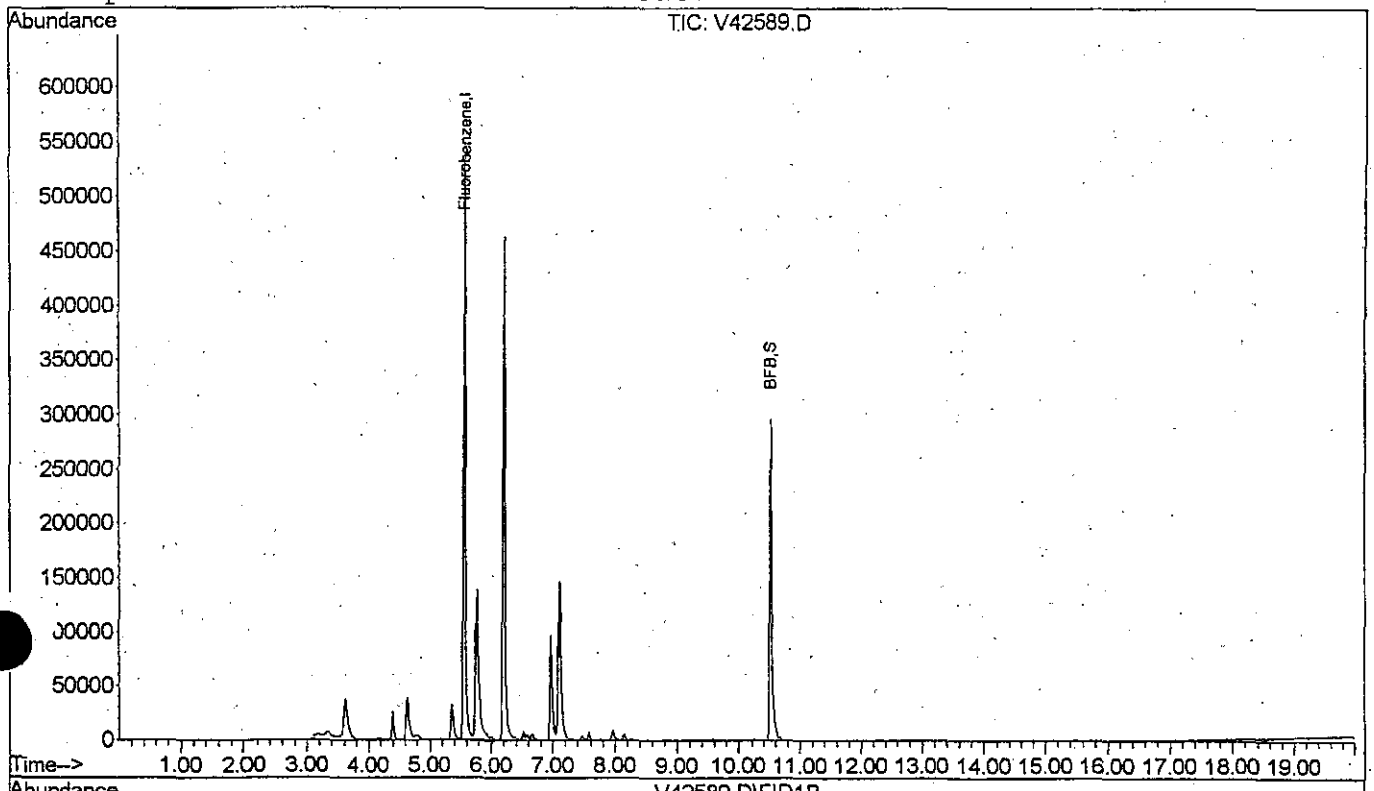
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration

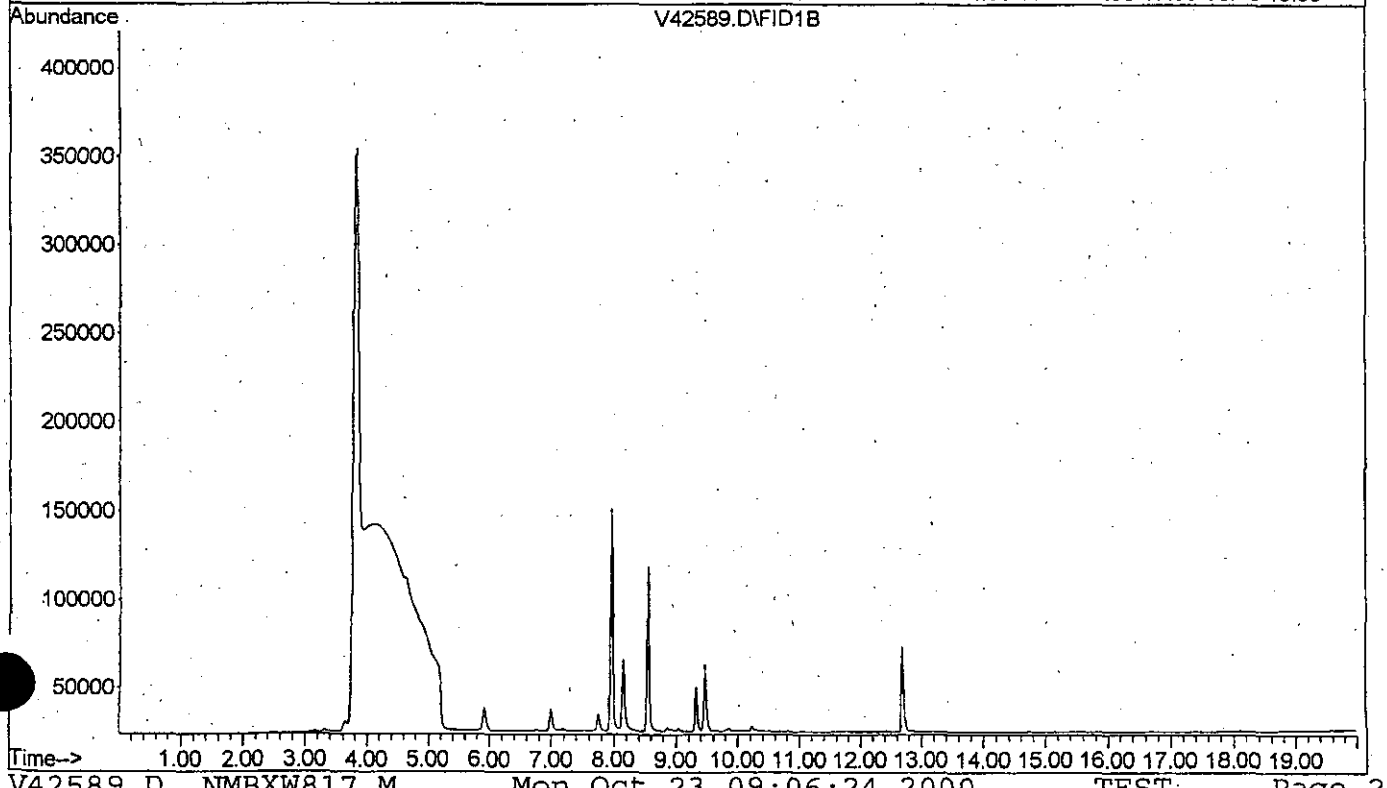




Data File : C:\HPCHEM\1\DATA\OCT20\V42589.D Vial: 32
Acq On : 21 Oct 2000 00:30 Operator: JC
Sample : 0010401-007A Inst : GC/MS VOA
Misc : SAMP BTEX_W-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 9:06 2000 Quant Results File: NMBXW817.R

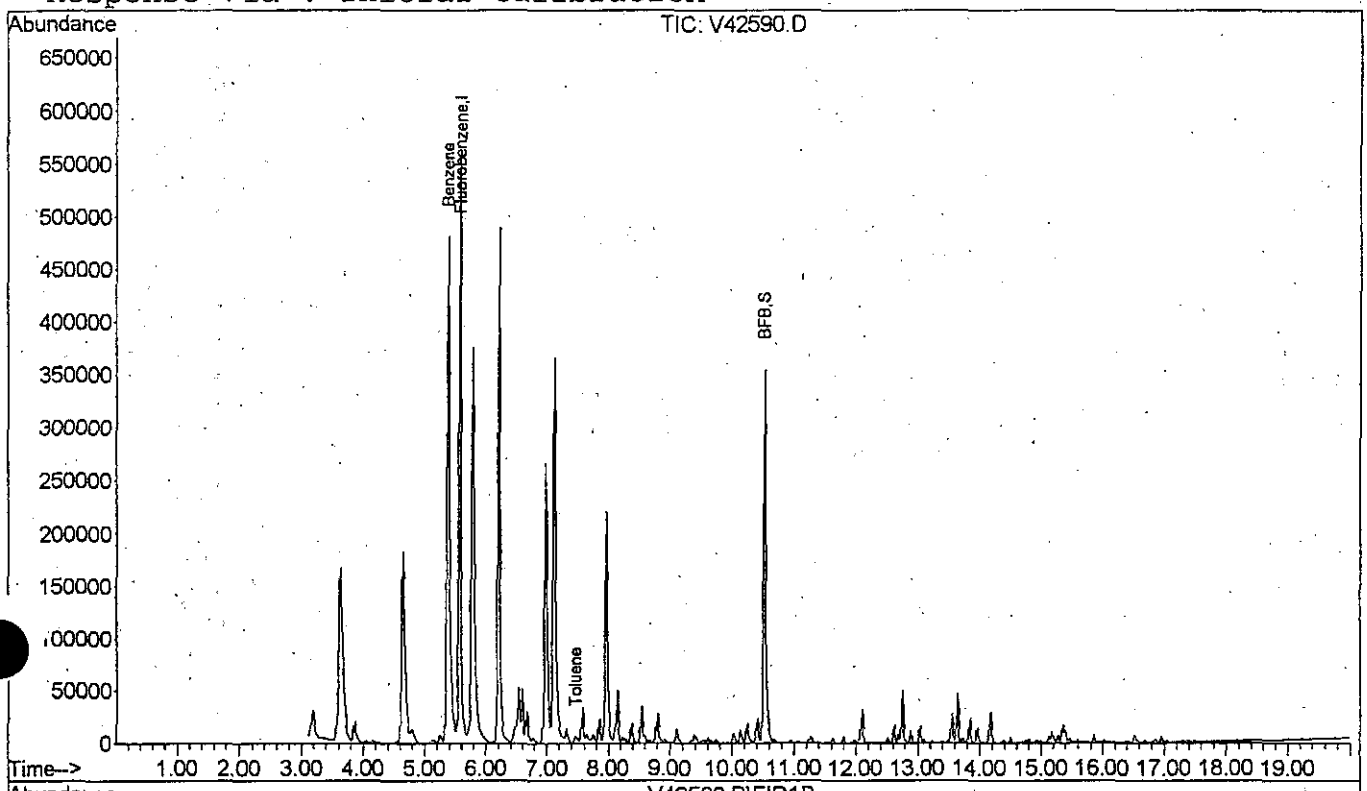
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration

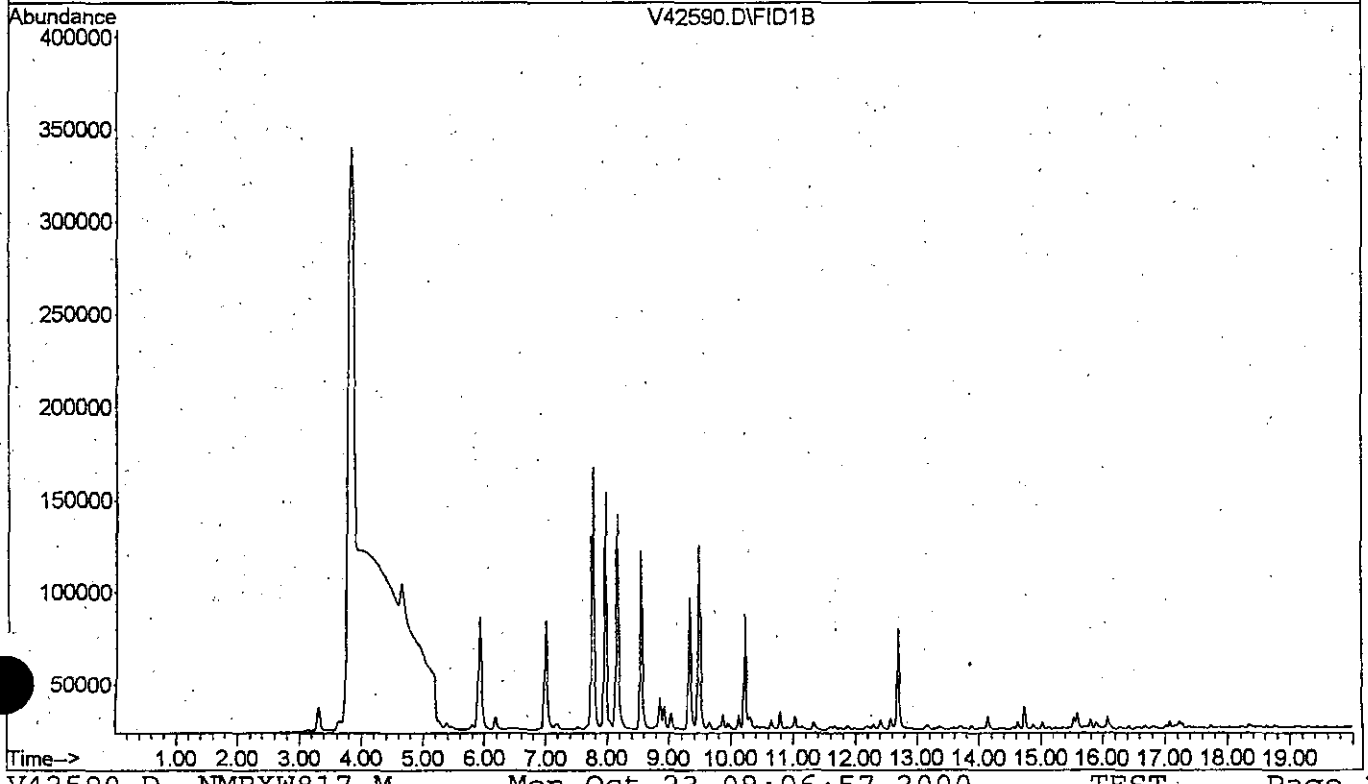




Data File : C:\HPCHEM\1\DATA\OCT20\V42590.D Vial: 33
Acq On : 21 Oct 2000 00:58 Operator: JC
Sample : 0010401-008A Inst : GC/MS VOA
Misc : SAMP BTEX_W-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 9:06 2000 Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration

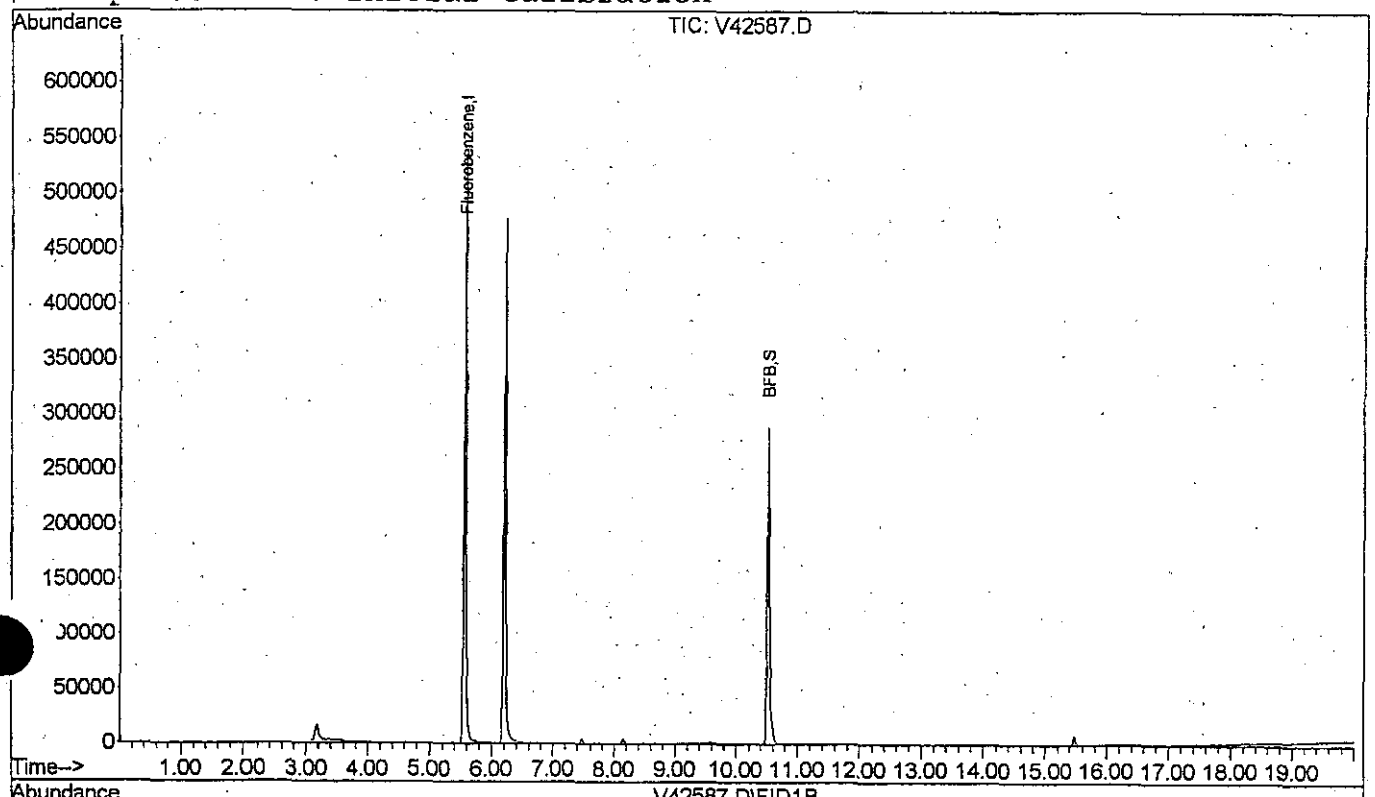


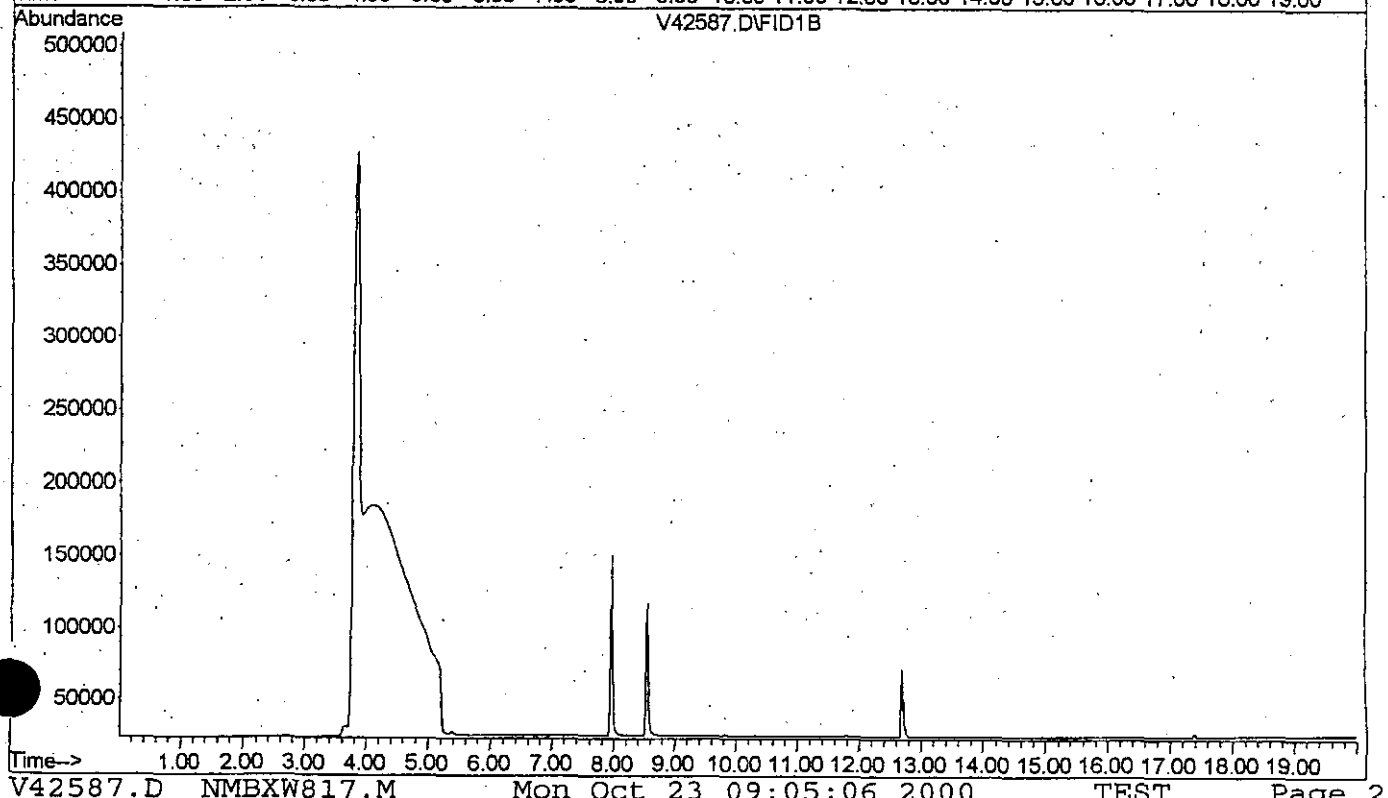


Data File : C:\HPCHEM\1\DATA\OCT20\V42587.D
Acq On : 20 Oct 2000 23:33
Sample : 0010401-009A
Misc : SAMP BTEX_W-MS
MS Integration Params: RTEINT2.P
Quant Time: Oct 23 9:04 2000

Vial: 30
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Fri Aug 18 16:57:33 2000
Response via : Initial Calibration





000073

BTEX Analysis
SW846 8260B

Soil Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 9:20:40 A**
Prep End Date: **11/2/00 9:19:00 AM**

Prep Batch **7843** Prep Code: **5035** Technician: **Josh Crain**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010368-009A	Soil		10.6		0		0	5	0.4716981
0010397-001A	Soil		6.4		0		0	5	0.78125
0010397-002A	Soil		5.82		0		0	5	0.8591065
0010397-003A	Soil		6.15		0		0	5	0.8130081
0010397-004A	Soil		5.11		0		0	5	0.9784736
0010397-005A	Soil		5.88		0		0	5	0.8503401
0010397-006A	Soil		6.12		0		0	5	0.8169935
0010397-006AMS	Soil		5		0		0	5	1
0010397-006AMSD	Soil		5		0		0	5	1
0010397-007A	Soil		6.08		0		0	5	0.8223684
0010397-008A	Soil		6.25		0		0	5	0.8
0010397-009A	Soil		6.46		0		0	5	0.7739938
0010397-010A	Soil		5.98		0		0	5	0.8361204
0010401-001A	Soil		5.1		0		0	5	0.9803922
0010401-002A	Soil		5.5		0		0	5	0.9090909
0010401-003A	Soil		5.3		0		0	5	0.9433962
0010419-001A	Soil		5		0		0	5	1
0010419-002A	Soil		5.05		0		0	5	0.9900990
0010421-001A	Soil		7.84		0		0	5	0.6377551
0010421-002A	Soil		5		0		0	5	1
0010426-001A	Soil		4.72		0		0	5	1.0593220
LCS-7843			5		0		0	5	1
MB-7843			5		0		0	5	1

000076

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7843** Batch ID: **7843** Test Code: **SW8260B** Units: **µg/Kg** Analysis Date: **10/20/00 10:54:00 AM** Prep Date: **10/20/00**

Client ID: Run ID: **MS-4(VOLATILES)_001** SeqNo: **154536**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	BRL	5									
Benzene	BRL	1									
Toluene	BRL	1									
Ethylbenzene	BRL	1									
Xylenes, Total	BRL	2									
Surr: 4-Bromofluorobenzene	49.13	0	50	0	98.3	50	150	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000077

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7843** Batch ID: **7843** Test Code: **SW8260B** Units: **µg/Kg** Analysis Date: **10/20/00 11:23:00 AM** Prep Date: **10/20/00**

Client ID: Run ID: **MS-4(VOLATILES)_001** SeqNo: **154537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.08	1	50	0	84.2	58	121	0			
Toluene	42.94	1	50	0	85.9	60	121	0			
Ethylbenzene	46.71	1	50	0	93.4	55	130	0			
Xylenes, Total	140.8	2	150	0	93.9	60	144	0			
Surr: 4-Bromofluorobenzene	56.82	0	50	0	114	50	150	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

0000078

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID: **0010397-006AMS** Batch ID: **7843** Test Code: **SW8260B** Units: **µg/Kg** Analysis Date: **10/24/00 10:16:00 AM** Prep Date: **10/20/00**
Client ID: Run ID: **MS-4(VOLATILES)_001** SeqNo: **155910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.8	1	50	0	47.6	58	121	0			S
Toluene	17.5	1	50	0	35	60	121	0			S
Ethylbenzene	13.1	1	50	0	26.2	55	130	0			S
Xylenes, Total	37.36	2	150	0	24.9	60	149	0			S
Surr: 4-Bromofluorobenzene	29.68	0	50	0	59.4	50	150	0			

Sample ID: **0010397-006AMS** Batch ID: **7843** Test Code: **SW8260B** Units: **µg/Kg** Analysis Date: **10/24/00 10:16:00 AM** Prep Date: **10/20/00**
Client ID: Run ID: **MS-4(VOLATILES)_001** SeqNo: **155911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	28.37	1	50	0	56.7	58	121	23.8	17.5	0	S
Toluene	23.29	1	50	0	46.6	60	121	17.5	28.4	0	S
Ethylbenzene	19.11	1	50	0	38.2	55	130	13.1	37.3	0	S
Xylenes, Total	54.42	2	150	0	36.3	60	144	37.36	37.2	0	S
Surr: 4-Bromofluorobenzene	27.81	0	50	0	55.6	50	150	29.68	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000179

INITIAL CALIBRATION

Response Factor Report GC/MS VOA

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

Calibration Files

1	=V40361.D	5	=V40362.D	10	=V40363.D
20	=V40364.D	50	=V40365.D	100	=V40366.D

		Compound	1	5	10	20	50	100	Avg	%RS
1)	I	Fluorobenzene	ISTD							
2)		MtBE	1.347	0.658	0.620	0.551	0.517	0.509	0.654	43.63
3)		Benzene	1.633	1.324	1.343	1.295	1.269	1.227	1.315	10.48
4)		Toluene	1.789	1.351	1.348	1.303	1.284	1.245	1.351	13.55
5)		Ethylbenzene	1.344	1.251	1.277	1.256	1.291	1.290	1.284	2.42
6)		m+p Xylene	0.605	0.490	0.492	0.493	0.505	0.508	0.514	7.36
7)		o-Xylene	0.562	0.508	0.523	0.515	0.534	0.530	0.531	3.28
8)	S	BFB	0.262	0.234	0.238	0.245	0.249	0.258	0.252	4.78
9)	T	Naphthalene	0.698	0.217	0.221	0.212	0.256	0.407	0.352	47.13

(#) = Out of Range ### Number of calibration levels exceeded format ###

Data File : C:\TEMP\V40361.D
Acq On : 7 Jul 2000 14:36
Sample : VSTD 001
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:37 2000

Vial: 9
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Wed Jul 05 16:12:17 2000
Response via : Initial Calibration
DataAcq Meth : 8260

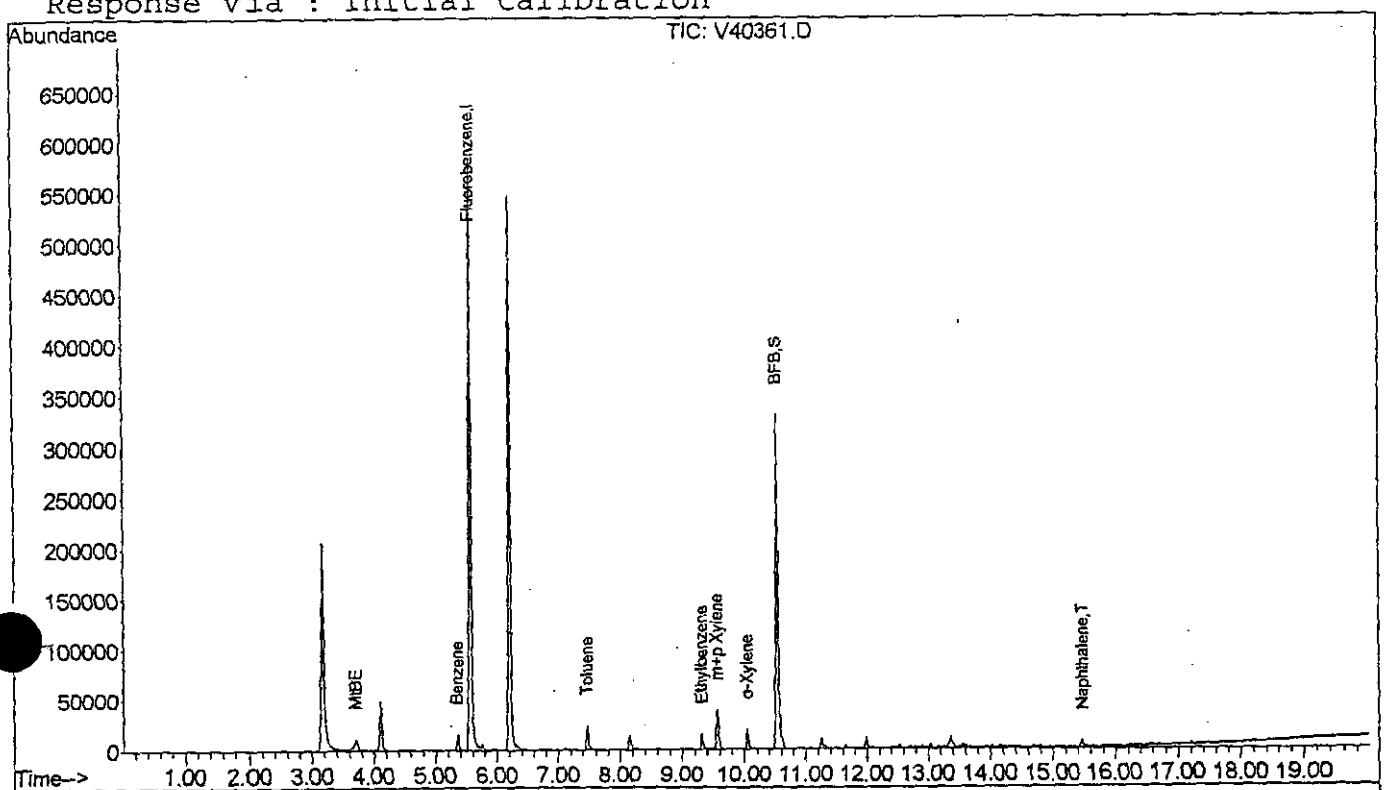
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	733822	50.00	ug/Kg	0.00
System Monitoring Compounds						
8) BFB	10.53	95	182697	57.70	ug/Kg	0.00
Spiked Amount 50.000			Recovery	=	115.40%	
Target Compounds						Qvalue
2) MtBE	3.72	73	20022	2.15	ug/Kg	98
3) Benzene	5.37	78	20173	0.92	ug/Kg	100
4) Toluene	7.47	91	26842	1.26	ug/Kg	99
5) Ethylbenzene	9.32	91	19936	1.00	ug/Kg	99
6) m+p Xylene	9.57	106	20766	2.78	ug/Kg	95
7) o-Xylene	10.05	106	9109	1.14	ug/Kg	98
9) Naphthalene	15.48	128	9745	9.58	ug/Kg	100

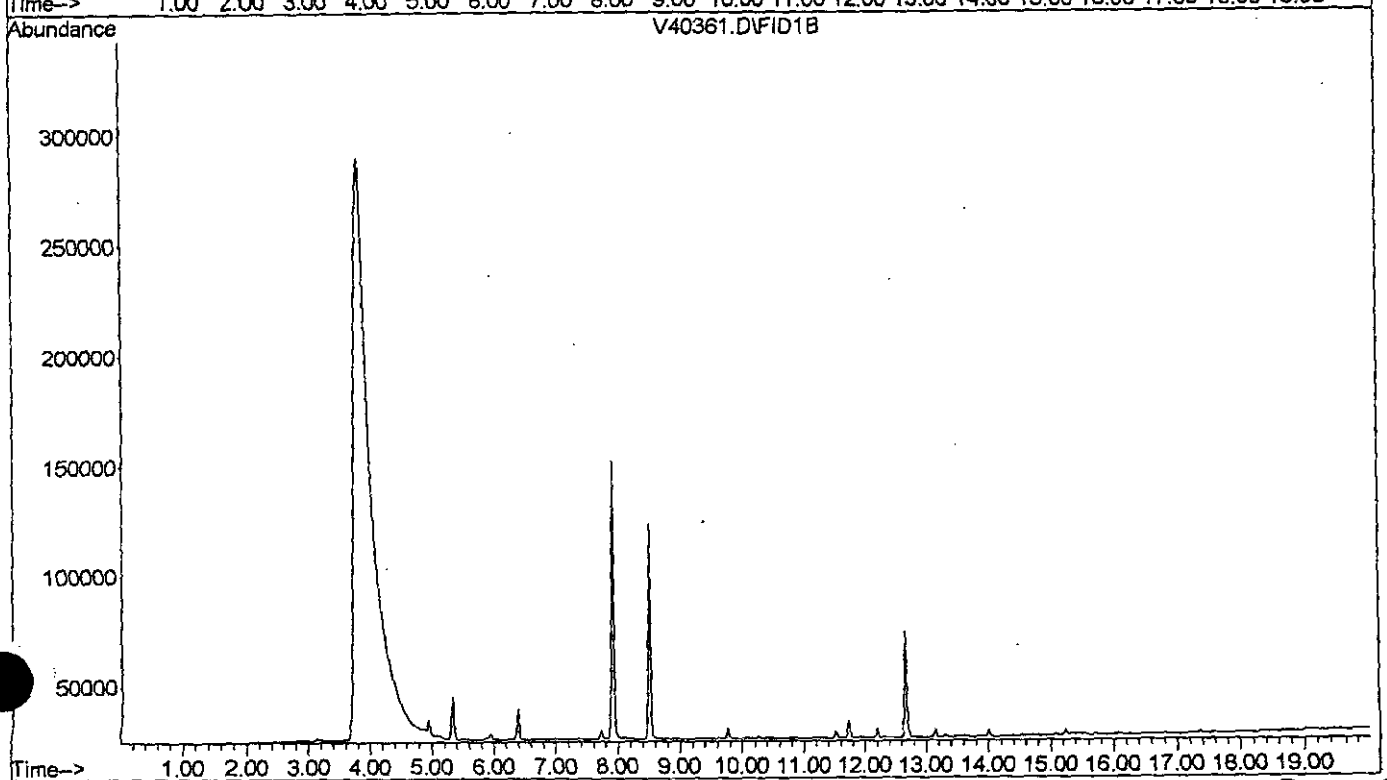
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40361.D
Acq On : 7 Jul 2000 14:36
Sample : VSTD 001
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:37 2000

Vial: 9
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V40362.D
Acq On : 7 Jul 2000 15:06
Sample : VSTD 005
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jul 8 11:43 2000

Vial: 10
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:41:20 2000
Response via : Initial Calibration
DataAcq Meth : 8260

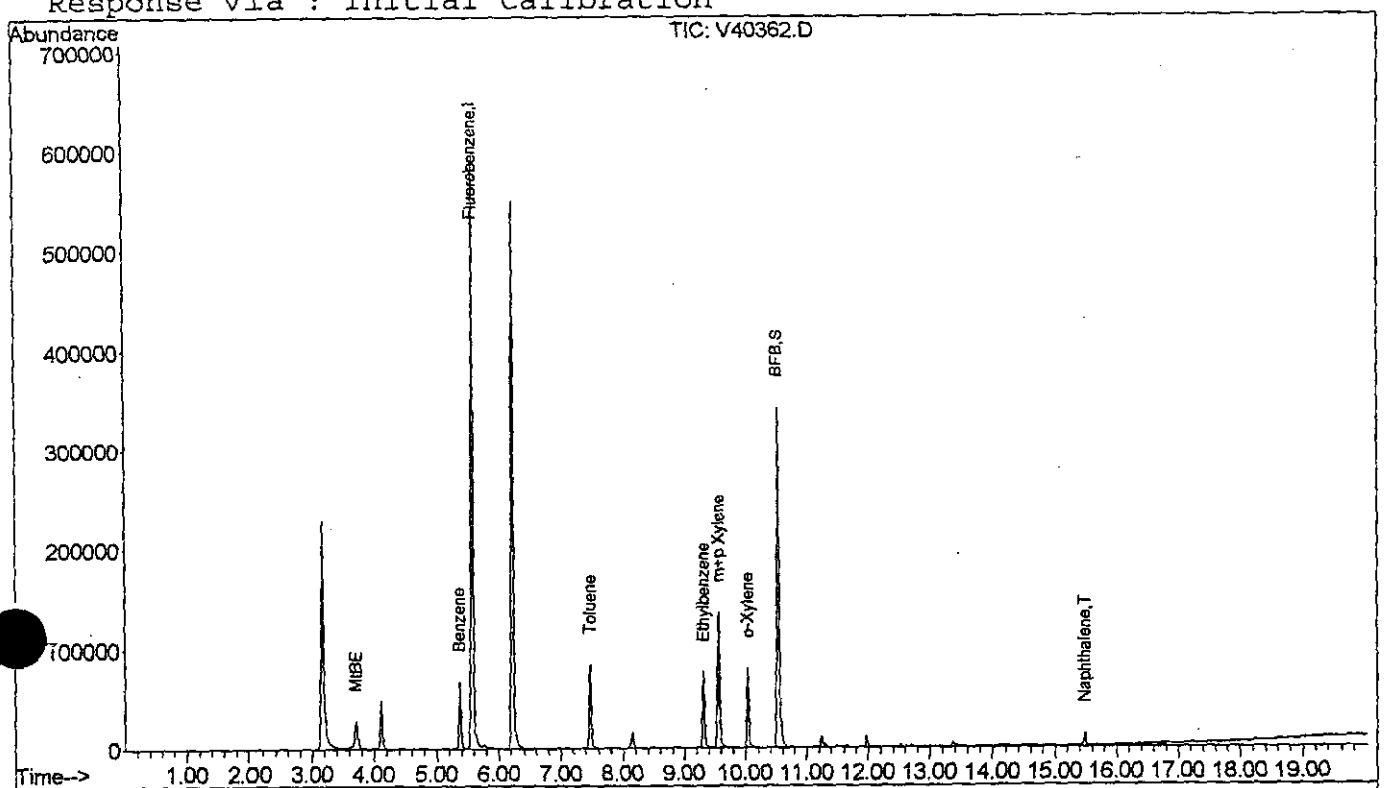
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	739177	50.00	ug/Kg	0.00
System Monitoring Compounds						
8) BFB	10.53	95	187768	57.34	ug/Kg	0.00
Spiked Amount 50.000			Recovery	=	114.68%	
Target Compounds						Qvalue
2) MtBE	3.72	73	50218	6.31	ug/Kg	98
3) Benzene	5.37	78	80818	3.76	ug/Kg	100
4) Toluene	7.47	91	89390	4.14	ug/Kg	100
5) Ethylbenzene	9.32	91	84520	4.21	ug/Kg	98
6) m+p Xylene	9.56	106	72067	9.30	ug/Kg	95
7) o-Xylene	10.04	106	35776	4.37	ug/Kg	99
9) Naphthalene	15.48	128	17139	9.13	ug/Kg	100

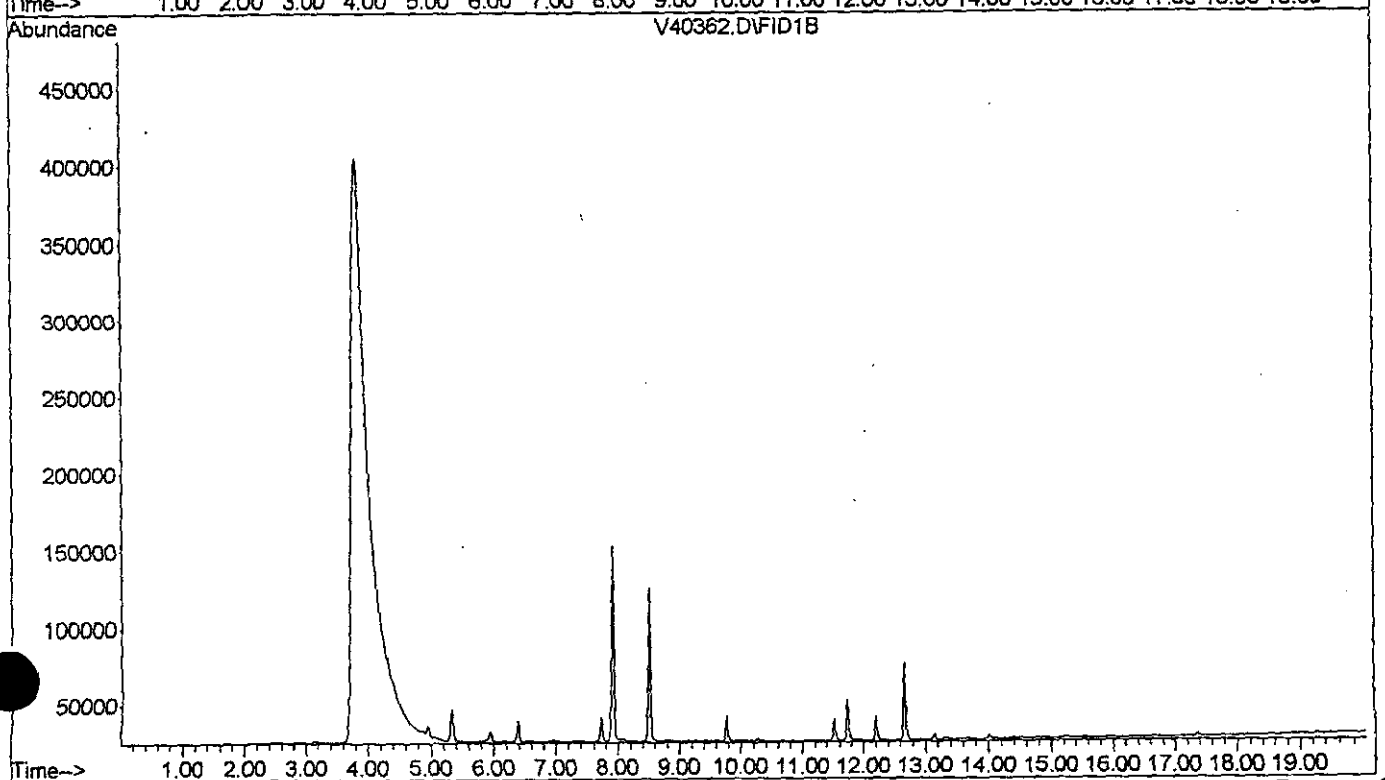
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40362.D
Acq On : 7 Jul 2000 15:06
Sample : VSTD 005
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:43 2000

Vial: 10
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V40363.D
Acq On : 7 Jul 2000 15:35
Sample : VSTD 010
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:46 2000

Vial: 11
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:44:11 2000
Response via : Initial Calibration
DataAcq Meth : 8260

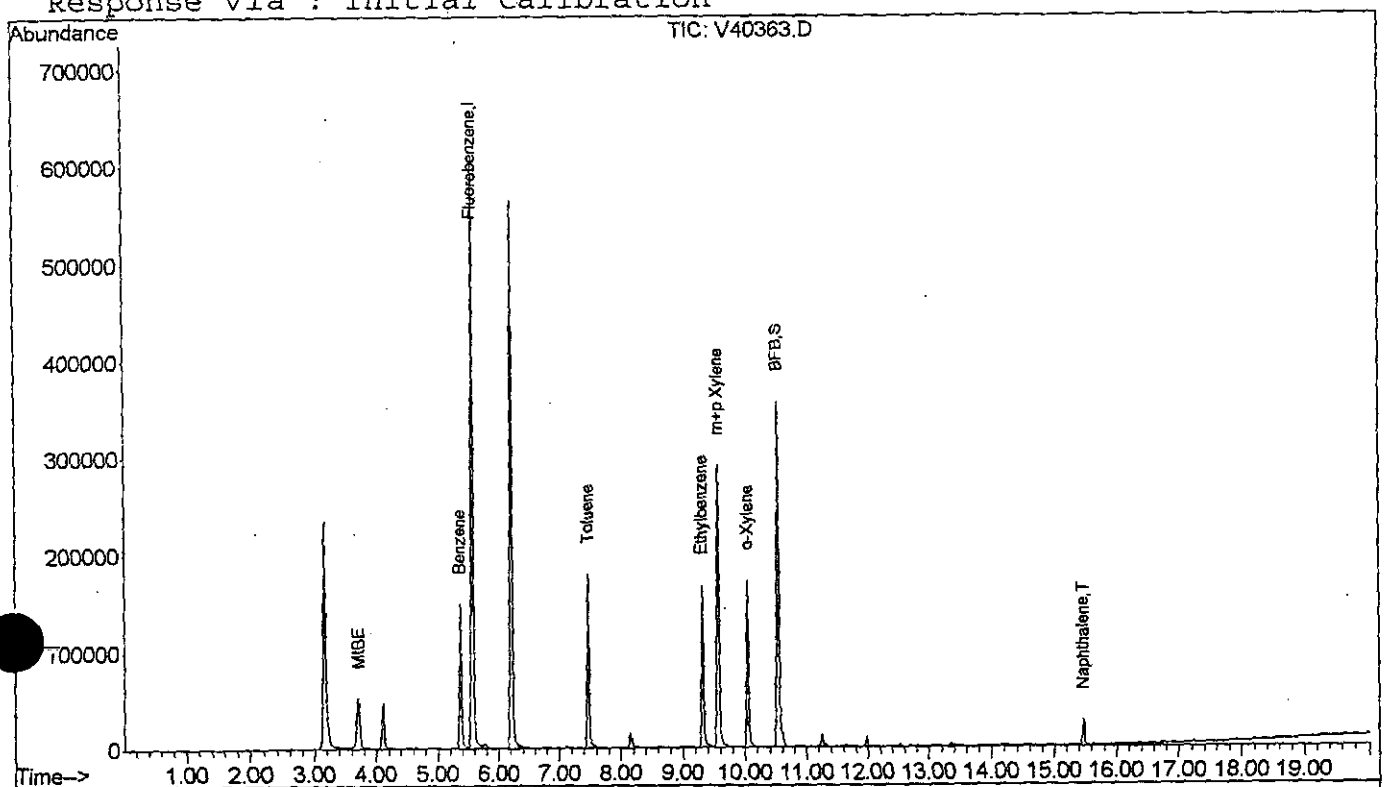
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	738914	50.00	ug/Kg	0.00
System Monitoring Compounds						
8) BFB	10.52	95	192728	58.12	ug/Kg	0.00
Spiked Amount 50.000			Recovery	=	116.24%	
Target Compounds						Qvalue
2) MtBE	3.72	73	97839	12.88	ug/Kg	98
3) Benzene	5.37	78	178788	8.52	ug/Kg	100
4) Toluene	7.47	91	186569	8.76	ug/Kg	99
5) Ethylbenzene	9.32	91	184504	9.30	ug/Kg	98
6) m+p Xylene	9.57	106	149234	19.28	ug/Kg	96
7) o-Xylene	10.04	106	76855	9.46	ug/Kg	98
9) Naphthalene	15.47	128	35498	12.96	ug/Kg	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40363.D
Acq On : 7 Jul 2000 15:35
Sample : VSTD 010
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:46 2000

Vial: 11
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration



000087

Data File : C:\TEMP\V40364.D
Acq On : 7 Jul 2000 16:05
Sample : VSTD 020
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jul 8 11:47 2000

Vial: 12
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:46:47 2000
Response via : Initial Calibration
DataAcq Meth : 8260

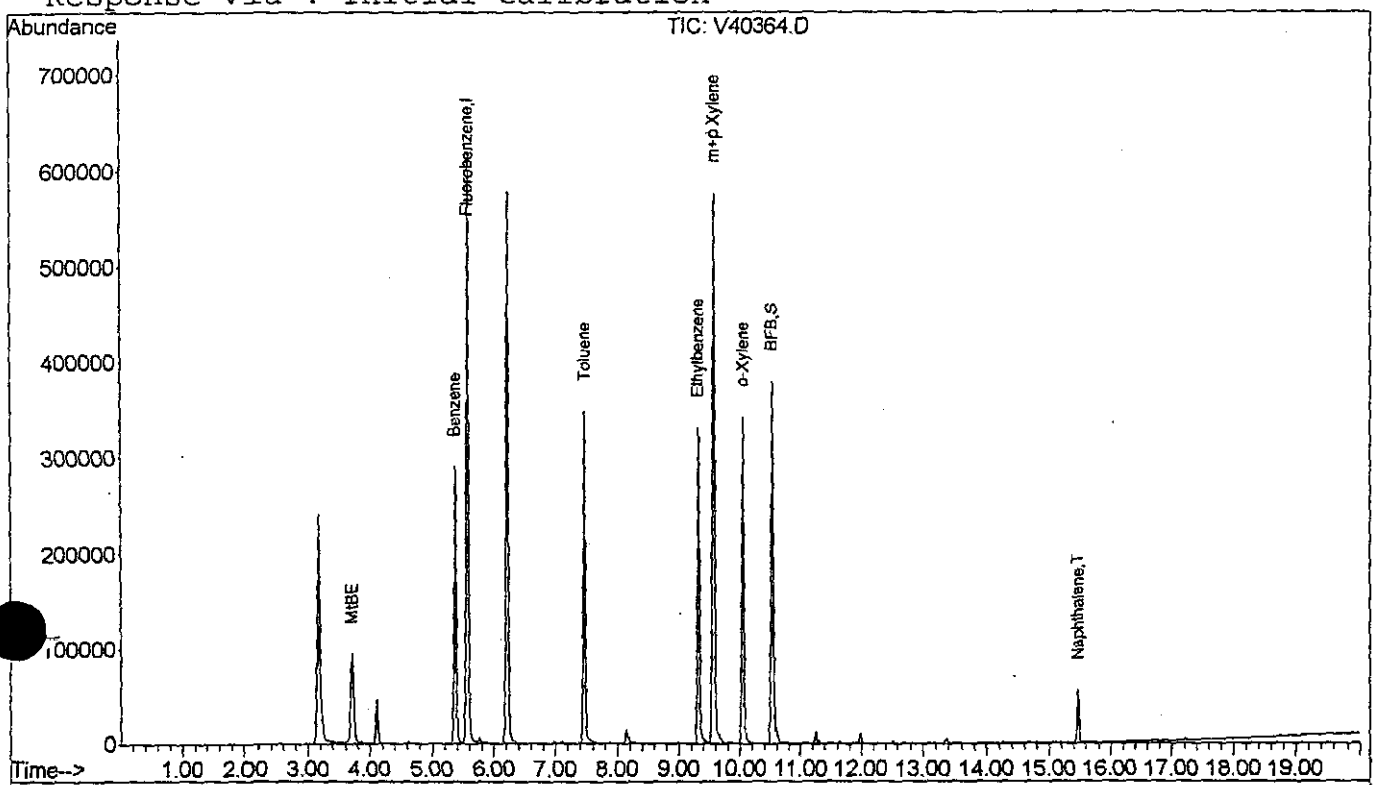
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	741087	50.00	ug/Kg	0.00
System Monitoring Compounds						
8) BFB	10.53	95	198755	58.92	ug/Kg	0.00
Spiked Amount 50.000			Recovery	=	117.84%	
Target Compounds						Qvalue
2) MtBE	3.71	73	173141	23.08	ug/Kg	99
3) Benzene	5.37	78	337149	16.23	ug/Kg	100
4) Toluene	7.47	91	350135	16.53	ug/Kg	100
5) Ethylbenzene	9.32	91	350592	17.68	ug/Kg	99
6) m+p Xylene	9.57	106	289171	37.13	ug/Kg	96
7) o-Xylene	10.04	106	147371	18.09	ug/Kg	100
9) Naphthalene	15.47	128	68216	19.71	ug/Kg	100

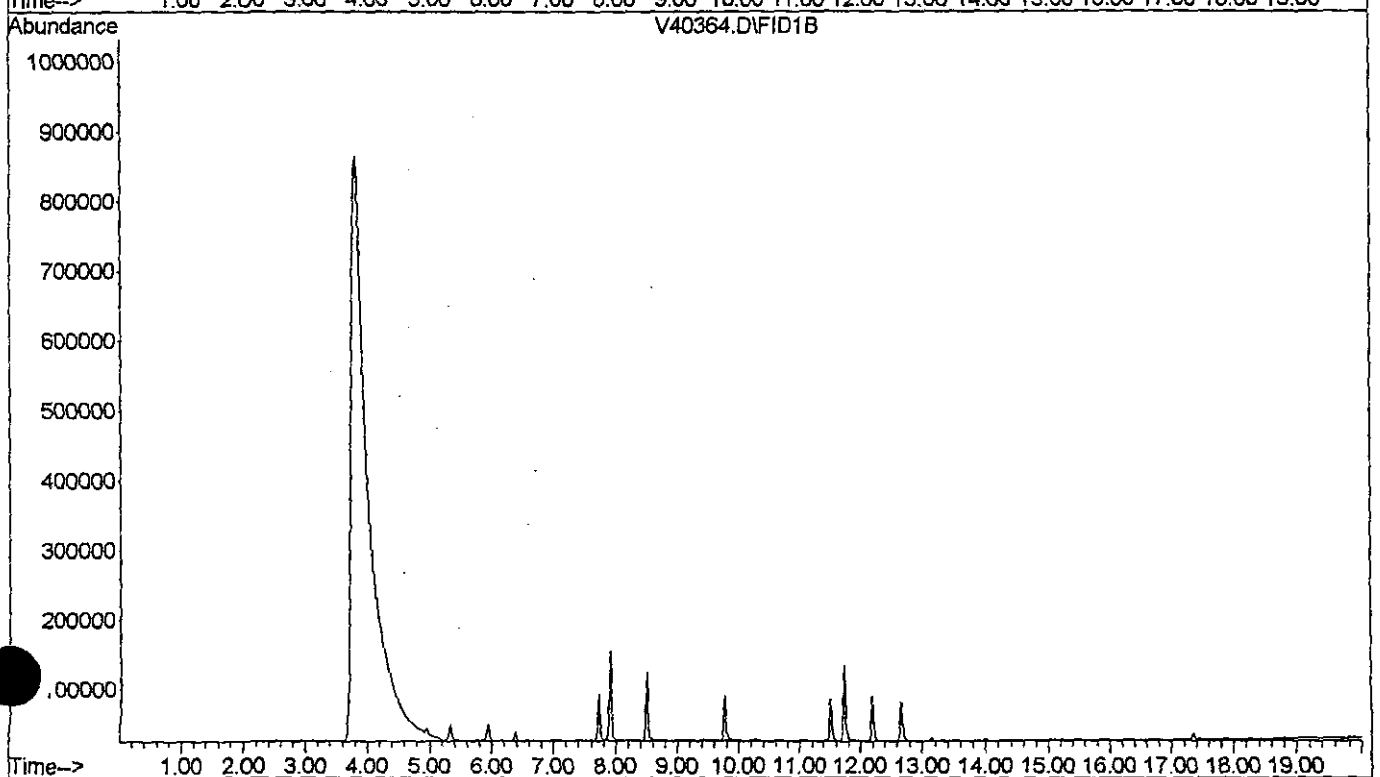
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40364.D
Acq On : 7 Jul 2000 16:05
Sample : VSTD 020
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:47 2000

Vial: 12
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V40365.D
Acq On : 7 Jul 2000 16:34
Sample : VSTD 050
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jul 8 11:49 2000

Vial: 13
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:48:14 2000
Response via : Initial Calibration
DataAcq Meth : 8260

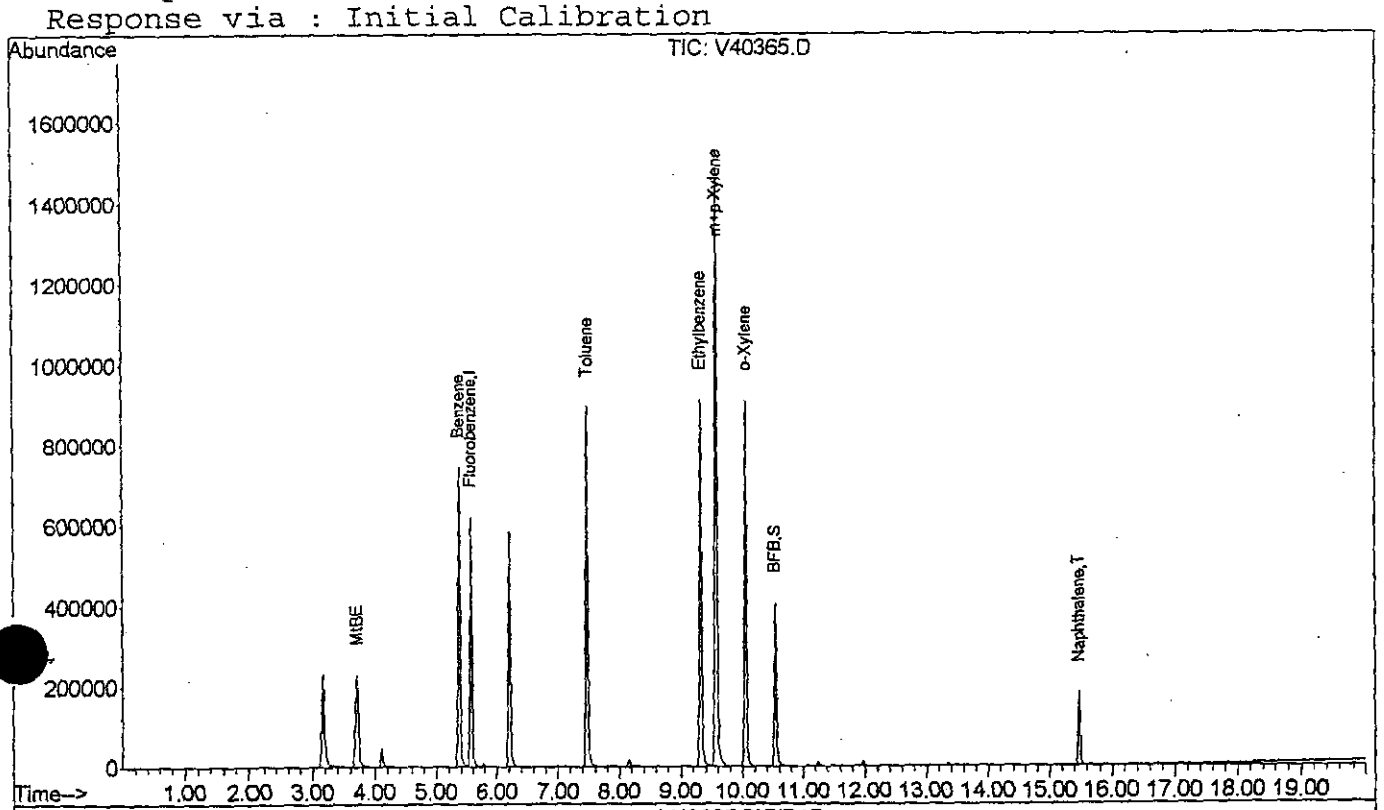
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	742732	50.00	ug/Kg	0.00
System Monitoring Compounds						
8) BFB	10.53	95	205595	59.91	ug/Kg	0.00
Spiked Amount 50.000			Recovery	=	119.82%	
Target Compounds						Qvalue
2) MtBE	3.71	73	416839	56.53	ug/Kg	100
3) Benzene	5.37	78	861212	42.06	ug/Kg	100
4) Toluene	7.47	91	881194	42.03	ug/Kg	99
5) Ethylbenzene	9.32	91	922331	46.78	ug/Kg	100
6) m+p Xylene	9.56	106	745305	95.63	ug/Kg	99
7) o-Xylene	10.04	106	385017	47.39	ug/Kg	99
9) Naphthalene	15.47	128	217863	51.02	ug/Kg	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40365.D
Acq On : 7 Jul 2000 16:34
Sample : VSTD 050
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:49 2000

Vial: 13
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration



Data File : C:\TEMP\V40366.D
Acq On : 7 Jul 2000 17:04
Sample : VSTD 100
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jul 7 17:40 2000

Vial: 14
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: GRO.RES

Quant Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration
DataAcq Meth : 8260

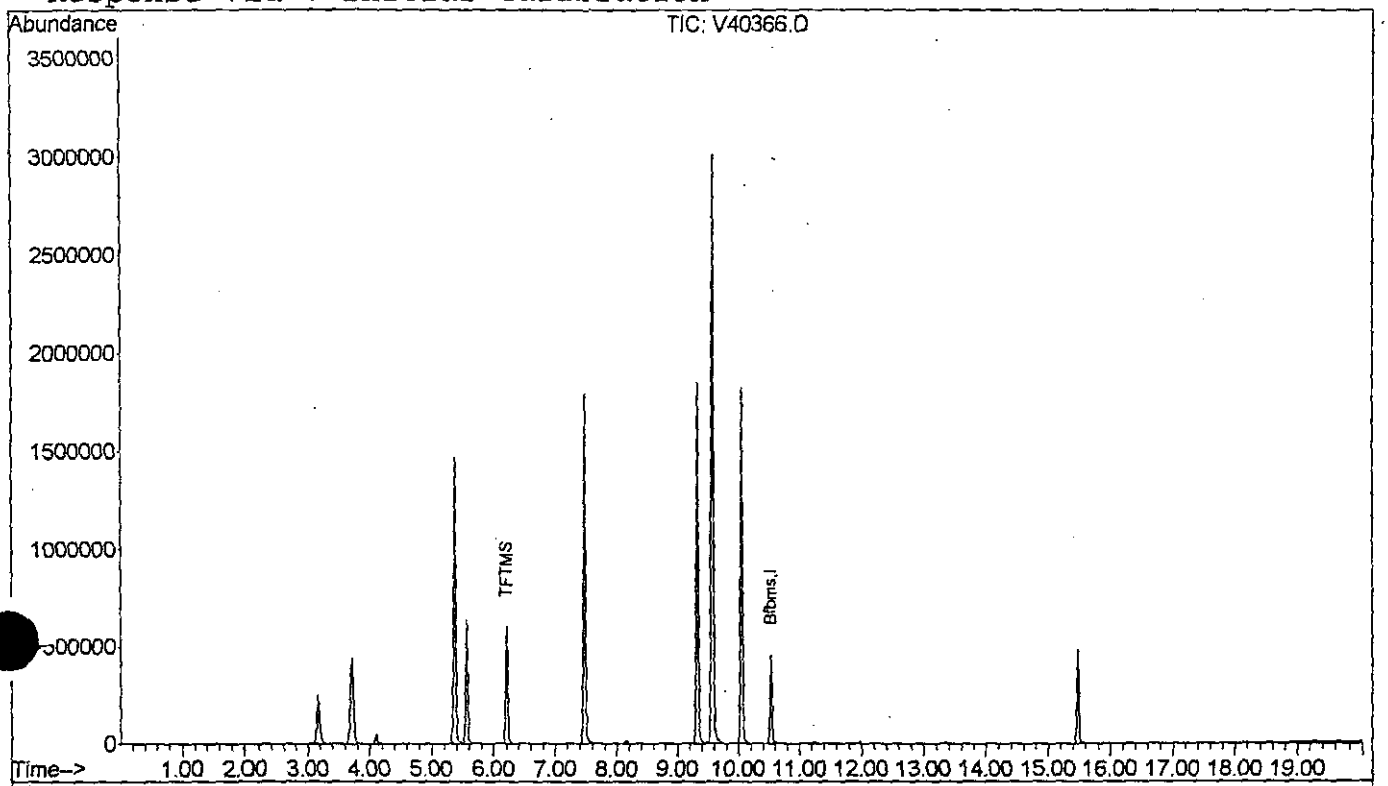
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bfbms	10.52	174	217903	50.00 ug	-0.13
3) BFB	12.66	GC1	153477	50.00 ug	-0.14
Target Compounds					**Qvalue**
2) TFTMS	6.21	146	372550	39.05 ug	100
4) TFT	8.51	GC1	251418	38.04 ug	100

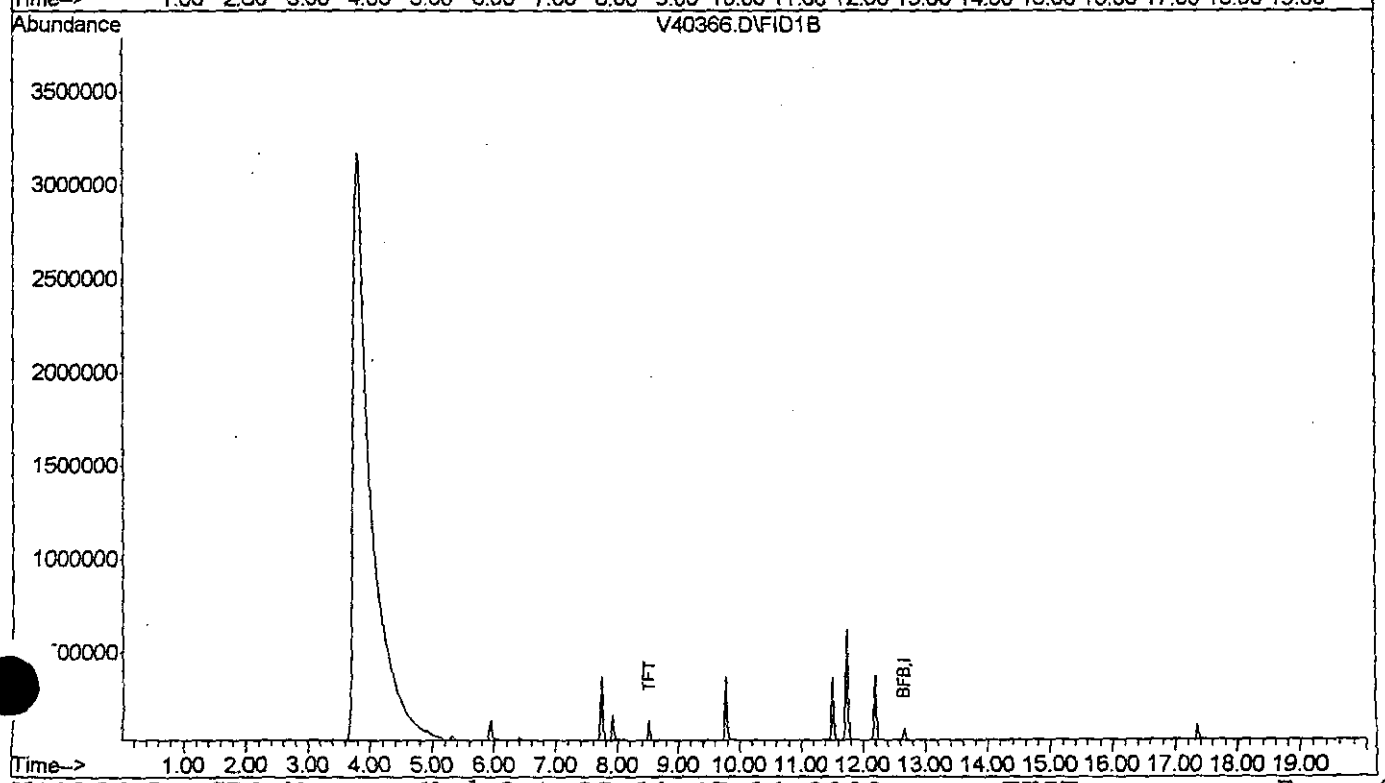
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40366.D
Acq On : 7 Jul 2000 17:04
Sample : VSTD 100
Misc : INITIAL STD
IS Integration Params: RTEINT2.P
Quant Time: Jul 7 17:40 2000

Vial: 14
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: GRO.RES

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\TEMP\V40367.D
Acq On : 7 Jul 2000 17:33
Sample : VSTD 150
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jul 8 11:53 2000

Vial: 15
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:51:48 2000
Response via : Initial Calibration
DataAcq Meth : 8260

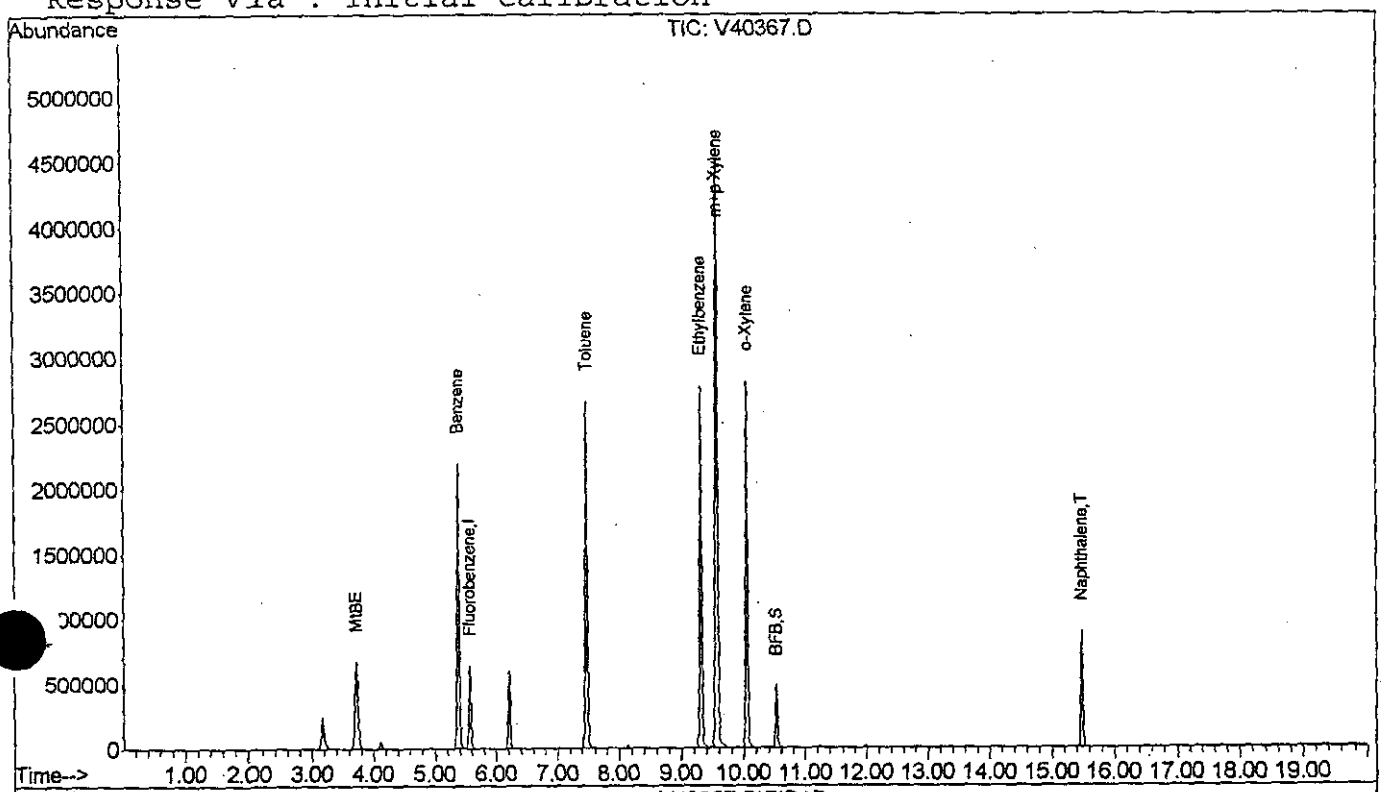
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	747988	50.00	ug/Kg	0.00
System Monitoring Compounds						
8) BFB	10.52	95	226536	63.03	ug/Kg	0.00
Spiked Amount 50.000			Recovery	=	126.06%	
Target Compounds						Qvalue
2) MtBE	3.71	73	1210297	163.51	ug/Kg	99
3) Benzene	5.37	78	2494709	123.74	ug/Kg	100
4) Toluene	7.47	91	2584691	124.98	ug/Kg	99
5) Ethylbenzene	9.32	91	2721445	138.85	ug/Kg	99
6) m+p Xylene	9.56	106	2207318	282.90	ug/Kg	99
7) o-Xylene	10.04	106	1146750	141.64	ug/Kg	99
9) Naphthalene	15.47	128	1065042	219.67	ug/Kg	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40367.D
Acq On : 7 Jul 2000 17:33
Sample : VSTD 150
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:53 2000

Vial: 15
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : C:\TEMP\V40368.D
Acq On : 7 Jul 2000 18:03
Sample : VSTD 200
Misc : INITIAL STD
Integration Params: RTEINT2.P
Quant Time: Jul 8 11:54 2000

Vial: 16
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:53:19 2000
Response via : Initial Calibration
DataAcq Meth : 8260

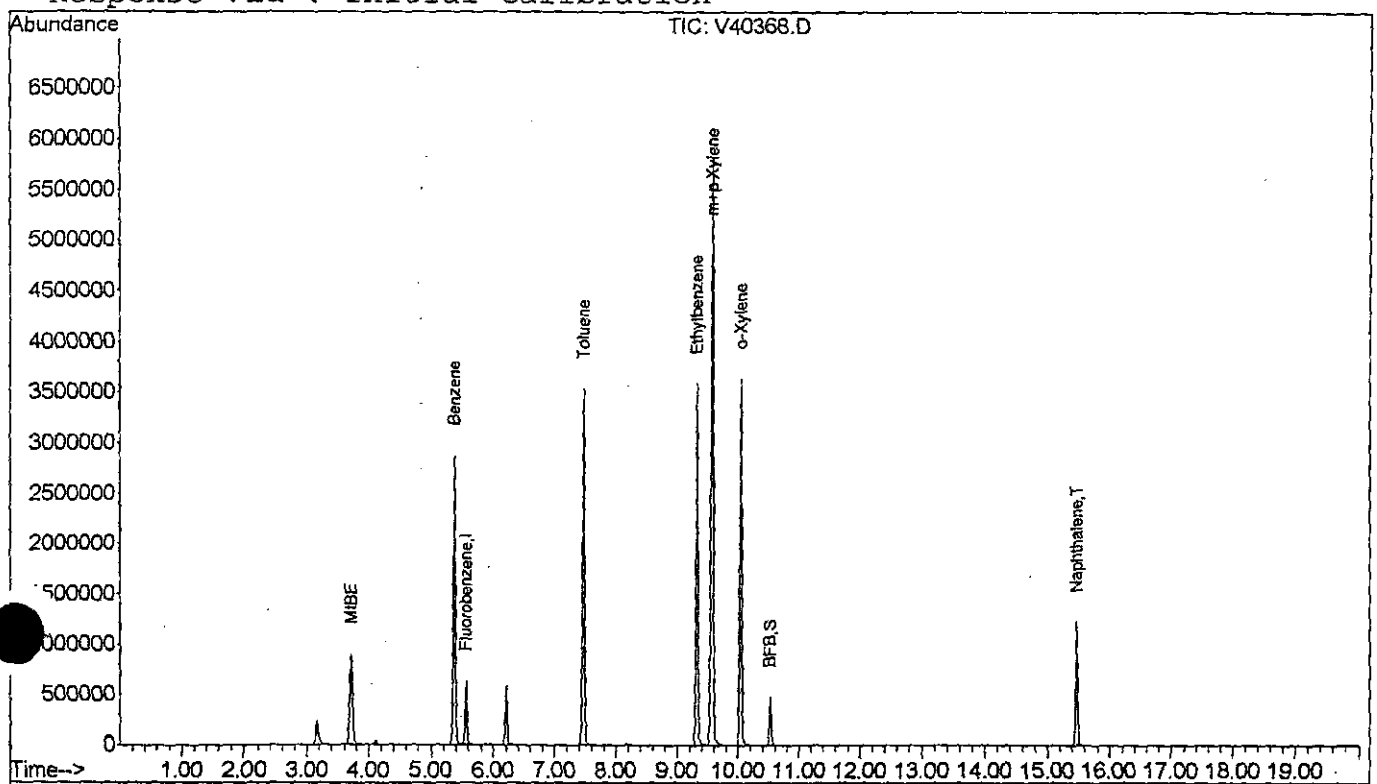
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	5.57	96	742946	50.00	ug/Kg	0.00
System Monitoring Compounds						
8) BFB	10.53	95	224226	61.37	ug/Kg	0.00
Spiked Amount 50.000			Recovery	=	122.74%	
Target Compounds						Qvalue
2) MtBE	3.71	73	1579152	212.24	ug/Kg	100
3) Benzene	5.37	78	3258564	164.88	ug/Kg	100
4) Toluene	7.47	91	3323224	163.81	ug/Kg	100
5) Ethylbenzene	9.32	91	3468121	180.01	ug/Kg	100
6) m+p Xylene	9.56	106	2825402	367.32	ug/Kg	99
7) o-Xylene	10.04	106	1492147	187.47	ug/Kg	99
9) Naphthalene	15.47	128	1449127	275.72	ug/Kg	100

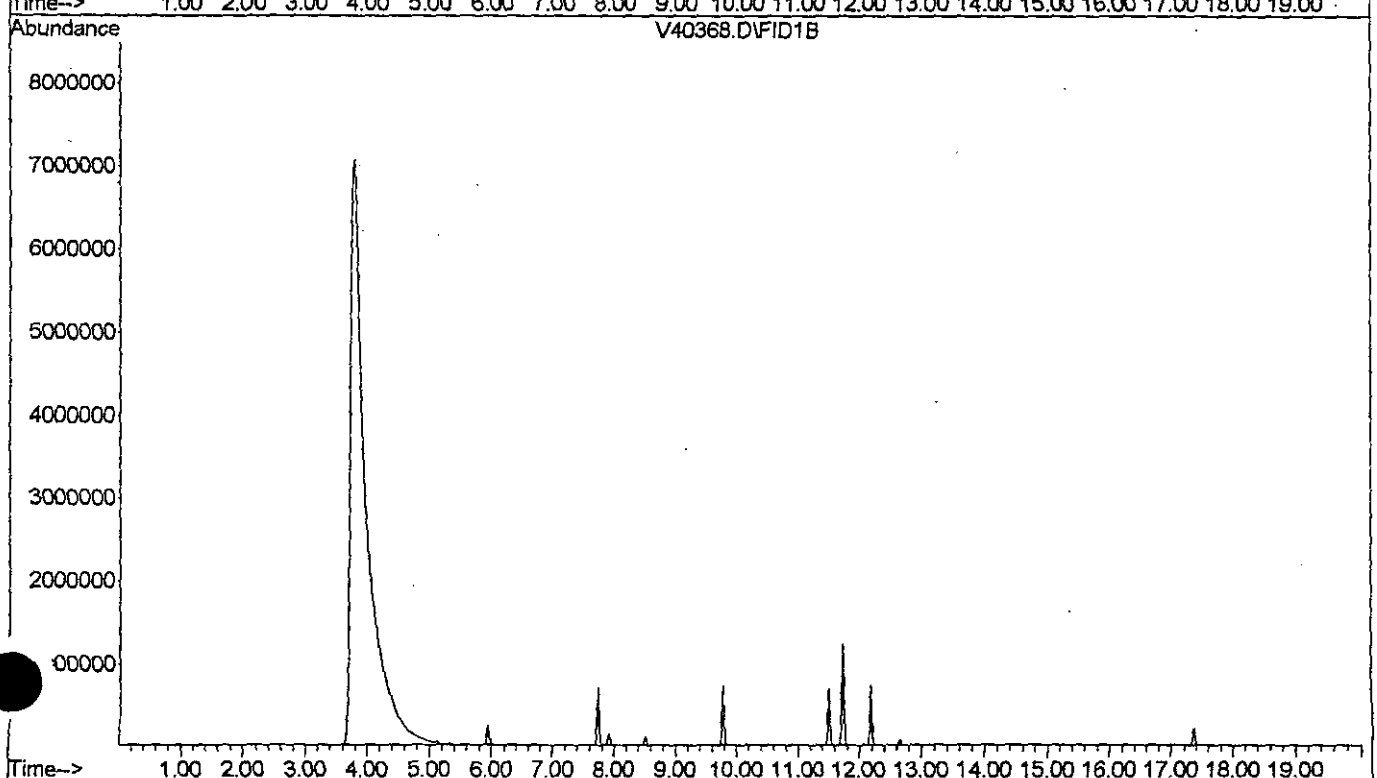
(#) = qualifier out of range (m) = manual integration

Data File : C:\TEMP\V40368.D
Acq On : 7 Jul 2000 18:03
Sample : VSTD 200
Misc : INITIAL STD
MS Integration Params: RTEINT2.P
Quant Time: Jul 8 11:54 2000

Vial: 16
Operator: CM
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





CONTINUING CALIBRATION

AES, Inc
3781 Presidential Pkwy
Suite 111
Atlanta, GA 30340

AES 6890 MS/FID ANALYSIS LOG SHEET

Date: 10/20/00
Method: 8260
Column ID: DB-VRX

IS ID: 504-0-0125
Std ID: VOA-0-0150
Batch ID: 7843

Instrument: MS/FID-1

Int.Std	CCC Area	(-50% to + 100%)
FB	683515	341757-1367030

Method Criteria Met	8260	8015	BTEX	
5 pts:	Y/N	Y/N	Y/N	Y/N
BFB:	Y/N	Y/N	Y/N	Y/N
CCC:	Y/N	Y/N	Y/N	Y/N

NO	File ID	Lab ID	Sample Vol/(Wt)	DF	pH	Status	Comments/Preparation
1	V42558.D	BFB Tune	5.00	1	N/A	OK/RIN	
2	59.D	BTEX 50ppbS		1		OK/RIN	
3	60.D	BTEX 01 ppbS		1		OK/RIN	
4	61.D	MB-7843		1		OK/RIN	
5	62.D	LCS-7843		1		OK/RIN	
6	63.D	0010397-001A	6.40	1		OK/RIN	
7	64.D	-002A	5.82	1		OK/RIN	
8	65.D	-003A	6.15	1		OK/RIN	
9	66.D	-004A	5.76	1		OK/RIN	n/a Neat
10	67.D	-005A	5.88	1		OK/RIN	
11	68.D	-006A	6.12	1		OK/RIN	
12	69.D	-007A	6.08	1		OK/RIN	
13	70.D	-008A	6.75	1		OK/RIN	
14	71.D	-009A	6.46	1		OK/RIN	
15	72.D	-010A	5.98	1		OK/RIN	
16	73.D	-004A	5.11	1		OK/RIN	
17	74.D	0010401-002A	5.50	1		OK/RIN	
18	75.D	-003A	5.30	1		OK/RIN	
19	76.D	-001A	5.10	1		OK/RIN	
20	77.D	BLANK MeOH	5.00	1		OK/RIN	
21	78.D	0010384-001A	5.01	1		OK/RIN	
22	79.D	-002A	5.12	1		OK/RIN	
23	80.D	-003A	5.05	1		OK/RIN	
24	81.D	0010368-009A	10.60	1		OK/RIN	
25	82.D	BLANK MeOH	5.00	1		OK/RIN	
26						OK/RIN	
27						OK/RIN	
28						OK/RIN	
29						OK/RIN	
30						OK/RIN	
31						OK/RIN	
32						OK/RIN	

10/20/00

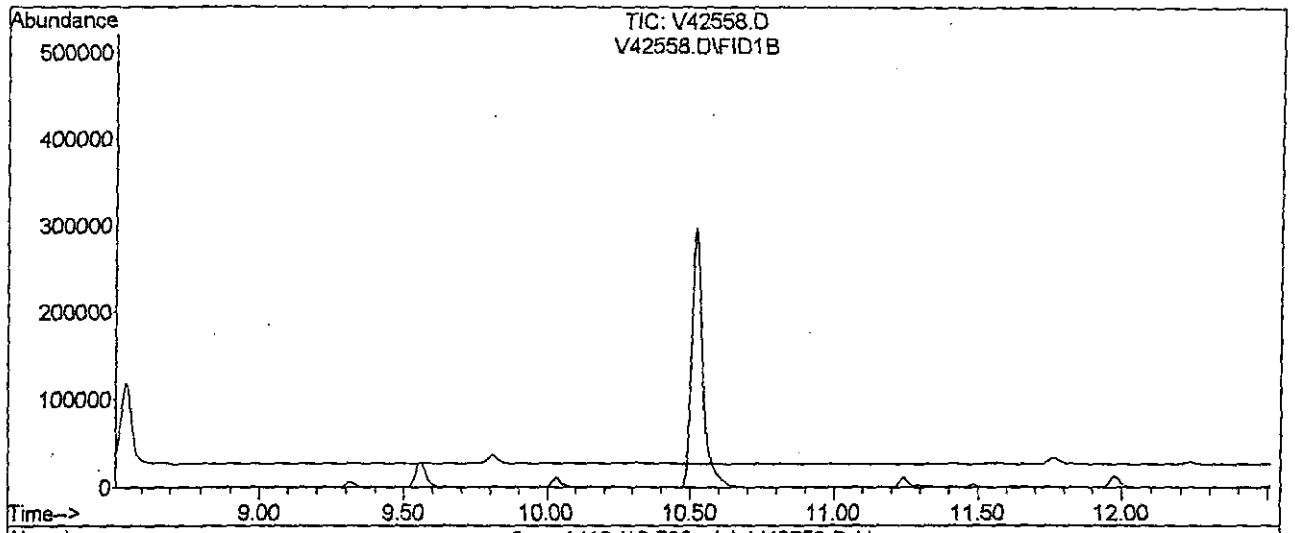
Comments:

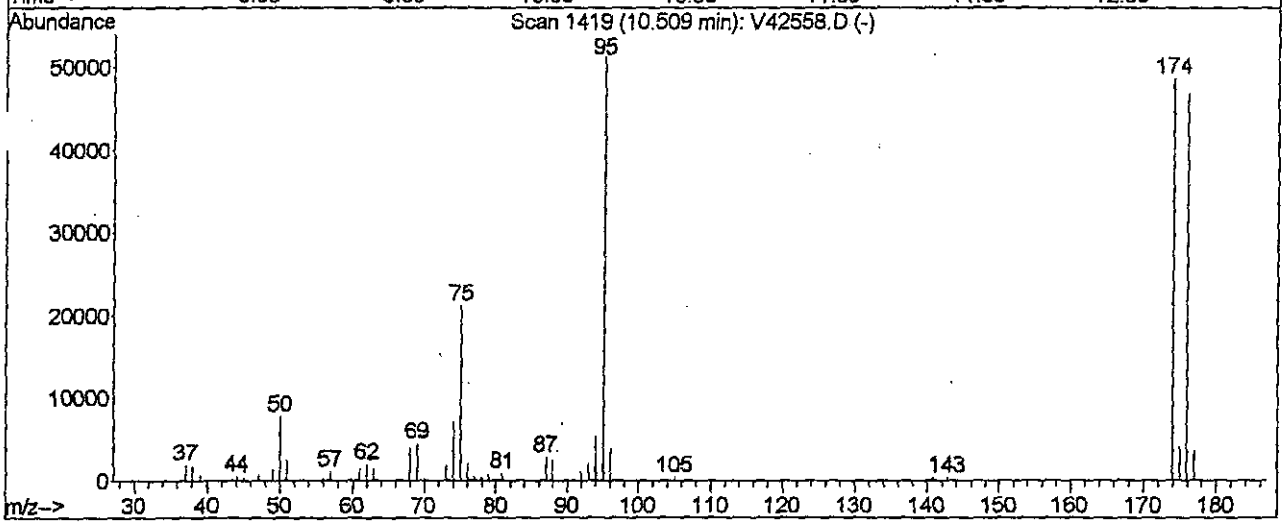
Analyst: [signature]

Date: 10/20/00

BFB

Data File : C:\HPCHEM\1\DATA\OCT20\V42558.D Vial: 1
Acq On : 20 Oct 2000 9:26 Operator: JC
Sample : BFB TUNE Inst : GC/MS VO
Misc : TUNE Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.
Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil





Spectrum Information: Scan 1419

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.1	7775	PASS
75	95	30	60	41.2	21218	PASS
95	95	100	100	100.0	51440	PASS
96	95	5	9	7.4	3831	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	94.7	48696	PASS
175	174	5	9	8.3	4066	PASS
176	174	95	101	96.2	46835	PASS
177	176	5	9	7.7	3612	PASS

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\OCT20\V42559.D Vial: 2
Acq On : 20 Oct 2000 9:56 Operator: JC
Sample : BTEX 50 PPB S Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	99	-0.02
2		MtBE	0.654	0.439	~~32.9#~~	84	-0.01
3		Benzene	1.315	1.150	12.5	90	-0.01
4		Toluene	1.351	1.230	9.0	95	-0.02
5		Ethylbenzene	1.284	1.261	1.8	97	-0.01
6		m+p Xylene	0.514	0.508	1.2	99	-0.01
7		o-Xylene	0.531	0.517	2.6	96	-0.01
8	S	BFB	0.252	0.285	-13.1	113	-0.01
9	T	Naphthalene	0.352	0.332	5.7	128	-0.01

MTBE: $\% D = \left| \frac{41.59 - 50}{50} \right| \times 100\% = -16.82\% < 20\%$

(#) = Out of Range SPCC's out = 0 CCC's out = 0
V42559.D MBXS7070.M Mon Oct 23 17:08:32 2000 TEST Page 1

Data File : C:\HPCHEM\1\DATA\OCT20\V42559.D Vial: 2
Acq On : 20 Oct 2000 9:56 Operator: JC
Sample : BTEX 50 PPB S Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 20 10:17 2000 Quant Results File: MBXS7070.RES

Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration
DataAcq Meth : 8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.55	96	683515	50.00 ug/Kg	-0.02
System Monitoring Compounds					
8) BFB	10.51	95	194544	56.57 ug/Kg	-0.01
Spiked Amount 50.000			Recovery	= 113.14%	
Target Compounds					Qvalue
2) MtBE	3.70	73	299787	41.59 ug/Kg	100
3) Benzene	5.36	78	786367	43.74 ug/Kg	100
4) Toluene	7.46	91	840927	45.55 ug/Kg	100
5) Ethylbenzene	9.31	91	862124	49.13 ug/Kg	99
6) m+p Xylene	9.55	106	694615	98.85 ug/Kg	100
7) o-Xylene	10.03	106	353662	48.68 ug/Kg	100
9) Naphthalene	15.46	128	227162	49.01 ug/Kg	100

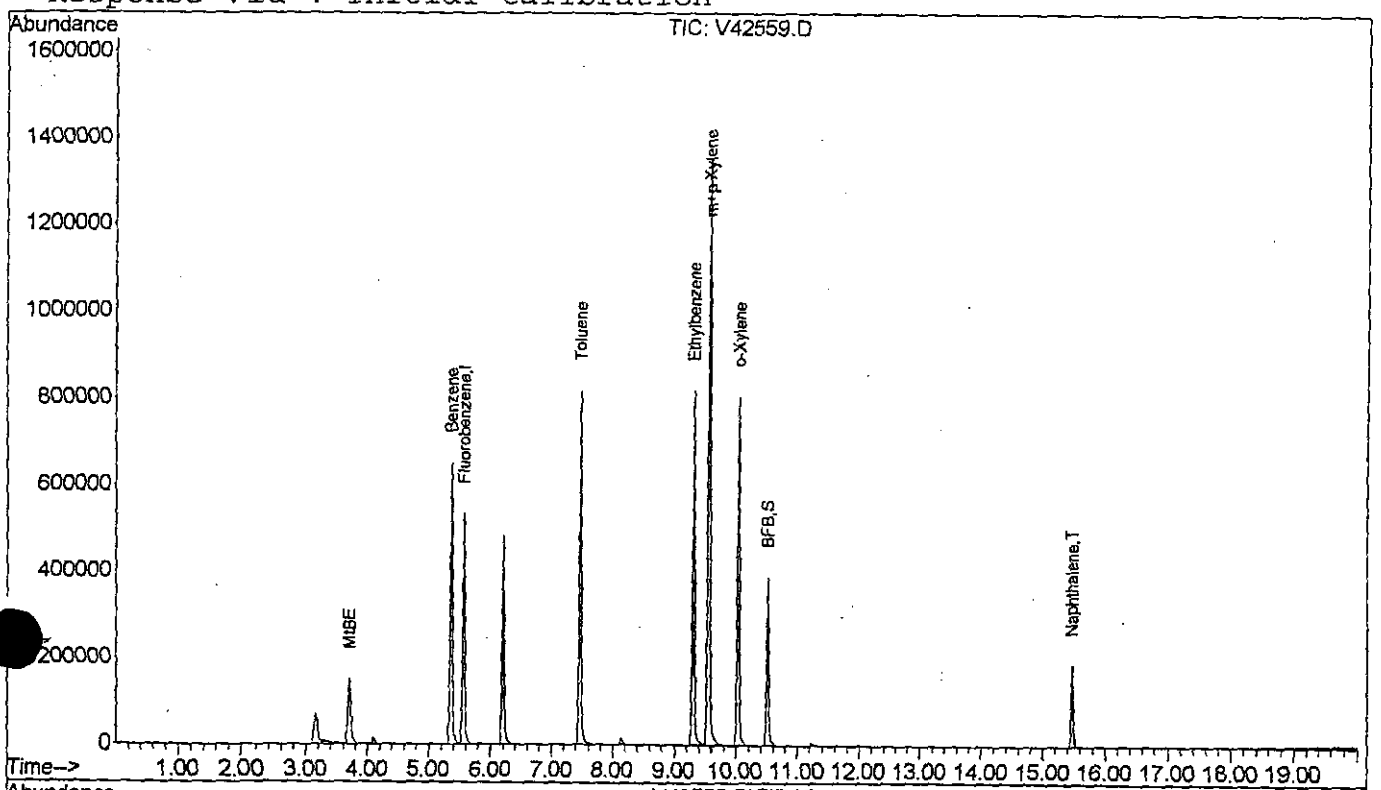
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\OCT20\V42559.D
Acq On : 20 Oct 2000 9:56
Sample : BTEX 50 PPB S
Misc : CON. CAL
IS Integration Params: RTEINT2.P
Quant Time: Oct 20 10:17 2000

Vial: 2
Operator: JC
Inst : GC/MS VOA
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration



000103

AES, Inc
3781 Presidential Pkwy
Suite 111
Atlanta, GA 30340

AES 6890 MS/FID ANALYSIS LOG SHEET

Date: 10/24/00
Method: 8260
Column ID: DB-VRX

IS ID: VOA-0-0132
Std ID: VOA-0-0150
Batch ID: 7920

Instrument: MS/FID-1

Int.Std	CCC Area	(-50% to + 100%)
FB	621610	310805 - 1243220

Method Criteria Met	8260	8015	BTEX	
5 pts:	Y/N	Y/N	Y/N	Y/N
BFB:	Y/N	Y/N	Y/N	Y/N
CCC:	Y/N	Y/N	Y/N	Y/N

NO	File ID	Lab ID	Sample ~~Vol~~/Wt	DF	pH	Status	Comments/Preparation
1	V426 49.0	BFB Tune	5.00	1	N/A	OK/RIN	
2	50.0	GRO 2000S		1		OK/RIN	
3	51.0	BTEX 50ppbS		1		OK/RIN	
4	52.0	BTEX 01ppbS		1		OK/RIN	
5	53.0	MB-7920		1		OK/RIN	
6	54.0	LCS-7920		1		OK/RIN	
7	55.0	0010443-001A	7.44	1		OK/RIN	
8	56.0	-002A	7.83	1		OK/RIN	
9	57.0	-003A	7.58	1		OK/RIN	
10	58.0	-004A	8.67	1		OK/RIN	
11	59.0	0010421-001A	7.84	1		OK/RIN	
12	60.0	-002A	5.00	1		OK/RIN	
13	61.0	0010426-001A	4.72	1		OK/RIN	
14	62.0	0010419-001A	5.00	1		OK/RIN	
15	63.0	-002A	5.05	1		OK/RIN	
16	64.0	0010449-001A	5.07	1		OK/RIN	
17	65.0	-002A	5.00	1		OK/RIN	
18	66.0	LCS-~~7920~~ 7843	5.00	1		OK/RIN	
19	67.0	BLANK MeOH	5.00	1		OK/RIN	
20	68.0	0010397-006AMS	5.00	1		OK/RIN	Failed
21	69.0	-006AMSD	5.00	1		OK/RIN	
22						OK/RIN	
23						OK/RIN	
24						OK/RIN	
25						OK/RIN	
26						OK/RIN	
27						OK/RIN	
28						OK/RIN	
29						OK/RIN	
30						OK/RIN	
31						OK/RIN	
32						OK/RIN	

10/24/00

Comments:

000104

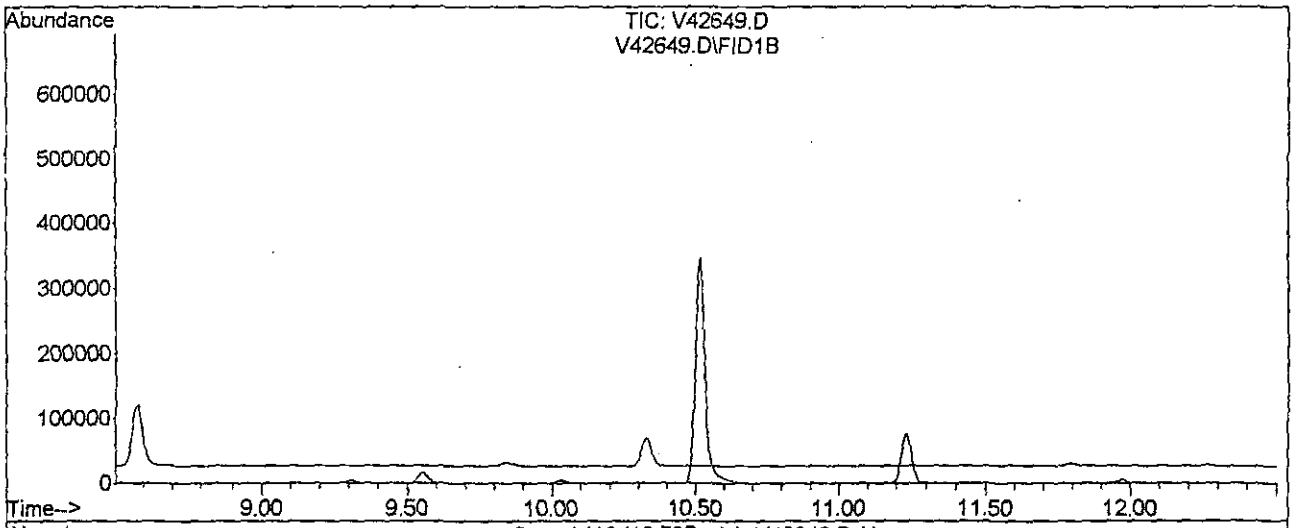
Analyst: [signature] Date: 10/24/00
Reviewed By: Date:

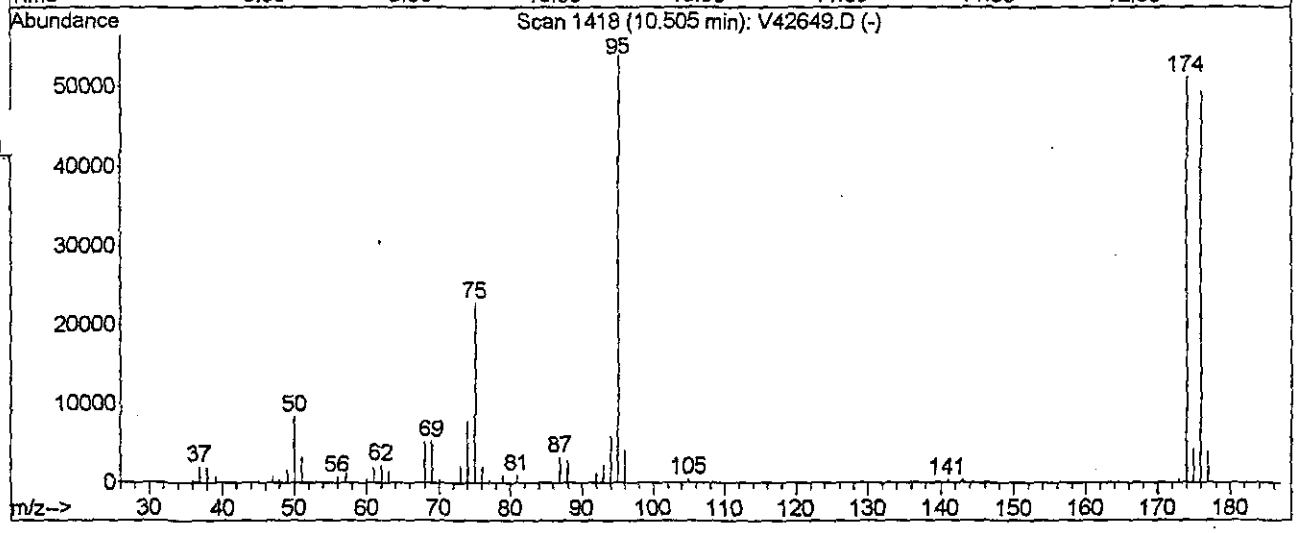
000024

MC 1:20 PM 5/12/00

BFB

Data File : C:\HPCHEM\1\DATA\OCT24\V42649.D Vial: 1
Acq On : 24 Oct 2000 10:16 Operator: JC
Sample : BFB TUNE Inst : GC/MS VO
Misc : TUNE Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.
Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil





Spectrum Information: Scan 1418

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.3	8248	PASS
75	95	30	60	42.1	22697	PASS
95	95	100	100	100.0	53869	PASS
96	95	5	9	7.5	4044	PASS
173	174	0.00	2	0.8	412	PASS
174	95	50	100	94.9	51141	PASS
175	174	5	9	8.1	4163	PASS
176	174	95	101	96.5	49330	PASS
177	176	5	9	7.8	3845	PASS

Data File : C:\HPCHEM\1\DATA\OCT24\V42651.D Vial: 3
Acq On : 24 Oct 2000 11:15 Operator: JC
Sample : BTEX 50 PPB S Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorobenzene	1.000	1.000	0.0	90	-0.01
2		MtBE	0.654	0.244	62.7#	42#	0.00
3		Benzene	1.315	1.162	11.6	82	-0.01
4		Toluene	1.351	1.191	11.8	83	-0.01
5		Ethylbenzene	1.284	1.234	3.9	86	-0.01
6		m+p Xylene	0.514	0.495	3.7	88	-0.01
7		o-Xylene	0.531	0.503	5.3	85	-0.01
8	S	BFB	0.252	0.281	-11.5	102	-0.01
9	T	Naphthalene	0.352	0.293	16.8	103	-0.01

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

Data File : C:\HPCHEM\1\DATA\OCT24\V42651.D Vial: 3
Acq On : 24 Oct 2000 11:15 Operator: JC
Sample : BTEX 50 PPB S Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 24 11:50 2000 Quant Results File: NMBXW817.RES

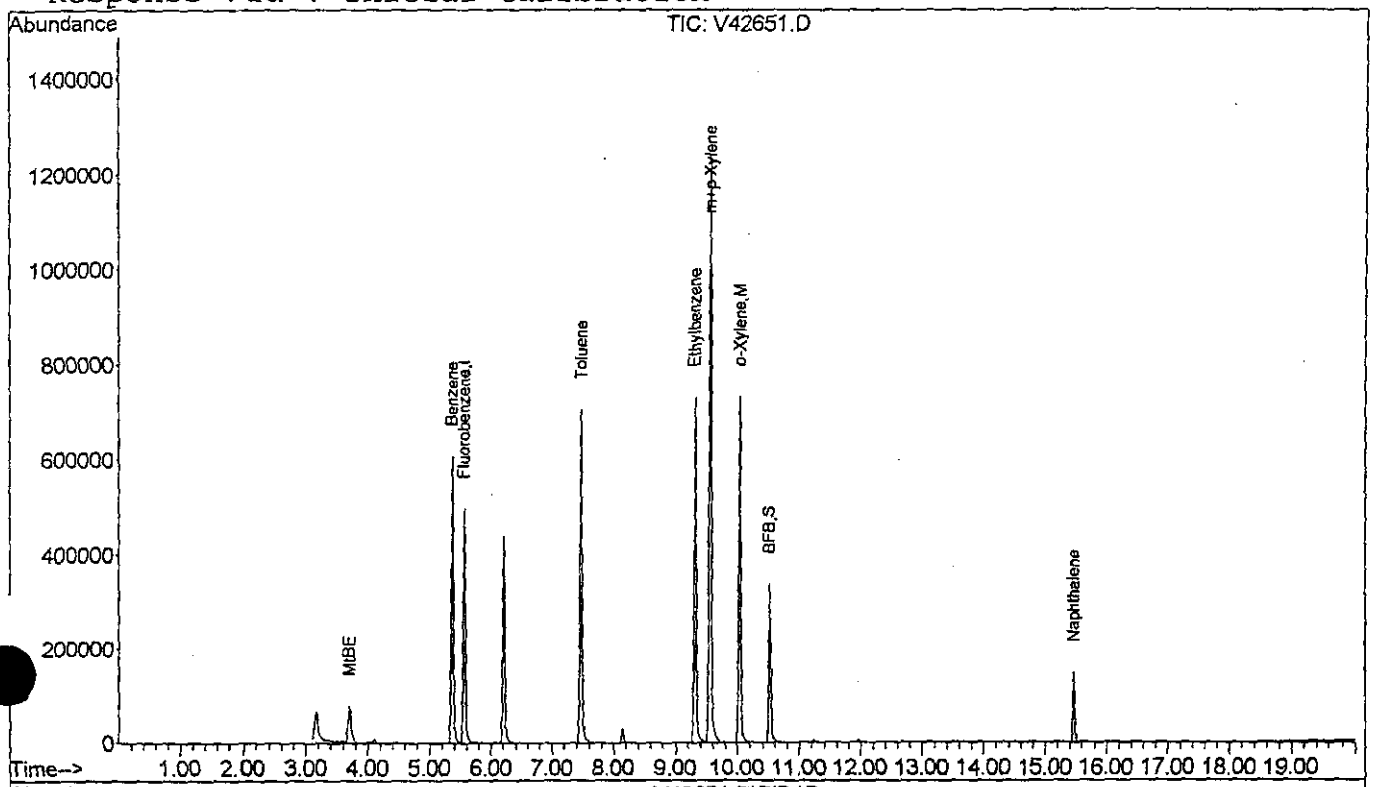
Quant Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration
DataAcq Meth : 8260

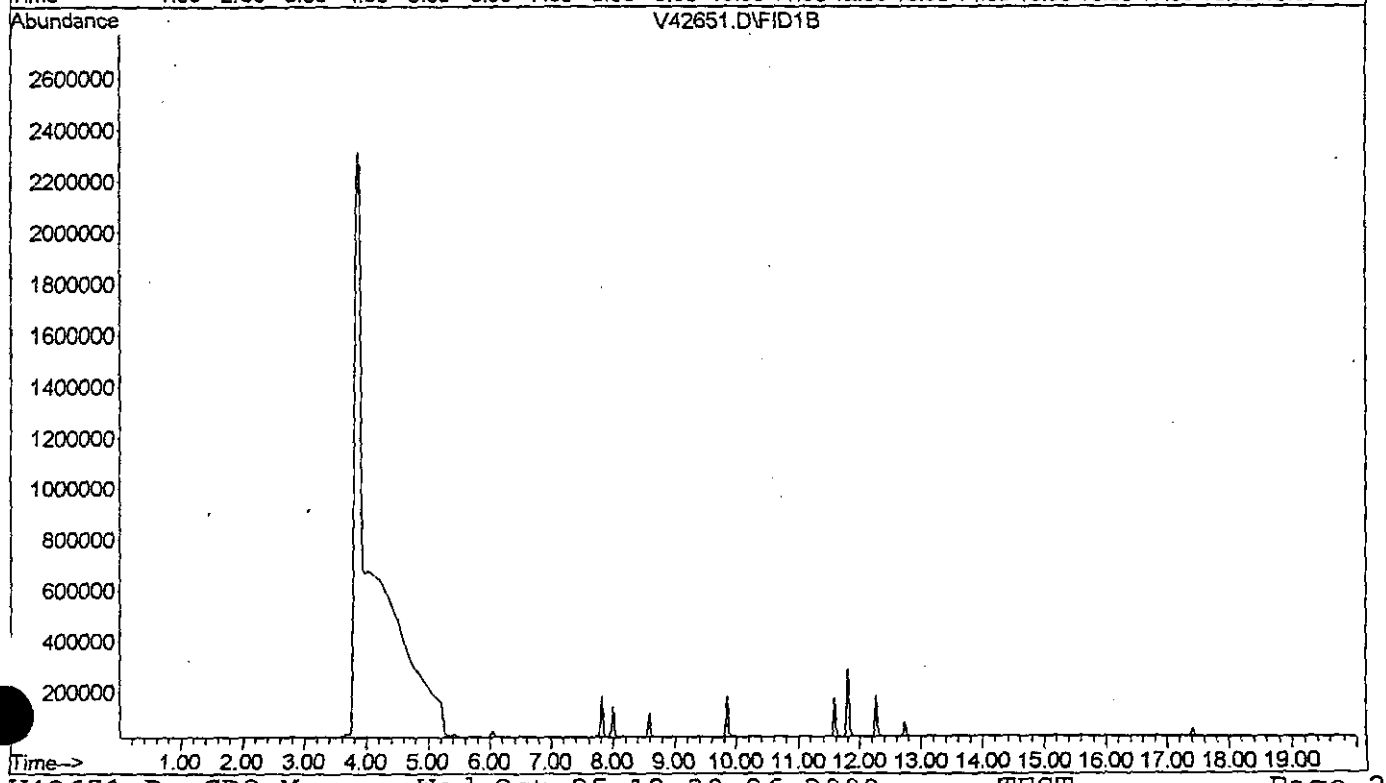
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.56	96	621610	50.00 ug/L	0.00
System Monitoring Compounds					
8) BFB	10.51	95	174943	36.37 ug/L	0.00
Spiked Amount 50.000			Recovery =	72.74%	
Target Compounds					Qvalue
2) MtBE	3.71	73	151667	21.97 ug/L	99
3) Benzene	5.36	78	722298	44.23 ug/L	100
4) Toluene	7.46	91	740173	44.38 ug/L	99
5) Ethylbenzene	9.31	91	767115	48.91 ug/L	99
6) m+p Xylene	9.55	106	615666	101.85 ug/L	95
7) o-Xylene	10.03	106	312881	48.32 ug/L	96
9) Naphthalene	15.46	128	182064	60.92 ug/L	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\OCT24\V42651.D Vial: 3
Acq On : 24 Oct 2000 11:15 Operator: JC
Sample : BTEX 50 PPB S Inst : GC/MS VOA
Misc : CON. CAL Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 24 11:50 2000 Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\GRO.M (RTE Integrator)
Title :
Last Update : Tue May 09 13:53:20 2000
Response via : Initial Calibration





Data File : C:\HPCHEM\1\DATA\OCT24\V42653.D Vial: 5
Acq On : 24 Oct 2000 12:14 Operator: JC
Sample : MB-7920 Inst : GC/MS VOA
Misc : MBLK BTEX_S-MS/GRO Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 24 12:40 2000 Quant Results File: MBXS7070.RES

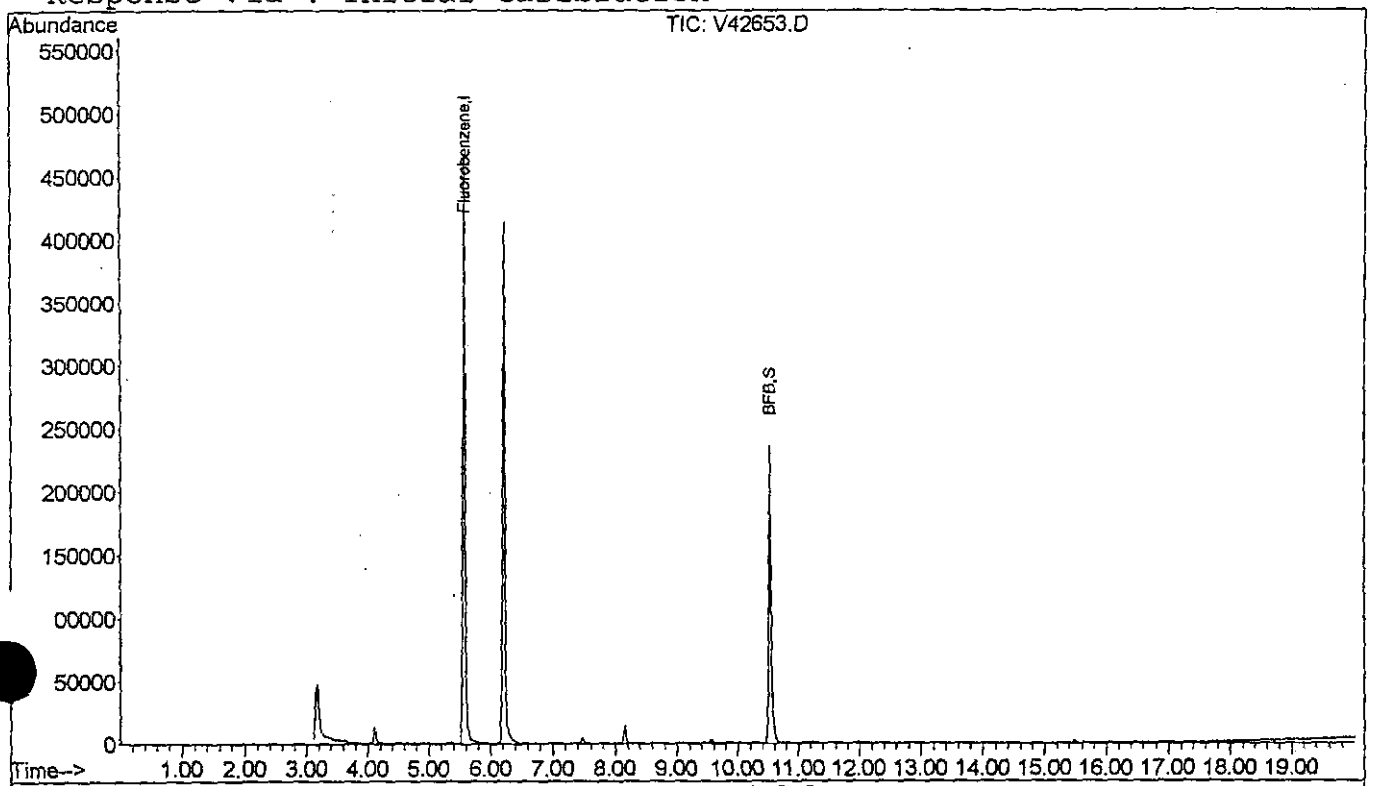
Quant Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration
DataAcq Meth : 8260

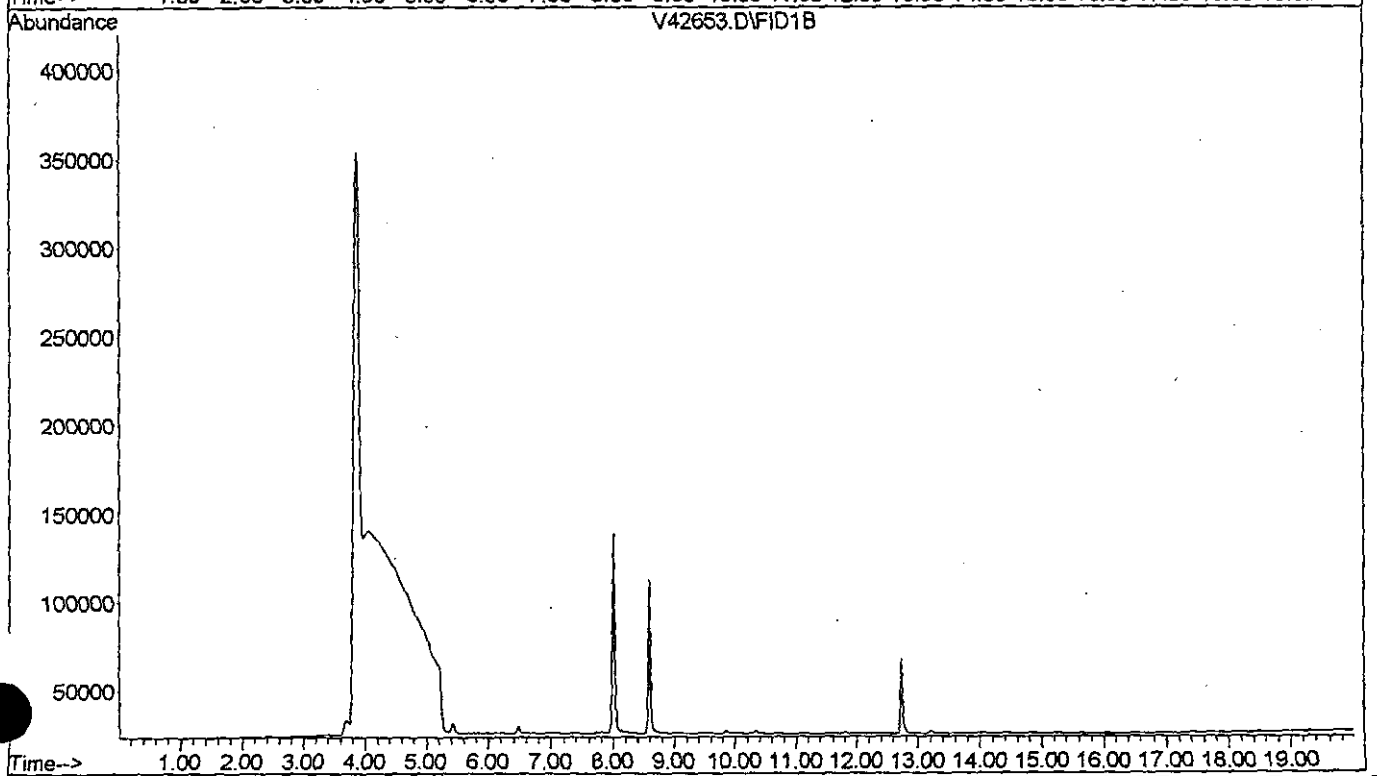
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene	5.56	96	597451	50.00 ug/Kg	0.00
System Monitoring Compounds					
8) BFB	10.52	95	142891	47.53 ug/Kg	0.00
Spiked Amount 50.000			Recovery =	95.06%	
Target Compounds					Qvalue
2) MtBE	0.00	73	0	N.D.	
3) Benzene	0.00	78	0	N.D. d	
4) Toluene	0.00	91	0	N.D. d	
5) Ethylbenzene	0.00	91	0	N.D. d	
6) m+p Xylene	0.00	106	0	N.D. d	
7) o-Xylene	0.00	106	0	N.D. d	
9) Naphthalene	0.00	128	0	N.D. d	

(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\OCT24\V42653.D Vial: 5
Acq On : 24 Oct 2000 12:14 Operator: JC
Sample : MB-7920 Inst : GC/MS VOA
Misc : MBLK BTEX_S-MS/GRO Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 24 12:40 2000 Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

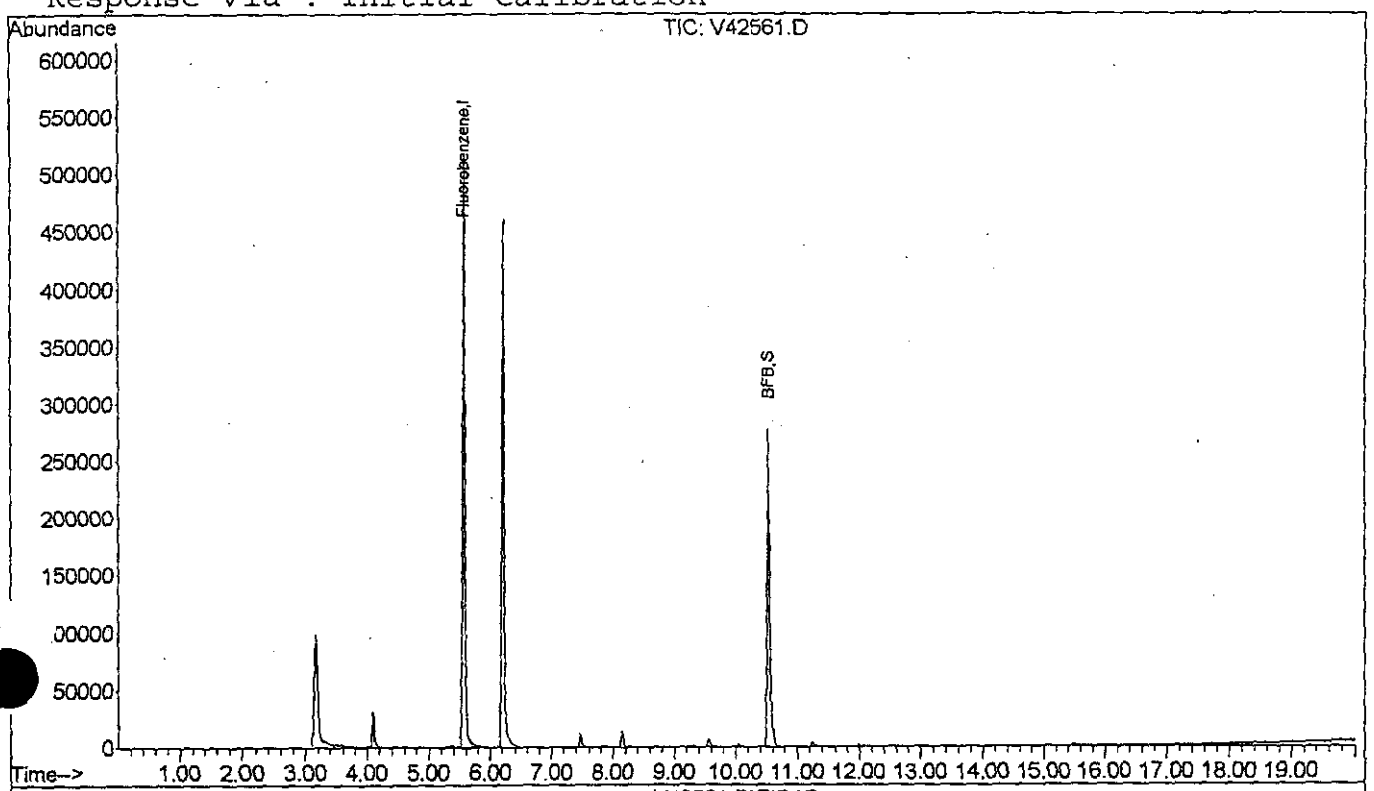


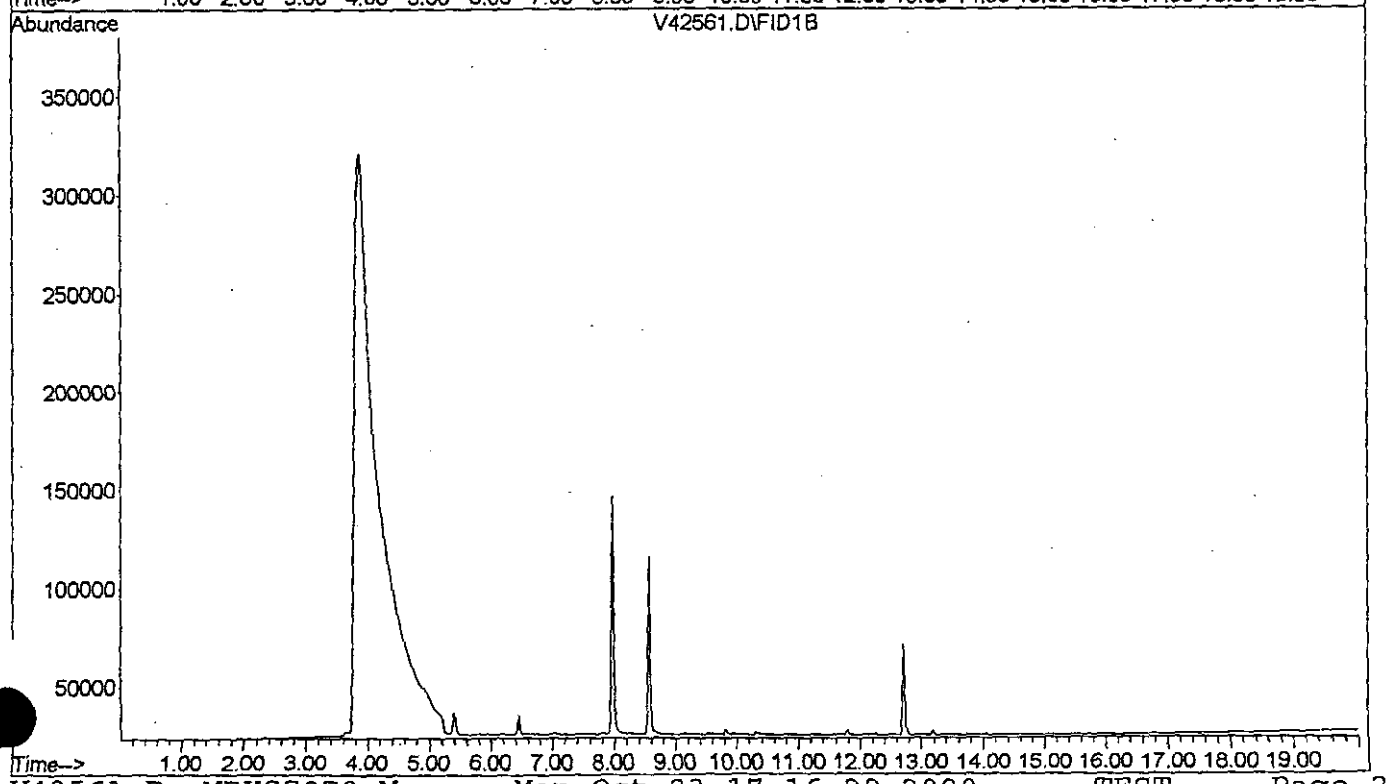


RAW DATA

Data File : C:\HPCHEM\1\DATA\OCT20\V42561.D Vial: 4
Acq On : 20 Oct 2000 10:54 Operator: JC
Sample : MB-7843 Inst : GC/MS VOA
Misc : MBLK BTEX_S-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 20 11:17 2000 Quant Results File: MBXS7070.R

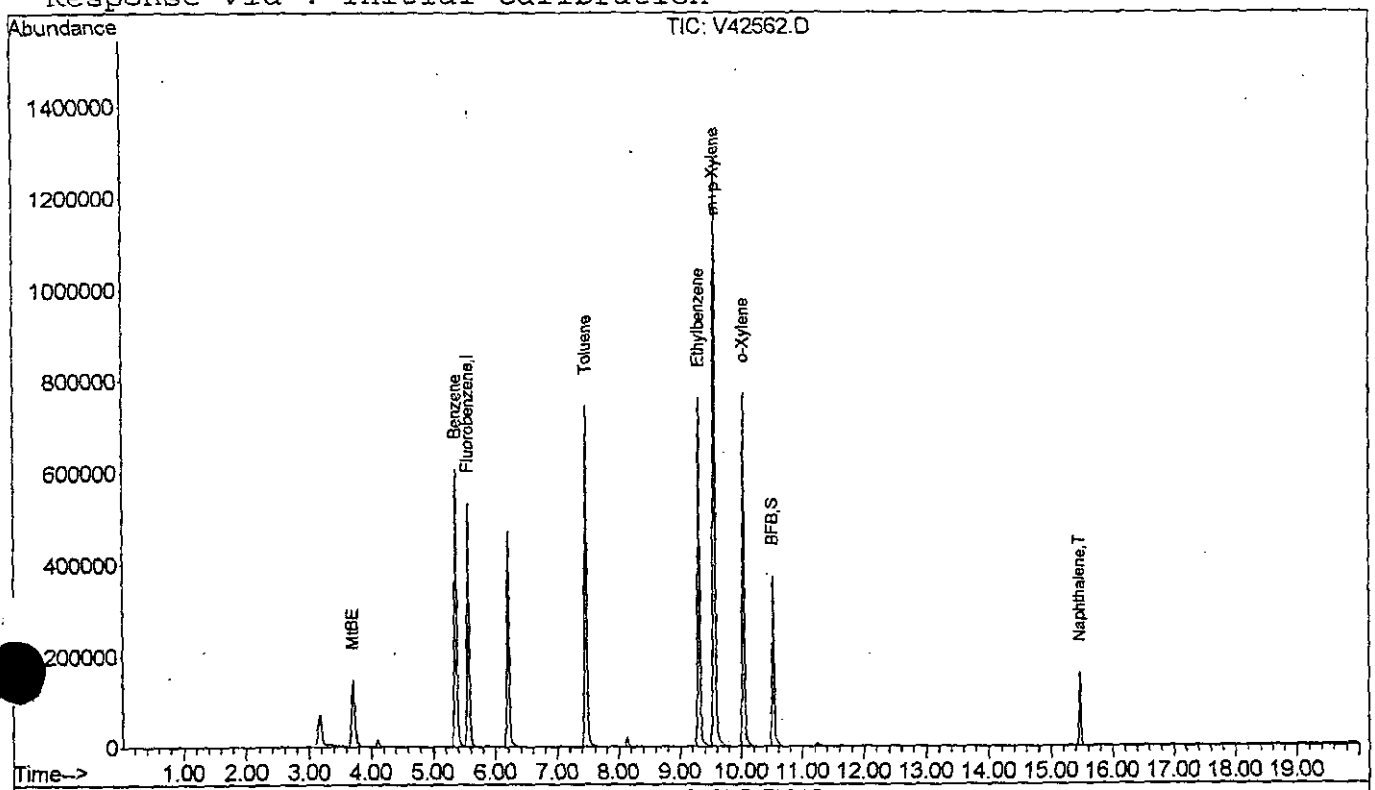
Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

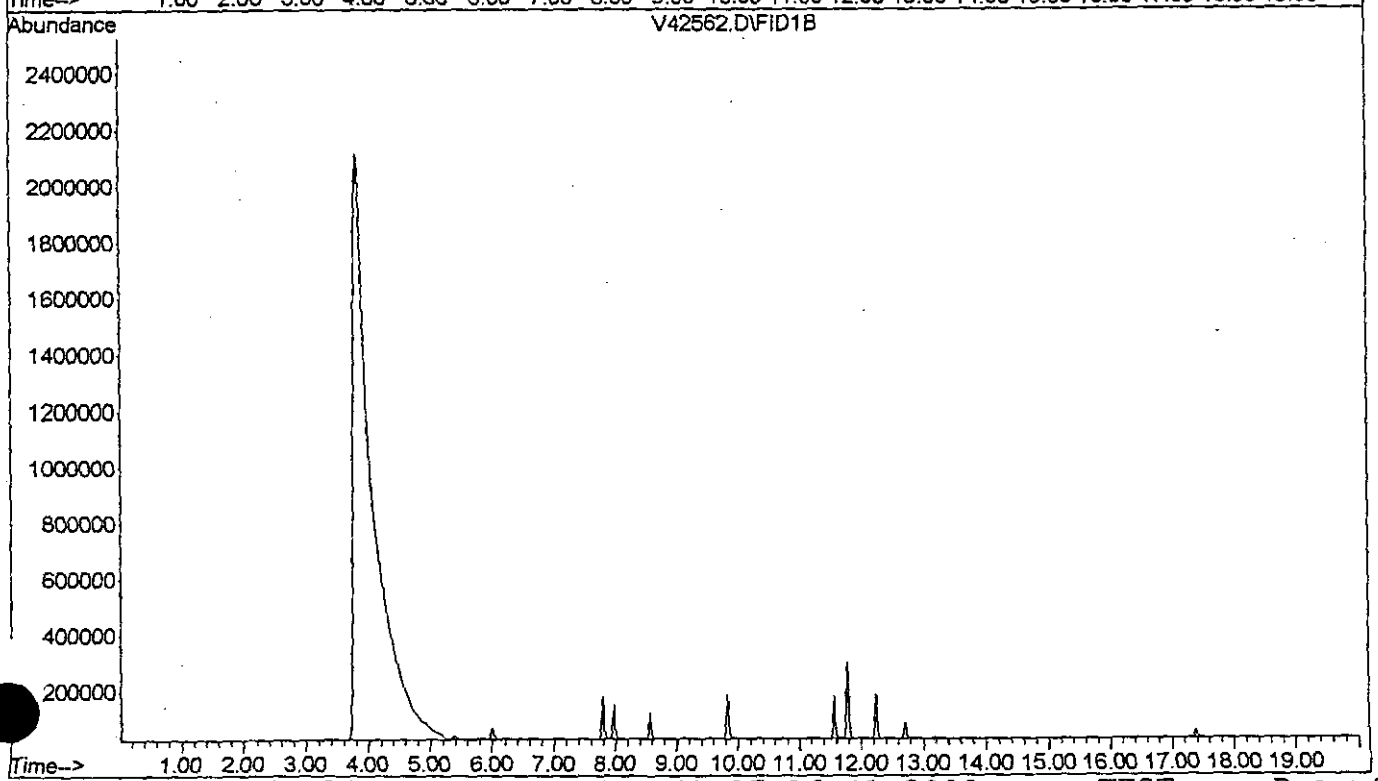




Data File : C:\HPCHEM\1\DATA\OCT20\V42562.D Vial: 5
Acq On : 20 Oct 2000 11:23 Operator: JC
Sample : LCS-7843 Inst : GC/MS VOA
Misc : LCS BTEX_S-MS Multiplr: 1.00
IS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 20 11:46 2000 Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

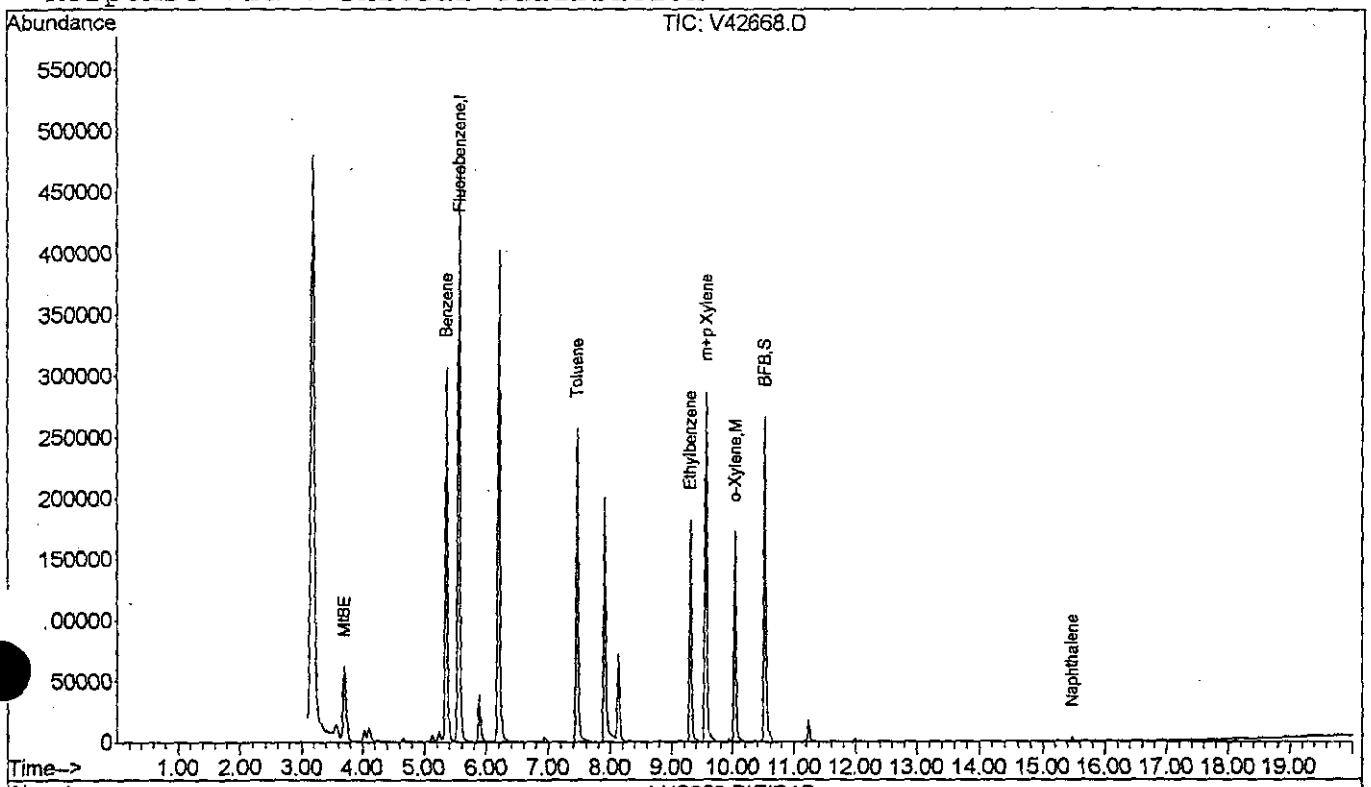


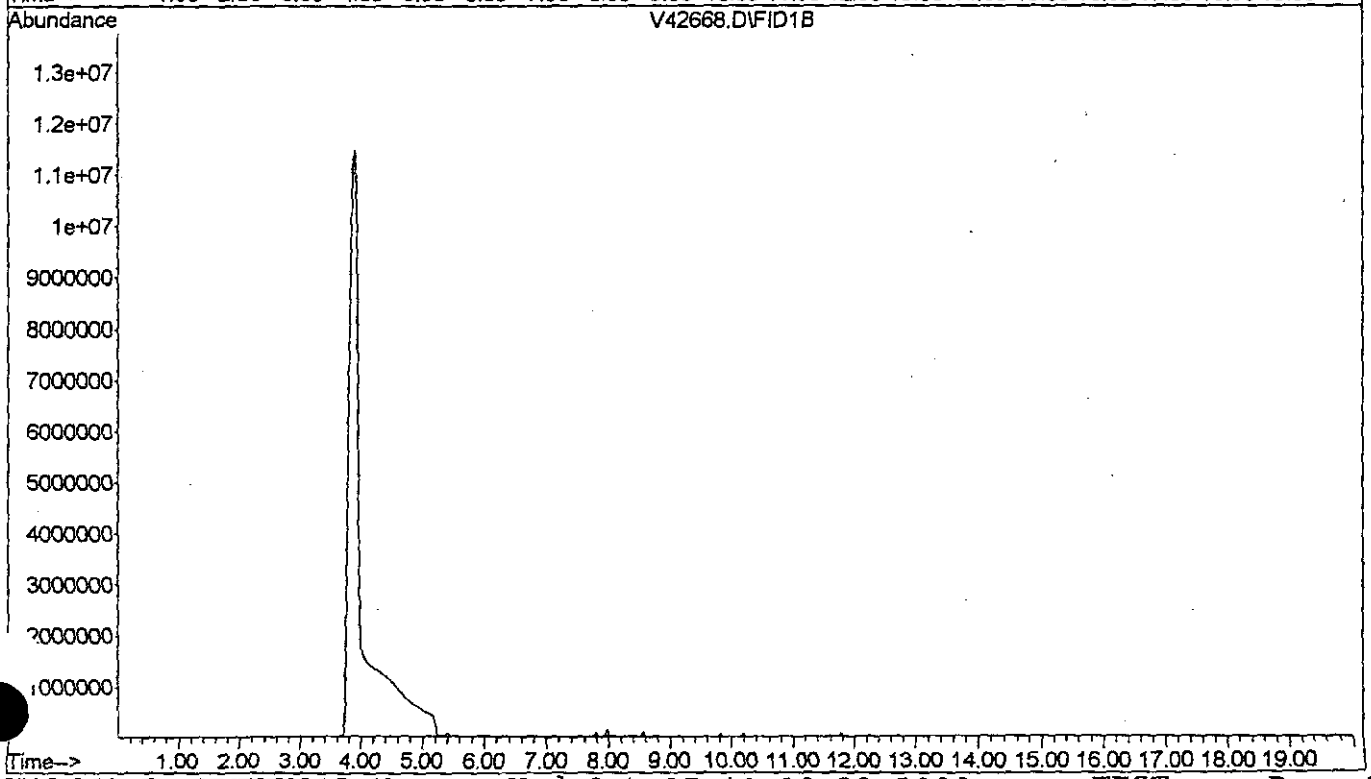


000113

Data File : C:\HPCHEM\1\DATA\OCT24\V42668.D Vial: 20
Acq On : 24 Oct 2000 19:34 Operator: JC
Sample : 0010397-006AMS 5.00g Inst : GC/MS VOA
Misc : MS BTEX_S-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 25 10:19 2000 Quant Results File: NMBXW817.R

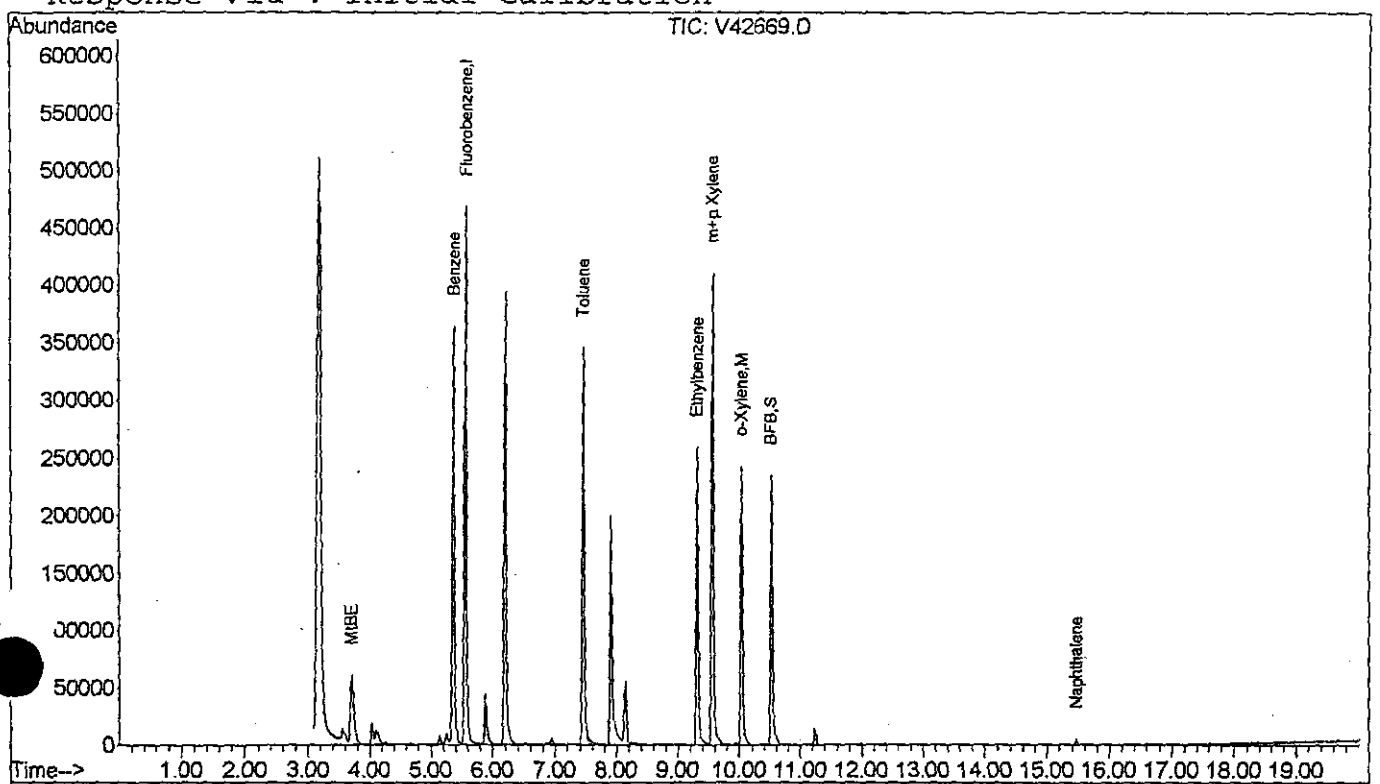
Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration

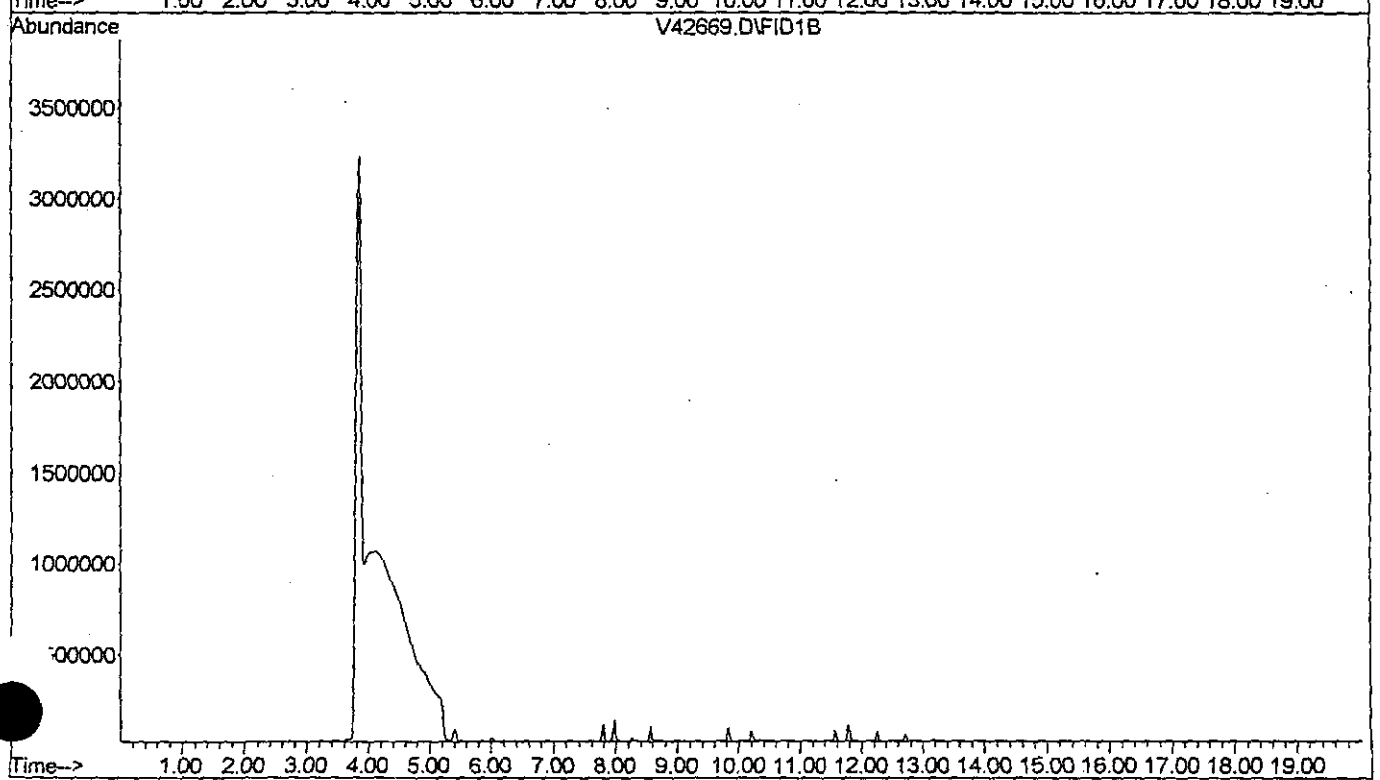




Data File : C:\HPCHEM\1\DATA\OCT24\V42669.D Vial: 21
Acq On : 24 Oct 2000 20:03 Operator: JC
Sample : 0010397-006AMSD 5.00g Inst : GC/MS VOA
Misc : MSD BTEX_S-MS Multiplr: 1.00
IS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 25 10:19 2000 Quant Results File: NMBXW817.R

Method : C:\HPCHEM\1\METHODS\NMBXW817.M (RTE Integrator)
Title : BTEX
Last Update : Mon Oct 23 17:02:49 2000
Response via : Initial Calibration





AES, Inc.
3781 Presidential Pkwy
Suite 111
Atlanta, GA 30340

NONCONFORMANCE REPORT
ORGANIC PREPARATION

Initiated by: JC Date Initiated: 10/25/00 NCR #: OP-QA-20-088

Client: _____ Project Number: 0010401 Method: BTEX-S-MS

Sample(s) affected: 0010397-00QA MS/MSD Batch ID: 7843

Section #1: Identification of Non-conformance:
Indicate and describe details (if necessary)

MS/MSD did not pass on first run.
Concentration < half of spike.

- ☐ Holding Time
- ☐ Catastrophic Failure
- ☒ ~~LCS/MS~~
- ☐ Method Blank
- ☐ Calibration
- ☐ Internal Standards
- ☒ Surrogates
- ☐ Other

Section #2: Actions Required for Immediate Response:
(add details if necessary)

- ☐ Proceed with analysis
- ☒ Reprep/reanalyze
- ☐ Do not analyze
- ☐ No action taken (justify)

Section #3: Result of action taken in Section #2
(add details if necessary)

Second run produced similar results
Matrix interference suspected.
~~Set~~ New MS/MSD to be run on different
sample in batch on 10/25/00

- ☐ Reprep/reanalysis acceptable
- ☒ Reprep/reanal agrees w/ original
- ☐ Other

Section #4: Closure, comments and Date.

Initiation of a Corrective Action to prevent recurrence? ☐ YES ☒ NO

If YES, initiate corrective action report (CAR): CAR initiated #: _____

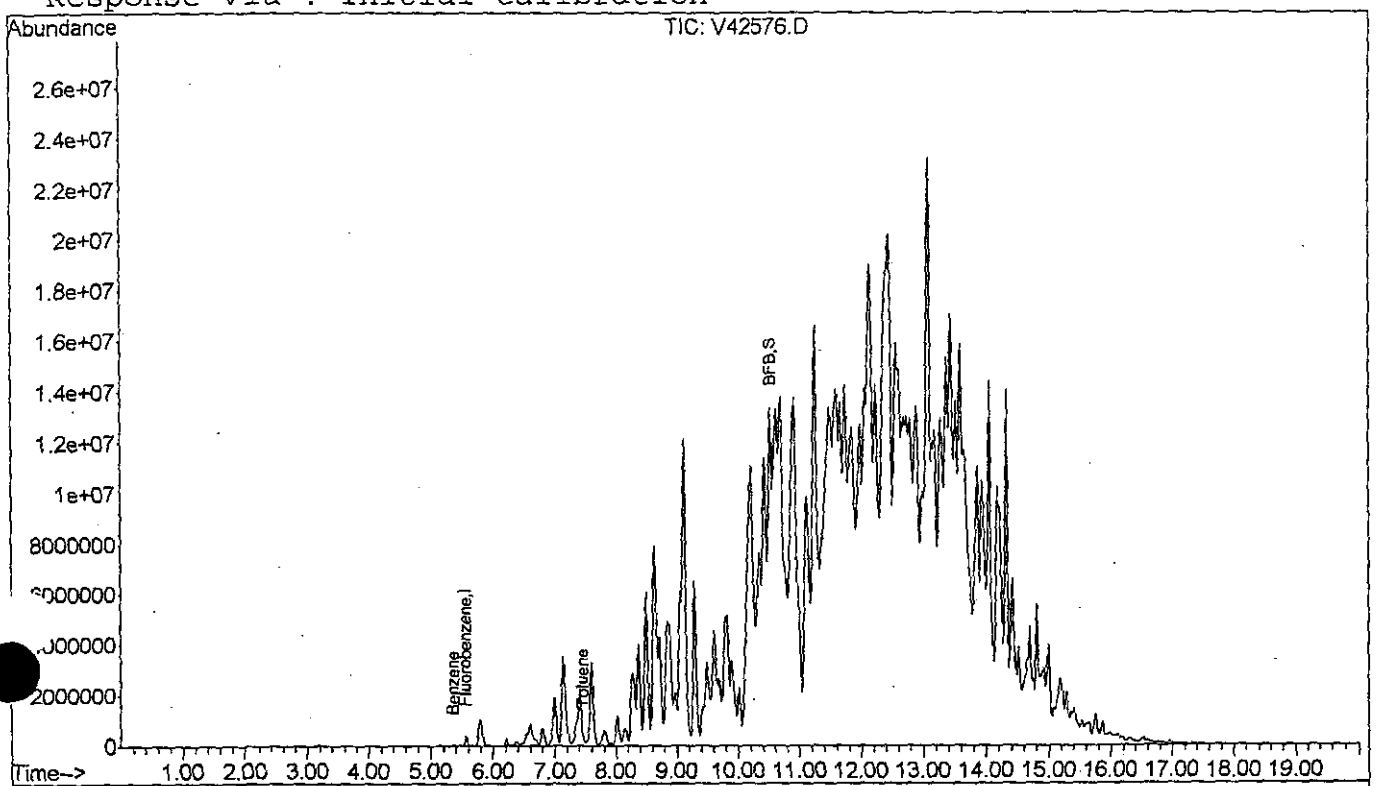
Comments: _____

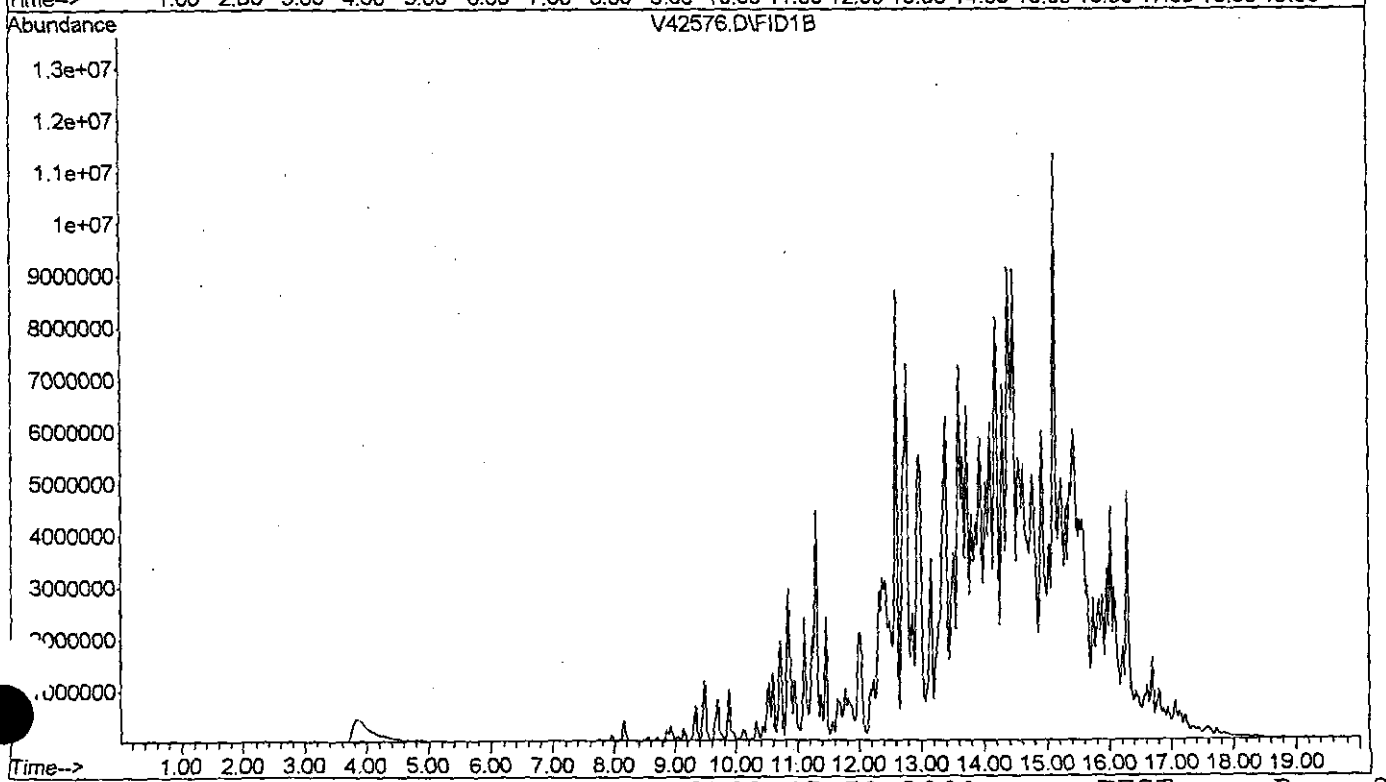
Closed By: [signature] Date: 10/25/00

000116

Data File : C:\HPCHEM\1\DATA\OCT20\V42576.D Vial: 19
Acq On : 20 Oct 2000 18:14 Operator: JC
Sample : 0010401-001A 5.10g Inst : GC/MS VOA
Misc : SAMP BTEX_S-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 8:47 2000 Quant Results File: MBXS7070.R

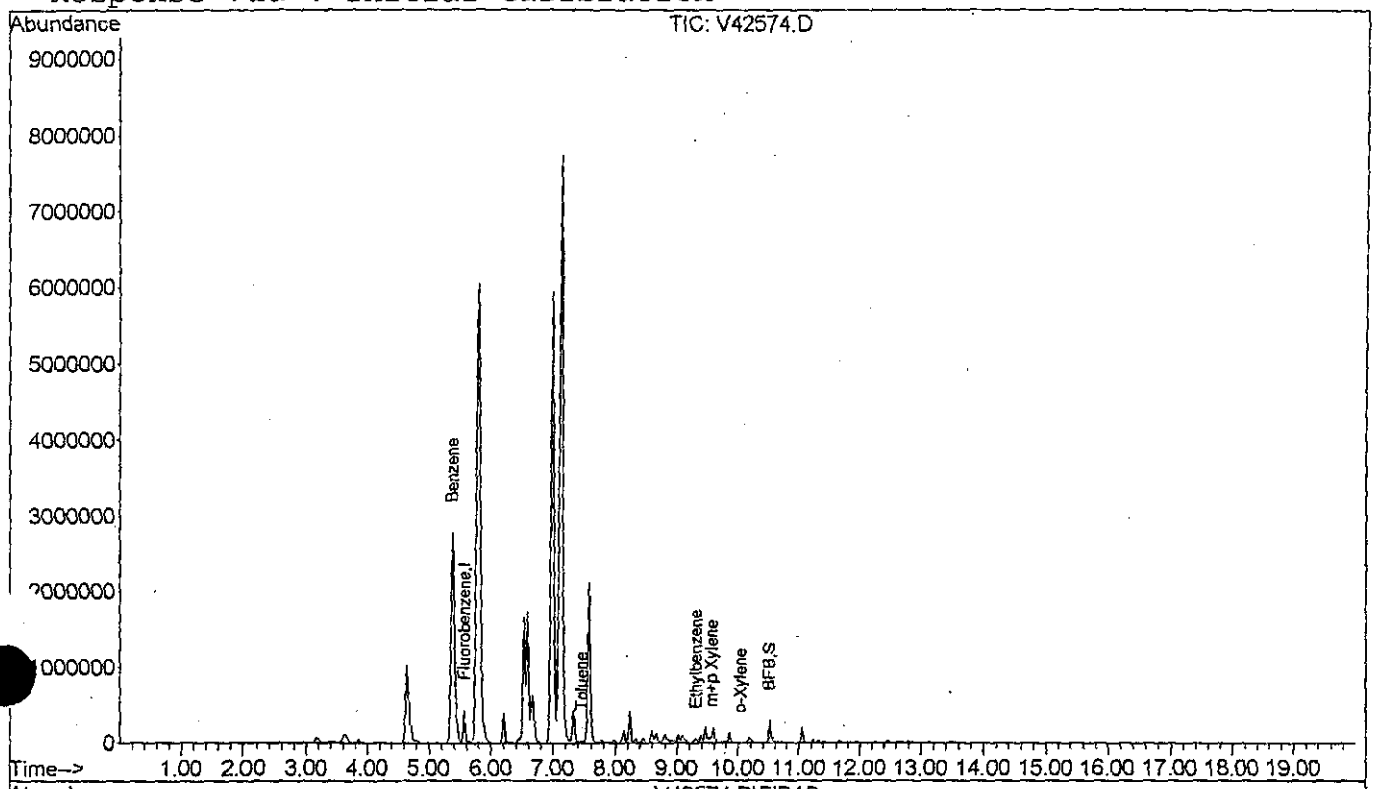
Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

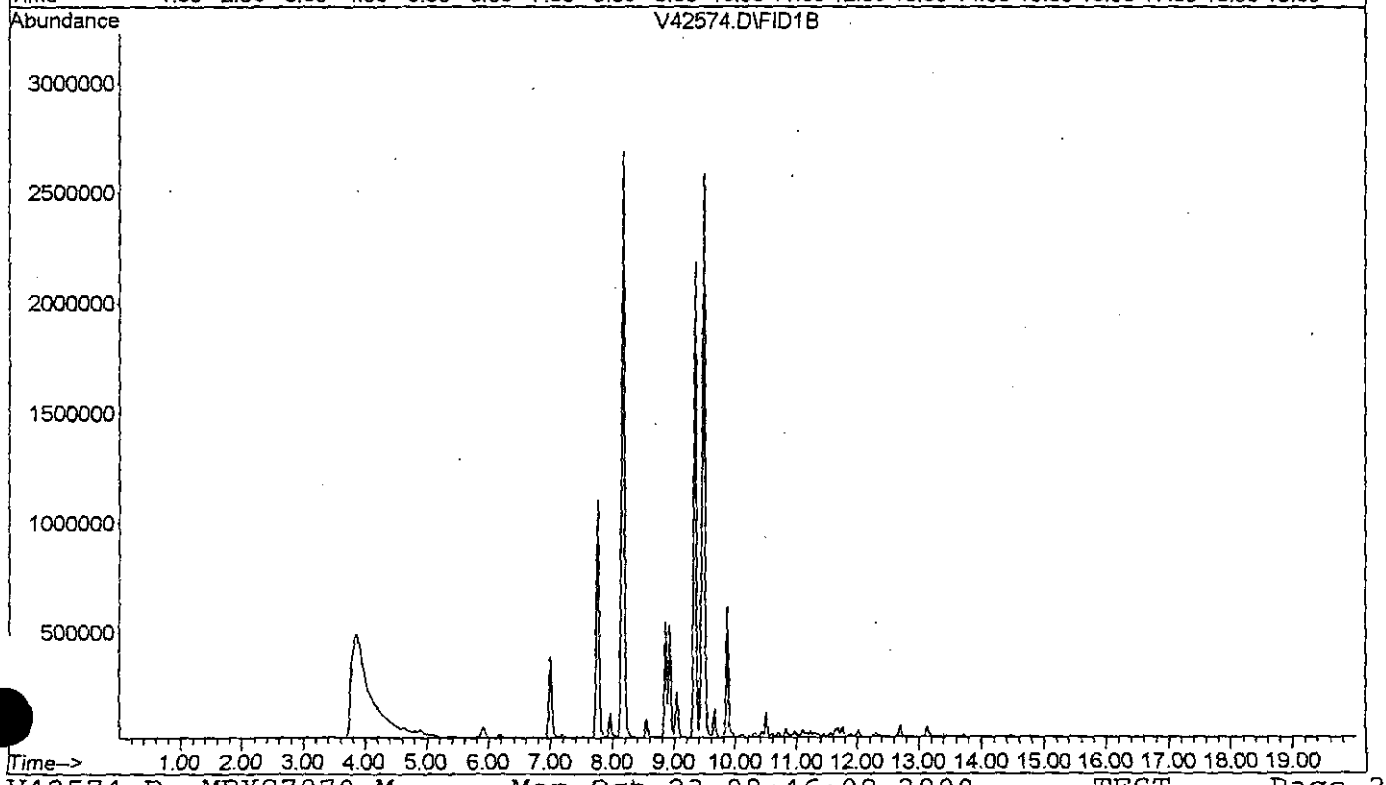




Data File : C:\HPCHEM\1\DATA\OCT20\V42574.D Vial: 17
Acq On : 20 Oct 2000 17:16 Operator: JC
Sample : 0010401-002A 5.50g Inst : GC/MS VOA
Misc : SAMP BTEX_S-MS Multiplr: 1.00
MS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 8:45 2000 Quant Results File: MBXS7070.R

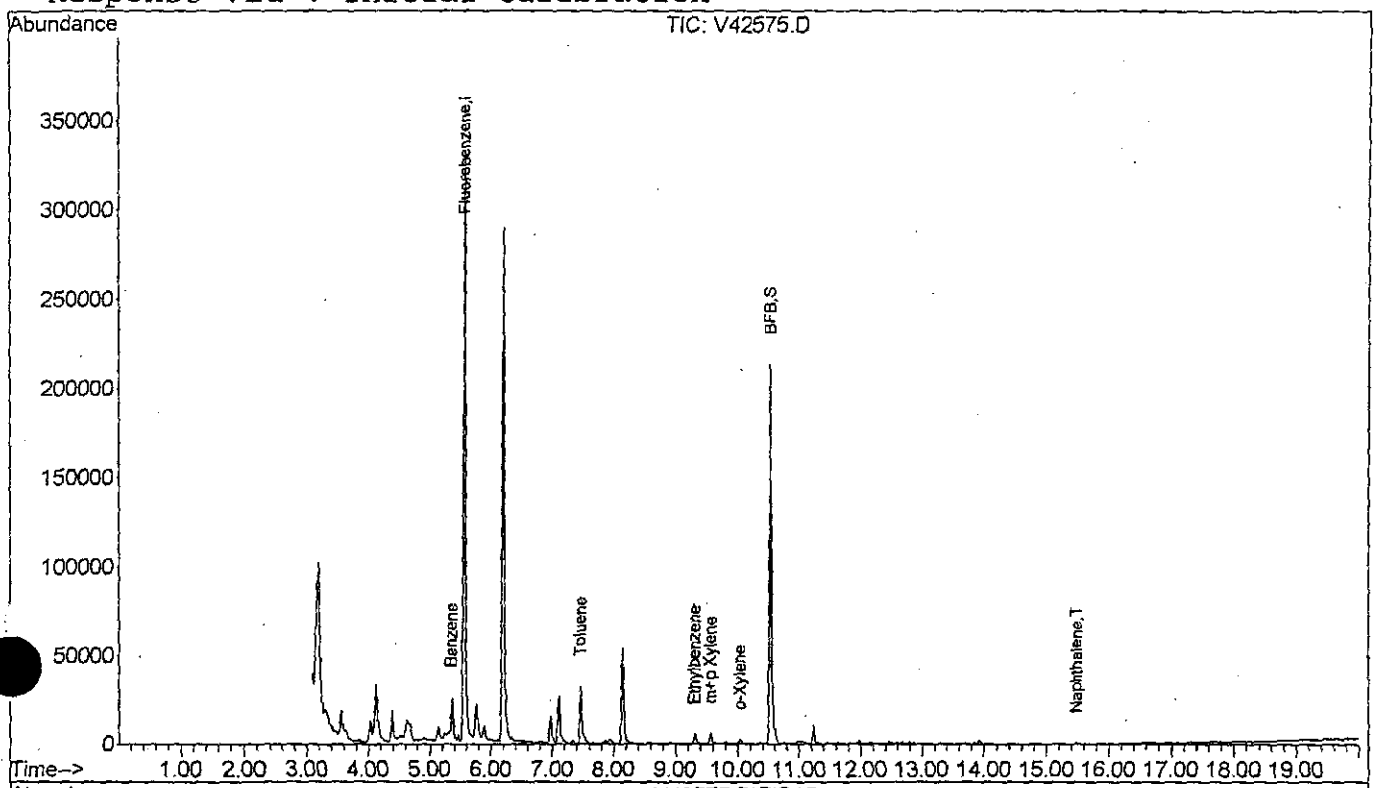
Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration

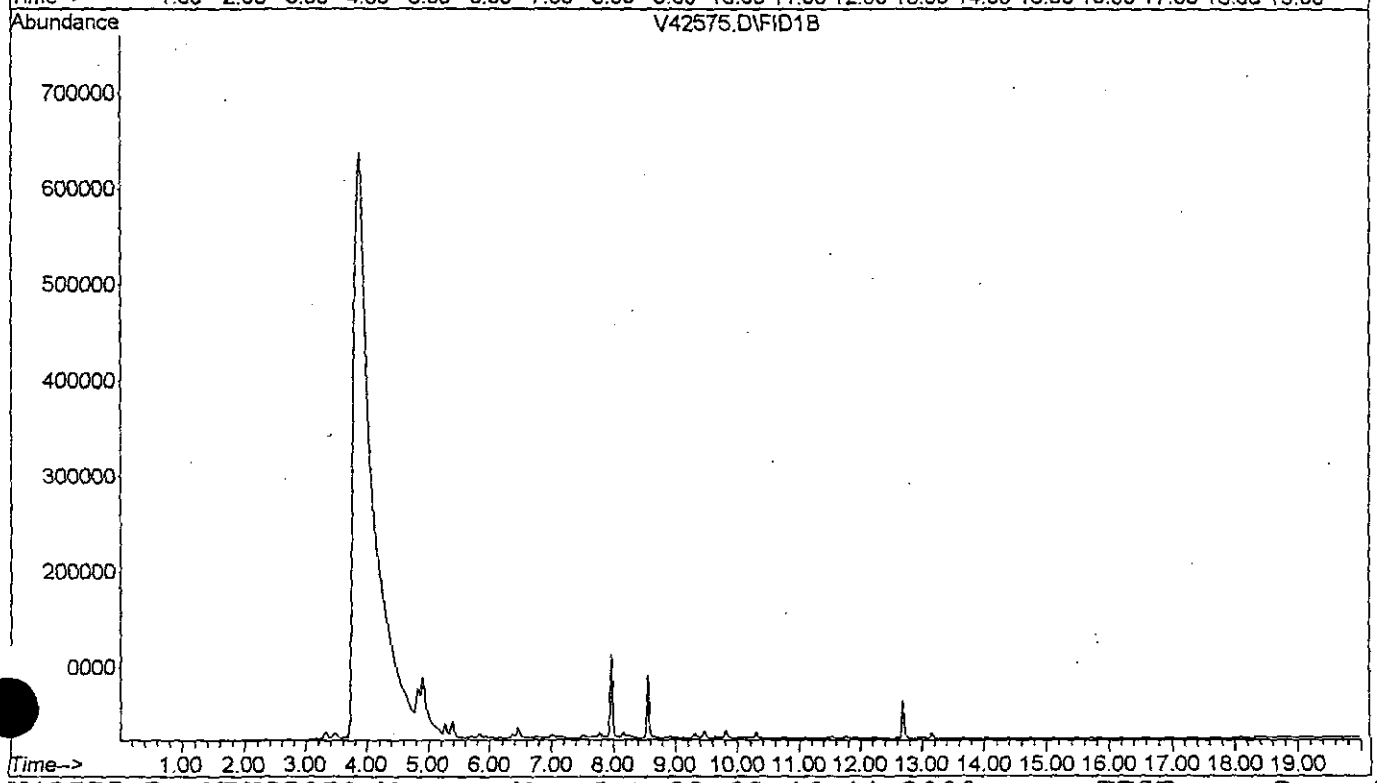




Data File : C:\HPCHEM\1\DATA\OCT20\V42575.D Vial: 18
Acq On : 20 Oct 2000 17:45 Operator: JC
Sample : 0010401-003A 5.30g Inst : GC/MS VOA
Misc : SAMP BTEX_S-MS Multiplr: 1.00
IS Integration Params: RTEINT2.P GC Integration Params: rteint2.p
Quant Time: Oct 23 8:46 2000 Quant Results File: MBXS7070.R

Method : C:\HPCHEM\1\METHODS\MBXS7070.M (RTE Integrator)
Title : BTEX Soil
Last Update : Sat Jul 08 11:58:51 2000
Response via : Initial Calibration





PAH Analysis
SW846 8310

Water Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 1:44:55 P**
Prep End Date: **10/20/00 8:00:00 P**

Prep Batch **7867** Prep Code: **3520_LC_PAH** Technician: **Zafer Sarihan**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-004C	Aqueous			1	0	10/20/00	0	1	1
0010401-005C	Aqueous			1	0	10/20/00	0	1	1
0010401-006C	Aqueous			1	0	10/20/00	0	1	1
0010401-007C	Aqueous			1	0	10/20/00	0	1	1
0010401-008B	Aqueous			1	0	10/20/00	0	1	1
LCS-7867				1	0	10/20/00	0	1	1
LCSD-7867				1	0	10/20/00	0	1	1
MB-7867				1	0	10/20/00	0	1	1

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7867** Batch ID: **7867** Test Code: **SW8310** Units: **µg/L** Analysis Date: **10/23/00 7:31:38 PM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155810**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	BRL	1									
Acenaphthylene	BRL	1									
1-Methylnaphthalene	BRL	1									
2-Methylnaphthalene	BRL	1									
Acenaphthene	BRL	1									
Fluorene	BRL	0.2									
Phenanthrene	BRL	0.1									
Anthracene	BRL	1									
Fluoranthene	BRL	0.2									
Pyrene	BRL	0.1									
Benz(a)anthracene	BRL	0.1									
Chrysene	BRL	0.1									
Benzo(b)fluoranthene	BRL	0.2									
Benzo(k)fluoranthene	BRL	0.1									
Benzo(a)pyrene	BRL	0.1									
Dibenz(a,h)anthracene	BRL	0.2									
Benzo(g,h,i)perylene	BRL	0.2									
Indeno(1,2,3-cd)pyrene	BRL	0.1									
Surr: 4-terphenyl-d14	5.595	0	4.8	0	117	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

0001323

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7867** Batch ID: **7867** Test Code: **SW8310** Units: **µg/L** Analysis Date: **10/23/00 8:23:11 PM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.599	1	5	0	52	40	140	0			
Acenaphthylene	4.629	1	10	0	46.3	40	140	0			
1-Methylnaphthalene	2.114	1	5	0	42.3	40	140	0			
2-Methylnaphthalene	2.202	1	5	0	44	40	140	0			
Acenaphthene	2.382	1	5	0	47.6	40	140	0			
Fluorene	0.873	0.2	1	0	87.3	40	140	0			
Phenanthrene	0.284	0.1	0.5	0	56.8	40	140	0			
Anthracene	0.283	1	0.5	0	56.6	40	140	0			J
Fluoranthene	1.659	0.2	1	0	166	40	140	0			S
Pyrene	0.476	0.1	0.5	0	95.2	40	140	0			
Benz(a)anthracene	0.473	0.1	0.5	0	94.6	40	140	0			
Chrysene	0.488	0.1	0.5	0	97.6	40	140	0			
Benzo(b)fluoranthene	1	0.2	1	0	100	40	140	0			
Benzo(k)fluoranthene	0.466	0.1	0.5	0	93.2	40	140	0			
Benzo(a)pyrene	0.456	0.1	0.5	0	91.2	40	140	0			
Dibenz(a,h)anthracene	0.83	0.2	1	0	83	40	140	0			
Benzo(g,h,i)perylene	0.946	0.2	1	0	94.6	40	140	0			
Indeno(1,2,3-cd)pyrene	0.443	0.1	0.5	0	88.6	40	140	0			
Surr: 4-terphenyl-d14	5.157	0	4.8	0	107	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000124

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-7867** Batch ID: **7867** Test Code: **SW8310** Units: **µg/L** Analysis Date: **10/23/00 9:14:51 PM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.918	1	5	0	58.4	40	140	2.599	11.6	0	
Acenaphthylene	5.58	1	10	0	55.8	40	140	4.629	18.6	0	
1-Methylnaphthalene	2.68	1	5	0	53.6	40	140	2.114	23.6	0	
2-Methylnaphthalene	2.766	1	5	0	55.3	40	140	2.202	22.7	0	
Acenaphthene	2.859	1	5	0	57.2	40	140	2.382	18.2	0	
Fluorene	0.63	0.2	1	0	63	40	140	0.873	32.3	0	
Phenanthrene	0.322	0.1	0.5	0	64.4	40	140	0.284	12.5	0	
Anthracene	0.322	1	0.5	0	64.4	40	140	0.283	0	0	J
Fluoranthene	1.055	0.2	1	0	106	40	140	1.659	44.5	0	
Pyrene	0.517	0.1	0.5	0	103	40	140	0.476	8.26	0	
Benz(a)anthracene	0.622	0.1	0.5	0	124	40	140	0.473	27.2	0	
Chrysene	0.427	0.1	0.5	0	85.4	40	140	0.488	13.3	0	
Benzo(b)fluoranthene	0.972	0.2	1	0	97.2	40	140	1	2.84	0	
Benzo(k)fluoranthene	0.452	0.1	0.5	0	90.4	40	140	0.466	3.05	0	
Benzo(a)pyrene	0.444	0.1	0.5	0	88.8	40	140	0.456	2.67	0	
Dibenz(a,h)anthracene	0.754	0.2	1	0	75.4	40	140	0.83	9.6	0	
Benzo(g,h,i)perylene	0.863	0.2	1	0	86.3	40	140	0.946	9.18	0	
Indeno(1,2,3-cd)pyrene	0.413	0.1	0.5	0	82.6	40	140	0.443	7.01	0	
Surr: 4-terphenyl-d14	4.135	0	4.8	0	86.2	20	140	5.157	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

00013

INITIAL CALIBRATION

Calibration Table

Calib. Data Modified : 9/14/00 5:48:06 PM

Calculate : External Standard
Based on : Peak Area

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

Curve Type : Linear
Origin : Ignored
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: ADC1 A, ADC1 CHANNEL A
Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Lvl Sig		Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
5.771	2	5	5.00000e-1	14.75709	3.38820e-2			Naphthalene
		4	1.00000	33.13679	3.01779e-2			
		3	2.00000	54.22546	3.68830e-2			
		2	5.00000	139.60797	3.58146e-2			
		1	10.00000	284.16232	3.51912e-2			
5.912	1	5	5.00000e-1	43.51245	1.14910e-2			Naphthalene
		4	1.00000	101.63905	9.83874e-3			
		3	2.00000	177.09276	1.12935e-2			
		2	5.00000	457.73398	1.09234e-2			
		1	10.00000	927.52972	1.07813e-2			
7.115	2	5	1.00000	20.09125	4.97729e-2			Acenaphthylene
		4	2.00000	44.26999	4.51773e-2			
		3	4.00000	74.00314	5.40518e-2			
		2	10.00000	192.17686	5.20354e-2			
		1	20.00000	388.72571	5.14502e-2			
7.714	2	5	5.00000e-1	8.92327	5.60333e-2			1-Methylnaphthalene
		4	1.00000	19.88931	5.02783e-2			
		3	2.00000	36.73984	5.44368e-2			
		2	5.00000	89.12464	5.61012e-2			

000127

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
		1	10.00000	176.93584	5.65177e-2			
7.853	1	5	5.00000e-1	84.18243	5.93948e-3			1-Methylnaphthalene
		4	1.00000	182.83362	5.46945e-3			
		3	2.00000	319.74792	6.25493e-3			
		2	5.00000	815.11816	6.13408e-3			
		1	10.00000	1600.36975	6.24856e-3			
8.090	2	5	5.00000e-1	12.88177	3.88145e-2			2-Methylnaphthalene
		4	1.00000	28.61016	3.49526e-2			
		3	2.00000	49.40136	4.04847e-2			
		2	5.00000	123.72823	4.04112e-2			
		1	10.00000	250.88606	3.98587e-2			
8.230	1	5	5.00000e-1	73.61031	6.79253e-3			2-Methylnaphthalene
		4	1.00000	161.39539	6.19596e-3			
		3	2.00000	279.61868	7.15260e-3			
		2	5.00000	691.67670	7.22881e-3			
		1	10.00000	1384.87012	7.22089e-3			
8.363	2	5	5.00000e-1	7.41926	6.73922e-2			Acenaphthene
		4	1.00000	16.93034	5.90656e-2			
		3	2.00000	28.05536	7.12876e-2			
		2	5.00000	69.66994	7.17670e-2			
		1	10.00000	143.46092	6.97054e-2			
8.522	1	5	5.00000e-1	227.99506	2.19303e-3			Acenaphthene
		4	1.00000	497.14474	2.01149e-3			
		3	2.00000	831.69177	2.40474e-3			
		2	5.00000	2116.87891	2.36197e-3			
		1	10.00000	4269.91895	2.34196e-3			
8.875	2	5	1.00000e-1	14.61118	6.84407e-3			Fluorene
		4	2.00000e-1	32.66193	6.12334e-3			
		3	5.00000e-1	54.44505	9.18357e-3			
		2	1.00000	139.24638	7.18152e-3			
		1	2.00000	281.37839	7.10787e-3			
8.960	1	5	1.00000e-1	8.53182	1.17208e-2			Fluorene
		4	2.00000e-1	17.61251	1.13556e-2			
		3	5.00000e-1	37.73751	1.32494e-2			
		2	1.00000	82.85392	1.20694e-2			
		1	2.00000	120.28089	1.66277e-2			
9.730	2	5	5.00000e-2	18.02111	2.77452e-3			Phenanthrene
		4	1.00000e-1	39.79345	2.51298e-3			
		3	2.00000e-1	67.07530	2.98172e-3			
		2	5.00000e-1	173.85025	2.87604e-3			
		1	1.00000	343.06598	2.91489e-3			
9.870	1	5	5.00000e-2	45.26786	1.10454e-3			Phenanthrene
		4	1.00000e-1	98.37514	1.01652e-3			
		3	2.00000e-1	165.13036	1.21116e-3			
		2	5.00000e-1	422.13602	1.18445e-3			
		1	1.00000	840.83624	1.18929e-3			
10.557	2	5	5.00000e-2	38.47166	1.29966e-3			Anthracene
		4	1.00000e-1	88.05602	1.13564e-3			
		3	2.00000e-1	151.13527	1.32332e-3			
		2	5.00000e-1	379.23813	1.31843e-3			
		1	1.00000	754.94653	1.32460e-3			
10.699	1	5	5.00000e-2	218.57169	2.28758e-4			Anthracene
		4	1.00000e-1	489.80444	2.04163e-4			
		3	2.00000e-1	838.25519	2.38591e-4			
		2	5.00000e-1	2105.73145	2.37447e-4			
		1	1.00000	4193.24414	2.38479e-4			

000128

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
11.395	2	5	1.00000e-1	9.01464	1.10931e-2			Fluoranthene
		4	2.00000e-1	19.40378	1.03073e-2			
		3	4.00000e-1	32.94216	1.21425e-2			
		2	1.00000	84.13593	1.18855e-2			
		1	2.00000	169.58119	1.17938e-2			
11.539	1	5	1.00000e-1	11.58462	8.63214e-3			Fluoranthene
		4	2.00000e-1	24.20294	8.26346e-3			
		3	4.00000e-1	41.76950	9.57637e-3			
		2	1.00000	105.95557	9.43792e-3			
		1	2.00000	215.07562	9.29905e-3			
11.895	2	5	5.00000e-2	5.03527	9.92996e-3			Pyrene
		4	1.00000e-1	10.05997	9.94038e-3			
		3	2.00000e-1	17.61109	1.13565e-2			
		2	5.00000e-1	45.89300	1.08949e-2			
		1	1.00000	93.10056	1.07411e-2			
12.037	1	5	5.00000e-2	23.95237	2.08748e-3			Pyrene
		4	1.00000e-1	51.17427	1.95411e-3			
		3	2.00000e-1	88.05202	2.27138e-3			
		2	5.00000e-1	212.28780	2.35529e-3			
		1	1.00000	450.67984	2.21887e-3			
13.300	2	5	2.00000	139.93500	1.42924e-2			P-terphenyl D14
		4	4.00000	268.93500	1.48735e-2			
		3	4.80000	326.26276	1.47121e-2			
		2	10.00000	690.10900	1.44905e-2			
		1	15.00000	1020.59900	1.46973e-2			
14.027	2	5	5.00000e-2	11.16390	4.47872e-3			Benzo(a)anthracene
		4	1.00000e-1	24.91508	4.01363e-3			
		3	2.00000e-1	42.26120	4.73247e-3			
		2	5.00000e-1	108.20583	4.62082e-3			
		1	1.00000	217.55798	4.59648e-3			
14.170	1	5	5.00000e-2	149.38280	3.34711e-4			Benzo(a)anthracene
		4	1.00000e-1	342.87982	2.91647e-4			
		3	2.00000e-1	580.52747	3.44514e-4			
		2	5.00000e-1	1486.57703	3.36343e-4			
		1	1.00000	2849.09888	3.50988e-4			
14.590	2	5	5.00000e-2	18.14643	2.75536e-3			Chrysene
		4	1.00000e-1	40.04166	2.49740e-3			
		3	2.00000e-1	68.34219	2.92645e-3			
		2	5.00000e-1	172.46683	2.89911e-3			
		1	1.00000	347.23474	2.87990e-3			
14.737	1	5	5.00000e-2	92.42841	5.40959e-4			Chrysene
		4	1.00000e-1	203.64078	4.91061e-4			
		3	2.00000e-1	350.60947	5.70435e-4			
		2	5.00000e-1	941.82025	5.30887e-4			
		1	1.00000	1931.44287	5.17748e-4			
16.411	2	5	1.00000e-1	25.57971	3.90935e-3			Benzo(b)fluoranthene
		4	2.00000e-1	56.07032	3.56695e-3			
		3	4.00000e-1	94.65772	4.22575e-3			
		2	1.00000	238.85312	4.18667e-3			
		1	2.00000	480.04309	4.16629e-3			
16.584	1	5	1.00000e-1	187.06203	5.34582e-4			Benzo(b)fluoranthene
		4	2.00000e-1	422.78955	4.73049e-4			
		3	4.00000e-1	719.40326	5.56016e-4			
		2	1.00000	1830.36072	5.46340e-4			
		1	2.00000	3551.39429	5.63159e-4			
17.490	2	5	5.00000e-2	7.73708	6.46239e-3			Benzo(k)fluoranthene

RetTime [min]	Lvl Sig		Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
		4	1.00000e-1	18.58857	5.37965e-3			
		3	2.00000e-1	31.55045	6.33905e-3			
		2	5.00000e-1	80.05262	6.24589e-3			
		1	1.00000	159.66829	6.26298e-3			
17.642	1	5	5.00000e-2	162.07825	3.08493e-4			Benzo(k)fluoranthene
		4	1.00000e-1	359.08487	2.78486e-4			
		3	2.00000e-1	615.84094	3.24759e-4			
		2	5.00000e-1	1559.22083	3.20673e-4			
		1	1.00000	3128.27124	3.19665e-4			
18.065	2	5	5.00000e-2	10.85466	4.60632e-3			Benzo(a)pyrene
		4	1.00000e-1	26.60964	3.75804e-3			
		3	2.00000e-1	46.45811	4.30495e-3			
		2	5.00000e-1	114.54205	4.36521e-3			
		1	1.00000	226.60728	4.41292e-3			
18.216	1	5	5.00000e-2	127.85419	3.91070e-4			Benzo(a)pyrene
		4	1.00000e-1	304.88193	3.27996e-4			
		3	2.00000e-1	532.83832	3.75348e-4			
		2	5.00000e-1	1357.57349	3.68304e-4			
		1	1.00000	2709.13159	3.69122e-4			
19.627	2	5	1.00000e-1	52.88899	1.89075e-3			Dibenzo(ah)anthracene
		4	2.00000e-1	116.12875	1.72223e-3			
		3	4.00000e-1	193.91678	2.06274e-3			
		2	1.00000	489.12625	2.04446e-3			
		1	2.00000	994.54974	2.01096e-3			
19.769	1	5	1.00000e-1	135.87962	7.35946e-4			Dibenzo(ah)anthracene
		4	2.00000e-1	280.15933	7.13879e-4			
		3	4.00000e-1	480.45383	8.32546e-4			
		2	1.00000	1199.76929	8.33494e-4			
		1	2.00000	2428.61548	8.23514e-4			
20.085	2	5	1.00000e-1	24.50035	4.08157e-3			Benzo(ghi)perylene
		4	2.00000e-1	59.51743	3.36036e-3			
		3	4.00000e-1	101.73080	3.93195e-3			
		2	1.00000	263.23438	3.79890e-3			
		1	2.00000	550.29504	3.63441e-3			
20.236	1	5	1.00000e-1	244.85063	4.08412e-4			Benzo(ghi)perylene
		4	2.00000e-1	581.78510	3.43770e-4			
		3	4.00000e-1	998.91718	4.00434e-4			
		2	1.00000	2569.22290	3.89223e-4			
		1	2.00000	5240.86035	3.81617e-4			
21.097	2	5	5.00000e-2	6.48660	7.70820e-3			Indeno(123cd)pyrene
		4	1.00000e-1	15.35210	6.51377e-3			
		3	2.00000e-1	26.69713	7.49144e-3			
		2	5.00000e-1	74.27673	6.73158e-3			
		1	1.00000	149.37302	6.69465e-3			

More compound-specific settings:

Compound: Naphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Naphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthylene
Amount Limits : Low 1.00000 High 20.00000

Compound: 1-Methylnaphthalene
Amount Limits : Low 1.00000 High 20.00000

Compound: 1-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: 2-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: 2-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthene
Amount Limits : Low 1.00000 High 10.00000

Compound: Fluorene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Fluorene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Phenanthrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Phenanthrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Anthracene
Amount Limits : Low 1.00000 High 1.00000

Compound: Anthracene
Amount Limits : Low 1.00000 High 1.00000

Compound: Fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: P-terphenyl D14
Amount Limits : Low 2.00000 High 20.00000

Compound: Benzo(a)anthracene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)anthracene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Chrysene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Chrysene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(b)fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(b)fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(k)fluoranthene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(k)fluoranthene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Dibenzo(ah)anthracene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Dibenzo(ah)anthracene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(ghi)perylene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(ghi)perylene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Indeno(123cd)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

13 Warnings or Errors (10 first messages follow) :

Warning : Overlapping peak time windows at 7.853 min, signal 1
Warning : Overlapping peak time windows at 8.23 min, signal 1
Warning : Overlapping peak time windows at 11.539 min, signal 1
Warning : Overlapping peak time windows at 14.17 min, signal 1
Warning : Overlapping peak time windows at 17.642 min, signal 1
Warning : Overlapping peak time windows at 19.769 min, signal 1
Warning : Overlapping peak time windows at 7.714 min, signal 2
Warning : Overlapping peak time windows at 8.09 min, signal 2
Warning : Overlapping peak time windows at 11.395 min, signal 2
Warning : Overlapping peak time windows at 14.027 min, signal 2

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Peak Sum Table

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No Entries in table

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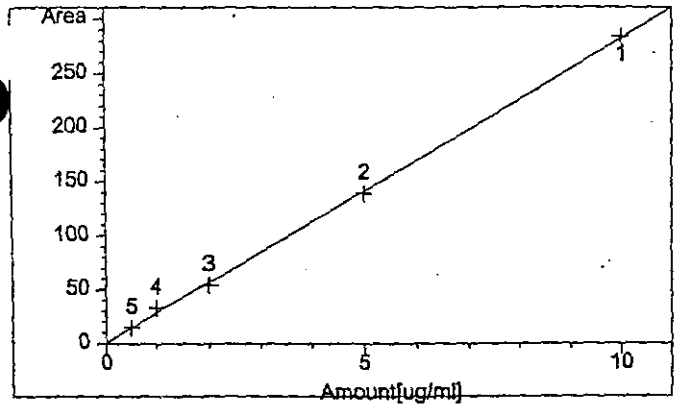
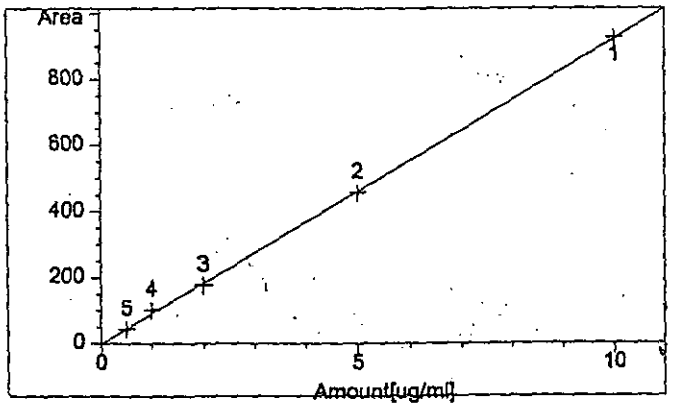
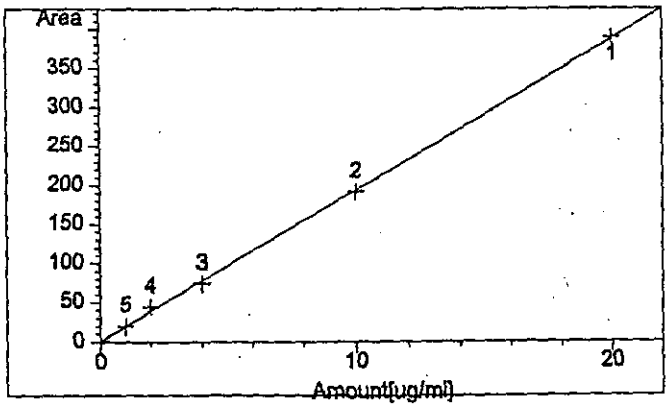
Calibration Curves



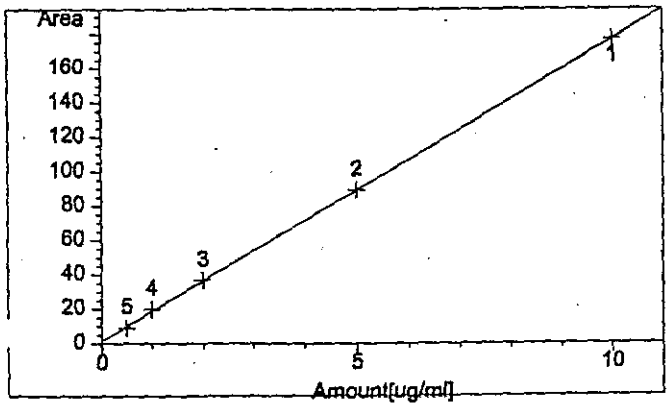
Naphthalene at exp. RT: 5.771
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99967
Residual Std. Dev.: 3.29823
Formula: y = mx + b
m: 28.20126
b: 8.33275e-1
x: Amount [ug/ml]
y: Area



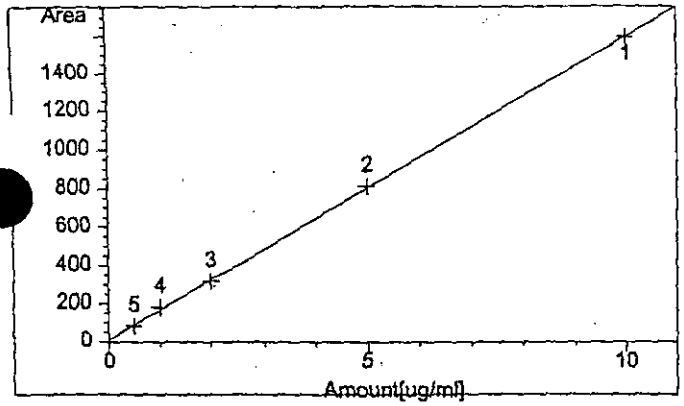
Naphthalene at exp. RT: 5.912
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99983
Residual Std. Dev.: 7.72442
Formula: y = mx + b
m: 92.61761
b: -1.18357
x: Amount [ug/ml]
y: Area



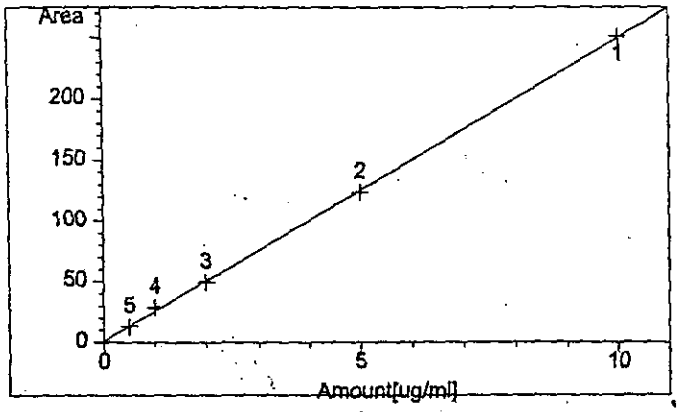
Acenaphthylene at exp. RT: 7.115
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99975
Residual Std. Dev.: 3.89621
Formula: y = mx + b
m: 19.32990
b: 8.12131e-1
x: Amount [ug/ml]
y: Area



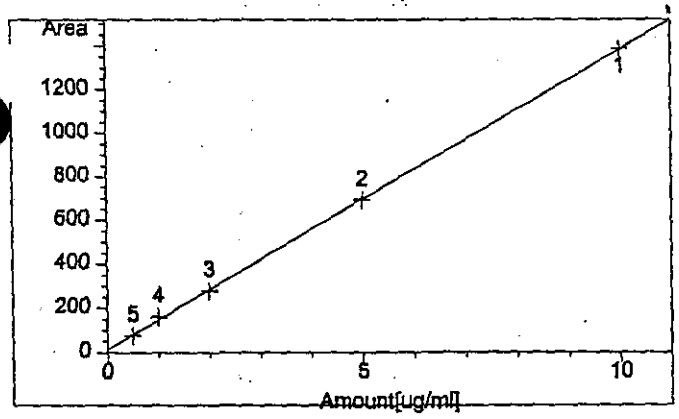
1-Methylnaphthalene at exp. RT: 7.714
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99993
Residual Std. Dev.: 0.90964
Formula: y = mx + b
m: 17.57030
b: 1.31247
x: Amount [ug/ml]
y: Area



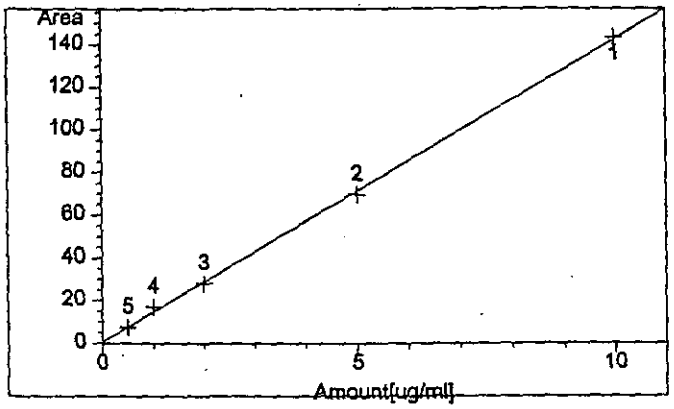
1-Methylnaphthalene at exp. RT: 7.853
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99988
Residual Std. Dev.: 11.04193
Formula: y = mx + b
m: 159.14850
b: 11.60095
x: Amount [ug/ml]
y: Area



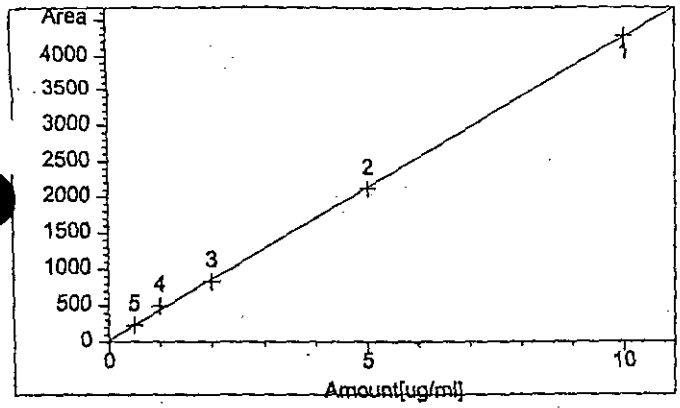
2-Methylnaphthalene at exp. RT: 8.090
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 2.12477
Formula: y = mx + b
m: 24.90255
b: 9.62089e-1
x: Amount [ug/ml]
y: Area



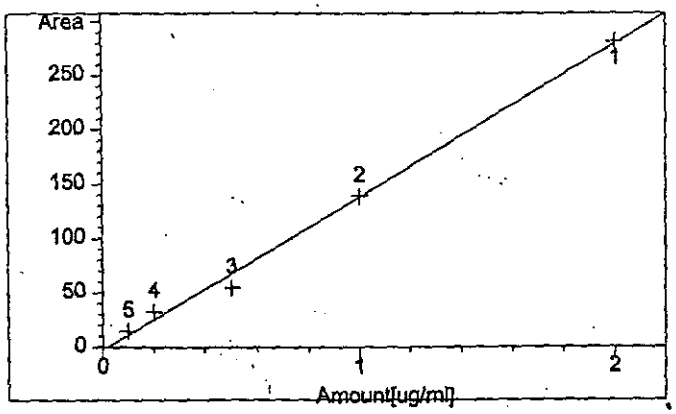
2-Methylnaphthalene at exp. RT: 8.230
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99988
Residual Std. Dev.: 9.56346
Formula: y = mx + b
m: 137.17135
b: 10.70026
x: Amount [ug/ml]
y: Area



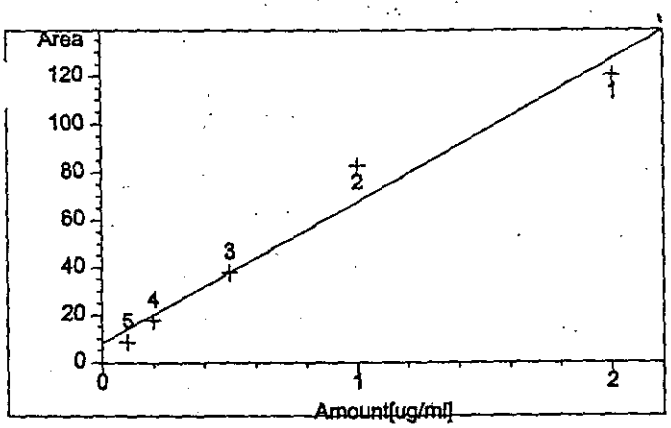
Acenaphthene at exp. RT: 8.363
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99960
Residual Std. Dev.: 1.82288
Formula: y = mx + b
m: 14.19461
b: 5.87097e-1
x: Amount [ug/ml]
y: Area



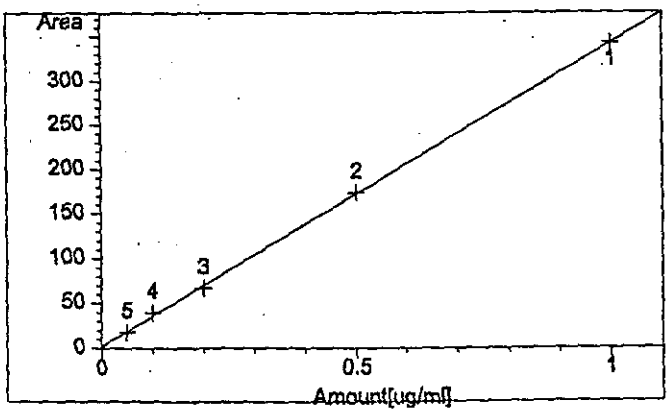
Acenaphthene at exp. RT: 8.522
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99978
Residual Std. Dev.: 39.87503
Formula: y = mx + b
m: 423.40908
b: 22.11230
x: Amount [ug/ml]
y: Area



Fluorene at exp. RT: 8.875
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99746
Residual Std. Dev.: 9.04001
Formula: y = mx + b
m: 141.06076
b: -2.73759
x: Amount [ug/ml]
y: Area

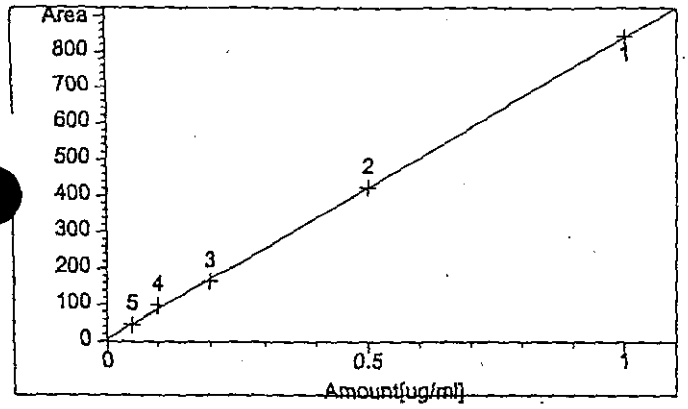


Fluorene at exp. RT: 8.960
ADC1 A, ADC1 CHANNEL A
Correlation: 0.98209
Residual Std. Dev.: 10.25170
Formula: y = mx + b
m: 59.58851
b: 8.11606
x: Amount [ug/ml]
y: Area

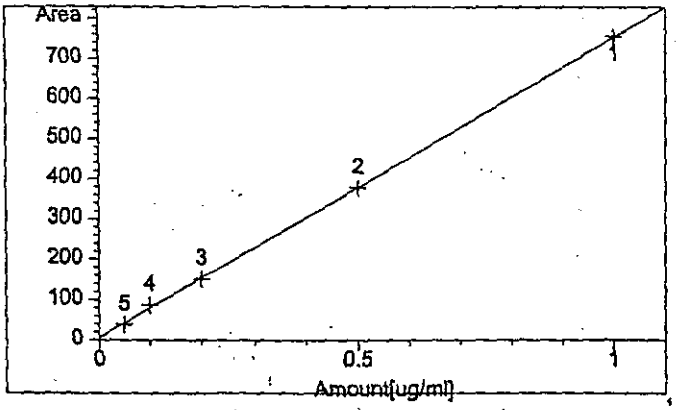


Phenanthrene at exp. RT: 9.730
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 2.94948
Formula: y = mx + b
m: 341.12995
b: 2.14314
x: Amount [ug/ml]
y: Area

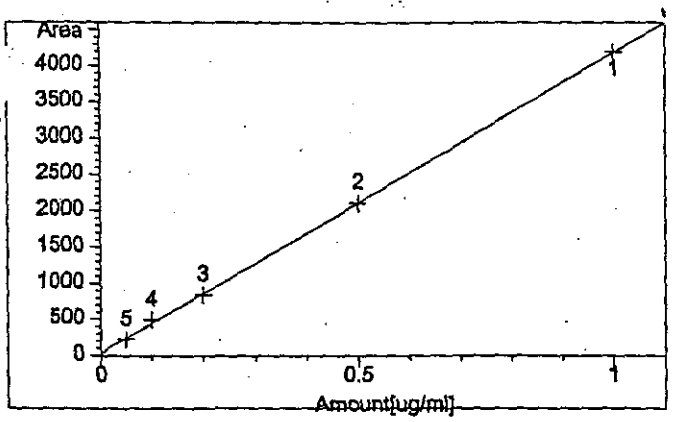
000135



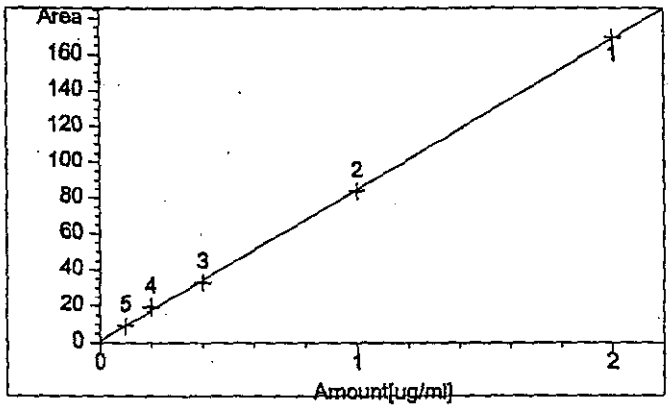
Phenanthrene at exp. RT: 9.870
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99983
Residual Std. Dev.: 6.98719
Formula: y = mx + b
m: 834.11869
b: 5.72521
x: Amount [ug/ml]
y: Area



Anthracene at exp. RT: 10.557
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99986
Residual Std. Dev.: 5.66714
Formula: y = mx + b
m: 749.41459
b: 5.08612
x: Amount [ug/ml]
y: Area

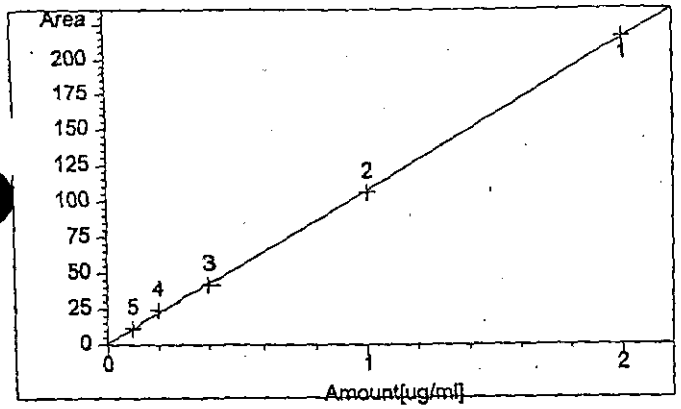


Anthracene at exp. RT: 10.699
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99986
Residual Std. Dev.: 31.03121
Formula: y = mx + b
m: 4159.86307
b: 29.97205
x: Amount [ug/ml]
y: Area

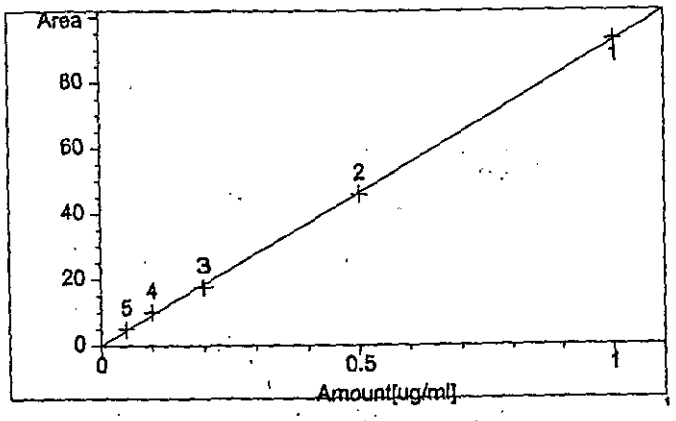


Fluoranthene at exp. RT: 11.395
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 1.45677
Formula: y = mx + b
m: 84.18281
b: 7.20265e-1
x: Amount [ug/ml]
y: Area

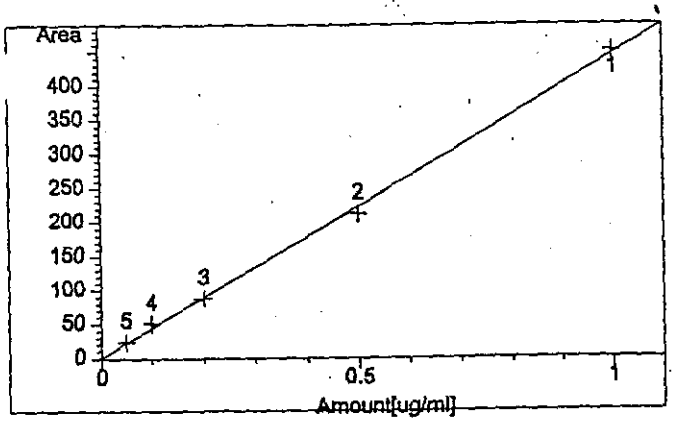
000136



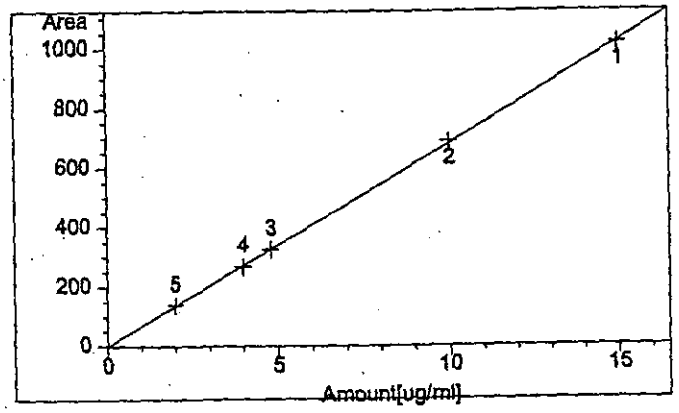
Fluoranthene at exp. RT: 11.539
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99982
Residual Std. Dev.: 1.85605
Formula: y = mx + b
m: 106.73882
b: 7.30925e-1
x: Amount [ug/ml]
y: Area



Pyrene at exp. RT: 11.895
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99981
Residual Std. Dev.: 0.81811
Formula: y = mx + b
m: 92.71533
b: 3.53020e-2
x: Amount [ug/ml]
y: Area

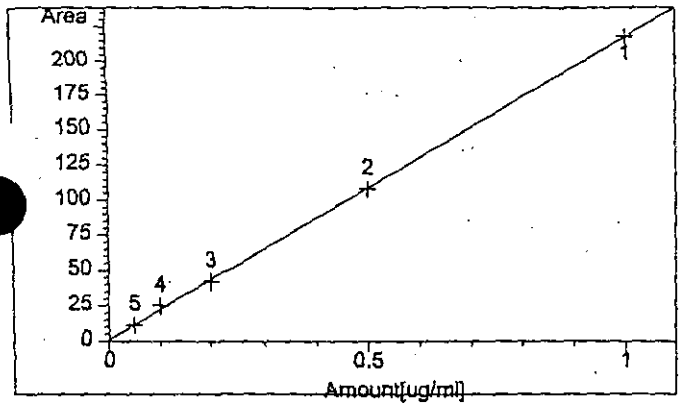


Pyrene at exp. RT: 12.037
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99925
Residual Std. Dev.: 7.81468
Formula: y = mx + b
m: 445.10527
b: 5.40309e-1
x: Amount [ug/ml]
y: Area

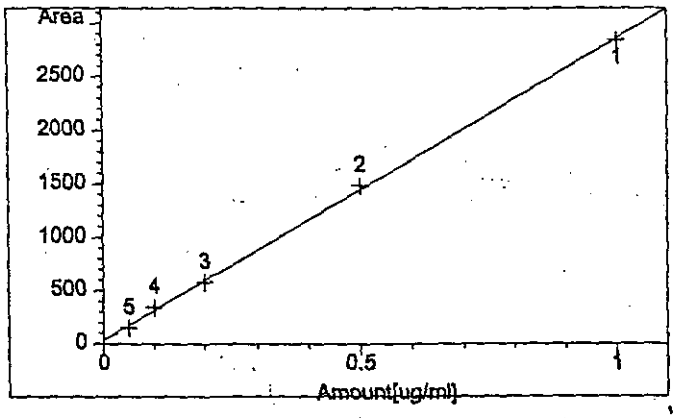


P-terphenyl D14 at exp. RT: 13.300
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99991
Residual Std. Dev.: 5.67124
Formula: y = mx + b
m: 68.20687
b: 8.06927e-1
x: Amount [ug/ml]
y: Area

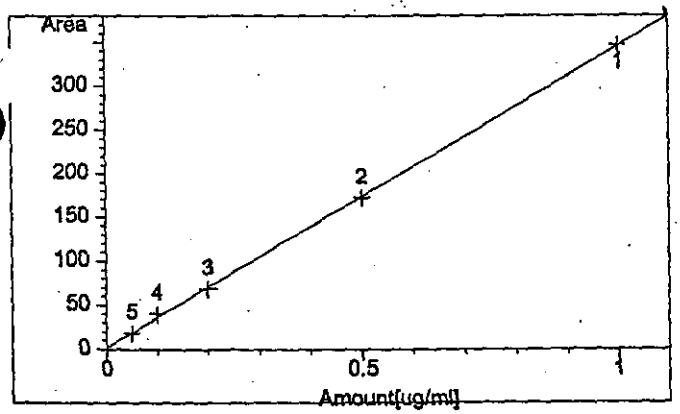
000137



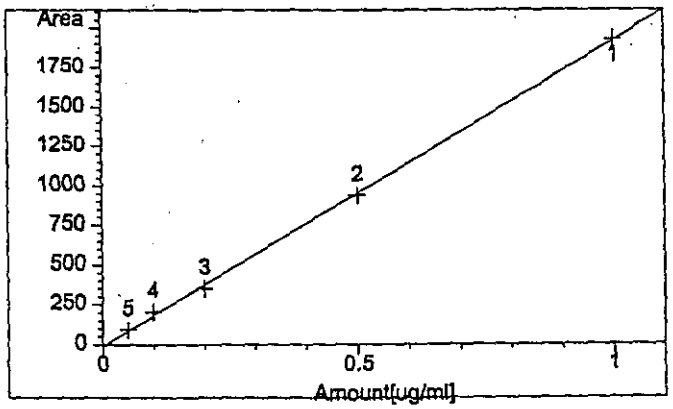
Benzo(a)anthracene at exp. RT: 14.027
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 1.85979
Formula: y = mx + b
m: 216.25301
b: 8.07184e-1
x: Amount [ug/ml]
y: Area



Benzo(a)anthracene at exp. RT: 14.170
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99966
Residual Std. Dev.: 33.48293
Formula: y = mx + b
m: 2830.28736
b: 34.48687
x: Amount [ug/ml]
y: Area

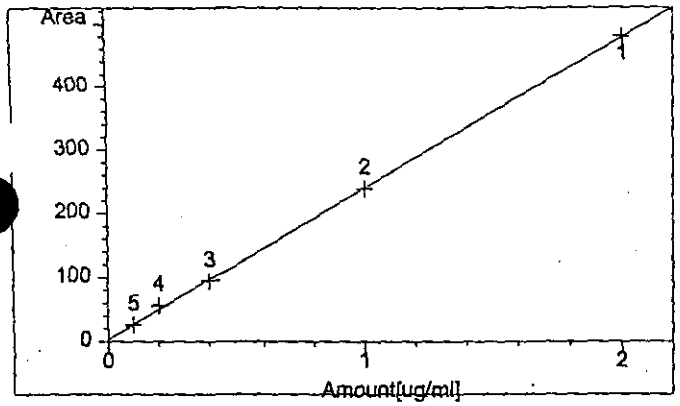


Chrysene at exp. RT: 14.590
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99984
Residual Std. Dev.: 2.83334
Formula: y = mx + b
m: 344.56682
b: 1.75665
x: Amount [ug/ml]
y: Area

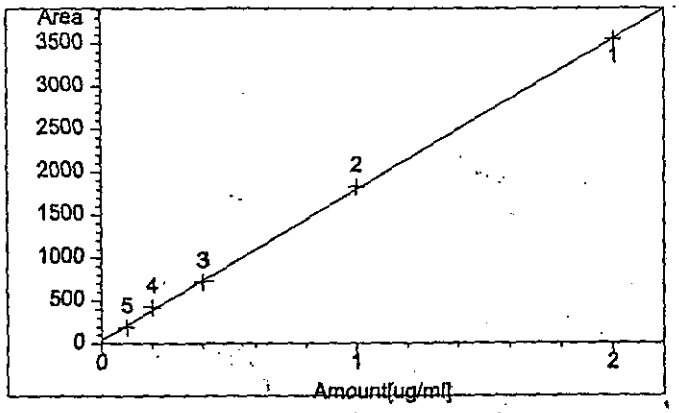


Chrysene at exp. RT: 14.737
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99970
Residual Std. Dev.: 21.61462
Formula: y = mx + b
m: 1933.78953
b: -11.51377
x: Amount [ug/ml]
y: Area

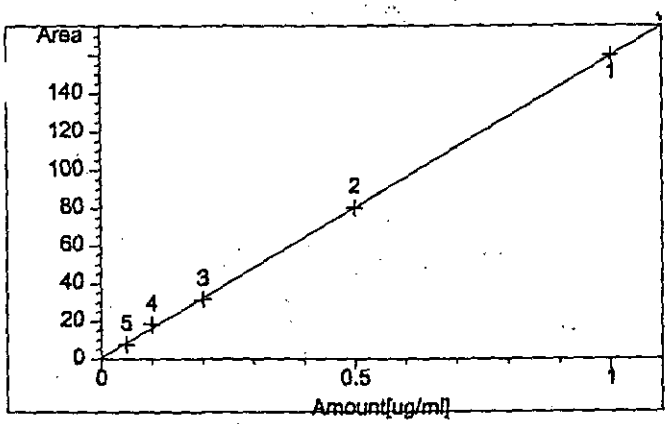
000138



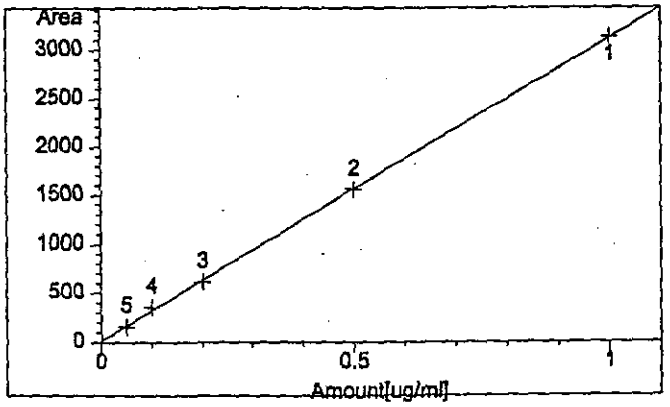
Benzo(b)fluoranthene at exp. RT: 16.411
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 4.06648
Formula: y = mx + b
m: 237.91403
b: 2.98441
x: Amount [ug/ml]
y: Area



Benzo(b)fluoranthene at exp. RT: 16.584
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99978
Residual Std. Dev.: 33.48849
Formula: y = mx + b
m: 1762.95608
b: 37.61447
x: Amount [ug/ml]
y: Area

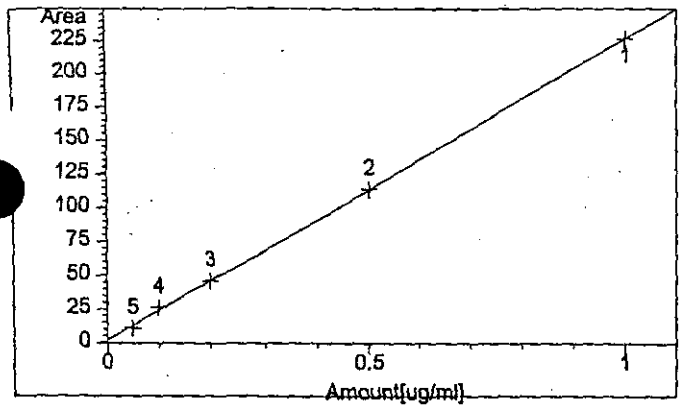


Benzo(k)fluoranthene at exp. RT: 17.490
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 1.37688
Formula: y = mx + b
m: 158.80179
b: 7.62741e-1
x: Amount [ug/ml]
y: Area

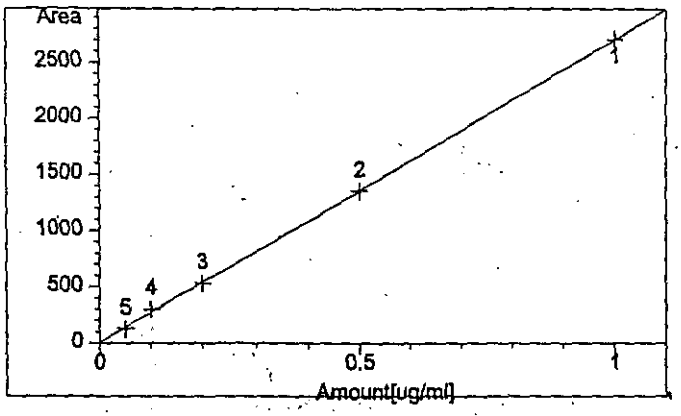


Benzo(k)fluoranthene at exp. RT: 17.642
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99985
Residual Std. Dev.: 24.01786
Formula: y = mx + b
m: 3106.79397
b: 15.38546
x: Amount [ug/ml]
y: Area

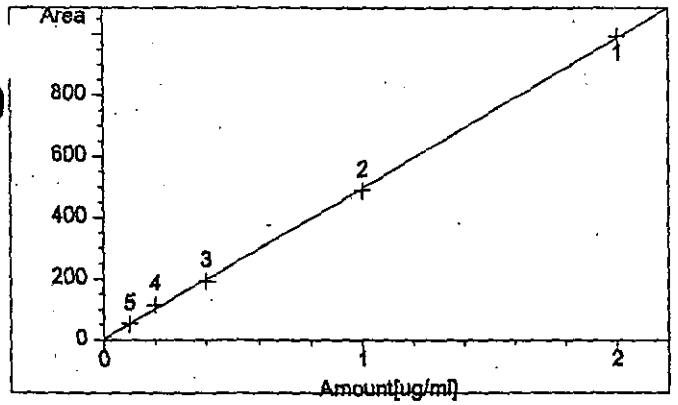
000139



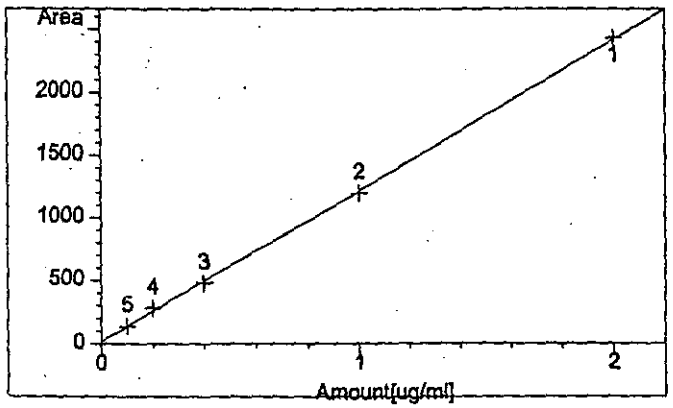
Benzo(a)pyrene at exp. RT: 18.065
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99983
Residual Std. Dev.: 1.85801
Formula: y = mx + b
m: 225.07618
b: 1.73616
x: Amount [ug/ml]
y: Area



Benzo(a)pyrene at exp. RT: 18.216
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99987
Residual Std. Dev.: 19.83931
Formula: y = mx + b
m: 2701.33249
b: 6.96288
x: Amount [ug/ml]
y: Area

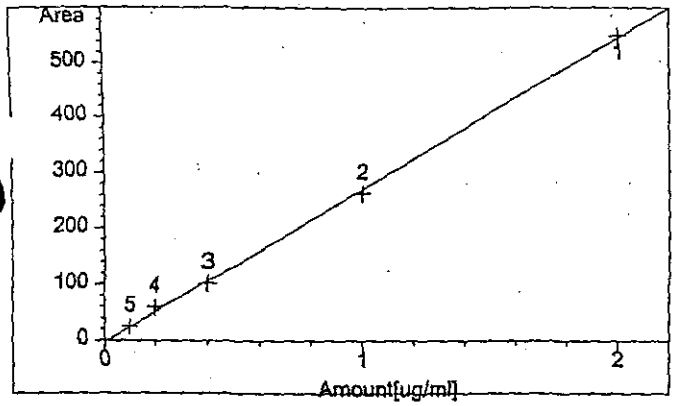


Dibenzo(ah)anthracene at exp. RT: 19.627
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99974
Residual Std. Dev.: 10.28532
Formula: y = mx + b
m: 492.64374
b: 4.76574
x: Amount [ug/ml]
y: Area

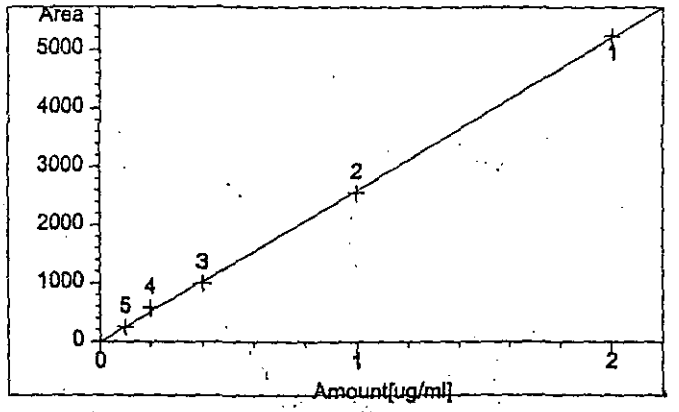


Dibenzo(ah)anthracene at exp. RT: 19.769
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99983
Residual Std. Dev.: 20.30396
Formula: y = mx + b
m: 1201.61497
b: 15.78043
x: Amount [ug/ml]
y: Area

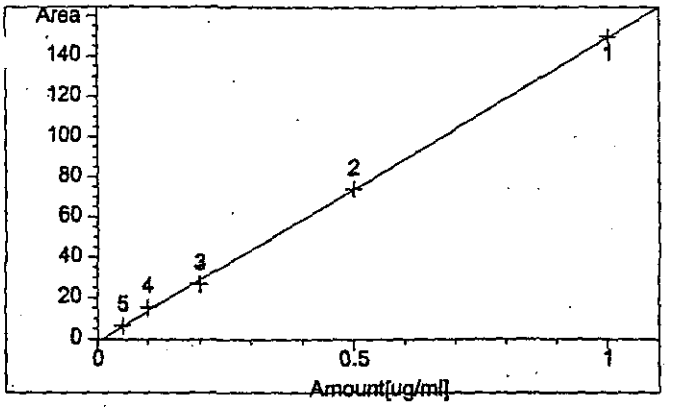
000140



Benzo(ghi)perylene at exp. RT: 20.085
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99955
Residual Std. Dev.: 7.52397
Formula: y = mx + b
m: 274.84004
b: -3.52603
x: Amount[ug/ml]
y: Area



Benzo(ghi)perylene at exp. RT: 20.236
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99977
Residual Std. Dev.: 51.12385
Formula: y = mx + b
m: 2613.66578
b: -6.98544
x: Amount[ug/ml]
y: Area



Indeno(123cd)pyrene at exp. RT: 21.097
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99974
Residual Std. Dev.: 1.54706
Formula: y = mx + b
m: 150.48816
b: -1.24351
x: Amount[ug/ml]
y: Area

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000141

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2'1 CS 9/14/00
Acq. Operator : RS verified from autosampler rack

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:03:07 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.913	BBA	927.52972	1.07949e-2	10.01257+		Naphthalene
7.854	PV	1600.36975	6.23646e-3	9.98065		1-Methylnaphthalene
8.231	VV	1384.87012	7.22294e-3	10.00284+		2-Methylnaphthalene
8.521	MF	4269.91895	2.34681e-3	10.02069+		Acenaphthene
8.991	FM	120.28089	1.57825e-2	1.89833		Fluorene
9.870	PP	840.83624	1.18900e-3	9.99752e-1		Phenanthrene
10.701	MM	4193.24414	2.38272e-4	9.99131e-1		Anthracene
11.544	BV	215.07562	9.31655e-3	2.00376+		Fluoranthene
12.042	VBA	450.67984	2.23560e-3	1.00754+		Pyrene
14.172	BV	2849.09888	3.48678e-4	9.93419e-1		Benzo(a)anthracene
14.729	VP	1931.44287	5.20210e-4	1.00476+		Chrysene
16.577	VV	3551.39429	5.60676e-4	1.99118		Benzo(b)fluoranthene
17.639	VV	3128.27124	3.19947e-4	1.00088+		Benzo(k)fluoranthene
18.214	VP	2709.13159	3.68707e-4	9.98876e-1		Benzo(a)pyrene
19.756	MF	2428.61548	8.25279e-4	2.00428+		Dibenzo(ah)anthracene
20.205	FM	5240.86035	3.82612e-4	2.00522+		Benzo(ghi)perylene

Totals : 56.92387

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.030	BB	10.86914	0.00000	0.00000		?
22.852	VP	13.08726	0.00000	0.00000		?
24.714	VV	11.71158	0.00000	0.00000		?
24.832	VP	3.91240	0.00000	0.00000		?

000142

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
Uncalib. totals :				0.00000		

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.774	BBA	284.16232	3.52864e-2	10.02707+		Naphthalene
7.122	BV	388.72571	5.15839e-2	20.05201+		Acenaphthylene
7.716	VV	176.93584	5.64856e-2	9.99433		1-Methylnaphthalene
8.091	VV	250.88606	3.99823e-2	10.03099+		2-Methylnaphthalene
8.369	VV	143.46092	7.00102e-2	10.04373+		Acenaphthene
8.872	VBA	281.37839	7.14654e-3	2.01088+		Fluorene
9.729	BP	343.06598	2.91023e-3	9.98399e-1		Phenanthrene
10.559	BP	754.94653	1.32421e-3	9.99709e-1-		Anthracene
11.399	MF	169.58119	1.18187e-2	2.00423+		Fluoranthene
11.898	FM	93.10056	1.07720e-2	1.00288+		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.028	BV	217.55798	4.60259e-3	1.00133+		Benzo(a)anthracene
14.588	VV	347.23474	2.88393e-3	1.00140+		Chrysene
16.429	BV	480.04309	4.17139e-3	2.00245+		Benzo(b)fluoranthene
17.490	VV	159.66829	6.26259e-3	9.99937e-1		Benzo(k)fluoranthene
18.066	VBA	226.60728	4.40223e-3	9.97577e-1		Benzo(a)pyrene
19.605	MF	994.54974	2.01804e-3	2.00705+		Dibenzo(ah)anthracene
20.046	FM	550.29504	3.65137e-3	2.00933+		Benzo(ghi)perylene
21.079	FM	149.37302	6.70035e-3	1.00085+		Indeno(123cd)pyrene

Totals : 78.18416

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
24.465	PBA	1.62544	0.00000	0.00000		?

Uncalib. totals : 0.00000

000142

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

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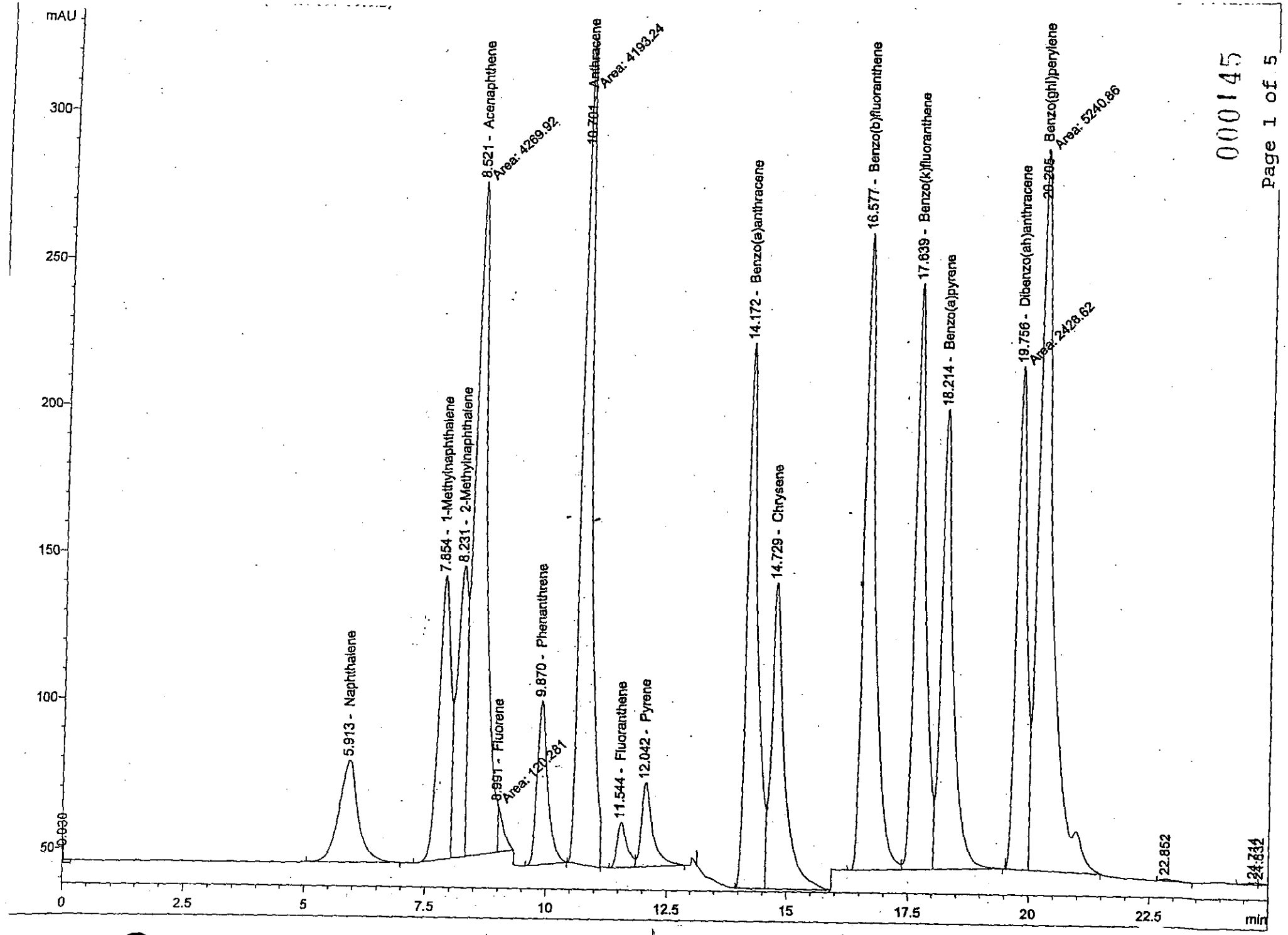
*** End of Report ***

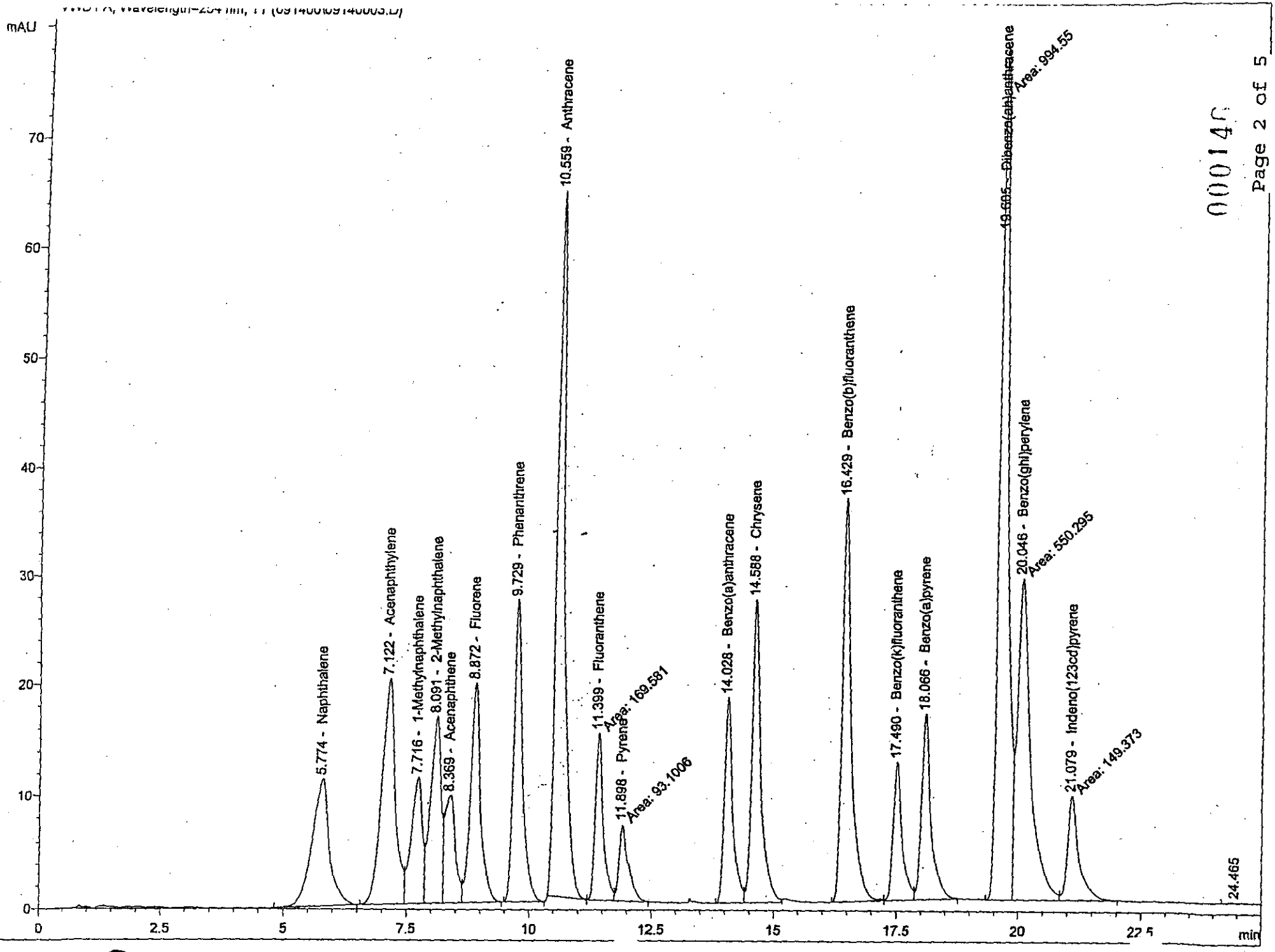
000144



000145

Page 1 of 5

000146


mAU
70
60
50
40
30
20
10
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.774 - Naphthalene
7.122 - Acenaphthylene
7.716 - 1-Methylnaphthalene
8.091 - 2-Methylnaphthalene
8.369 - Acenaphthene
8.872 - Fluorene
9.729 - Phenanthrene
10.559 - Anthracene
11.399 - Fluoranthene
11.898 - Pyrene
Area: 169.581
Area: 93.1006
14.028 - Benzo(a)anthracene
14.588 - Chrysene
16.429 - Benzo(b)fluoranthene
17.490 - Benzo(k)fluoranthene
18.066 - Benzo(a)pyrene
19.605 - Dibenzo(ah)anthracene
Area: 994.55
20.046 - Benzo(ghi)perylene
Area: 550.295
21.079 - Indeno(123cd)pyrene
Area: 149.373
24.465

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Injection Date : 9/14/00 12:58:24 PM
Sample Name : PAH Std X2 RS 9/14/00
Acq. Operator : RS verified from autosampler rack std 1 & 2 reversed

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 12:06:12 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 1:59:40 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.917	BBA	457.73398	1.11988e-2	5.12605		Naphthalene
7.860	VV	815.11816	5.75871e-3	4.69403		1-Methylnaphthalene
8.233	VV	691.67670	7.45349e-3	5.15541		2-Methylnaphthalene
8.520	MF	2116.87891	2.33564e-3	4.94426		Acenaphthene
8.945	FM	82.85392	1.05866e-2	8.77141e-1		Fluorene
9.870	BP	422.13602	1.19065e-3	5.02614e-1		Phenanthrene
10.704	MM	2105.73145	2.52953e-4	5.32652e-1-		Anthracene
11.550	BV	105.95557	9.69210e-3	1.02693		Fluoranthene
12.045	VBA	212.28780	2.54630e-3	5.40549e-1		Pyrene
14.182	BV	1486.57703	3.35882e-4	4.99314e-1		Benzo(a)anthracene
14.741	VP	941.82025	5.17225e-4	4.87133e-1		Chrysene
16.598	BV	1830.36072	5.69251e-4	1.04193		Benzo(b)fluoranthene
17.659	VV	1559.22083	3.25714e-4	5.07861e-1		Benzo(k)fluoranthene
18.233	VV	1357.57349	3.97466e-4	5.39589e-1		Benzo(a)pyrene
19.785	MF	1199.76929	8.37166e-4	1.00441		Dibenzo(ah)anthracene
20.238	FM	2569.22290	4.05655e-4	1.04222		Benzo(ghi)perylene

Totals : 28.52209

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.779	BBA	139.60797	3.49668e-2	4.88165		Naphthalene
7.130	BV	192.17686	5.00158e-2	9.61188		Acenaphthylene

000147

Injection Date : 9/14/00 12:58:24 PM
Sample Name : PAH Std 1
Acq. Operator : RS

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 12:06:12 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.721	VV	89.12464	5.42990e-2	4.83938		1-Methylnaphthalene
8.092	VV	123.72823	3.87922e-2	4.79969		2-Methylnaphthalene
8.369	VV	69.66994	7.67620e-2	5.34800		Acenaphthene
8.869	VBA	139.24638	7.24799e-3	1.00926		Fluorene
9.728	BP	173.85025	2.86544e-3	4.98158e-1		Phenanthrene
10.563	BP	379.23813	1.29998e-3	4.93001e-1-		Anthracene
11.405	MF	84.13593	1.16359e-2	9.78998e-1		Fluoranthene
11.901	FM	45.89300	1.07995e-2	4.95623e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.037	BV	108.20583	4.49416e-3	4.86295e-1		Benzo(a)anthracene
14.599	VV	172.46683	2.91181e-3	5.02191e-1		Chrysene
16.448	BV	238.85312	4.12255e-3	9.84684e-1		Benzo(b)fluoranthene
17.509	VV	80.05262	6.20053e-3	4.96369e-1		Benzo(k)fluoranthene
18.084	VBA	114.54205	4.78890e-3	5.48530e-1		Benzo(a)pyrene
19.634	MF	489.12625	1.95380e-3	9.55656e-1		Dibenzo(ah)anthracene
20.079	FM	263.23438	3.96531e-3	1.04380		Benzo(ghi)perylene
21.088	FM	74.27673	7.01643e-3	5.21157e-1		Indeno(123cd)pyrene

Totals : 38.49433

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
15.258	VV	1.66118	0.00000	0.00000		?

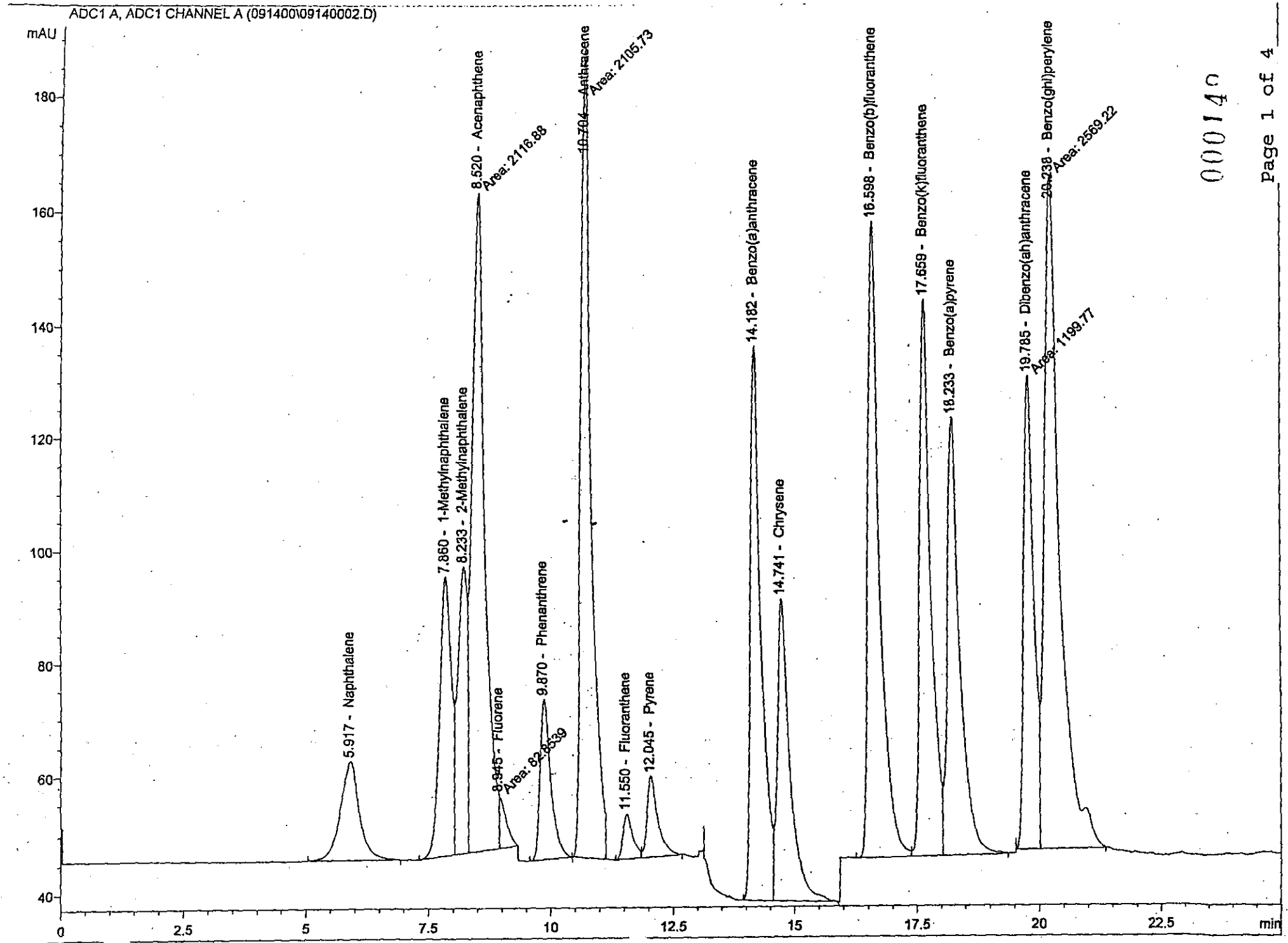
Uncalib. totals : 0.00000

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

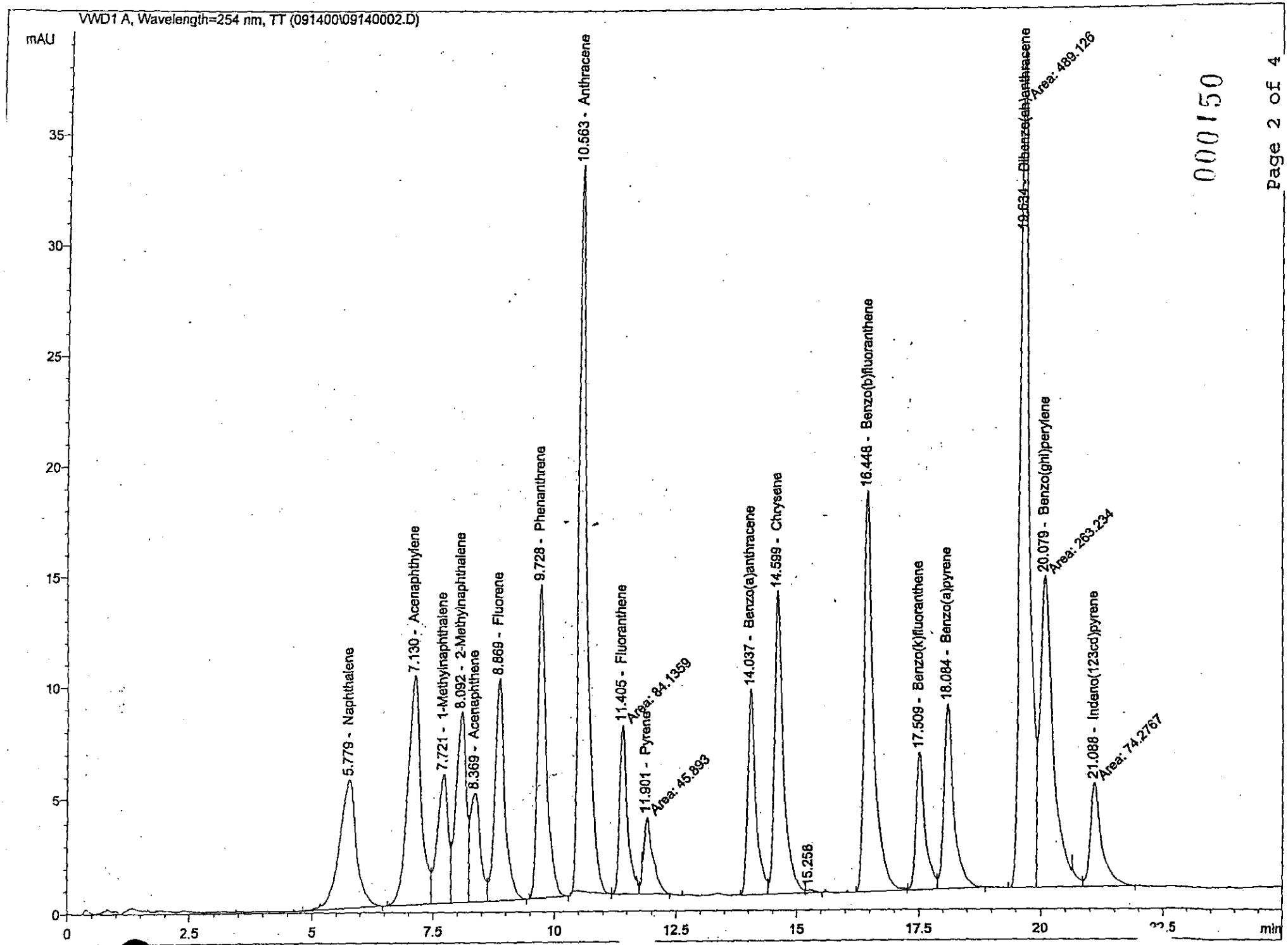
*** End of Report ***

000148


ADC1 A, ADC1 CHANNEL A (091400\09140002.D)
mAU
5.917 - Naphthalene
7.860 - 1-Methylnaphthalene
8.233 - 2-Methylnaphthalene
8.520 - Acenaphthene
Area: 2116.88
8.945 - Fluorene
Area: 82.8539
9.870 - Phenanthrene
10.704 - Anthracene
Area: 2105.73
11.550 - Fluoranthene
12.045 - Pyrene
14.182 - Benzo(a)anthracene
14.741 - Chrysene
16.598 - Benzo(b)fluoranthene
17.659 - Benzo(k)fluoranthene
18.233 - Benzo(a)pyrene
19.785 - Dibenzo(ah)anthracene
Area: 1199.77
20.238 - Benzo(ghi)perylene
Area: 2569.22
min

000140

000150


VWD1 A, Wavelength=254 nm, TT (091400\09140002.D)
mAU
35
30
25
20
15
10
5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.779 - Naphthalene
7.130 - Acenaphthylene
7.721 - 1-Methylnaphthalene
8.092 - 2-Methylnaphthalene
8.369 - Acenaphthene
8.869 - Fluorene
9.728 - Phenanthrene
10.563 - Anthracene
11.405 - Fluoranthene
11.901 - Pyrene
Area: 84.1359
Area: 45.893
14.037 - Benzo(a)anthracene
14.599 - Chrysene
15.258
16.448 - Benzo(b)fluoranthene
17.509 - Benzo(k)fluoranthene
18.084 - Benzo(a)pyrene
19.634 - Dibenzo(ah)anthracene
Area: 489.126
20.079 - Benzo(ghi)perylene
Area: 263.234
21.088 - Indeno(123cd)pyrene
Area: 74.2767

==========

Injection Date : 9/14/00 2:41:18 PM
Sample Name : PAH Std 3
Acq. Operator : RS

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:07:57 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:07:52 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.911	BBA	177.09276	1.11843e-2	1.98066		Naphthalene
7.852	PV	319.74792	6.02428e-3	1.92625		1-Methylnaphthalene
8.228	VV	279.61868	7.20738e-3	2.01532		2-Methylnaphthalene
8.521	MF	831.69177	2.34274e-3	1.94844		Acenaphthene
8.926	FM	37.73751	1.11312e-2	4.20065e-1		Fluorene
9.871	BP	165.13036	1.18462e-3	1.95617e-1		Phenanthrene
10.700	MM	838.25519	2.39733e-4	2.00957e-1-		Anthracene
11.538	PV	41.76950	9.53598e-3	3.98313e-1		Fluoranthene
12.035	VBA	88.05202	2.38119e-3	2.09669e-1		Pyrene
14.171	MF	580.52747	3.37815e-4	1.96111e-1		Benzo(a)anthracene
14.733	FM	350.60947	5.29417e-4	1.85619e-1		Chrysene
16.585	VV	719.40326	5.48016e-4	3.94245e-1		Benzo(b)fluoranthene
17.645	VV	615.84094	3.20375e-4	1.97300e-1		Benzo(k)fluoranthene
18.220	VV	532.83832	3.78729e-4	2.01801e-1		Benzo(a)pyrene
19.775	MF	480.45383	8.28050e-4	3.97840e-1		Dibenzo(ah)anthracene
20.230	FM	998.91718	3.95775e-4	3.95346e-1		Benzo(ghi)perylene

Totals : 11.26355

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.033	BB	50.38533	0.00000	0.00000		?

Uncalib. totals : 0.00000

000151

Results obtained with enhanced integrator!

Injection Date : 9/14/00 2:41:18 PM
Sample Name : PAH Std 3
Acq. Operator : RS

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:07:57 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.773	BBA	54.22546	3.59894e-2	1.95154		Naphthalene
7.122	BV	74.00314	5.16203e-2	3.82007		Acenaphthylene
7.715	VV	36.73984	5.50470e-2	2.02242		1-Methylnaphthalene
8.089	VV	49.40136	3.96439e-2	1.95846		2-Methylnaphthalene
8.370	VV	28.05536	7.20467e-2	2.02130		Acenaphthene
8.876	VBA	54.44505	7.59180e-3	4.13336e-1		Fluorene
9.731	BP	67.07530	2.88396e-3	1.93443e-1		Phenanthrene
10.559	MM	151.13527	1.30837e-3	1.97740e-1		Anthracene
11.394	MF	32.94216	1.17607e-2	3.87422e-1		Fluoranthene
11.892	FM	17.61109	1.09133e-2	1.92195e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.029	BV	42.26120	4.59885e-3	1.94353e-1		Benzo(a)anthracene
14.592	VB	68.34219	2.88828e-3	1.97391e-1		Chrysene
16.438	PB	94.65772	4.14976e-3	3.92807e-1		Benzo(b)fluoranthene
17.498	BV	31.55045	6.22107e-3	1.96278e-1		Benzo(k)fluoranthene
18.084	VBA	46.45811	4.44209e-3	2.06371e-1		Benzo(a)pyrene
19.628	MF	193.91678	1.99609e-3	3.87074e-1		Dibenzo(ah)anthracene
20.073	FM	101.73080	3.95179e-3	4.02019e-1		Benzo(ghi)perylene
21.089	FM	26.69713	6.95941e-3	1.85796e-1		Indeno(123cd)pyrene

Totals : 15.32001

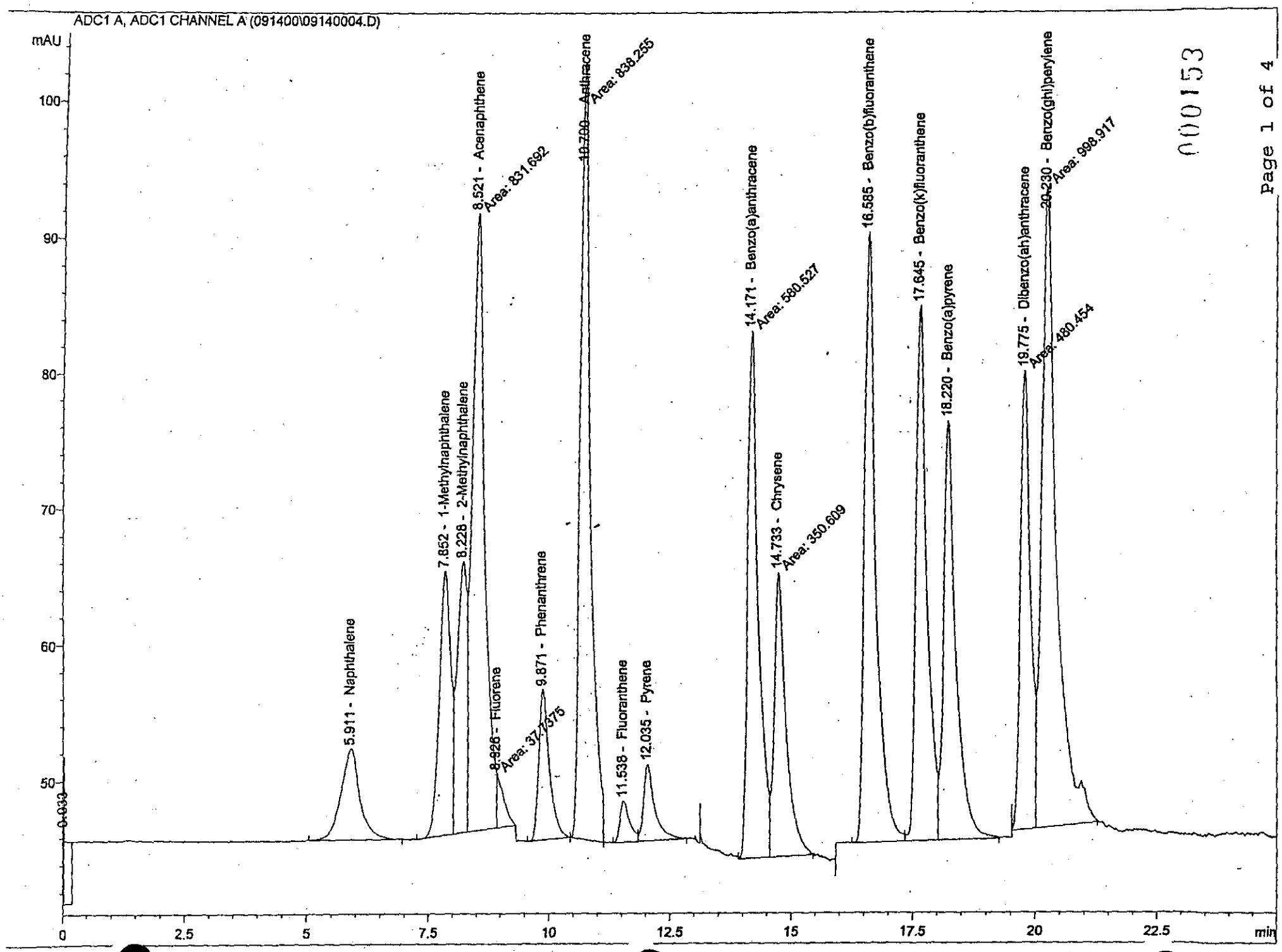
Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

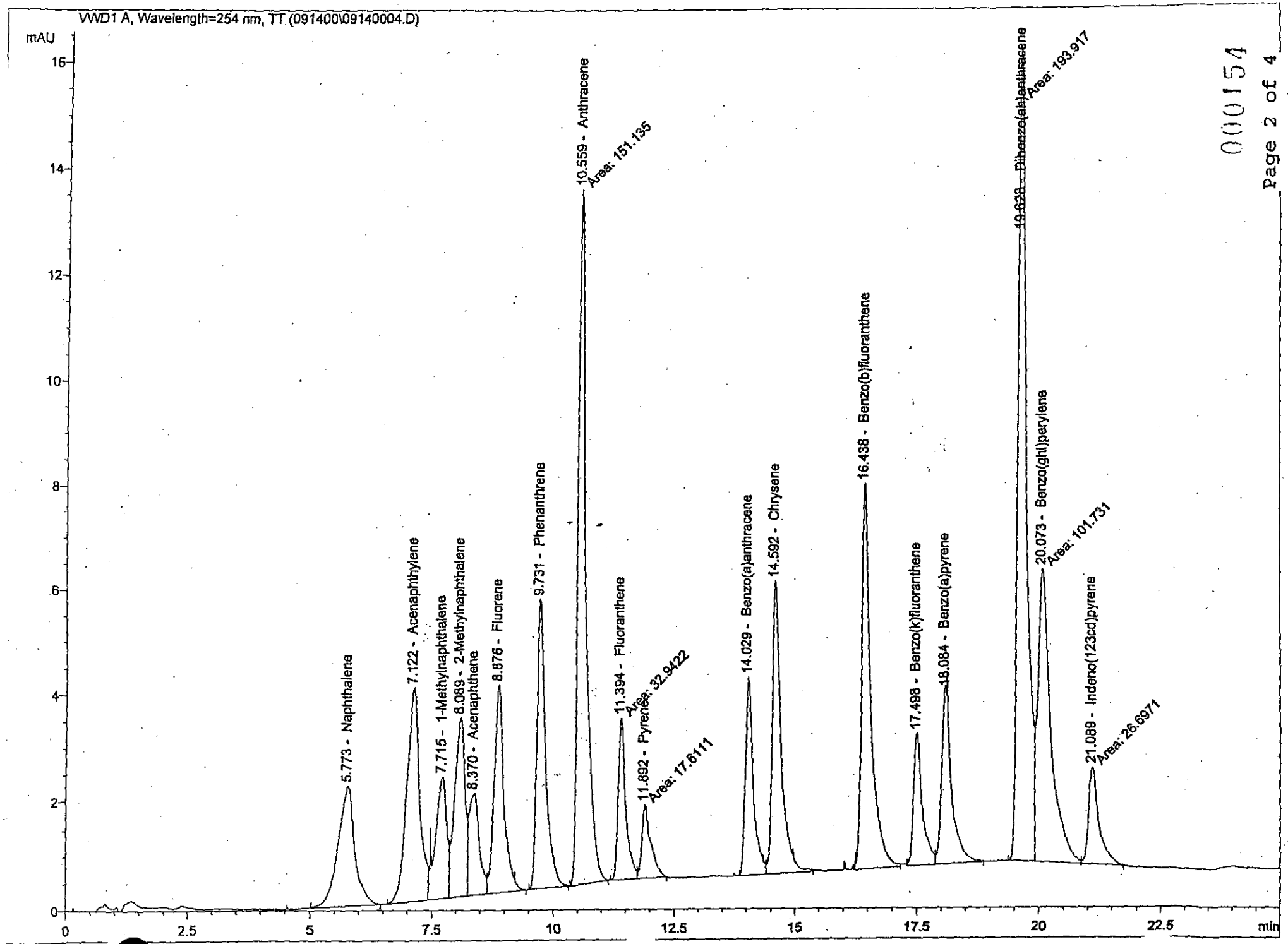
*** End of Report ***

000152



000153

Page 1 of 4


VWD1 A, Wavelength=254 nm, TT (091400\09140004.D)
mAU
16
14
12
10
8
6
4
2
0
5.773 - Naphthalene
7.122 - Acenaphthylene
7.715 - 1-Methylnaphthalene
8.089 - 2-Methylnaphthalene
8.370 - Acenaphthene
8.876 - Fluorene
9.731 - Phenanthrene
10.559 - Anthracene
Area: 151.135
11.394 - Fluoranthene
Area: 32.9422
11.892 - Pyrene
Area: 17.6111
14.029 - Benzo(a)anthracene
14.592 - Chrysene
16.438 - Benzo(b)fluoranthene
17.498 - Benzo(k)fluoranthene
18.084 - Benzo(a)pyrene
19.628 - Dibenzo(ah)anthracene
Area: 193.917
20.073 - Benzo(ghi)perylene
Area: 101.731
21.089 - Indeno(123cd)pyrene
Area: 26.6971
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000154

Injection Date : 9/14/00 3:32:57 PM
Sample Name : PAH Std 4
Acq. Operator : RS

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:31:46 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:31:41 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.917	BV	101.63905	1.09826e-2	1.11626		Naphthalene
7.863	PV	182.83362	5.81298e-3	1.06281		1-Methylnaphthalene
8.237	VV	161.39539	6.87639e-3	1.10982		2-Methylnaphthalene
8.530	MF	497.14474	2.25877e-3	1.12294		Acenaphthene
8.972	FM	17.61251	6.85159e-3	1.20674e-1-		Fluorene
9.874	PP	98.37514	1.13620e-3	1.11774e-1		Phenanthrene
10.701	MM	489.80444	2.28149e-4	1.11748e-1-		Anthracene
11.540	BV	24.20294	9.29049e-3	2.24857e-1		Fluoranthene
12.036	VP	51.17427	2.31760e-3	1.18601e-1		Pyrene
14.169	MF	342.87982	3.16324e-4	1.08461e-1		Benzo(a)anthracene
14.732	FM	203.64078	5.44538e-4	1.10890e-1		Chrysene
16.583	MM	422.78955	5.21232e-4	2.20371e-1		Benzo(b)fluoranthene
17.644	MF	359.08487	3.08907e-4	1.10924e-1		Benzo(k)fluoranthene
18.219	FM	304.88193	3.64538e-4	1.11141e-1		Benzo(a)pyrene
19.779	MF	280.15933	8.00035e-4	2.24137e-1		Dibenzo(ah)anthracene
20.245	FM	581.78510	3.88389e-4	2.25959e-1		Benzo(ghi)perylene

Totals : 6.21136

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.132	BV	6.35649	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000155

Data File C:\HPCHEM\1\DATA\091400\09140005.D

Sample Name: PAH Std 4

Injection Date : 9/14/00 3:32:57 PM
Sample Name : PAH Std 4
Acq. Operator : RS

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:31:46 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.779	BBA	33.13679	3.47898e-2	1.15282		Naphthalene
7.132	BV	44.26999	5.04264e-2	2.23238		Acenaphthylene
7.725	VV	19.88931	5.26675e-2	1.04752		1-Methylnaphthalene
8.098	VV	28.61016	3.85104e-2	1.10179		2-Methylnaphthalene
8.381	VV	16.93034	6.88819e-2	1.16619		Acenaphthene
8.883	VBA	32.66193	7.68545e-3	2.51022e-1		Fluorene
9.733	BP	39.79345	2.76666e-3	1.10095e-1		Phenanthrene
10.559	MM	88.05602	1.25058e-3	1.10121e-1		Anthracene
11.395	MF	19.40378	1.14395e-2	2.21970e-1		Fluoranthene
11.893	FM	10.05997	1.07686e-2	1.08332e-1		Pyrene
13.300		-	-	-		P-terphenyl D14
14.027	BV	24.91508	4.47694e-3	1.11543e-1		Benzo(a)anthracene
14.590	VB	40.04166	2.79295e-3	1.11834e-1		Chrysene
16.436	BB	56.07032	4.00177e-3	2.24380e-1		Benzo(b)fluoranthene
17.497	BV	18.58857	6.00301e-3	1.11587e-1		Benzo(k)fluoranthene
18.071	VB	26.60964	4.19755e-3	1.11695e-1		Benzo(a)pyrene
19.630	MF	116.12875	1.96039e-3	2.27658e-1		Dibenzo(ah)anthracene
20.085	FM	59.51743	3.97344e-3	2.36489e-1		Benzo(ghi)perylene
21.095	VP	15.35210	7.05636e-3	1.08330e-1		Indeno(123cd)pyrene

Totals : 8.74576

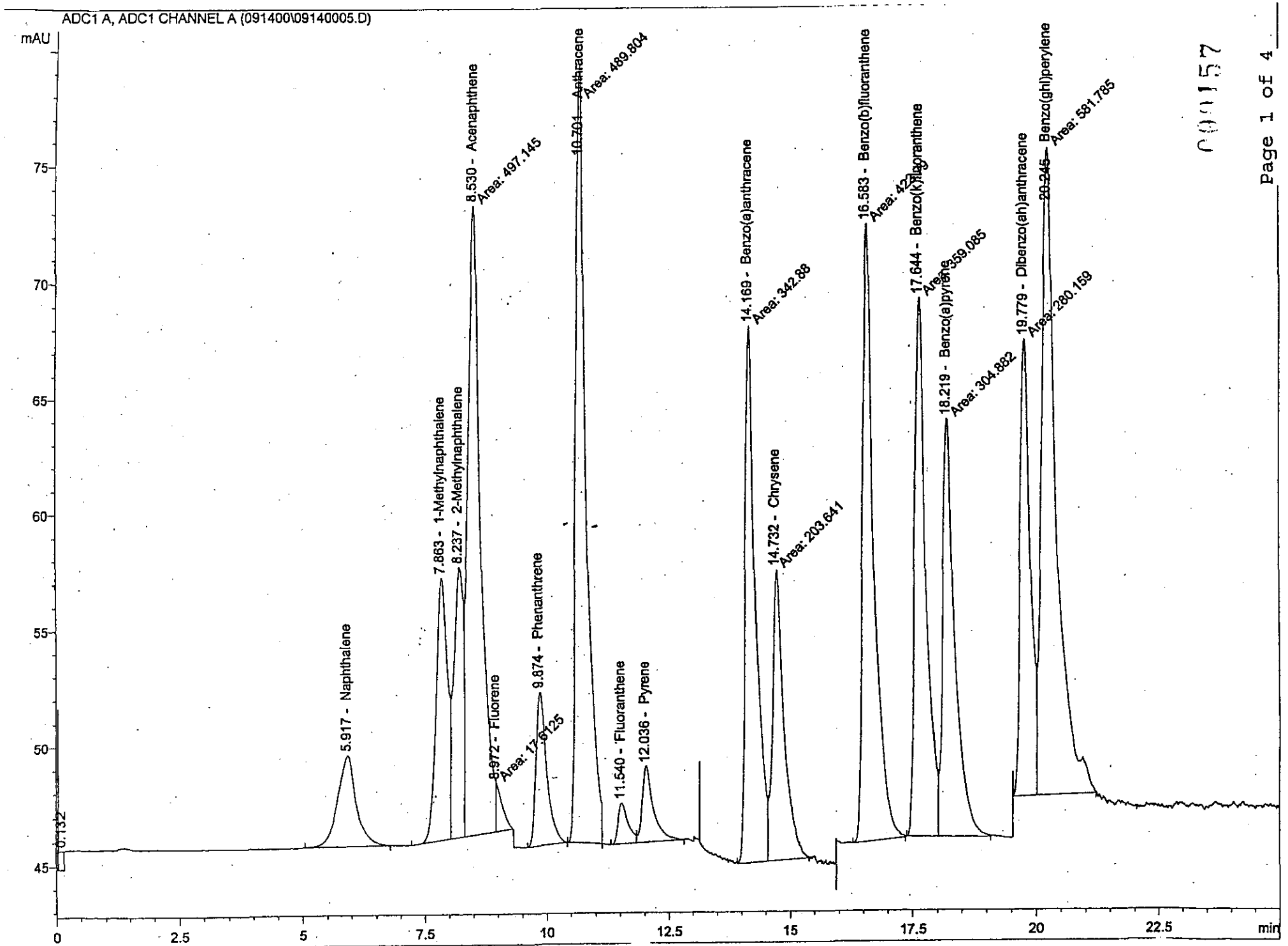
Uncalibrated Peaks : compound name not specified

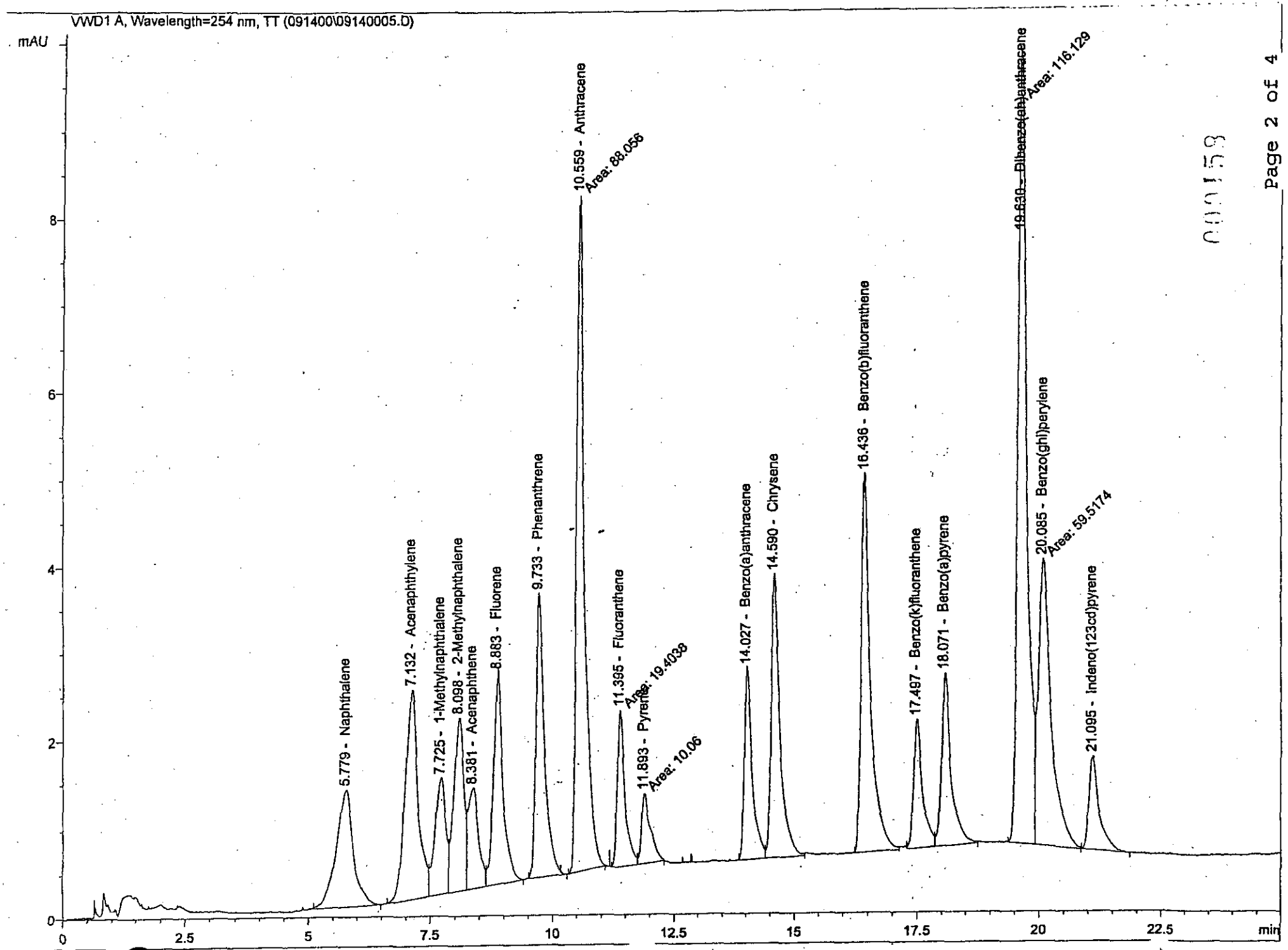
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

000156


ADC1 A, ADC1 CHANNEL A (091400\09140005.D)
mAU
5.917 - Naphthalene
7.863 - 1-Methylnaphthalene
8.237 - 2-Methylnaphthalene
8.530 - Acenaphthene
Area: 497.145
8.972 - Fluorene
Area: 17.6125
9.874 - Phenanthrene
10.701 - Anthracene
Area: 489.804
11.540 - Fluoranthene
12.036 - Pyrene
14.169 - Benzo(a)anthracene
Area: 342.88
14.732 - Chrysene
Area: 203.641
16.583 - Benzo(b)fluoranthene
Area: 422
17.644 - Benzo(k)fluoranthene
Area: 359.085
18.219 - Benzo(a)pyrene
Area: 304.882
19.779 - Dibenzo(ah)anthracene
Area: 280.159
20.245 - Benzo(ghi)perylene
Area: 581.785
0.132
min


VWD1 A, Wavelength=254 nm, TT (091400\09140005.D)
mAU
8
6
4
2
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.779 - Naphthalene
7.132 - Acenaphthylene
7.725 - 1-Methylnaphthalene
8.098 - 2-Methylnaphthalene
8.381 - Acenaphthene
8.883 - Fluorene
9.733 - Phenanthrene
10.559 - Anthracene
Area: 88.056
11.395 - Fluoranthene
Area: 19.4038
11.893 - Pyrene
Area: 10.06
14.027 - Benzo(a)anthracene
14.590 - Chrysene
16.436 - Benzo(b)fluoranthene
17.497 - Benzo(k)fluoranthene
18.071 - Benzo(a)pyrene
19.630 - Dibenzo(ah)anthracene
Area: 116.129
20.085 - Benzo(ghi)perylene
Area: 59.5174
21.095 - Indeno(123cd)pyrene

Injection Date : 9/14/00 4:24:31 PM
Sample Name : PAH Std 5
Acq. Operator : RS

Seq. Line : 6
Vial : 6
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:34:28 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 5:47:59 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 5:47:47 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.912	MM	43.51245	1.10908e-2	4.82587e-1	-	Naphthalene
7.853	PV	84.18243	5.41754e-3	4.56061e-1	-	1-Methylnaphthalene
8.230	VV	73.61031	6.23043e-3	4.58624e-1	-	2-Methylnaphthalene
8.522	MF	227.99506	2.13272e-3	4.86250e-1	-	Acenaphthene
8.960	FM	8.53182	8.17774e-4	6.97710e-3	-	Fluorene
9.870	PP	45.26786	1.04724e-3	4.74065e-2	-	Phenanthrene
10.699	MM	218.57169	2.07428e-4	4.53379e-2	-	Anthracene
11.539	PV	11.58462	8.77755e-3	1.01685e-1	-	Fluoranthene
12.037	VBA	23.95237	2.19598e-3	5.25989e-2	-	Pyrene
14.170	MF	149.38280	2.71752e-4	4.05951e-2	-	Benzo(a)anthracene
14.737	FM	92.42841	5.81537e-4	5.37505e-2	-	Chrysene
16.584	MM	187.06203	4.53171e-4	8.47710e-2	-	Benzo(b)fluoranthene
17.642	MF	162.07825	2.91321e-4	4.72168e-2	-	Benzo(k)fluoranthene
18.216	FM	127.85419	3.50027e-4	4.47525e-2	-	Benzo(a)pyrene
19.769	MF	135.87962	7.35564e-4	9.99482e-2	-	Dibenzo(ah)anthracene
20.236	FM	244.85063	3.93520e-4	9.63536e-2	-	Benzo(ghi)perylene

Totals : 2.60491

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

000159

==========

Injection Date : 9/14/00 4:24:31 PM
Sample Name : PAH Std 5
Acq. Operator : RS

Seq. Line : 6
Vial : 6
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:34:28 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 5:47:59 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771	BB	14.75709	3.34572e-2	4.93730e-1	-	Naphthalene
7.115	BV	20.09125	4.96422e-2	9.97373e-1	-	Acenaphthylene
7.714	VV	8.92327	4.85430e-2	4.33163e-1	-	1-Methylnaphthalene
8.090	VV	12.88177	3.71574e-2	4.78653e-1	-	2-Methylnaphthalene
8.363	VV	7.41926	6.48745e-2	4.81321e-1	-	Acenaphthene
8.875	VB	14.61118	8.41739e-3	1.22988e-1	-	Fluorene
9.730	BP	18.02111	2.58282e-3	4.65452e-2	-	Phenanthrene
10.557	BP	38.47166	1.15796e-3	4.45488e-2	-	Anthracene
11.395	MF	9.01464	1.09298e-2	9.85281e-2	-	Fluoranthene
11.895	FM	5.03527	1.07101e-2	5.39281e-2	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027	BV	11.16390	4.28987e-3	4.78917e-2	-	Benzo(a)anthracene
14.590	VB	18.14643	2.62125e-3	4.75664e-2	-	Chrysene
16.411	MM	25.57971	3.71281e-3	9.49725e-2	-	Benzo(b)fluoranthene
17.490	MF	7.73708	5.67637e-3	4.39185e-2	-	Benzo(k)fluoranthene
18.065	FM	10.85466	3.73231e-3	4.05130e-2	-	Benzo(a)pyrene
19.627	MF	52.88899	1.84696e-3	9.76837e-2	-	Dibenzo(ah)anthracene
20.085	FM	24.50035	4.16212e-3	1.01973e-1	-	Benzo(ghi)perylene
21.097	MM	6.48660	7.91892e-3	5.13669e-2	-	Indeno(123cd)pyrene

Totals : 3.77666

Uncalibrated Peaks : compound name not specified

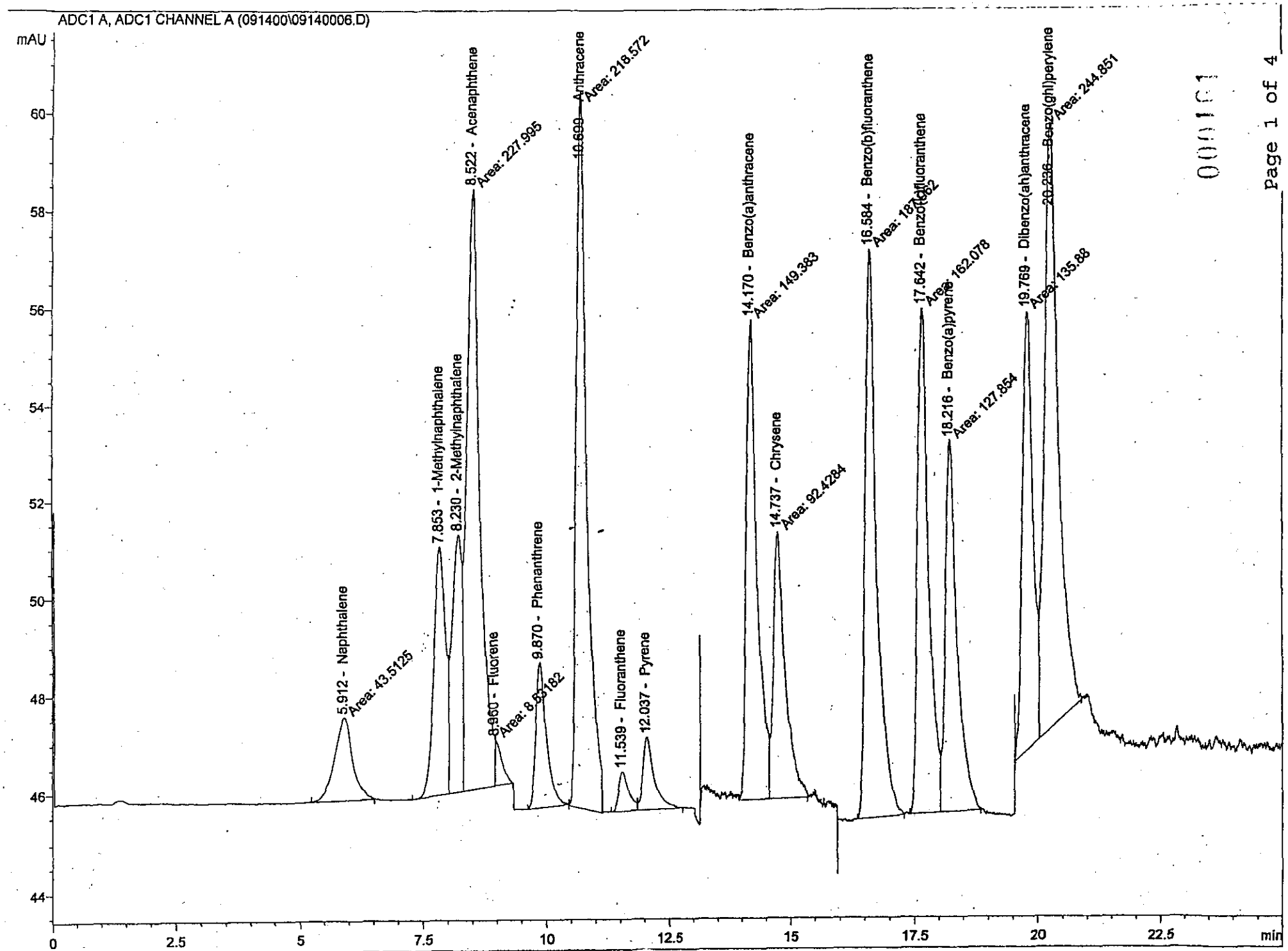
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

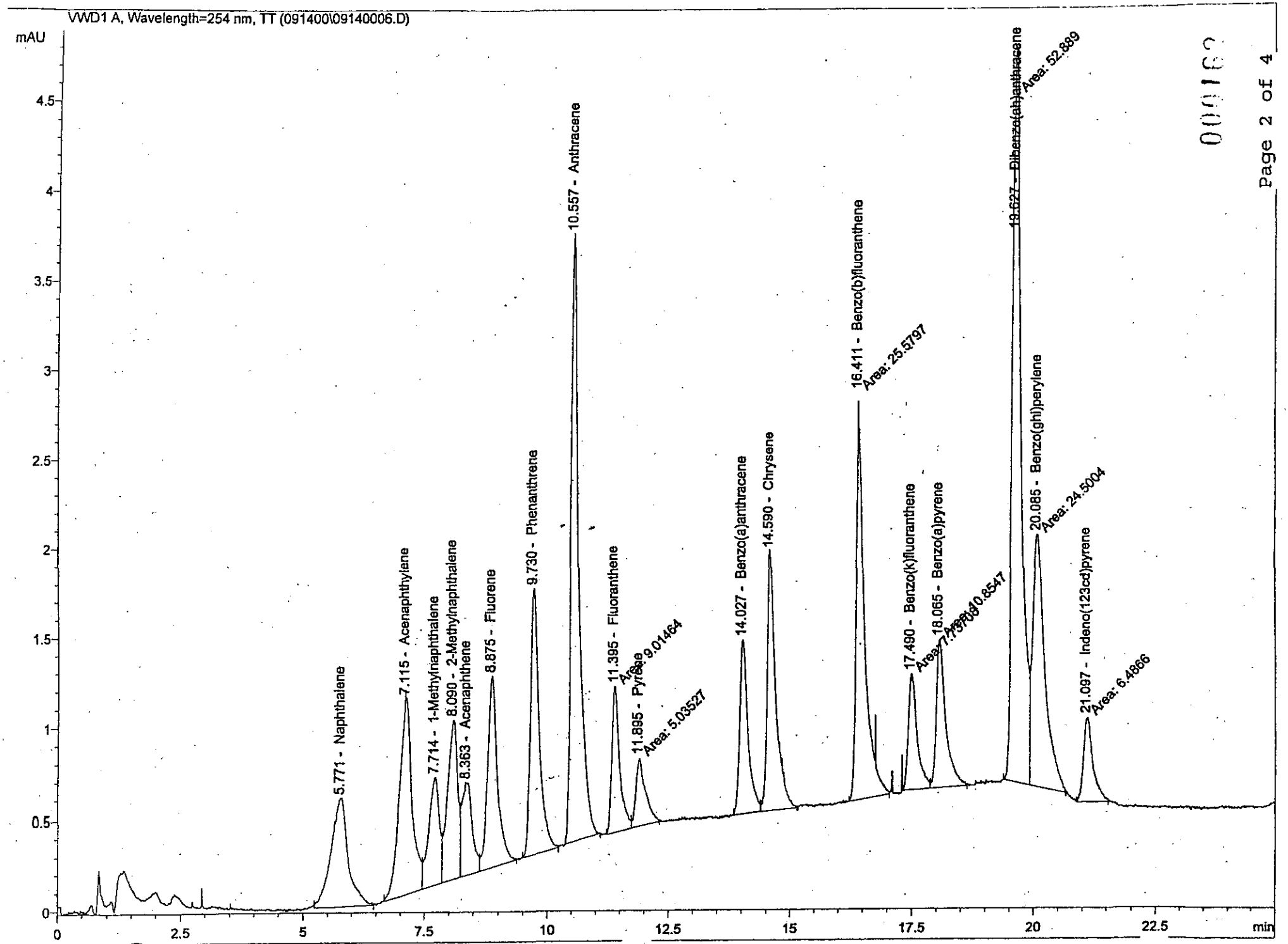
==========

*** End of Report ***

000160


ADC1 A, ADC1 CHANNEL A (091400\09140006.D)
mAU
60
58
56
54
52
50
48
46
44
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.912 - Naphthalene
Area: 43.5125
7.853 - 1-Methylnaphthalene
8.230 - 2-Methylnaphthalene
8.522 - Acenaphthene
Area: 227.995
8.960 - Fluorene
Area: 8.53182
9.870 - Phenanthrene
10.609 - Anthracene
Area: 218.572
11.539 - Fluoranthene
12.037 - Pyrene
14.170 - Benzo(a)anthracene
Area: 149.383
14.737 - Chrysene
Area: 92.4284
16.584 - Benzo(b)fluoranthene
Area: 187.662
17.642 - Benzo(k)fluoranthene
Area: 162.078
18.216 - Benzo(a)pyrene
Area: 127.854
19.769 - Dibenzo(ah)anthracene
Area: 135.88
20.236 - Benzo(ghi)perylene
Area: 244.851

000161


VWD1 A, Wavelength=254 nm, TT (091400\09140006.D)
mAU
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.771 - Naphthalene
7.115 - Acenaphthylene
7.714 - 1-Methylnaphthalene
8.090 - 2-Methylnaphthalene
8.363 - Acenaphthene
8.875 - Fluorene
9.730 - Phenanthrene
10.557 - Anthracene
11.385 - Fluoranthene
11.895 - Pyrene
Area: 9.01464
Area: 5.03527
14.027 - Benzo(a)anthracene
14.590 - Chrysene
16.411 - Benzo(b)fluoranthene
Area: 25.5797
17.490 - Benzo(k)fluoranthene
Area: 7.75708
18.065 - Benzo(a)pyrene
Area: 10.8547
19.627 - Dibenzo(ah)anthracene
Area: 52.889
20.085 - Benzo(ghi)perylene
Area: 24.5004
21.097 - Indeno(123cd)pyrene
Area: 6.4866

CONTINUING CALIBRATION

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	21	PAH	10230001	01:01		ACN Blank
No	2	71	PAH	10230002	02:01		ICV EPA Std 2
No	3	72	PAH	10230003	03:01		CCV 2nd EPA
No	4	21	PAH	10230004	04:01		CCB
No	5	57	PAH	10230005	05:01		7867 MBlk
No	6	58	PAH	10230006	06:01		7867 LCS
No	7	59	PAH	10230007	07:01		7867 LCSD
No	8	60	PAH	10230008	08:01		0010401-004C
No	9	61	PAH	10230009	09:01		0010401-005C
No	10	62	PAH	10230010	10:01		0010401-006C
No	11	63	PAH	10230011	11:01		0010401-007C
No	12	64	PAH	10230012	12:01		0010401-008B
No	13	65	PAH	10230013	13:01		7872 MBlk
No	14	66	PAH	10230014	14:01		7872 LCS
No	15	71	PAH	10230015	15:01		CCV, PAH Std 2
No	16	21	PAH	10230016	16:01		CCB. ACN
No	17	68	PAH	10230017	17:01		0010401-002B
No	18	73	PAH	10230018	18:01		10401-003B 4X
No	19	74	PAH	10230019	19:01		10401-001B 25X
No	20	75	PAH	10230020	20:01		10401-001B 10X
No	21	71	PAH	10230021	21:01		CCV, PAH Std 2
No	22	21	PAH	10230022	22:01		CCB, ACN
No	23	69	PAH	10230023	23:01		0010401-003B
No	24	67	PAH	10230024	24:01		0010401-001B
No	25	71	PAH	10230025	25:01		CCV, PAH Std 2
No	26	21	PAH	10230026	26:01		CCB, ACN

PAH ICV/CCV 2nd Source Results
EPA 8310

Datafile #					
ICV	Analyte	Actual Amt ppm	Recovered ppm	%	
10230002.D	Naphthalene	5.00	5.170	103.4	
10230002.D	Acenaphthylene	10.00	10.233	102.3	
10230002.D	1-methylnaphthalene	5.00	4.900	98.0	
10230002.D	2-methylnaphthalene	5.00	5.146	102.9	
10230002.D	Acenaphthene	5.00	5.403	108.1	
10230002.D	Fluorene	1.00	1.048	104.8	
10230002.D	Phenanthrene	0.50	0.521	104.2	
10230002.D	Anthracene	0.50	0.516	103.2	
10230002.D	Fluoranthene	1.00	1.014	101.4	
10230002.D	Pyrene	0.50	0.544	108.8	
10230002.D	Benzo(a)anthracene	0.50	0.511	102.2	
10230002.D	Chrysene	0.50	0.519	103.8	
10230002.D	Benzo(b)fluoranthene	1.00	1.022	102.2	
10230002.D	Benzo(k)fluoranthene	0.50	0.487	97.4	
10230002.D	Benzo(a)pyrene	0.50	0.479	95.8	
10230002.D	ibenzo(ah)anthracene	1.00	0.965	96.5	
10230002.D	Benzo(ghi)perylene	1.00	1.051	105.1	Average
10230002.D	Indeno(123cd)pyrene	0.50	0.467	93.4	101.9
Datafile #					
CCV 2nd source	Analyte	Actual Amt ppm	Recovered ppm	%	
10230003.D	Naphthalene	2.600	2.493	95.9	
10230003.D	Acenaphthylene	2.600	2.739	105.3	
10230003.D	1-methylnaphthalene	4.000	3.339	83.5	
10230003.D	2-methylnaphthalene	5.700	5.151	90.4	
10230003.D	Acenaphthene	5.200	5.551	106.8	
10230003.D	Fluorene	0.520	0.555	106.7	
10230003.D	Phenanthrene	0.208	0.199	95.7	
10230003.D	Anthracene	0.104	0.094	90.4	
10230003.D	Fluoranthene	0.260	0.280	107.7	
10230003.D	Pyrene	0.520	0.473	91.0	
10230003.D	Benzo(a)anthracene	0.260	0.247	95.0	
10230003.D	Chrysene	0.260	0.253	97.3	
10230003.D	Benzo(b)fluoranthene	0.104	0.093	89.4	
10230003.D	Benzo(k)fluoranthene	0.104	0.094	90.4	
10230003.D	Benzo(a)pyrene	0.260	0.230	88.5	
10230003.D	ibenzo(ah)anthracene	1.040	1.007	96.8	
10230003.D	Benzo(ghi)perylene	0.416	0.519	124.8	Average
10230003.D	Indeno(123cd)pyrene	0.260	0.238	91.5	97.1

Analyst: RS Date: 10/24/00 Instrument: HP 1100 HPLC

PAH CCV Results
EPA 8310

Datafile #					
CCV	Analyte	Actual Amt ppm	Recovered ppm	%	
10230015.D	Naphthalene	5.00	5.228	104.6	
10230015.D	Acenaphthylene	10.00	10.292	102.9	
10230015.D	1-methylnaphthalene	5.00	5.011	100.2	
10230015.D	2-methylnaphthalene	5.00	4.991	99.8	
10230015.D	Acenaphthene	5.00	5.837	116.7	
10230015.D	Fluorene	1.00	1.050	105.0	
10230015.D	Phenanthrene	0.50	0.527	105.4	
10230015.D	Anthracene	0.50	0.520	104.0	
10230015.D	Fluoranthene	1.00	1.023	102.3	
10230015.D	Pyrene	0.50	0.549	109.8	
10230015.D	Benzo(a)anthracene	0.50	0.513	102.6	
10230015.D	Chrysene	0.50	0.525	105.0	
10230015.D	Benzo(b)fluoranthene	1.00	1.031	103.1	
10230015.D	Benzo(k)fluoranthene	0.50	0.497	99.4	
10230015.D	Benzo(a)pyrene	0.50	0.502	100.4	
10230015.D	ibenzo(ah)anthracene	1.00	0.983	98.3	
10230015.D	Benzo(ghi)perylene	1.00	1.054	105.4	Average
10230015.D	Indeno(123cd)pyrene	0.50	0.455	91.0	103.1

Datafile #					
CCV	Analyte	Actual Amt ppm	Recovered ppm	%	
10230021.D	Naphthalene	5.00	5.193	103.9	
10230021.D	Acenaphthylene	10.00	10.208	102.1	
10230021.D	1-methylnaphthalene	5.00	4.945	98.9	
10230021.D	2-methylnaphthalene	5.00	5.121	102.4	
10230021.D	Acenaphthene	5.00	5.543	110.9	
10230021.D	Fluorene	1.00	1.053	105.3	
10230021.D	Phenanthrene	0.50	0.526	105.2	
10230021.D	Anthracene	0.50	0.519	103.8	
10230021.D	Fluoranthene	1.00	1.016	101.6	
10230021.D	Pyrene	0.50	0.538	107.6	
10230021.D	Benzo(a)anthracene	0.50	0.509	101.8	
10230021.D	Chrysene	0.50	0.515	103.0	
10230021.D	Benzo(b)fluoranthene	1.00	1.020	102.0	
10230021.D	Benzo(k)fluoranthene	0.50	0.494	98.8	
10230021.D	Benzo(a)pyrene	0.50	0.465	93.0	
10230021.D	ibenzo(ah)anthracene	1.00	0.962	96.2	
10230021.D	Benzo(ghi)perylene	1.00	0.942	94.2	Average
10230021.D	Indeno(123cd)pyrene	0.50	0.452	90.4	101.2

Analyst: RS Date: 10/24/00 Instrument: HP 1100 HPLC

Injection Date : 10/23/00 4:56:30 PM
Sample Name : ICV EPA Std 2
Acq. Operator : RS

Seq. Line : 2
Vial : 71
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.897	VV	465.77731	1.08245e-2	5.04182		Naphthalene
7.845	VV	768.98724	6.18865e-3	4.75899		1-Methylnaphthalene
8.217	VV	656.25745	7.17129e-3	4.70621		2-Methylnaphthalene
8.504	MF	2242.54443	2.33849e-3	5.24418		Acenaphthene
8.958	FM	81.82041	1.51171e-2	1.23689		Fluorene
9.860	PBA	428.17899	1.18284e-3	5.06467e-1		Phenanthrene
10.703	BBA	2128.74658	2.37008e-4	5.04530e-1		Anthracene
11.543	BV	107.42793	9.30492e-3	9.99608e-1		Fluoranthene
12.044	VBA	228.63306	2.24135e-3	5.12447e-1		Pyrene
14.193	VV	1478.21631	3.45078e-4	5.10100e-1		Benzo(a)anthracene
14.768	VP	993.19049	5.23114e-4	5.19552e-1		Chrysene
16.636	VV	1871.29919	5.55827e-4	1.04012		Benzo(b)fluoranthene
17.743	VV	1567.20923	3.18715e-4	4.99494e-1		Benzo(k)fluoranthene
18.315	VP	1399.77808	3.68346e-4	5.15603e-1		Benzo(a)pyrene
19.923	BV	1159.52283	8.20887e-4	9.51838e-1		Dibenzo(ah)anthracene
20.391	VBA	2648.33618	3.83614e-4	1.01594		Benzo(ghi)perylene

Totals : 28.56378

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.758	BBA	146.63483	3.52579e-2	5.17004		Naphthalene
7.118	BV	198.62526	5.15218e-2	10.23353		Acenaphthylene
7.707	VV	87.40682	5.60596e-2	4.89999		1-Methylnaphthalene
8.080	VV	129.12253	3.98573e-2	5.14648		2-Methylnaphthalene
8.353	VV	77.28410	6.99141e-2	5.40325		Acenaphthene

000167

Injection Date : 10/23/00 4:56:30 PM
Sample Name : ICV EPA Std 2
Acq. Operator : RS

Seq. Line : 2
Vial : 71
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.862	VBA	145.03232	7.22296e-3	1.04756		Fluorene
9.719	BBA	179.81189	2.89650e-3	5.20824e-1		Phenanthrene
10.561	BBA	391.58377	1.31704e-3	5.15733e-1	-	Anthracene
11.398	BV	86.13543	1.17796e-2	1.01464		Fluoranthene
11.898	VB	50.49495	1.07782e-2	5.44243e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.048	BV	111.32719	4.59068e-3	5.11068e-1		Benzo(a)anthracene
14.626	VB	180.51653	2.87395e-3	5.18796e-1		Chrysene
16.486	BP	246.14632	4.15224e-3	1.02206		Benzo(b)fluoranthene
17.591	VV	78.17545	6.23572e-3	4.87480e-1		Benzo(k)fluoranthene
18.166	VBA	109.61227	4.37257e-3	4.79287e-1		Benzo(a)pyrene
19.769	BV	480.13922	2.00972e-3	9.64944e-1		Dibenzo(ah)anthracene
20.227	VP	285.45523	3.68342e-3	1.05145		Benzo(ghi)perylene
21.339	VBA	69.02179	6.76476e-3	4.66916e-1		Indeno(123cd)pyrene

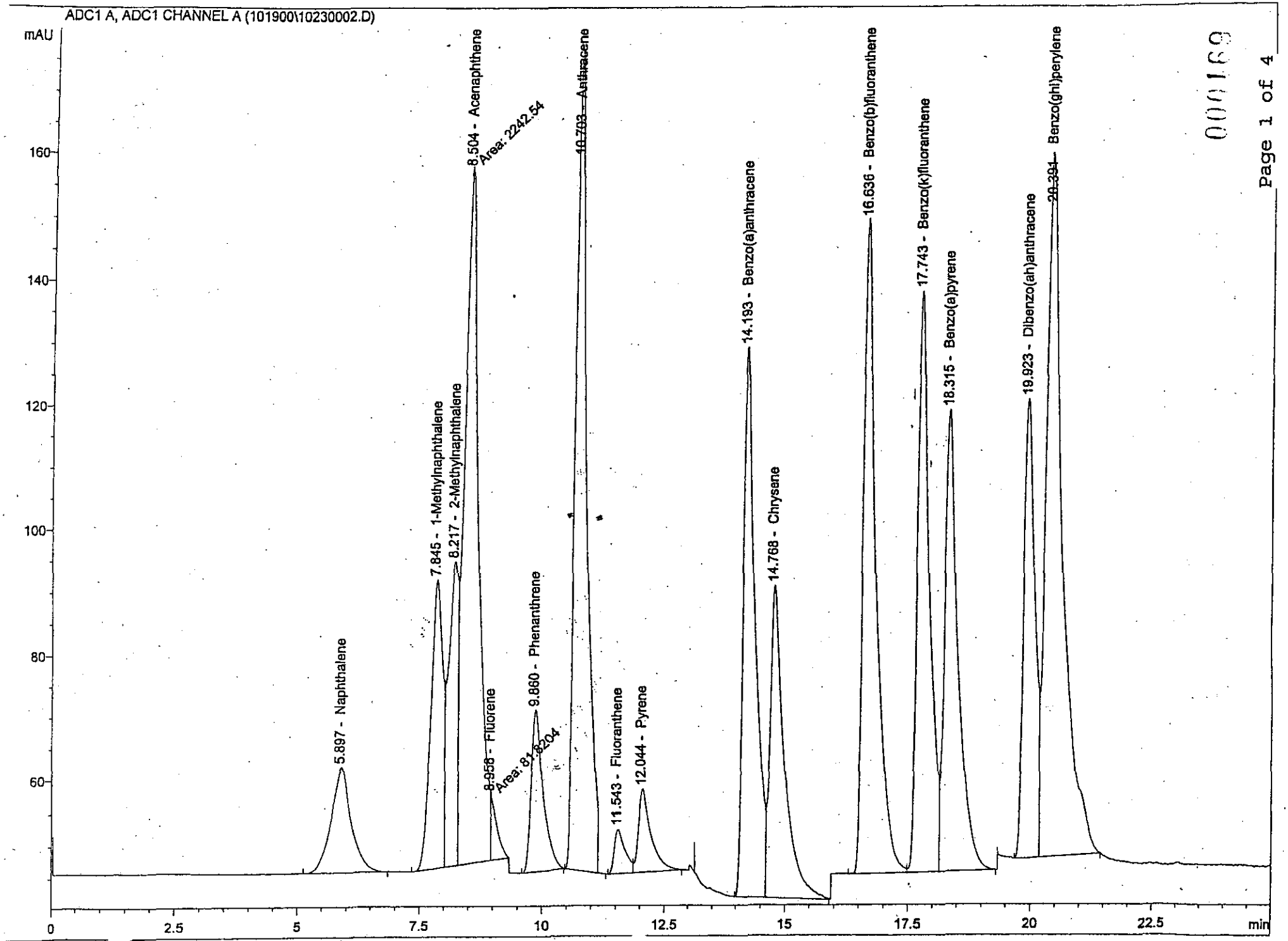
Totals : 39.99829

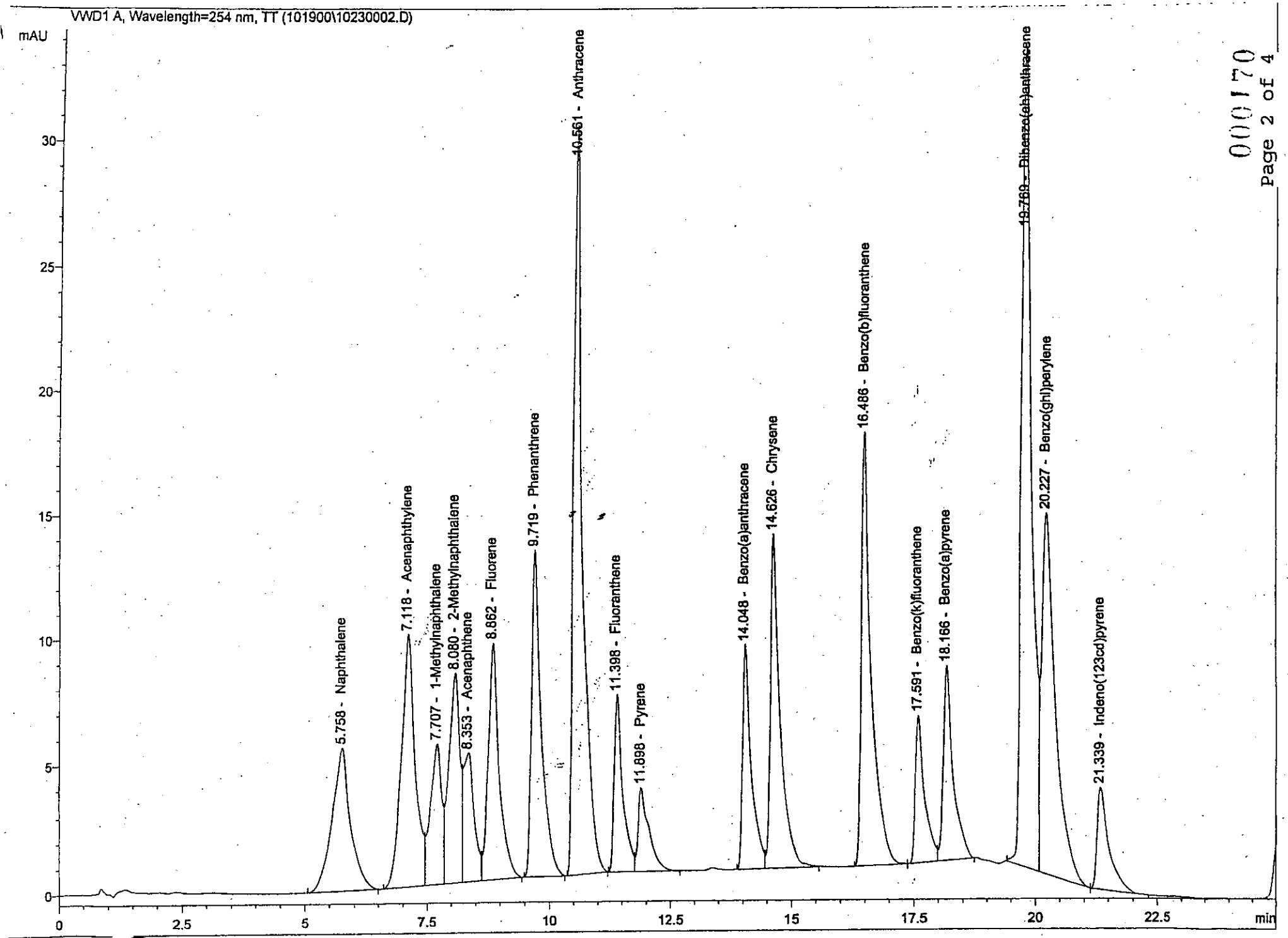
Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***


ADC1 A, ADC1 CHANNEL A (101900\10230002.D)
mAU
160
140
120
100
80
60
5.897 - Naphthalene
7.845 - 1-Methylnaphthalene
8.217 - 2-Methylnaphthalene
8.504 - Acenaphthene
Area: 2242.54
8.958 - Fluorene
9.860 - Phenanthrene
Area: 81,8204
10.793 - Anthracene
11.543 - Fluoranthene
12.044 - Pyrene
14.193 - Benzo(a)anthracene
14.768 - Chrysene
16.636 - Benzo(b)fluoranthene
17.743 - Benzo(k)fluoranthene
18.315 - Benzo(a)pyrene
19.923 - Dibenzo(ah)anthracene
20.391 - Benzo(ghi)perylene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (101900\10230002.D)
mAU
30
25
20
15
10
5
0
5.758 - Naphthalene
7.118 - Acenaphthylene
7.707 - 1-Methylnaphthalene
8.080 - 2-Methylnaphthalene
8.353 - Acenaphthene
8.862 - Fluorene
9.719 - Phenanthrene
10.561 - Anthracene
11.398 - Fluoranthene
11.898 - Pyrene
14.048 - Benzo(a)anthracene
14.626 - Chrysene
16.486 - Benzo(b)fluoranthene
17.591 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.769 - Dibenzo(ah)anthracene
20.227 - Benzo(ghi)perylene
21.339 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000170

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.890	BP	234.48811	1.08516e-2	2.54457		Naphthalene
7.839	PV	555.37067	6.15219e-3	3.41674		1-Methylnaphthalene
8.211	VV	675.87457	7.17474e-3	4.84922		2-Methylnaphthalene
8.498	MF	2215.51611	2.33821e-3	5.18034		Acenaphthene
8.960	FM	61.31166	1.45603e-2	8.92716e-1		Fluorene
9.856	BBA	174.53528	1.15954e-3	2.02381e-1		Phenanthrene
10.700	BBA	410.07867	2.22823e-4	9.13748e-2-		Anthracene
11.539	PV	25.15317	9.09642e-3	2.28804e-1		Fluoranthene
12.037	VBA	209.82175	2.24087e-3	4.70184e-1		Pyrene
14.187	BV	723.13647	3.36471e-4	2.43314e-1		Benzo(a)anthracene
14.766	VP	495.73309	5.29130e-4	2.62307e-1		Chrysene
16.643	BP	188.22644	4.53876e-4	8.54315e-2-		Benzo(b)fluoranthene
17.748	VV	313.58588	3.06083e-4	9.59833e-2-		Benzo(k)fluoranthene
18.317	VV	672.16028	3.66353e-4	2.46248e-1		Benzo(a)pyrene
19.926	BV	1240.69543	8.21628e-4	1.01939		Dibenzo(ah)anthracene
20.411	VBA	1194.89746	3.84841e-4	4.59846e-1		Benzo(ghi)perylene

Totals : 20.28886

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.751	BBA	71.12842	3.50440e-2	2.49262		Naphthalene
7.105	BV	53.74709	5.09516e-2	2.73850		Acenaphthylene
7.701	VV	59.98731	5.56690e-2	3.33943		1-Methylnaphthalene
8.074	VV	129.24025	3.98576e-2	5.15121		2-Methylnaphthalene
8.344	VV	79.38483	6.99282e-2	5.55124		Acenaphthene

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.853	VBA	75.58694	7.34590e-3	5.55254e-1		Fluorene
9.715	BBA	70.19515	2.84193e-3	1.99490e-1		Phenanthrene
10.557	BBA	75.38005	1.24434e-3	9.37984e-2	-	Anthracene
11.397	BV	24.30515	1.15269e-2	2.80163e-1		Fluoranthene
11.890	VB	43.87326	1.07770e-2	4.72823e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.041	BV	54.32914	4.55551e-3	2.47497e-1		Benzo(a)anthracene
14.622	VB	88.99771	2.84491e-3	2.53191e-1		Chrysene
16.492	BB	25.16528	3.70473e-3	9.32306e-2	-	Benzo(b)fluoranthene
17.596	PV	15.64363	5.99013e-3	9.37073e-2	-	Benzo(k)fluoranthene
18.166	VBA	53.55561	4.29891e-3	2.30231e-1		Benzo(a)pyrene
19.771	BV	501.06424	2.01056e-3	1.00742		Dibenzo(ah)anthracene
20.238	VP	139.00601	3.73077e-3	5.18600e-1		Benzo(ghi)perylene
21.355	VBA	34.52599	6.88437e-3	2.37690e-1		Indeno(123cd)pyrene

Totals : 23.55610

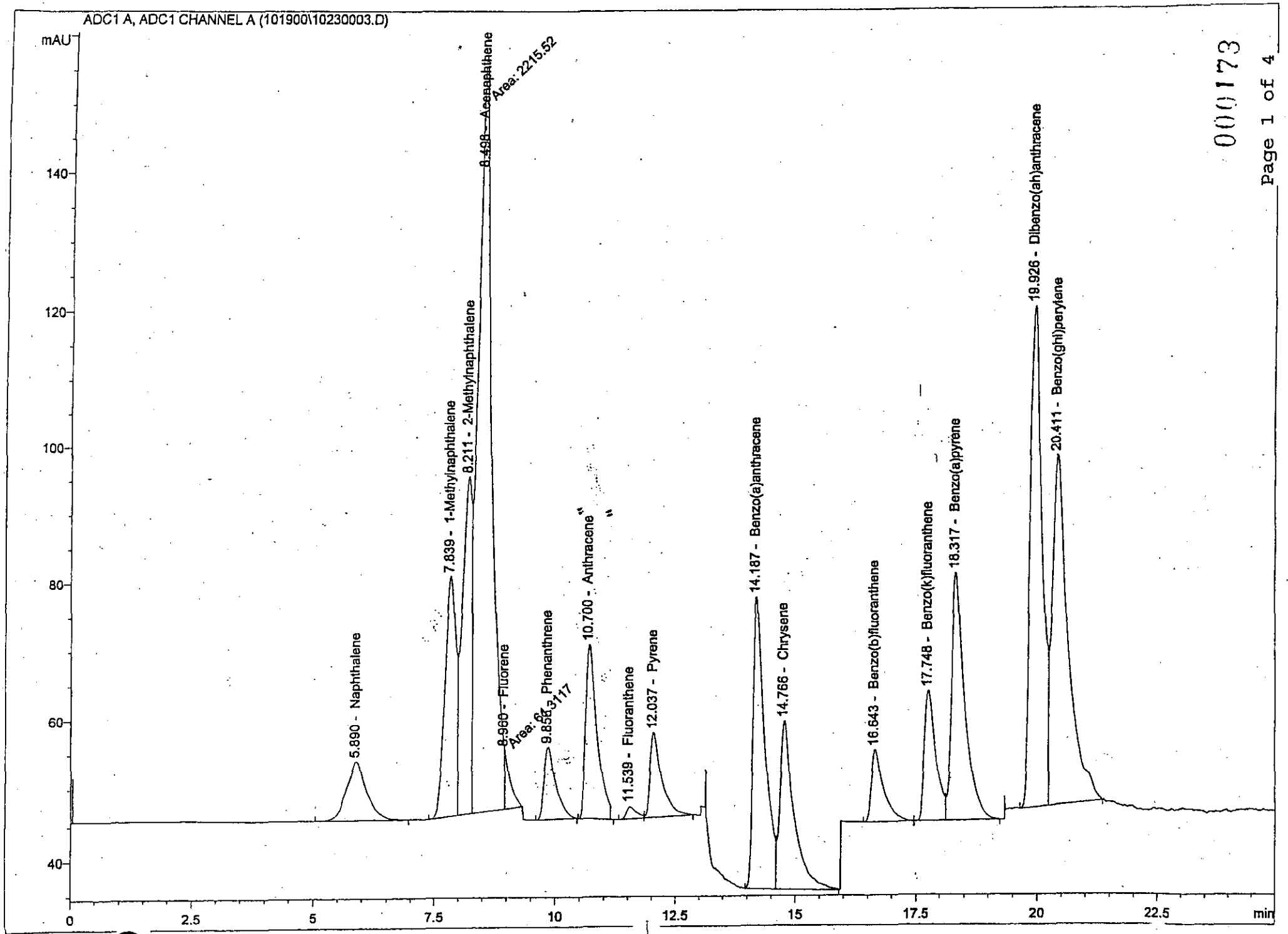
Uncalibrated Peaks : compound name not specified

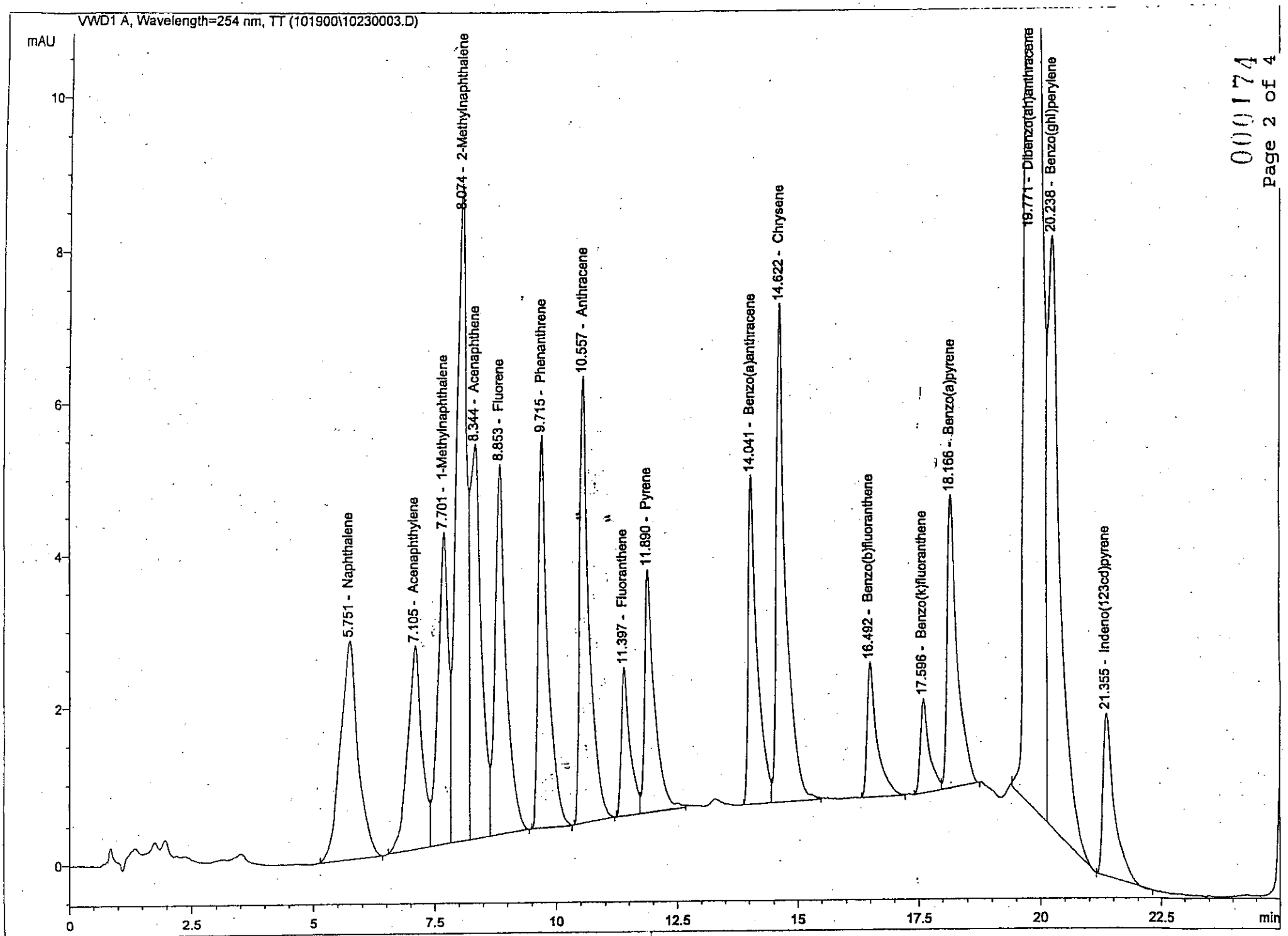
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

000172


ADC1 A, ADC1 CHANNEL A (101900\10230003.D)
mAU
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.890 - Naphthalene
7.839 - 1-Methylnaphthalene
8.211 - 2-Methylnaphthalene
8.498 - Acenaphthene
Area: 2215.52
8.980 - Fluorene
Area: 6
9.858 - Phenanthrene
3117
10.700 - Anthracene
11.539 - Fluoranthene
12.037 - Pyrene
14.187 - Benzo(a)anthracene
14.766 - Chrysene
16.643 - Benzo(b)fluoranthene
17.748 - Benzo(k)fluoranthene
18.317 - Benzo(a)pyrene
19.926 - Dibenzo(ah)anthracene
20.411 - Benzo(ghi)perylene


VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000176

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 2: VWD1 A, Wavelength=254 nm, TT

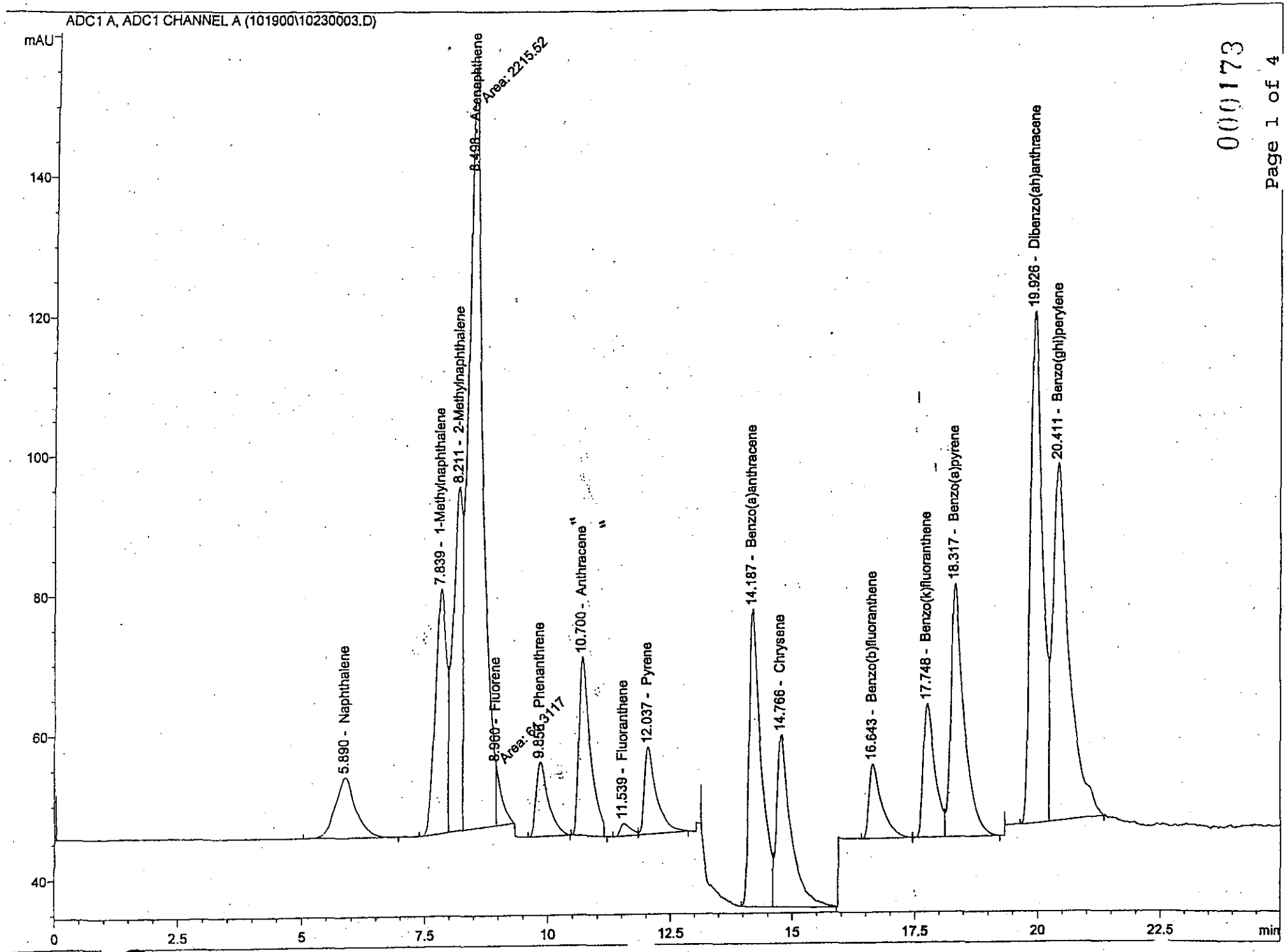
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

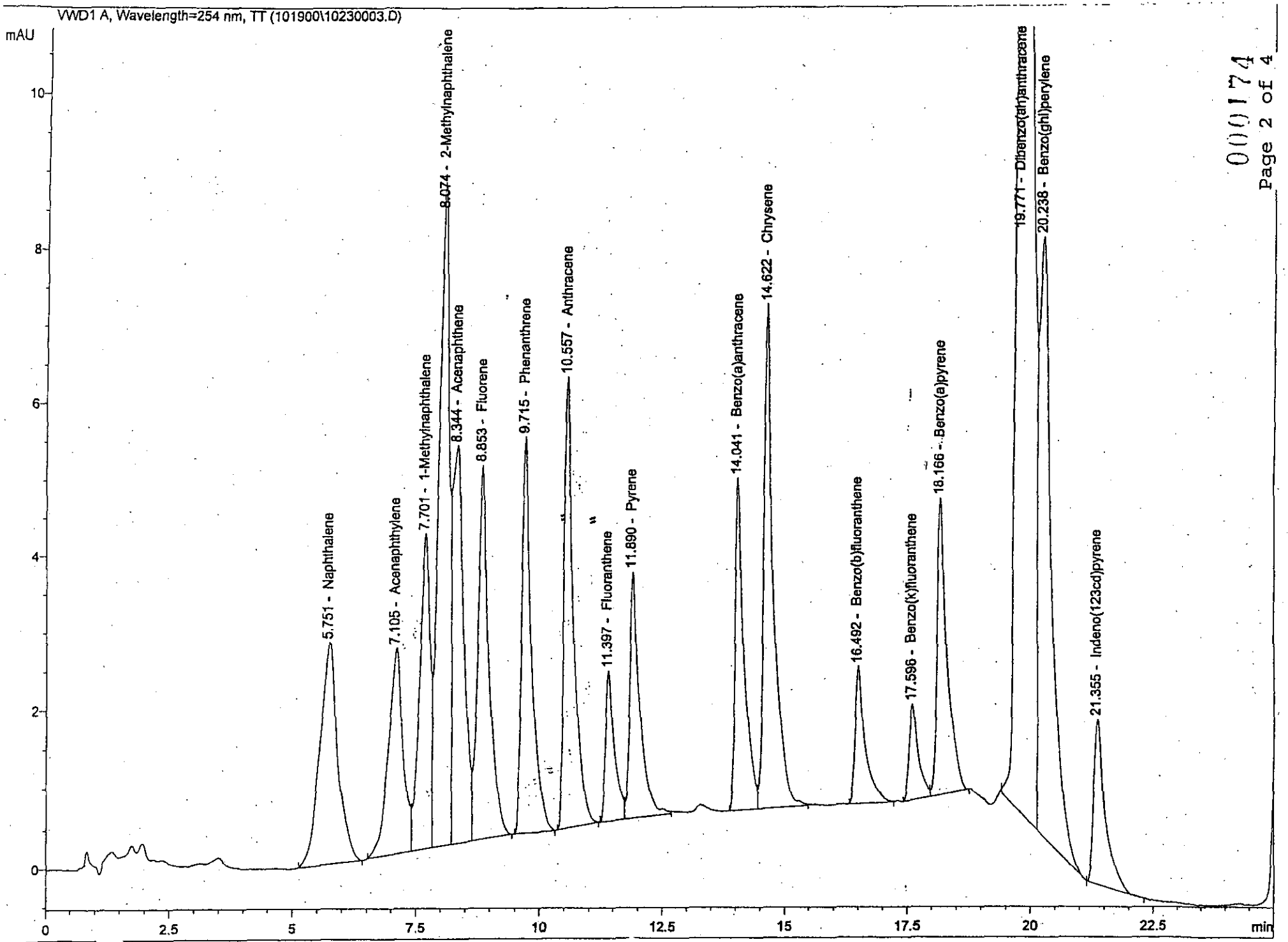
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

000178


ADC1 A, ADC1 CHANNEL A (101900\10230003.D)
mAU
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.890 - Naphthalene
7.839 - 1-Methylnaphthalene
8.211 - 2-Methylnaphthalene
8.438 - Acenaphthene
Area: 2215.52
8.960 - Fluorene
Area: 6
9.8
3117
Phenanthrene
10.700 - Anthracene
11.539 - Fluoranthene
12.037 - Pyrene
14.187 - Benzo(a)anthracene
14.766 - Chrysene
16.643 - Benzo(b)fluoranthene
17.748 - Benzo(k)fluoranthene
18.317 - Benzo(a)pyrene
19.926 - Dibenzo(ah)anthracene
20.411 - Benzo(ghi)perylene

001173


VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

000176

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

000177

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 2: VWD1 A, Wavelength=254 nm, TT

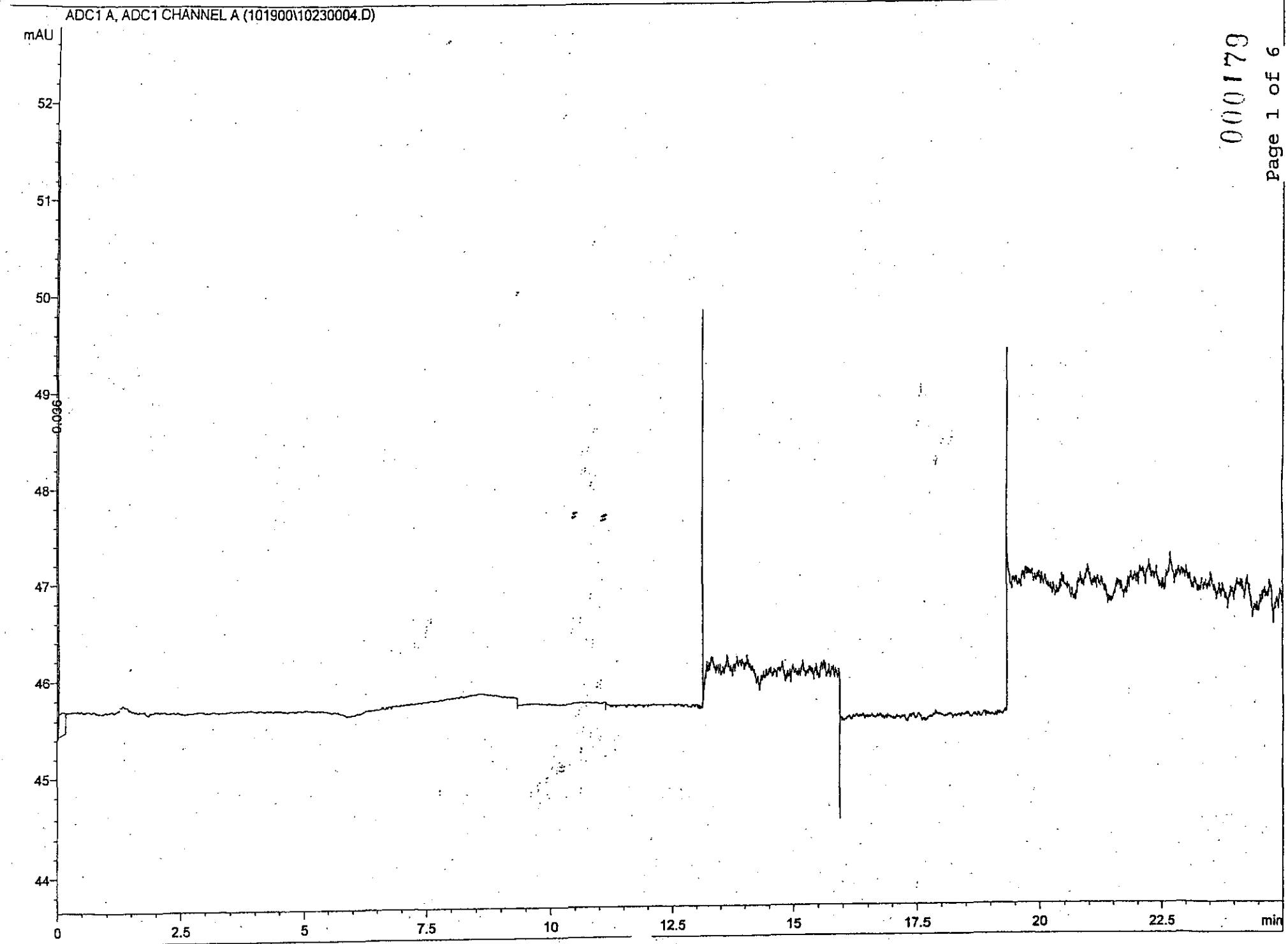
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

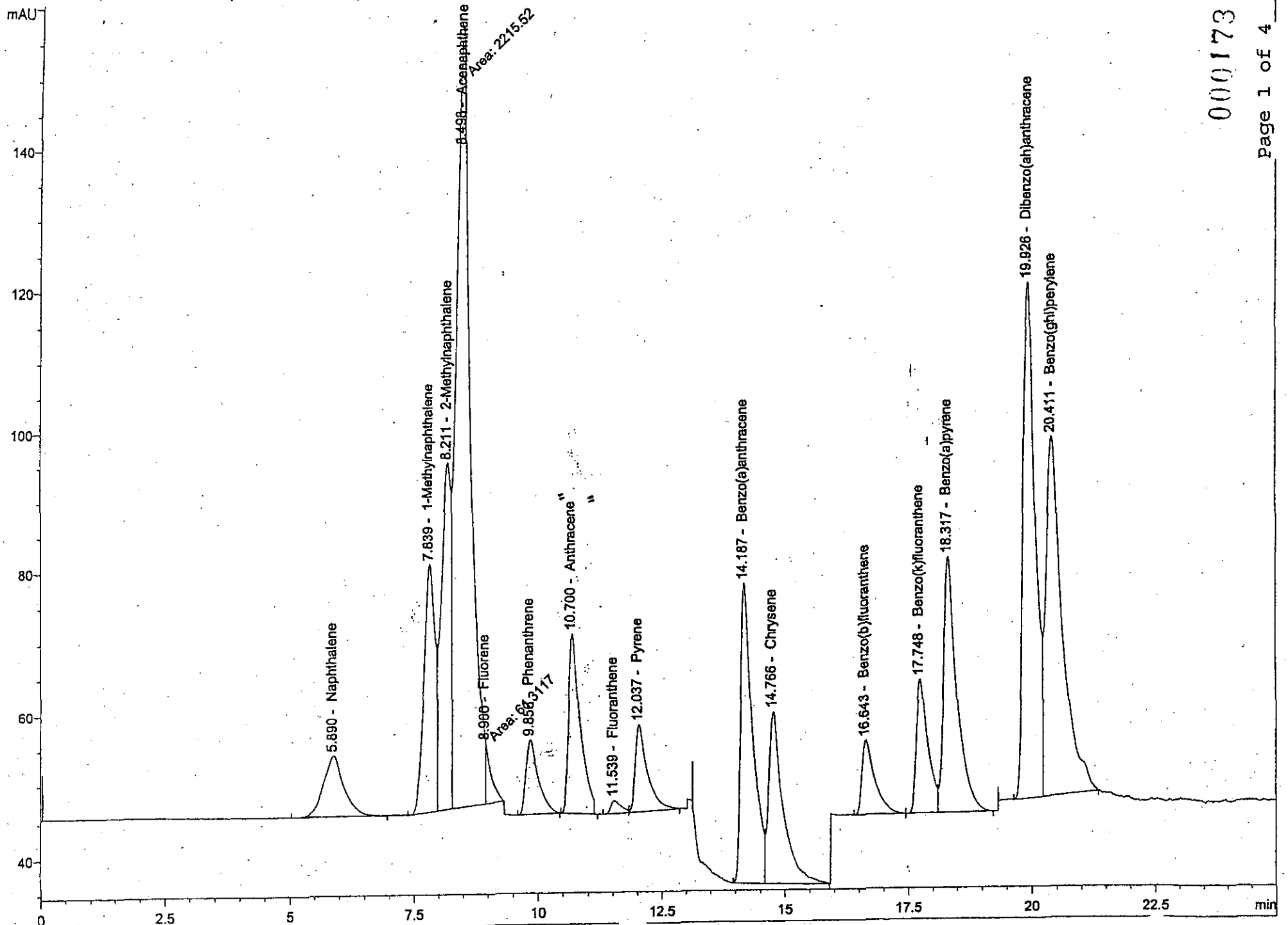
*** End of Report ***

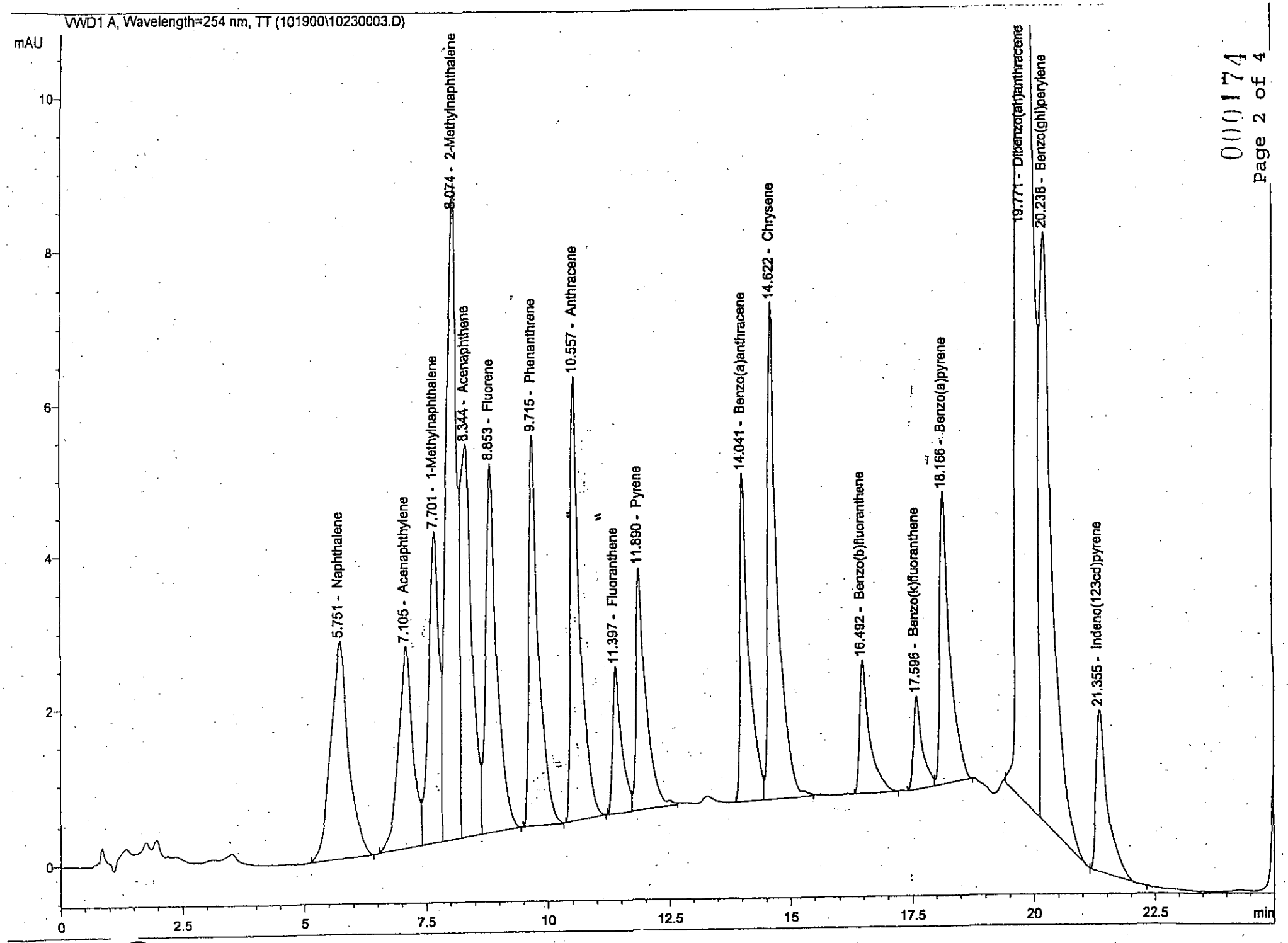
000178


ADC1 A, ADC1 CHANNEL A (101900\10230004.D)
mAU
52
51
50
49
0.036
48
47
46
45
44
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000173

ADC1 A, ADC1 CHANNEL A (101900\10230003.D)




VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000176

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

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Area Percent Report

==========

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

000177

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

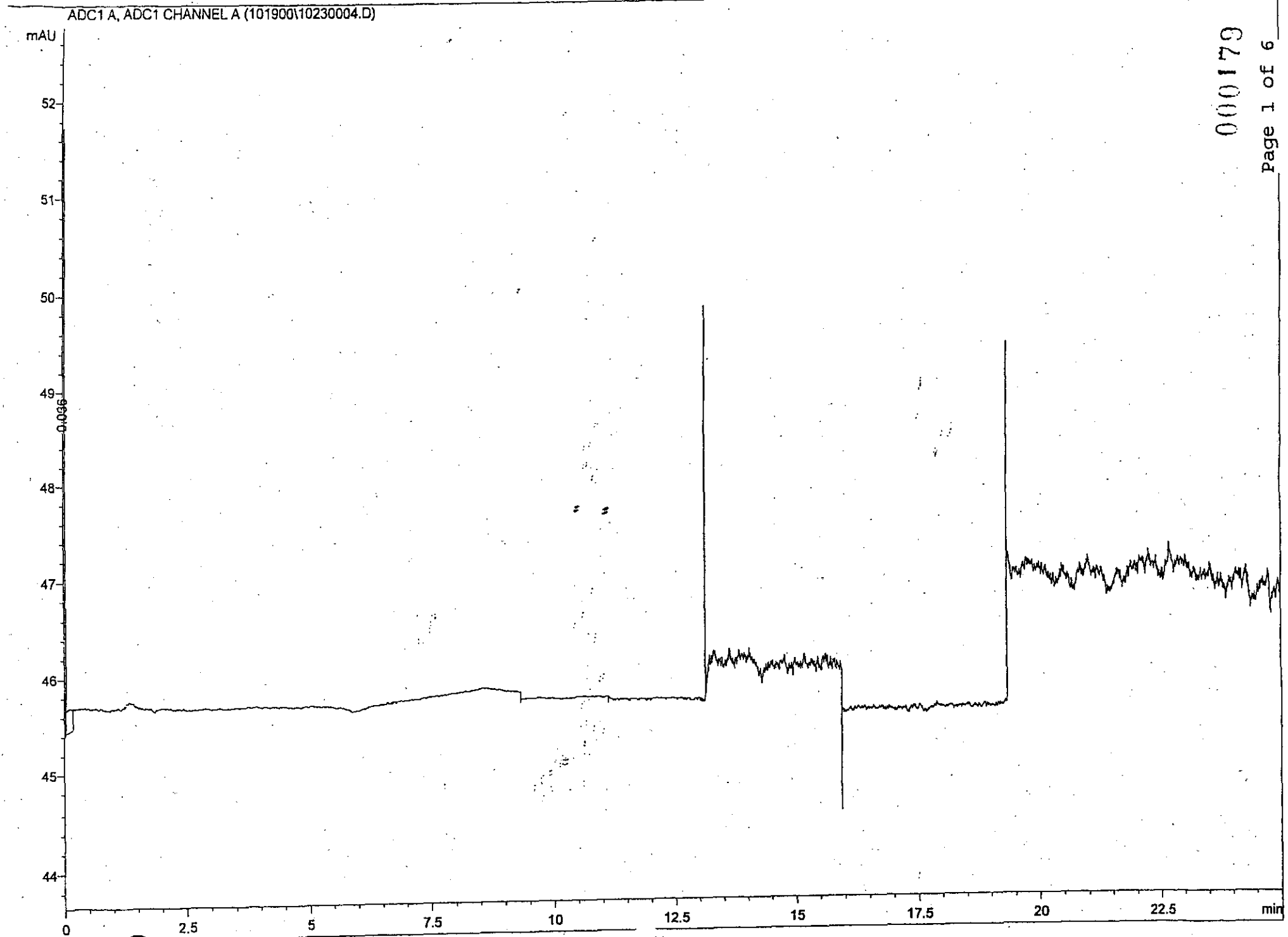
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

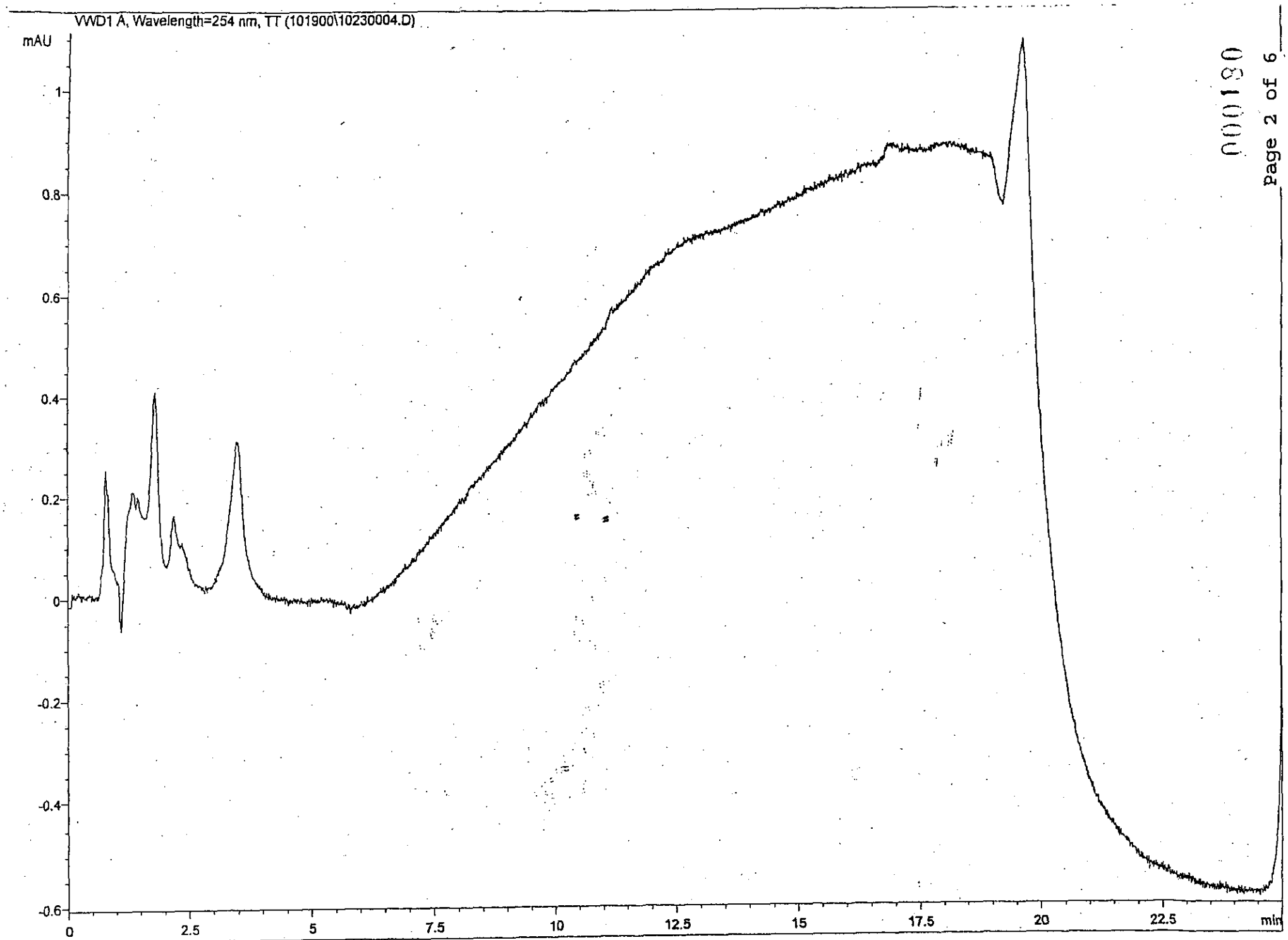
==========

*** End of Report ***

000178

000179


ADC1 A, ADC1 CHANNEL A (101900\10230004.D)
mAU
52
51
50
49
0.036
48
47
46
45
44
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (101900\10230004.D)
mAU
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000180

Injection Date : 10/24/00 4:08:17 AM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 15
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 3:21:05 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.893	PBA	478.44342	1.08238e-2	5.17857		Naphthalene
7.843	PV	775.84052	6.18949e-3	4.80205		1-Methylnaphthalene
8.208	VV	705.35034	7.17956e-3	5.06410		2-Methylnaphthalene
8.505	MF	2203.67407	2.33808e-3	5.15237		Acenaphthene
8.873	FM	157.66521	1.59179e-2	2.50970+		Fluorene
9.858	PBA	438.93094	1.18323e-3	5.19357e-1		Phenanthrene
10.690	BBA	2157.29907	2.37053e-4	5.11394e-1-		Anthracene
11.531	BV	105.33149	9.30365e-3	9.79967e-1		Fluoranthene
12.027	VBA	240.99319	2.24162e-3	5.40216e-1		Pyrene
14.166	BV	1548.14551	3.45450e-4	5.34807e-1		Benzo(a)anthracene
14.726	VP	1003.27460	5.23054e-4	5.24767e-1		Chrysene
16.590	PV	1908.01562	5.56047e-4	1.06095		Benzo(b)fluoranthene
17.672	VV	1578.48706	3.18738e-4	5.03124e-1		Benzo(k)fluoranthene
18.245	VBA	1427.26697	3.68382e-4	5.25779e-1		Benzo(a)pyrene
19.829	BV	1180.06116	8.21085e-4	9.68930e-1		Dibenzo(ah)anthracene
20.291	VBA	2776.58569	3.83567e-4	1.06501		Benzo(ghi)perylene

Totals : 30.44110

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.752	PBA	148.26740	3.52601e-2	5.22793		Naphthalene
7.107	BV	199.76038	5.15230e-2	10.29225		Acenaphthylene

000181

Injection Date : 10/24/00 4:08:17 AM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 15
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 3:21:05 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.701	VV	89.35323	5.60782e-2	5.01077		1-Methylnaphthalene
8.074	VV	125.24007	3.98481e-2	4.99057		2-Methylnaphthalene
8.352	VV	83.45036	6.99536e-2	5.83766		Acenaphthene
8.856	VBA	145.40239	7.22262e-3	1.05019		Fluorene
9.715	BBA	181.96098	2.89691e-3	5.27124e-1		Phenanthrene
10.545	BBA	394.43820	1.31717e-3	5.19542e-1		Anthracene
11.383	BV	86.85467	1.17804e-2	1.02318		Fluoranthene
11.880	VP	50.93433	1.07782e-2	5.48982e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.019	BV	111.82954	4.59084e-3	5.13391e-1		Benzo(a)anthracene
14.583	VB	182.48898	2.87426e-3	5.24520e-1		Chrysene
16.437	PP	248.31625	4.15268e-3	1.03118		Benzo(b)fluoranthene
17.519	VV	79.61861	6.23683e-3	4.96568e-1		Benzo(k)fluoranthene
18.094	VBA	114.81594	4.37576e-3	5.02407e-1		Benzo(a)pyrene
19.675	BV	489.16412	2.01009e-3	9.83263e-1		Dibenzo(ah)anthracene
20.124	VP	286.26694	3.68330e-3	1.05441		Benzo(ghi)perylene
21.206	VBA	67.25397	6.76791e-3	4.55169e-1		Indeno(123cd)pyrene

Totals : 40.58910

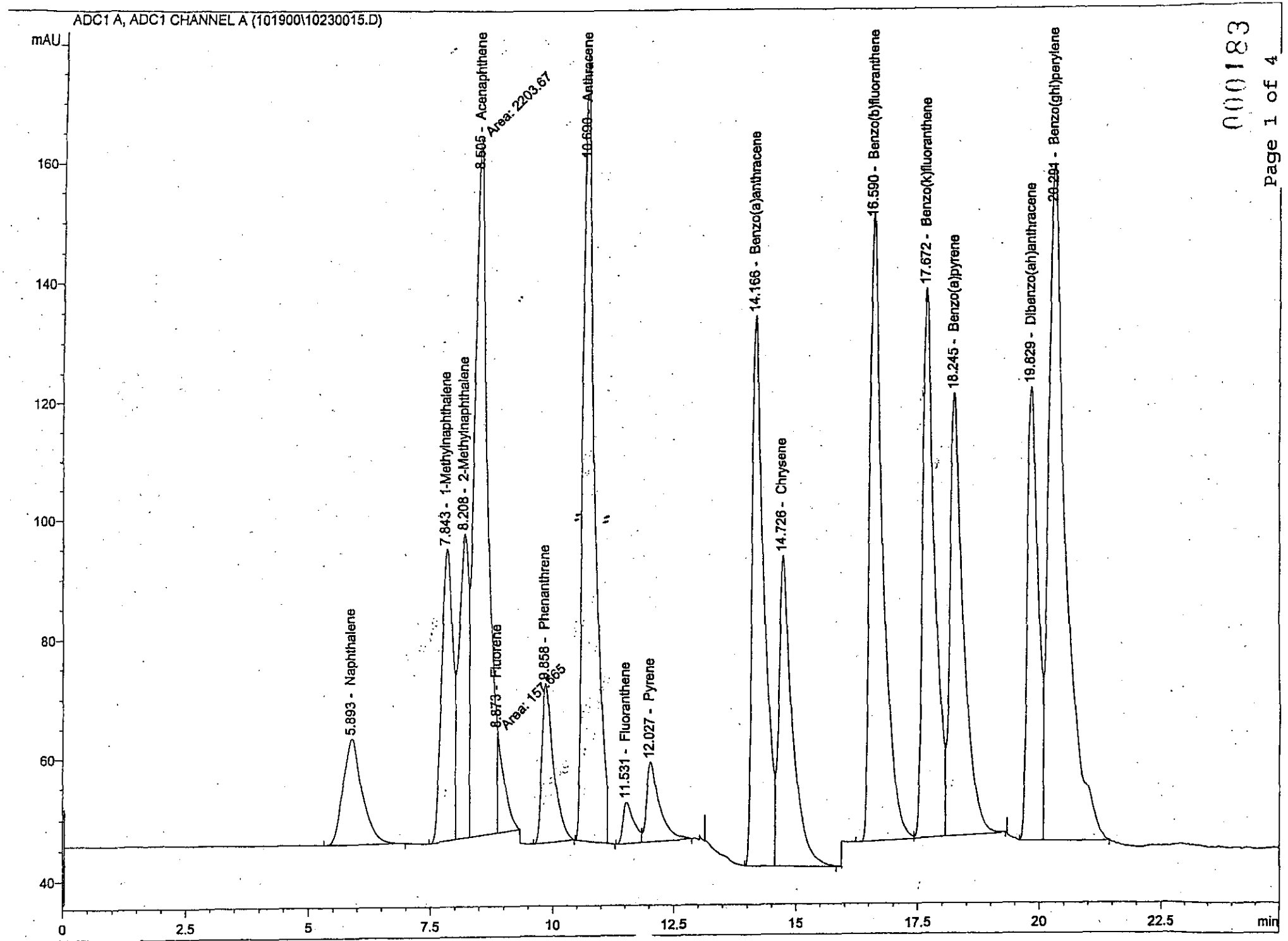
Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

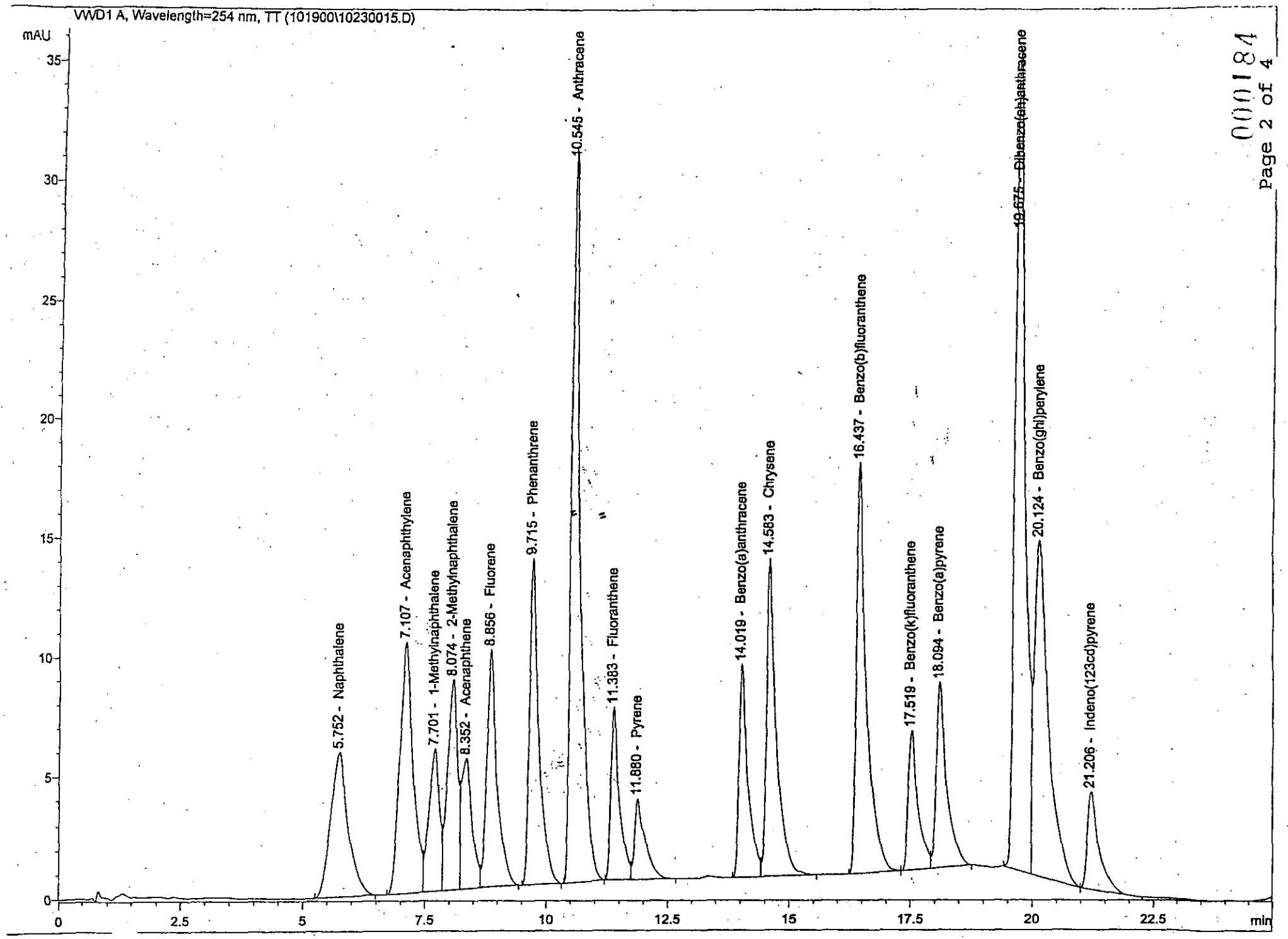
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

000182


ADC1 A, ADC1 CHANNEL A (101900\10230015.D)
mAU
160
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.893 - Naphthalene
7.843 - 1-Methylnaphthalene
8.208 - 2-Methylnaphthalene
8.505 - Acenaphthene
Area: 2203.67
8.873 - Fluorene
Area: 157
9.858 - Phenanthrene
10.690 - Anthracene
11.531 - Fluoranthene
12.027 - Pyrene
14.166 - Benzo(a)anthracene
14.726 - Chrysene
16.590 - Benzo(b)fluoranthene
17.672 - Benzo(k)fluoranthene
18.245 - Benzo(a)pyrene
19.829 - Dibenzo(ah)anthracene
20.294 - Benzo(ghi)perylene

000183


VWD1 A, Wavelength=254 nm, TT (101900\10230015.D)
mAU
35
30
25
20
15
10
5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.752 - Naphthalene
7.107 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.352 - Acenaphthene
8.856 - Fluorene
9.715 - Phenanthrene
10.545 - Anthracene
11.383 - Fluoranthene
11.880 - Pyrene
14.019 - Benzo(a)anthracene
14.583 - Chrysene
16.437 - Benzo(b)fluoranthene
17.519 - Benzo(k)fluoranthene
18.094 - Benzo(a)pyrene
19.675 - Dibenzo(ah)anthracene
20.124 - Benzo(ghi)perylene
21.206 - Indeno(123cd)pyrene

000184

==========

Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========
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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 10/24/00 9:01:44 AM
Multiplier : 1.0000
Dilution : 1.0000

000185

Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:01:44 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.900		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.600		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene

000186

Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	5.900		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.600		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene

000187

Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

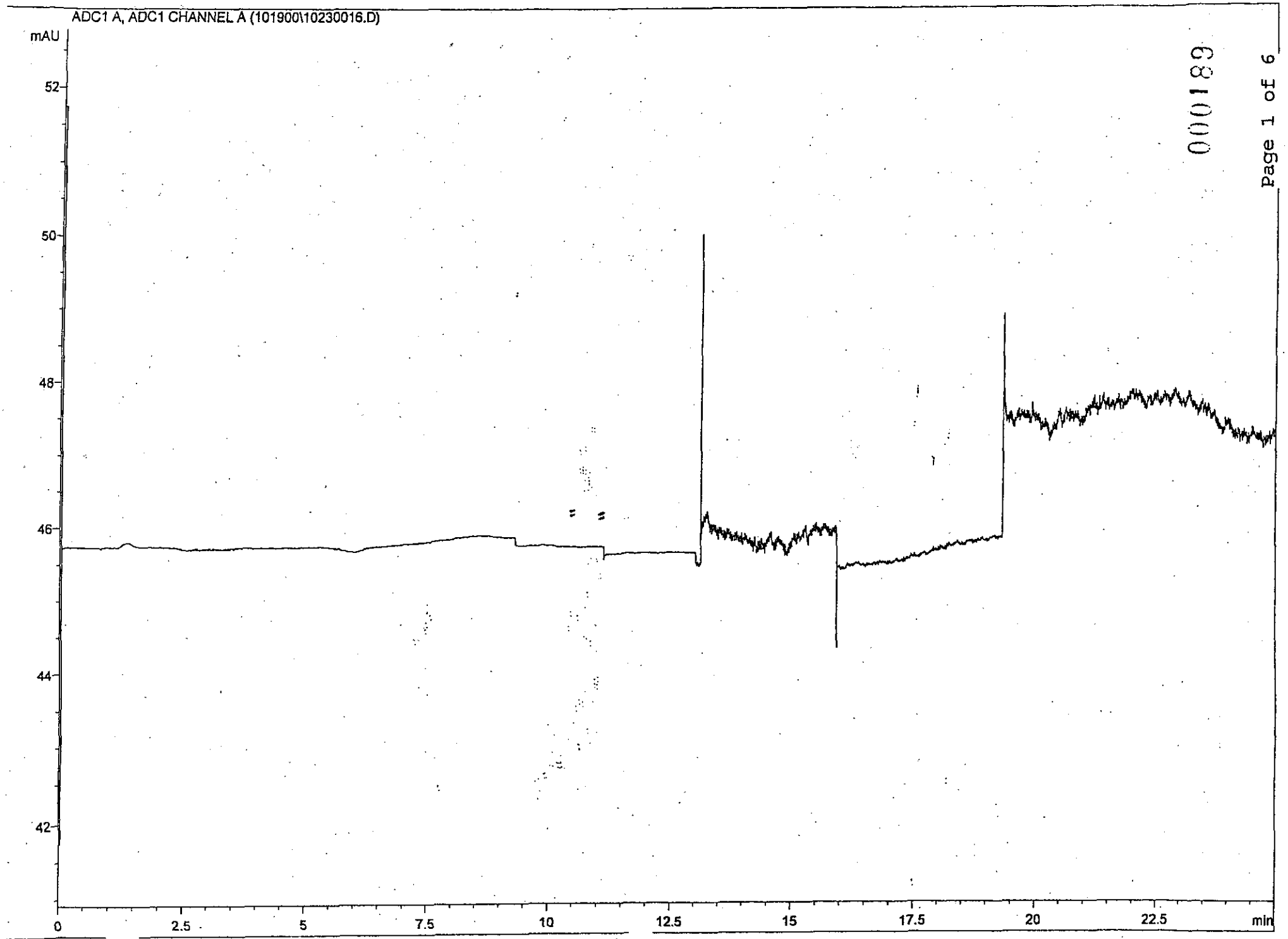
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

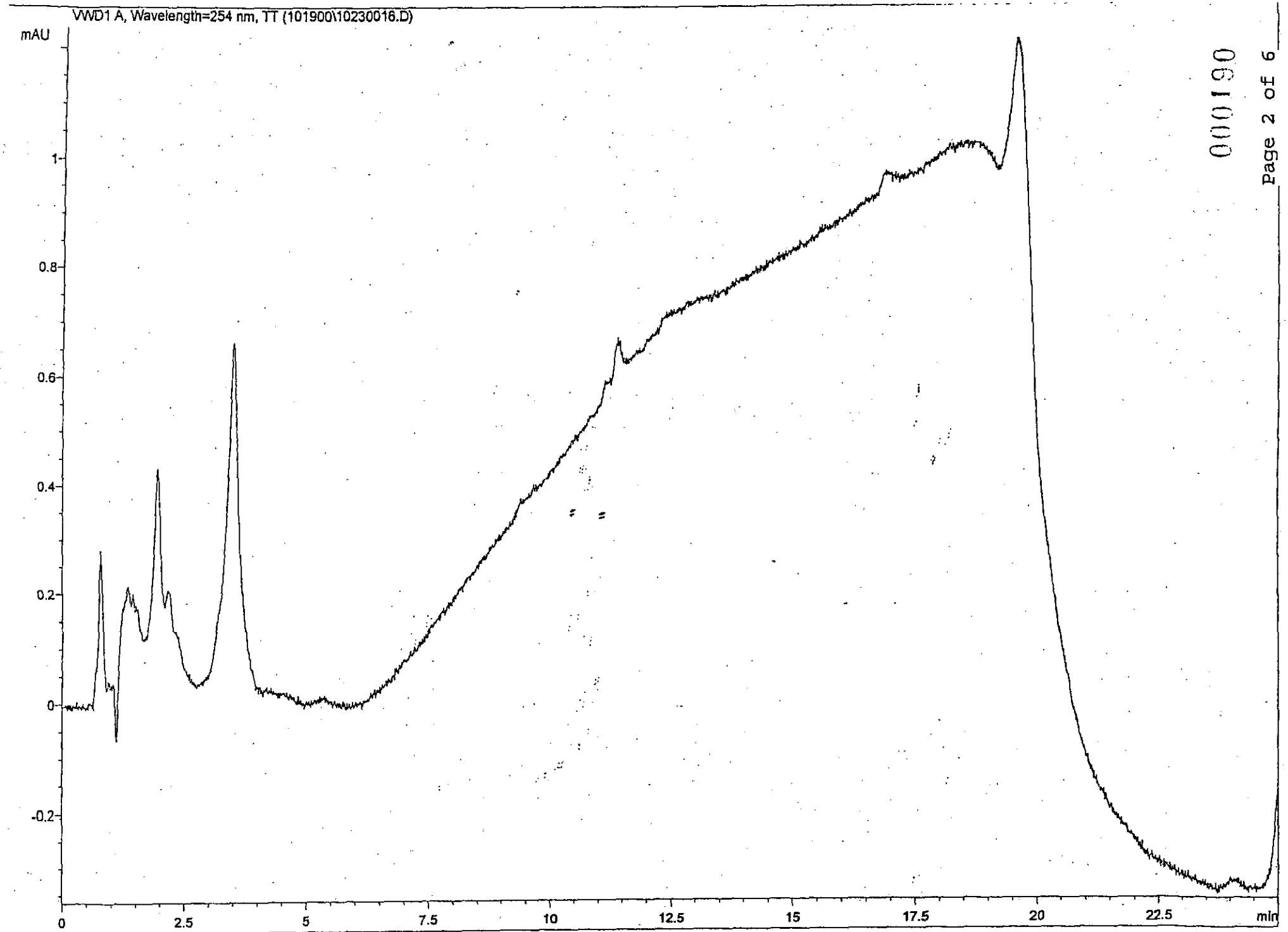
Uncalibrated Peaks:
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

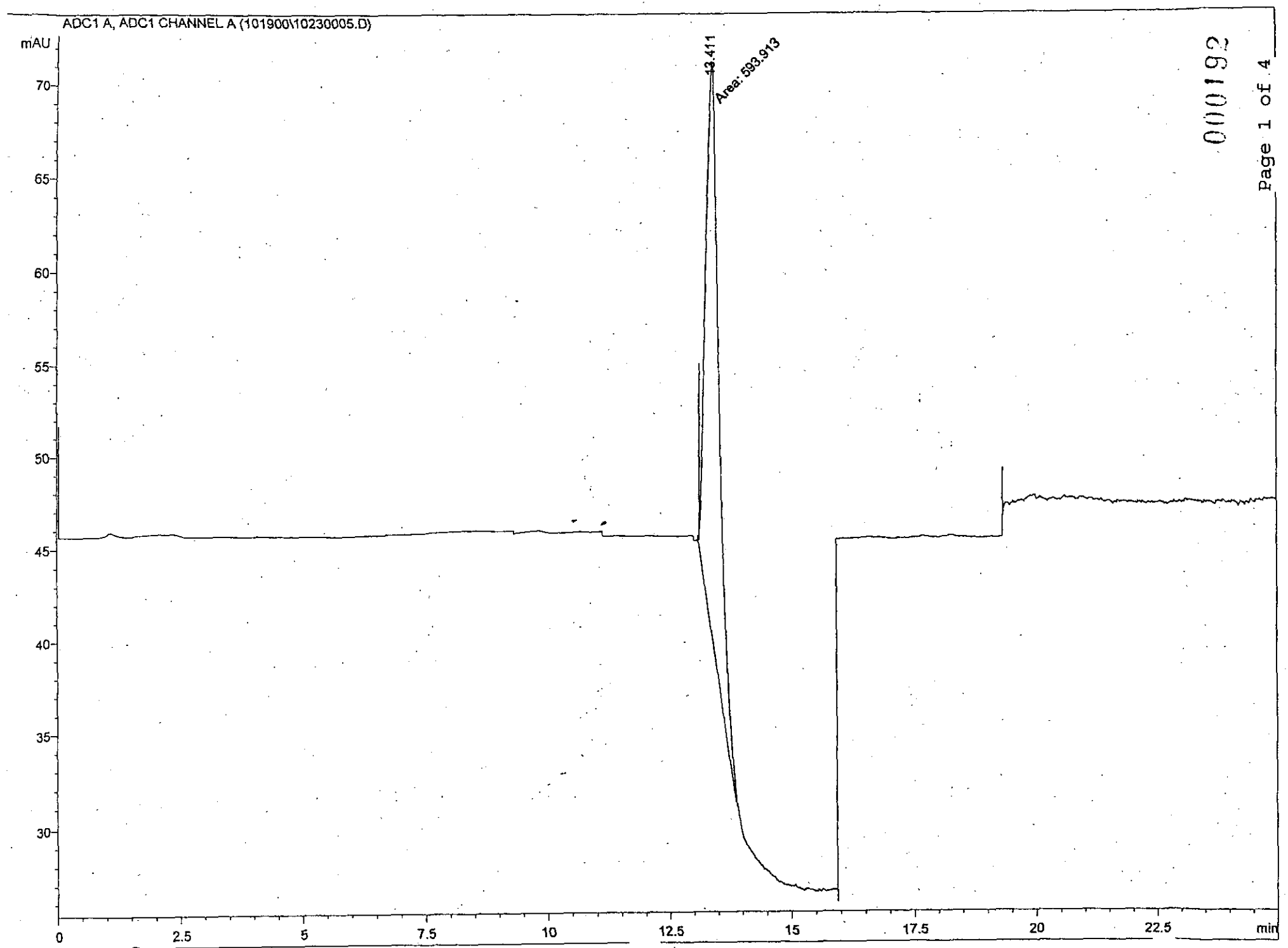
000188


ADC1 A, ADC1 CHANNEL A (101900\10230016.D)
mAU
52
50
48
46
44
42
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

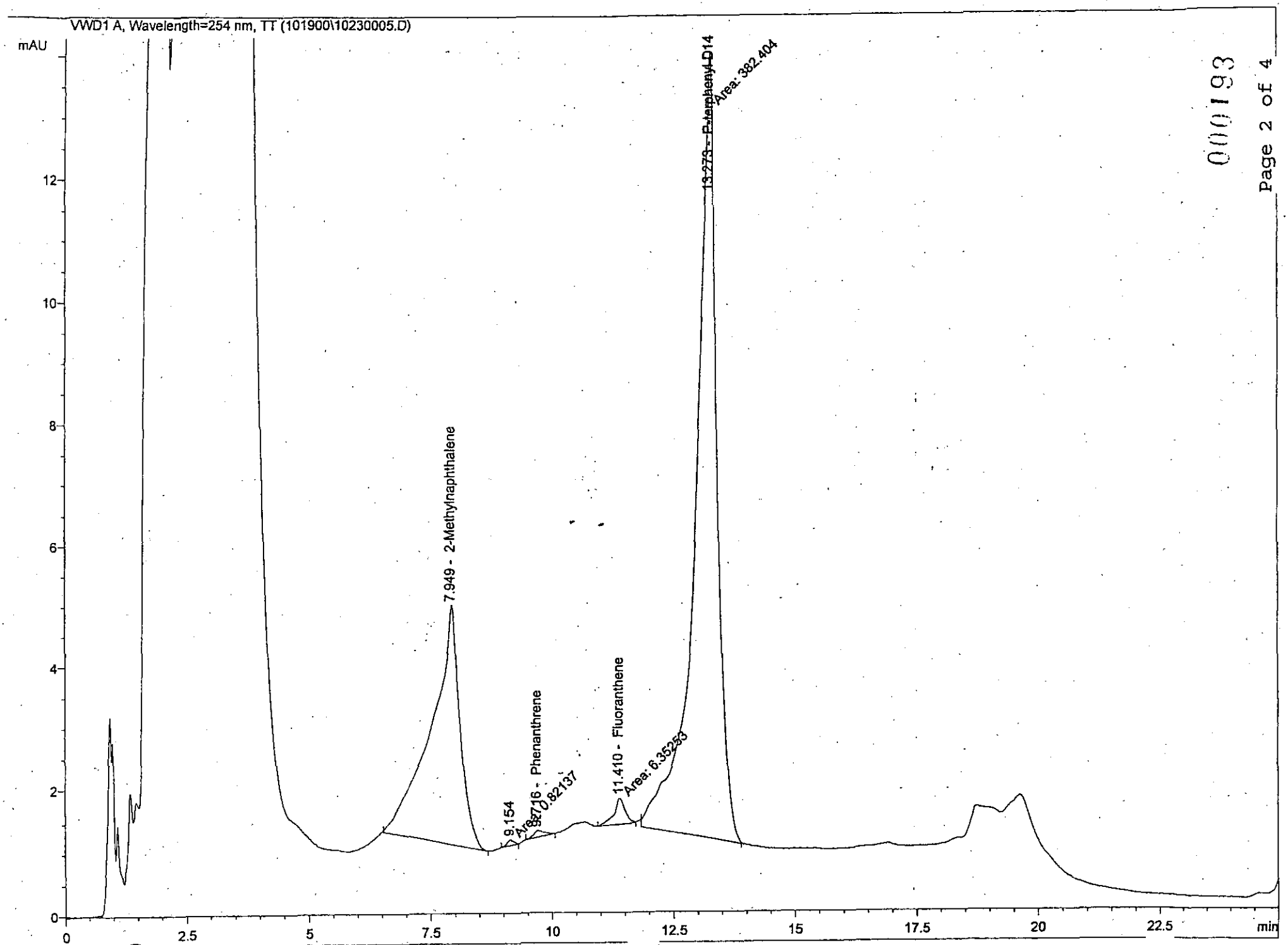

VWD1 A, Wavelength=254 nm, TT (101900\10230016.D)
mAU
1
0.8
0.6
0.4
0.2
0
-0.2
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000190

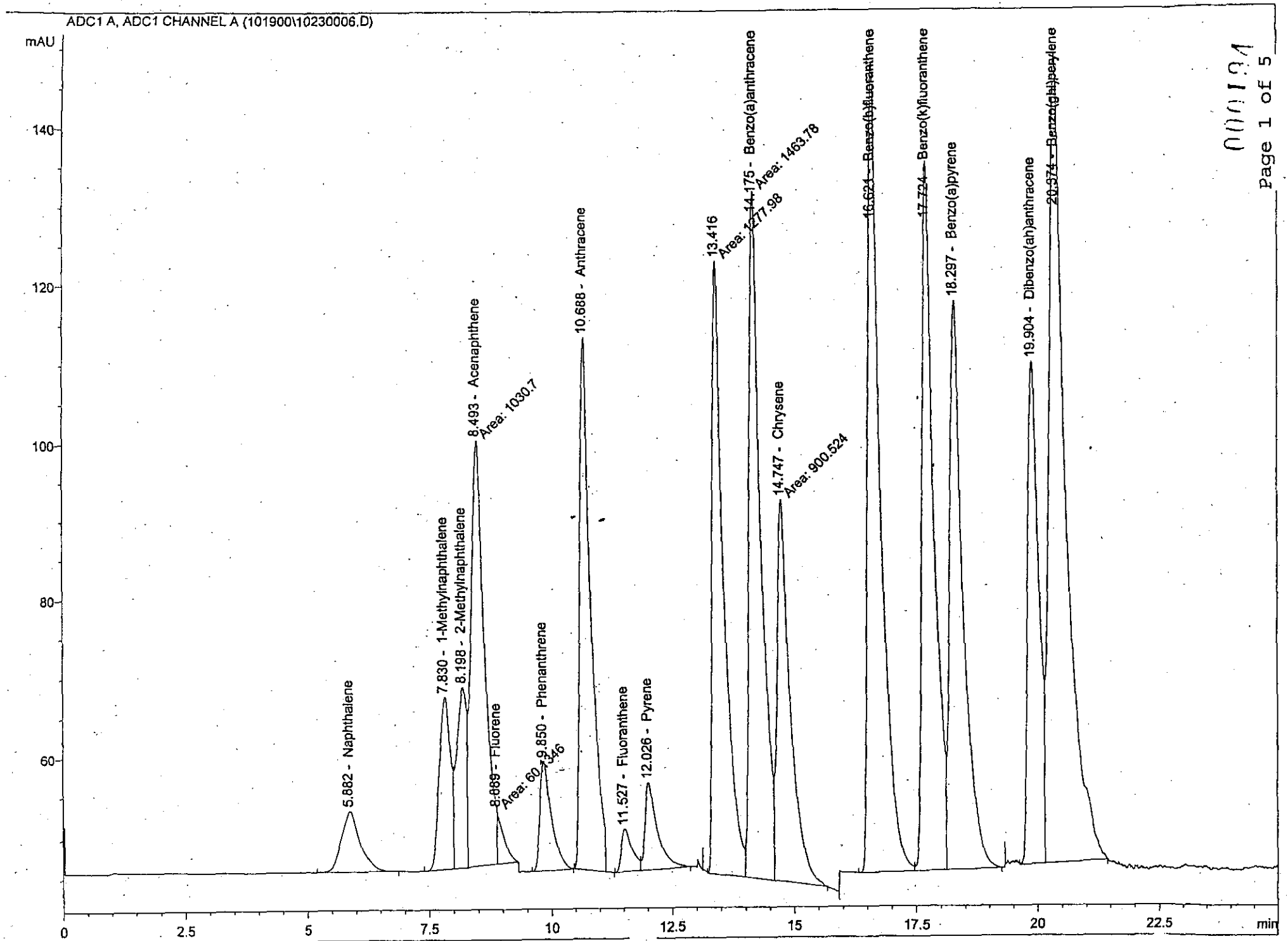
RAW DATA

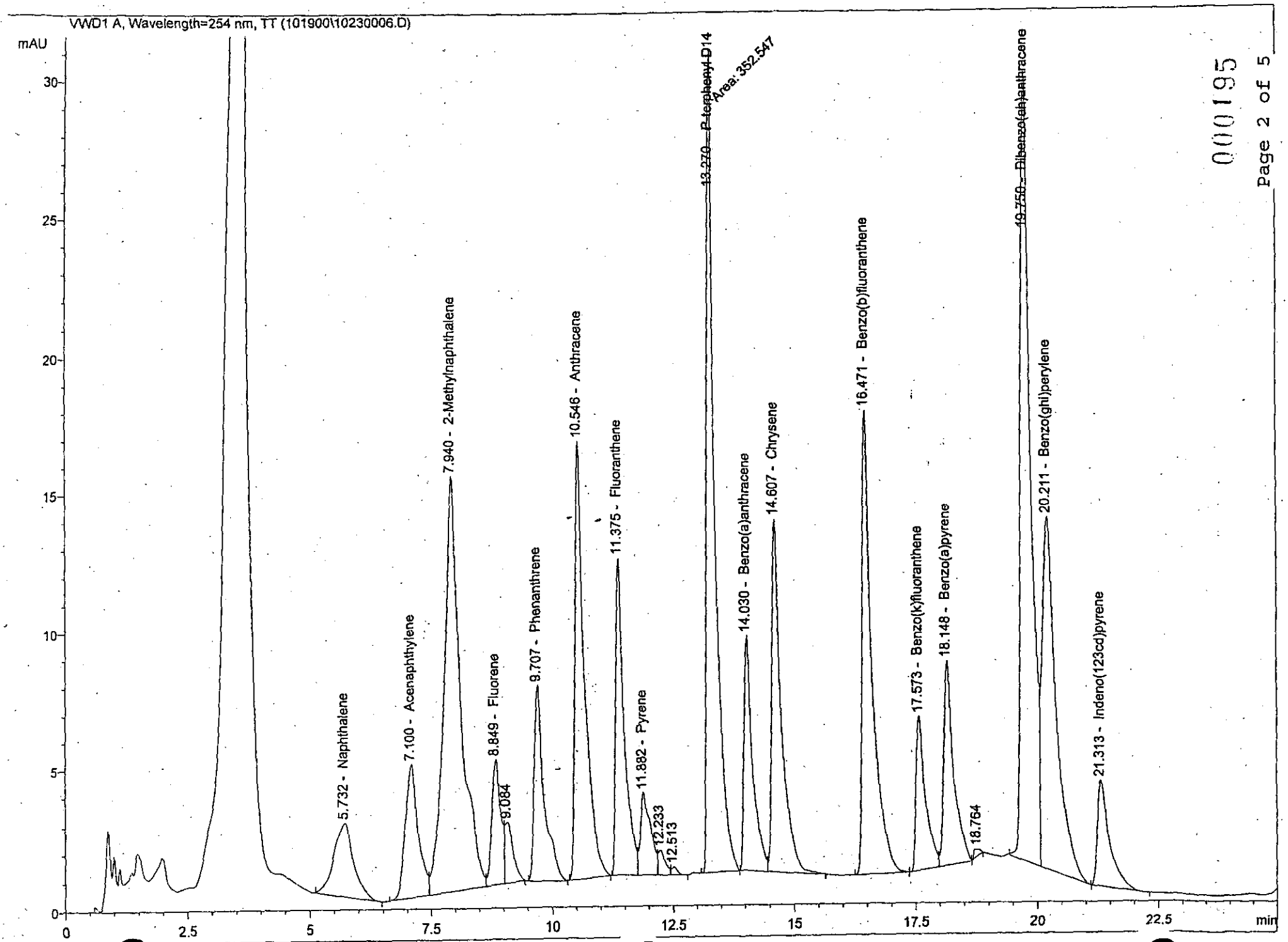

ADC1 A, ADC1 CHANNEL A (101900\10230005.D)
mAU
70
65
60
55
50
45
40
35
30
13.411
Area: 593.913
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

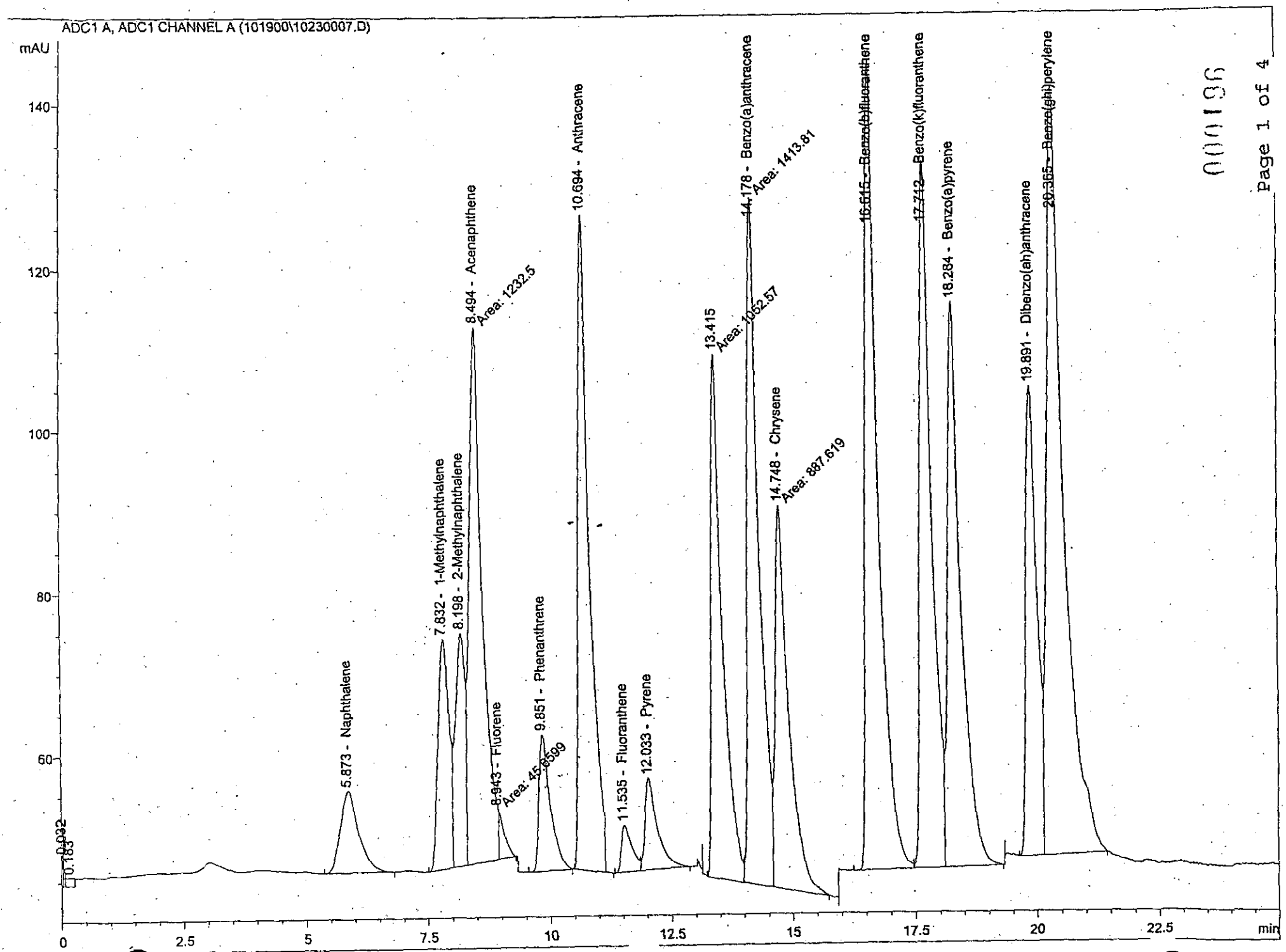
000192


VWD1 A, Wavelength=254 nm, TT (101900\10230005.D)
mAU
12
10
8
6
4
2
0
7.949 - 2-Methylnaphthalene
9.154
Area: 0.82137
9.716 - Phenanthrene
11.410 - Fluoranthene
Area: 6.35253
13.273 - P-terphenyl-D14
Area: 382.404
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000193

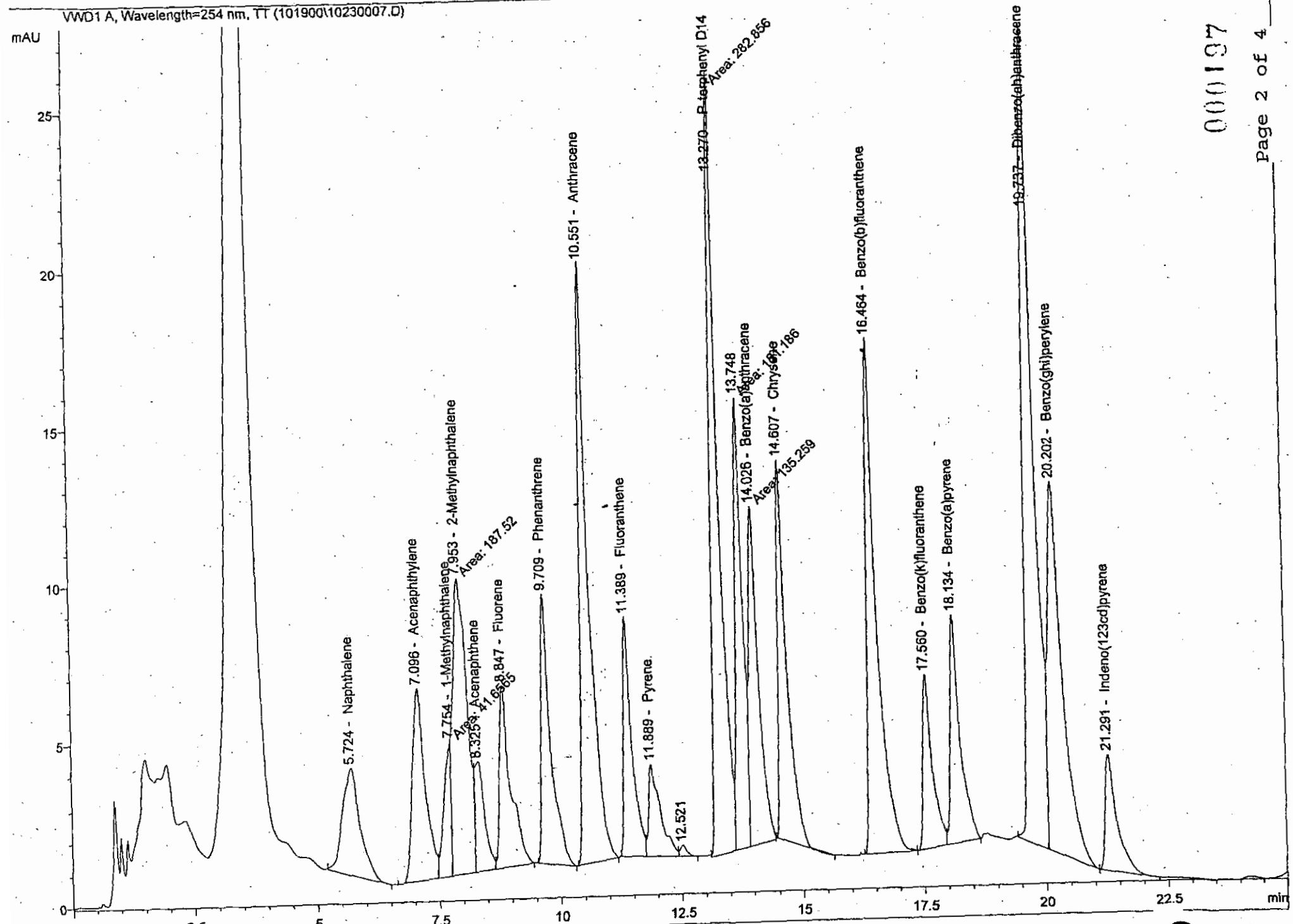

ADC1 A, ADC1 CHANNEL A (101900\10230006.D)
mAU
140
120
100
80
60
5.882 - Naphthalene
7.830 - 1-Methylnaphthalene
8.198 - 2-Methylnaphthalene
8.493 - Acenaphthene
Area: 1030.7
8.889 - Fluorene
Area: 60
9.850 - Phenanthrene
10.688 - Anthracene
11.527 - Fluoranthene
12.026 - Pyrene
13.416
Area: 1277.98
14.175 - Benzo(a)anthracene
Area: 1463.78
14.747 - Chrysene
Area: 900.524
16.621 - Benzo(b)fluoranthene
17.724 - Benzo(k)fluoranthene
18.297 - Benzo(a)pyrene
19.904 - Dibenzo(ah)anthracene
20.974 - Benzo(ghi)perylene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

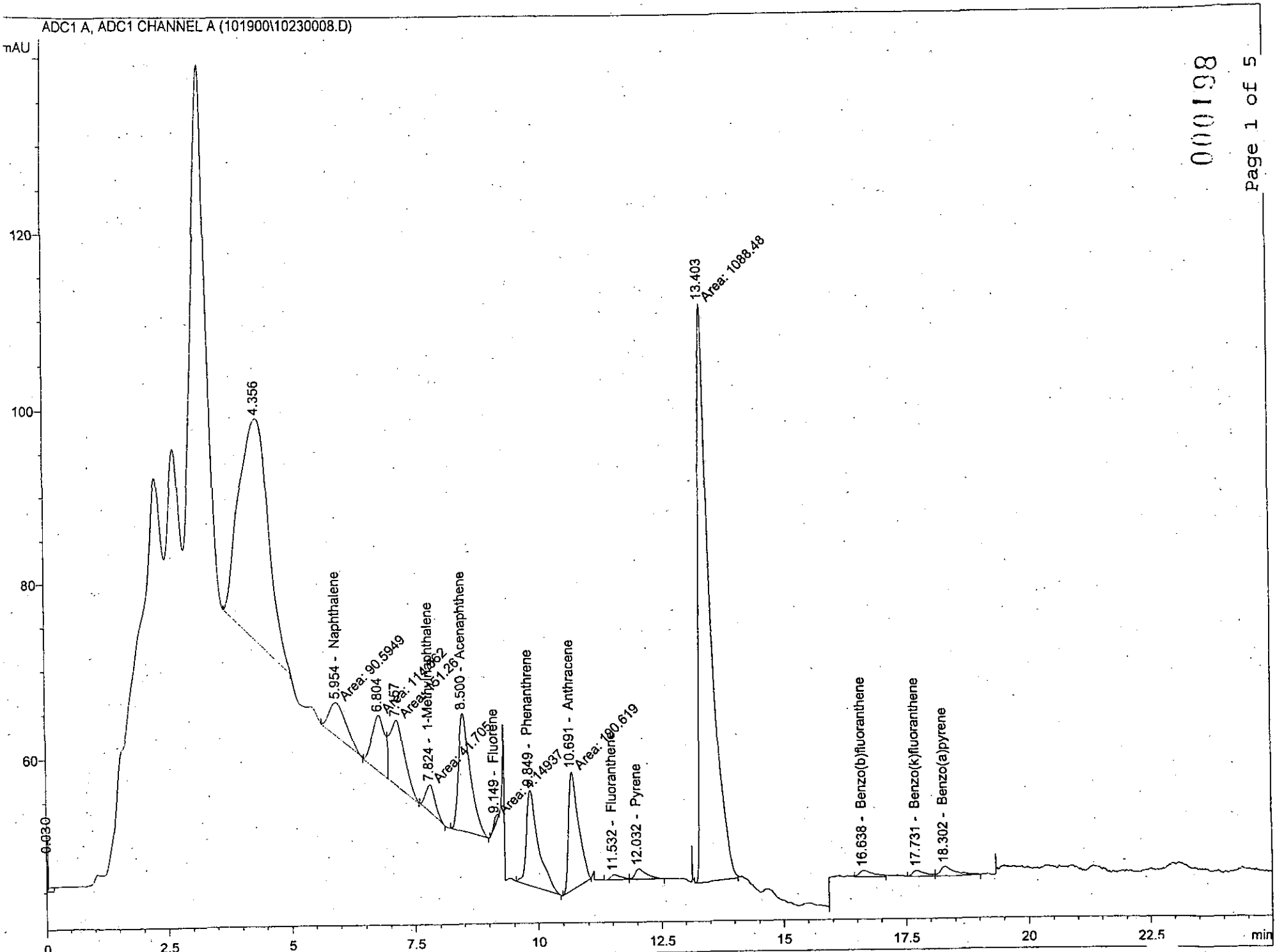

VWD1 A, Wavelength=254 nm, TT (101900\10230006.D)
mAU
30
25
20
15
10
5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.732 - Naphthalene
7.100 - Acenaphthylene
7.940 - 2-Methylnaphthalene
8.849 - Fluorene
9.084
9.707 - Phenanthrene
10.546 - Anthracene
11.375 - Fluoranthene
11.882 - Pyrene
12.233
12.513
13.279 - P-terphenyl-D14
Area: 352.547
14.030 - Benzo(a)anthracene
14.607 - Chrysene
16.471 - Benzo(b)fluoranthene
17.573 - Benzo(k)fluoranthene
18.148 - Benzo(a)pyrene
18.764
19.750 - Dibenzo(ah)anthracene
20.211 - Benzo(ghi)perylene
21.313 - Indeno(123cd)pyrene

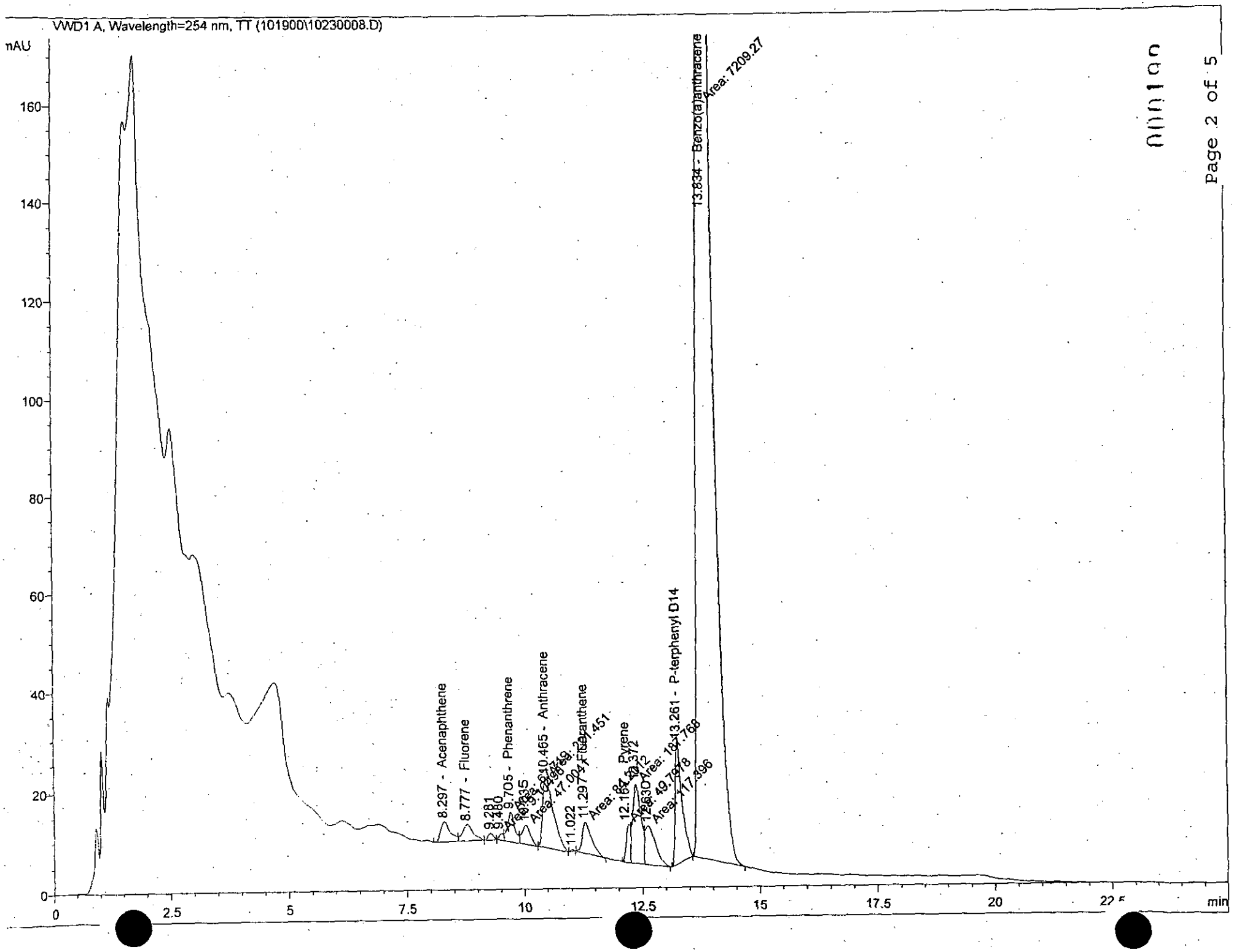

ADC1 A, ADC1 CHANNEL A (101900\10230007.D)
mAU
140
120
100
80
60
0.032
0.183
5.873 - Naphthalene
7.832 - 1-Methylnaphthalene
8.198 - 2-Methylnaphthalene
8.494 - Acenaphthene
Area: 1232.5
8.943 - Fluorene
Area: 45.8599
9.851 - Phenanthrene
10.694 - Anthracene
11.535 - Fluoranthene
12.033 - Pyrene
13.415
Area: 1052.57
14.178 - Benzo(a)anthracene
Area: 1413.81
14.748 - Chrysene
Area: 897.619
16.615 - Benzo(b)fluoranthene
17.712 - Benzo(k)fluoranthene
18.284 - Benzo(a)pyrene
19.891 - Dibenzo(ah)anthracene
20.365 - Benzo(ghi)perylene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

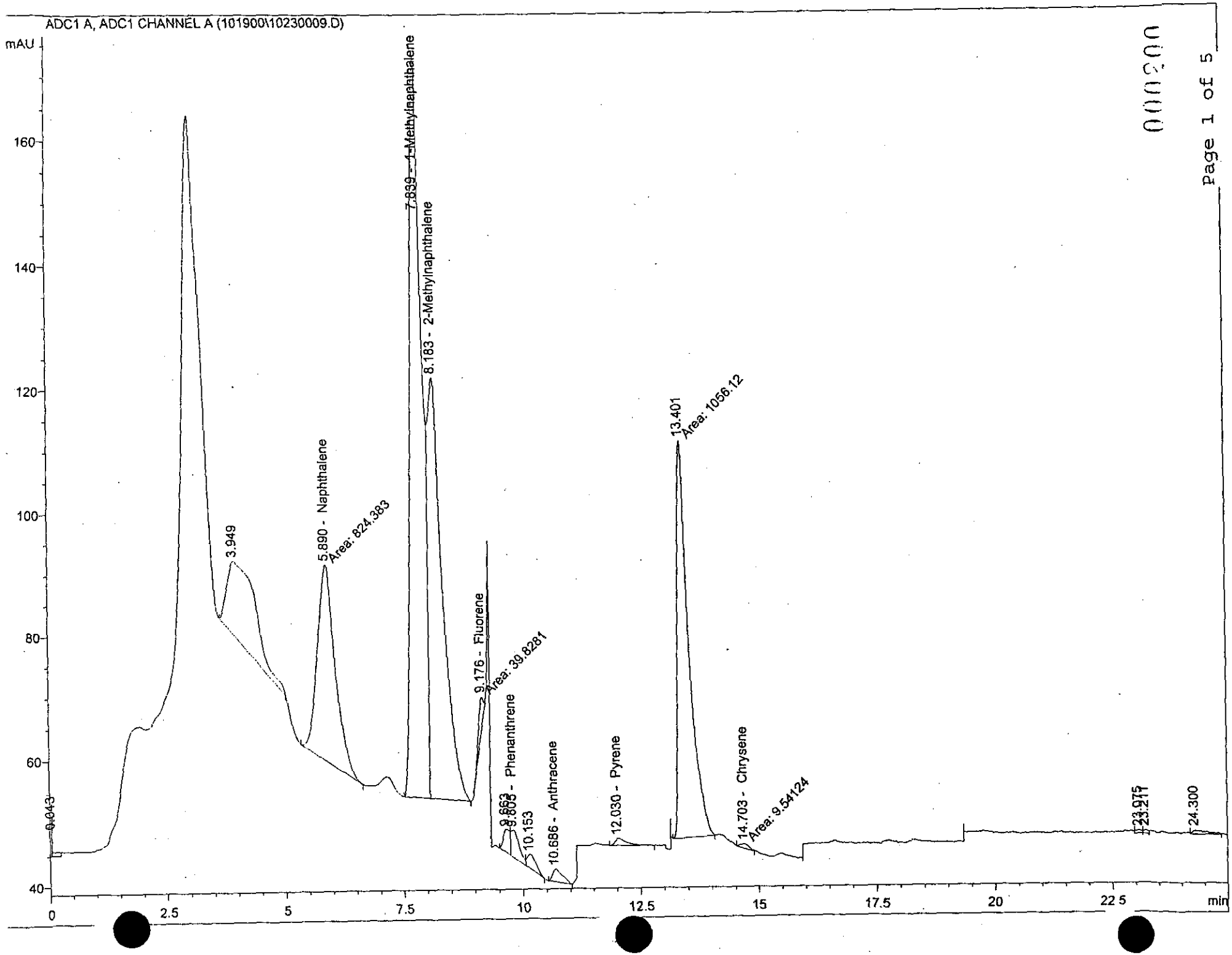
001196

000197

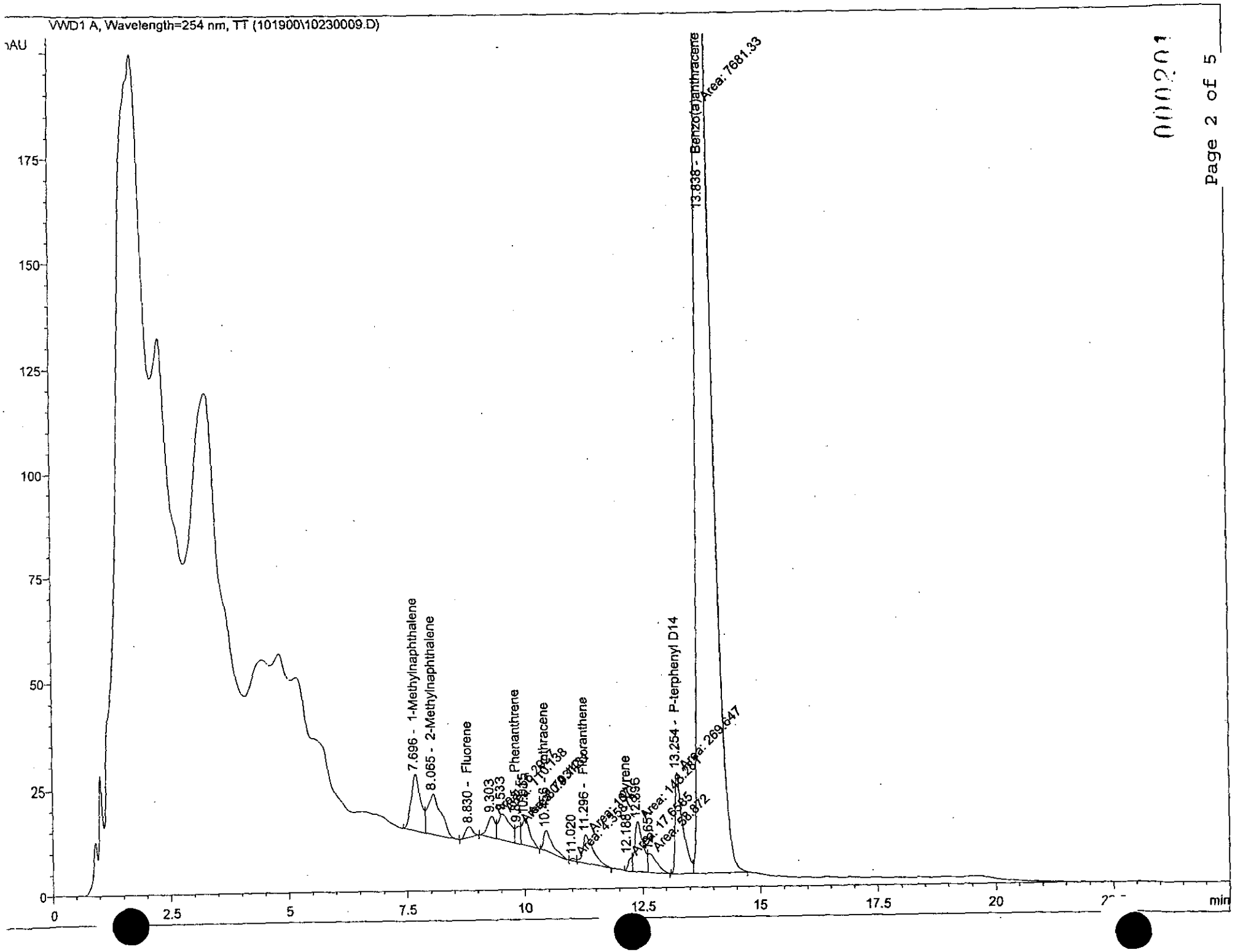

VWD1 A, Wavelength=254 nm, TT (101900\10230007.D)
mAU
25
20
15
10
5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.724 - Naphthalene
7.096 - Acenaphthylene
7.754 - 1-Methylnaphthalene
7.953 - 2-Methylnaphthalene
Area: 187.52
8.325 - Acenaphthene
8.847 - Fluorene
9.709 - Phenanthrene
10.551 - Anthracene
11.389 - Fluoranthene
11.889 - Pyrene
12.521
13.270 - P-terphenyl D14
Area: 282.856
13.748
14.026 - Benzo(a)anthracene
14.607 - Chrysene
Area: 135.259
16.464 - Benzo(b)fluoranthene
17.560 - Benzo(k)fluoranthene
18.134 - Benzo(a)pyrene
19.737 - Dibenzo(ah)anthracene
20.202 - Benzo(ghi)perylene
21.291 - Indeno(123cd)pyrene

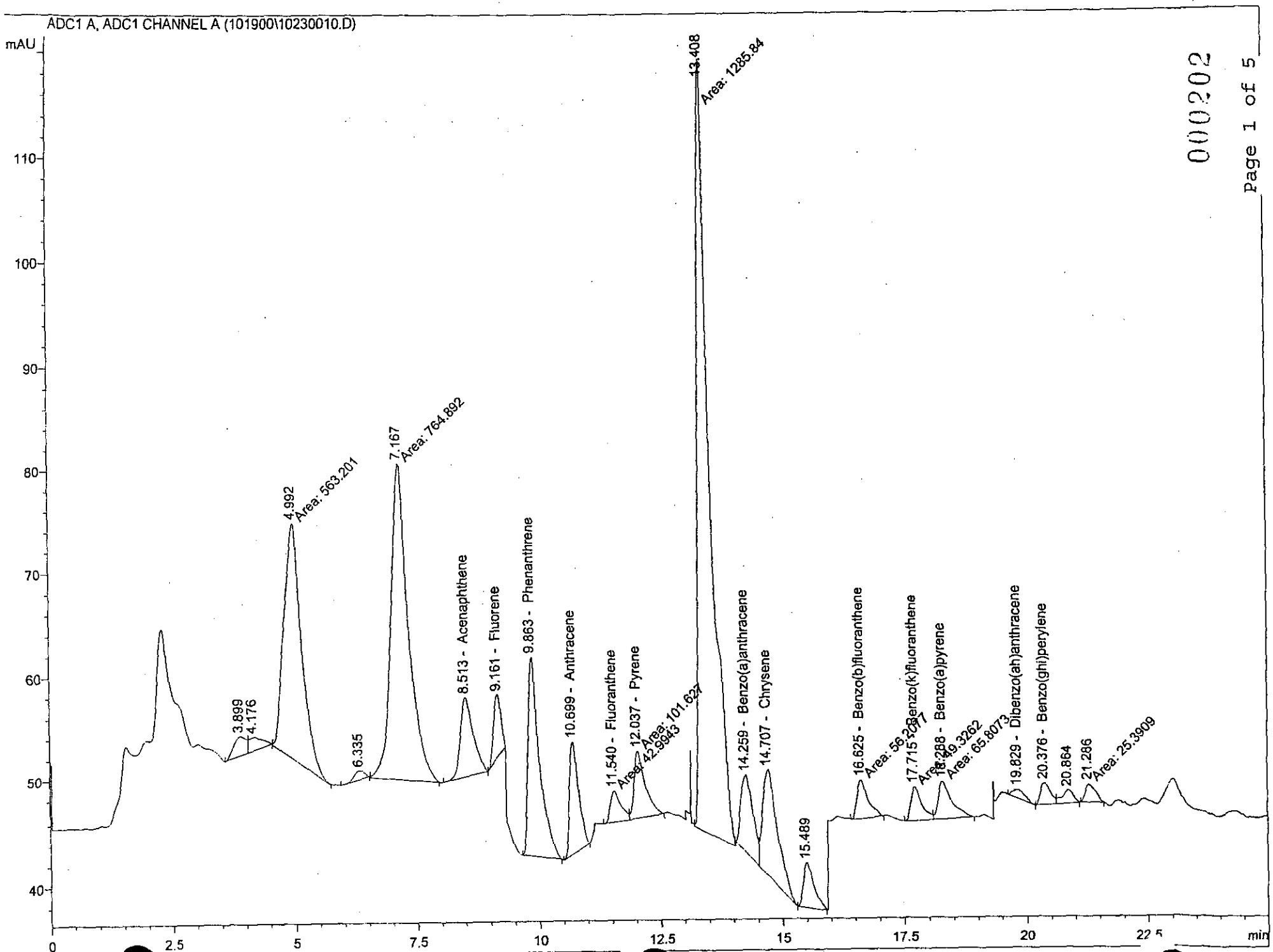

ADC1 A, ADC1 CHANNEL A (101900\10230008.D)
mAU
120
100
80
60
0.030
4.356
5.954 - Naphthalene
Area: 90.5949
6.804
7.157
Area: 114.862
7.824 - 1-Methylnaphthalene
Area: 151.26
8.500 - Acenaphthene
Area: 41.705
9.149 - Fluorene
Area: 9.14937
9.849 - Phenanthrene
10.691 - Anthracene
Area: 100.619
11.532 - Fluoranthene
12.032 - Pyrene
13.403
Area: 1088.48
16.638 - Benzo(b)fluoranthene
17.731 - Benzo(k)fluoranthene
18.302 - Benzo(a)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (101900\10230008.D)
mAU
160
140
120
100
80
60
40
20
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
8.297 - Acenaphthene
8.777 - Fluorene
9.281
9.480
9.705 - Phenanthrene
10.465 - Anthracene
11.022
11.297 - Fluoranthene
Pyrene
13.261 - P-terphenyl D14
13.834 - Benzo(a)anthracene
Area: 7209.27

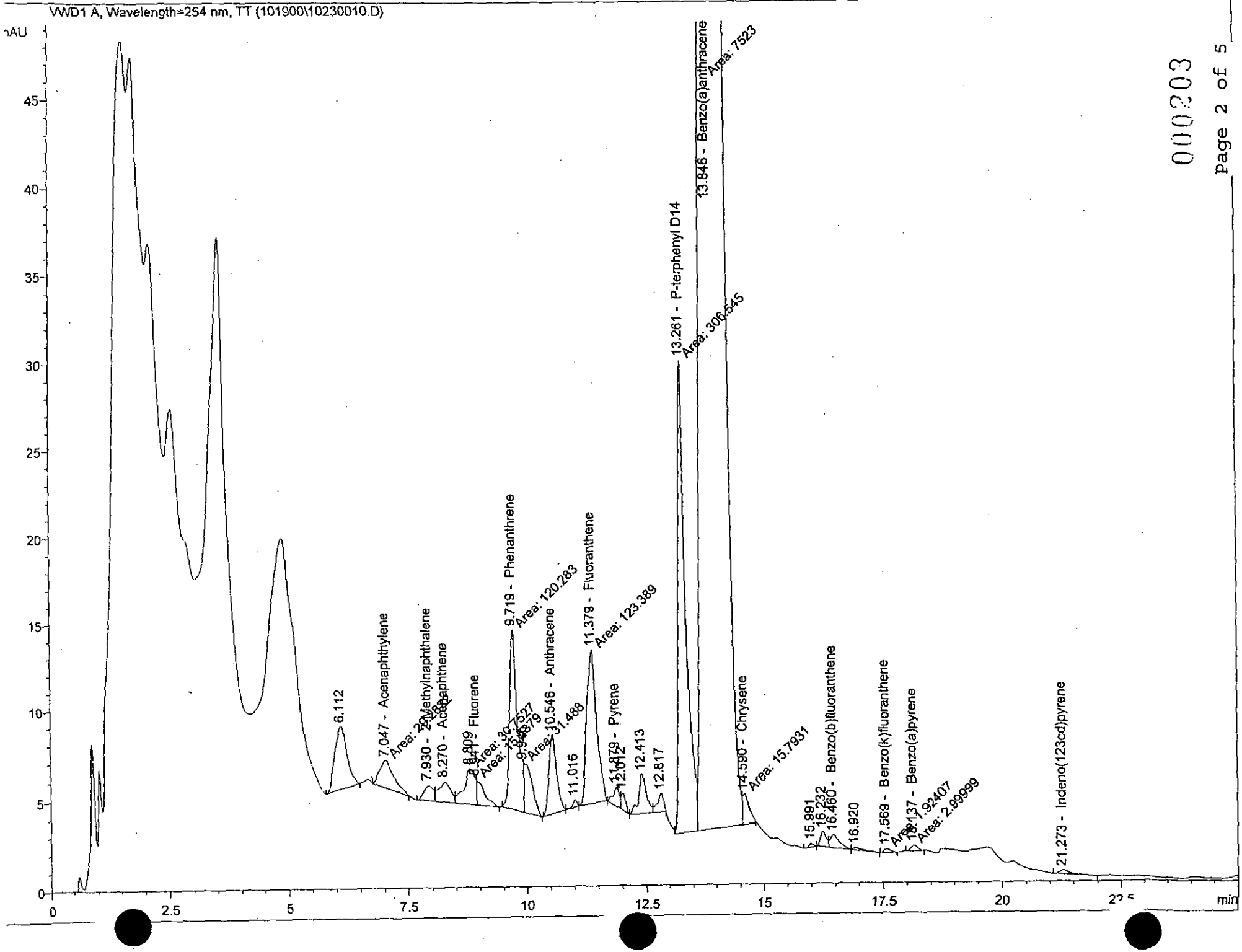

ADC1 A, ADC1 CHANNEL A (101900\10230009.D)
mAU
160
140
120
100
80
60
40
0.043
3.949
5.890 - Naphthalene
Area: 824.383
7.839 - 1-Methylnaphthalene
8.183 - 2-Methylnaphthalene
9.176 - Fluorene
Area: 39.8281
9.663 - Phenanthrene
9.805
10.153
10.686 - Anthracene
12.030 - Pyrene
13.401
Area: 1056.12
14.703 - Chrysene
Area: 9.54124
23.975
23.217
24.300
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000200

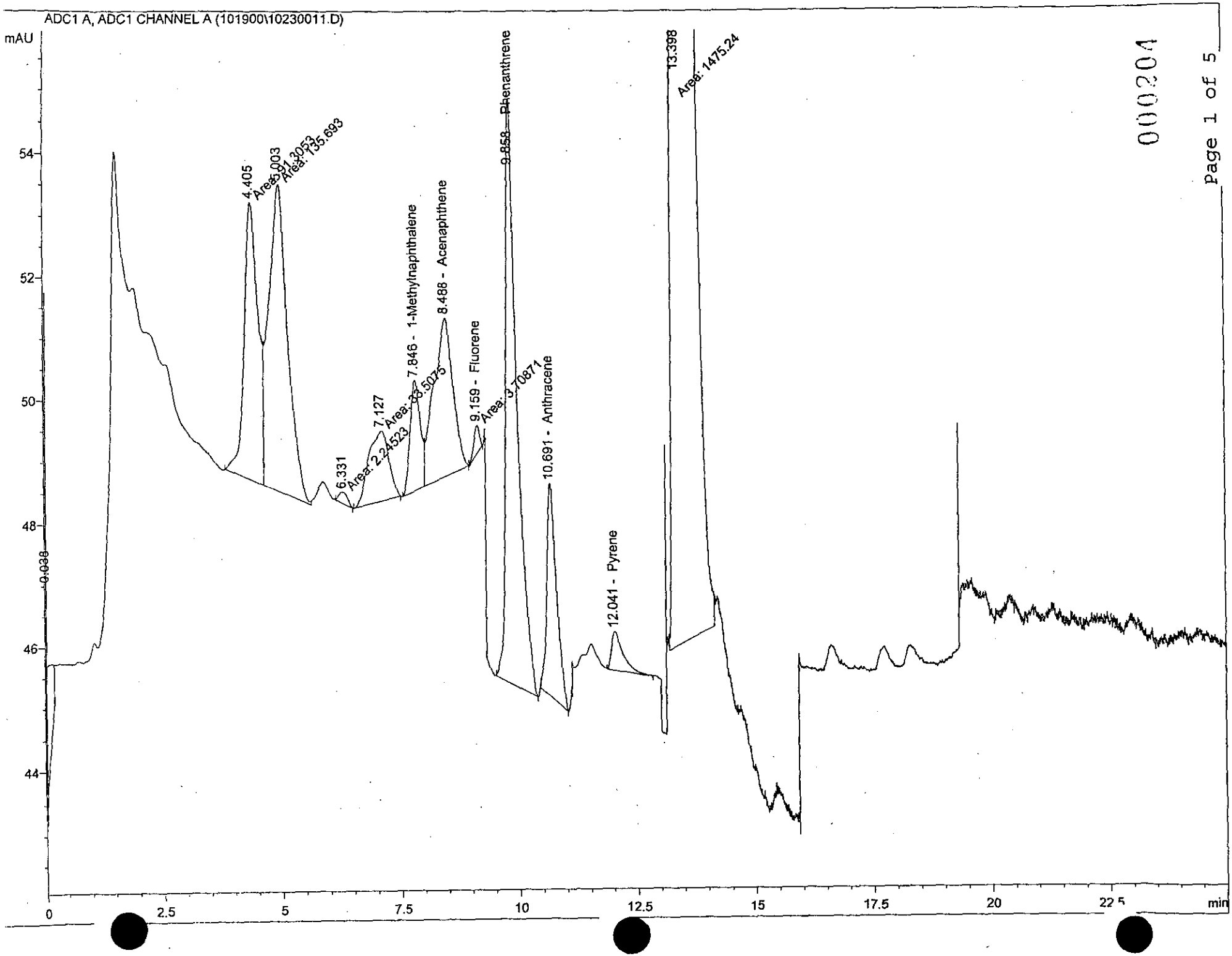

VWD1 A, Wavelength=254 nm, TT (101900\10230009.D)
mAU
175
150
125
100
75
50
25
0
0
2.5
5
7.5
10
12.5
15
17.5
20
min
7.696 - 1-Methylnaphthalene
8.065 - 2-Methylnaphthalene
8.830 - Fluorene
9.303
9.533
Phenanthrene
10.138
11.020
11.296 - Fluoranthene
12.188
12.896
13.254 - P-terphenyl D14
13.838 - Benzo(a)anthracene
Area: 7681.33
Area: 269.647


ADC1 A, ADC1 CHANNEL A (101900\10230010.D)
mAU
110
100
90
80
70
60
50
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
3.899
4.176
4.992
Area: 563.201
6.335
7.167
Area: 764.892
8.513 - Acenaphthene
9.161 - Fluorene
9.863 - Phenanthrene
10.699 - Anthracene
11.540 - Fluoranthene
Area: 42.9943
12.037 - Pyrene
Area: 101.627
13.408
Area: 1285.84
14.259 - Benzo(a)anthracene
14.707 - Chrysene
15.489
16.625 - Benzo(b)fluoranthene
Area: 56.2877
17.715 - Benzo(k)fluoranthene
Area: 49.3262
18.288 - Benzo(a)pyrene
Area: 65.8073
19.829 - Dibenzo(ah)anthracene
20.376 - Benzo(ghi)perylene
20.864
21.286
Area: 25.3909

000202

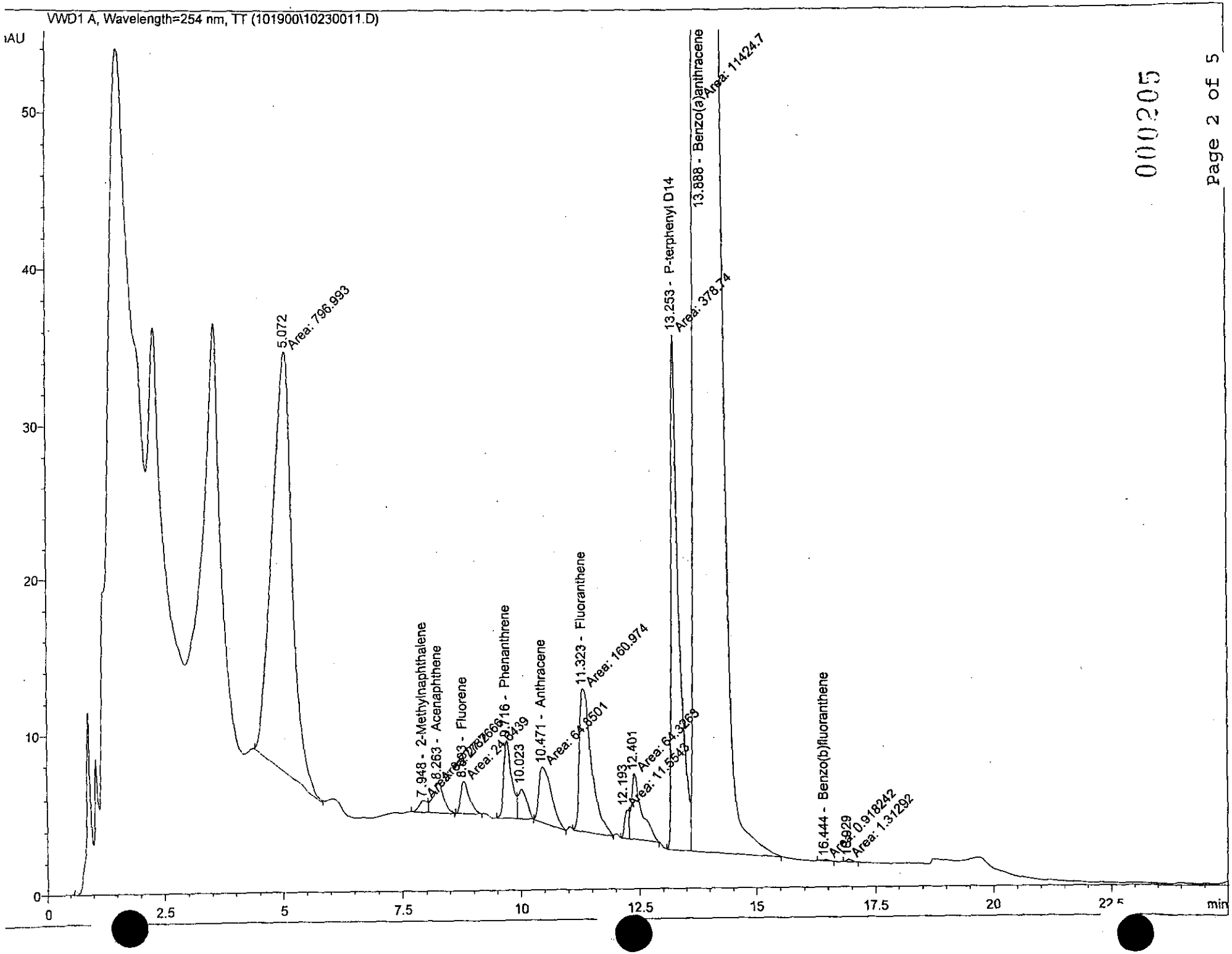

VWD1 A, Wavelength=254 nm, TT (101900\10230010.D)
mAU
6.112
7.047 - Acenaphthylene
Area: 20.
7.930 - 2-Methylnaphthalene
8.270 - Acenaphthene
8.809
Fluorene
9.719 - Phenanthrene
Area: 120.283
Area: 30.7527
Area: 10.546 - Anthracene
Area: 31.488
11.016
11.379 - Fluoranthene
Area: 123.389
11.879 - Pyrene
12.413
12.817
13.261 - P-terphenyl D14
Area: 306.545
13.846 - Benzo(a)anthracene
Area: 7523
14.590 - Chrysene
Area: 15.7931
15.991
16.232
16.460 - Benzo(b)fluoranthene
16.920
17.569 - Benzo(k)fluoranthene
Area: 1.92407
Area: 2.99999
21.273 - Indeno(123cd)pyrene
min

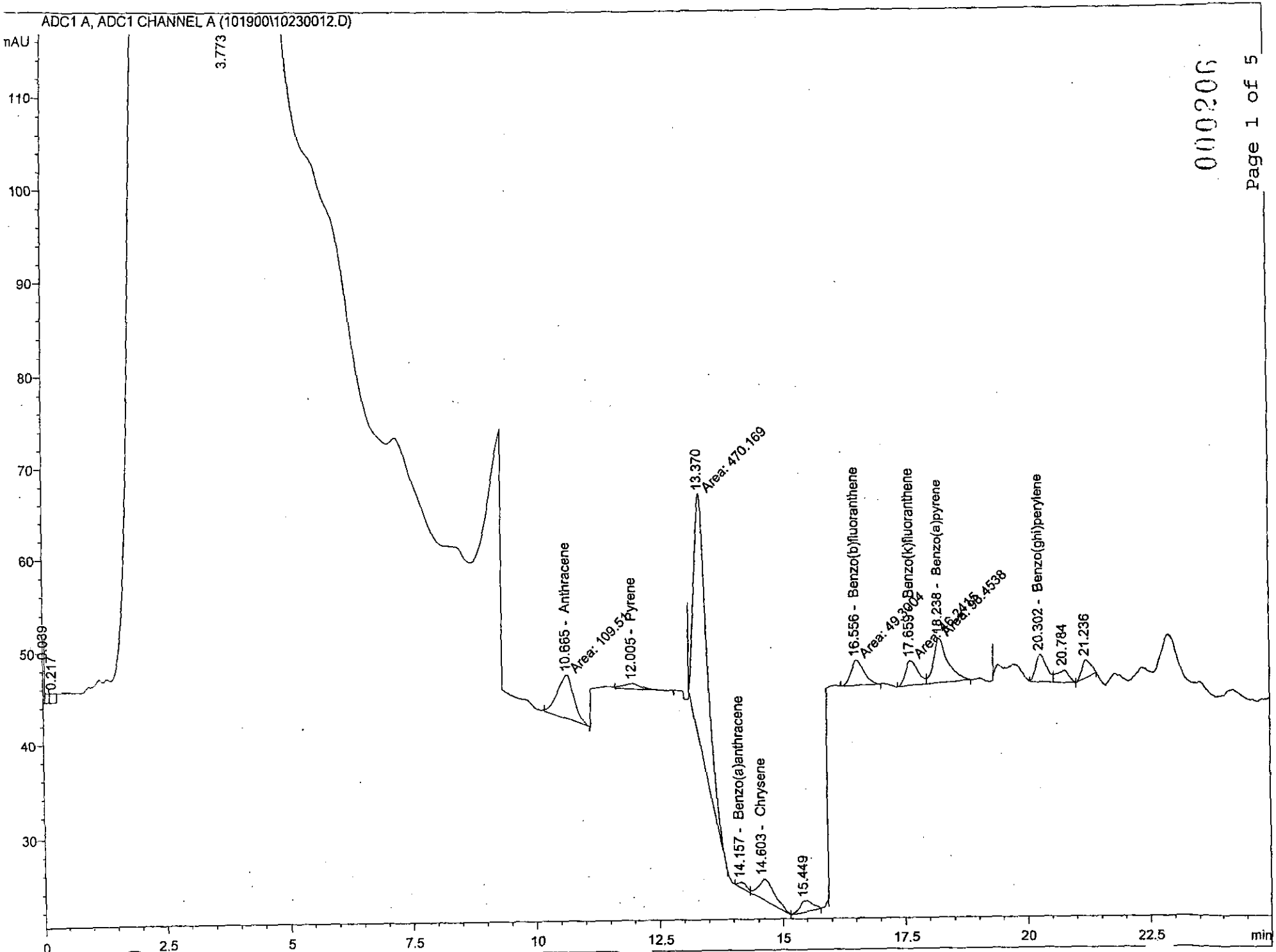
000203



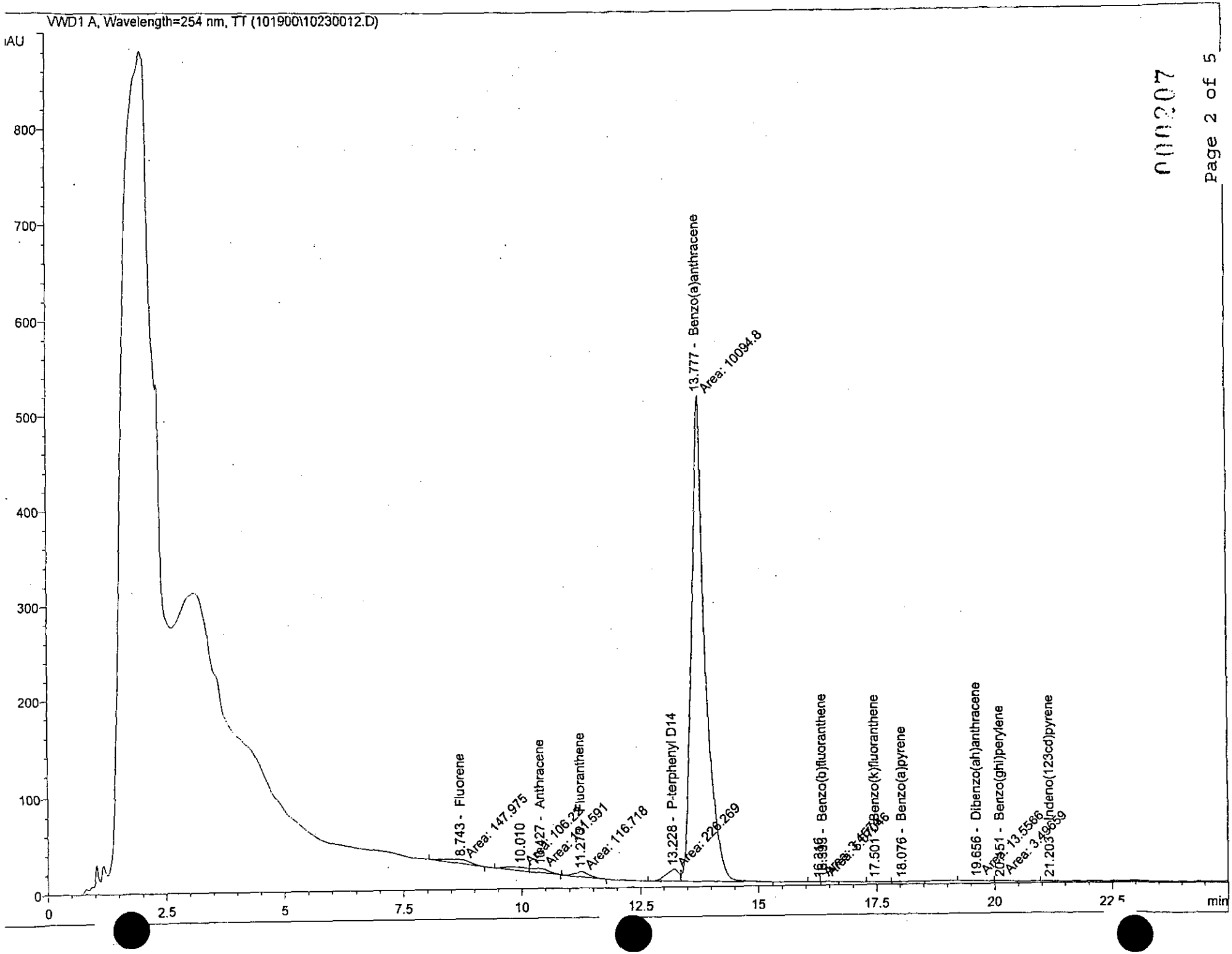
000204

Page 1 of 5


VWD1 A, Wavelength=254 nm, TT (101900\10230011.D)
mAU
5.072
Area: 796.993
7.948 - 2-Methylnaphthalene
8.263 - Acenaphthene
Fluorene
Phenanthrene
10.023
10.471 - Anthracene
11.323 - Fluoranthene
Area: 160.974
12.193
12.401
13.253 - P-terphenyl D14
Area: 378.74
13.888 - Benzo(a)anthracene
Area: 114247
16.444 - Benzo(b)fluoranthene
Area: 1.31292
min
000205
Page 2 of 5


ADC1 A, ADC1 CHANNEL A (101900\10230012.D)
mAU
110
100
90
80
70
60
50
40
30
3.773
0.217
0.039
10.665 - Anthracene
Area: 109.51
12.005 - Pyrene
13.370
Area: 470.169
14.157 - Benzo(a)anthracene
14.603 - Chrysene
15.449
16.556 - Benzo(b)fluoranthene
Area: 49.30
17.659 - Benzo(k)fluoranthene
Area: 104
18.238 - Benzo(a)pyrene
Area: 38.4538
20.302 - Benzo(ghi)perylene
20.784
21.236
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000206


VWD1 A, Wavelength=254 nm, TT (101900\10230012.D)
mAU
800
700
600
500
400
300
200
100
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
8.743 - Fluorene
Area: 147.975
10.010
Area: 106.22
Area: 101.591
Area: 116.718
13.228 - P-terphenyl D14
Area: 226.269
13.777 - Benzo(a)anthracene
Area: 10094.8
17.501 - Benzo(k)fluoranthene
18.076 - Benzo(a)pyrene
19.656 - Dibenzo(ah)anthracene
Area: 13.5566
Area: 3.49659
21.203 - Indeno(123cd)pyrene

000207

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
6.000		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

NO HITS

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.036	PB	3.51668	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000175

PAH Analysis
SW846 8310

Soil Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 3:41:44 P**
Prep End Date: **10/20/00 8:00:00 P**

Prep Batch **7872** Prep Code: **3550_LC_PAH** Technician: **Juliet Kearse**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-001B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-002B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-003B	Soil		0.03012		0	10/20/00	0	1	33.200531
LCS-7872			0.03		0	10/20/00	0	1	33.333333
MB-7872			0.03		0	10/20/00	0	1	33.333333

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/24/00 2:24:53 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	BRL	17									
Acenaphthylene	BRL	33									
1-Methylnaphthalene	BRL	17									
2-Methylnaphthalene	BRL	17									
Acenaphthene	BRL	17									
Fluorene	BRL	17									
Phenanthrene	BRL	17									
Anthracene	BRL	17									
Fluoranthene	BRL	17									
Pyrene	BRL	17									
Benz(a)anthracene	BRL	3.3									
Chrysene	BRL	17									
Benzo(b)fluoranthene	BRL	3									
Benzo(k)fluoranthene	BRL	3									
Benzo(a)pyrene	BRL	2									
Dibenz(a,h)anthracene	BRL	3.3									
Benzo(g,h,i)perylene	BRL	17									
Indeno(1,2,3-cd)pyrene	BRL	1.7									
Surr: 4-terphenyl-d14	190.1	0	160	0	119	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000211

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/23/00 3:16:38 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	104.7	17	166.7	0	62.8	40	140	0			
Acenaphthylene	215.8	33	333.3	0	64.8	40	140	0			
1-Methylnaphthalene	99.47	17	166.7	0	59.7	40	140	0			
2-Methylnaphthalene	104.4	17	166.7	0	62.6	40	140	0			
Acenaphthene	115.7	17	166.7	0	69.4	40	140	0			
Fluorene	27.33	17	33.33	0	82	40	140	0			
Phenanthrene	12.27	17	16.67	0	73.6	40	140	0			J
Anthracene	9.2	17	16.67	0	55.2	40	140	0			J
Fluoranthene	36.9	17	33.33	0	111	40	140	0			
Pyrene	16	17	16.67	0	96	40	140	0			J
Benz(a)anthracene	15.3	3.3	16.67	0	91.8	40	140	0			
Chrysene	16.9	17	16.67	0	101	40	140	0			J
Benzo(b)fluoranthene	35.77	3	33.33	0	107	40	140	0			
Benzo(k)fluoranthene	17.2	3	16.67	0	103	40	140	0			
Benzo(a)pyrene	12.03	2	16.67	0	72.2	40	140	0			
Dibenz(a,h)anthracene	32.27	3.3	33.33	0	96.8	40	140	0			
Benzo(g,h,i)perylene	34.9	17	33.33	0	105	40	140	0			
Indeno(1,2,3-cd)pyrene	16.5	1.7	16.67	0	99	40	140	0			
Surr: 4-terphenyl-d14	213.4	0	160	0	133	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000212

PAH Analysis
SW846 8310

Soil Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 3:41:44 P**
Prep End Date: **10/20/00 8:00:00 P**

Prep Batch **7872** Prep Code: **3550_LC_PAH** Technician: **Juliet Kearse**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-001B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-002B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-003B	Soil		0.03012		0	10/20/00	0	1	33.200531
LCS-7872			0.03		0	10/20/00	0	1	33.333333
MB-7872			0.03		0	10/20/00	0	1	33.333333

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/24/00 2:24:53 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	BRL	17									
Acenaphthylene	BRL	33									
1-Methylnaphthalene	BRL	17									
2-Methylnaphthalene	BRL	17									
Acenaphthene	BRL	17									
Fluorene	BRL	17									
Phenanthrene	BRL	17									
Anthracene	BRL	17									
Fluoranthene	BRL	17									
Pyrene	BRL	17									
Benz(a)anthracene	BRL	3.3									
Chrysene	BRL	17									
Benzo(b)fluoranthene	BRL	3									
Benzo(k)fluoranthene	BRL	3									
Benzo(a)pyrene	BRL	2									
Dibenz(a,h)anthracene	BRL	3.3									
Benzo(g,h,i)perylene	BRL	17									
Indeno(1,2,3-cd)pyrene	BRL	1.7									
Surr: 4-terphenyl-d14	190.1	0	160	0	119	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000211

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/23/00 3:16:38 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	104.7	17	166.7	0	62.8	40	140	0			
Acenaphthylene	215.8	33	333.3	0	64.8	40	140	0			
1-Methylnaphthalene	99.47	17	166.7	0	59.7	40	140	0			
2-Methylnaphthalene	104.4	17	166.7	0	62.6	40	140	0			
Acenaphthene	115.7	17	166.7	0	69.4	40	140	0			
Fluorene	27.33	17	33.33	0	82	40	140	0			
Phenanthrene	12.27	17	16.67	0	73.6	40	140	0			J
Anthracene	9.2	17	16.67	0	55.2	40	140	0			J
Fluoranthene	36.9	17	33.33	0	111	40	140	0			
Pyrene	16	17	16.67	0	96	40	140	0			J
Benz(a)anthracene	15.3	3.3	16.67	0	91.8	40	140	0			
Chrysene	16.9	17	16.67	0	101	40	140	0			J
Benzo(b)fluoranthene	35.77	3	33.33	0	107	40	140	0			
Benzo(k)fluoranthene	17.2	3	16.67	0	103	40	140	0			
Benzo(a)pyrene	12.03	2	16.67	0	72.2	40	140	0			
Dibenz(a,h)anthracene	32.27	3.3	33.33	0	96.8	40	140	0			
Benzo(g,h,i)perylene	34.9	17	33.33	0	105	40	140	0			
Indeno(1,2,3-cd)pyrene	16.5	1.7	16.67	0	99	40	140	0			
Surr: 4-terphenyl-d14	213.4	0	160	0	133	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000212

PAH Analysis
SW846 8310

Soil Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 3:41:44 P**
Prep End Date: **10/20/00 8:00:00 P**

Prep Batch **7872** Prep Code: **3550_LC_PAH** Technician: **Juliet Kearse**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-001B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-002B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-003B	Soil		0.03012		0	10/20/00	0	1	33.200531
LCS-7872			0.03		0	10/20/00	0	1	33.333333
MB-7872			0.03		0	10/20/00	0	1	33.333333

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/24/00 2:24:53 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	BRL	17									
Acenaphthylene	BRL	33									
1-Methylnaphthalene	BRL	17									
2-Methylnaphthalene	BRL	17									
Acenaphthene	BRL	17									
Fluorene	BRL	17									
Phenanthrene	BRL	17									
Anthracene	BRL	17									
Fluoranthene	BRL	17									
Pyrene	BRL	17									
Benz(a)anthracene	BRL	3.3									
Chrysene	BRL	17									
Benzo(b)fluoranthene	BRL	3									
Benzo(k)fluoranthene	BRL	3									
Benzo(a)pyrene	BRL	2									
Dibenz(a,h)anthracene	BRL	3.3									
Benzo(g,h,i)perylene	BRL	17									
Indeno(1,2,3-cd)pyrene	BRL	1.7									
Surr: 4-terphenyl-d14	190.1	0	160	0	119	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

000211

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/23/00 3:16:38 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	104.7	17	166.7	0	62.8	40	140	0			
Acenaphthylene	215.8	33	333.3	0	64.8	40	140	0			
1-Methylnaphthalene	99.47	17	166.7	0	59.7	40	140	0			
2-Methylnaphthalene	104.4	17	166.7	0	62.6	40	140	0			
Acenaphthene	115.7	17	166.7	0	69.4	40	140	0			
Fluorene	27.33	17	33.33	0	82	40	140	0			
Phenanthrene	12.27	17	16.67	0	73.6	40	140	0			J
Anthracene	9.2	17	16.67	0	55.2	40	140	0			J
Fluoranthene	36.9	17	33.33	0	111	40	140	0			
Pyrene	16	17	16.67	0	96	40	140	0			J
Benz(a)anthracene	15.3	3.3	16.67	0	91.8	40	140	0			
Chrysene	16.9	17	16.67	0	101	40	140	0			J
Benzo(b)fluoranthene	35.77	3	33.33	0	107	40	140	0			
Benzo(k)fluoranthene	17.2	3	16.67	0	103	40	140	0			
Benzo(a)pyrene	12.03	2	16.67	0	72.2	40	140	0			
Dibenz(a,h)anthracene	32.27	3.3	33.33	0	96.8	40	140	0			
Benzo(g,h,i)perylene	34.9	17	33.33	0	105	40	140	0			
Indeno(1,2,3-cd)pyrene	16.5	1.7	16.67	0	99	40	140	0			
Surr: 4-terphenyl-d14	213.4	0	160	0	133	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

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INITIAL CALIBRATION

Calibration Table

Calib. Data Modified : 9/14/00 5:48:06 PM

Calculate : External Standard
Based on : Peak Area

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

Curve Type : Linear
Origin : Ignored
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: ADC1 A, ADC1 CHANNEL A
Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
5.771	2	5	5.00000e-1	14.75709	3.38820e-2			Naphthalene
		4	1.00000	33.13679	3.01779e-2			
		3	2.00000	54.22546	3.68830e-2			
		2	5.00000	139.60797	3.58146e-2			
		1	10.00000	284.16232	3.51912e-2			
5.912	1	5	5.00000e-1	43.51245	1.14910e-2			Naphthalene
		4	1.00000	101.63905	9.83874e-3			
		3	2.00000	177.09276	1.12935e-2			
		2	5.00000	457.73398	1.09234e-2			
		1	10.00000	927.52972	1.07813e-2			
7.115	2	5	1.00000	20.09125	4.97729e-2			Acenaphthylene
		4	2.00000	44.26999	4.51773e-2			
		3	4.00000	74.00314	5.40518e-2			
		2	10.00000	192.17686	5.20354e-2			
		1	20.00000	388.72571	5.14502e-2			
7.714	2	5	5.00000e-1	8.92327	5.60333e-2			1-Methylnaphthalene
		4	1.00000	19.88931	5.02783e-2			
		3	2.00000	36.73984	5.44368e-2			
		2	5.00000	89.12464	5.61012e-2			

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
		1	10.00000	176.93584	5.65177e-2			
7.853	1	5	5.00000e-1	84.18243	5.93948e-3			1-Methylnaphthalene
		4	1.00000	182.83362	5.46945e-3			
		3	2.00000	319.74792	6.25493e-3			
		2	5.00000	815.11816	6.13408e-3			
		1	10.00000	1600.36975	6.24856e-3			
8.090	2	5	5.00000e-1	12.88177	3.88145e-2			2-Methylnaphthalene
		4	1.00000	28.61016	3.49526e-2			
		3	2.00000	49.40136	4.04847e-2			
		2	5.00000	123.72823	4.04112e-2			
		1	10.00000	250.88606	3.98587e-2			
8.230	1	5	5.00000e-1	73.61031	6.79253e-3			2-Methylnaphthalene
		4	1.00000	161.39539	6.19596e-3			
		3	2.00000	279.61868	7.15260e-3			
		2	5.00000	691.67670	7.22881e-3			
		1	10.00000	1384.87012	7.22089e-3			
8.363	2	5	5.00000e-1	7.41926	6.73922e-2			Acenaphthene
		4	1.00000	16.93034	5.90656e-2			
		3	2.00000	28.05536	7.12876e-2			
		2	5.00000	69.66994	7.17670e-2			
		1	10.00000	143.46092	6.97054e-2			
8.522	1	5	5.00000e-1	227.99506	2.19303e-3			Acenaphthene
		4	1.00000	497.14474	2.01149e-3			
		3	2.00000	831.69177	2.40474e-3			
		2	5.00000	2116.87891	2.36197e-3			
		1	10.00000	4269.91895	2.34196e-3			
8.875	2	5	1.00000e-1	14.61118	6.84407e-3			Fluorene
		4	2.00000e-1	32.66193	6.12334e-3			
		3	5.00000e-1	54.44505	9.18357e-3			
		2	1.00000	139.24638	7.18152e-3			
		1	2.00000	281.37839	7.10787e-3			
8.960	1	5	1.00000e-1	8.53182	1.17208e-2			Fluorene
		4	2.00000e-1	17.61251	1.13556e-2			
		3	5.00000e-1	37.73751	1.32494e-2			
		2	1.00000	82.85392	1.20694e-2			
		1	2.00000	120.28089	1.66277e-2			
9.730	2	5	5.00000e-2	18.02111	2.77452e-3			Phenanthrene
		4	1.00000e-1	39.79345	2.51298e-3			
		3	2.00000e-1	67.07530	2.98172e-3			
		2	5.00000e-1	173.85025	2.87604e-3			
		1	1.00000	343.06598	2.91489e-3			
9.870	1	5	5.00000e-2	45.26786	1.10454e-3			Phenanthrene
		4	1.00000e-1	98.37514	1.01652e-3			
		3	2.00000e-1	165.13036	1.21116e-3			
		2	5.00000e-1	422.13602	1.18445e-3			
		1	1.00000	840.83624	1.18929e-3			
10.557	2	5	5.00000e-2	38.47166	1.29966e-3			Anthracene
		4	1.00000e-1	88.05602	1.13564e-3			
		3	2.00000e-1	151.13527	1.32332e-3			
		2	5.00000e-1	379.23813	1.31843e-3			
		1	1.00000	754.94653	1.32460e-3			
10.699	1	5	5.00000e-2	218.57169	2.28758e-4			Anthracene
		4	1.00000e-1	489.80444	2.04163e-4			
		3	2.00000e-1	838.25519	2.38591e-4			
		2	5.00000e-1	2105.73145	2.37447e-4			
		1	1.00000	4193.24414	2.38479e-4			

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RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
11.395	2	5	1.00000e-1	9.01464	1.10931e-2			Fluoranthene
		4	2.00000e-1	19.40378	1.03073e-2			
		3	4.00000e-1	32.94216	1.21425e-2			
		2	1.00000	84.13593	1.18855e-2			
		1	2.00000	169.58119	1.17938e-2			
11.539	1	5	1.00000e-1	11.58462	8.63214e-3			Fluoranthene
		4	2.00000e-1	24.20294	8.26346e-3			
		3	4.00000e-1	41.76950	9.57637e-3			
		2	1.00000	105.95557	9.43792e-3			
		1	2.00000	215.07562	9.29905e-3			
11.895	2	5	5.00000e-2	5.03527	9.92996e-3			Pyrene
		4	1.00000e-1	10.05997	9.94038e-3			
		3	2.00000e-1	17.61109	1.13565e-2			
		2	5.00000e-1	45.89300	1.08949e-2			
		1	1.00000	93.10056	1.07411e-2			
12.037	1	5	5.00000e-2	23.95237	2.08748e-3			Pyrene
		4	1.00000e-1	51.17427	1.95411e-3			
		3	2.00000e-1	88.05202	2.27138e-3			
		2	5.00000e-1	212.28780	2.35529e-3			
		1	1.00000	450.67984	2.21887e-3			
13.300	2	5	2.00000	139.93500	1.42924e-2			P-terphenyl D14
		4	4.00000	268.93500	1.48735e-2			
		3	4.80000	326.26276	1.47121e-2			
		2	10.00000	690.10900	1.44905e-2			
		1	15.00000	1020.59900	1.46973e-2			
14.027	2	5	5.00000e-2	11.16390	4.47872e-3			Benzo(a)anthracene
		4	1.00000e-1	24.91508	4.01363e-3			
		3	2.00000e-1	42.26120	4.73247e-3			
		2	5.00000e-1	108.20583	4.62082e-3			
		1	1.00000	217.55798	4.59648e-3			
14.170	1	5	5.00000e-2	149.38280	3.34711e-4			Benzo(a)anthracene
		4	1.00000e-1	342.87982	2.91647e-4			
		3	2.00000e-1	580.52747	3.44514e-4			
		2	5.00000e-1	1486.57703	3.36343e-4			
		1	1.00000	2849.09888	3.50988e-4			
14.590	2	5	5.00000e-2	18.14643	2.75536e-3			Chrysene
		4	1.00000e-1	40.04166	2.49740e-3			
		3	2.00000e-1	68.34219	2.92645e-3			
		2	5.00000e-1	172.46683	2.89911e-3			
		1	1.00000	347.23474	2.87990e-3			
14.737	1	5	5.00000e-2	92.42841	5.40959e-4			Chrysene
		4	1.00000e-1	203.64078	4.91061e-4			
		3	2.00000e-1	350.60947	5.70435e-4			
		2	5.00000e-1	941.82025	5.30887e-4			
		1	1.00000	1931.44287	5.17748e-4			
16.411	2	5	1.00000e-1	25.57971	3.90935e-3			Benzo(b)fluoranthene
		4	2.00000e-1	56.07032	3.56695e-3			
		3	4.00000e-1	94.65772	4.22575e-3			
		2	1.00000	238.85312	4.18667e-3			
		1	2.00000	480.04309	4.16629e-3			
16.584	1	5	1.00000e-1	187.06203	5.34582e-4			Benzo(b)fluoranthene
		4	2.00000e-1	422.78955	4.73049e-4			
		3	4.00000e-1	719.40326	5.56016e-4			
		2	1.00000	1830.36072	5.46340e-4			
		1	2.00000	3551.39429	5.63159e-4			
17.490	2	5	5.00000e-2	7.73708	6.46239e-3			Benzo(k)fluoranthene

000216

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
		4	1.00000e-1	18.58857	5.37965e-3			
		3	2.00000e-1	31.55045	6.33905e-3			
		2	5.00000e-1	80.05262	6.24589e-3			
		1	1.00000	159.66829	6.26298e-3			
17.642	1	5	5.00000e-2	162.07825	3.08493e-4			Benzo(k)fluoranthene
		4	1.00000e-1	359.08487	2.78486e-4			
		3	2.00000e-1	615.84094	3.24759e-4			
		2	5.00000e-1	1559.22083	3.20673e-4			
		1	1.00000	3128.27124	3.19665e-4			
18.065	2	5	5.00000e-2	10.85466	4.60632e-3			Benzo(a)pyrene
		4	1.00000e-1	26.60964	3.75804e-3			
		3	2.00000e-1	46.45811	4.30495e-3			
		2	5.00000e-1	114.54205	4.36521e-3			
		1	1.00000	226.60728	4.41292e-3			
18.216	1	5	5.00000e-2	127.85419	3.91070e-4			Benzo(a)pyrene
		4	1.00000e-1	304.88193	3.27996e-4			
		3	2.00000e-1	532.83832	3.75348e-4			
		2	5.00000e-1	1357.57349	3.68304e-4			
		1	1.00000	2709.13159	3.69122e-4			
19.627	2	5	1.00000e-1	52.88899	1.89075e-3			Dibenzo(ah)anthracene
		4	2.00000e-1	116.12875	1.72223e-3			
		3	4.00000e-1	193.91678	2.06274e-3			
		2	1.00000	489.12625	2.04446e-3			
		1	2.00000	994.54974	2.01096e-3			
19.769	1	5	1.00000e-1	135.87962	7.35946e-4			Dibenzo(ah)anthracene
		4	2.00000e-1	280.15933	7.13879e-4			
		3	4.00000e-1	480.45383	8.32546e-4			
		2	1.00000	1199.76929	8.33494e-4			
		1	2.00000	2428.61548	8.23514e-4			
20.085	2	5	1.00000e-1	24.50035	4.08157e-3			Benzo(ghi)perylene
		4	2.00000e-1	59.51743	3.36036e-3			
		3	4.00000e-1	101.73080	3.93195e-3			
		2	1.00000	263.23438	3.79890e-3			
		1	2.00000	550.29504	3.63441e-3			
20.236	1	5	1.00000e-1	244.85063	4.08412e-4			Benzo(ghi)perylene
		4	2.00000e-1	581.78510	3.43770e-4			
		3	4.00000e-1	998.91718	4.00434e-4			
		2	1.00000	2569.22290	3.89223e-4			
		1	2.00000	5240.86035	3.81617e-4			
21.097	2	5	5.00000e-2	6.48660	7.70820e-3			Indeno(123cd)pyrene
		4	1.00000e-1	15.35210	6.51377e-3			
		3	2.00000e-1	26.69713	7.49144e-3			
		2	5.00000e-1	74.27673	6.73158e-3			
		1	1.00000	149.37302	6.69465e-3			

More compound-specific settings:

Compound: Naphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Naphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthylene
Amount Limits : Low 1.00000 High 20.00000

000217

Compound: 1-Methylnaphthalene
Amount Limits : Low 1.00000 High 20.00000

Compound: 1-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: 2-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: 2-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthene
Amount Limits : Low 1.00000 High 10.00000

Compound: Fluorene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Fluorene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Phenanthrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Phenanthrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Anthracene
Amount Limits : Low 1.00000 High 1.00000

Compound: Anthracene
Amount Limits : Low 1.00000 High 1.00000

Compound: Fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: P-terphenyl D14
Amount Limits : Low 2.00000 High 20.00000

Compound: Benzo(a)anthracene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)anthracene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Chrysene
Amount Limits : Low 1.00000e-1 High 1.00000

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Compound: Chrysene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(b)fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(b)fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(k)fluoranthene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(k)fluoranthene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Dibenzo(ah)anthracene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Dibenzo(ah)anthracene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(ghi)perylene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(ghi)perylene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Indeno(123cd)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

13 Warnings or Errors (10 first messages follow) :

Warning : Overlapping peak time windows at 7.853 min, signal 1
Warning : Overlapping peak time windows at 8.23 min, signal 1
Warning : Overlapping peak time windows at 11.539 min, signal 1
Warning : Overlapping peak time windows at 14.17 min, signal 1
Warning : Overlapping peak time windows at 17.642 min, signal 1
Warning : Overlapping peak time windows at 19.769 min, signal 1
Warning : Overlapping peak time windows at 7.714 min, signal 2
Warning : Overlapping peak time windows at 8.09 min, signal 2
Warning : Overlapping peak time windows at 11.395 min, signal 2
Warning : Overlapping peak time windows at 14.027 min, signal 2

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Peak Sum Table

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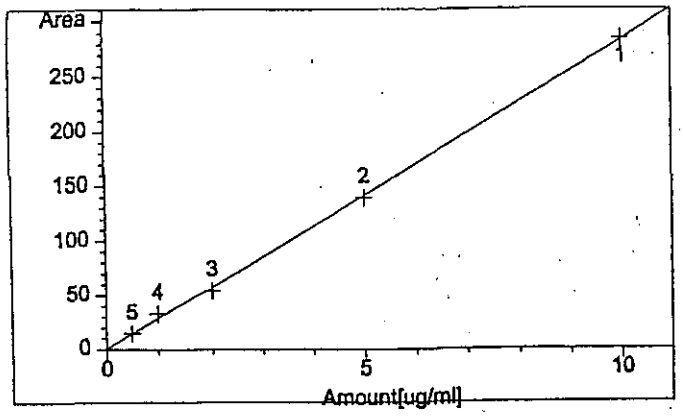
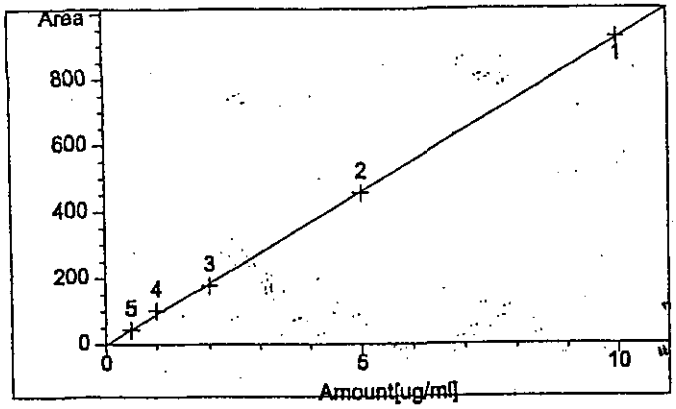
No Entries in table

==========

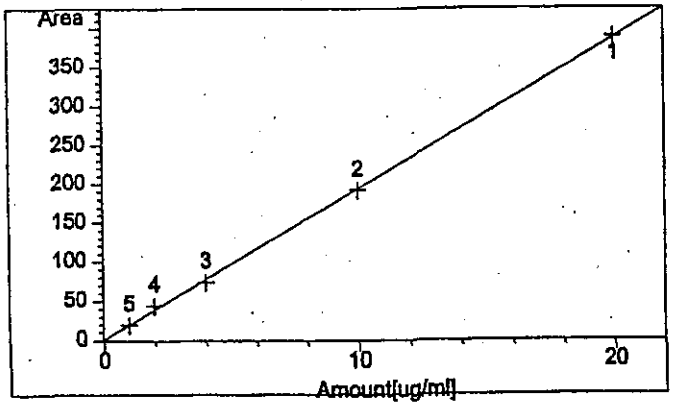
Calibration Curves



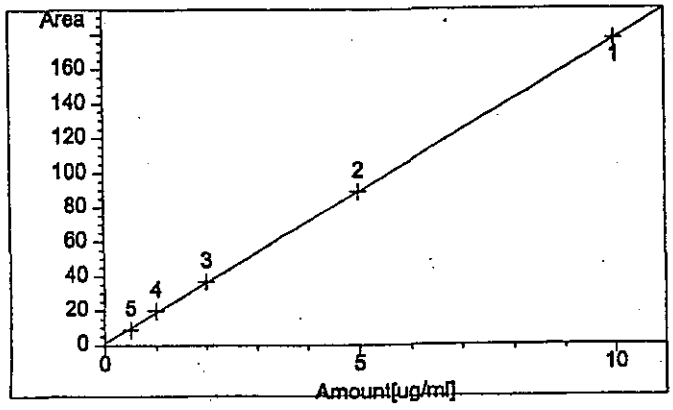
Naphthalene at exp. RT: 5.771
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99967
Residual Std. Dev.: 3.29823
Formula: y = mx + b
m: 28.20126
b: 8.33275e-1
x: Amount [ug/ml]
y: Area



Naphthalene at exp. RT: 5.912
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99983
Residual Std. Dev.: 7.72442
Formula: y = mx + b
m: 92.61761
b: -1.18357
x: Amount [ug/ml]
y: Area



Acenaphthylene at exp. RT: 7.115
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99975
Residual Std. Dev.: 3.89621
Formula: y = mx + b
m: 19.32990
b: 8.12131e-1
x: Amount [ug/ml]
y: Area



1-Methylnaphthalene at exp. RT: 7.714
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99993
Residual Std. Dev.: 0.90964
Formula: y = mx + b
m: 17.57030
b: 1.31247
x: Amount [ug/ml]
y: Area

000220

PAH Analysis
SW846 8310

Soil Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 3:41:44 P**
Prep End Date: **10/20/00 8:00:00 P**

Prep Batch **7872** Prep Code: **3550_LC_PAH** Technician: **Juliet Kearse**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-001B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-002B	Soil		0.03003		0	10/20/00	0	1	33.300033
0010401-003B	Soil		0.03012		0	10/20/00	0	1	33.200531
LCS-7872			0.03		0	10/20/00	0	1	33.333333
MB-7872			0.03		0	10/20/00	0	1	33.333333

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/24/00 2:24:53 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	BRL	17									
Acenaphthylene	BRL	33									
1-Methylnaphthalene	BRL	17									
2-Methylnaphthalene	BRL	17									
Acenaphthene	BRL	17									
Fluorene	BRL	17									
Phenanthrene	BRL	17									
Anthracene	BRL	17									
Fluoranthene	BRL	17									
Pyrene	BRL	17									
Benz(a)anthracene	BRL	3.3									
Chrysene	BRL	17									
Benzo(b)fluoranthene	BRL	3									
Benzo(k)fluoranthene	BRL	3									
Benzo(a)pyrene	BRL	2									
Dibenz(a,h)anthracene	BRL	3.3									
Benzo(g,h,i)perylene	BRL	17									
Indeno(1,2,3-cd)pyrene	BRL	1.7									
Surr: 4-terphenyl-d14	190.1	0	160	0	119	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000211

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7872** Batch ID: **7872** Test Code: **SW8310** Units: **µg/Kg** Analysis Date: **10/23/00 3:16:38 AM** Prep Date: **10/20/00**

Client ID: Run ID: **HPLC-1_001023A** SeqNo: **155833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	104.7	17	166.7	0	62.8	40	140	0			
Acenaphthylene	215.8	33	333.3	0	64.8	40	140	0			
1-Methylnaphthalene	99.47	17	166.7	0	59.7	40	140	0			
2-Methylnaphthalene	104.4	17	166.7	0	62.6	40	140	0			
Acenaphthene	115.7	17	166.7	0	69.4	40	140	0			
Fluorene	27.33	17	33.33	0	82	40	140	0			
Phenanthrene	12.27	17	16.67	0	73.6	40	140	0			J
Anthracene	9.2	17	16.67	0	55.2	40	140	0			J
Fluoranthene	36.9	17	33.33	0	111	40	140	0			
Pyrene	16	17	16.67	0	96	40	140	0			J
Benz(a)anthracene	15.3	3.3	16.67	0	91.8	40	140	0			
Chrysene	16.9	17	16.67	0	101	40	140	0			J
Benzo(b)fluoranthene	35.77	3	33.33	0	107	40	140	0			
Benzo(k)fluoranthene	17.2	3	16.67	0	103	40	140	0			
Benzo(a)pyrene	12.03	2	16.67	0	72.2	40	140	0			
Dibenz(a,h)anthracene	32.27	3.3	33.33	0	96.8	40	140	0			
Benzo(g,h,i)perylene	34.9	17	33.33	0	105	40	140	0			
Indeno(1,2,3-cd)pyrene	16.5	1.7	16.67	0	99	40	140	0			
Surr: 4-terphenyl-d14	213.4	0	160	0	133	20	140	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000212

INITIAL CALIBRATION

Calibration Table

Calib. Data Modified : 9/14/00 5:48:06 PM

Calculate : External Standard
Based on : Peak Area

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

Curve Type : Linear
Origin : Ignored
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: ADC1 A, ADC1 CHANNEL A
Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
5.771	2	5	5.00000e-1	14.75709	3.38820e-2			Naphthalene
		4	1.00000	33.13679	3.01779e-2			
		3	2.00000	54.22546	3.68830e-2			
		2	5.00000	139.60797	3.58146e-2			
		1	10.00000	284.16232	3.51912e-2			
5.912	1	5	5.00000e-1	43.51245	1.14910e-2			Naphthalene
		4	1.00000	101.63905	9.83874e-3			
		3	2.00000	177.09276	1.12935e-2			
		2	5.00000	457.73398	1.09234e-2			
		1	10.00000	927.52972	1.07813e-2			
7.115	2	5	1.00000	20.09125	4.97729e-2			Acenaphthylene
		4	2.00000	44.26999	4.51773e-2			
		3	4.00000	74.00314	5.40518e-2			
		2	10.00000	192.17686	5.20354e-2			
		1	20.00000	388.72571	5.14502e-2			
7.714	2	5	5.00000e-1	8.92327	5.60333e-2			1-Methylnaphthalene
		4	1.00000	19.88931	5.02783e-2			
		3	2.00000	36.73984	5.44368e-2			
		2	5.00000	89.12464	5.61012e-2			

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
		1	10.00000	176.93584	5.65177e-2			
7.853	1	5	5.00000e-1	84.18243	5.93948e-3			1-Methylnaphthalene
		4	1.00000	182.83362	5.46945e-3			
		3	2.00000	319.74792	6.25493e-3			
		2	5.00000	815.11816	6.13408e-3			
		1	10.00000	1600.36975	6.24856e-3			
8.090	2	5	5.00000e-1	12.88177	3.88145e-2			2-Methylnaphthalene
		4	1.00000	28.61016	3.49526e-2			
		3	2.00000	49.40136	4.04847e-2			
		2	5.00000	123.72823	4.04112e-2			
		1	10.00000	250.88606	3.98587e-2			
8.230	1	5	5.00000e-1	73.61031	6.79253e-3			2-Methylnaphthalene
		4	1.00000	161.39539	6.19596e-3			
		3	2.00000	279.61868	7.15260e-3			
		2	5.00000	691.67670	7.22881e-3			
		1	10.00000	1384.87012	7.22089e-3			
8.363	2	5	5.00000e-1	7.41926	6.73922e-2			Acenaphthene
		4	1.00000	16.93034	5.90656e-2			
		3	2.00000	28.05536	7.12876e-2			
		2	5.00000	69.66994	7.17670e-2			
		1	10.00000	143.46092	6.97054e-2			
8.522	1	5	5.00000e-1	227.99506	2.19303e-3			Acenaphthene
		4	1.00000	497.14474	2.01149e-3			
		3	2.00000	831.69177	2.40474e-3			
		2	5.00000	2116.87891	2.36197e-3			
		1	10.00000	4269.91895	2.34196e-3			
8.875	2	5	1.00000e-1	14.61118	6.84407e-3			Fluorene
		4	2.00000e-1	32.66193	6.12334e-3			
		3	5.00000e-1	54.44505	9.18357e-3			
		2	1.00000	139.24638	7.18152e-3			
		1	2.00000	281.37839	7.10787e-3			
8.960	1	5	1.00000e-1	8.53182	1.17208e-2			Fluorene
		4	2.00000e-1	17.61251	1.13556e-2			
		3	5.00000e-1	37.73751	1.32494e-2			
		2	1.00000	82.85392	1.20694e-2			
		1	2.00000	120.28089	1.66277e-2			
9.730	2	5	5.00000e-2	18.02111	2.77452e-3			Phenanthrene
		4	1.00000e-1	39.79345	2.51298e-3			
		3	2.00000e-1	67.07530	2.98172e-3			
		2	5.00000e-1	173.85025	2.87604e-3			
		1	1.00000	343.06598	2.91489e-3			
9.870	1	5	5.00000e-2	45.26786	1.10454e-3			Phenanthrene
		4	1.00000e-1	98.37514	1.01652e-3			
		3	2.00000e-1	165.13036	1.21116e-3			
		2	5.00000e-1	422.13602	1.18445e-3			
		1	1.00000	840.83624	1.18929e-3			
10.557	2	5	5.00000e-2	38.47166	1.29966e-3			Anthracene
		4	1.00000e-1	88.05602	1.13564e-3			
		3	2.00000e-1	151.13527	1.32332e-3			
		2	5.00000e-1	379.23813	1.31843e-3			
		1	1.00000	754.94653	1.32460e-3			
10.699	1	5	5.00000e-2	218.57169	2.28758e-4			Anthracene
		4	1.00000e-1	489.80444	2.04163e-4			
		3	2.00000e-1	838.25519	2.38591e-4			
		2	5.00000e-1	2105.73145	2.37447e-4			
		1	1.00000	4193.24414	2.38479e-4			

000215

RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
11.395	2	5	1.00000e-1	9.01464	1.10931e-2			Fluoranthene
		4	2.00000e-1	19.40378	1.03073e-2			
		3	4.00000e-1	32.94216	1.21425e-2			
		2	1.00000	84.13593	1.18855e-2			
		1	2.00000	169.58119	1.17938e-2			
11.539	1	5	1.00000e-1	11.58462	8.63214e-3			Fluoranthene
		4	2.00000e-1	24.20294	8.26346e-3			
		3	4.00000e-1	41.76950	9.57637e-3			
		2	1.00000	105.95557	9.43792e-3			
		1	2.00000	215.07562	9.29905e-3			
11.895	2	5	5.00000e-2	5.03527	9.92996e-3			Pyrene
		4	1.00000e-1	10.05997	9.94038e-3			
		3	2.00000e-1	17.61109	1.13565e-2			
		2	5.00000e-1	45.89300	1.08949e-2			
		1	1.00000	93.10056	1.07411e-2			
12.037	1	5	5.00000e-2	23.95237	2.08748e-3			Pyrene
		4	1.00000e-1	51.17427	1.95411e-3			
		3	2.00000e-1	88.05202	2.27138e-3			
		2	5.00000e-1	212.28780	2.35529e-3			
		1	1.00000	450.67984	2.21887e-3			
13.300	2	5	2.00000	139.93500	1.42924e-2			P-terphenyl D14
		4	4.00000	268.93500	1.48735e-2			
		3	4.80000	326.26276	1.47121e-2			
		2	10.00000	690.10900	1.44905e-2			
		1	15.00000	1020.59900	1.46973e-2			
14.027	2	5	5.00000e-2	11.16390	4.47872e-3			Benzo(a)anthracene
		4	1.00000e-1	24.91508	4.01363e-3			
		3	2.00000e-1	42.26120	4.73247e-3			
		2	5.00000e-1	108.20583	4.62082e-3			
		1	1.00000	217.55798	4.59648e-3			
14.170	1	5	5.00000e-2	149.38280	3.34711e-4			Benzo(a)anthracene
		4	1.00000e-1	342.87982	2.91647e-4			
		3	2.00000e-1	580.52747	3.44514e-4			
		2	5.00000e-1	1486.57703	3.36343e-4			
		1	1.00000	2849.09888	3.50988e-4			
14.590	2	5	5.00000e-2	18.14643	2.75536e-3			Chrysene
		4	1.00000e-1	40.04166	2.49740e-3			
		3	2.00000e-1	68.34219	2.92645e-3			
		2	5.00000e-1	172.46683	2.89911e-3			
		1	1.00000	347.23474	2.87990e-3			
14.737	1	5	5.00000e-2	92.42841	5.40959e-4			Chrysene
		4	1.00000e-1	203.64078	4.91061e-4			
		3	2.00000e-1	350.60947	5.70435e-4			
		2	5.00000e-1	941.82025	5.30887e-4			
		1	1.00000	1931.44287	5.17748e-4			
16.411	2	5	1.00000e-1	25.57971	3.90935e-3			Benzo(b)fluoranthene
		4	2.00000e-1	56.07032	3.56695e-3			
		3	4.00000e-1	94.65772	4.22575e-3			
		2	1.00000	238.85312	4.18667e-3			
		1	2.00000	480.04309	4.16629e-3			
16.584	1	5	1.00000e-1	187.06203	5.34582e-4			Benzo(b)fluoranthene
		4	2.00000e-1	422.78955	4.73049e-4			
		3	4.00000e-1	719.40326	5.56016e-4			
		2	1.00000	1830.36072	5.46340e-4			
		1	2.00000	3551.39429	5.63159e-4			
17.490	2	5	5.00000e-2	7.73708	6.46239e-3			Benzo(k)fluoranthene

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RetTime [min]	Sig	Lvl	Amount [ug/ml]	Area	Amt/Area	Ref	Grp	Name
		4	1.00000e-1	18.58857	5.37965e-3			
		3	2.00000e-1	31.55045	6.33905e-3			
		2	5.00000e-1	80.05262	6.24589e-3			
		1	1.00000	159.66829	6.26298e-3			
17.642	1	5	5.00000e-2	162.07825	3.08493e-4			Benzo(k)fluoranthene
		4	1.00000e-1	359.08487	2.78486e-4			
		3	2.00000e-1	615.84094	3.24759e-4			
		2	5.00000e-1	1559.22083	3.20673e-4			
		1	1.00000	3128.27124	3.19665e-4			
18.065	2	5	5.00000e-2	10.85466	4.60632e-3			Benzo(a)pyrene
		4	1.00000e-1	26.60964	3.75804e-3			
		3	2.00000e-1	46.45811	4.30495e-3			
		2	5.00000e-1	114.54205	4.36521e-3			
		1	1.00000	226.60728	4.41292e-3			
18.216	1	5	5.00000e-2	127.85419	3.91070e-4			Benzo(a)pyrene
		4	1.00000e-1	304.88193	3.27996e-4			
		3	2.00000e-1	532.83832	3.75348e-4			
		2	5.00000e-1	1357.57349	3.68304e-4			
		1	1.00000	2709.13159	3.69122e-4			
19.627	2	5	1.00000e-1	52.88899	1.89075e-3			Dibenzo(ah)anthracene
		4	2.00000e-1	116.12875	1.72223e-3			
		3	4.00000e-1	193.91678	2.06274e-3			
		2	1.00000	489.12625	2.04446e-3			
		1	2.00000	994.54974	2.01096e-3			
19.769	1	5	1.00000e-1	135.87962	7.35946e-4			Dibenzo(ah)anthracene
		4	2.00000e-1	280.15933	7.13879e-4			
		3	4.00000e-1	480.45383	8.32546e-4			
		2	1.00000	1199.76929	8.33494e-4			
		1	2.00000	2428.61548	8.23514e-4			
20.085	2	5	1.00000e-1	24.50035	4.08157e-3			Benzo(ghi)perylene
		4	2.00000e-1	59.51743	3.36036e-3			
		3	4.00000e-1	101.73080	3.93195e-3			
		2	1.00000	263.23438	3.79890e-3			
		1	2.00000	550.29504	3.63441e-3			
20.236	1	5	1.00000e-1	244.85063	4.08412e-4			Benzo(ghi)perylene
		4	2.00000e-1	581.78510	3.43770e-4			
		3	4.00000e-1	998.91718	4.00434e-4			
		2	1.00000	2569.22290	3.89223e-4			
		1	2.00000	5240.86035	3.81617e-4			
21.097	2	5	5.00000e-2	6.48660	7.70820e-3			Indeno(123cd)pyrene
		4	1.00000e-1	15.35210	6.51377e-3			
		3	2.00000e-1	26.69713	7.49144e-3			
		2	5.00000e-1	74.27673	6.73158e-3			
		1	1.00000	149.37302	6.69465e-3			

More compound-specific settings:

Compound: Naphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Naphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthylene
Amount Limits : Low 1.00000 High 20.00000

000217

Compound: 1-Methylnaphthalene
Amount Limits : Low 1.00000 High 20.00000

Compound: 1-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: 2-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: 2-Methylnaphthalene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthene
Amount Limits : Low 1.00000 High 10.00000

Compound: Acenaphthene
Amount Limits : Low 1.00000 High 10.00000

Compound: Fluorene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Fluorene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Phenanthrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Phenanthrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Anthracene
Amount Limits : Low 1.00000 High 1.00000

Compound: Anthracene
Amount Limits : Low 1.00000 High 1.00000

Compound: Fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: P-terphenyl D14
Amount Limits : Low 2.00000 High 20.00000

Compound: Benzo(a)anthracene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)anthracene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Chrysene
Amount Limits : Low 1.00000e-1 High 1.00000

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Compound: Chrysene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(b)fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(b)fluoranthene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(k)fluoranthene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(k)fluoranthene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Benzo(a)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

Compound: Dibenzo(ah)anthracene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Dibenzo(ah)anthracene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(ghi)perylene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Benzo(ghi)perylene
Amount Limits : Low 2.00000e-1 High 2.00000

Compound: Indeno(123cd)pyrene
Amount Limits : Low 1.00000e-1 High 1.00000

13 Warnings or Errors (10 first messages follow) :

Warning : Overlapping peak time windows at 7.853 min, signal 1
Warning : Overlapping peak time windows at 8.23 min, signal 1
Warning : Overlapping peak time windows at 11.539 min, signal 1
Warning : Overlapping peak time windows at 14.17 min, signal 1
Warning : Overlapping peak time windows at 17.642 min, signal 1
Warning : Overlapping peak time windows at 19.769 min, signal 1
Warning : Overlapping peak time windows at 7.714 min, signal 2
Warning : Overlapping peak time windows at 8.09 min, signal 2
Warning : Overlapping peak time windows at 11.395 min, signal 2
Warning : Overlapping peak time windows at 14.027 min, signal 2

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Peak Sum Table

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No Entries in table

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Calibration Curves

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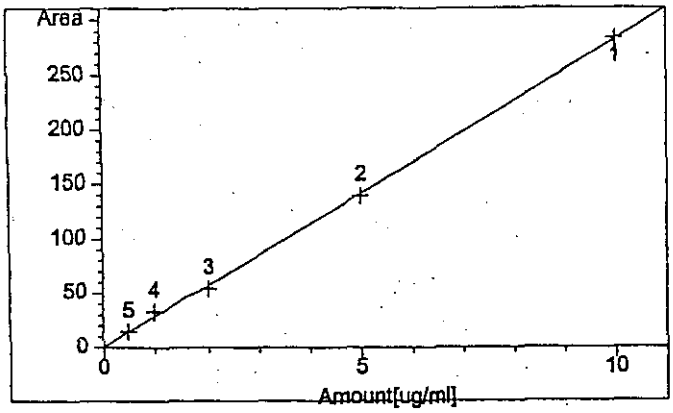
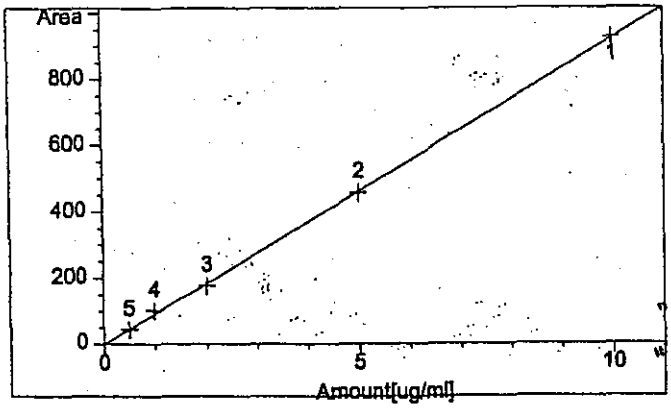
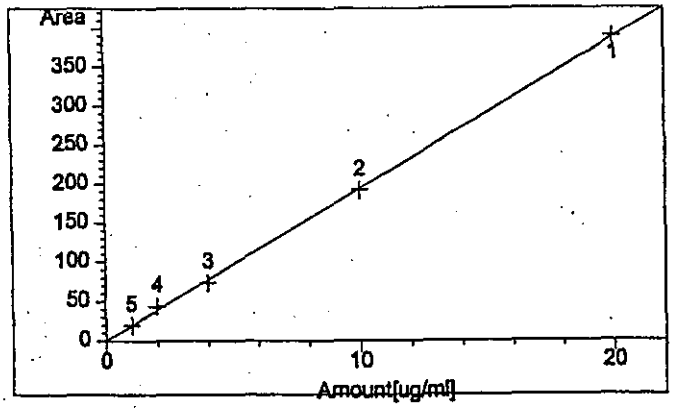


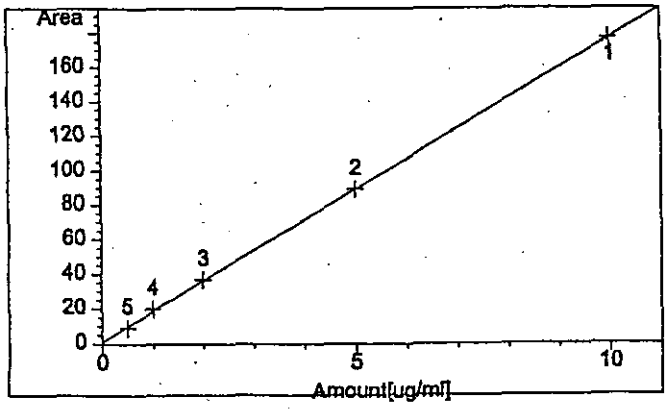
Naphthalene at exp. RT: 5.771
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99967
Residual Std. Dev.: 3.29823
Formula: y = mx + b
m: 28.20126
b: 8.33275e-1
x: Amount [ug/ml]
y: Area



Naphthalene at exp. RT: 5.912
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99983
Residual Std. Dev.: 7.72442
Formula: y = mx + b
m: 92.61761
b: -1.18357
x: Amount [ug/ml]
y: Area

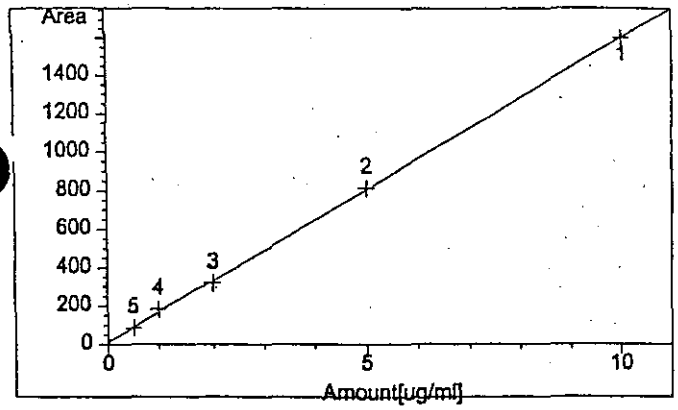


Acenaphthylene at exp. RT: 7.115
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99975
Residual Std. Dev.: 3.89621
Formula: y = mx + b
m: 19.32990
b: 8.12131e-1
x: Amount [ug/ml]
y: Area

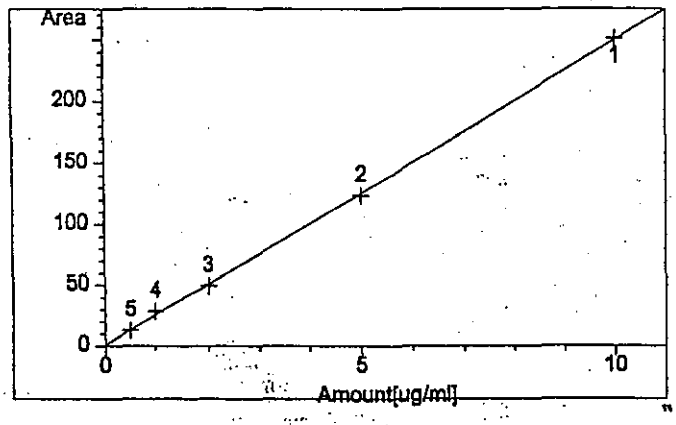


1-Methylnaphthalene at exp. RT: 7.714
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99993
Residual Std. Dev.: 0.90964
Formula: y = mx + b
m: 17.57030
b: 1.31247
x: Amount [ug/ml]
y: Area

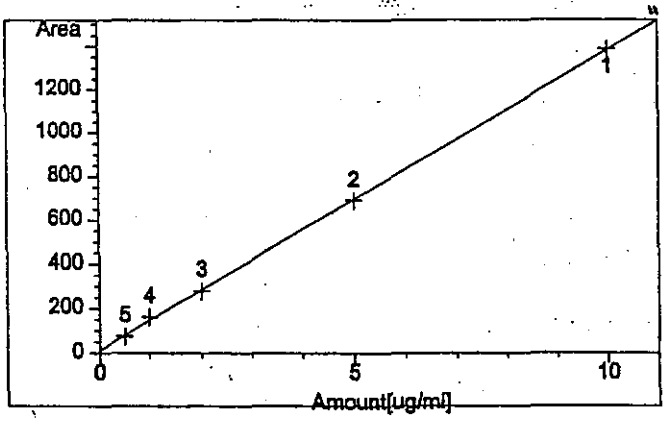
000220



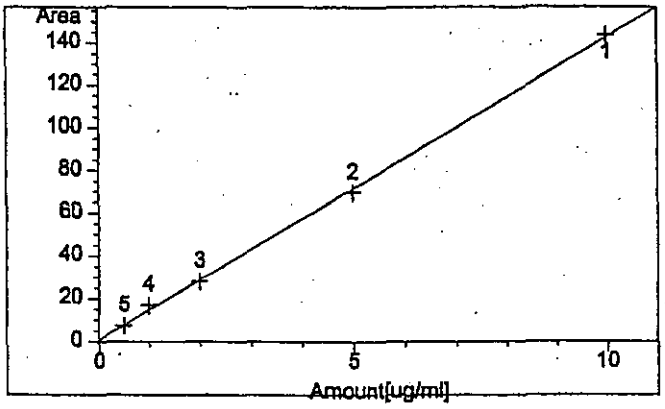
1-Methylnaphthalene at exp. RT: 7.853
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99988
Residual Std. Dev.: 11.04193
Formula: y = mx + b
m: 159.14850
b: 11.60095
x: Amount [ug/ml]
y: Area



2-Methylnaphthalene at exp. RT: 8.090
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 2.12477
Formula: y = mx + b
m: 24.90255
b: 9.62089e-1
x: Amount [ug/ml]
y: Area

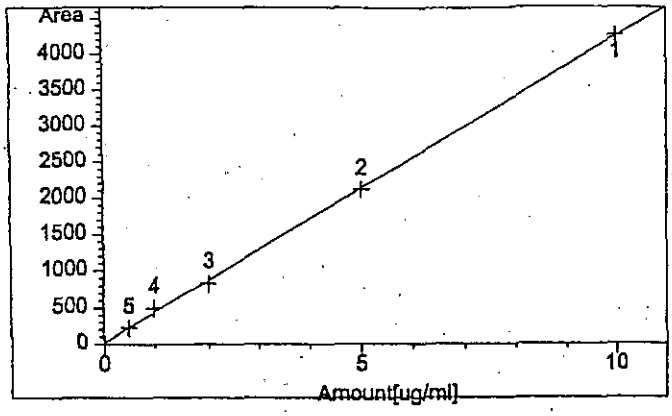


2-Methylnaphthalene at exp. RT: 8.230
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99988
Residual Std. Dev.: 9.56346
Formula: y = mx + b
m: 137.17135
b: 10.70026
x: Amount [ug/ml]
y: Area

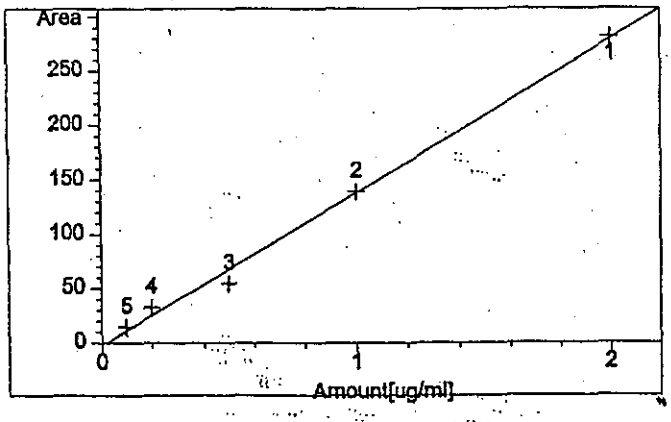


Acenaphthene at exp. RT: 8.363
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99960
Residual Std. Dev.: 1.82288
Formula: y = mx + b
m: 14.19461
b: 5.87097e-1
x: Amount [ug/ml]
y: Area

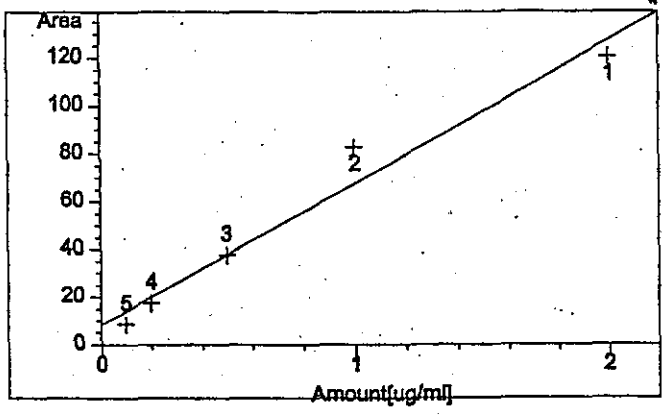
000221



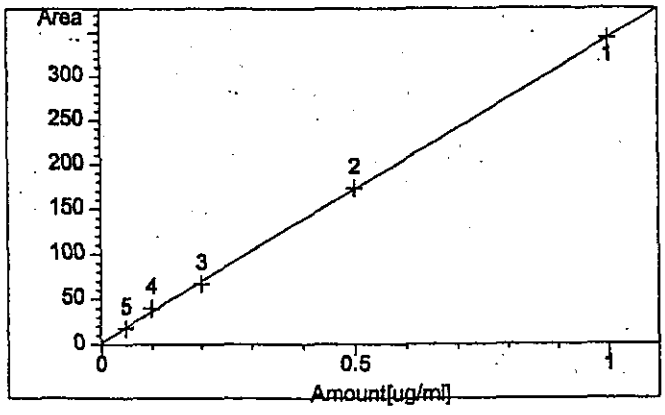
Acenaphthene at exp. RT: 8.522
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99978
Residual Std. Dev.: 39.87503
Formula: y = mx + b
m: 423.40908
b: 22.11230
x: Amount [ug/ml]
y: Area



Fluorene at exp. RT: 8.875
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99746
Residual Std. Dev.: 9.04001
Formula: y = mx + b
m: 141.06076
b: -2.73759
x: Amount [ug/ml]
y: Area

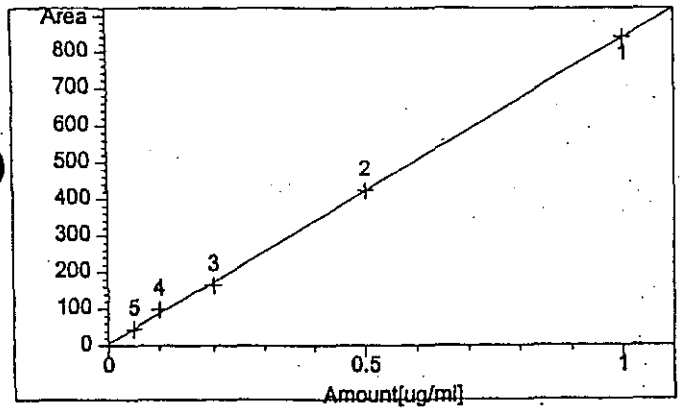


Fluorene at exp. RT: 8.960
ADC1 A, ADC1 CHANNEL A
Correlation: 0.98209
Residual Std. Dev.: 10.25170
Formula: y = mx + b
m: 59.58851
b: 8.11606
x: Amount [ug/ml]
y: Area

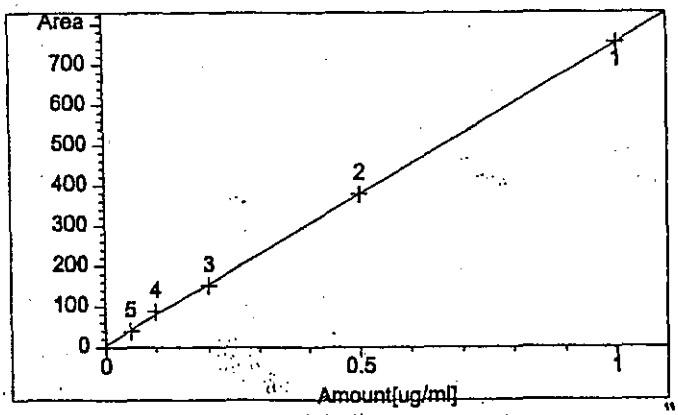


Phenanthrene at exp. RT: 9.730
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 2.94948
Formula: y = mx + b
m: 341.12995
b: 2.14314
x: Amount [ug/ml]
y: Area

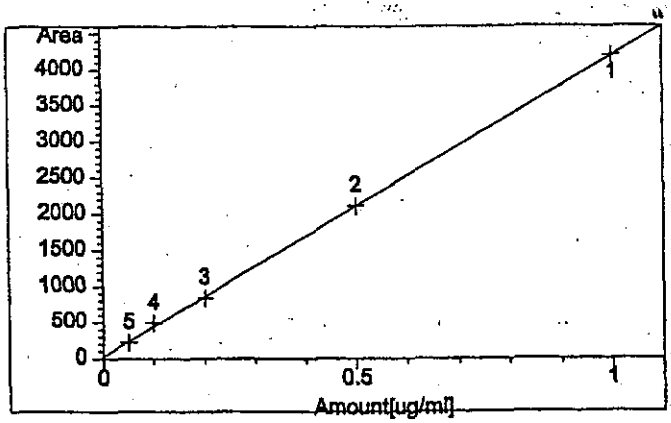
000222



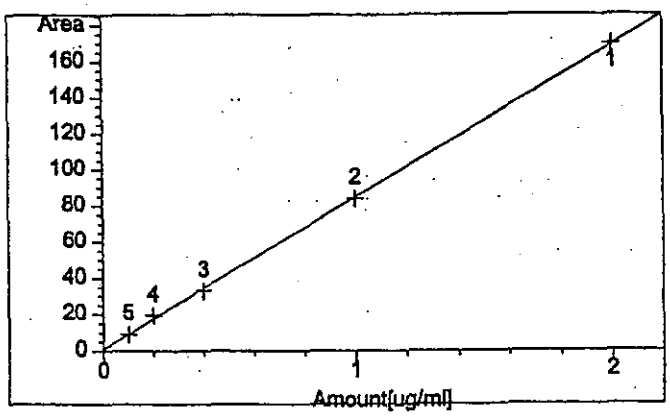
Phenanthrene at exp. RT: 9.870
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99983
Residual Std. Dev.: 6.98719
Formula: y = mx + b
m: 834.11869
b: 5.72521
x: Amount [ug/ml]
y: Area



Anthracene at exp. RT: 10.557
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99986
Residual Std. Dev.: 5.66714
Formula: y = mx + b
m: 749.41459
b: 5.08612
x: Amount [ug/ml]
y: Area

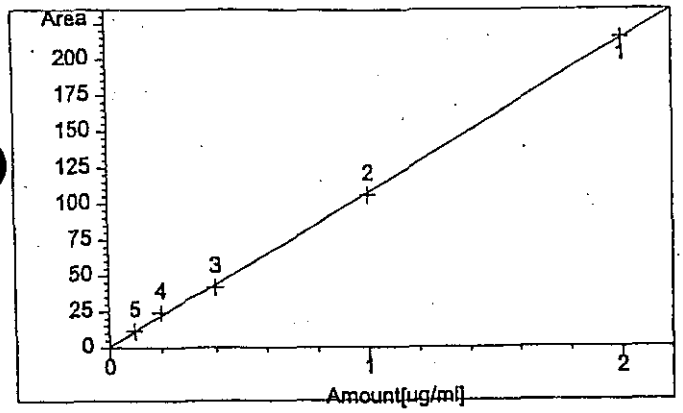


Anthracene at exp. RT: 10.699
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99986
Residual Std. Dev.: 31.03121
Formula: y = mx + b
m: 4159.86307
b: 29.97205
x: Amount [ug/ml]
y: Area

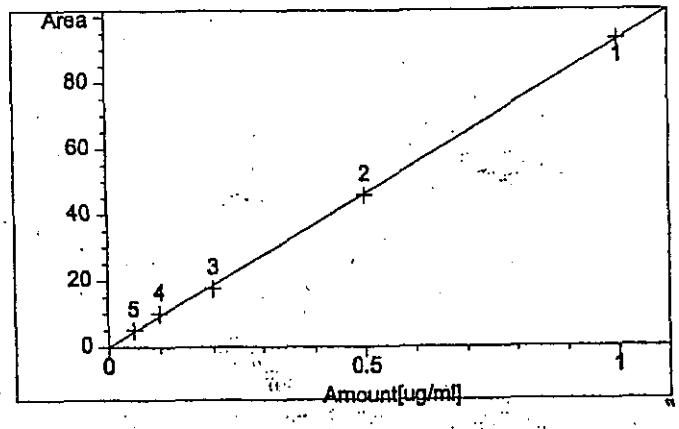


Fluoranthene at exp. RT: 11.395
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 1.45677
Formula: y = mx + b
m: 84.18281
b: 7.20265e-1
x: Amount [ug/ml]
y: Area

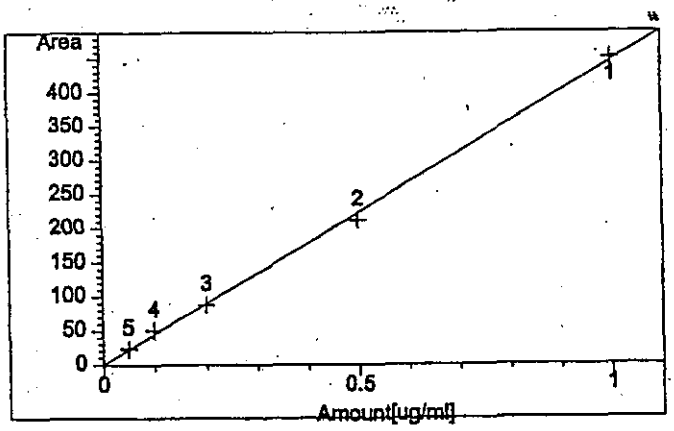
000223



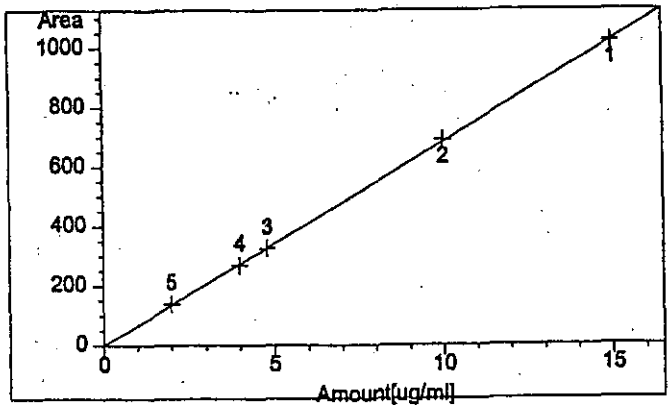
Fluoranthene at exp. RT: 11.539
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99982
Residual Std. Dev.: 1.85605
Formula: y = mx + b
m: 106.73882
b: 7.30925e-1
x: Amount [ug/ml]
y: Area



Pyrene at exp. RT: 11.895
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99981
Residual Std. Dev.: 0.81811
Formula: y = mx + b
m: 92.71533
b: 3.53020e-2
x: Amount [ug/ml]
y: Area

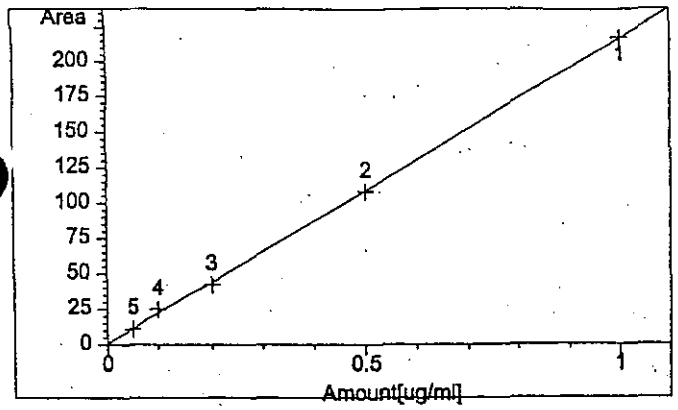


Pyrene at exp. RT: 12.037
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99925
Residual Std. Dev.: 7.81468
Formula: y = mx + b
m: 445.10527
b: 5.40309e-1
x: Amount [ug/ml]
y: Area

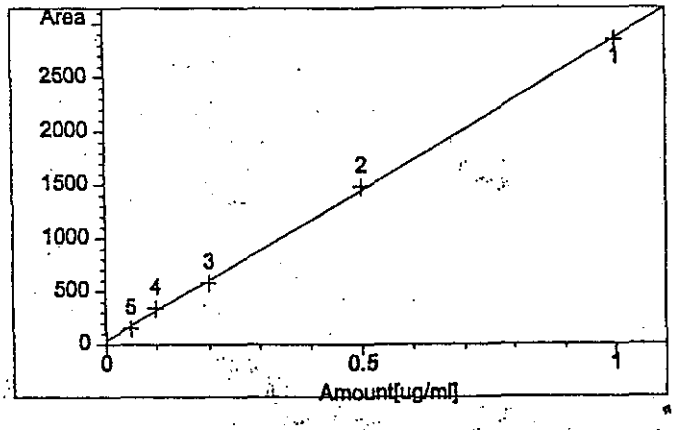


P-terphenyl D14 at exp. RT: 13.300
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99991
Residual Std. Dev.: 5.67124
Formula: y = mx + b
m: 68.20687
b: 8.06927e-1
x: Amount [ug/ml]
y: Area

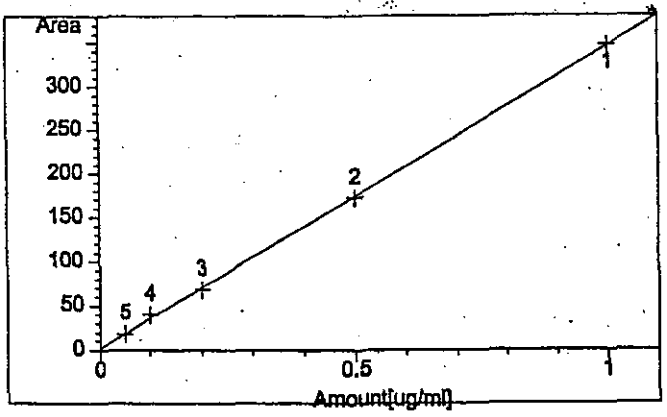
000224



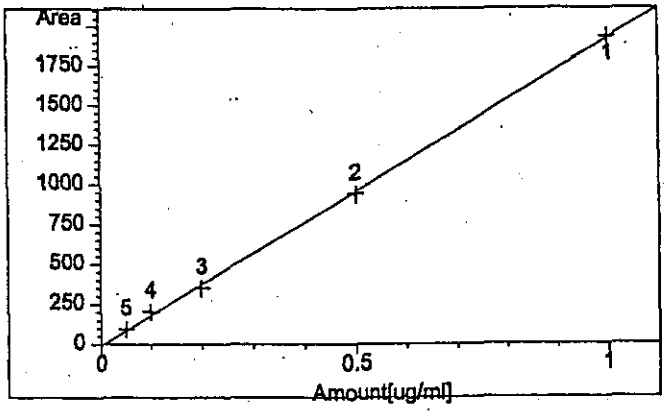
Benzo(a)anthracene at exp. RT: 14.027
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 1.85979
Formula: y = mx + b
m: 216.25301
b: 8.07184e-1
x: Amount[ug/ml]
y: Area



Benzo(a)anthracene at exp. RT: 14.170
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99966
Residual Std. Dev.: 33.48293
Formula: y = mx + b
m: 2830.28736
b: 34.48687
x: Amount[ug/ml]
y: Area

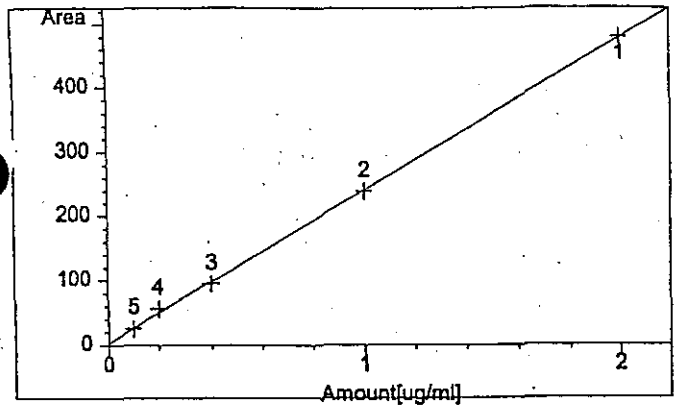


Chrysene at exp. RT: 14.590
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99984
Residual Std. Dev.: 2.83334
Formula: y = mx + b
m: 344.56682
b: 1.75665
x: Amount[ug/ml]
y: Area

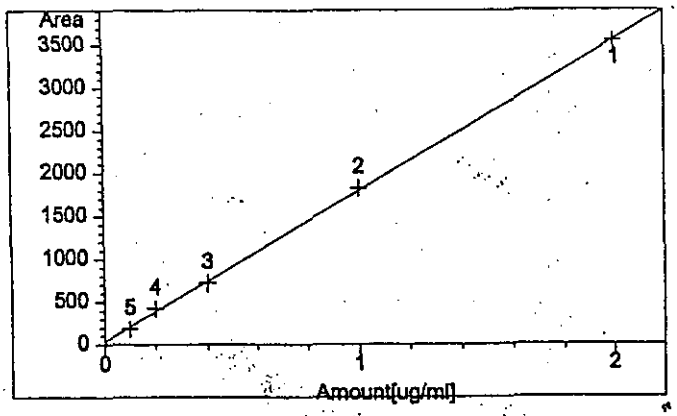


Chrysene at exp. RT: 14.737
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99970
Residual Std. Dev.: 21.61462
Formula: y = mx + b
m: 1933.78953
b: -11.51377
x: Amount[ug/ml]
y: Area

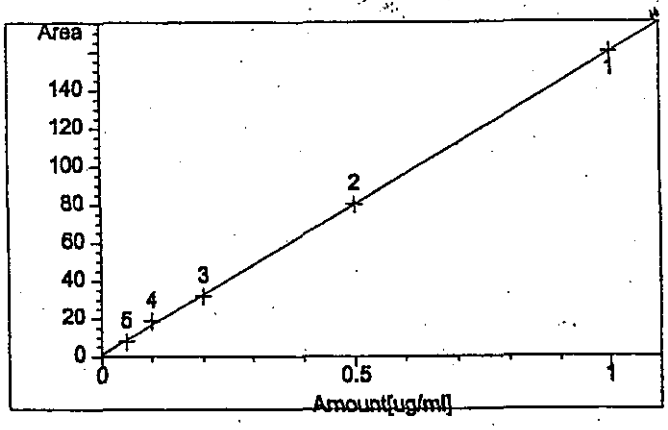
000225



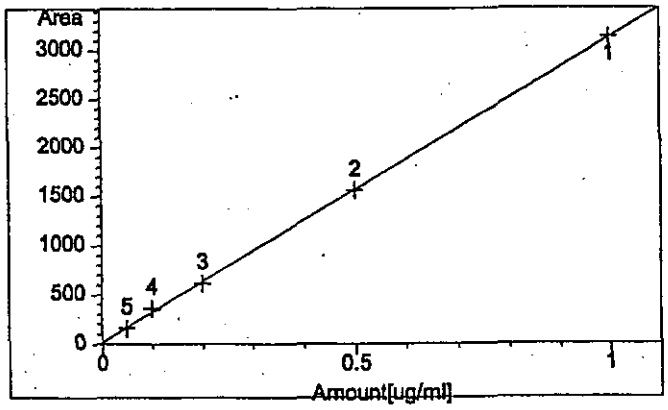
Benzo(b)fluoranthene at exp. RT: 16.411
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 4.06648
Formula: y = mx + b
m: 237.91403
b: 2.98441
x: Amount [ug/ml]
y: Area



Benzo(b)fluoranthene at exp. RT: 16.584
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99978
Residual Std. Dev.: 33.48849
Formula: y = mx + b
m: 1762.95608
b: 37.61447
x: Amount [ug/ml]
y: Area

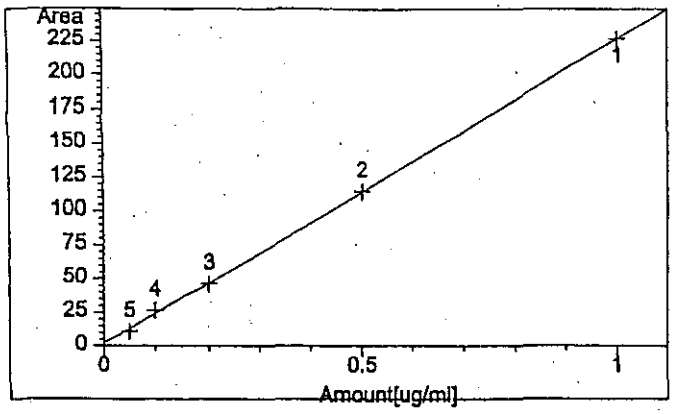


Benzo(k)fluoranthene at exp. RT: 17.490
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99982
Residual Std. Dev.: 1.37688
Formula: y = mx + b
m: 158.80179
b: 7.62741e-1
x: Amount [ug/ml]
y: Area

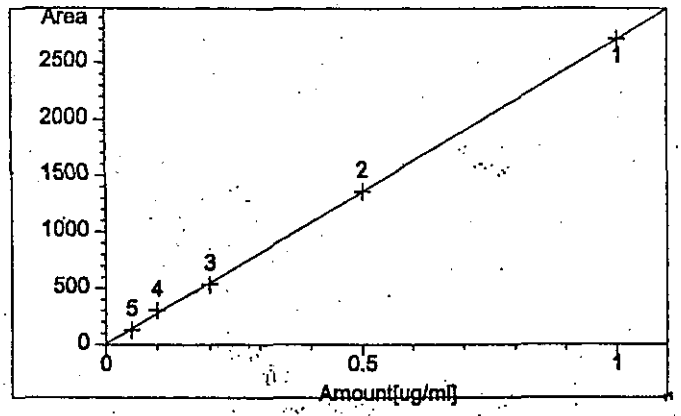


Benzo(k)fluoranthene at exp. RT: 17.642
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99985
Residual Std. Dev.: 24.01786
Formula: y = mx + b
m: 3106.79397
b: 15.38546
x: Amount [ug/ml]
y: Area

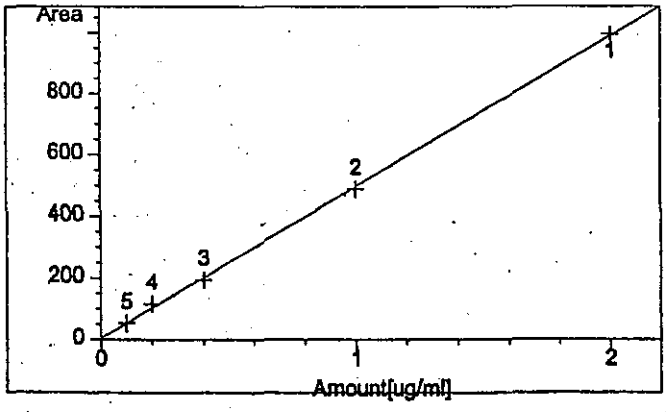
000320



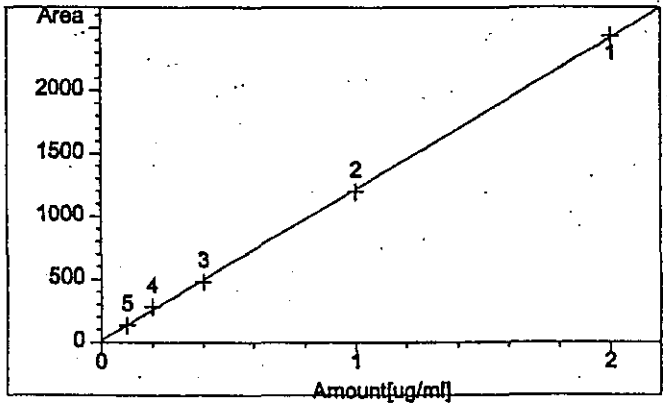
Benzo(a)pyrene at exp. RT: 18.065
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99983
Residual Std. Dev.: 1.85801
Formula: y = mx + b
m: 225.07618
b: 1.73616
x: Amount[ug/ml]
y: Area



Benzo(a)pyrene at exp. RT: 18.216
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99987
Residual Std. Dev.: 19.83931
Formula: y = mx + b
m: 2701.33249
b: 6.96288
x: Amount[ug/ml]
y: Area

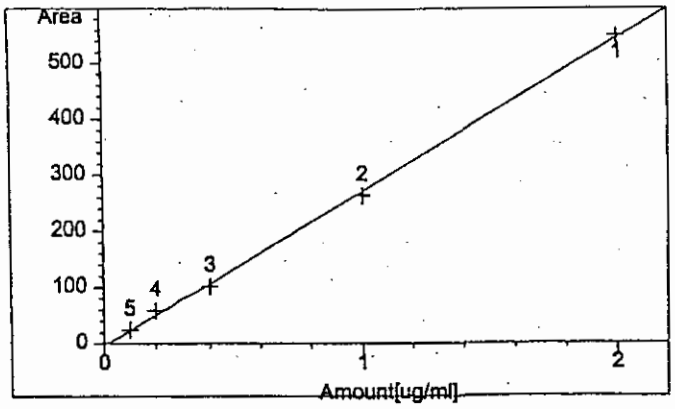


Dibenzo(ah)anthracene at exp. RT: 19.627
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99974
Residual Std. Dev.: 10.28532
Formula: y = mx + b
m: 492.64374
b: 4.76574
x: Amount[ug/ml]
y: Area

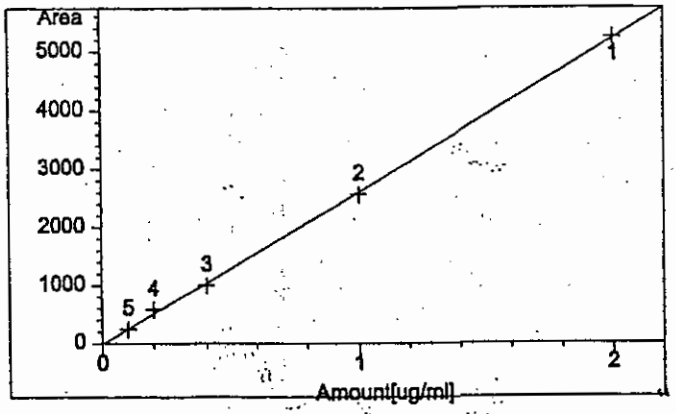


Dibenzo(ah)anthracene at exp. RT: 19.769
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99983
Residual Std. Dev.: 20.30396
Formula: y = mx + b
m: 1201.61497
b: 15.78043
x: Amount[ug/ml]
y: Area

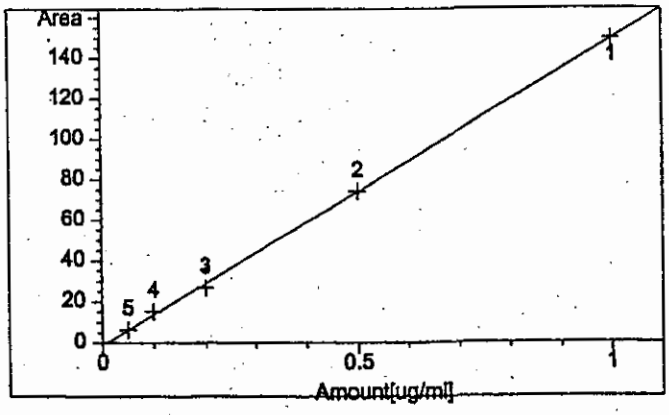
000227



Benzo(ghi)perylene at exp. RT: 20.085
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99955
Residual Std. Dev.: 7.52397
Formula: y = mx + b
m: 274.84004
b: -3.52603
x: Amount[ug/ml]
y: Area



Benzo(ghi)perylene at exp. RT: 20.236
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99977
Residual Std. Dev.: 51.12385
Formula: y = mx + b
m: 2613.66578
b: -6.98544
x: Amount[ug/ml]
y: Area



Indeno(123cd)pyrene at exp. RT: 21.097
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99974
Residual Std. Dev.: 1.54706
Formula: y = mx + b
m: 150.48816
b: -1.24351
x: Amount[ug/ml]
y: Area

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000228

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2 1 RS 9/14/00
Acq. Operator : RS
verified from autosampler rack

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:03:07 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.913	BBA	927.52972	1.07949e-2	10.01257+		Naphthalene
7.854	PV	1600.36975	6.23646e-3	9.98065		1-Methylnaphthalene
8.231	VV	1384.87012	7.22294e-3	10.00284+		2-Methylnaphthalene
8.521	MF	4269.91895	2.34681e-3	10.02069+		Acenaphthene
8.991	FM	120.28089	1.57825e-2	1.89833		Fluorene
9.870	PP	840.83624	1.18900e-3	9.99752e-1		Phenanthrene
10.701	MM	4193.24414	2.38272e-4	9.99131e-1-		Anthracene
11.544	BV	215.07562	9.31655e-3	2.00376+		Fluoranthene
12.042	VBA	450.67984	2.23560e-3	1.00754+		Pyrene
14.172	BV	2849.09888	3.48678e-4	9.93419e-1		Benzo(a)anthracene
14.729	VP	1931.44287	5.20210e-4	1.00476+		Chrysene
16.577	VV	3551.39429	5.60676e-4	1.99118		Benzo(b)fluoranthene
17.639	VV	3128.27124	3.19947e-4	1.00088+		Benzo(k)fluoranthene
18.214	VP	2709.13159	3.68707e-4	9.98876e-1		Benzo(a)pyrene
19.756	MF	2428.61548	8.25279e-4	2.00428+		Dibenzo(ah)anthracene
20.205	FM	5240.86035	3.82612e-4	2.00522+		Benzo(ghi)perylene

Totals : 56.92387

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.030	BB	10.86914	0.00000	0.00000	?	
22.852	VP	13.08726	0.00000	0.00000	?	
24.714	VV	11.71158	0.00000	0.00000	?	
24.832	VP	3.91240	0.00000	0.00000	?	

000229

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
Uncalib. totals :				0.00000		

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.774	BBA	284.16232	3.52864e-2	10.02707+		Naphthalene
7.122	BV	388.72571	5.15839e-2	20.05201+		Acenaphthylene
7.716	VV	176.93584	5.64856e-2	9.99433		1-Methylnaphthalene
8.091	VV	250.88606	3.99823e-2	10.03099+		2-Methylnaphthalene
8.369	VV	143.46092	7.00102e-2	10.04373+		Acenaphthene
8.872	VBA	281.37839	7.14654e-3	2.01088+		Fluorene
9.729	BP	343.06598	2.91023e-3	9.98399e-1		Phenanthrene
10.559	BP	754.94653	1.32421e-3	9.99709e-1-		Anthracene
11.399	MF	169.58119	1.18187e-2	2.00423+		Fluoranthene
11.898	FM	93.10056	1.07720e-2	1.00288+		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.028	BV	217.55798	4.60259e-3	1.00133+		Benzo(a)anthracene
14.588	VV	347.23474	2.88393e-3	1.00140+		Chrysene
16.429	BV	480.04309	4.17139e-3	2.00245+		Benzo(b)fluoranthene
17.490	VV	159.66829	6.26259e-3	9.99937e-1		Benzo(k)fluoranthene
18.066	VBA	226.60728	4.40223e-3	9.97577e-1		Benzo(a)pyrene
19.605	MF	994.54974	2.01804e-3	2.00705+		Dibenzo(ah)anthracene
20.046	FM	550.29504	3.65137e-3	2.00933+		Benzo(ghi)perylene
21.079	FM	149.37302	6.70035e-3	1.00085+		Indeno(123cd)pyrene

Totals : 78.18416

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
24.465	PBA	1.62544	0.00000	0.00000		?

Uncalib. totals : 0.00000

000230

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Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

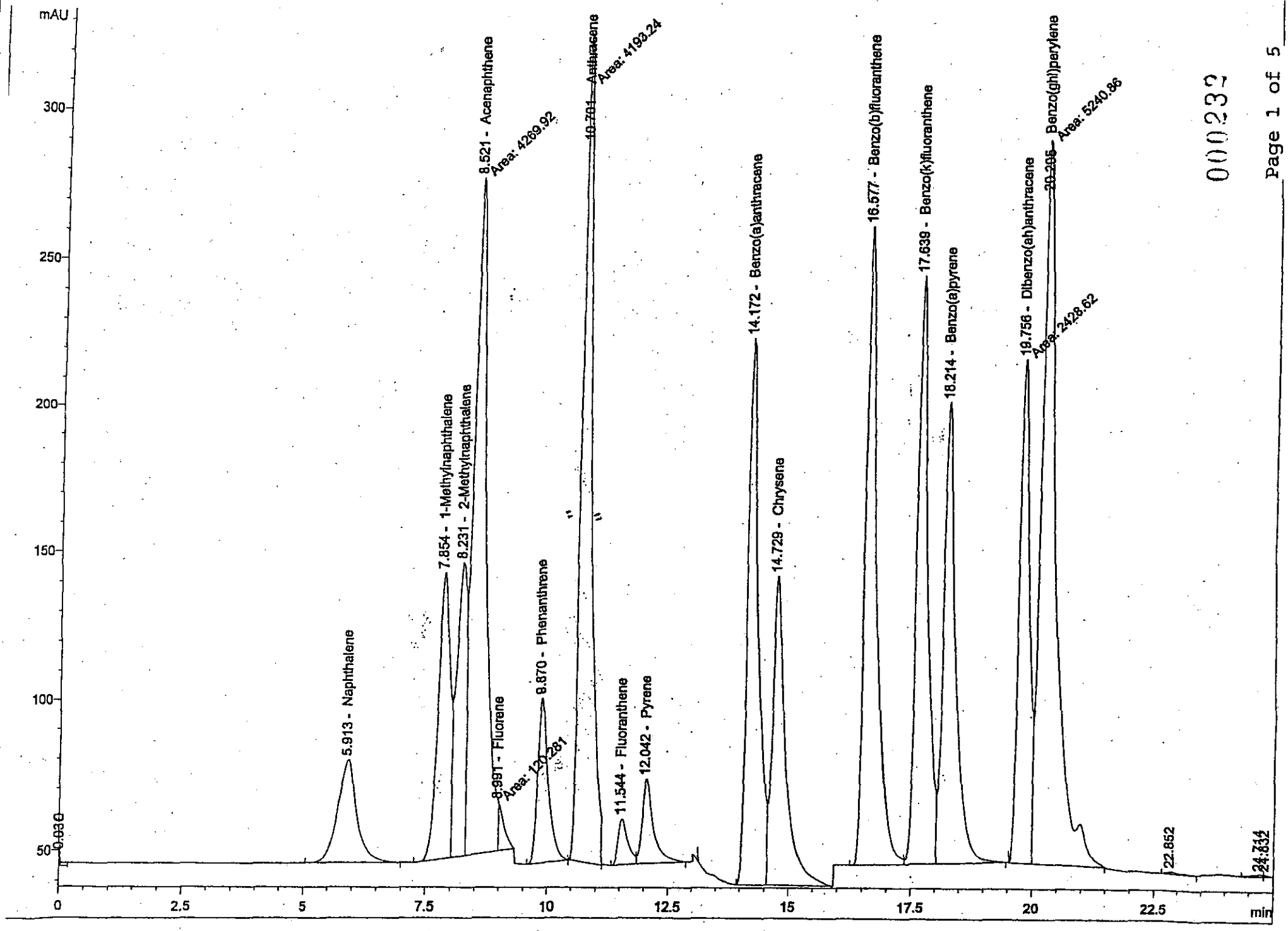
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

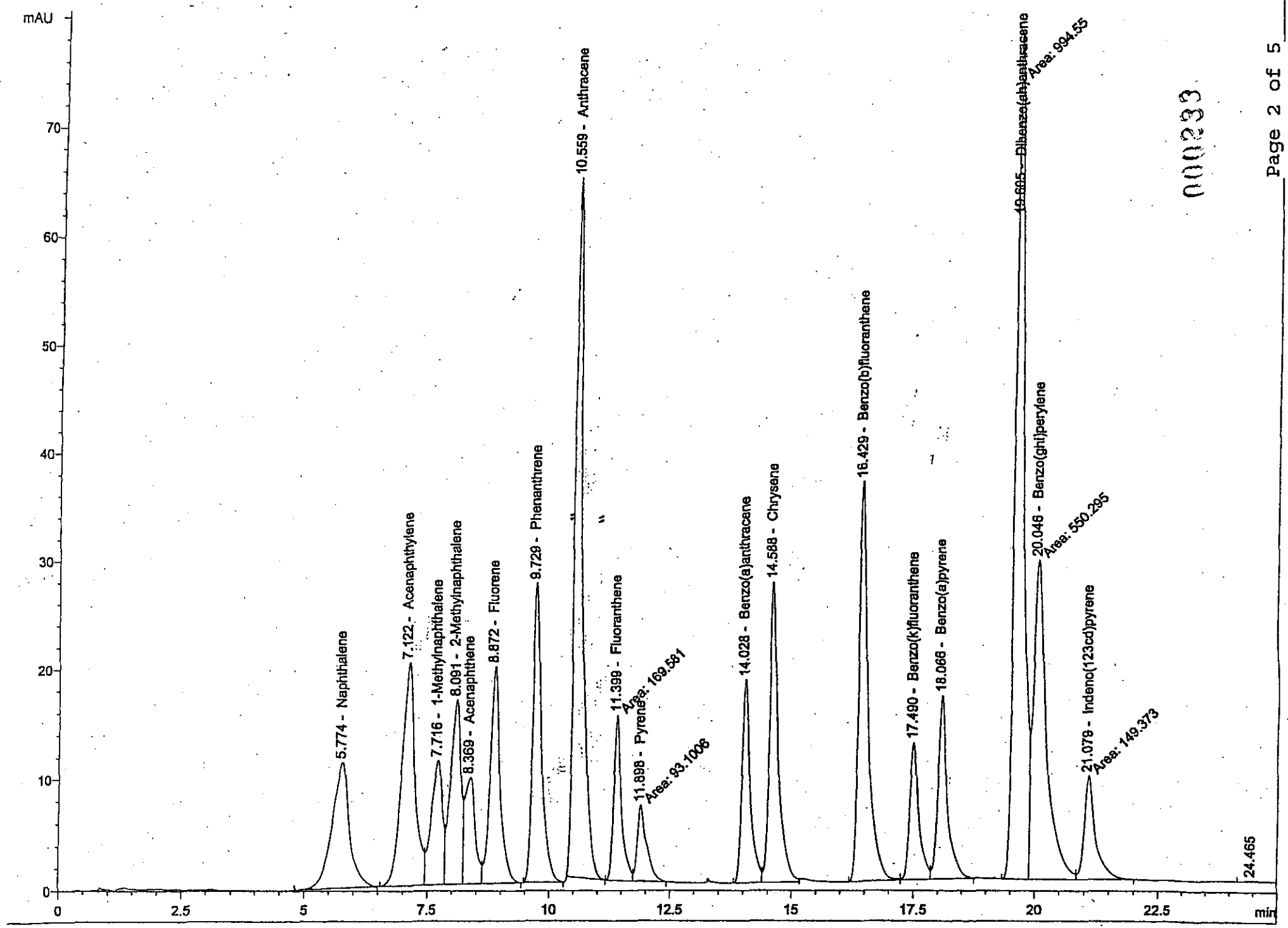
*** End of Report ***

000231


mAU
300
250
200
150
100
50
0.030
5.913 - Naphthalene
7.854 - 1-Methylnaphthalene
8.231 - 2-Methylnaphthalene
8.521 - Acenaphthene
Area: 4269.92
8.991 - Fluorene
Area: 120.281
9.870 - Phenanthrene
10.791 - Anthracene
Area: 4193.24
11.544 - Fluoranthene
12.042 - Pyrene
14.172 - Benzo(a)anthracene
14.729 - Chrysene
16.577 - Benzo(b)fluoranthene
17.639 - Benzo(k)fluoranthene
18.214 - Benzo(a)pyrene
19.756 - Dibenzo(ah)anthracene
20.295 - Benzo(ghi)perylene
Area: 5240.86
Area: 2428.62
22.852
24.834
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000232

000233


mAU
70
60
50
40
30
20
10
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.774 - Naphthalene
7.122 - Acenaphthylene
7.716 - 1-Methylnaphthalene
8.091 - 2-Methylnaphthalene
8.369 - Acenaphthene
8.872 - Fluorene
9.729 - Phenanthrene
10.559 - Anthracene
11.399 - Fluoranthene
11.898 - Pyrene
Area: 169.581
Area: 93.1006
14.028 - Benzo(a)anthracene
14.588 - Chrysene
16.429 - Benzo(b)fluoranthene
17.490 - Benzo(k)fluoranthene
18.066 - Benzo(a)pyrene
19.605 - Dibenzo(ah)anthracene
Area: 994.55
20.046 - Benzo(ghi)perylene
Area: 550.295
21.079 - Indeno(123cd)pyrene
Area: 149.373
24.465

Injection Date : 9/14/00 12:58:24 PM
Sample Name : PAH Std 2 RS 9/14/a
Acq. Operator : RS verified from auto sampler rack std 1 & 2 reversed

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 12:06:12 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 1:59:40 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.917	BBA	457.73398	1.11988e-2	5.12605		Naphthalene
7.860	VV	815.11816	5.75871e-3	4.69403		1-Methylnaphthalene
8.233	VV	691.67670	7.45349e-3	5.15541		2-Methylnaphthalene
8.520	MF	2116.87891	2.33564e-3	4.94426		Acenaphthene
8.945	FM	82.85392	1.05866e-2	8.77141e-1		Fluorene
9.870	BP	422.13602	1.19065e-3	5.02614e-1		Phenanthrene
10.704	MM	2105.73145	2.52953e-4	5.32652e-1-		Anthracene
11.550	BV	105.95557	9.69210e-3	1.02693		Fluoranthene
12.045	VBA	212.28780	2.54630e-3	5.40549e-1		Pyrene
14.182	BV	1486.57703	3.35882e-4	4.99314e-1		Benzo(a)anthracene
14.741	VP	941.82025	5.17225e-4	4.87133e-1		Chrysene
16.598	BV	1830.36072	5.69251e-4	1.04193		Benzo(b)fluoranthene
17.659	VV	1559.22083	3.25714e-4	5.07861e-1		Benzo(k)fluoranthene
18.233	VV	1357.57349	3.97466e-4	5.39589e-1		Benzo(a)pyrene
19.785	MF	1199.76929	8.37166e-4	1.00441		Dibenzo(ah)anthracene
20.238	FM	2569.22290	4.05655e-4	1.04222		Benzo(ghi)perylene

Totals : 28.52209

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.779	BBA	139.60797	3.49668e-2	4.88165		Naphthalene
7.130	BV	192.17686	5.00158e-2	9.61188		Acenaphthylene

Injection Date : 9/14/00 12:58:24 PM
Sample Name : PAH Std 1
Acq. Operator : RS

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 12:06:12 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.721	VV	89.12464	5.42990e-2	4.83938		1-Methylnaphthalene
8.092	VV	123.72823	3.87922e-2	4.79969		2-Methylnaphthalene
8.369	VV	69.66994	7.67620e-2	5.34800		Acenaphthene
8.869	VBA	139.24638	7.24799e-3	1.00926		Fluorene
9.728	BP	173.85025	2.86544e-3	4.98158e-1		Phenanthrene
10.563	BP	379.23813	1.29998e-3	4.93001e-1		Anthracene
11.405	MF	84.13593	1.16359e-2	9.78998e-1		Fluoranthene
11.901	FM	45.89300	1.07995e-2	4.95623e-1		Pyrene
13.300		-	-	-		P-terphenyl D14
14.037	BV	108.20583	4.49416e-3	4.86295e-1		Benzo(a)anthracene
14.599	VV	172.46683	2.91181e-3	5.02191e-1		Chrysene
16.448	BV	238.85312	4.12255e-3	9.84684e-1		Benzo(b)fluoranthene
17.509	VV	80.05262	6.20053e-3	4.96369e-1		Benzo(k)fluoranthene
18.084	VBA	114.54205	4.78890e-3	5.48530e-1		Benzo(a)pyrene
19.634	MF	489.12625	1.95380e-3	9.55656e-1		Dibenzo(ah)anthracene
20.079	FM	263.23438	3.96531e-3	1.04380		Benzo(ghi)perylene
21.088	FM	74.27673	7.01643e-3	5.21157e-1		Indeno(123cd)pyrene

Totals : 38.49433

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
15.258	VV	1.66118	0.00000	0.00000		?

Uncalib. totals : 0.00000

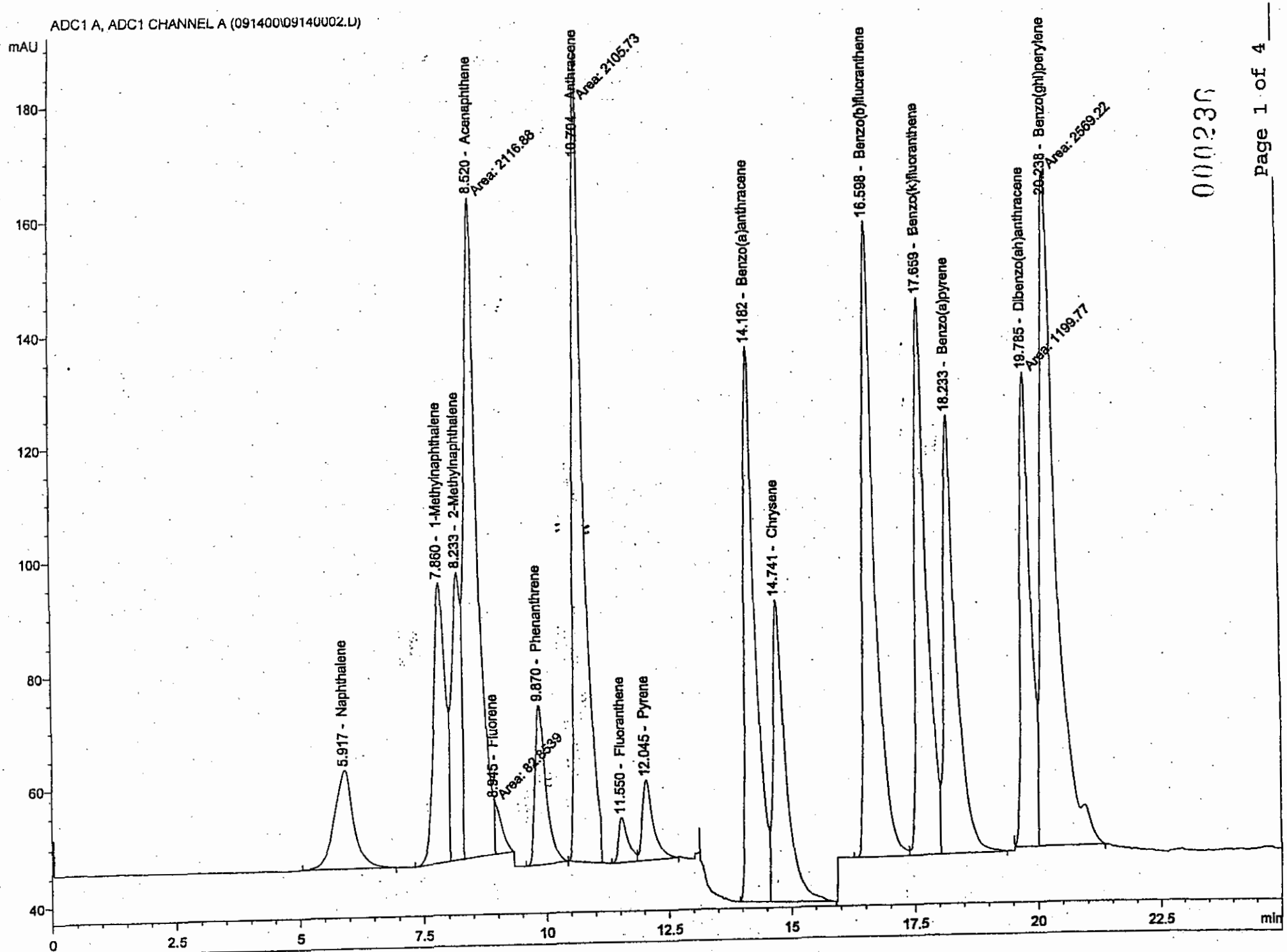
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

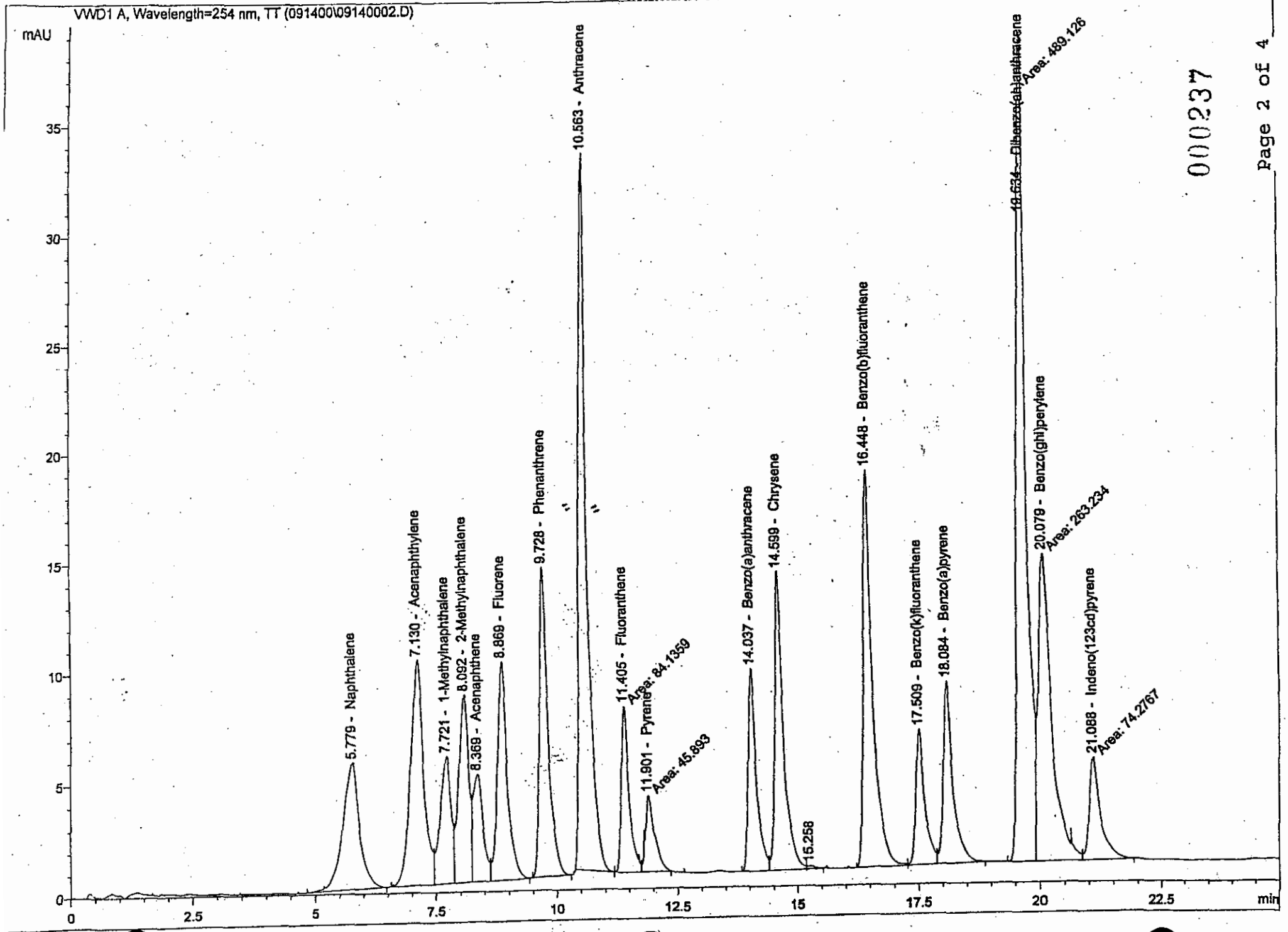
*** End of Report ***

000235

000236


ADC1 A, ADC1 CHANNEL A (091400\09140002.D)
mAU
180
160
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.917 - Naphthalene
7.860 - 1-Methylnaphthalene
8.233 - 2-Methylnaphthalene
8.520 - Acenaphthene
Area: 2116.88
8.945 - Fluorene
Area: 82.8539
9.870 - Phenanthrene
10.704 - Anthracene
Area: 2105.73
11.550 - Fluoranthene
12.045 - Pyrene
14.182 - Benzo(a)anthracene
14.741 - Chrysene
16.598 - Benzo(b)fluoranthene
17.659 - Benzo(k)fluoranthene
18.233 - Benzo(a)pyrene
19.785 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
Area: 2569.22
Area: 1199.77

000237


VWD1 A, Wavelength=254 nm, TT (091400\09140002.D)
mAU
35
30
25
20
15
10
5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.779 - Naphthalene
7.130 - Acenaphthylene
7.721 - 1-Methylnaphthalene
8.092 - 2-Methylnaphthalene
8.369 - Acenaphthene
8.869 - Fluorene
9.728 - Phenanthrene
10.563 - Anthracene
11.405 - Fluoranthene
11.901 - Pyrene
Area: 84.1359
Area: 45.893
14.037 - Benzo(a)anthracene
14.599 - Chrysene
15.258
16.448 - Benzo(b)fluoranthene
17.509 - Benzo(k)fluoranthene
18.084 - Benzo(a)pyrene
19.634 - Dibenzo(ah)anthracene
Area: 489.126
20.079 - Benzo(ghi)perylene
Area: 263.234
21.088 - Indeno(123cd)pyrene
Area: 74.2767

Injection Date : 9/14/00 2:41:18 PM
Sample Name : PAH Std 3
Acq. Operator : RS

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:07:57 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:07:52 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.911	BBA	177.09276	1.11843e-2	1.98066		Naphthalene
7.852	PV	319.74792	6.02428e-3	1.92625		1-Methylnaphthalene
8.228	VV	279.61868	7.20738e-3	2.01532		2-Methylnaphthalene
8.521	MF	831.69177	2.34274e-3	1.94844		Acenaphthene
8.926	FM	37.73751	1.11312e-2	4.20065e-1		Fluorene
9.871	BP	165.13036	1.18462e-3	1.95617e-1		Phenanthrene
10.700	MM	838.25519	2.39733e-4	2.00957e-1-		Anthracene
11.538	PV	41.76950	9.53598e-3	3.98313e-1		Fluoranthene
12.035	VBA	88.05202	2.38119e-3	2.09669e-1		Pyrene
14.171	MF	580.52747	3.37815e-4	1.96111e-1		Benzo(a)anthracene
14.733	FM	350.60947	5.29417e-4	1.85619e-1		Chrysene
16.585	VV	719.40326	5.48016e-4	3.94245e-1		Benzo(b)fluoranthene
17.645	VV	615.84094	3.20375e-4	1.97300e-1		Benzo(k)fluoranthene
18.220	VV	532.83832	3.78729e-4	2.01801e-1		Benzo(a)pyrene
19.775	MF	480.45383	8.28050e-4	3.97840e-1		Dibenzo(ah)anthracene
20.230	FM	998.91718	3.95775e-4	3.95346e-1		Benzo(ghi)perylene

Totals : 11.26355

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.033	BB	50.38533	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000238

Injection Date : 9/14/00 2:41:18 PM
Sample Name : PAH Std 3
Acq. Operator : RS

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:07:57 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.773	BBA	54.22546	3.59894e-2	1.95154		Naphthalene
7.122	BV	74.00314	5.16203e-2	3.82007		Acenaphthylene
7.715	VV	36.73984	5.50470e-2	2.02242		1-Methylnaphthalene
8.089	VV	49.40136	3.96439e-2	1.95846		2-Methylnaphthalene
8.370	VV	28.05536	7.20467e-2	2.02130		Acenaphthene
8.876	VBA	54.44505	7.59180e-3	4.13336e-1		Fluorene
9.731	BP	67.07530	2.88396e-3	1.93443e-1		Phenanthrene
10.559	MM	151.13527	1.30837e-3	1.97740e-1		Anthracene
11.394	MF	32.94216	1.17607e-2	3.87422e-1		Fluoranthene
11.892	FM	17.61109	1.09133e-2	1.92195e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.029	BV	42.26120	4.59885e-3	1.94353e-1		Benzo(a)anthracene
14.592	VB	68.34219	2.88828e-3	1.97391e-1		Chrysene
16.438	PB	94.65772	4.14976e-3	3.92807e-1		Benzo(b)fluoranthene
17.498	BV	31.55045	6.22107e-3	1.96278e-1		Benzo(k)fluoranthene
18.084	VBA	46.45811	4.44209e-3	2.06371e-1		Benzo(a)pyrene
19.628	MF	193.91678	1.99609e-3	3.87074e-1		Dibenzo(ah)anthracene
20.073	FM	101.73080	3.95179e-3	4.02019e-1		Benzo(ghi)perylene
21.089	FM	26.69713	6.95941e-3	1.85796e-1		Indeno(123cd)pyrene

Totals : 15.32001

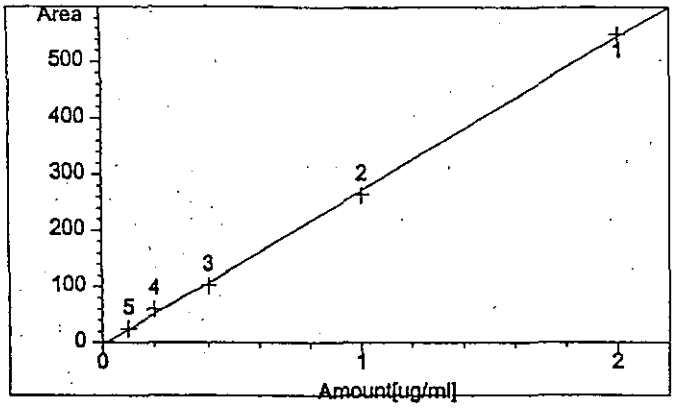
Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

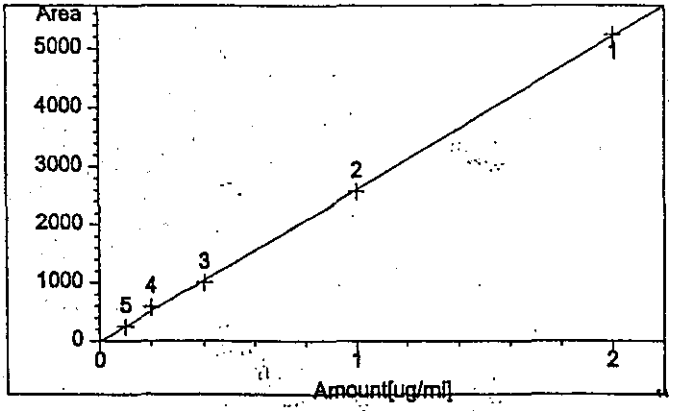
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

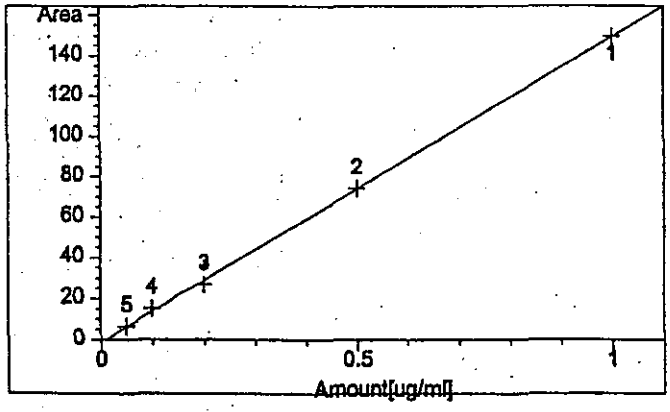
000239



Benzo(ghi)perylene at exp. RT: 20.085
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99955
Residual Std. Dev.: 7.52397
Formula: y = mx + b
m: 274.84004
b: -3.52603
x: Amount[ug/ml]
y: Area



Benzo(ghi)perylene at exp. RT: 20.236
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99977
Residual Std. Dev.: 51.12385
Formula: y = mx + b
m: 2613.66578
b: -6.98544
x: Amount[ug/ml]
y: Area



Indeno(123cd)pyrene at exp. RT: 21.097
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99974
Residual Std. Dev.: 1.54706
Formula: y = mx + b
m: 150.48816
b: -1.24351
x: Amount[ug/ml]
y: Area

==========

000228

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2 1 RS 9/14/00
Acq. Operator : RS
verified from autosampler rack

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:03:07 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.913	BBA	927.52972	1.07949e-2	10.01257+		Naphthalene
7.854	PV	1600.36975	6.23646e-3	9.98065		1-Methylnaphthalene
8.231	VV	1384.87012	7.22294e-3	10.00284+		2-Methylnaphthalene
8.521	MF	4269.91895	2.34681e-3	10.02069+		Acenaphthene
8.991	FM	120.28089	1.57825e-2	1.89833		Fluorene
9.870	PP	840.83624	1.18900e-3	9.99752e-1		Phenanthrene
10.701	MM	4193.24414	2.38272e-4	9.99131e-1-		Anthracene
11.544	BV	215.07562	9.31655e-3	2.00376+		Fluoranthene
12.042	VBA	450.67984	2.23560e-3	1.00754+		Pyrene
14.172	BV	2849.09888	3.48678e-4	9.93419e-1		Benzo(a)anthracene
14.729	VP	1931.44287	5.20210e-4	1.00476+		Chrysene
16.577	VV	3551.39429	5.60676e-4	1.99118		Benzo(b)fluoranthene
17.639	VV	3128.27124	3.19947e-4	1.00088+		Benzo(k)fluoranthene
18.214	VP	2709.13159	3.68707e-4	9.98876e-1		Benzo(a)pyrene
19.756	MF	2428.61548	8.25279e-4	2.00428+		Dibenzo(ah)anthracene
20.205	FM	5240.86035	3.82612e-4	2.00522+		Benzo(ghi)perylene

Totals : 56.92387

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.030	BB	10.86914	0.00000	0.00000	?	
22.852	VP	13.08726	0.00000	0.00000	?	
24.714	VV	11.71158	0.00000	0.00000	?	
24.832	VP	3.91240	0.00000	0.00000	?	

000229

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
Uncalib. totals :				0.00000		

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.774	BBA	284.16232	3.52864e-2	10.02707+		Naphthalene
7.122	BV	388.72571	5.15839e-2	20.05201+		Acenaphthylene
7.716	VV	176.93584	5.64856e-2	9.99433		1-Methylnaphthalene
8.091	VV	250.88606	3.99823e-2	10.03099+		2-Methylnaphthalene
8.369	VV	143.46092	7.00102e-2	10.04373+		Acenaphthene
8.872	VBA	281.37839	7.14654e-3	2.01088+		Fluorene
9.729	BP	343.06598	2.91023e-3	9.98399e-1		Phenanthrene
10.559	BP	754.94653	1.32421e-3	9.99709e-1-		Anthracene
11.399	MF	169.58119	1.18187e-2	2.00423+		Fluoranthene
11.898	FM	93.10056	1.07720e-2	1.00288+		Pyrene
13.300		-	-	- -		P-terphenyl D14
14.028	BV	217.55798	4.60259e-3	1.00133+		Benzo(a)anthracene
14.588	VV	347.23474	2.88393e-3	1.00140+		Chrysene
16.429	BV	480.04309	4.17139e-3	2.00245+		Benzo(b)fluoranthene
17.490	VV	159.66829	6.26259e-3	9.99937e-1		Benzo(k)fluoranthene
18.066	VBA	226.60728	4.40223e-3	9.97577e-1		Benzo(a)pyrene
19.605	MF	994.54974	2.01804e-3	2.00705+		Dibenzo(ah)anthracene
20.046	FM	550.29504	3.65137e-3	2.00933+		Benzo(ghi)perylene
21.079	FM	149.37302	6.70035e-3	1.00085+		Indeno(123cd)pyrene

Totals : 78.18416

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
24.465	PBA	1.62544	0.00000	0.00000	?	

Uncalib. totals : 0.00000

000230

==========

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

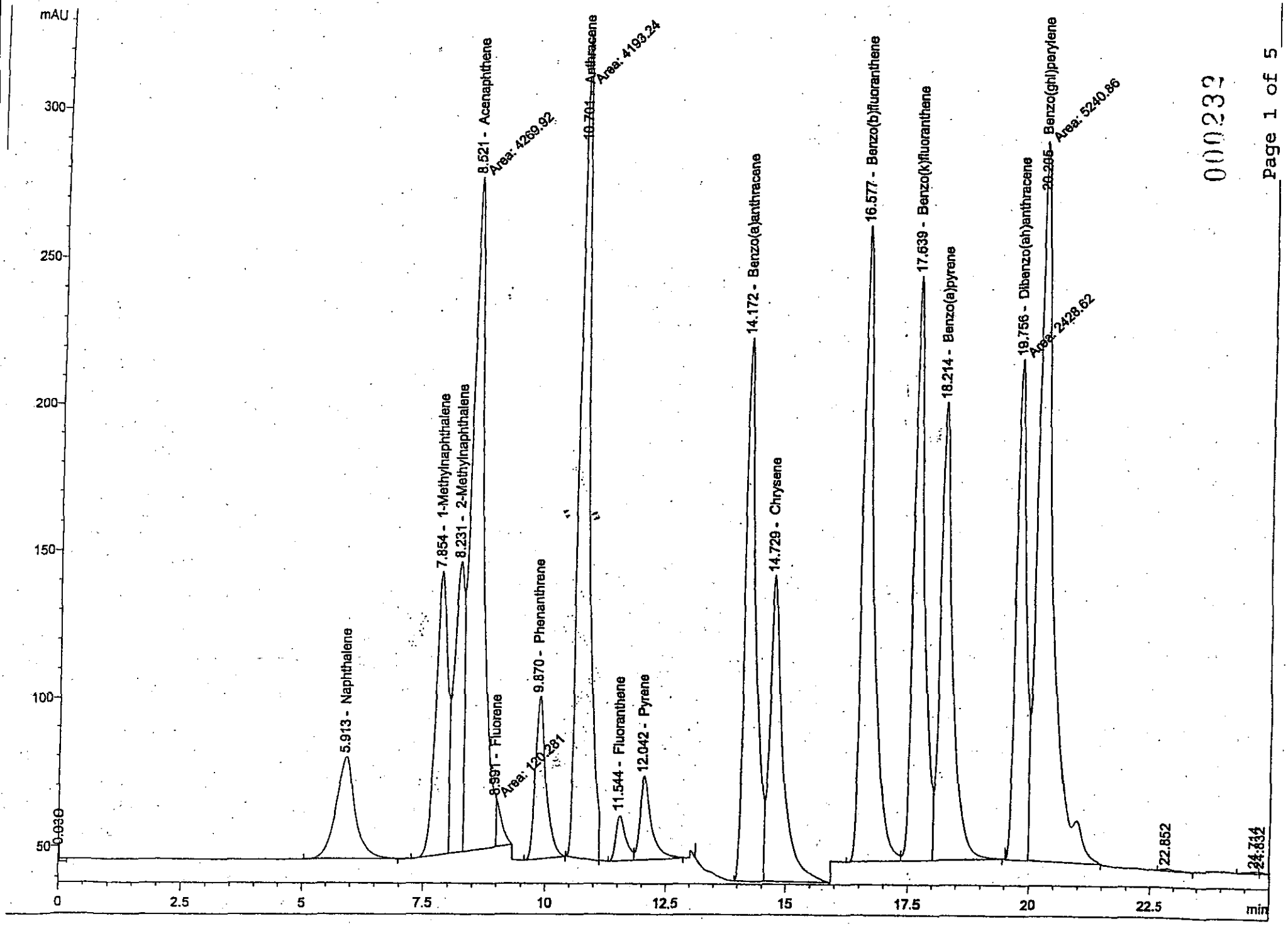
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

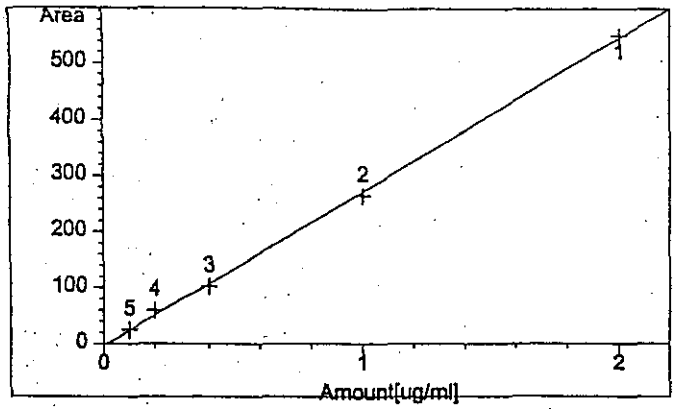
==========

*** End of Report ***

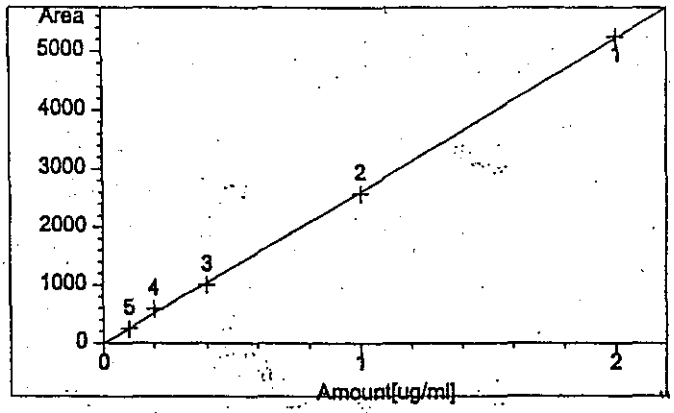
000231


mAU
300
250
200
150
100
50
0.030
5.913 - Naphthalene
7.854 - 1-Methylnaphthalene
8.231 - 2-Methylnaphthalene
8.521 - Acenaphthene
Area: 4269.92
8.991 - Fluorene
Area: 120.281
9.870 - Phenanthrene
10.701 - Anthracene
Area: 4193.24
11.544 - Fluoranthene
12.042 - Pyrene
14.172 - Benzo(a)anthracene
14.729 - Chrysene
16.577 - Benzo(b)fluoranthene
17.639 - Benzo(k)fluoranthene
18.214 - Benzo(a)pyrene
19.756 - Dibenzo(ah)anthracene
Area: 2428.62
20.295 - Benzo(ghi)perylene
Area: 5240.86
22.852
24.834
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

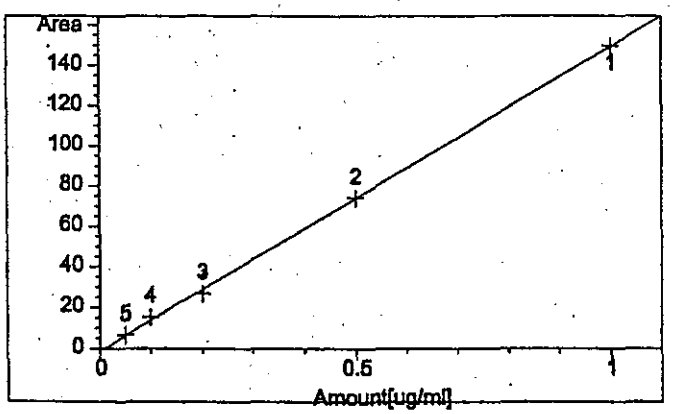
000232



Benzo(ghi)perylene at exp. RT: 20.085
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99955
Residual Std. Dev.: 7.52397
Formula: y = mx + b
m: 274.84004
b: -3.52603
x: Amount[ug/ml]
y: Area



Benzo(ghi)perylene at exp. RT: 20.236
ADC1 A, ADC1 CHANNEL A
Correlation: 0.99977
Residual Std. Dev.: 51.12385
Formula: y = mx + b
m: 2613.66578
b: -6.98544
x: Amount[ug/ml]
y: Area



Indeno(123cd)pyrene at exp. RT: 21.097
VWD1 A, Wavelength=254 nm, TT
Correlation: 0.99974
Residual Std. Dev.: 1.54706
Formula: y = mx + b
m: 150.48816
b: -1.24351
x: Amount[ug/ml]
y: Area

==========

000228

Injection Date : 9/14/00 1:50:02 PM Seq. Line : 3
Sample Name : PAH Std 2 1 RS 9/14/00 Vial : 3
Acq. Operator : RS verified from autosampler rack Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:03:07 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.913	BBA	927.52972	1.07949e-2	10.01257+		Naphthalene
7.854	PV	1600.36975	6.23646e-3	9.98065		1-Methylnaphthalene
8.231	VV	1384.87012	7.22294e-3	10.00284+		2-Methylnaphthalene
8.521	MF	4269.91895	2.34681e-3	10.02069+		Acenaphthene
8.991	FM	120.28089	1.57825e-2	1.89833		Fluorene
9.870	PP	840.83624	1.18900e-3	9.99752e-1		Phenanthrene
10.701	MM	4193.24414	2.38272e-4	9.99131e-1-		Anthracene
11.544	BV	215.07562	9.31655e-3	2.00376+		Fluoranthene
12.042	VBA	450.67984	2.23560e-3	1.00754+		Pyrene
14.172	BV	2849.09888	3.48678e-4	9.93419e-1		Benzo(a)anthracene
14.729	VP	1931.44287	5.20210e-4	1.00476+		Chrysene
16.577	VV	3551.39429	5.60676e-4	1.99118		Benzo(b)fluoranthene
17.639	VV	3128.27124	3.19947e-4	1.00088+		Benzo(k)fluoranthene
18.214	VP	2709.13159	3.68707e-4	9.98876e-1		Benzo(a)pyrene
19.756	MF	2428.61548	8.25279e-4	2.00428+		Dibenzo(ah)anthracene
20.205	FM	5240.86035	3.82612e-4	2.00522+		Benzo(ghi)perylene

Totals : 56.92387

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.030	BB	10.86914	0.00000	0.00000	?	
22.852	VP	13.08726	0.00000	0.00000	?	
24.714	VV	11.71158	0.00000	0.00000	?	
24.832	VP	3.91240	0.00000	0.00000	?	

000229

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
Uncalib. totals :				0.00000		

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.774	BBA	284.16232	3.52864e-2	10.02707+		Naphthalene
7.122	BV	388.72571	5.15839e-2	20.05201+		Acenaphthylene
7.716	VV	176.93584	5.64856e-2	9.99433		1-Methylnaphthalene
8.091	VV	250.88606	3.99823e-2	10.03099+		2-Methylnaphthalene
8.369	VV	143.46092	7.00102e-2	10.04373+		Acenaphthene
8.872	VBA	281.37839	7.14654e-3	2.01088+		Fluorene
9.729	BP	343.06598	2.91023e-3	9.98399e-1		Phenanthrene
10.559	BP	754.94653	1.32421e-3	9.99709e-1-		Anthracene
11.399	MF	169.58119	1.18187e-2	2.00423+		Fluoranthene
11.898	FM	93.10056	1.07720e-2	1.00288+		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.028	BV	217.55798	4.60259e-3	1.00133+		Benzo(a)anthracene
14.588	VV	347.23474	2.88393e-3	1.00140+		Chrysene
16.429	BV	480.04309	4.17139e-3	2.00245+		Benzo(b)fluoranthene
17.490	VV	159.66829	6.26259e-3	9.99937e-1		Benzo(k)fluoranthene
18.066	VBA	226.60728	4.40223e-3	9.97577e-1		Benzo(a)pyrene
19.605	MF	994.54974	2.01804e-3	2.00705+		Dibenzo(ah)anthracene
20.046	FM	550.29504	3.65137e-3	2.00933+		Benzo(ghi)perylene
21.079	FM	149.37302	6.70035e-3	1.00085+		Indeno(123cd)pyrene

Totals : 78.18416

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
24.465	PBA	1.62544	0.00000	0.00000		?

Uncalib. totals : 0.00000

000230

==========

Injection Date : 9/14/00 1:50:02 PM
Sample Name : PAH Std 2
Acq. Operator : RS

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:03:13 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

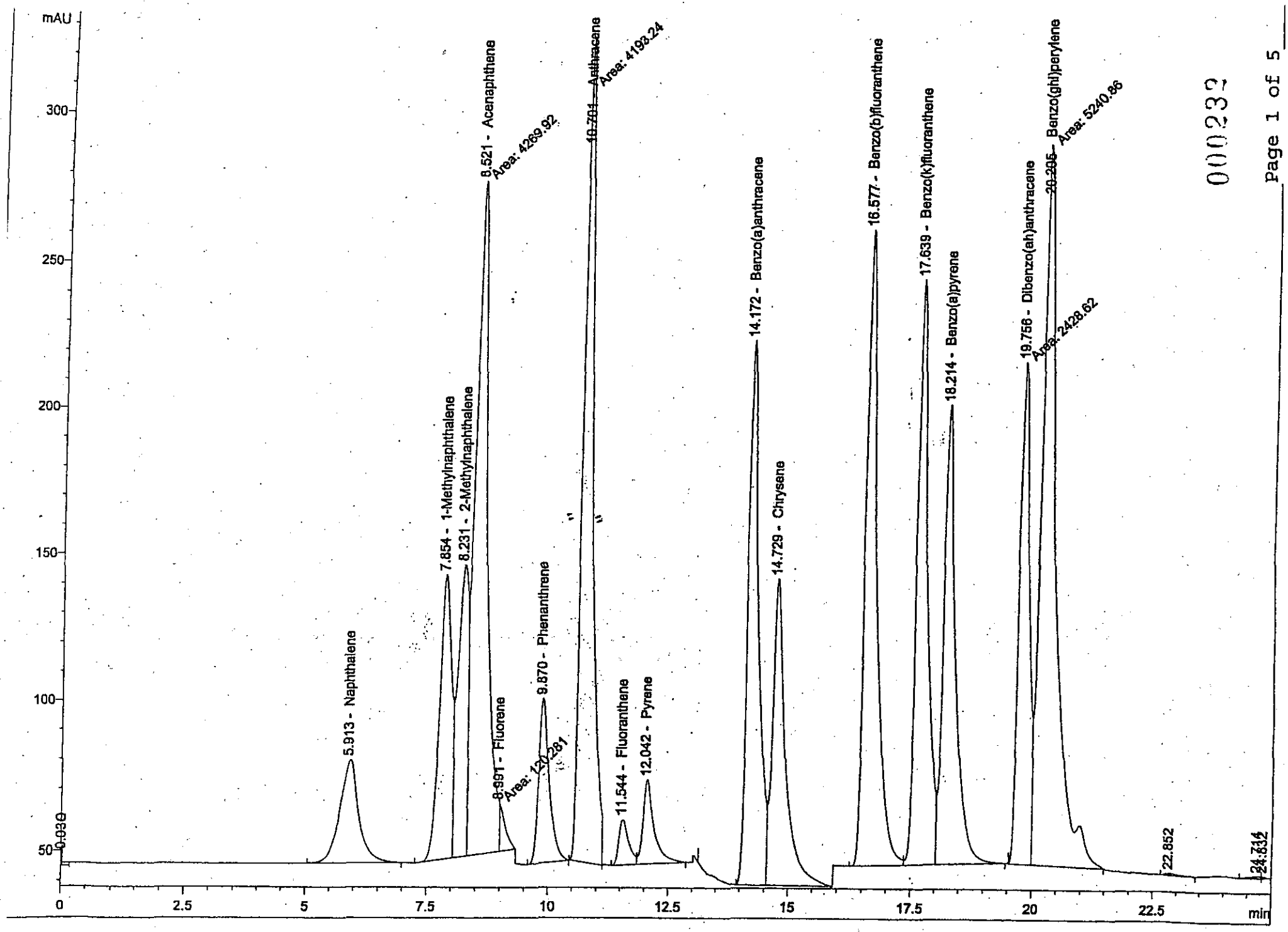
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

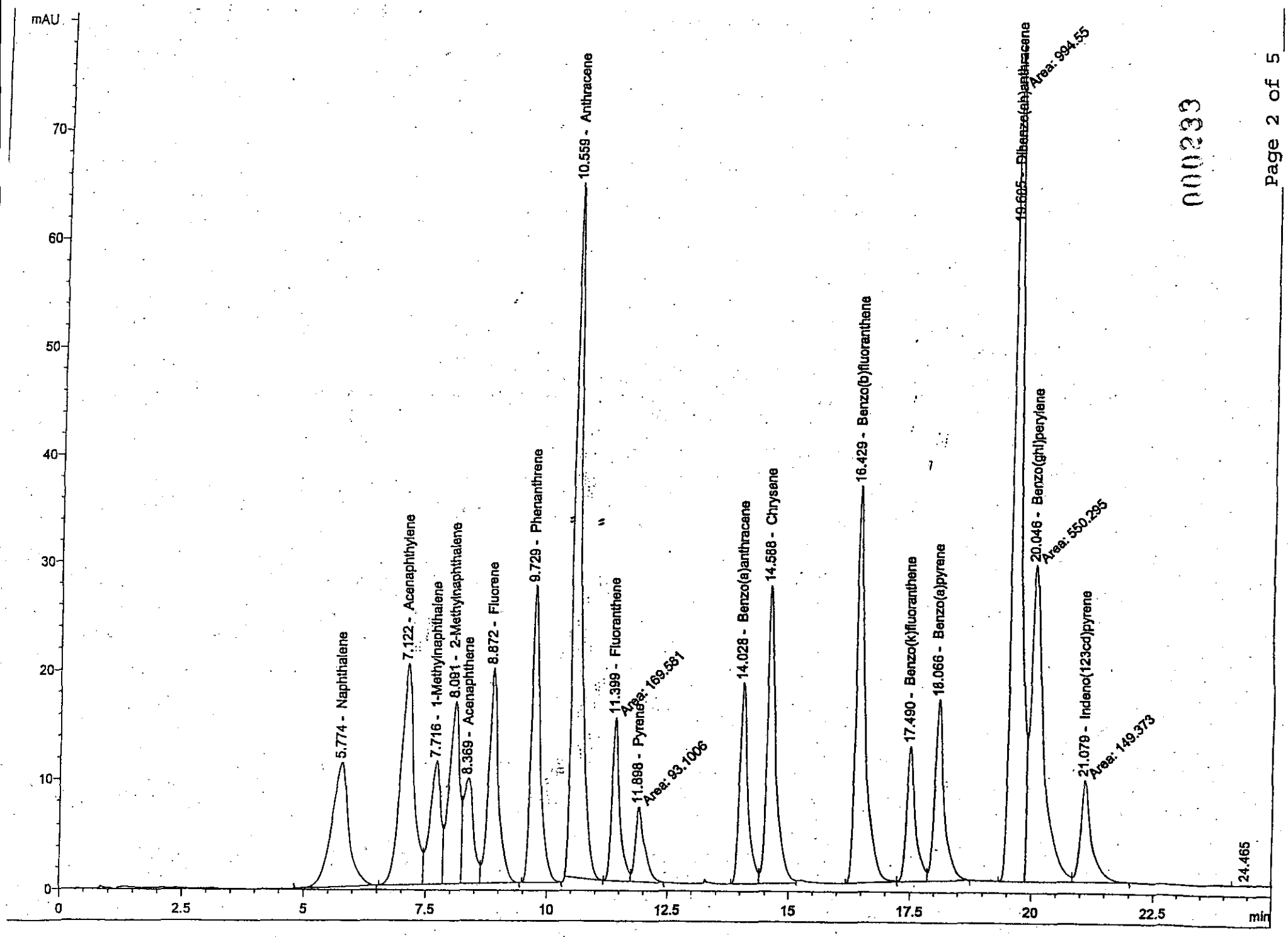
*** End of Report ***

000231


mAU
300
250
200
150
100
50
0.030
5.913 - Naphthalene
7.854 - 1-Methylnaphthalene
8.231 - 2-Methylnaphthalene
8.521 - Acenaphthene
Area: 4269.92
8.991 - Fluorene
Area: 120.281
9.870 - Phenanthrene
10.701 - Anthracene
Area: 4198.24
11.544 - Fluoranthene
12.042 - Pyrene
14.172 - Benzo(a)anthracene
14.729 - Chrysene
16.577 - Benzo(b)fluoranthene
17.639 - Benzo(k)fluoranthene
18.214 - Benzo(a)pyrene
19.756 - Dibenzo(ah)anthracene
Area: 2428.62
20.206 - Benzo(ghi)perylene
Area: 5240.86
22.852
24.834
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000232

000233


mAU
70
60
50
40
30
20
10
0
5.774 - Naphthalene
7.122 - Acenaphthylene
7.716 - 1-Methylnaphthalene
8.091 - 2-Methylnaphthalene
8.369 - Acenaphthene
8.872 - Fluorene
9.729 - Phenanthrene
10.559 - Anthracene
11.399 - Fluoranthene
11.898 - Pyrene
Area: 169.581
Area: 93.1006
14.028 - Benzo(a)anthracene
14.588 - Chrysene
16.429 - Benzo(b)fluoranthene
17.490 - Benzo(k)fluoranthene
18.066 - Benzo(a)pyrene
19.605 - Dibenzo(ah)anthracene
Area: 994.55
20.046 - Benzo(ghi)perylene
Area: 550.295
21.079 - Indeno(123cd)pyrene
Area: 149.373
24.465
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

Injection Date : 9/14/00 12:58:24 PM
Sample Name : PAH Std 1-2 RS 9/14/00
Acq. Operator : RS verified from auto sampler rack std 1/2 reversed

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 12:06:12 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 1:59:40 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.917	BBA	457.73398	1.11988e-2	5.12605		Naphthalene
7.860	VV	815.11816	5.75871e-3	4.69403		1-Methylnaphthalene
8.233	VV	691.67670	7.45349e-3	5.15541		2-Methylnaphthalene
8.520	MF	2116.87891	2.33564e-3	4.94426		Acenaphthene
8.945	FM	82.85392	1.05866e-2	8.77141e-1		Fluorene
9.870	BP	422.13602	1.19065e-3	5.02614e-1		Phenanthrene
10.704	MM	2105.73145	2.52953e-4	5.32652e-1		Anthracene
11.550	BV	105.95557	9.69210e-3	1.02693		Fluoranthene
12.045	VBA	212.28780	2.54630e-3	5.40549e-1		Pyrene
14.182	BV	1486.57703	3.35882e-4	4.99314e-1		Benzo(a)anthracene
14.741	VP	941.82025	5.17225e-4	4.87133e-1		Chrysene
16.598	BV	1830.36072	5.69251e-4	1.04193		Benzo(b)fluoranthene
17.659	VV	1559.22083	3.25714e-4	5.07861e-1		Benzo(k)fluoranthene
18.233	VV	1357.57349	3.97466e-4	5.39589e-1		Benzo(a)pyrene
19.785	MF	1199.76929	8.37166e-4	1.00441		Dibenzo(ah)anthracene
20.238	FM	2569.22290	4.05655e-4	1.04222		Benzo(ghi)perylene

Totals : 28.52209

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.779	BBA	139.60797	3.49668e-2	4.88165		Naphthalene
7.130	BV	192.17686	5.00158e-2	9.61188		Acenaphthylene

Injection Date : 9/14/00 12:58:24 PM
Sample Name : PAH Std 1
Acq. Operator : RS

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 12:06:12 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 1:59:42 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.721	VV	89.12464	5.42990e-2	4.83938		1-Methylnaphthalene
8.092	VV	123.72823	3.87922e-2	4.79969		2-Methylnaphthalene
8.369	VV	69.66994	7.67620e-2	5.34800		Acenaphthene
8.869	VBA	139.24638	7.24799e-3	1.00926		Fluorene
9.728	BP	173.85025	2.86544e-3	4.98158e-1		Phenanthrene
10.563	BP	379.23813	1.29998e-3	4.93001e-1		Anthracene
11.405	MF	84.13593	1.16359e-2	9.78998e-1		Fluoranthene
11.901	FM	45.89300	1.07995e-2	4.95623e-1		Pyrene
13.300		-	-	-		P-terphenyl D14
14.037	BV	108.20583	4.49416e-3	4.86295e-1		Benzo(a)anthracene
14.599	VV	172.46683	2.91181e-3	5.02191e-1		Chrysene
16.448	BV	238.85312	4.12255e-3	9.84684e-1		Benzo(b)fluoranthene
17.509	VV	80.05262	6.20053e-3	4.96369e-1		Benzo(k)fluoranthene
18.084	VBA	114.54205	4.78890e-3	5.48530e-1		Benzo(a)pyrene
19.634	MF	489.12625	1.95380e-3	9.55656e-1		Dibenzo(ah)anthracene
20.079	FM	263.23438	3.96531e-3	1.04380		Benzo(ghi)perylene
21.088	FM	74.27673	7.01643e-3	5.21157e-1		Indeno(123cd)pyrene

Totals : 38.49433

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
15.258	VV	1.66118	0.00000	0.00000		?

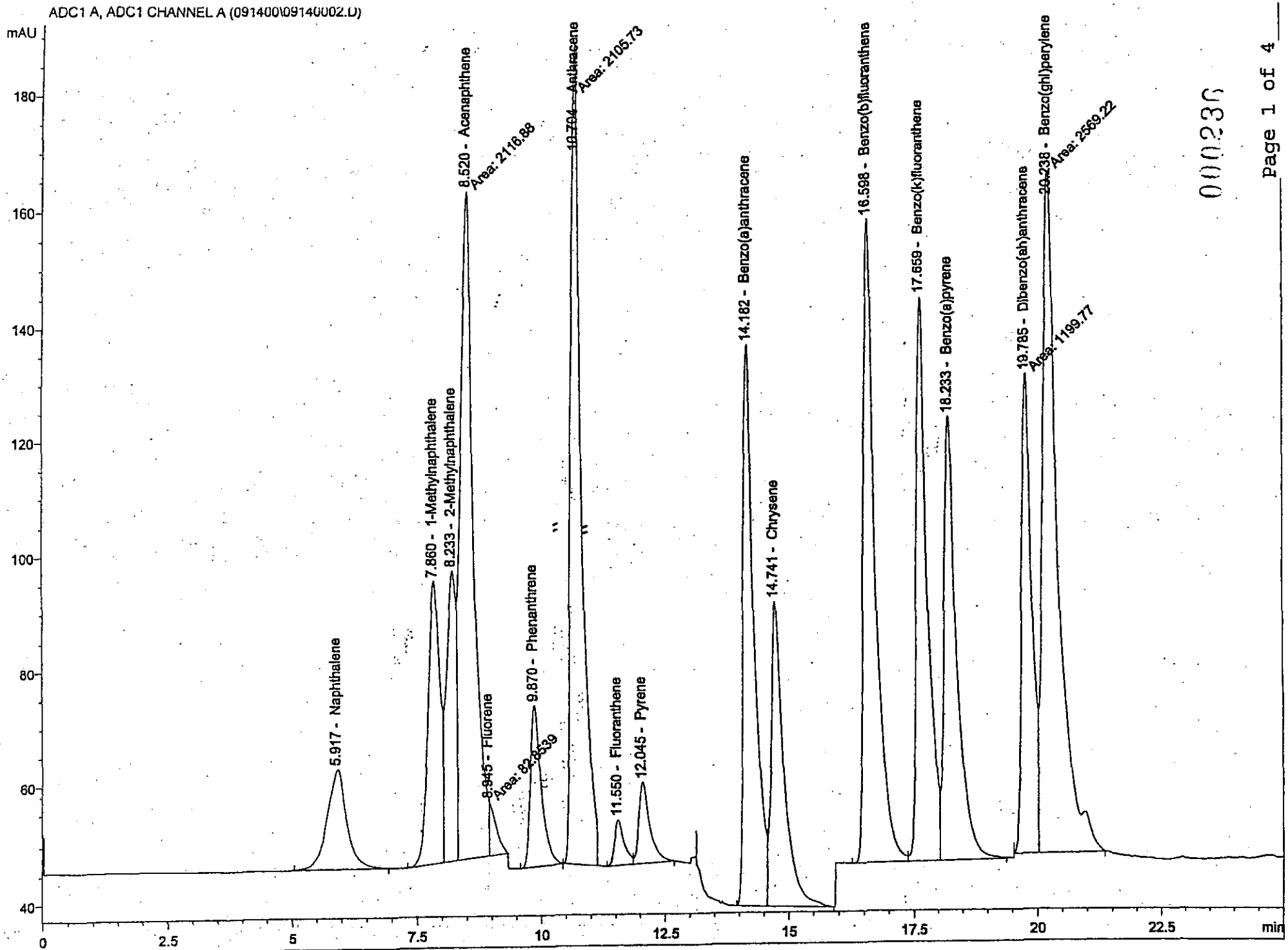
Uncalib. totals : 0.00000

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

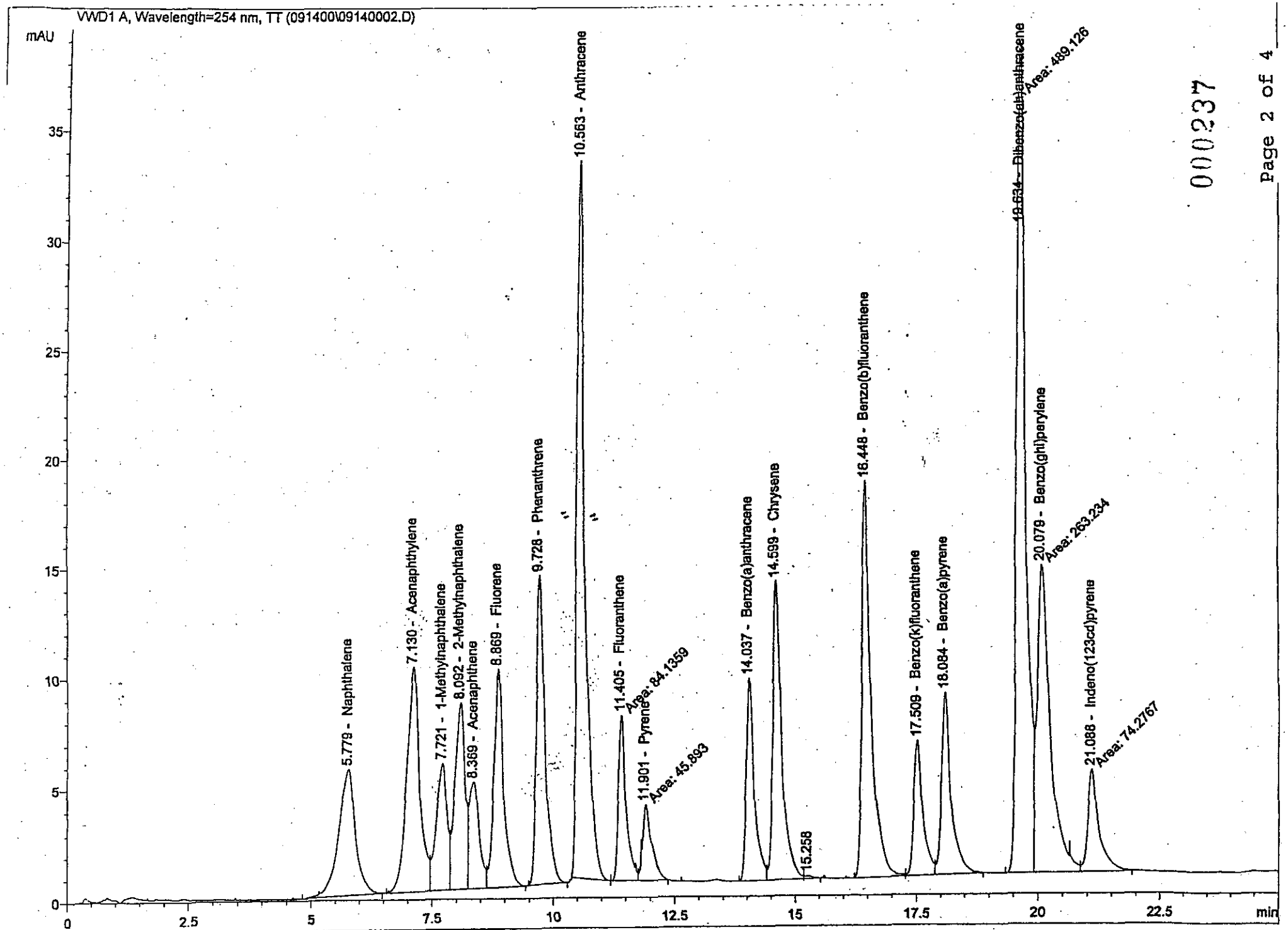
*** End of Report ***

000235


ADC1 A, ADC1 CHANNEL A (091400\09140002.D)
mAU
180
160
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.917 - Naphthalene
7.860 - 1-Methylnaphthalene
8.233 - 2-Methylnaphthalene
8.520 - Acenaphthene
Area: 2116.88
8.945 - Fluorene
Area: 82.8539
9.870 - Phenanthrene
10.704 - Anthracene
Area: 2105.73
11.550 - Fluoranthene
12.045 - Pyrene
14.182 - Benzo(a)anthracene
14.741 - Chrysene
16.598 - Benzo(b)fluoranthene
17.659 - Benzo(k)fluoranthene
18.233 - Benzo(a)pyrene
19.785 - Dibenzo(ah)anthracene
Area: 1199.77
20.238 - Benzo(ghi)perylene
Area: 2569.22

000230

000237


VWD1 A, Wavelength=254 nm, TT (091400\09140002.D)
mAU
35
30
25
20
15
10
5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.779 - Naphthalene
7.130 - Acenaphthylene
7.721 - 1-Methylnaphthalene
8.092 - 2-Methylnaphthalene
8.369 - Acenaphthene
8.869 - Fluorene
9.728 - Phenanthrene
10.563 - Anthracene
11.405 - Fluoranthene
11.901 - Pyrene
Area: 84.1359
Area: 45.893
14.037 - Benzo(a)anthracene
14.599 - Chrysene
15.258
16.448 - Benzo(b)fluoranthene
17.509 - Benzo(k)fluoranthene
18.084 - Benzo(a)pyrene
19.634 - Dibenzo(ah)anthracene
Area: 489.126
20.079 - Benzo(ghi)perylene
Area: 263.234
21.088 - Indeno(123cd)pyrene
Area: 74.2767

Injection Date : 9/14/00 2:41:18 PM
Sample Name : PAH Std 3
Acq. Operator : RS

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:07:57 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:07:52 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.911	BBA	177.09276	1.11843e-2	1.98066		Naphthalene
7.852	PV	319.74792	6.02428e-3	1.92625		1-Methylnaphthalene
8.228	VV	279.61868	7.20738e-3	2.01532		2-Methylnaphthalene
8.521	MF	831.69177	2.34274e-3	1.94844		Acenaphthene
8.926	FM	37.73751	1.11312e-2	4.20065e-1		Fluorene
9.871	BP	165.13036	1.18462e-3	1.95617e-1		Phenanthrene
10.700	MM	838.25519	2.39733e-4	2.00957e-1-		Anthracene
11.538	PV	41.76950	9.53598e-3	3.98313e-1		Fluoranthene
12.035	VBA	88.05202	2.38119e-3	2.09669e-1		Pyrene
14.171	MF	580.52747	3.37815e-4	1.96111e-1		Benzo(a)anthracene
14.733	FM	350.60947	5.29417e-4	1.85619e-1		Chrysene
16.585	VV	719.40326	5.48016e-4	3.94245e-1		Benzo(b)fluoranthene
17.645	VV	615.84094	3.20375e-4	1.97300e-1		Benzo(k)fluoranthene
18.220	VV	532.83832	3.78729e-4	2.01801e-1		Benzo(a)pyrene
19.775	MF	480.45383	8.28050e-4	3.97840e-1		Dibenzo(ah)anthracene
20.230	FM	998.91718	3.95775e-4	3.95346e-1		Benzo(ghi)perylene

Totals : 11.26355

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.033	BB	50.38533	0.00000	0.00000		?

Uncalib. totals : 0.00000

000238

Results obtained with enhanced integrator!

Injection Date : 9/14/00 2:41:18 PM
Sample Name : PAH Std 3
Acq. Operator : RS

Seq. Line : 4
Vial : 4
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:07:57 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.773	BBA	54.22546	3.59894e-2	1.95154		Naphthalene
7.122	BV	74.00314	5.16203e-2	3.82007		Acenaphthylene
7.715	VV	36.73984	5.50470e-2	2.02242		1-Methylnaphthalene
8.089	VV	49.40136	3.96439e-2	1.95846		2-Methylnaphthalene
8.370	VV	28.05536	7.20467e-2	2.02130		Acenaphthene
8.876	VBA	54.44505	7.59180e-3	4.13336e-1		Fluorene
9.731	BP	67.07530	2.88396e-3	1.93443e-1		Phenanthrene
10.559	MM	151.13527	1.30837e-3	1.97740e-1		Anthracene
11.394	MF	32.94216	1.17607e-2	3.87422e-1		Fluoranthene
11.892	FM	17.61109	1.09133e-2	1.92195e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.029	BV	42.26120	4.59885e-3	1.94353e-1		Benzo(a)anthracene
14.592	VB	68.34219	2.88828e-3	1.97391e-1		Chrysene
16.438	PB	94.65772	4.14976e-3	3.92807e-1		Benzo(b)fluoranthene
17.498	BV	31.55045	6.22107e-3	1.96278e-1		Benzo(k)fluoranthene
18.084	VBA	46.45811	4.44209e-3	2.06371e-1		Benzo(a)pyrene
19.628	MF	193.91678	1.99609e-3	3.87074e-1		Dibenzo(ah)anthracene
20.073	FM	101.73080	3.95179e-3	4.02019e-1		Benzo(ghi)perylene
21.089	FM	26.69713	6.95941e-3	1.85796e-1		Indeno(123cd)pyrene

Totals : 15.32001

Uncalibrated Peaks : compound name not specified

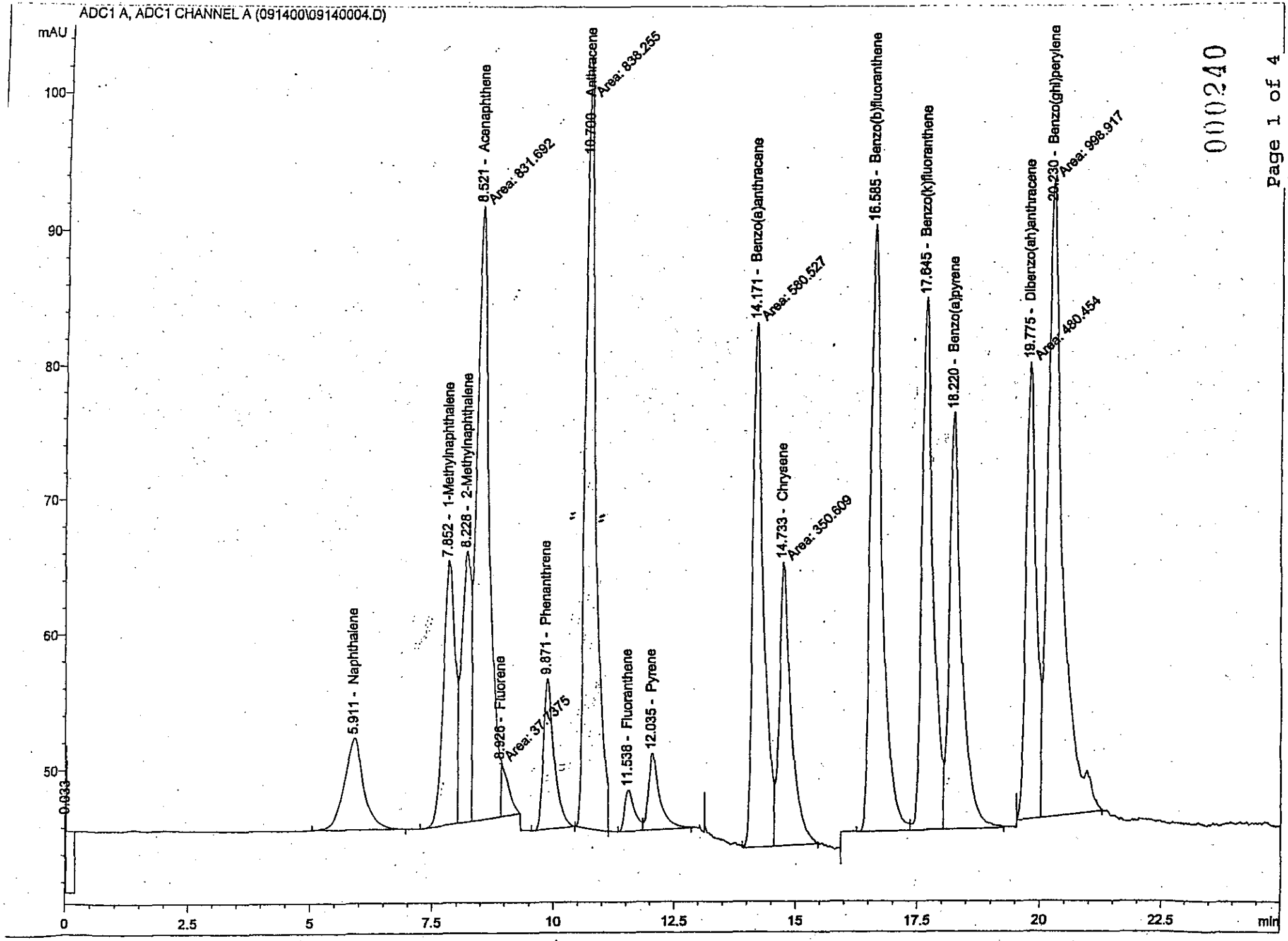
3 Warnings or Errors :

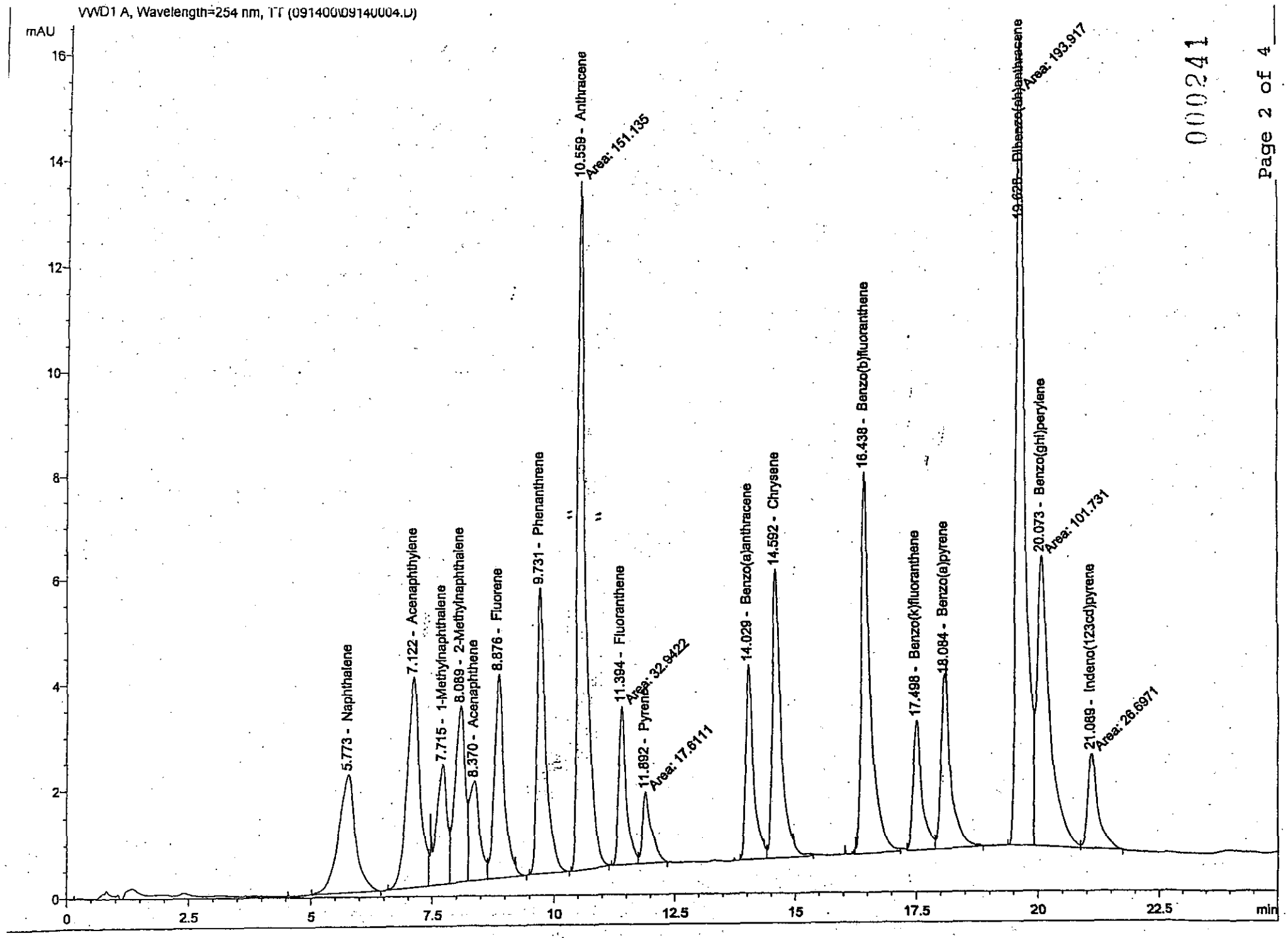
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

000239

000240


ADC1 A, ADC1 CHANNEL A (091400\09140004.D)
mAU
100
90
80
70
60
50
0.033
5.911 - Naphthalene
7.852 - 1-Methylnaphthalene
8.228 - 2-Methylnaphthalene
8.521 - Acenaphthene
Area: 831.692
8.926 - Fluorene
Area: 37.7375
9.871 - Phenanthrene
10.700 - Anthracene
Area: 838.255
11.538 - Fluoranthene
12.035 - Pyrene
14.171 - Benzo(a)anthracene
Area: 580.527
14.733 - Chrysene
Area: 350.609
16.585 - Benzo(b)fluoranthene
17.645 - Benzo(k)fluoranthene
18.220 - Benzo(a)pyrene
19.775 - Dibenzo(ah)anthracene
Area: 480.454
20.230 - Benzo(ghi)perylene
Area: 998.917
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (091400\09140004.D)
mAU
16
14
12
10
8
6
4
2
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.773 - Naphthalene
7.122 - Acenaphthylene
7.715 - 1-Methylnaphthalene
8.089 - 2-Methylnaphthalene
8.370 - Acenaphthene
8.876 - Fluorene
9.731 - Phenanthrene
10.559 - Anthracene
Area: 151.135
11.394 - Fluoranthene
11.892 - Pyrene
Area: 32.9422
Area: 17.6111
14.029 - Benzo(a)anthracene
14.592 - Chrysene
16.438 - Benzo(b)fluoranthene
17.498 - Benzo(k)fluoranthene
18.084 - Benzo(a)pyrene
19.628 - Dibenzo(ah)anthracene
Area: 193.917
20.073 - Benzo(ghi)perylene
Area: 101.731
21.089 - Indeno(123cd)pyrene
Area: 26.6971

000241

Injection Date : 9/14/00 3:32:57 PM
Sample Name : PAH Std 4
Acq. Operator : RS

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:31:46 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 4:31:41 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.917	BV	101.63905	1.09826e-2	1.11626		Naphthalene
7.863	PV	182.83362	5.81298e-3	1.06281		1-Methylnaphthalene
8.237	VV	161.39539	6.87639e-3	1.10982		2-Methylnaphthalene
8.530	MF	497.14474	2.25877e-3	1.12294		Acenaphthene
8.972	FM	17.61251	6.85159e-3	1.20674e-1		Fluorene
9.874	PP	98.37514	1.13620e-3	1.11774e-1		Phenanthrene
10.701	MM	489.80444	2.28149e-4	1.11748e-1		Anthracene
11.540	BV	24.20294	9.29049e-3	2.24857e-1		Fluoranthene
12.036	VP	51.17427	2.31760e-3	1.18601e-1		Pyrene
14.169	MF	342.87982	3.16324e-4	1.08461e-1		Benzo(a)anthracene
14.732	FM	203.64078	5.44538e-4	1.10890e-1		Chrysene
16.583	MM	422.78955	5.21232e-4	2.20371e-1		Benzo(b)fluoranthene
17.644	MF	359.08487	3.08907e-4	1.10924e-1		Benzo(k)fluoranthene
18.219	FM	304.88193	3.64538e-4	1.11141e-1		Benzo(a)pyrene
19.779	MF	280.15933	8.00035e-4	2.24137e-1		Dibenzo(ah)anthracene
20.245	FM	581.78510	3.88389e-4	2.25959e-1		Benzo(ghi)perylene

Totals : 6.21136

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.132	BV	6.35649	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000242

Data File C:\HPCHEM\1\DATA\091400\09140005.D Sample Name: PAH Std 4

==========

Injection Date : 9/14/00 3:32:57 PM
Sample Name : PAH Std 4
Acq. Operator : RS

Seq. Line : 5
Vial : 5
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 2:37:53 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:31:46 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.779	BBA	33.13679	3.47898e-2	1.15282		Naphthalene
7.132	BV	44.26999	5.04264e-2	2.23238		Acenaphthylene
7.725	VV	19.88931	5.26675e-2	1.04752		1-Methylnaphthalene
8.098	VV	28.61016	3.85104e-2	1.10179		2-Methylnaphthalene
8.381	VV	16.93034	6.88819e-2	1.16619		Acenaphthene
8.883	VBA	32.66193	7.68545e-3	2.51022e-1		Fluorene
9.733	BP	39.79345	2.76666e-3	1.10095e-1		Phenanthrene
10.559	MM	88.05602	1.25058e-3	1.10121e-1		Anthracene
11.395	MF	19.40378	1.14395e-2	2.21970e-1		Fluoranthene
11.893	FM	10.05997	1.07686e-2	1.08332e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027	BV	24.91508	4.47694e-3	1.11543e-1		Benzo(a)anthracene
14.590	VB	40.04166	2.79295e-3	1.11834e-1		Chrysene
16.436	BB	56.07032	4.00177e-3	2.24380e-1		Benzo(b)fluoranthene
17.497	BV	18.58857	6.00301e-3	1.11587e-1		Benzo(k)fluoranthene
18.071	VB	26.60964	4.19755e-3	1.11695e-1		Benzo(a)pyrene
19.630	MF	116.12875	1.96039e-3	2.27658e-1		Dibenzo(ah)anthracene
20.085	FM	59.51743	3.97344e-3	2.36489e-1		Benzo(ghi)perylene
21.095	VP	15.35210	7.05636e-3	1.08330e-1		Indeno(123cd)pyrene

Totals : 8.74576

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

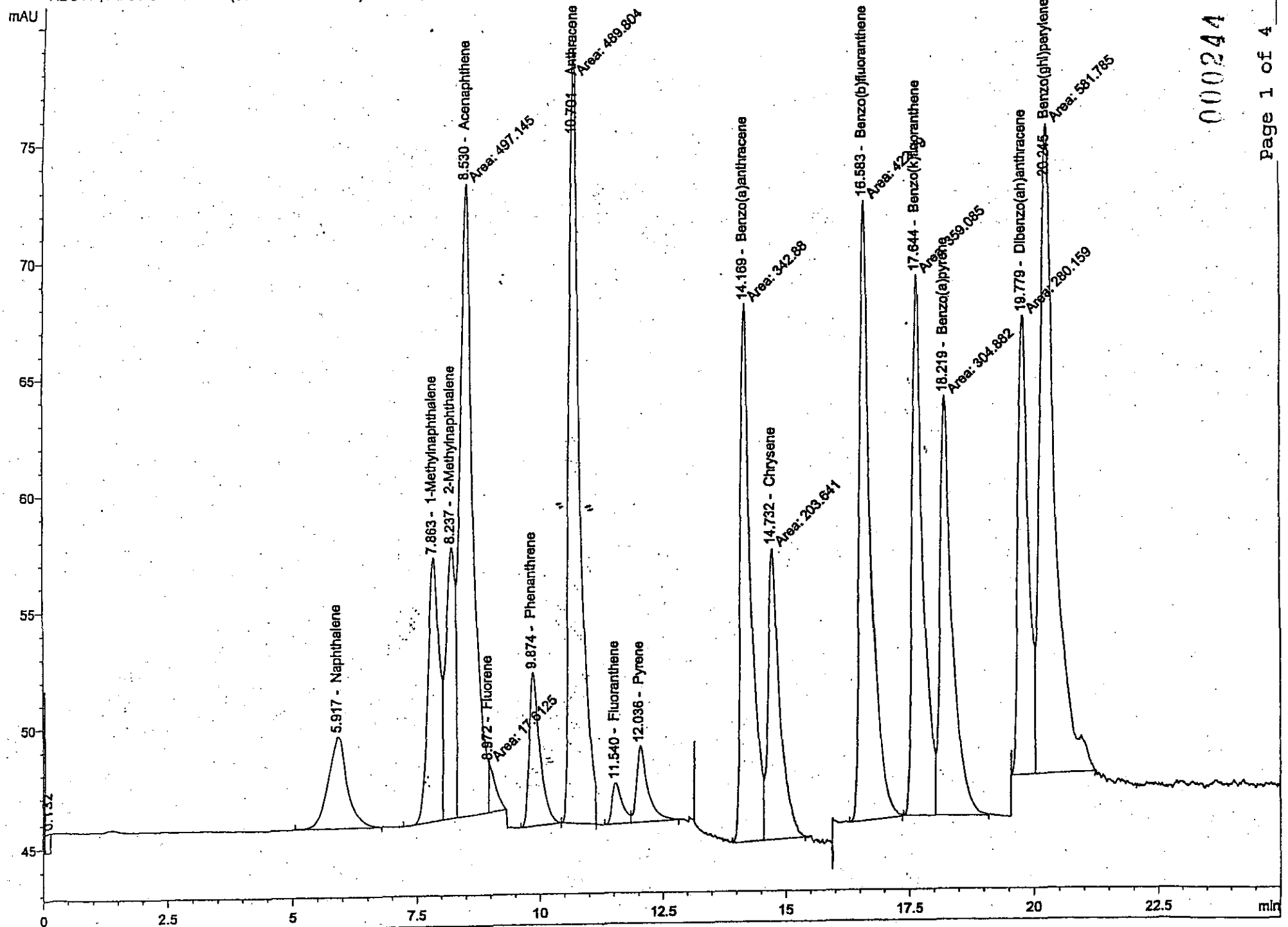
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

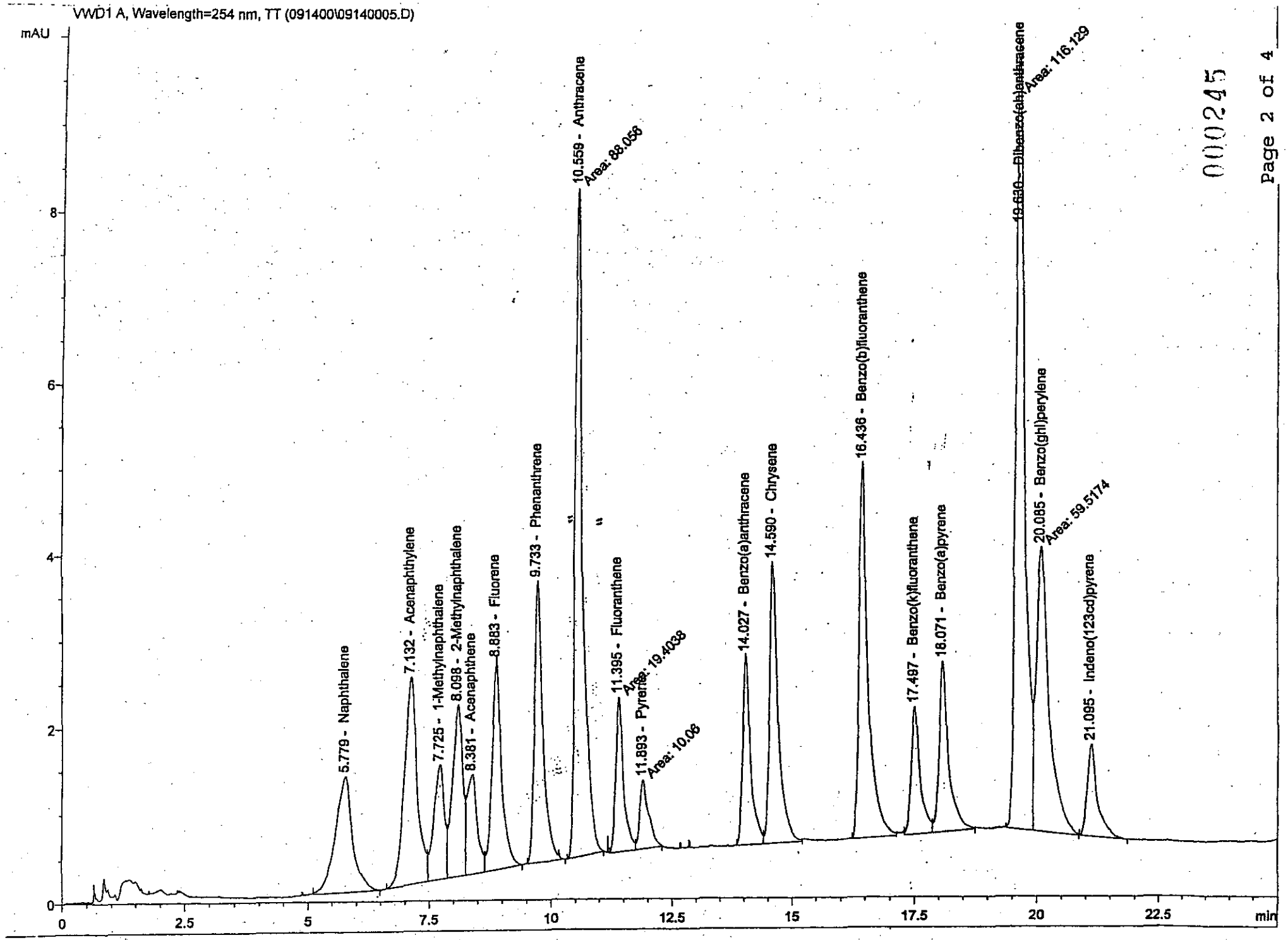
000243

ADC1 A, ADC1 CHANNEL A (091400\09140005.D)



000244

000245


VWD1 A, Wavelength=254 nm, TT (091400\09140005.D)
mAU
min
5.779 - Naphthalene
7.132 - Acenaphthylene
7.725 - 1-Methylnaphthalene
8.098 - 2-Methylnaphthalene
8.381 - Acenaphthene
8.883 - Fluorene
9.733 - Phenanthrene
10.559 - Anthracene
Area: 88.058
11.395 - Fluoranthene
11.893 - Pyrene
Area: 19.4038
Area: 10.06
14.027 - Benzo(a)anthracene
14.590 - Chrysene
16.436 - Benzo(b)fluoranthene
17.497 - Benzo(k)fluoranthene
18.071 - Benzo(a)pyrene
19.630 - Dibenzo(ah)anthracene
Area: 116.129
20.085 - Benzo(ghi)perylene
Area: 59.5174
21.095 - Indeno(123cd)pyrene

Injection Date : 9/14/00 4:24:31 PM
Sample Name : PAH Std 5
Acq. Operator : RS

Seq. Line : 6
Vial : 6
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:34:28 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 5:47:59 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : Thursday, September 14, 2000 5:47:47 PM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.912	MM	43.51245	1.10908e-2	4.82587e-1	-	Naphthalene
7.853	PV	84.18243	5.41754e-3	4.56061e-1	-	1-Methylnaphthalene
8.230	VV	73.61031	6.23043e-3	4.58624e-1	-	2-Methylnaphthalene
8.522	MF	227.99506	2.13272e-3	4.86250e-1	-	Acenaphthene
8.960	FM	8.53182	8.17774e-4	6.97710e-3	-	Fluorene
9.870	PP	45.26786	1.04724e-3	4.74065e-2	-	Phenanthrene
10.699	MM	218.57169	2.07428e-4	4.53379e-2	-	Anthracene
11.539	PV	11.58462	8.77755e-3	1.01685e-1	-	Fluoranthene
12.037	VBA	23.95237	2.19598e-3	5.25989e-2	-	Pyrene
14.170	MF	149.38280	2.71752e-4	4.05951e-2	-	Benzo(a)anthracene
14.737	FM	92.42841	5.81537e-4	5.37505e-2	-	Chrysene
16.584	MM	187.06203	4.53171e-4	8.47710e-2	-	Benzo(b)fluoranthene
17.642	MF	162.07825	2.91321e-4	4.72168e-2	-	Benzo(k)fluoranthene
18.216	FM	127.85419	3.50027e-4	4.47525e-2	-	Benzo(a)pyrene
19.769	MF	135.87962	7.35564e-4	9.99482e-2	-	Dibenzo(ah)anthracene
20.236	FM	244.85063	3.93520e-4	9.63536e-2	-	Benzo(ghi)perylene

Totals : 2.60491

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

000246

Injection Date : 9/14/00 4:24:31 PM
Sample Name : PAH Std 5
Acq. Operator : RS

Seq. Line : 6
Vial : 6
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 4:34:28 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 9/14/00 5:47:59 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771	BB	14.75709	3.34572e-2	4.93730e-1	-	Naphthalene
7.115	BV	20.09125	4.96422e-2	9.97373e-1	-	Acenaphthylene
7.714	VV	8.92327	4.85430e-2	4.33163e-1	-	1-Methylnaphthalene
8.090	VV	12.88177	3.71574e-2	4.78653e-1	-	2-Methylnaphthalene
8.363	VV	7.41926	6.48745e-2	4.81321e-1	-	Acenaphthene
8.875	VB	14.61118	8.41739e-3	1.22988e-1	-	Fluorene
9.730	BP	18.02111	2.58282e-3	4.65452e-2	-	Phenanthrene
10.557	BP	38.47166	1.15796e-3	4.45488e-2	-	Anthracene
11.395	MF	9.01464	1.09298e-2	9.85281e-2	-	Fluoranthene
11.895	FM	5.03527	1.07101e-2	5.39281e-2	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027	BV	11.16390	4.28987e-3	4.78917e-2	-	Benzo(a)anthracene
14.590	VB	18.14643	2.62125e-3	4.75664e-2	-	Chrysene
16.411	MM	25.57971	3.71281e-3	9.49725e-2	-	Benzo(b)fluoranthene
17.490	MF	7.73708	5.67637e-3	4.39185e-2	-	Benzo(k)fluoranthene
18.065	FM	10.85466	3.73231e-3	4.05130e-2	-	Benzo(a)pyrene
19.627	MF	52.88899	1.84696e-3	9.76837e-2	-	Dibenzo(ah)anthracene
20.085	FM	24.50035	4.16212e-3	1.01973e-1	-	Benzo(ghi)perylene
21.097	MM	6.48660	7.91892e-3	5.13669e-2	-	Indeno(123cd)pyrene

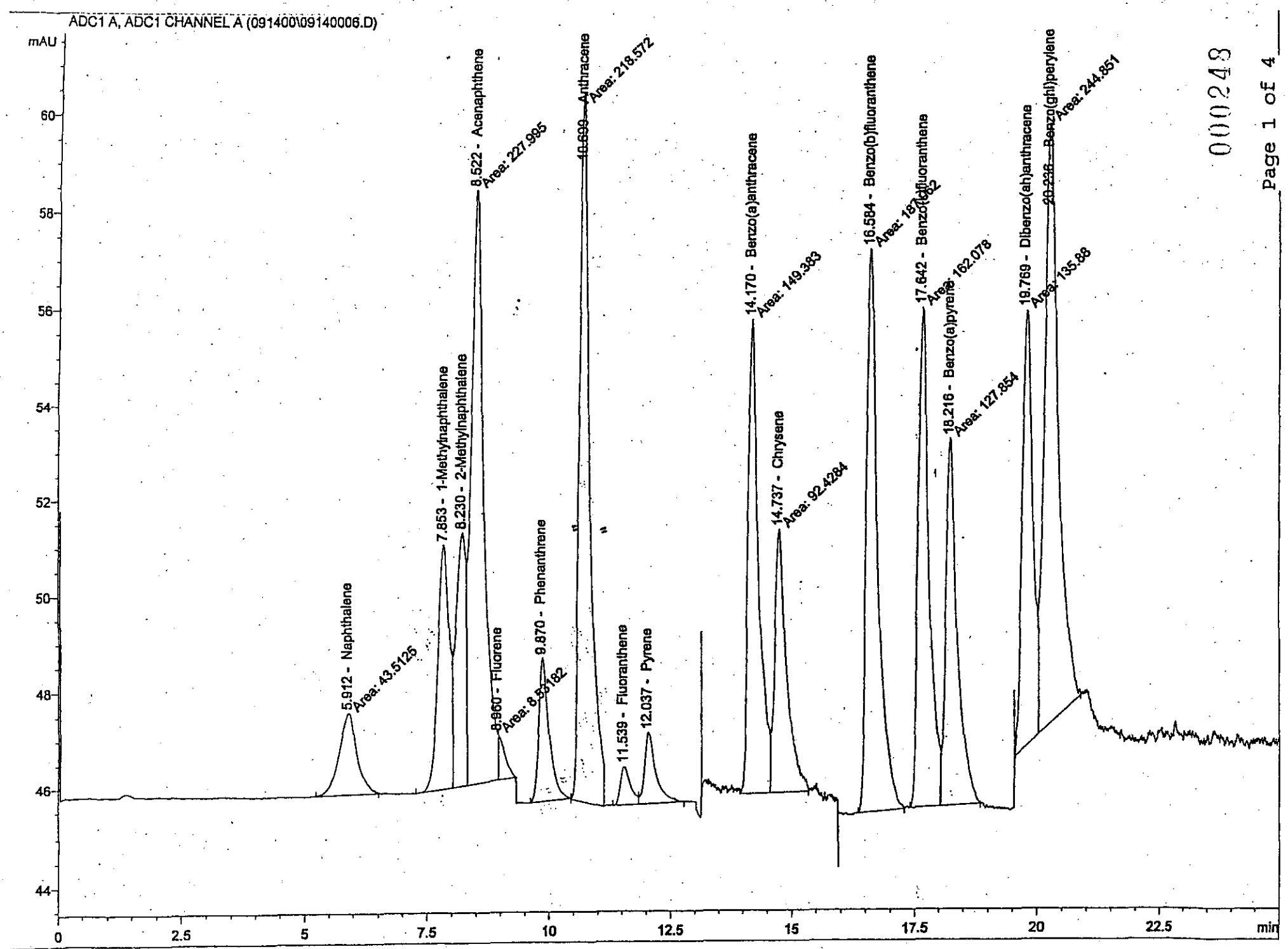
Totals : 3.77666

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

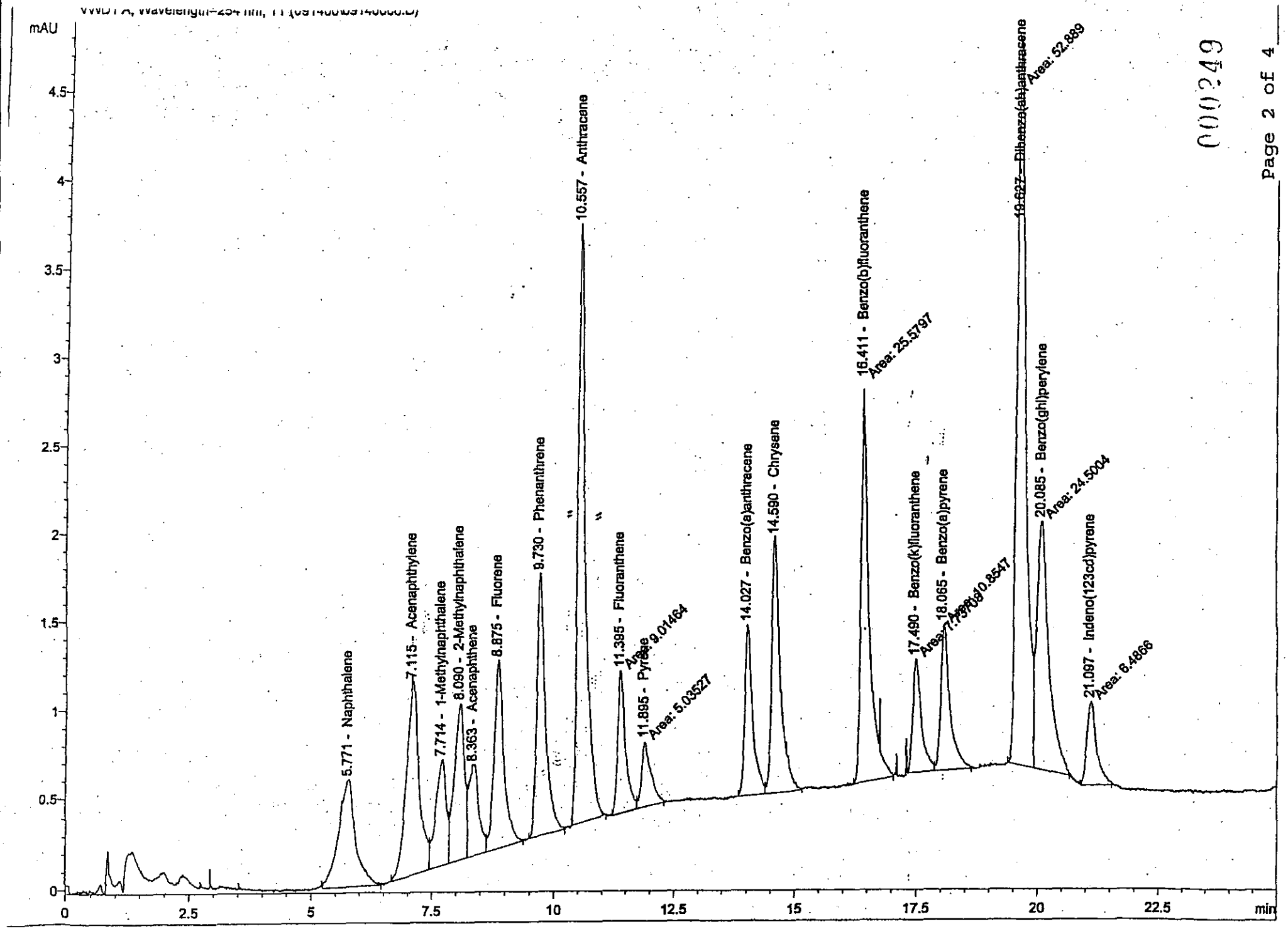
*** End of Report ***



000248

Page 1 of 4

000249


mAU
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.771 - Naphthalene
7.115 - Acenaphthylene
7.714 - 1-Methylnaphthalene
8.090 - 2-Methylnaphthalene
8.363 - Acenaphthene
8.875 - Fluorene
9.730 - Phenanthrene
10.557 - Anthracene
11.395 - Fluoranthene
Area: 9.01464
11.885 - Pyrene
Area: 5.03527
14.027 - Benzo(a)anthracene
14.590 - Chrysene
16.411 - Benzo(b)fluoranthene
Area: 25.5797
17.490 - Benzo(k)fluoranthene
Area: 7.79818
18.065 - Benzo(a)pyrene
Area: 10.8547
19.627 - Dibenzo(ah)anthracene
Area: 52.889
20.085 - Benzo(ghi)perylene
Area: 24.5004
21.097 - Indeno(123cd)pyrene
Area: 5.4866

CONTINUING CALIBRATION

Sel	Run	Vial	Method	Datafile	SeqTable	Calib:RF:RT	Sample Name
No	1	21	PAH	10230001	01:01		ACN Blank
No	2	71	PAH	10230002	02:01		ICV EPA Std 2
No	3	72	PAH	10230003	03:01		CCV 2nd EPA
No	4	21	PAH	10230004	04:01		CCB
No	5	57	PAH	10230005	05:01		7867 MBlk
No	6	58	PAH	10230006	06:01		7867 LCS
No	7	59	PAH	10230007	07:01		7867 LCSD
No	8	60	PAH	10230008	08:01		0010401-004C
No	9	61	PAH	10230009	09:01		0010401-005C
No	10	62	PAH	10230010	10:01		0010401-006C
No	11	63	PAH	10230011	11:01		0010401-007C
No	12	64	PAH	10230012	12:01		0010401-008B
No	13	65	PAH	10230013	13:01		7872 MBlk
No	14	66	PAH	10230014	14:01		7872 LCS
No	15	71	PAH	10230015	15:01		CCV, PAH Std 2
No	16	21	PAH	10230016	16:01		CCB. ACN
No	17	68	PAH	10230017	17:01		0010401-002B
No	18	73	PAH	10230018	18:01		10401-003B 4X
No	19	74	PAH	10230019	19:01		10401-001B 25X
No	20	75	PAH	10230020	20:01		10401-001B 10X
No	21	71	PAH	10230021	21:01		CCV, PAH Std 2
No	22	21	PAH	10230022	22:01		CCB, ACN
No	23	69	PAH	10230023	23:01		0010401-003B
No	24	67	PAH	10230024	24:01		0010401-001B
No	25	71	PAH	10230025	25:01		CCV, PAH Std 2
No	26	21	PAH	10230026	26:01		CCB, ACN

PAH ICV/CCV 2nd Source Results
EPA 8310

Datafile #					
ICV	Analyte	Actual Amt ppm	Recovered ppm	%	
10230002.D	Naphthalene	5.00	5.170	103.4	
10230002.D	Acenaphthylene	10.00	10.233	102.3	
10230002.D	1-methylnaphthalene	5.00	4.900	98.0	
10230002.D	2-methylnaphthalene	5.00	5.146	102.9	
10230002.D	Acenaphthene	5.00	5.403	108.1	
10230002.D	Fluorene	1.00	1.048	104.8	
10230002.D	Phenanthrene	0.50	0.521	104.2	
10230002.D	Anthracene	0.50	0.516	103.2	
10230002.D	Fluoranthene	1.00	1.014	101.4	
10230002.D	Pyrene	0.50	0.544	108.8	
10230002.D	Benzo(a)anthracene	0.50	0.511	102.2	
10230002.D	Chrysene	0.50	0.519	103.8	
10230002.D	Benzo(b)fluoranthene	1.00	1.022	102.2	
10230002.D	Benzo(k)fluoranthene	0.50	0.487	97.4	
10230002.D	Benzo(a)pyrene	0.50	0.479	95.8	
10230002.D	ibenzo(ah)anthracene	1.00	0.965	96.5	
10230002.D	Benzo(ghi)perylene	1.00	1.051	105.1	Average
10230002.D	Indeno(123cd)pyrene	0.50	0.467	93.4	101.9
Datafile #					
CCV 2nd source	Analyte	Actual Amt ppm	Recovered ppm	%	
10230003.D	Naphthalene	2.600	2.493	95.9	
10230003.D	Acenaphthylene	2.600	2.739	105.3	
10230003.D	1-methylnaphthalene	4.000	3.339	83.5	
10230003.D	2-methylnaphthalene	5.700	5.151	90.4	
10230003.D	Acenaphthene	5.200	5.551	106.8	
10230003.D	Fluorene	0.520	0.555	106.7	
10230003.D	Phenanthrene	0.208	0.199	95.7	
10230003.D	Anthracene	0.104	0.094	90.4	
10230003.D	Fluoranthene	0.260	0.280	107.7	
10230003.D	Pyrene	0.520	0.473	91.0	
10230003.D	Benzo(a)anthracene	0.260	0.247	95.0	
10230003.D	Chrysene	0.260	0.253	97.3	
10230003.D	Benzo(b)fluoranthene	0.104	0.093	89.4	
10230003.D	Benzo(k)fluoranthene	0.104	0.094	90.4	
10230003.D	Benzo(a)pyrene	0.260	0.230	88.5	
10230003.D	ibenzo(ah)anthracene	1.040	1.007	96.8	
10230003.D	Benzo(ghi)perylene	0.416	0.519	124.8	Average
10230003.D	Indeno(123cd)pyrene	0.260	0.238	91.5	97.1

Analyst: RS Date: 10/24/00 Instrument: HP 1100 HPLC

PAH CCV Results
EPA 8310

Datafile #					
CCV	Analyte	Actual Amt ppm	Recovered ppm	%	
10230015.D	Naphthalene	5.00	5.228	104.6	
10230015.D	Acenaphthylene	10.00	10.292	102.9	
10230015.D	1-methylnaphthalene	5.00	5.011	100.2	
10230015.D	2-methylnaphthalene	5.00	4.991	99.8	
10230015.D	Acenaphthene	5.00	5.837	116.7	
10230015.D	Fluorene	1.00	1.050	105.0	
10230015.D	Phenanthrene	0.50	0.527	105.4	
10230015.D	Anthracene	0.50	0.520	104.0	
10230015.D	Fluoranthene	1.00	1.023	102.3	
10230015.D	Pyrene	0.50	0.549	109.8	
10230015.D	Benzo(a)anthracene	0.50	0.513	102.6	
10230015.D	Chrysene	0.50	0.525	105.0	
10230015.D	Benzo(b)fluoranthene	1.00	1.031	103.1	
10230015.D	Benzo(k)fluoranthene	0.50	0.497	99.4	
10230015.D	Benzo(a)pyrene	0.50	0.502	100.4	
10230015.D	ibenzo(ah)anthracene	1.00	0.983	98.3	
10230015.D	Benzo(ghi)perylene	1.00	1.054	105.4	Average
10230015.D	Indeno(123cd)pyrene	0.50	0.455	91.0	103.1

Datafile #					
CCV	Analyte	Actual Amt ppm	Recovered ppm	%	
10230021.D	Naphthalene	5.00	5.193	103.9	
10230021.D	Acenaphthylene	10.00	10.208	102.1	
10230021.D	1-methylnaphthalene	5.00	4.945	98.9	
10230021.D	2-methylnaphthalene	5.00	5.121	102.4	
10230021.D	Acenaphthene	5.00	5.543	110.9	
10230021.D	Fluorene	1.00	1.053	105.3	
10230021.D	Phenanthrene	0.50	0.526	105.2	
10230021.D	Anthracene	0.50	0.519	103.8	
10230021.D	Fluoranthene	1.00	1.016	101.6	
10230021.D	Pyrene	0.50	0.538	107.6	
10230021.D	Benzo(a)anthracene	0.50	0.509	101.8	
10230021.D	Chrysene	0.50	0.515	103.0	
10230021.D	Benzo(b)fluoranthene	1.00	1.020	102.0	
10230021.D	Benzo(k)fluoranthene	0.50	0.494	98.8	
10230021.D	Benzo(a)pyrene	0.50	0.465	93.0	
10230021.D	ibenzo(ah)anthracene	1.00	0.962	96.2	
10230021.D	Benzo(ghi)perylene	1.00	0.942	94.2	Average
10230021.D	Indeno(123cd)pyrene	0.50	0.452	90.4	101.2

Analyst: RS Date: 10/24/00 Instrument: HP 1100 HPLC

PAH CCV Results
EPA 8310

Datafile # CCV	Analyte	Actual Amt ppm	Recovered ppm	%	
10230025.D	Naphthalene	5.00	5.214	104.3	
10230025.D	Acenaphthylene	10.00	10.194	101.9	
10230025.D	1-methylnaphthalene	5.00	4.912	98.2	
10230025.D	2-methylnaphthalene	5.00	4.948	99.0	
10230025.D	Acenaphthene	5.00	5.692	113.8	
10230025.D	Fluorene	1.00	1.041	104.1	
10230025.D	Phenanthrene	0.50	0.527	105.4	
10230025.D	Anthracene	0.50	0.520	104.0	
10230025.D	Fluoranthene	1.00	1.005	100.5	
10230025.D	Pyrene	0.50	0.503	100.6	
10230025.D	Benzo(a)anthracene	0.50	0.515	103.0	
10230025.D	Chrysene	0.50	0.515	103.0	
10230025.D	Benzo(b)fluoranthene	1.00	0.976	97.6	
10230025.D	Benzo(k)fluoranthene	0.50	0.928	185.6 *	
10230025.D	Benzo(a)pyrene	0.50	0.367	73.4	
10230025.D	ibenzo(ah)anthracene	1.00	1.103	110.3	
10230025.D	Benzo(ghi)perylene	1.00	0.826	82.6	Average
10230025.D	Indeno(123cd)pyrene	0.50	1.072	214.4 *	111.2

Datafile # CCV	Analyte	Actual Amt ppm	Recovered ppm	%	
	Naphthalene	5.00		0.0	
	Acenaphthylene	10.00		0.0	
	1-methylnaphthalene	5.00		0.0	
	2-methylnaphthalene	5.00		0.0	
	Acenaphthene	5.00		0.0	
	Fluorene	1.00		0.0	
	Phenanthrene	0.50		0.0	
	Anthracene	0.50		0.0	
	Fluoranthene	1.00		0.0	
	Pyrene	0.50		0.0	
	Benzo(a)anthracene	0.50		0.0	
	Chrysene	0.50		0.0	
	Benzo(b)fluoranthene	1.00		0.0	
	Benzo(k)fluoranthene	0.50		0.0	
	Benzo(a)pyrene	0.50		0.0	
	ibenzo(ah)anthracene	1.00		0.0	
	Benzo(ghi)perylene	1.00		0.0	Average
	Indeno(123cd)pyrene	0.50		0.0	0.0

Analyst: RS Date: 10/24/00 Instrument: HP 1100 HPLC

* This CCV ran immediately after soil samples which had high levels of contamination. Baseline is bad due to residual contaminants on column.

PS 10/24/00

Injection Date : 10/23/00 4:56:30 PM
Sample Name : ICV EPA Std 2
Acq. Operator : RS

Seq. Line : 2
Vial : 71
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.897	VV	465.77731	1.08245e-2	5.04182		Naphthalene
7.845	VV	768.98724	6.18865e-3	4.75899		1-Methylnaphthalene
8.217	VV	656.25745	7.17129e-3	4.70621		2-Methylnaphthalene
8.504	MF	2242.54443	2.33849e-3	5.24418		Acenaphthene
8.958	FM	81.82041	1.51171e-2	1.23689		Fluorene
9.860	PBA	428.17899	1.18284e-3	5.06467e-1		Phenanthrene
10.703	BBA	2128.74658	2.37008e-4	5.04530e-1-		Anthracene
11.543	BV	107.42793	9.30492e-3	9.99608e-1		Fluoranthene
12.044	VBA	228.63306	2.24135e-3	5.12447e-1		Pyrene
14.193	VV	1478.21631	3.45078e-4	5.10100e-1		Benzo(a)anthracene
14.768	VP	993.19049	5.23114e-4	5.19552e-1		Chrysene
16.636	VV	1871.29919	5.55827e-4	1.04012		Benzo(b)fluoranthene
17.743	VV	1567.20923	3.18715e-4	4.99494e-1		Benzo(k)fluoranthene
18.315	VP	1399.77808	3.68346e-4	5.15603e-1		Benzo(a)pyrene
19.923	BV	1159.52283	8.20887e-4	9.51838e-1		Dibenzo(ah)anthracene
20.391	VBA	2648.33618	3.83614e-4	1.01594		Benzo(ghi)perylene

Totals : 28.56378

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.758	BBA	146.63483	3.52579e-2	5.17004		Naphthalene
7.118	BV	198.62526	5.15218e-2	10.23353		Acenaphthylene
7.707	VV	87.40682	5.60596e-2	4.89999		1-Methylnaphthalene
8.080	VV	129.12253	3.98573e-2	5.14648		2-Methylnaphthalene
8.353	VV	77.28410	6.99141e-2	5.40325		Acenaphthene

000255

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Injection Date : 10/23/00 4:56:30 PM
Sample Name : ICV EPA Std 2
Acq. Operator : RS

Seq. Line : 2
Vial : 71
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.862	VBA	145.03232	7.22296e-3	1.04756		Fluorene
9.719	BBA	179.81189	2.89650e-3	5.20824e-1		Phenanthrene
10.561	BBA	391.58377	1.31704e-3	5.15733e-1	-	Anthracene
11.398	BV	86.13543	1.17796e-2	1.01464		Fluoranthene
11.898	VB	50.49495	1.07782e-2	5.44243e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.048	BV	111.32719	4.59068e-3	5.11068e-1		Benzo(a)anthracene
14.626	VB	180.51653	2.87395e-3	5.18796e-1		Chrysene
16.486	BP	246.14632	4.15224e-3	1.02206		Benzo(b)fluoranthene
17.591	VV	78.17545	6.23572e-3	4.87480e-1		Benzo(k)fluoranthene
18.166	VBA	109.61227	4.37257e-3	4.79287e-1		Benzo(a)pyrene
19.769	BV	480.13922	2.00972e-3	9.64944e-1		Dibenzo(ah)anthracene
20.227	VP	285.45523	3.68342e-3	1.05145		Benzo(ghi)perylene
21.339	VBA	69.02179	6.76476e-3	4.66916e-1		Indeno(123cd)pyrene

Totals : 39.99829

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

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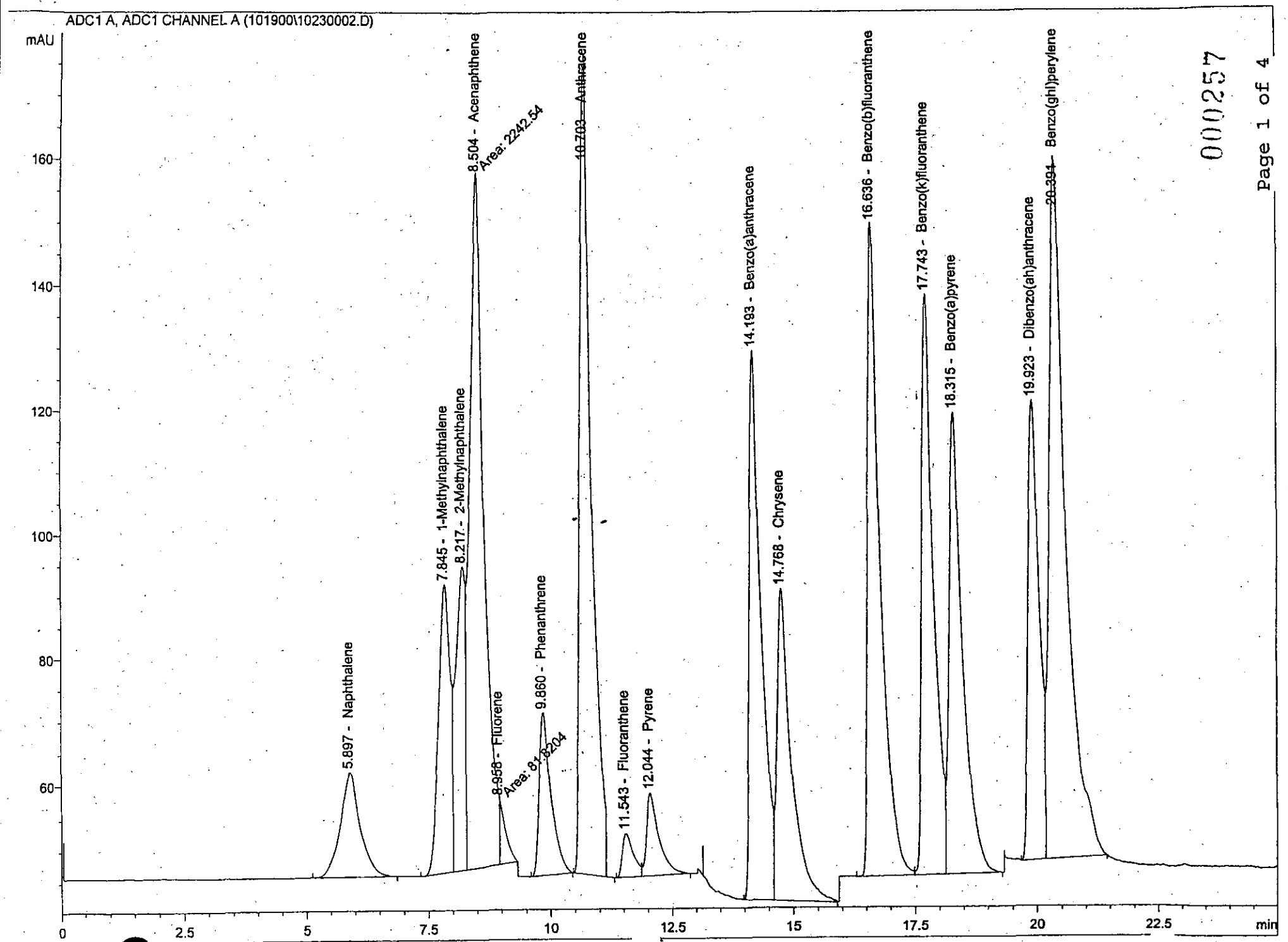
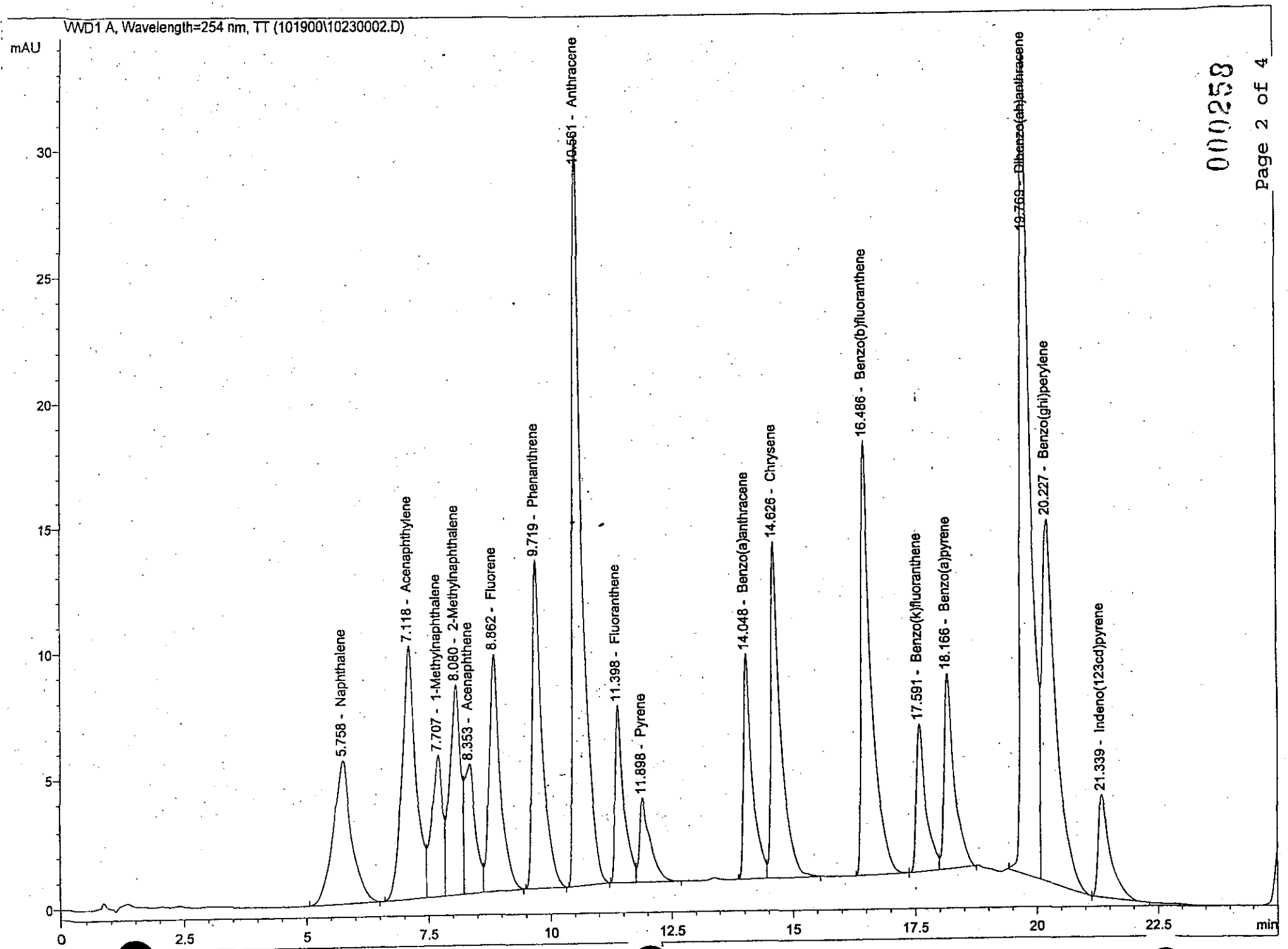
*** End of Report ***

000256


ADC1 A, ADC1 CHANNEL A (101900\10230002.D)
mAU
160
140
120
100
80
60
5.897 - Naphthalene
7.845 - 1-Methylnaphthalene
8.217 - 2-Methylnaphthalene
8.504 - Acenaphthene
Area: 2242.54
8.958 - Fluorene
Area: 81.8204
9.860 - Phenanthrene
10.703 - Anthracene
11.543 - Fluoranthene
12.044 - Pyrene
14.193 - Benzo(a)anthracene
14.768 - Chrysene
16.636 - Benzo(b)fluoranthene
17.743 - Benzo(k)fluoranthene
18.315 - Benzo(a)pyrene
19.923 - Dibenzo(ah)anthracene
20.394 - Benzo(ghi)perylene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000257


VWD1 A, Wavelength=254 nm, TT (101900\10230002.D)
mAU
30
25
20
15
10
5
0
5.758 - Naphthalene
7.118 - Acenaphthylene
7.707 - 1-Methylnaphthalene
8.080 - 2-Methylnaphthalene
8.353 - Acenaphthene
8.862 - Fluorene
9.719 - Phenanthrene
10.561 - Anthracene
11.398 - Fluoranthene
11.898 - Pyrene
14.048 - Benzo(a)anthracene
14.626 - Chrysene
16.486 - Benzo(b)fluoranthene
17.591 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.769 - Dibenzo(ah)anthracene
20.227 - Benzo(ghi)perylene
21.339 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000258

==========

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.890	BP	234.48811	1.08516e-2	2.54457		Naphthalene
7.839	PV	555.37067	6.15219e-3	3.41674		1-Methylnaphthalene
8.211	VV	675.87457	7.17474e-3	4.84922		2-Methylnaphthalene
8.498	MF	2215.51611	2.33821e-3	5.18034		Acenaphthene
8.960	FM	61.31166	1.45603e-2	8.92716e-1		Fluorene
9.856	BBA	174.53528	1.15954e-3	2.02381e-1		Phenanthrene
10.700	BBA	410.07867	2.22823e-4	9.13748e-2-		Anthracene
11.539	PV	25.15317	9.09642e-3	2.28804e-1		Fluoranthene
12.037	VBA	209.82175	2.24087e-3	4.70184e-1		Pyrene
14.187	BV	723.13647	3.36471e-4	2.43314e-1		Benzo(a)anthracene
14.766	VP	495.73309	5.29130e-4	2.62307e-1		Chrysene
16.643	BP	188.22644	4.53876e-4	8.54315e-2-		Benzo(b)fluoranthene
17.748	VV	313.58588	3.06083e-4	9.59833e-2-		Benzo(k)fluoranthene
18.317	VV	672.16028	3.66353e-4	2.46248e-1		Benzo(a)pyrene
19.926	BV	1240.69543	8.21628e-4	1.01939		Dibenzo(ah)anthracene
20.411	VBA	1194.89746	3.84841e-4	4.59846e-1		Benzo(ghi)perylene

Totals : 20.28886

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.751	BBA	71.12842	3.50440e-2	2.49262		Naphthalene
7.105	BV	53.74709	5.09516e-2	2.73850		Acenaphthylene
7.701	VV	59.98731	5.56690e-2	3.33943		1-Methylnaphthalene
8.074	VV	129.24025	3.98576e-2	5.15121		2-Methylnaphthalene
8.344	VV	79.38483	6.99282e-2	5.55124		Acenaphthene

000259

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.853	VBA	75.58694	7.34590e-3	5.55254e-1		Fluorene
9.715	BBA	70.19515	2.84193e-3	1.99490e-1		Phenanthrene
10.557	BBA	75.38005	1.24434e-3	9.37984e-2		Anthracene
11.397	BV	24.30515	1.15269e-2	2.80163e-1		Fluoranthene
11.890	VB	43.87326	1.07770e-2	4.72823e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.041	BV	54.32914	4.55551e-3	2.47497e-1		Benzo(a)anthracene
14.622	VB	88.99771	2.84491e-3	2.53191e-1		Chrysene
16.492	BB	25.16528	3.70473e-3	9.32306e-2		Benzo(b)fluoranthene
17.596	PV	15.64363	5.99013e-3	9.37073e-2		Benzo(k)fluoranthene
18.166	VBA	53.55561	4.29891e-3	2.30231e-1		Benzo(a)pyrene
19.771	BV	501.06424	2.01056e-3	1.00742		Dibenzo(ah)anthracene
20.238	VP	139.00601	3.73077e-3	5.18600e-1		Benzo(ghi)perylene
21.355	VBA	34.52599	6.88437e-3	2.37690e-1		Indeno(123cd)pyrene
Totals :				23.55610		

Uncalibrated Peaks : compound name not specified

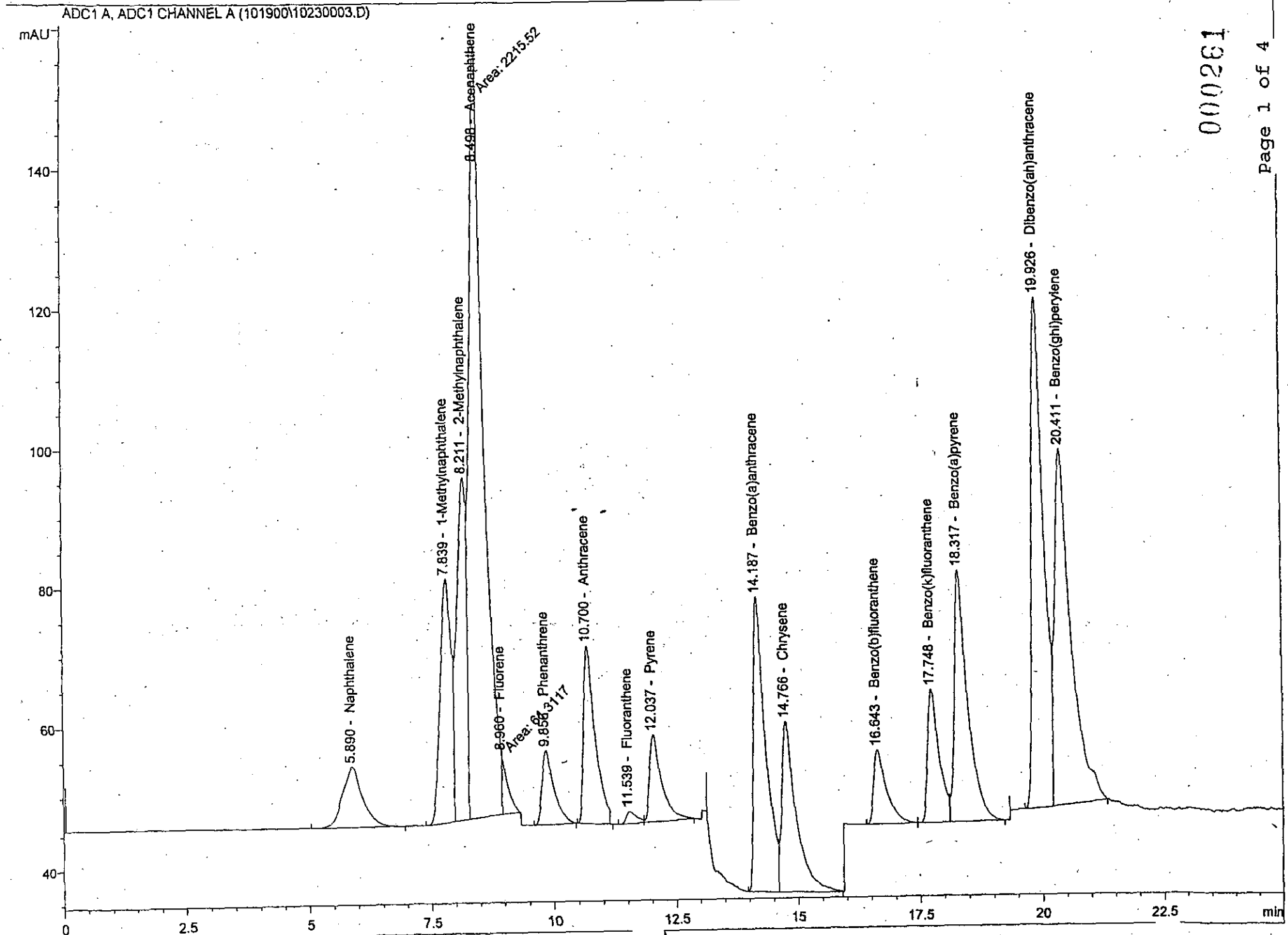
Results obtained with enhanced integrator!
3 Warnings or Errors :

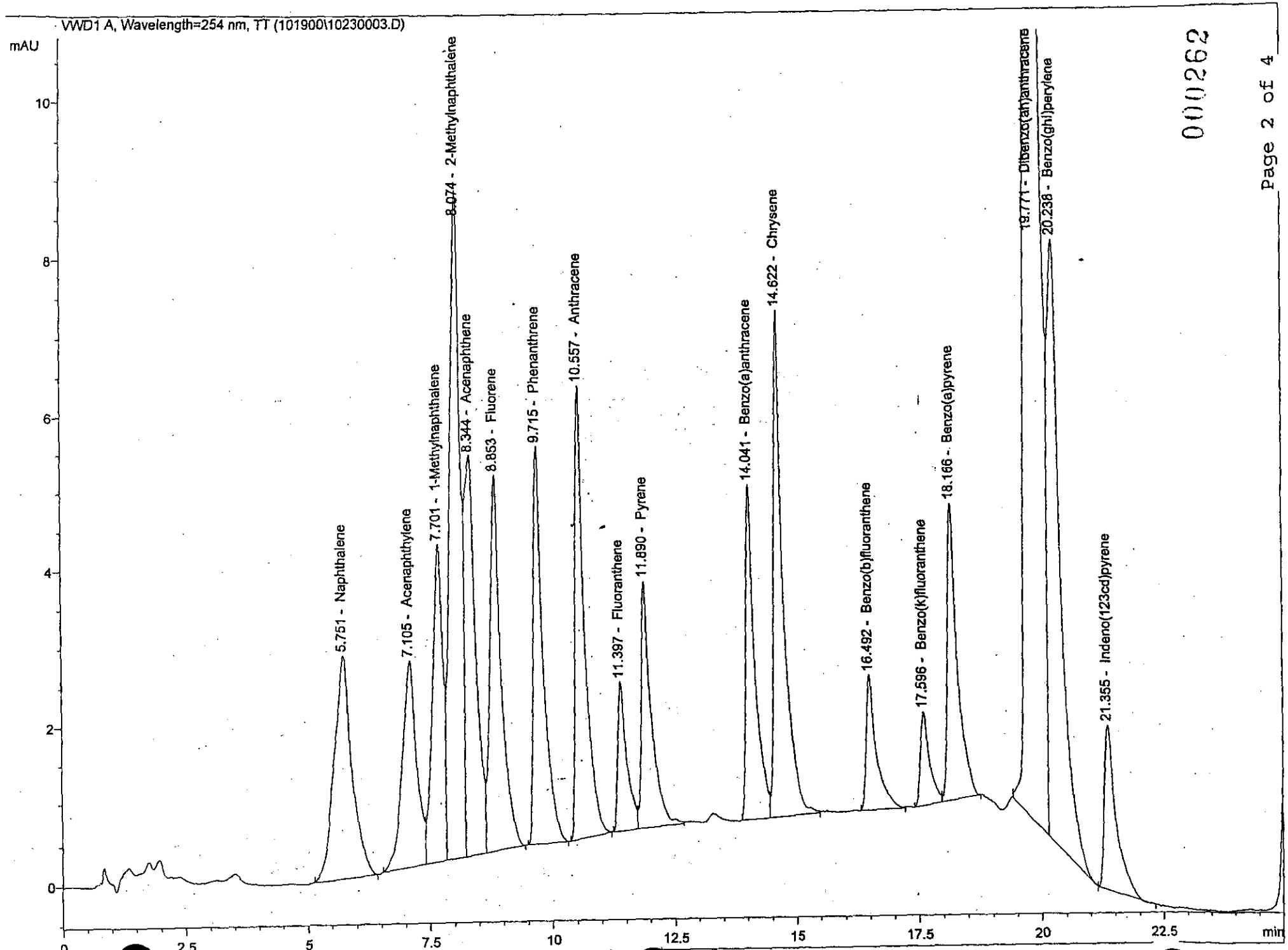
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

000260

000261


ADC1 A, ADC1 CHANNEL A (101900\10230003.D)
mAU
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.890 - Naphthalene
7.839 - 1-Methylnaphthalene
8.211 - 2-Methylnaphthalene
8.498 - Acenaphthene
Area: 2215.52
8.960 - Fluorene
Area: 6
9.858 - Phenanthrene
3117
10.700 - Anthracene
11.539 - Fluoranthene
12.037 - Pyrene
14.187 - Benzo(a)anthracene
14.766 - Chrysene
16.643 - Benzo(b)fluoranthene
17.748 - Benzo(k)fluoranthene
18.317 - Benzo(a)pyrene
19.926 - Dibenzo(ah)anthracene
20.411 - Benzo(ghi)perylene


VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000262

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
6.000		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

NO HITS

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.036	PB	3.51668	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000263

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000264

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

000265

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

000266

==========

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.853	VBA	75.58694	7.34590e-3	5.55254e-1		Fluorene
9.715	BBA	70.19515	2.84193e-3	1.99490e-1		Phenanthrene
10.557	BBA	75.38005	1.24434e-3	9.37984e-2-		Anthracene
11.397	BV	24.30515	1.15269e-2	2.80163e-1		Fluoranthene
11.890	VB	43.87326	1.07770e-2	4.72823e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.041	BV	54.32914	4.55551e-3	2.47497e-1		Benzo(a)anthracene
14.622	VB	88.99771	2.84491e-3	2.53191e-1		Chrysene
16.492	BB	25.16528	3.70473e-3	9.32306e-2-		Benzo(b)fluoranthene
17.596	PV	15.64363	5.99013e-3	9.37073e-2-		Benzo(k)fluoranthene
18.166	VBA	53.55561	4.29891e-3	2.30231e-1		Benzo(a)pyrene
19.771	BV	501.06424	2.01056e-3	1.00742		Dibenzo(ah)anthracene
20.238	VP	139.00601	3.73077e-3	5.18600e-1		Benzo(ghi)perylene
21.355	VBA	34.52599	6.88437e-3	2.37690e-1		Indeno(123cd)pyrene

Totals : 23.55610

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

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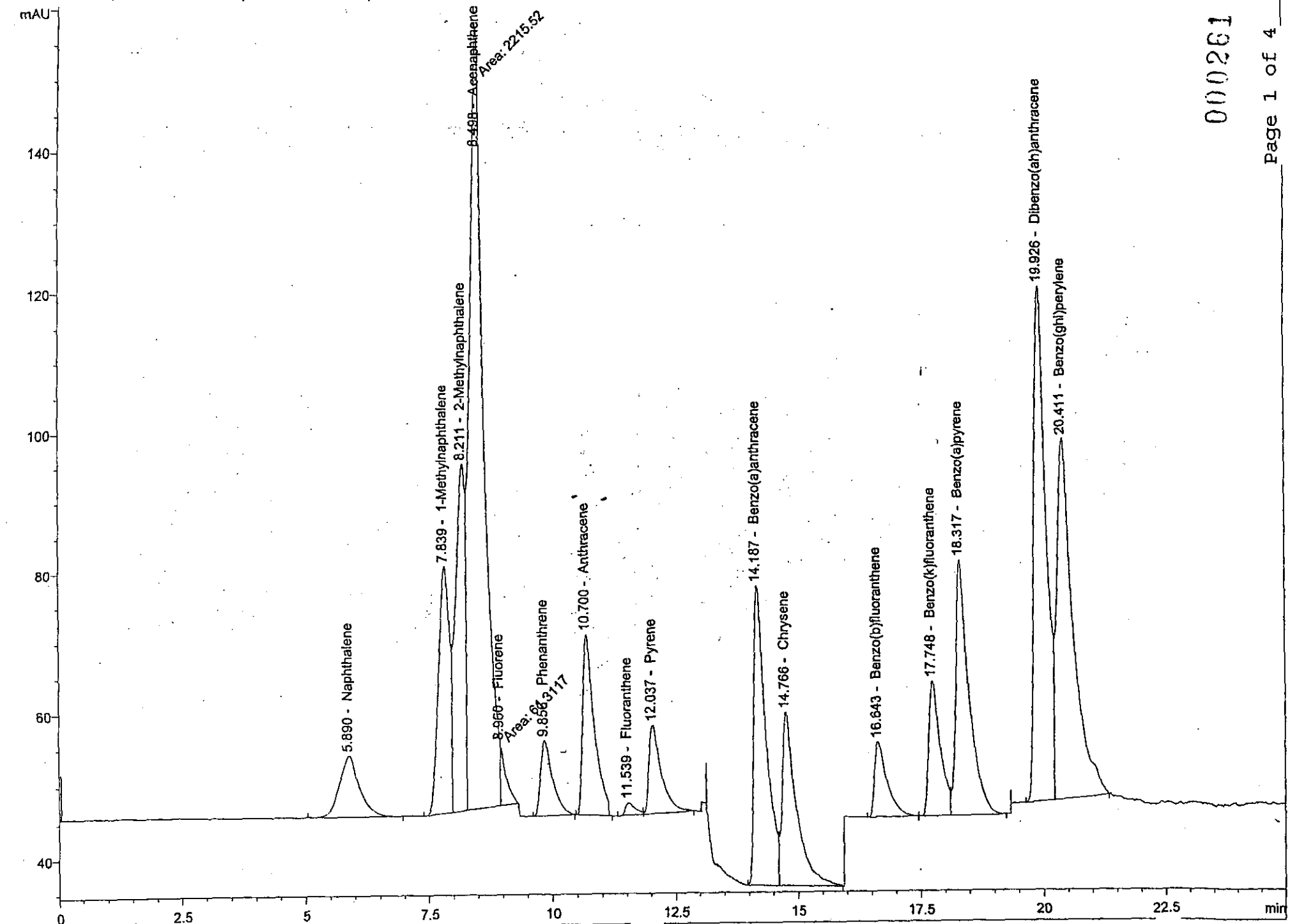
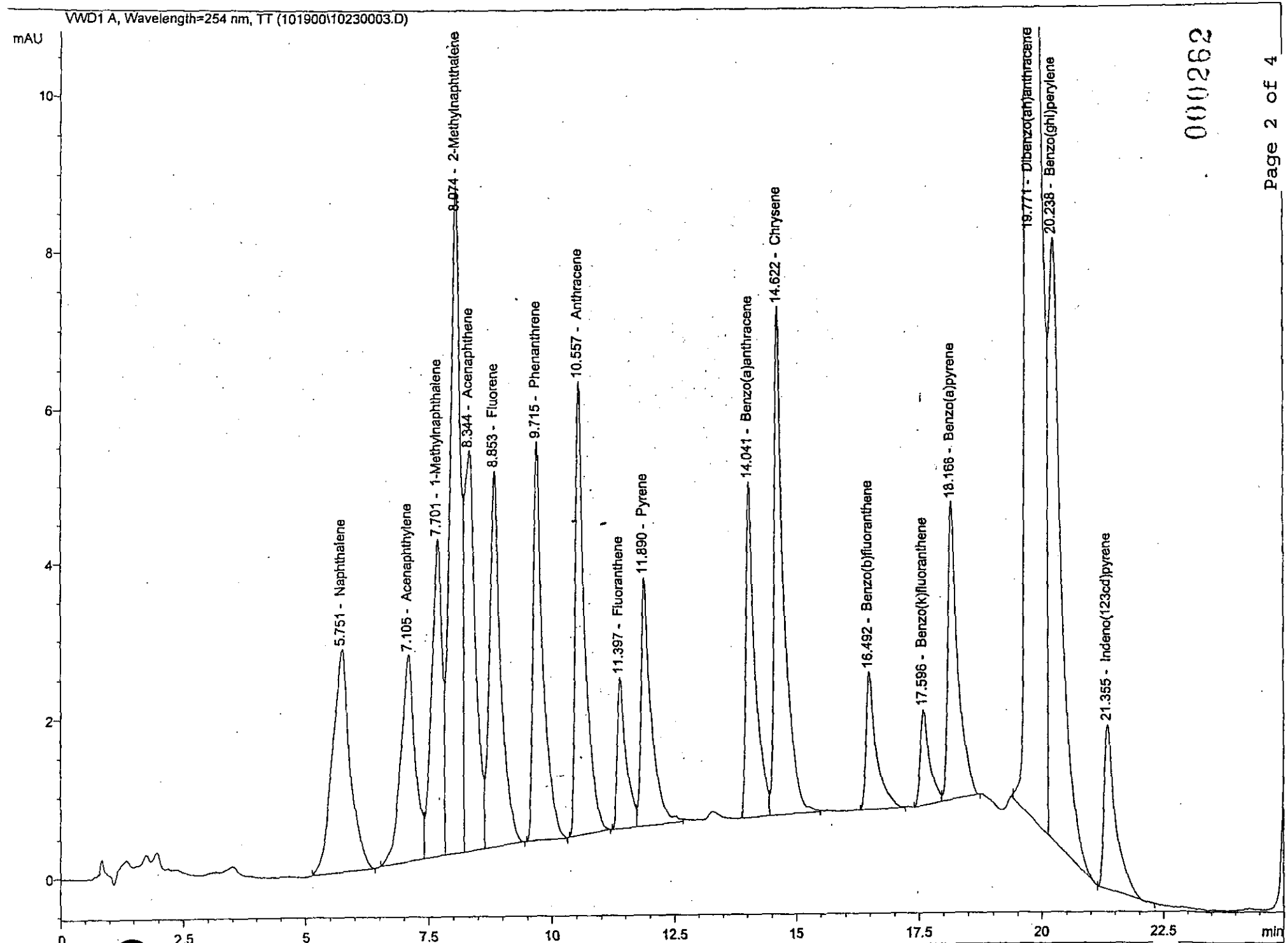
*** End of Report ***

000260

000261

ADC1 A, ADC1 CHANNEL A (101900\10230003.D)




VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

0001262

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
6.000		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

NO HITS

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.036	PB	3.51668	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000263

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000264

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

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Area Percent Report

==========

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

000265

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

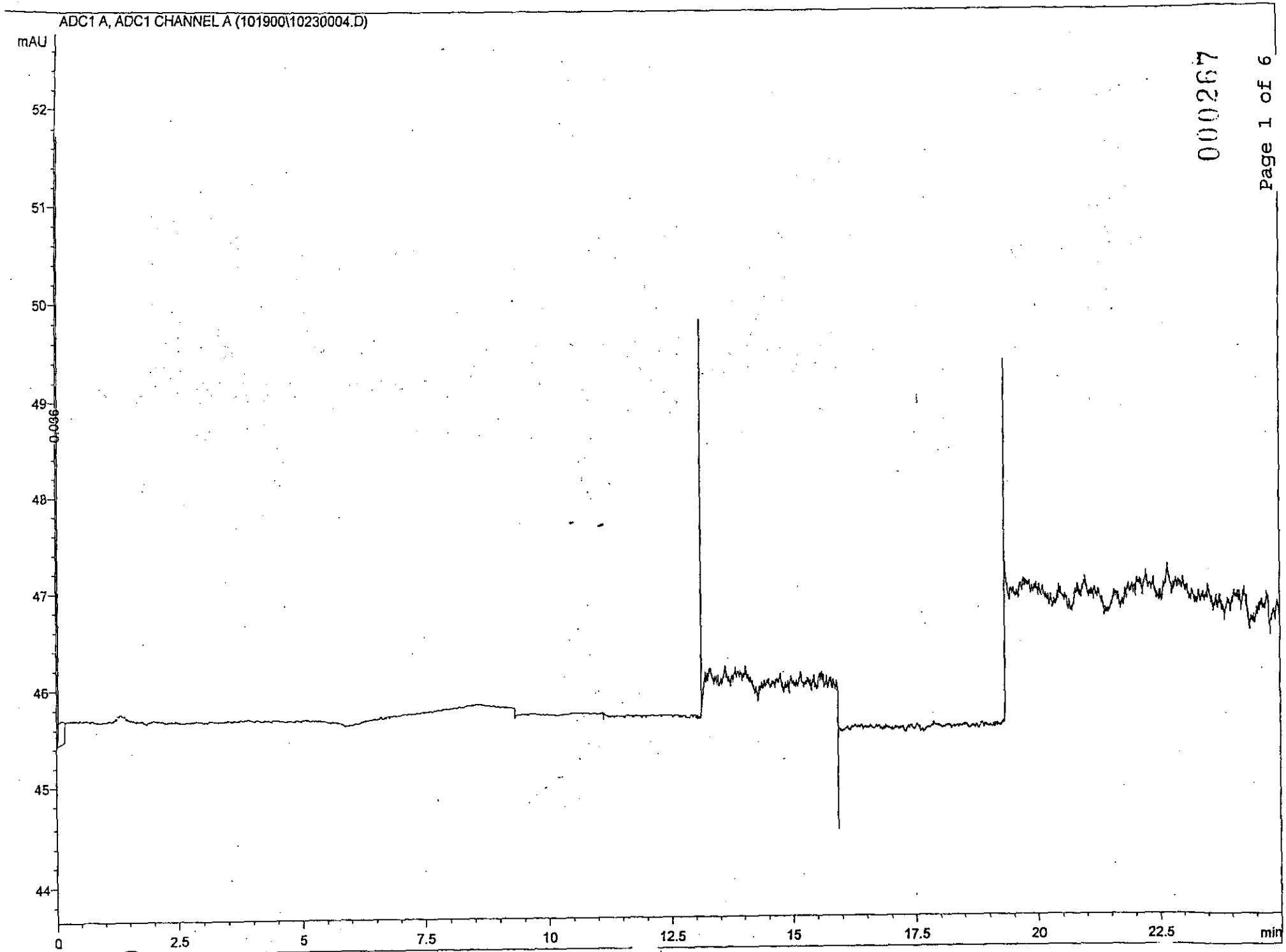
Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

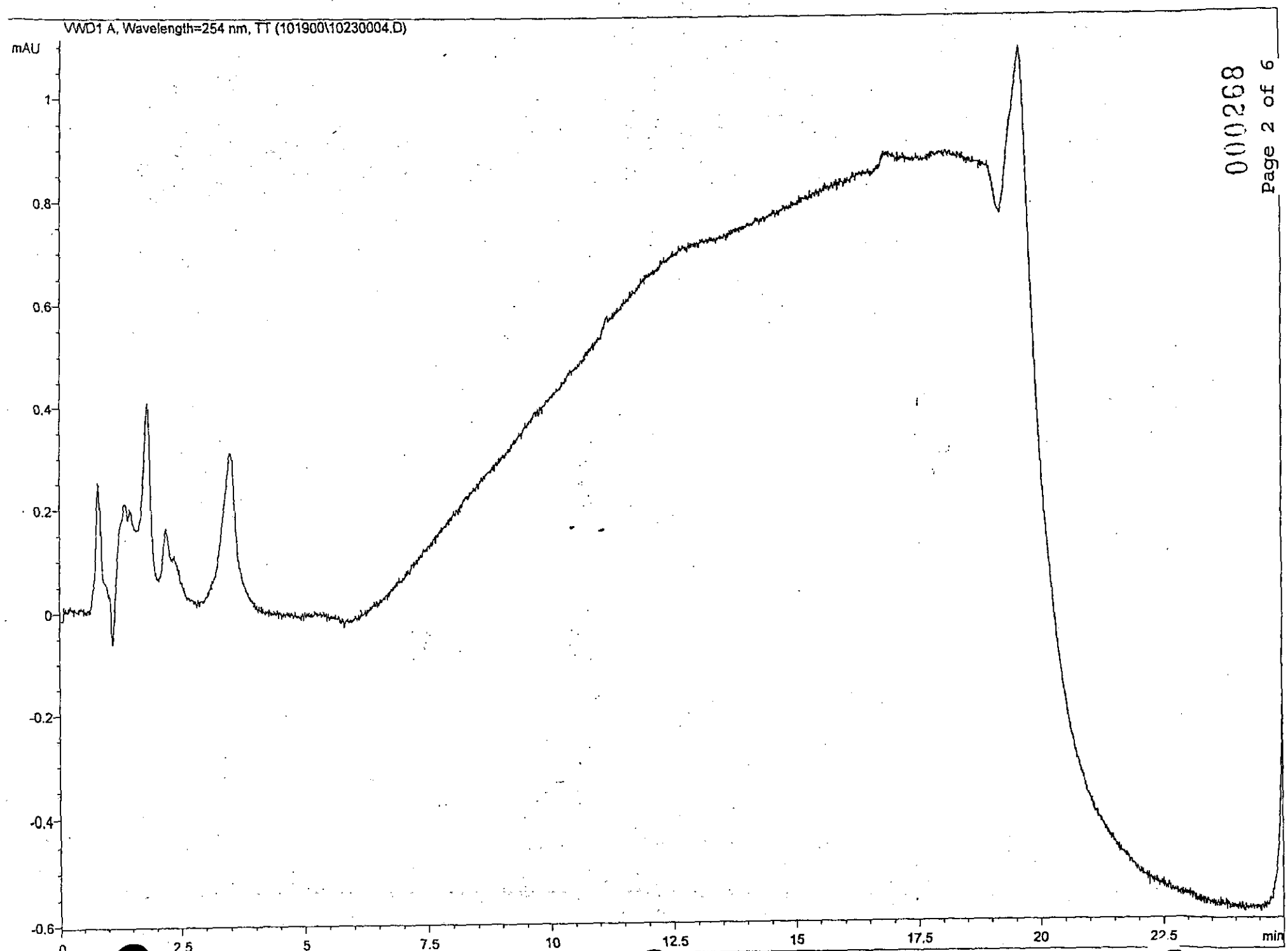
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

000266


ADC1 A, ADC1 CHANNEL A (101900\10230004.D)
mAU
52
51
50
49
0.036
48
47
46
45
44
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (101900\10230004.D)
mAU
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

Injection Date : 10/24/00 4:08:17 AM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 15
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 3:21:05 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.893	PBA	478.44342	1.08238e-2	5.17857		Naphthalene
7.843	PV	775.84052	6.18949e-3	4.80205		1-Methylnaphthalene
8.208	VV	705.35034	7.17956e-3	5.06410		2-Methylnaphthalene
8.505	MF	2203.67407	2.33808e-3	5.15237		Acenaphthene
8.873	FM	157.66521	1.59179e-2	2.50970+		Fluorene
9.858	PBA	438.93094	1.18323e-3	5.19357e-1		Phenanthrene
10.690	BBA	2157.29907	2.37053e-4	5.11394e-1-		Anthracene
11.531	BV	105.33149	9.30365e-3	9.79967e-1		Fluoranthene
12.027	VBA	240.99319	2.24162e-3	5.40216e-1		Pyrene
14.166	BV	1548.14551	3.45450e-4	5.34807e-1		Benzo(a)anthracene
14.726	VP	1003.27460	5.23054e-4	5.24767e-1		Chrysene
16.590	PV	1908.01562	5.56047e-4	1.06095		Benzo(b)fluoranthene
17.672	VV	1578.48706	3.18738e-4	5.03124e-1		Benzo(k)fluoranthene
18.245	VBA	1427.26697	3.68382e-4	5.25779e-1		Benzo(a)pyrene
19.829	BV	1180.06116	8.21085e-4	9.68930e-1		Dibenzo(ah)anthracene
20.291	VBA	2776.58569	3.83567e-4	1.06501		Benzo(ghi)perylene

Totals : 30.44110

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.752	PBA	148.26740	3.52601e-2	5.22793		Naphthalene
7.107	BV	199.76038	5.15230e-2	10.29225		Acenaphthylene

==========

Injection Date : 10/24/00 4:08:17 AM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 15
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 3:21:05 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.701	VV	89.35323	5.60782e-2	5.01077		1-Methylnaphthalene
8.074	VV	125.24007	3.98481e-2	4.99057		2-Methylnaphthalene
8.352	VV	83.45036	6.99536e-2	5.83766		Acenaphthene
8.856	VBA	145.40239	7.22262e-3	1.05019		Fluorene
9.715	BBA	181.96098	2.89691e-3	5.27124e-1		Phenanthrene
10.545	BBA	394.43820	1.31717e-3	5.19542e-1-		Anthracene
11.383	BV	86.85467	1.17804e-2	1.02318		Fluoranthene
11.880	VP	50.93433	1.07782e-2	5.48982e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.019	BV	111.82954	4.59084e-3	5.13391e-1		Benzo(a)anthracene
14.583	VB	182.48898	2.87426e-3	5.24520e-1		Chrysene
16.437	PP	248.31625	4.15268e-3	1.03118		Benzo(b)fluoranthene
17.519	VV	79.61861	6.23683e-3	4.96568e-1		Benzo(k)fluoranthene
18.094	VBA	114.81594	4.37576e-3	5.02407e-1		Benzo(a)pyrene
19.675	BV	489.16412	2.01009e-3	9.83263e-1		Dibenzo(ah)anthracene
20.124	VP	286.26694	3.68330e-3	1.05441		Benzo(ghi)perylene
21.206	VBA	67.25397	6.76791e-3	4.55169e-1		Indeno(123cd)pyrene

Totals : 40.58910

Uncalibrated Peaks : compound name not specified

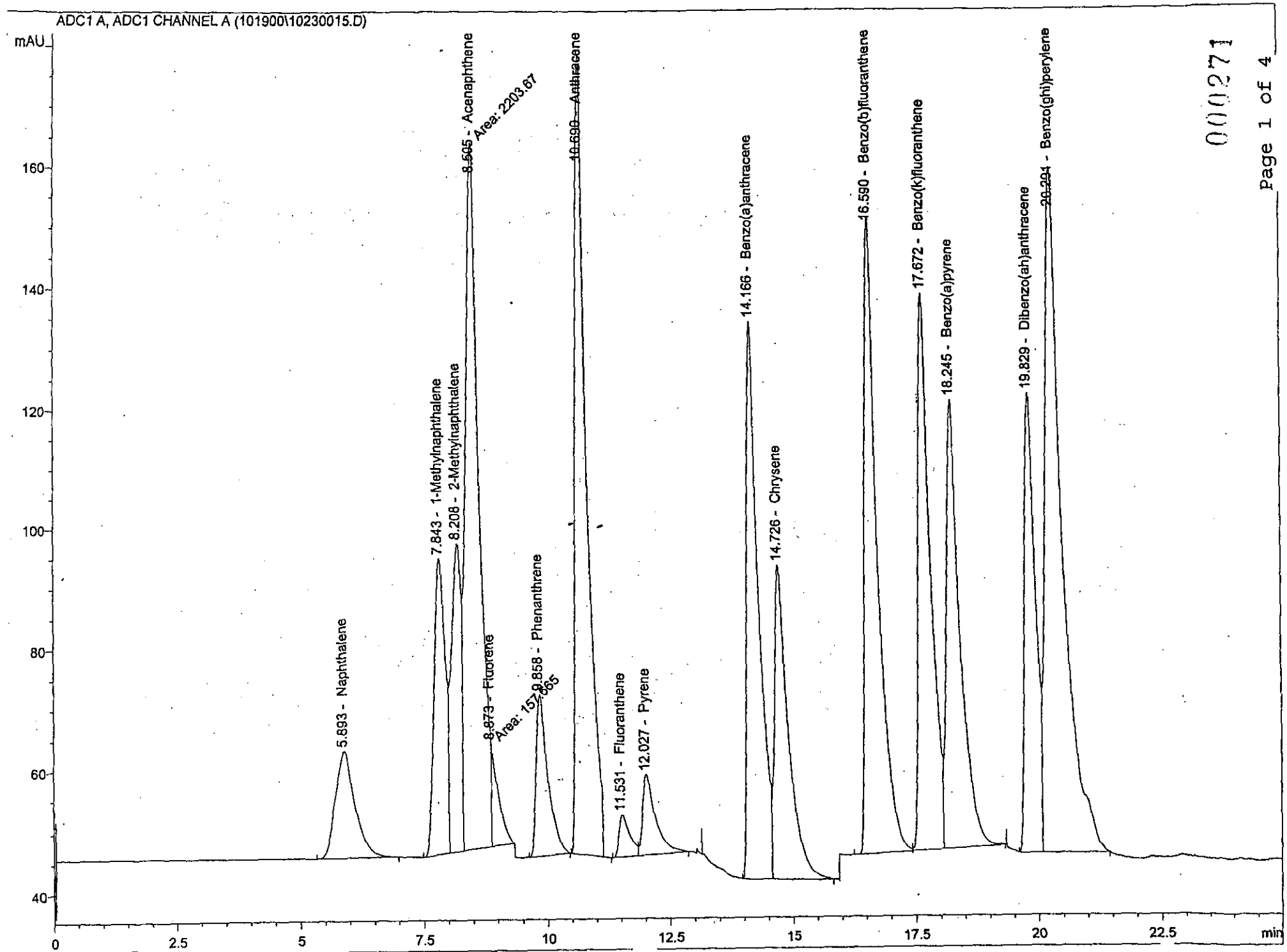
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

000270


ADC1 A, ADC1 CHANNEL A (101900\10230015.D)
mAU
160
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.893 - Naphthalene
7.843 - 1-Methylnaphthalene
8.208 - 2-Methylnaphthalene
8.505 - Acenaphthene
Area: 2203.67
8.873 - Fluorene
Area: 157
9.858 - Phenanthrene
.65
10.690 - Anthracene
11.531 - Fluoranthene
12.027 - Pyrene
14.166 - Benzo(a)anthracene
14.726 - Chrysene
16.590 - Benzo(b)fluoranthene
17.672 - Benzo(k)fluoranthene
18.245 - Benzo(a)pyrene
19.829 - Dibenzo(ah)anthracene
20.294 - Benzo(ghi)perylene

001271

==========

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.853	VBA	75.58694	7.34590e-3	5.55254e-1		Fluorene
9.715	BBA	70.19515	2.84193e-3	1.99490e-1		Phenanthrene
10.557	BBA	75.38005	1.24434e-3	9.37984e-2-		Anthracene
11.397	BV	24.30515	1.15269e-2	2.80163e-1		Fluoranthene
11.890	VB	43.87326	1.07770e-2	4.72823e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.041	BV	54.32914	4.55551e-3	2.47497e-1		Benzo(a)anthracene
14.622	VB	88.99771	2.84491e-3	2.53191e-1		Chrysene
16.492	BB	25.16528	3.70473e-3	9.32306e-2-		Benzo(b)fluoranthene
17.596	PV	15.64363	5.99013e-3	9.37073e-2-		Benzo(k)fluoranthene
18.166	VBA	53.55561	4.29891e-3	2.30231e-1		Benzo(a)pyrene
19.771	BV	501.06424	2.01056e-3	1.00742		Dibenzo(ah)anthracene
20.238	VP	139.00601	3.73077e-3	5.18600e-1		Benzo(ghi)perylene
21.355	VBA	34.52599	6.88437e-3	2.37690e-1		Indeno(123cd)pyrene
Totals :				23.55610		

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

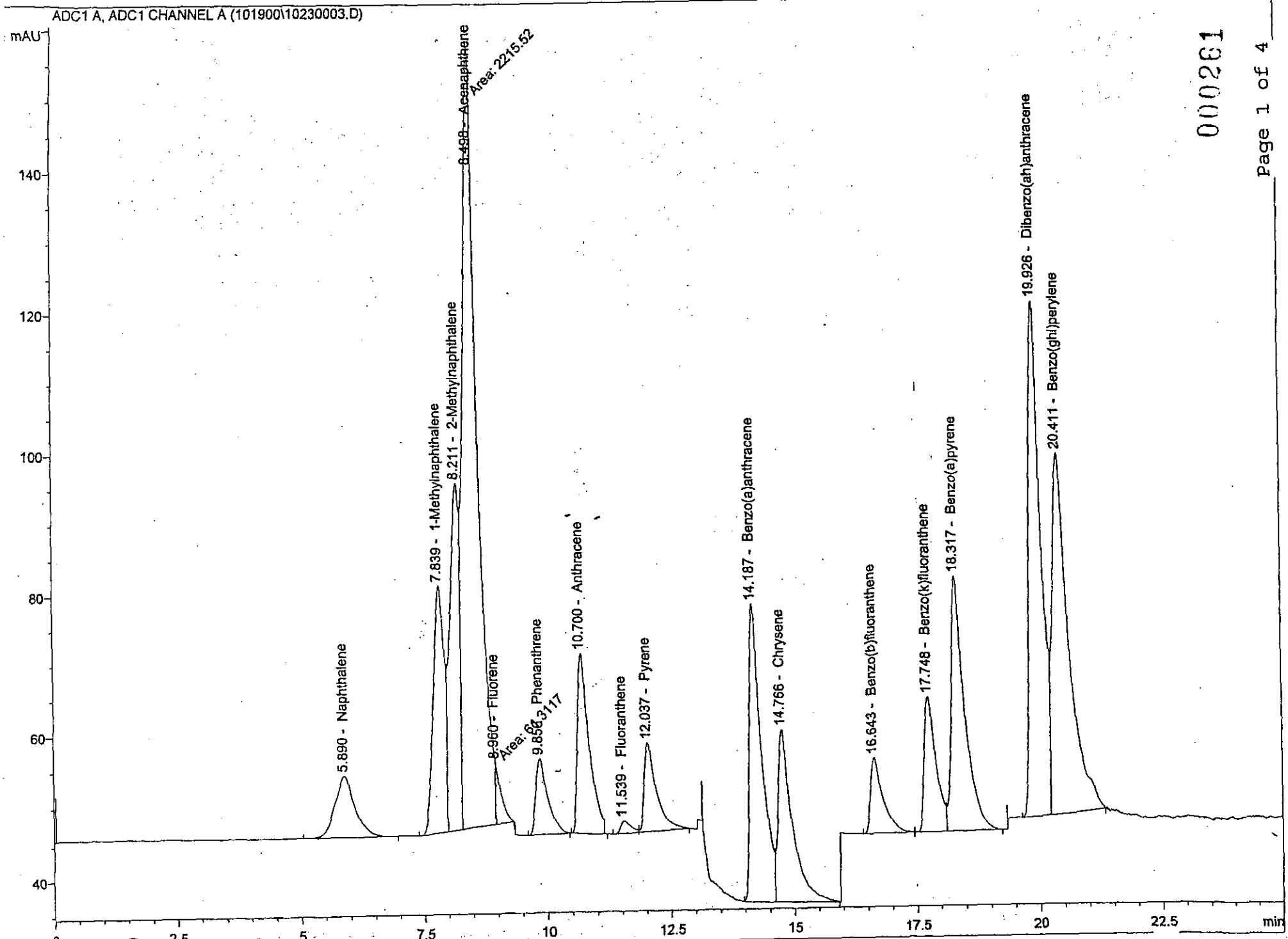
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

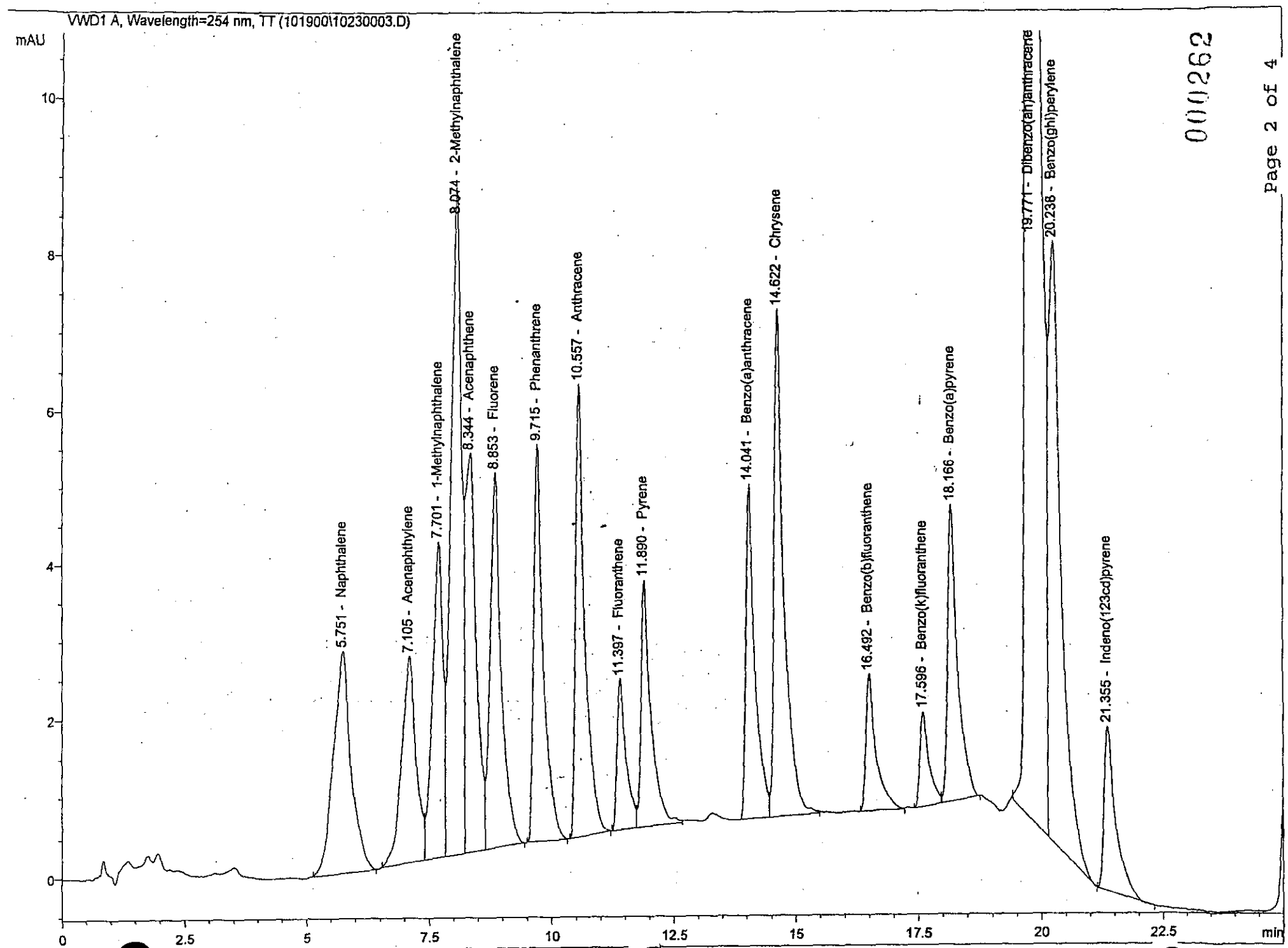
==========

*** End of Report ***

000260

000261


ADC1 A, ADC1 CHANNEL A (101900\10230003.D)
mAU
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.890 - Naphthalene
7.839 - 1-Methylnaphthalene
8.211 - 2-Methylnaphthalene
8.498 - Acenaphthene
Area: 2215.52
8.960 - Fluorene
Area: 61
9.858 - Phenanthrene
3117
10.700 - Anthracene
11.539 - Fluoranthene
12.037 - Pyrene
14.187 - Benzo(a)anthracene
14.766 - Chrysene
16.643 - Benzo(b)fluoranthene
17.748 - Benzo(k)fluoranthene
18.317 - Benzo(a)pyrene
19.926 - Dibenzo(ah)anthracene
20.411 - Benzo(ghi)perylene


VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000262

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
6.000		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

NO HITS

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.036	PB	3.51668	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000263

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000264

Data File C:\HPCHEM\1\DATA\

==========

Injection Date : 10/23/00 6:39:43 PM Seq. Line : 4
Sample Name : CCB Vial : 21
Acq. Operator : RS Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

000265

Data File C:\HPCHEM\1\DATA\

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

000266

==========

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.853	VBA	75.58694	7.34590e-3	5.55254e-1		Fluorene
9.715	BBA	70.19515	2.84193e-3	1.99490e-1		Phenanthrene
10.557	BBA	75.38005	1.24434e-3	9.37984e-2-		Anthracene
11.397	BV	24.30515	1.15269e-2	2.80163e-1		Fluoranthene
11.890	VB	43.87326	1.07770e-2	4.72823e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.041	BV	54.32914	4.55551e-3	2.47497e-1		Benzo(a)anthracene
14.622	VB	88.99771	2.84491e-3	2.53191e-1		Chrysene
16.492	BB	25.16528	3.70473e-3	9.32306e-2-		Benzo(b)fluoranthene
17.596	PV	15.64363	5.99013e-3	9.37073e-2-		Benzo(k)fluoranthene
18.166	VBA	53.55561	4.29891e-3	2.30231e-1		Benzo(a)pyrene
19.771	BV	501.06424	2.01056e-3	1.00742		Dibenzo(ah)anthracene
20.238	VP	139.00601	3.73077e-3	5.18600e-1		Benzo(ghi)perylene
21.355	VBA	34.52599	6.88437e-3	2.37690e-1		Indeno(123cd)pyrene

Totals : 23.55610

Uncalibrated Peaks : compound name not specified

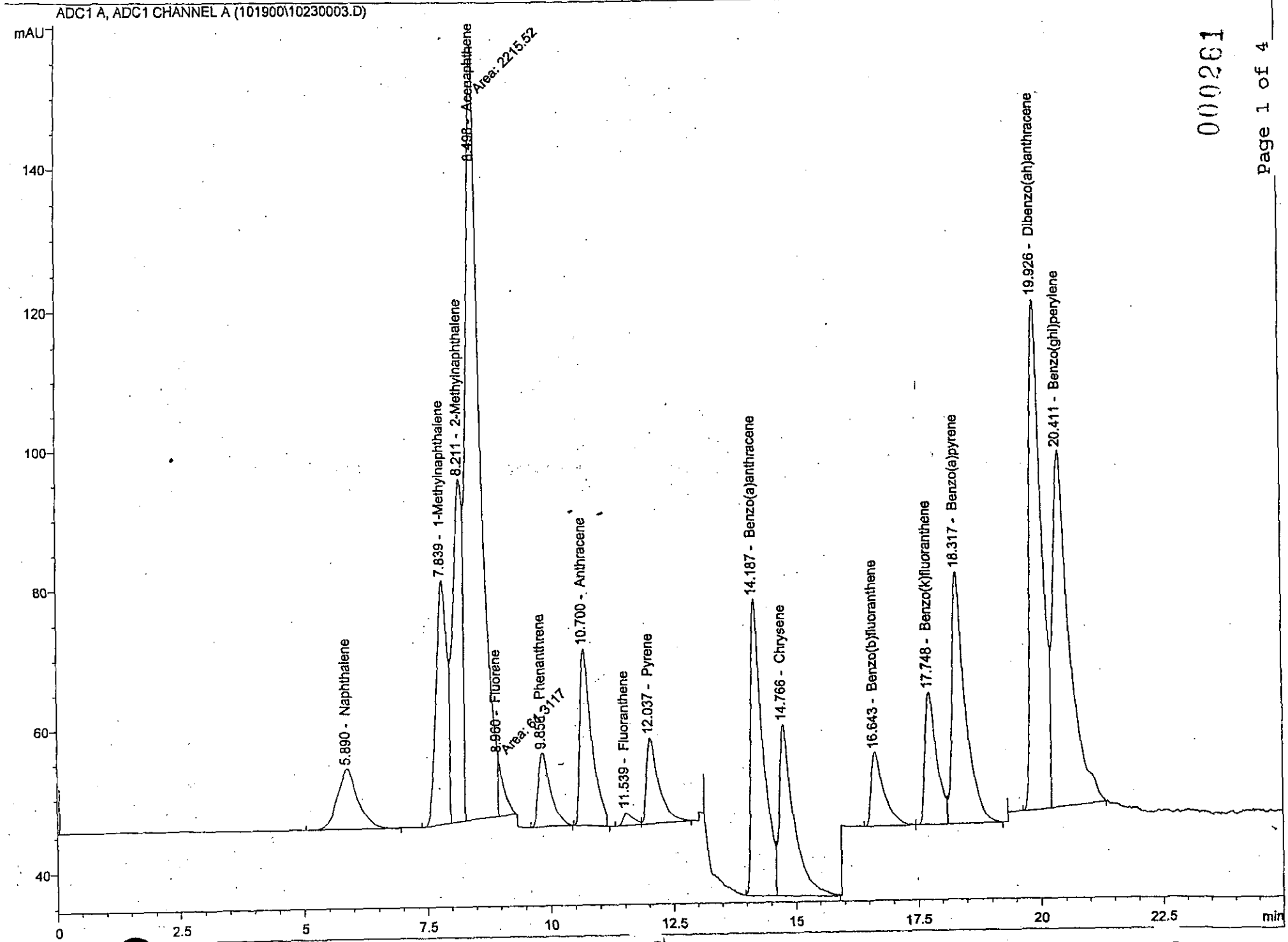
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

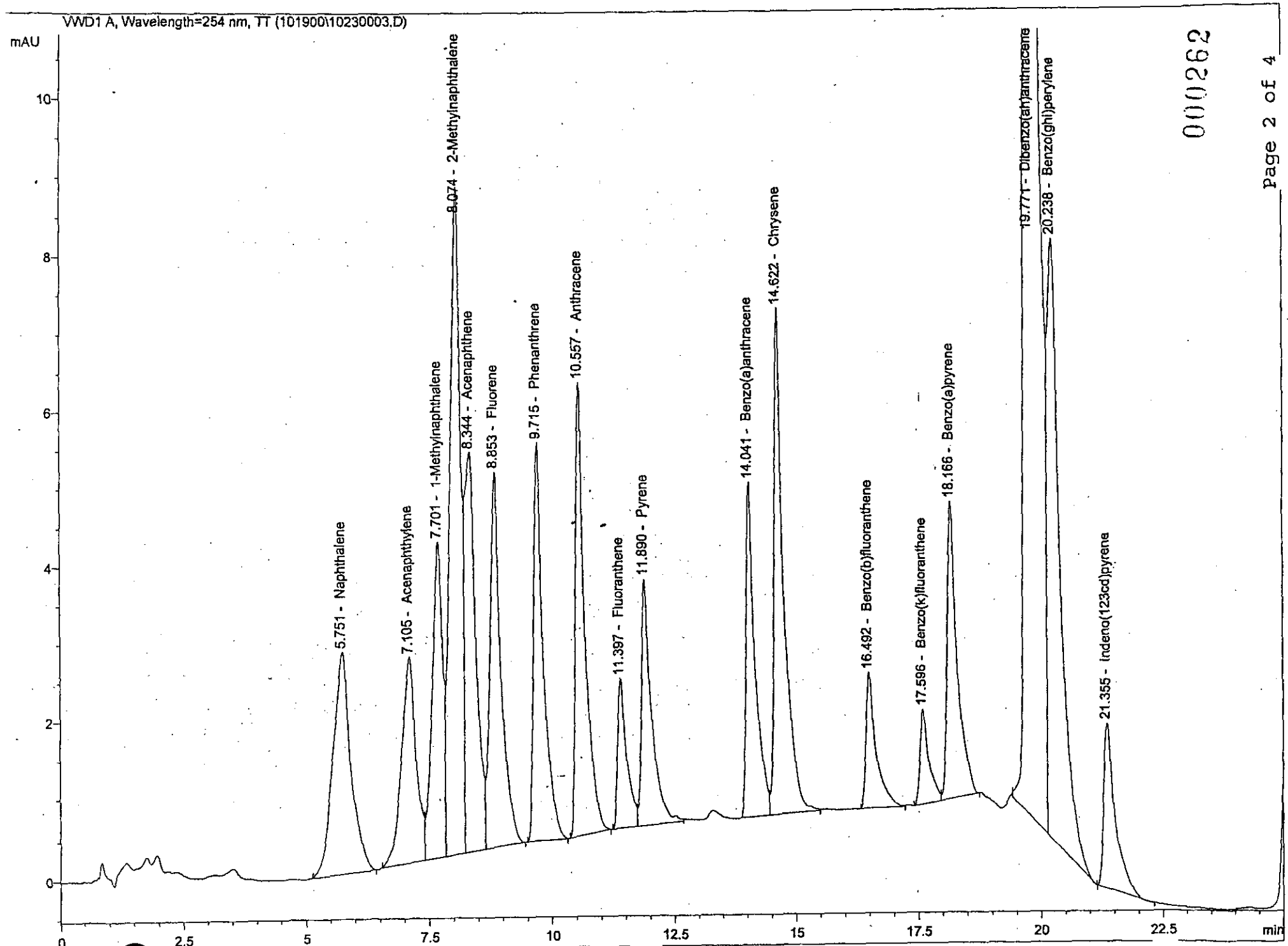
*** End of Report ***

000260



000281

Page 1 of 4


VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000262

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
6.000		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

NO HITS

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.036	PB	3.51668	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000263

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000264

Data File C:\HPCHEM\1\DATA\...

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

ethod : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

000265

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

000266

==========

Injection Date : 10/23/00 5:48:06 PM
Sample Name : CCV 2nd EPA
Acq. Operator : RS

Seq. Line : 3
Vial : 72
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.853	VBA	75.58694	7.34590e-3	5.55254e-1		Fluorene
9.715	BBA	70.19515	2.84193e-3	1.99490e-1		Phenanthrene
10.557	BBA	75.38005	1.24434e-3	9.37984e-2	-	Anthracene
11.397	BV	24.30515	1.15269e-2	2.80163e-1		Fluoranthene
11.890	VB	43.87326	1.07770e-2	4.72823e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.041	BV	54.32914	4.55551e-3	2.47497e-1		Benzo(a)anthracene
14.622	VB	88.99771	2.84491e-3	2.53191e-1		Chrysene
16.492	BB	25.16528	3.70473e-3	9.32306e-2	-	Benzo(b)fluoranthene
17.596	PV	15.64363	5.99013e-3	9.37073e-2	-	Benzo(k)fluoranthene
18.166	VBA	53.55561	4.29891e-3	2.30231e-1		Benzo(a)pyrene
19.771	BV	501.06424	2.01056e-3	1.00742		Dibenzo(ah)anthracene
20.238	VP	139.00601	3.73077e-3	5.18600e-1		Benzo(ghi)perylene
21.355	VBA	34.52599	6.88437e-3	2.37690e-1		Indeno(123cd)pyrene
Totals :				23.55610		

Uncalibrated Peaks : compound name not specified

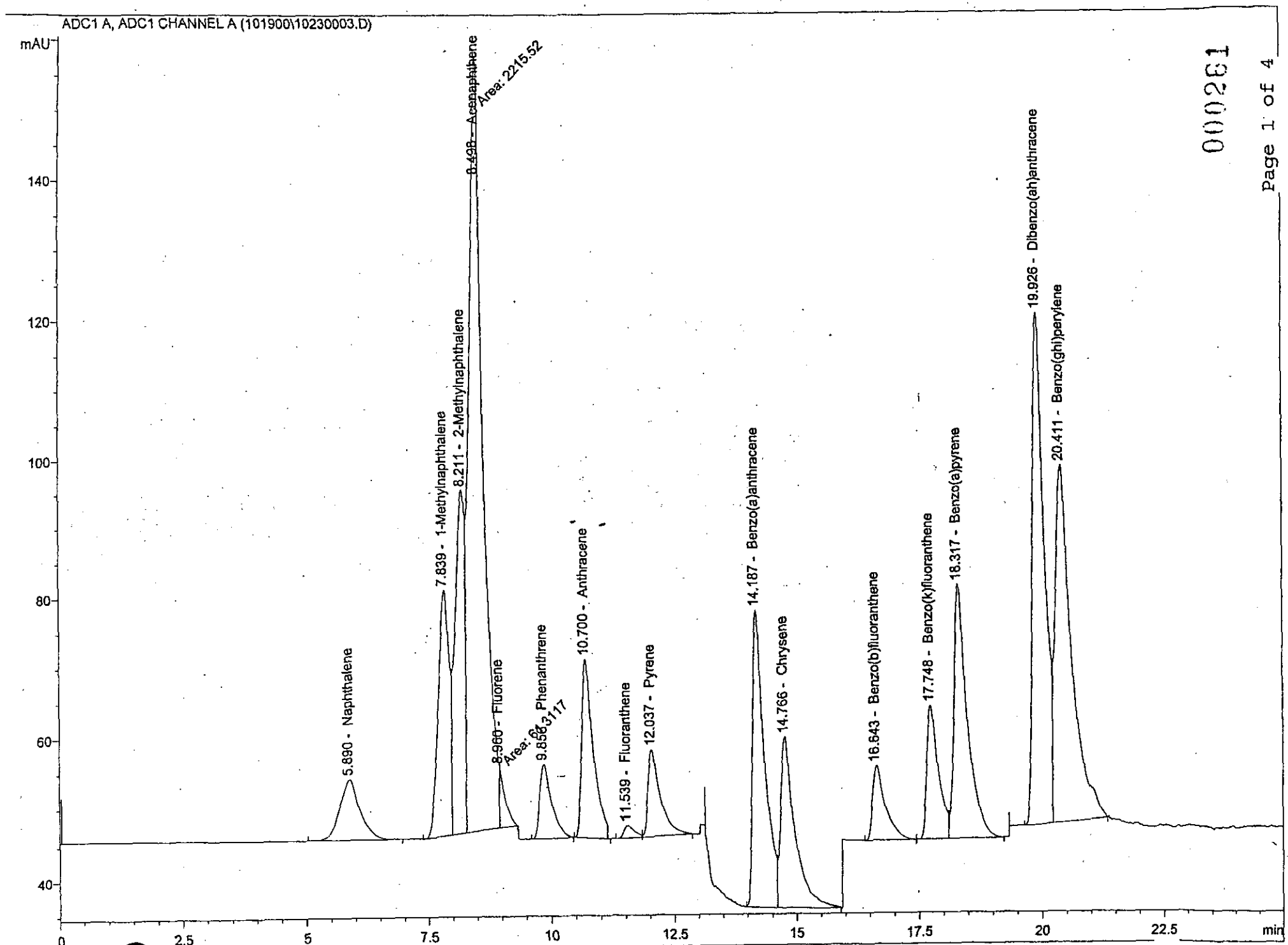
Results obtained with enhanced integrator!
3 Warnings or Errors :

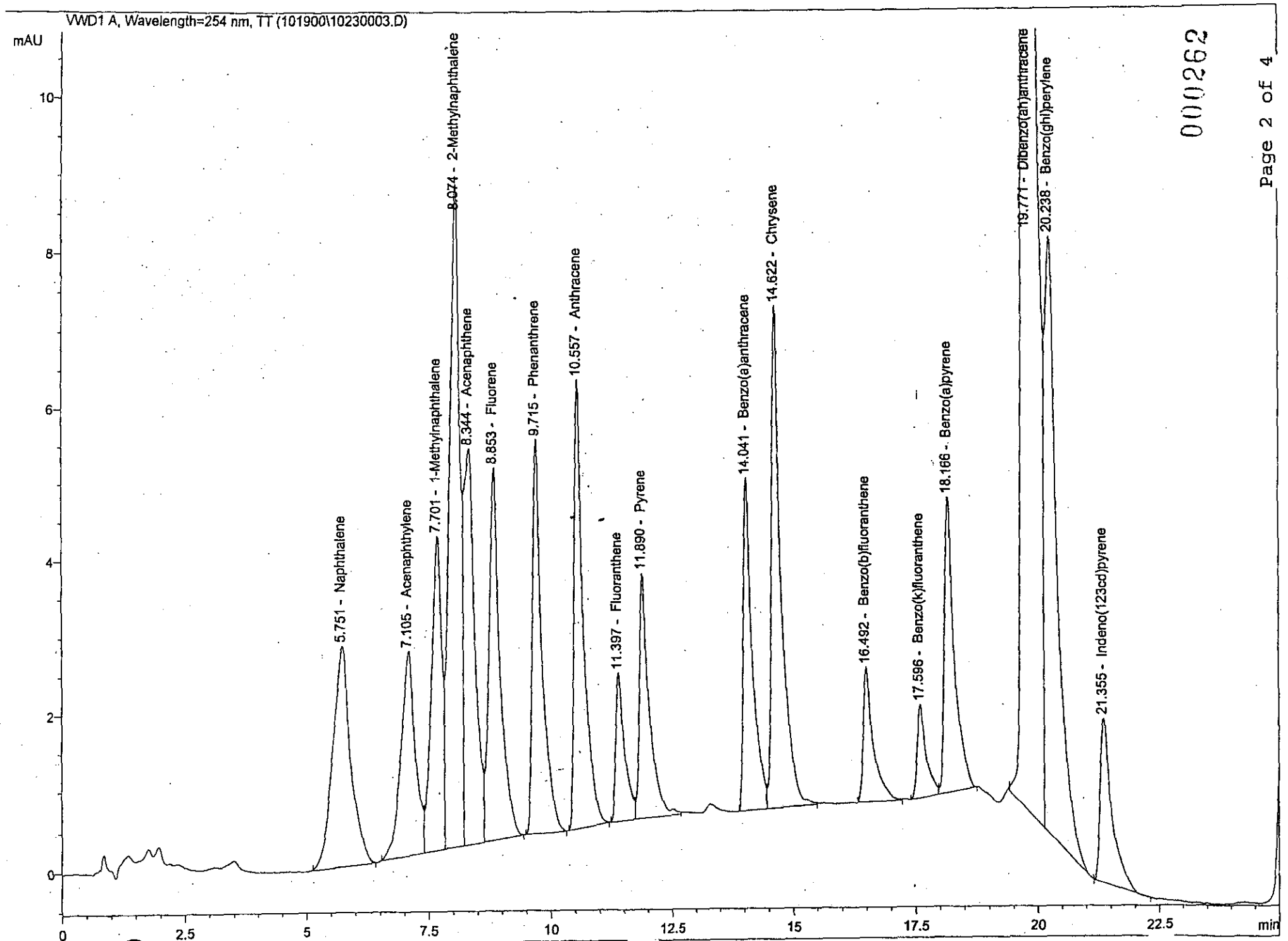
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

000260


ADC1 A, ADC1 CHANNEL A (101900\10230003.D)
mAU
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.890 - Naphthalene
7.839 - 1-Methylnaphthalene
8.211 - 2-Methylnaphthalene
8.498 - Acenaphthene
Area: 2215.52
8.960 - Fluorene
Area: 6
9.856 - Phenanthrene
3117
10.700 - Anthracene
11.539 - Fluoranthene
12.037 - Pyrene
14.187 - Benzo(a)anthracene
14.766 - Chrysene
16.643 - Benzo(b)fluoranthene
17.748 - Benzo(k)fluoranthene
18.317 - Benzo(a)pyrene
19.926 - Dibenzo(ah)anthracene
20.411 - Benzo(ghi)perylene


VWD1 A, Wavelength=254 nm, TT (101900\10230003.D)
mAU
10
8
6
4
2
0
5.751 - Naphthalene
7.105 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.344 - Acenaphthene
8.853 - Fluorene
9.715 - Phenanthrene
10.557 - Anthracene
11.397 - Fluoranthene
11.890 - Pyrene
14.041 - Benzo(a)anthracene
14.622 - Chrysene
16.492 - Benzo(b)fluoranthene
17.596 - Benzo(k)fluoranthene
18.166 - Benzo(a)pyrene
19.771 - Dibenzo(ah)anthracene
20.238 - Benzo(ghi)perylene
21.355 - Indeno(123cd)pyrene
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000262

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
6.000		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

NO HITS

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.036	PB	3.51668	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000263

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.771		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000264

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 10/5/00 9:24:21 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	6.000		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.036	PB	0.0172	3.51668	100.0000	?
Uncalib. totals :				3.51668	100.0000	

Results obtained with enhanced integrator!

000265

==========

Injection Date : 10/23/00 6:39:43 PM
Sample Name : CCB
Acq. Operator : RS

Seq. Line : 4
Vial : 21
Inj : 1
Inj Volume : 12 µl

Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.771		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

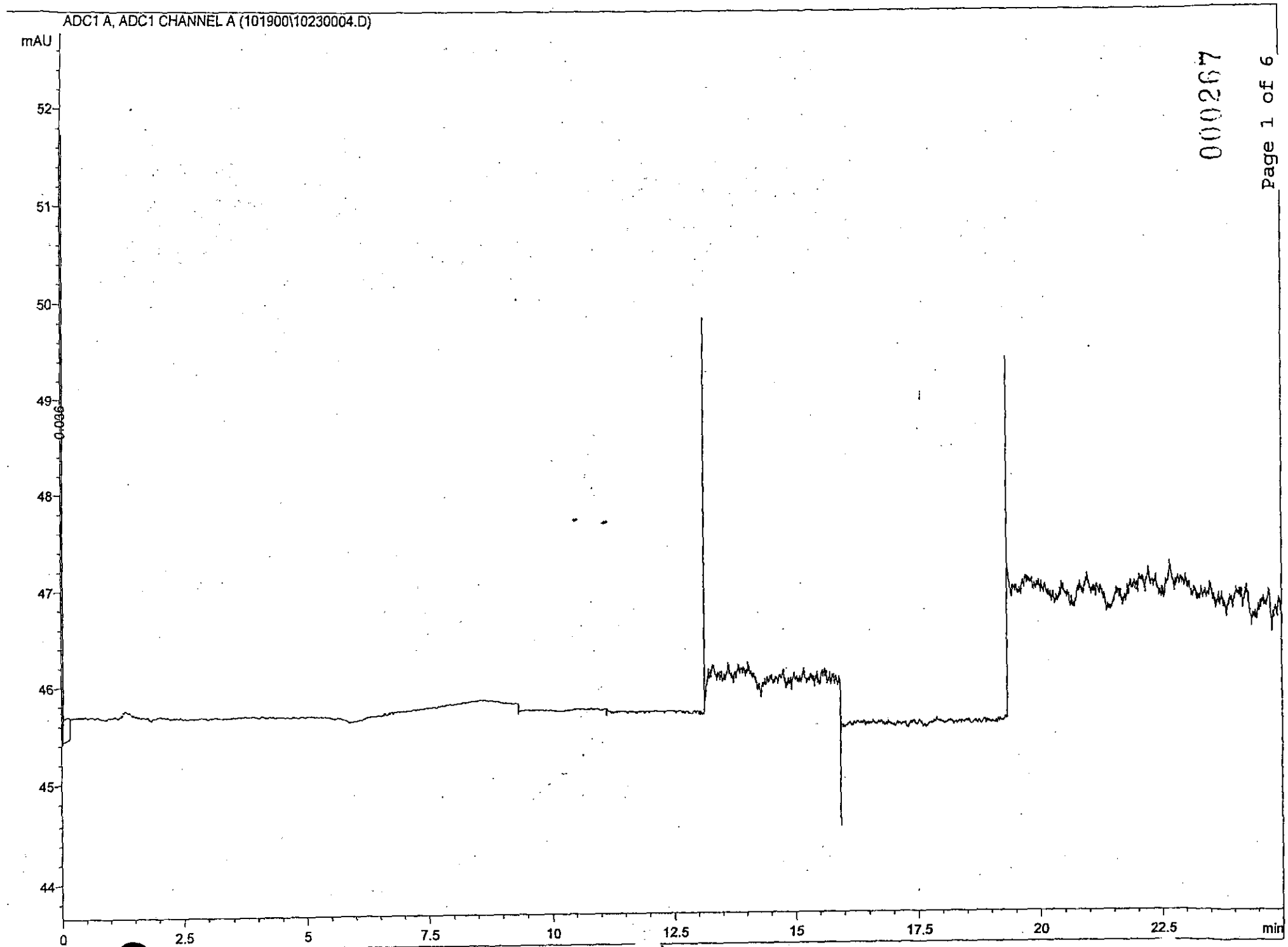
Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

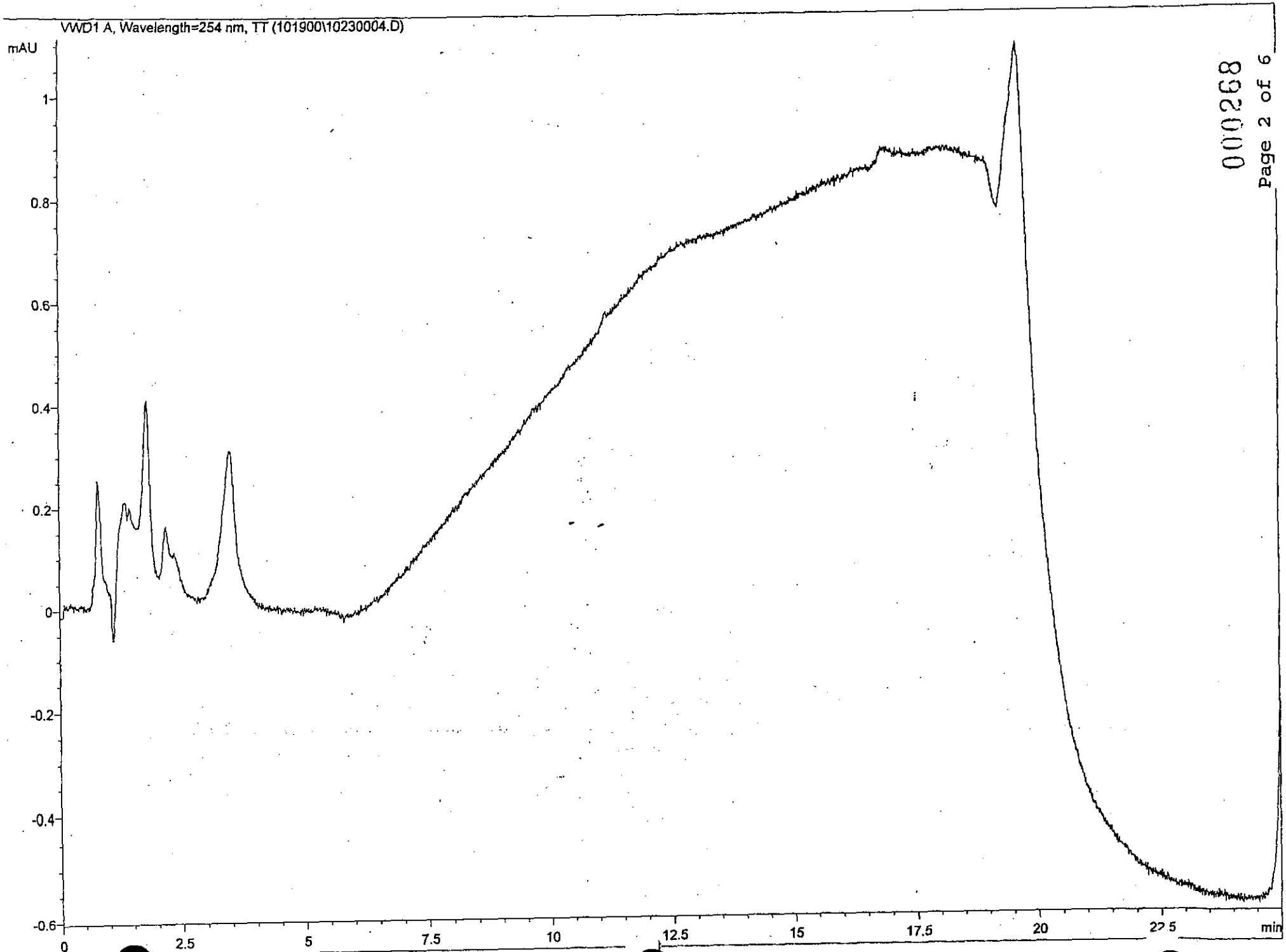
==========

*** End of Report ***

000266


ADC1 A, ADC1 CHANNEL A (101900\10230004.D)
mAU
52
51
50
49
48
47
46
45
44
0.036
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

0002967


VWD1 A, Wavelength=254 nm, TT (101900\10230004.D)
mAU
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000268

Injection Date : 10/24/00 4:08:17 AM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 15
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 3:21:05 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.893	PBA	478.44342	1.08238e-2	5.17857		Naphthalene
7.843	PV	775.84052	6.18949e-3	4.80205		1-Methylnaphthalene
8.208	VV	705.35034	7.17956e-3	5.06410		2-Methylnaphthalene
8.505	MF	2203.67407	2.33808e-3	5.15237		Acenaphthene
8.873	FM	157.66521	1.59179e-2	2.50970+		Fluorene
9.858	PBA	438.93094	1.18323e-3	5.19357e-1		Phenanthrene
10.690	BBA	2157.29907	2.37053e-4	5.11394e-1-		Anthracene
11.531	BV	105.33149	9.30365e-3	9.79967e-1		Fluoranthene
12.027	VBA	240.99319	2.24162e-3	5.40216e-1		Pyrene
14.166	BV	1548.14551	3.45450e-4	5.34807e-1		Benzo(a)anthracene
14.726	VP	1003.27460	5.23054e-4	5.24767e-1		Chrysene
16.590	PV	1908.01562	5.56047e-4	1.06095		Benzo(b)fluoranthene
17.672	VV	1578.48706	3.18738e-4	5.03124e-1		Benzo(k)fluoranthene
18.245	VBA	1427.26697	3.68382e-4	5.25779e-1		Benzo(a)pyrene
19.829	BV	1180.06116	8.21085e-4	9.68930e-1		Dibenzo(ah)anthracene
20.291	VBA	2776.58569	3.83567e-4	1.06501		Benzo(ghi)perylene

Totals : 30.44110

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.752	PBA	148.26740	3.52601e-2	5.22793		Naphthalene
7.107	BV	199.76038	5.15230e-2	10.29225		Acenaphthylene

000269

==========

Injection Date : 10/24/00 4:08:17 AM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 15
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 3:21:05 PM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.701	VV	89.35323	5.60782e-2	5.01077		1-Methylnaphthalene
8.074	VV	125.24007	3.98481e-2	4.99057		2-Methylnaphthalene
8.352	VV	83.45036	6.99536e-2	5.83766		Acenaphthene
8.856	VBA	145.40239	7.22262e-3	1.05019		Fluorene
9.715	BBA	181.96098	2.89691e-3	5.27124e-1		Phenanthrene
10.545	BBA	394.43820	1.31717e-3	5.19542e-1		Anthracene
11.383	BV	86.85467	1.17804e-2	1.02318		Fluoranthene
11.880	VP	50.93433	1.07782e-2	5.48982e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.019	BV	111.82954	4.59084e-3	5.13391e-1		Benzo(a)anthracene
14.583	VB	182.48898	2.87426e-3	5.24520e-1		Chrysene
16.437	PP	248.31625	4.15268e-3	1.03118		Benzo(b)fluoranthene
17.519	VV	79.61861	6.23683e-3	4.96568e-1		Benzo(k)fluoranthene
18.094	VBA	114.81594	4.37576e-3	5.02407e-1		Benzo(a)pyrene
19.675	BV	489.16412	2.01009e-3	9.83263e-1		Dibenzo(ah)anthracene
20.124	VP	286.26694	3.68330e-3	1.05441		Benzo(ghi)perylene
21.206	VBA	67.25397	6.76791e-3	4.55169e-1		Indeno(123cd)pyrene

Totals : 40.58910

Uncalibrated Peaks : compound name not specified

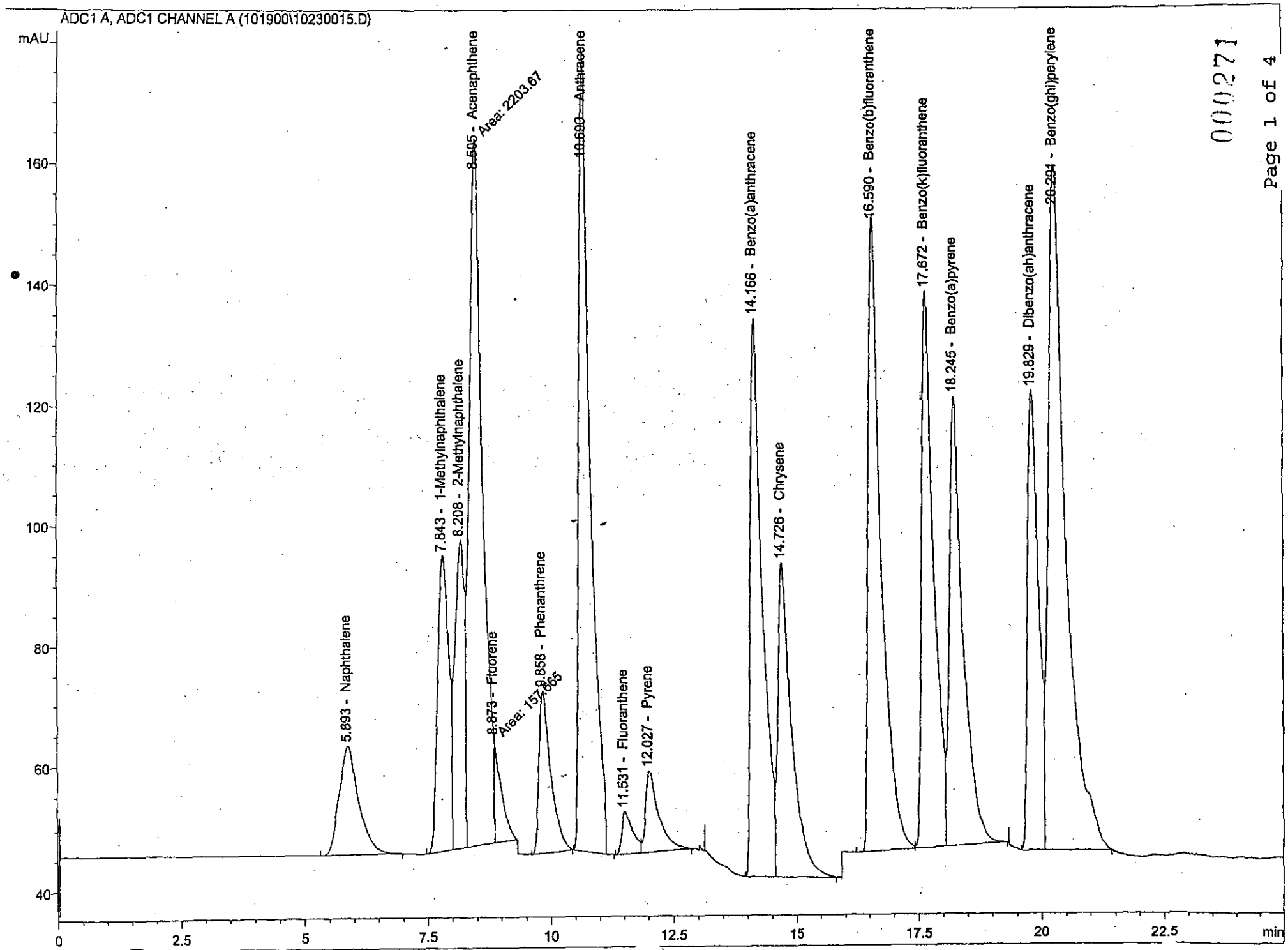
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

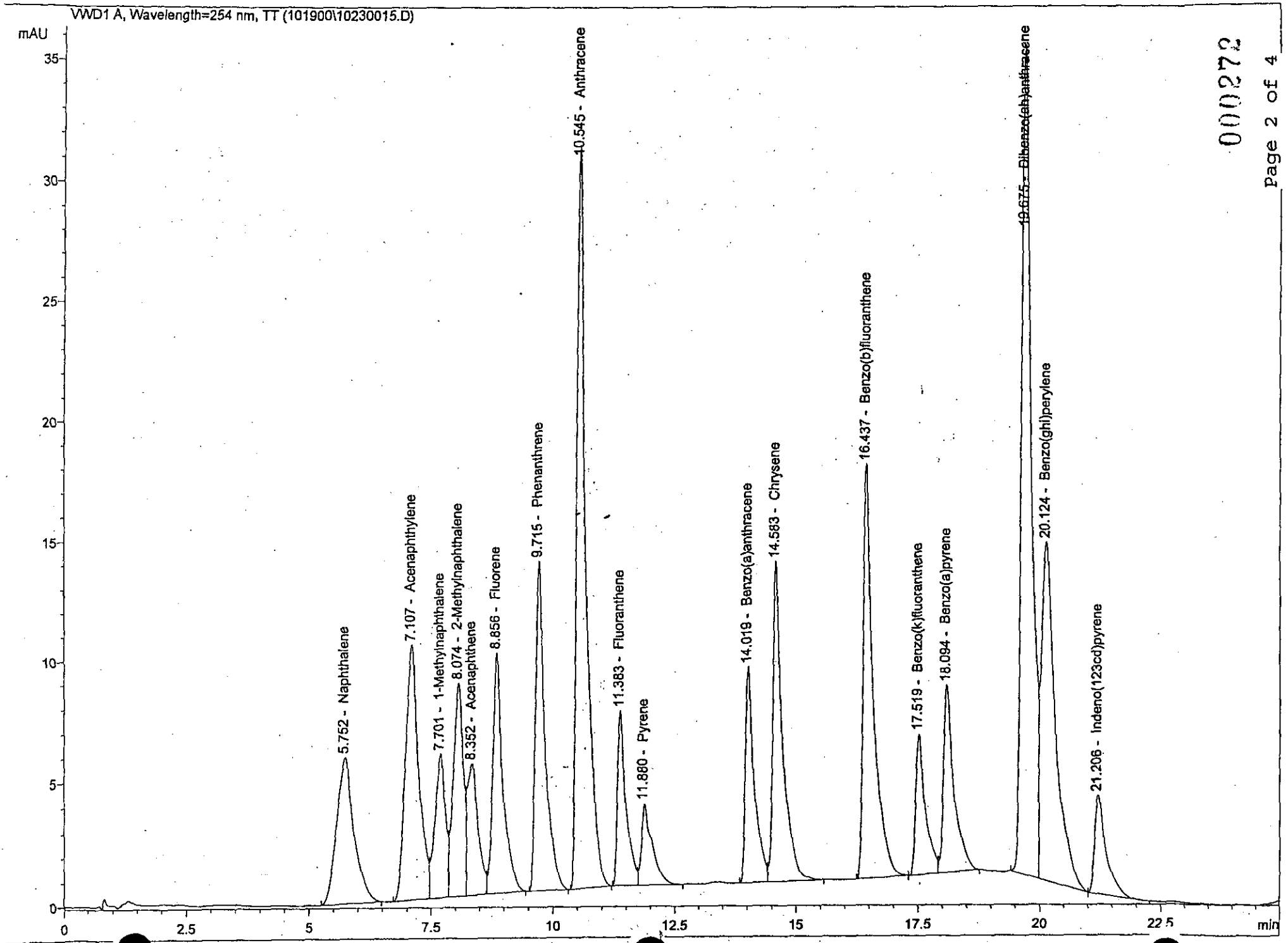
==========

*** End of Report ***

000270


ADC1 A, ADC1 CHANNEL A (101900\10230015.D)
mAU
160
140
120
100
80
60
40
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.893 - Naphthalene
7.843 - 1-Methylnaphthalene
8.208 - 2-Methylnaphthalene
8.505 - Acenaphthene
Area: 2203.67
8.873 - Fluorene
Area: 1578.858
9.865 - Phenanthrene
10.690 - Anthracene
11.531 - Fluoranthene
12.027 - Pyrene
14.166 - Benzo(a)anthracene
14.726 - Chrysene
16.590 - Benzo(b)fluoranthene
17.672 - Benzo(k)fluoranthene
18.245 - Benzo(a)pyrene
19.829 - Dibenzo(ah)anthracene
20.294 - Benzo(ghi)perylene

000271


VWD1 A, Wavelength=254 nm, TT (101900\10230015.D)
mAU
35
30
25
20
15
10
5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.752 - Naphthalene
7.107 - Acenaphthylene
7.701 - 1-Methylnaphthalene
8.074 - 2-Methylnaphthalene
8.352 - Acenaphthene
8.856 - Fluorene
9.715 - Phenanthrene
10.545 - Anthracene
11.383 - Fluoranthene
11.880 - Pyrene
14.019 - Benzo(a)anthracene
14.583 - Chrysene
16.437 - Benzo(b)fluoranthene
17.519 - Benzo(k)fluoranthene
18.094 - Benzo(a)pyrene
19.675 - Dibenzo(ah)anthracene
20.124 - Benzo(ghi)perylene
21.206 - Indeno(123cd)pyrene

000272

==========

Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

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Area Percent Report

==========

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:01:44 AM
Multiplier : 1.0000
Dilution : 1.0000

000273

Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:01:44 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.900		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.600		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene

Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	5.900		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.600		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene

000275

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Injection Date : 10/24/00 4:59:52 AM
Sample Name : CCB. ACN
Acq. Operator : RS

Seq. Line : 16
Vial :
Inj :
Inj Volume : 12

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/23/00 3:03:17 PM by RS
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:01:45 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

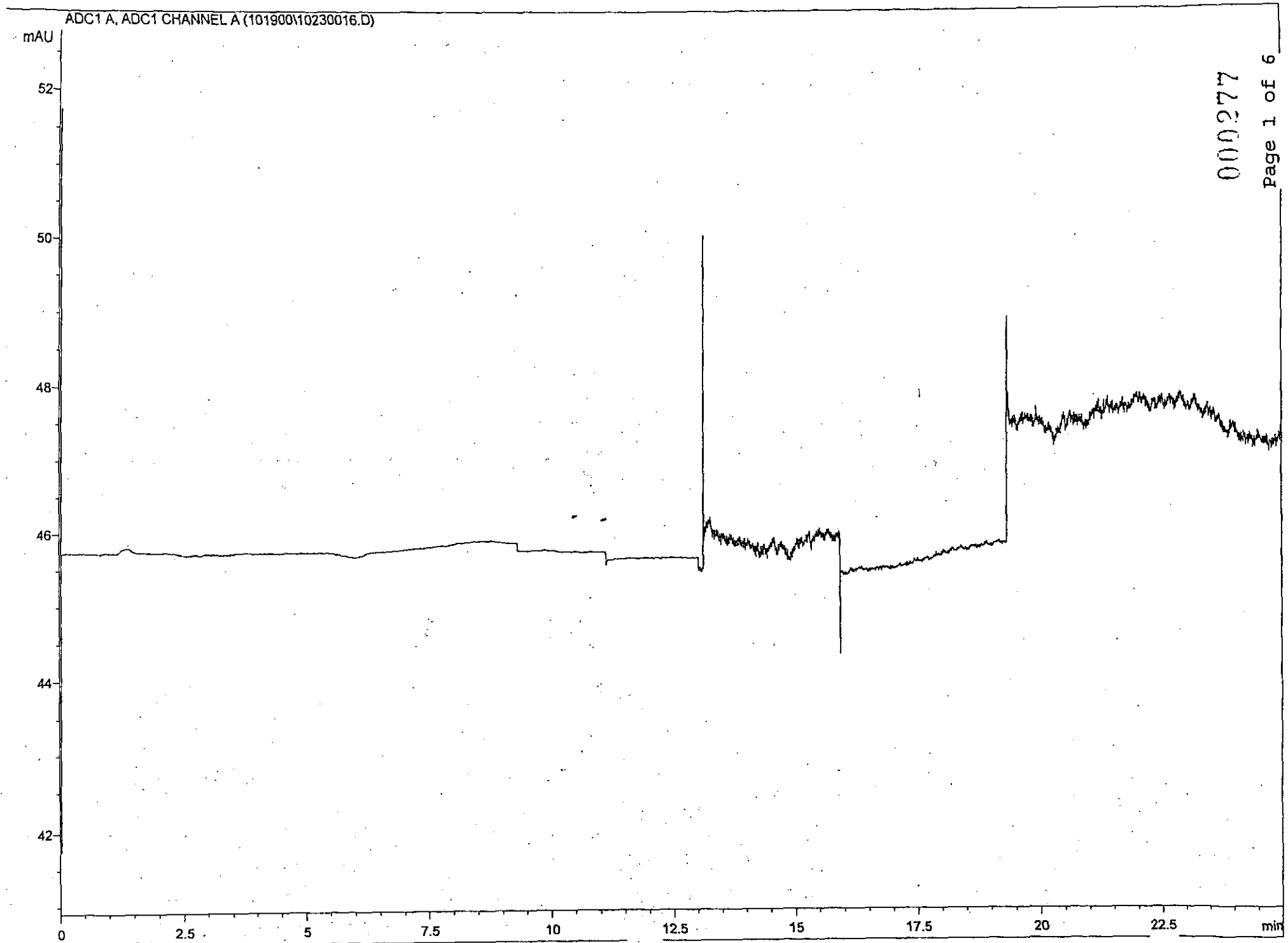
Uncalibrated Peaks:
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

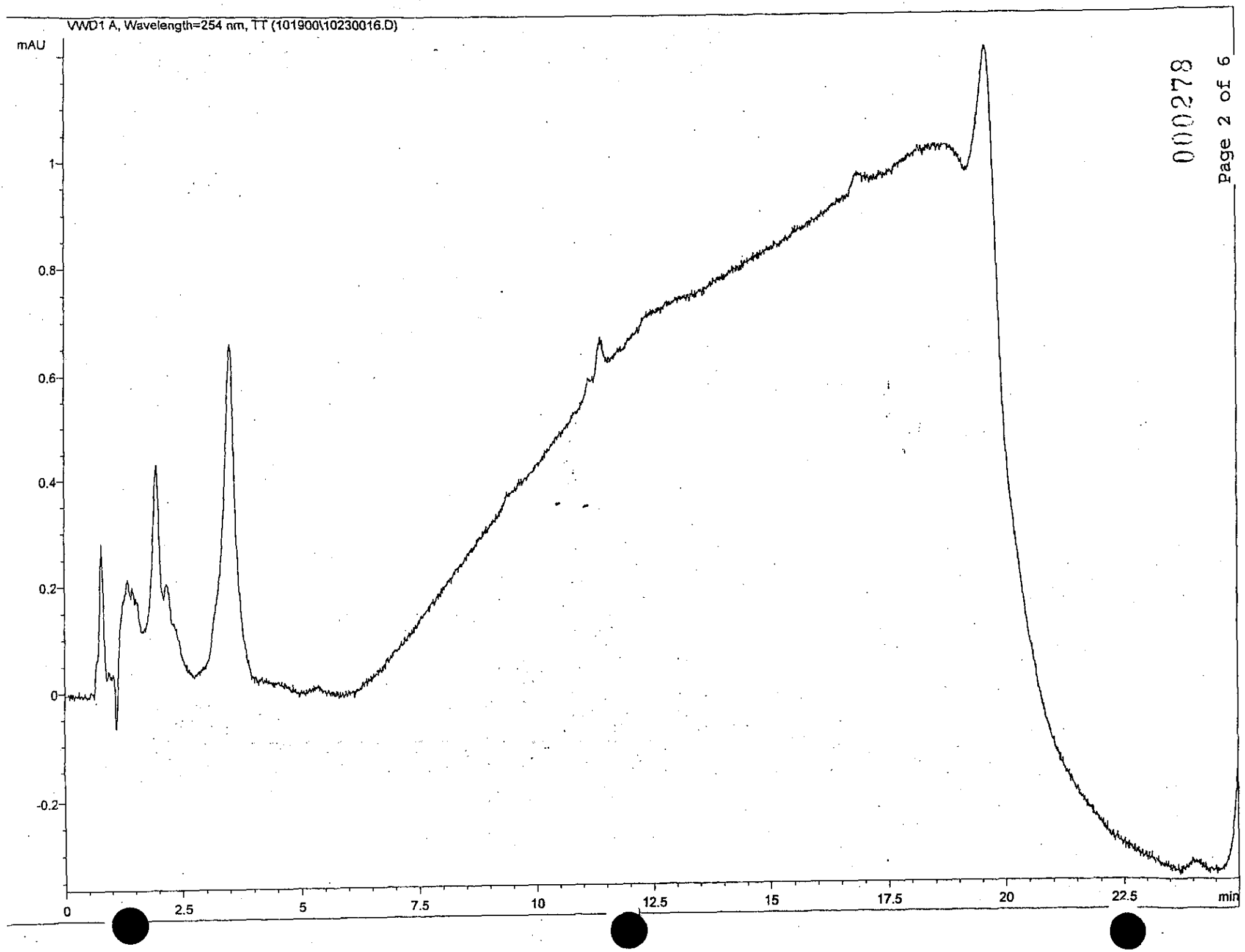
==========

*** End of Report ***

000276


ADC1 A, ADC1 CHANNEL A (101900\10230016.D)
mAU
52
50
48
46
44
42
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000277


VWD1 A, Wavelength=254 nm, TT (101900\10230016.D)
mAU
1
0.8
0.6
0.4
0.2
0
-0.2
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000278

==========

Injection Date : 10/24/00 9:18:25 AM Seq. Line : 21
Sample Name : CCV, PAH Std 2 Vial : 71
Acq. Operator : RS Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:17:13 AM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:46:26 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.885	VBA	470.03323	1.08243e-2	5.08777		Naphthalene
7.839	PV	776.51941	6.18957e-3	4.80632		1-Methylnaphthalene
8.206	VV	683.06042	7.17595e-3	4.90161		2-Methylnaphthalene
8.500	MF	2296.94360	2.33905e-3	5.37266		Acenaphthene
8.970	FM	74.14226	1.49447e-2	1.10804		Fluorene
9.852	PBA	438.27145	1.18321e-3	5.18567e-1		Phenanthrene
10.687	BBA	2159.39404	2.37056e-4	5.11897e-1-		Anthracene
11.532	BV	108.76920	9.30571e-3	1.01217		Fluoranthene
12.028	VBA	247.01801	2.24175e-3	5.53751e-1		Pyrene
14.163	PV	1485.60645	3.45119e-4	5.12711e-1		Benzo(a)anthracene
14.722	VP	978.39612	5.23205e-4	5.11902e-1		Chrysene
16.583	PP	1864.53442	5.55786e-4	1.03628		Benzo(b)fluoranthene
17.661	MF	1381.75842	3.18291e-4	4.39802e-1		Benzo(k)fluoranthene
18.235	FM	932.27264	3.67423e-4	3.42538e-1		Benzo(a)pyrene
19.812	BV	986.57281	8.18902e-4	8.07906e-1		Dibenzo(ah)anthracene
20.275	VV	2075.05469	3.83892e-4	7.96598e-1		Benzo(ghi)perylene

Totals : 28.32051

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
20.967	VBA	127.55014	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000279

==========

Injection Date : 10/24/00 9:18:25 AM Seq. Line : 21
Sample Name : CCV, PAH Std 2 Vial : 71
Acq. Operator : RS Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:17:13 AM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:46:26 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.746	BBA	147.28598	3.52588e-2	5.19313		Naphthalene
7.108	BV	198.13406	5.15213e-2	10.20812		Acenaphthylene
7.700	VV	88.20618	5.60674e-2	4.94549		1-Methylnaphthalene
8.072	VV	128.48633	3.98558e-2	5.12093		2-Methylnaphthalene
8.348	VV	79.27673	6.99275e-2	5.54363		Acenaphthene
8.855	VBA	145.85086	7.22221e-3	1.05336		Fluorene
9.710	BBA	181.73157	2.89686e-3	5.26452e-1		Phenanthrene
10.544	BBA	394.14792	1.31716e-3	5.19154e-1		Anthracene
11.385	BV	86.28957	1.17798e-2	1.01647		Fluoranthene
11.881	VB	49.88980	1.07781e-2	5.37716e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.017	BV	110.97885	4.59058e-3	5.09457e-1		Benzo(a)anthracene
14.581	VV	179.31982	2.87376e-3	5.15323e-1		Chrysene
16.431	BP	245.65269	4.15213e-3	1.01998		Benzo(b)fluoranthene
17.508	MF	79.13950	6.23647e-3	4.93551e-1		Benzo(k)fluoranthene
18.084	FM	106.43843	4.37047e-3	4.65186e-1		Benzo(a)pyrene
19.662	BV	478.87137	2.00966e-3	9.62370e-1		Dibenzo(ah)anthracene
20.110	VV	255.32651	3.68873e-3	9.41830e-1		Benzo(ghi)perylene
21.156	VP	66.71707	6.76889e-3	4.51601e-1		Indeno(123cd)pyrene

Totals : 40.02375

Uncalibrated Peaks : compound name not specified

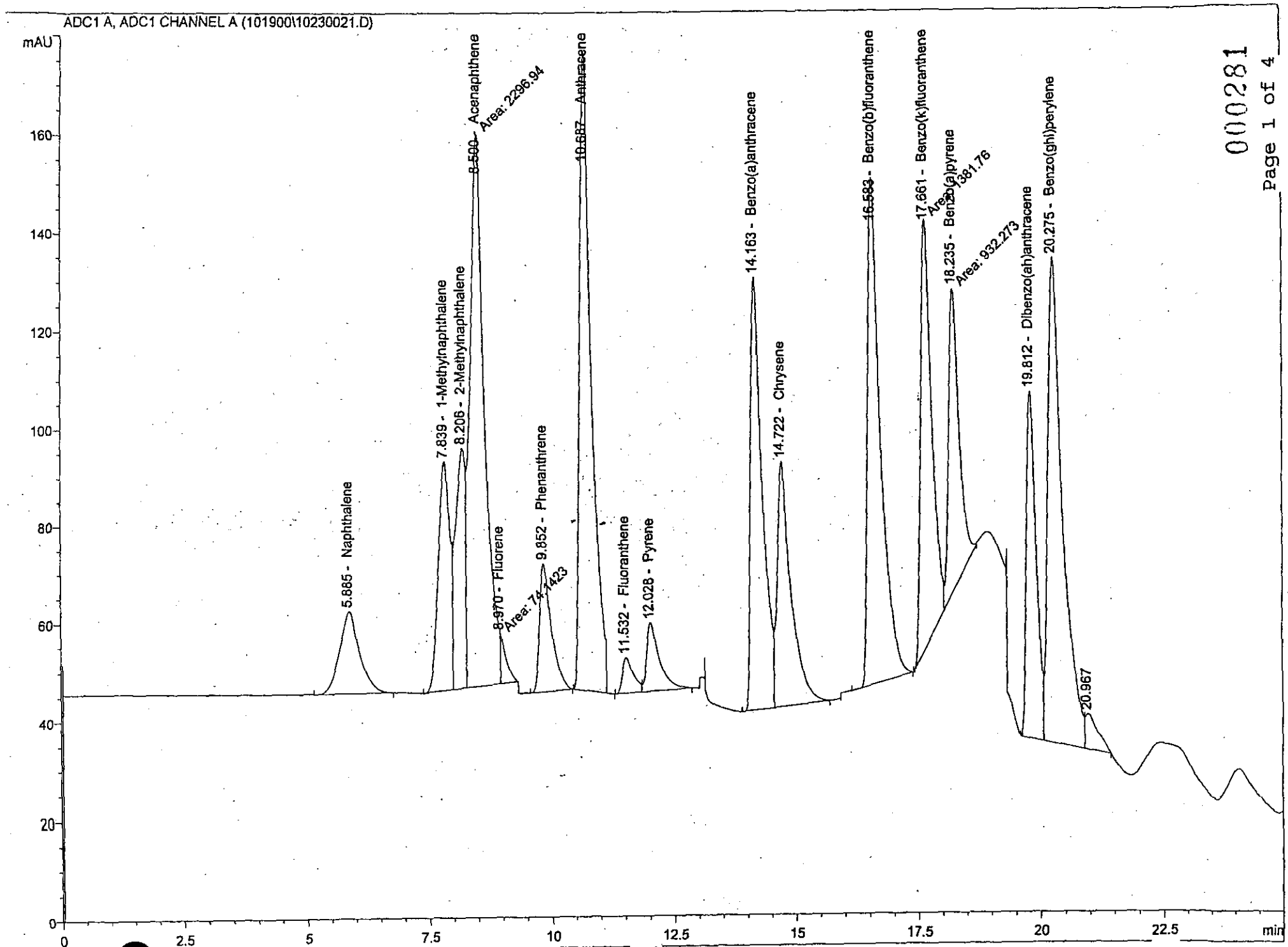
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

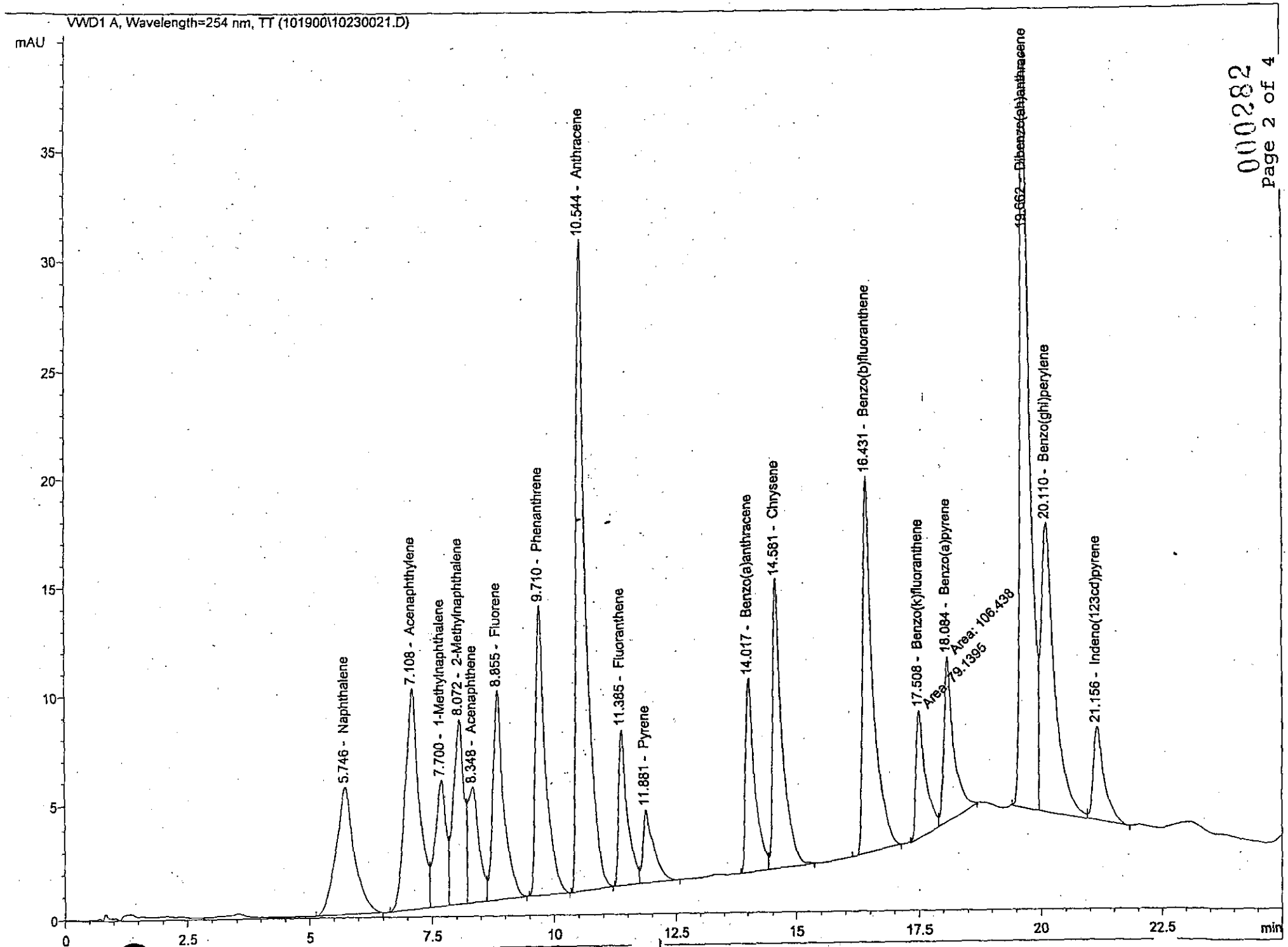
*** End of Report ***

000280



000281

Page 1 of 4



000282
Page 2 of 4

Injection Date : 10/24/00 10:10:05 AM Seq. Line : 22
Sample Name : CCB, ACN Vial : 21
Acq. Operator : RS Inj : 1
Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 10:08:54 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.900		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene
Totals :				0.00000		

Uncalibrated Peaks : compound name not specified

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.746		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene

==========

Injection Date : 10/24/00 10:10:05 AM Seq. Line : 22
Sample Name : CCB, ACN Vial : 21
Acq. Operator : RS Inj : 1
Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 10:08:54 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene
Totals :				0.00000		

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========
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Area Percent Report

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Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Injection Date : 10/24/00 10:10:05 AM Seq. Line : 22
Sample Name : CCB, ACN Vial : 21
Acq. Operator : RS Inj : 1
Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 10:08:54 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	5.900		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:
Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.746		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene

000285

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Injection Date : 10/24/00 10:10:05 AM Seq. Line : 22
Sample Name : CCB, ACN Vial : 21
Acq. Operator : RS Inj : 1
Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 10:08:54 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

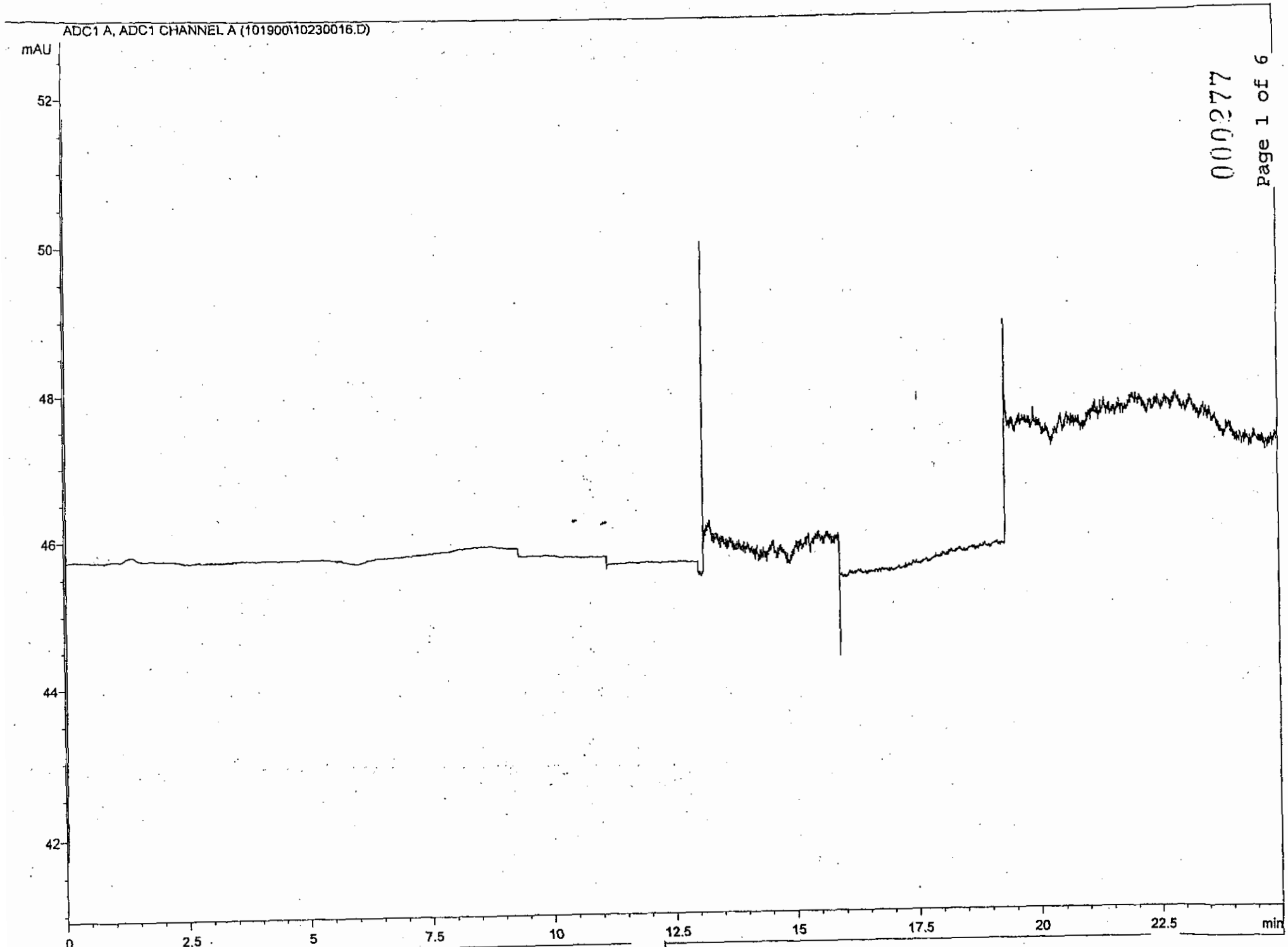
Uncalibrated Peaks:
Results obtained with enhanced integrator!
3 Warnings or Errors :

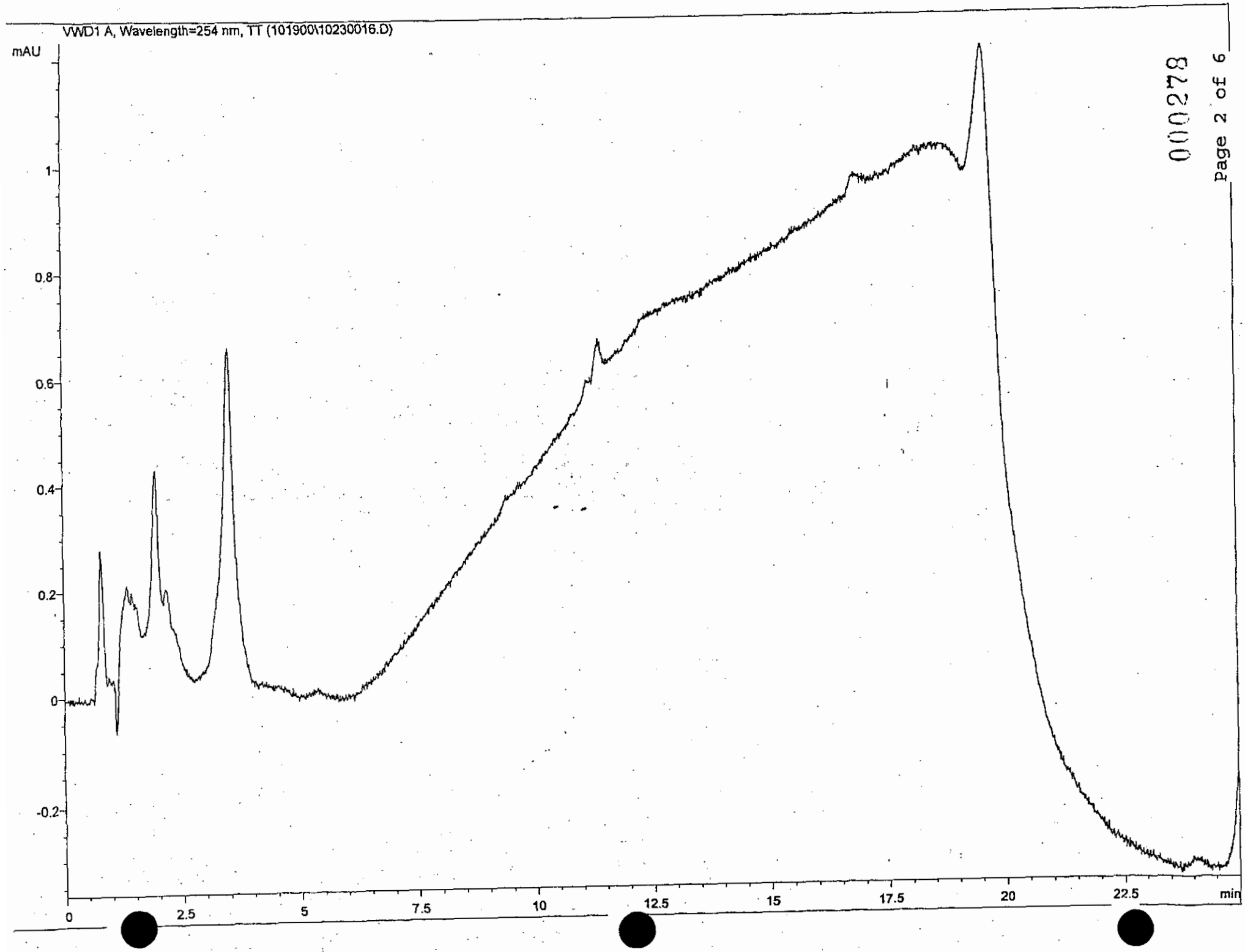
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***

000286


ADC1 A, ADC1 CHANNEL A (101900\10230016.D)
mAU
52
50
48
46
44
42
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (101900\10230016.D)
mAU
1
0.8
0.6
0.4
0.2
0
-0.2
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000278

Injection Date : 10/24/00 9:18:25 AM Seq. Line : 21
Sample Name : CCV, PAH Std 2 Vial : 71
Acq. Operator : RS Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:17:13 AM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:46:26 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.885	VBA	470.03323	1.08243e-2	5.08777		Naphthalene
7.839	PV	776.51941	6.18957e-3	4.80632		1-Methylnaphthalene
8.206	VV	683.06042	7.17595e-3	4.90161		2-Methylnaphthalene
8.500	MF	2296.94360	2.33905e-3	5.37266		Acenaphthene
8.970	FM	74.14226	1.49447e-2	1.10804		Fluorene
9.852	PBA	438.27145	1.18321e-3	5.18567e-1		Phenanthrene
10.687	BBA	2159.39404	2.37056e-4	5.11897e-1-		Anthracene
11.532	BV	108.76920	9.30571e-3	1.01217		Fluoranthene
12.028	VBA	247.01801	2.24175e-3	5.53751e-1		Pyrene
14.163	PV	1485.60645	3.45119e-4	5.12711e-1		Benzo(a)anthracene
14.722	VP	978.39612	5.23205e-4	5.11902e-1		Chrysene
16.583	PP	1864.53442	5.55786e-4	1.03628		Benzo(b)fluoranthene
17.661	MF	1381.75842	3.18291e-4	4.39802e-1		Benzo(k)fluoranthene
18.235	FM	932.27264	3.67423e-4	3.42538e-1		Benzo(a)pyrene
19.812	BV	986.57281	8.18902e-4	8.07906e-1		Dibenzo(ah)anthracene
20.275	VV	2075.05469	3.83892e-4	7.96598e-1		Benzo(ghi)perylene

Totals : 28.32051

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
20.967	VBA	127.55014	0.00000	0.00000		?

Uncalib. totals : 0.00000

Results obtained with enhanced integrator!

000279

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Injection Date : 10/24/00 9:18:25 AM Seq. Line : 21
Sample Name : CCV, PAH Std 2 Vial : 71
Acq. Operator : RS Inj : 1
Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:17:13 AM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 9:46:26 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.746	BBA	147.28598	3.52588e-2	5.19313		Naphthalene
7.108	BV	198.13406	5.15213e-2	10.20812		Acenaphthylene
7.700	VV	88.20618	5.60674e-2	4.94549		1-Methylnaphthalene
8.072	VV	128.48633	3.98558e-2	5.12093		2-Methylnaphthalene
8.348	VV	79.27673	6.99275e-2	5.54363		Acenaphthene
8.855	VBA	145.85086	7.22221e-3	1.05336		Fluorene
9.710	BBA	181.73157	2.89686e-3	5.26452e-1		Phenanthrene
10.544	BBA	394.14792	1.31716e-3	5.19154e-1		Anthracene
11.385	BV	86.28957	1.17798e-2	1.01647		Fluoranthene
11.881	VB	49.88980	1.07781e-2	5.37716e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.017	BV	110.97885	4.59058e-3	5.09457e-1		Benzo(a)anthracene
14.581	VV	179.31982	2.87376e-3	5.15323e-1		Chrysene
16.431	BP	245.65269	4.15213e-3	1.01998		Benzo(b)fluoranthene
17.508	MF	79.13950	6.23647e-3	4.93551e-1		Benzo(k)fluoranthene
18.084	FM	106.43843	4.37047e-3	4.65186e-1		Benzo(a)pyrene
19.662	BV	478.87137	2.00966e-3	9.62370e-1		Dibenzo(ah)anthracene
20.110	VV	255.32651	3.68873e-3	9.41830e-1		Benzo(ghi)perylene
21.156	VP	66.71707	6.76889e-3	4.51601e-1		Indeno(123cd)pyrene

Totals : 40.02375

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

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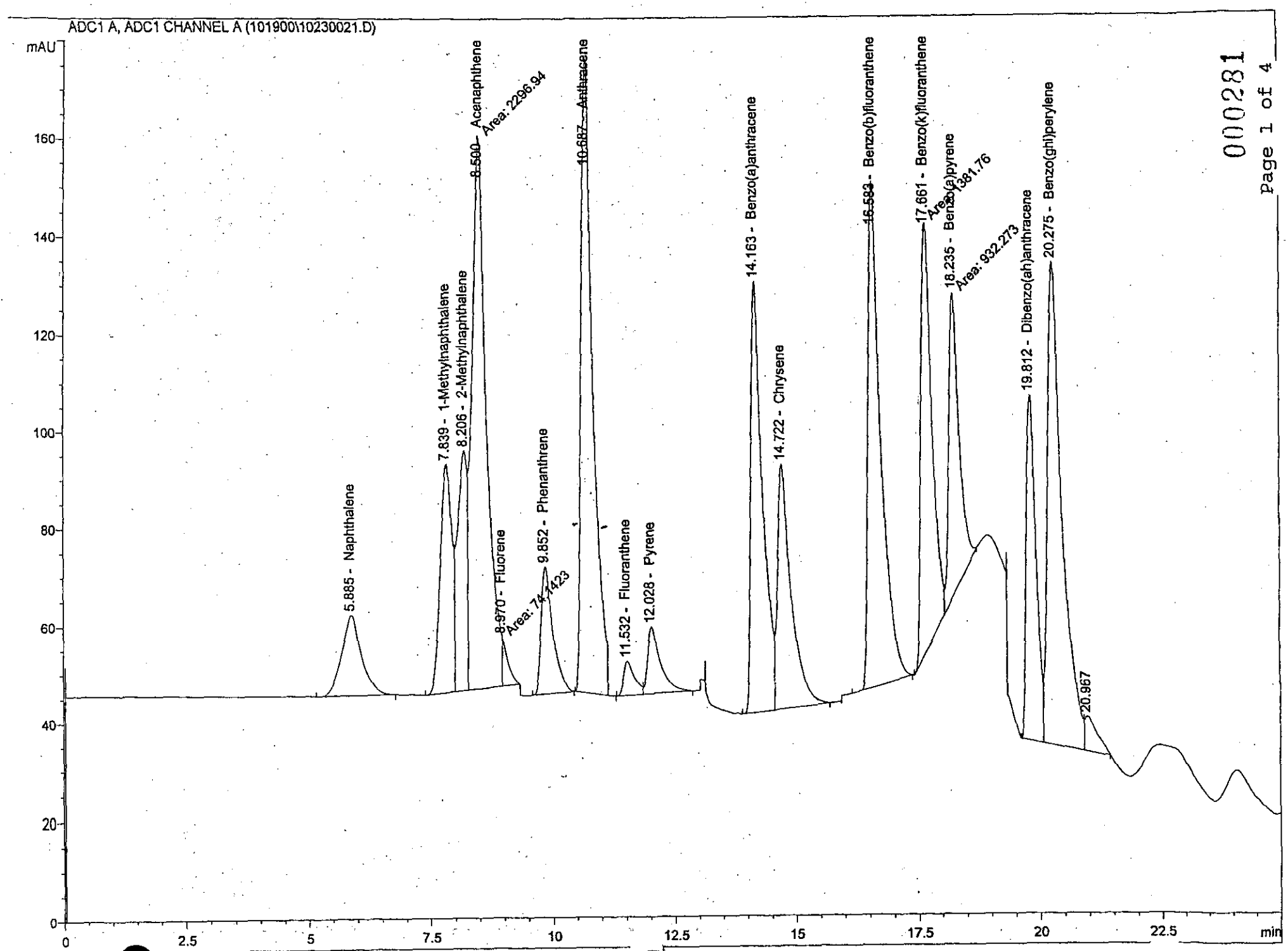
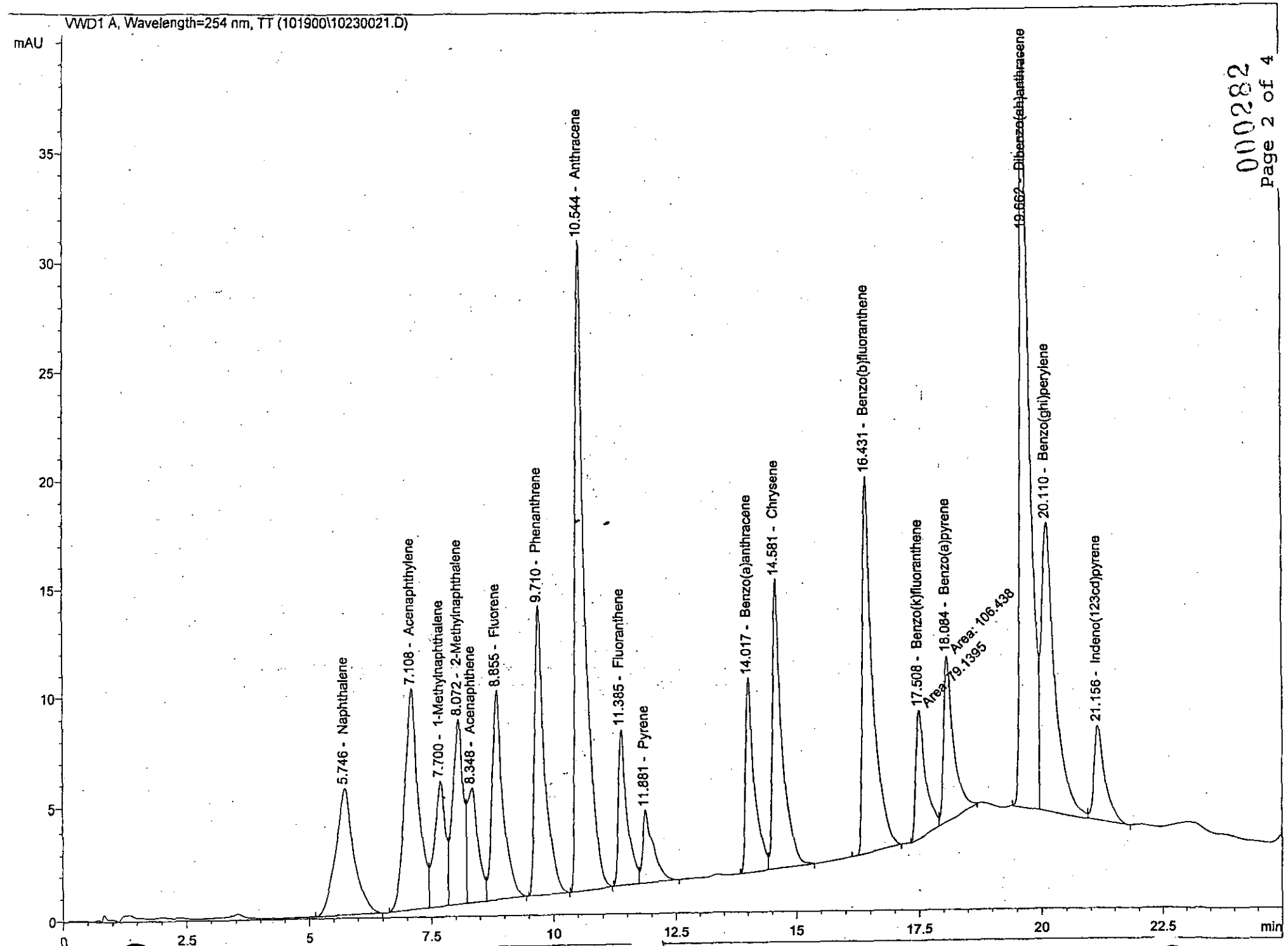
*** End of Report ***


ADC1 A, ADC1 CHANNEL A (101900\10230021.D)
mAU
5.885 - Naphthalene
7.839 - 1-Methylnaphthalene
8.206 - 2-Methylnaphthalene
8.590 - Acenaphthene
Area: 2296.94
8.970 - Fluorene
Area: 74.7423
9.852 - Phenanthrene
10.687 - Anthracene
11.532 - Fluoranthene
12.028 - Pyrene
14.163 - Benzo(a)anthracene
14.722 - Chrysene
16.583 - Benzo(b)fluoranthene
17.661 - Benzo(k)fluoranthene
18.235 - Benzo(a)pyrene
Area: 1381.76
Area: 932.273
19.812 - Dibenzo(ah)anthracene
20.275 - Benzo(ghi)perylene
20.967
min

000281



000282
Page 2 of 4

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==================================================================
Injection Date   : 10/24/00 10:10:05 AM          Seq. Line :  22
Sample Name      : CCB, ACN                          Vial :  21
Acq. Operator    : RS                                 Inj :   1
Method           : C:\HPCHEM\1\METHODS\PAH.M
 ast changed     : 10/24/00 10:08:54 AM by RS
                   (modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min
==================================================================

==================================================================
                      External Standard Report
==================================================================

Sorted By              :      Signal
Calib. Data Modified   :      10/24/00 9:46:25 AM
Multiplier             :      1.0000
Dilution               :      1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          [mAU*s]                [ug/ml]
-------|------|----------|----------|----------|--|------------------
  5.900            -          -          -      -   Naphthalene
  7.853            -          -          -      -   1-Methylnaphthalene
  8.230            -          -          -      -   2-Methylnaphthalene
  8.522            -          -          -      -   Acenaphthene
  8.960            -          -          -      -   Fluorene
  9.870            -          -          -      -   Phenanthrene
 10.699            -          -          -      -   Anthracene
 11.539            -          -          -      -   Fluoranthene
 12.037            -          -          -      -   Pyrene
 14.170            -          -          -      -   Benzo(a)anthracene
 14.737            -          -          -      -   Chrysene
 16.584            -          -          -      -   Benzo(b)fluoranthene
 17.642            -          -          -      -   Benzo(k)fluoranthene
 18.216            -          -          -      -   Benzo(a)pyrene
 19.769            -          -          -      -   Dibenzo(ah)anthracene
 20.236            -          -          -      -   Benzo(ghi)perylene

Totals :                                  0.00000

Uncalibrated Peaks     :      compound name not specified


Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime  Type     Area      Amt/Area    Amount   Grp   Name
 [min]          mAU   *s                [ug/ml]
-------|------|----------|----------|----------|--|------------------
  5.746            -          -          -      -   Naphthalene
  7.115            -          -          -      -   Acenaphthylene
  7.714            -          -          -      -   1-Methylnaphthalene
  8.090            -          -          -      -   2-Methylnaphthalene
  8.363            -          -          -      -   Acenaphthene
```

==========

Injection Date : 10/24/00 10:10:05 AM Seq. Line : 22
Sample Name : CCB, ACN Vial : 21
Acq. Operator : RS Inj : 1
Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 10:08:54 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene
Totals :				0.00000		

Uncalibrated Peaks : compound name not specified

Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========
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Area Percent Report

==========

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Injection Date : 10/24/00 10:10:05 AM Seq. Line : 22
Sample Name : CCB, ACN Vial : 21
Acq. Operator : RS Inj : 1
Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 10:08:54 AM by RS
(modified after loading)

Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	5.900		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:
Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.746		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene

000285

==========

Injection Date : 10/24/00 10:10:05 AM Seq. Line : 22
Sample Name : CCB, ACN Vial : 21
Acq. Operator : RS Inj : 1
Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 10:08:54 AM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

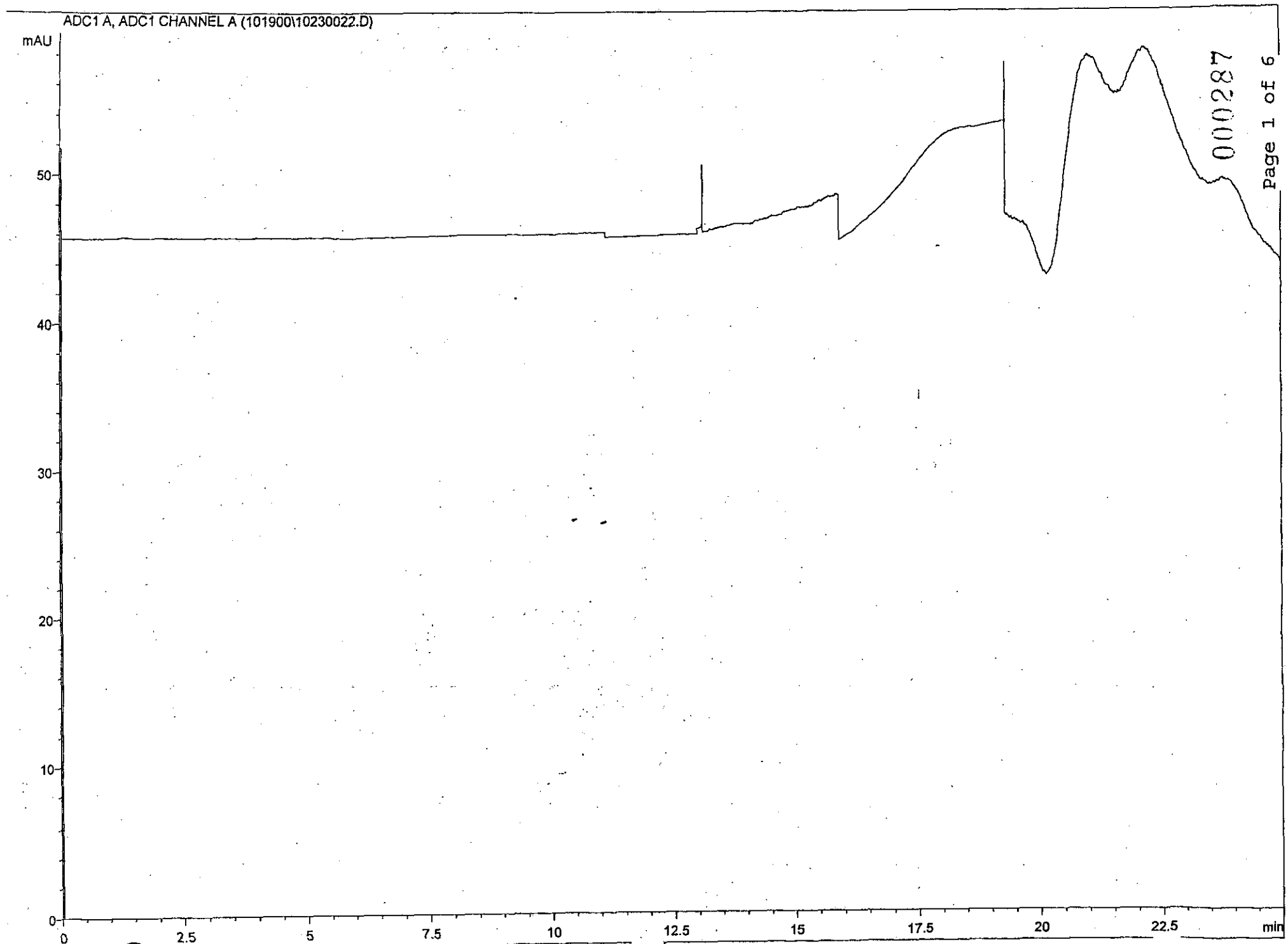
Uncalibrated Peaks:
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

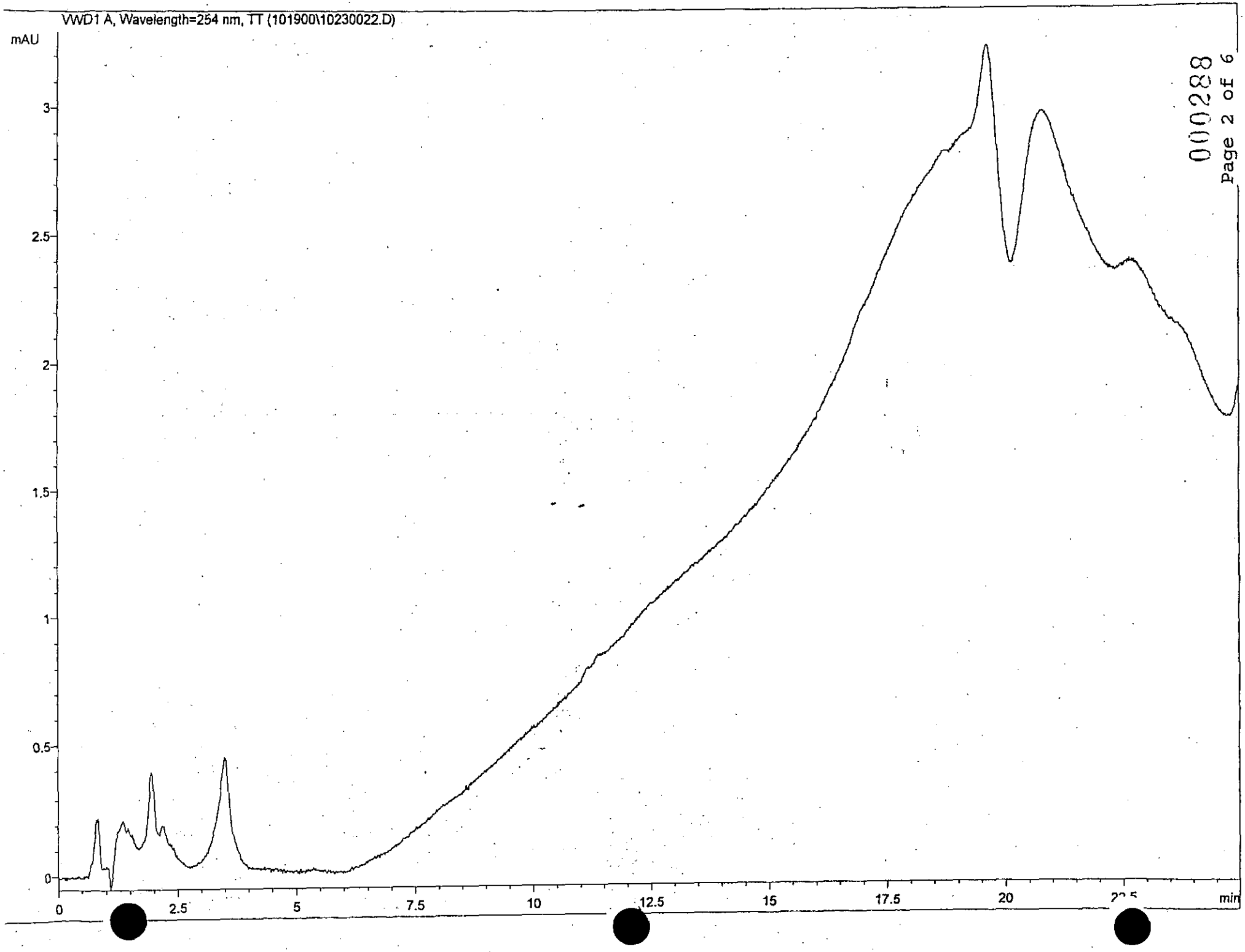
==========

*** End of Report ***

000286


ADC1 A, ADC1 CHANNEL A (101900\10230022.D)
mAU
50
40
30
20
10
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

000287


VWD1 A, Wavelength=254 nm, TT (101900\10230022.D)
mAU
3
2.5
2
1.5
1
0.5
0
0
2.5
5
7.5
10
12.5
15
17.5
20
min

Injection Date : 10/24/00 12:45:28 PM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 25
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 12:44:04 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.883	VBA	477.23251	1.08239e-2	5.16550		Naphthalene
7.841	PV	770.22729	6.18880e-3	4.76678		1-Methylnaphthalene
8.205	VV	707.81030	7.17994e-3	5.08204		2-Methylnaphthalene
8.502	MF	2284.31665	2.33892e-3	5.34283		Acenaphthene
8.982	FM	67.85407	1.47745e-2	1.00251		Fluorene
9.852	PBA	434.54330	1.18307e-3	5.14097e-1		Phenanthrene
10.681	MM	2204.80737	2.37125e-4	5.22814e-1-		Anthracene
11.525	BV	109.95025	9.30638e-3	1.02324		Fluoranthene
12.020	VBA	246.16603	2.24173e-3	5.51837e-1		Pyrene
14.147	MF	1572.73486	3.45573e-4	5.43495e-1		Benzo(a)anthracene
14.699	FM	1090.49084	5.22579e-4	5.69868e-1		Chrysene
16.557	MF	1772.44873	5.55192e-4	9.84048e-1		Benzo(b)fluoranthene
17.634	MF	8085.68359	3.21263e-4	2.59763+		Benzo(k)fluoranthene
18.179	FM	5132.87500	3.69686e-4	1.89755+		Benzo(a)pyrene
19.752	MF	1889.63416	8.25263e-4	1.55945		Dibenzo(ah)anthracene
20.188	FM	1295.72046	3.84667e-4	4.98421e-1		Benzo(ghi)perylene

Totals : 32.62211

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.105	BV	567.23639	0.00000	0.00000		?
23.475	BV	3413.62158	0.00000	0.00000		?

Uncalib. totals : 0.00000

Injection Date : 10/24/00 12:45:28 PM
Sample Name : CCV, PAH Std 2
Acq. Operator : RS

Seq. Line : 25
Vial : 71
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 12:44:04 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.742	PBA	147.87573	3.52596e-2	5.21404		Naphthalene
7.108	PV	197.85527	5.15210e-2	10.19370		Acenaphthylene
7.700	VV	87.63097	5.60618e-2	4.91275		1-Methylnaphthalene
8.071	VV	124.19114	3.98454e-2	4.94845		2-Methylnaphthalene
8.350	VV	81.38571	6.99411e-2	5.69220		Acenaphthene
8.852	VBA	144.06487	7.22386e-3	1.04070		Fluorene
9.709	PBA	181.93427	2.89690e-3	5.27046e-1		Phenanthrene
10.538	BBA	394.92957	1.31719e-3	5.20197e-1	-	Anthracene
11.378	BV	85.29021	1.17786e-2	1.00460		Fluoranthene
11.873	VV	46.70643	1.07776e-2	5.03381e-1		Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.001	BV	112.23793	4.59096e-3	5.15280e-1		Benzo(a)anthracene
14.559	VV	179.35017	2.87377e-3	5.15411e-1		Chrysene
16.405	BV	235.30060	4.14989e-3	9.76471e-1		Benzo(b)fluoranthene
17.471	MF	148.11296	6.26473e-3	9.27888e-1		Benzo(k)fluoranthene
18.043	FM	84.43284	4.35158e-3	3.67416e-1		Benzo(a)pyrene
19.606	BV	548.55939	2.01223e-3	1.10383		Dibenzo(ah)anthracene
20.026	VP	223.46695	3.69589e-3	8.25909e-1		Benzo(ghi)perylene
21.077	MM	160.04016	6.69667e-3	1.07174	+	Indeno(123cd)pyrene

Totals : 40.86101

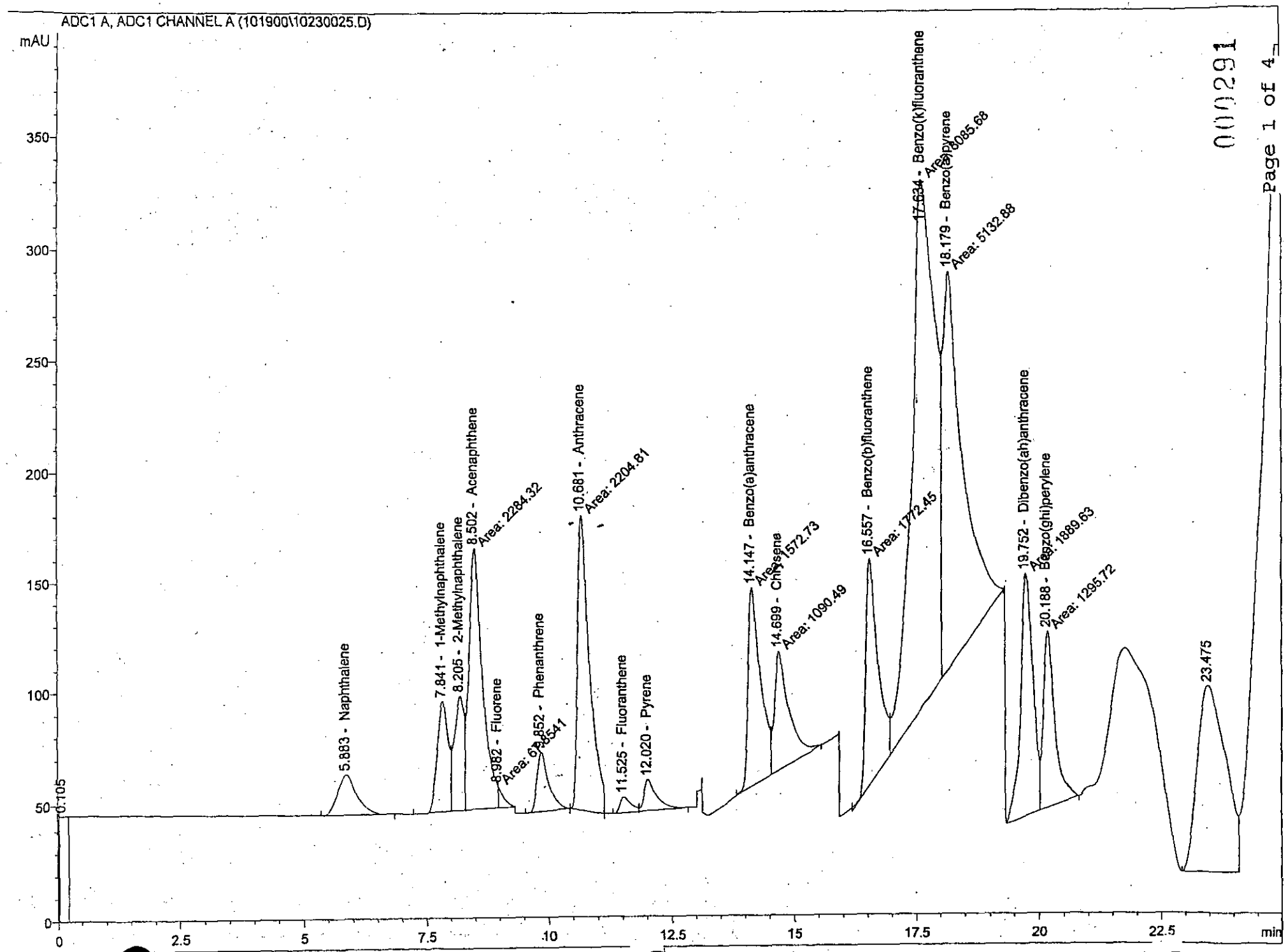
Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

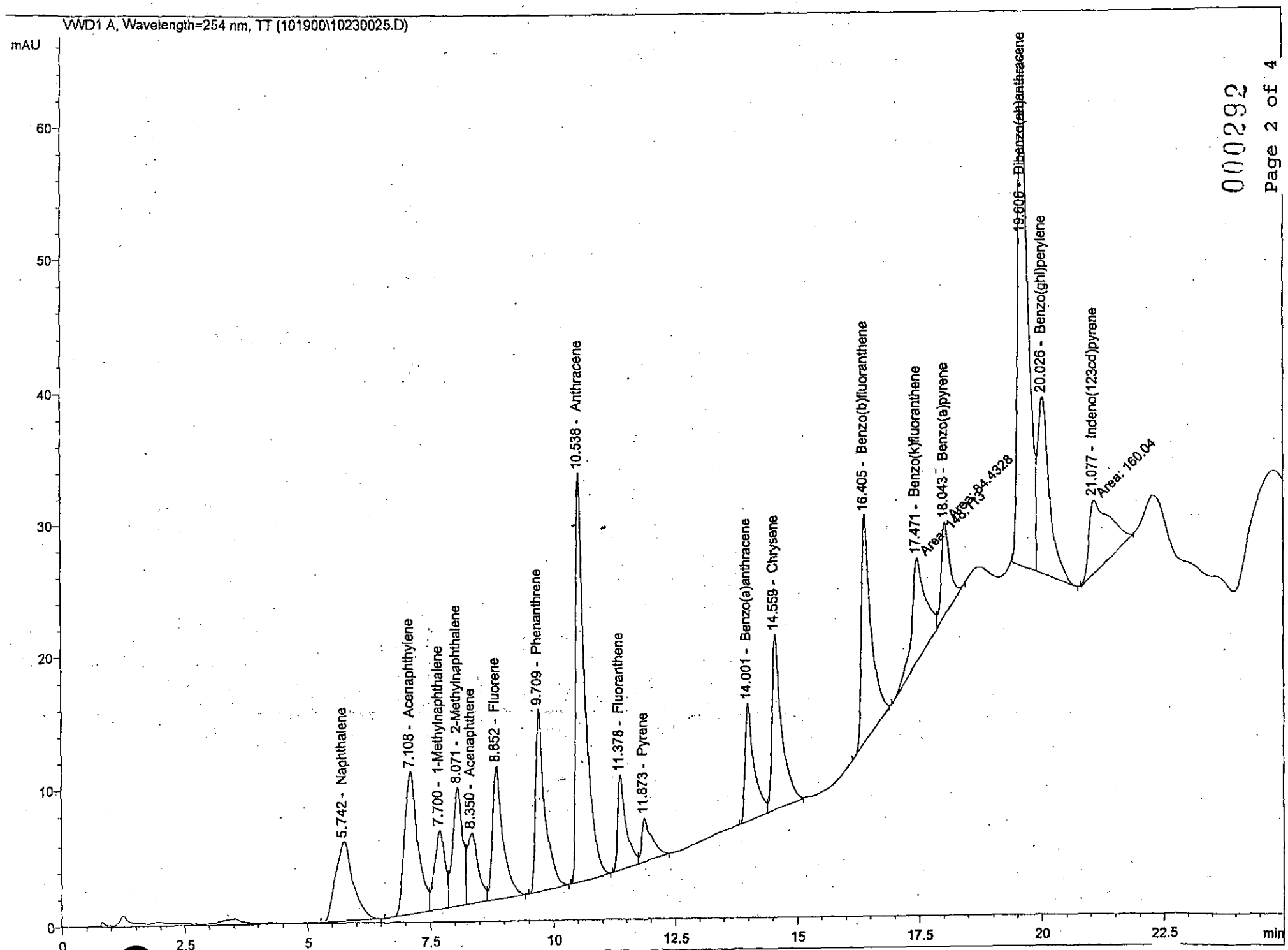
Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

*** End of Report ***

000290


ADC1 A, ADC1 CHANNEL A (101900\10230025.D)
mAU
5.883 - Naphthalene
7.841 - 1-Methylnaphthalene
8.205 - 2-Methylnaphthalene
8.502 - Acenaphthene
Area: 2284.32
8.982 - Fluorene
Area: 6
9.852 - Phenanthrene
10.541
10.681 - Anthracene
Area: 2204.81
11.525 - Fluoranthene
12.020 - Pyrene
14.147 - Benzo(a)anthracene
Area:
14.699 - Chrysene
Area: 1572.73
Area: 1090.49
16.557 - Benzo(b)fluoranthene
Area: 1772.45
17.634 - Benzo(k)fluoranthene
Area:
18.179 - Benzo(a)pyrene
Area: 5132.88
19.752 - Dibenzo(ah)anthracene
Area:
20.188 - Benzo(ghi)perylene
Area: 1889.63
Area: 1295.72
23.475
min

000291


VWD1 A, Wavelength=254 nm, TT (101900\10230025.D)
mAU
60
50
40
30
20
10
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min
5.742 - Naphthalene
7.108 - Acenaphthylene
7.700 - 1-Methylnaphthalene
8.071 - 2-Methylnaphthalene
8.350 - Acenaphthene
8.852 - Fluorene
9.709 - Phenanthrene
10.538 - Anthracene
11.378 - Fluoranthene
11.873 - Pyrene
14.001 - Benzo(a)anthracene
14.559 - Chrysene
16.405 - Benzo(b)fluoranthene
17.471 - Benzo(k)fluoranthene
18.043 - Benzo(a)pyrene
Area: 84.4328
19.606 - Dibenzo(ah)anthracene
20.026 - Benzo(ghi)perylene
21.077 - Indeno(123cd)pyrene
Area: 160.04

Injection Date : 10/24/00 1:36:41 PM
Sample Name : CCB, ACN
Acq. Operator : RS

Seq. Line : 26
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 1:35:34 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
5.900		-	-	-	-	Naphthalene
7.853		-	-	-	-	1-Methylnaphthalene
8.230		-	-	-	-	2-Methylnaphthalene
8.522		-	-	-	-	Acenaphthene
8.960		-	-	-	-	Fluorene
9.870		-	-	-	-	Phenanthrene
10.699		-	-	-	-	Anthracene
11.539		-	-	-	-	Fluoranthene
12.037		-	-	-	-	Pyrene
14.170		-	-	-	-	Benzo(a)anthracene
14.737		-	-	-	-	Chrysene
16.584		-	-	-	-	Benzo(b)fluoranthene
17.642		-	-	-	-	Benzo(k)fluoranthene
18.216		-	-	-	-	Benzo(a)pyrene
19.769		-	-	-	-	Dibenzo(ah)anthracene
20.236		-	-	-	-	Benzo(ghi)perylene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

RetTime [min]	Type	Area [mAU*s]	Amt/Area	Amount [ug/ml]	Grp	Name
0.229	BBA	283.88242	0.00000	0.00000		?

Uncalib. totals : 0.00000

000293

Injection Date : 10/24/00 1:36:41 PM
Sample Name : CCB, ACN
Acq. Operator : RS

Seq. Line : 26
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 1:35:34 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.746		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

000294

Injection Date : 10/24/00 1:36:41 PM
Sample Name : CCB, ACN
Acq. Operator : RS

Seq. Line : 26
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 1:35:34 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	5.900		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.229	BBA	0.3959	283.88242	100.0000	?
Uncalib. totals :				283.88242	100.0000	

==========

Injection Date : 10/24/00 1:36:41 PM
Sample Name : CCB, ACN
Acq. Operator : RS

Seq. Line : 26
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 1:35:34 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

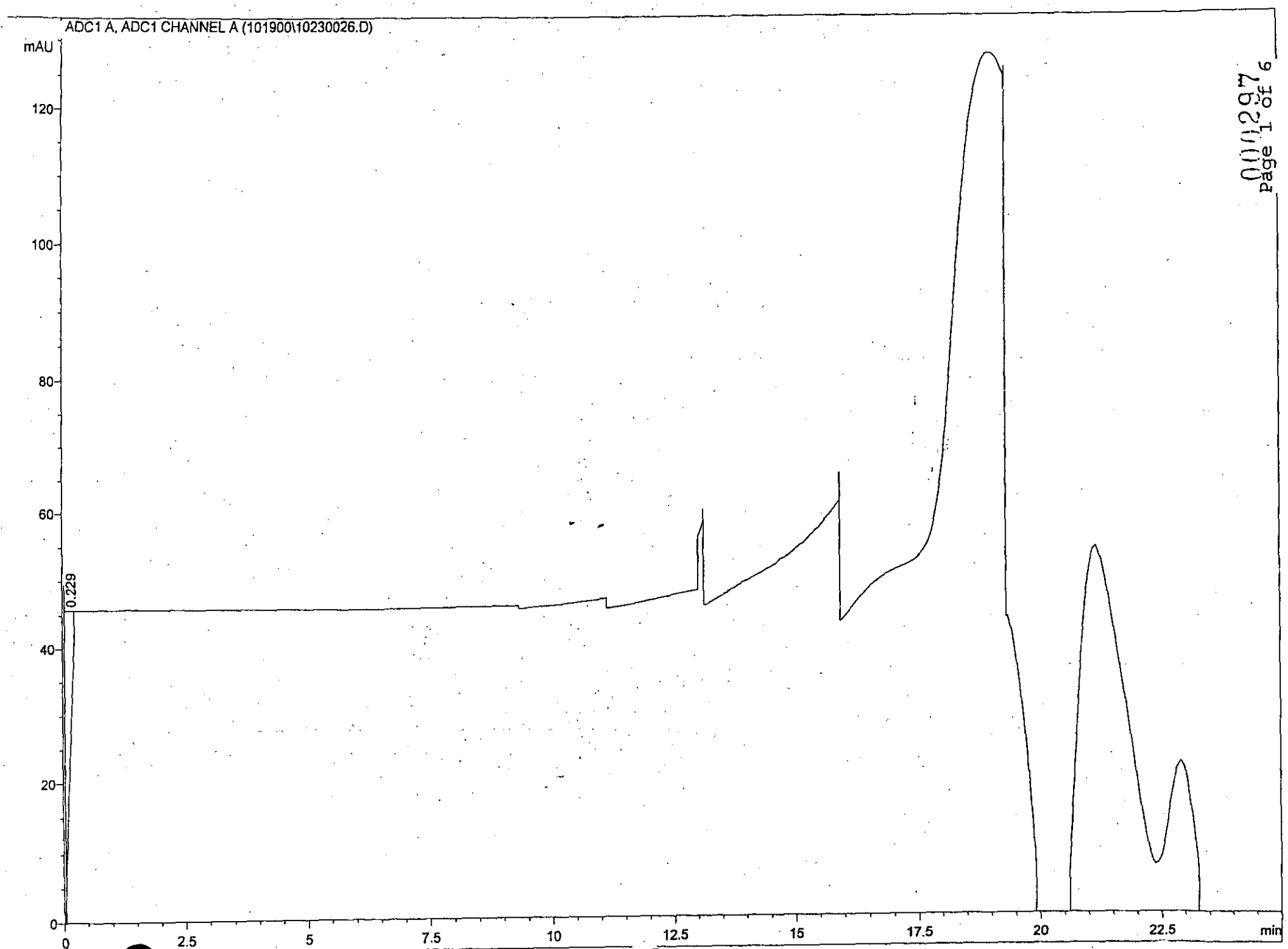
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.746		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

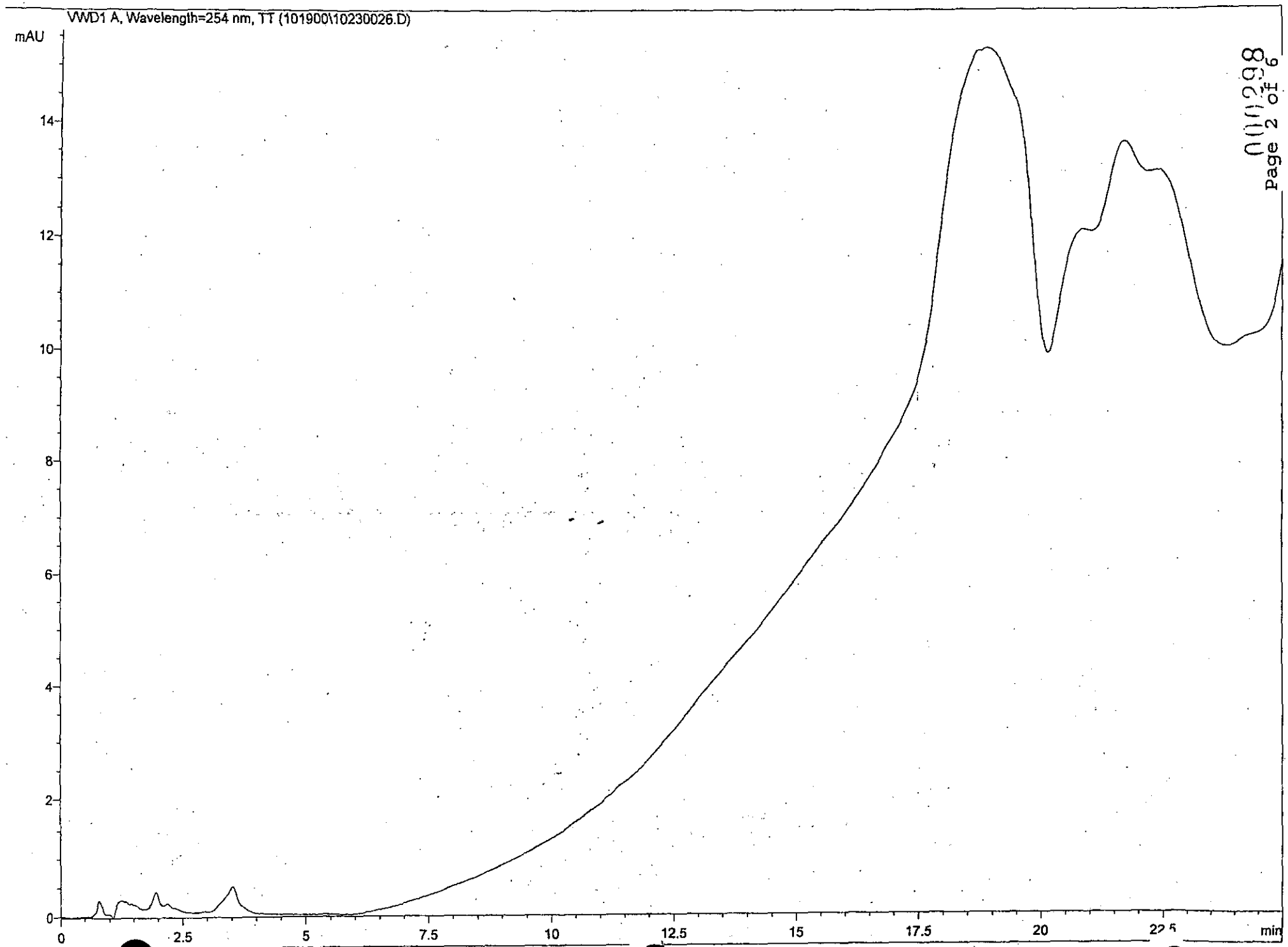
Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

*** End of Report ***


ADC1 A, ADC1 CHANNEL A (101900\10230026.D)
mAU
120
100
80
60
40
20
0
0.229
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (101900\10230026.D)
mAU
14
12
10
8
6
4
2
0
0
2.5
5
7.5
10
12.5
15
17.5
20
min

RAW DATA

==========

Injection Date : 10/24/00 1:36:41 PM
Sample Name : CCB, ACN
Acq. Operator : RS

Seq. Line : 26
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 1:35:34 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

RetTime [min]	Type	Area mAU *s	Amt/Area	Amount [ug/ml]	Grp	Name
5.746		-	-	-	-	Naphthalene
7.115		-	-	-	-	Acenaphthylene
7.714		-	-	-	-	1-Methylnaphthalene
8.090		-	-	-	-	2-Methylnaphthalene
8.363		-	-	-	-	Acenaphthene
8.875		-	-	-	-	Fluorene
9.730		-	-	-	-	Phenanthrene
10.557		-	-	-	-	Anthracene
11.395		-	-	-	-	Fluoranthene
11.895		-	-	-	-	Pyrene
13.300		-	-	-	-	P-terphenyl D14
14.027		-	-	-	-	Benzo(a)anthracene
14.590		-	-	-	-	Chrysene
16.411		-	-	-	-	Benzo(b)fluoranthene
17.490		-	-	-	-	Benzo(k)fluoranthene
18.065		-	-	-	-	Benzo(a)pyrene
19.627		-	-	-	-	Dibenzo(ah)anthracene
20.085		-	-	-	-	Benzo(ghi)perylene
21.097		-	-	-	-	Indeno(123cd)pyrene

Totals : 0.00000

Uncalibrated Peaks : compound name not specified

3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

==========

000294

Injection Date : 10/24/00 1:36:41 PM
Sample Name : CCB, ACN
Acq. Operator : RS

Seq. Line : 26
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 1:35:34 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

Area Percent Report

Sorted By : Signal
Calib. Data Modified : 10/24/00 9:46:25 AM
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ADC1 A, ADC1 CHANNEL A

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	5.900		0.0000	0.00000	0.0000	Naphthalene
2	7.853		0.0000	0.00000	0.0000	1-Methylnaphthalene
3	8.230		0.0000	0.00000	0.0000	2-Methylnaphthalene
4	8.522		0.0000	0.00000	0.0000	Acenaphthene
5	8.960		0.0000	0.00000	0.0000	Fluorene
6	9.870		0.0000	0.00000	0.0000	Phenanthrene
7	10.699		0.0000	0.00000	0.0000	Anthracene
8	11.539		0.0000	0.00000	0.0000	Fluoranthene
9	12.037		0.0000	0.00000	0.0000	Pyrene
10	14.170		0.0000	0.00000	0.0000	Benzo(a)anthracene
11	14.737		0.0000	0.00000	0.0000	Chrysene
12	16.584		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
13	17.642		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
14	18.216		0.0000	0.00000	0.0000	Benzo(a)pyrene
15	19.769		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
16	20.236		0.0000	0.00000	0.0000	Benzo(ghi)perylene
Totals :				0.00000	0.0000	

Uncalibrated Peaks:

Peak #	RetTime [min]	Type	Width [min]	Area [mAU*s]	Area %	Name
1	0.229	BBA	0.3959	283.88242	100.0000	?
Uncalib. totals :				283.88242	100.0000	

==========

Injection Date : 10/24/00 1:36:41 PM
Sample Name : CCB, ACN
Acq. Operator : RS

Seq. Line : 26
Vial : 21
Inj : 1
Inj Volume : 12 µl

Acq. Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 1:35:34 PM by RS
(modified after loading)
Analysis Method : C:\HPCHEM\1\METHODS\PAH.M
Last changed : 10/24/00 2:16:17 PM by RS
(modified after loading)
Polynuclear Aromatic Hydrocarbons By HPLC
Vydak C18 PAH 5um 300A 2.1 x 250 mm column
12 uL injection volume
Initial: 45% CH3CN/55% H2O with gradient elution
0.50 ml/min

==========

Results obtained with enhanced integrator!

Signal 2: VWD1 A, Wavelength=254 nm, TT

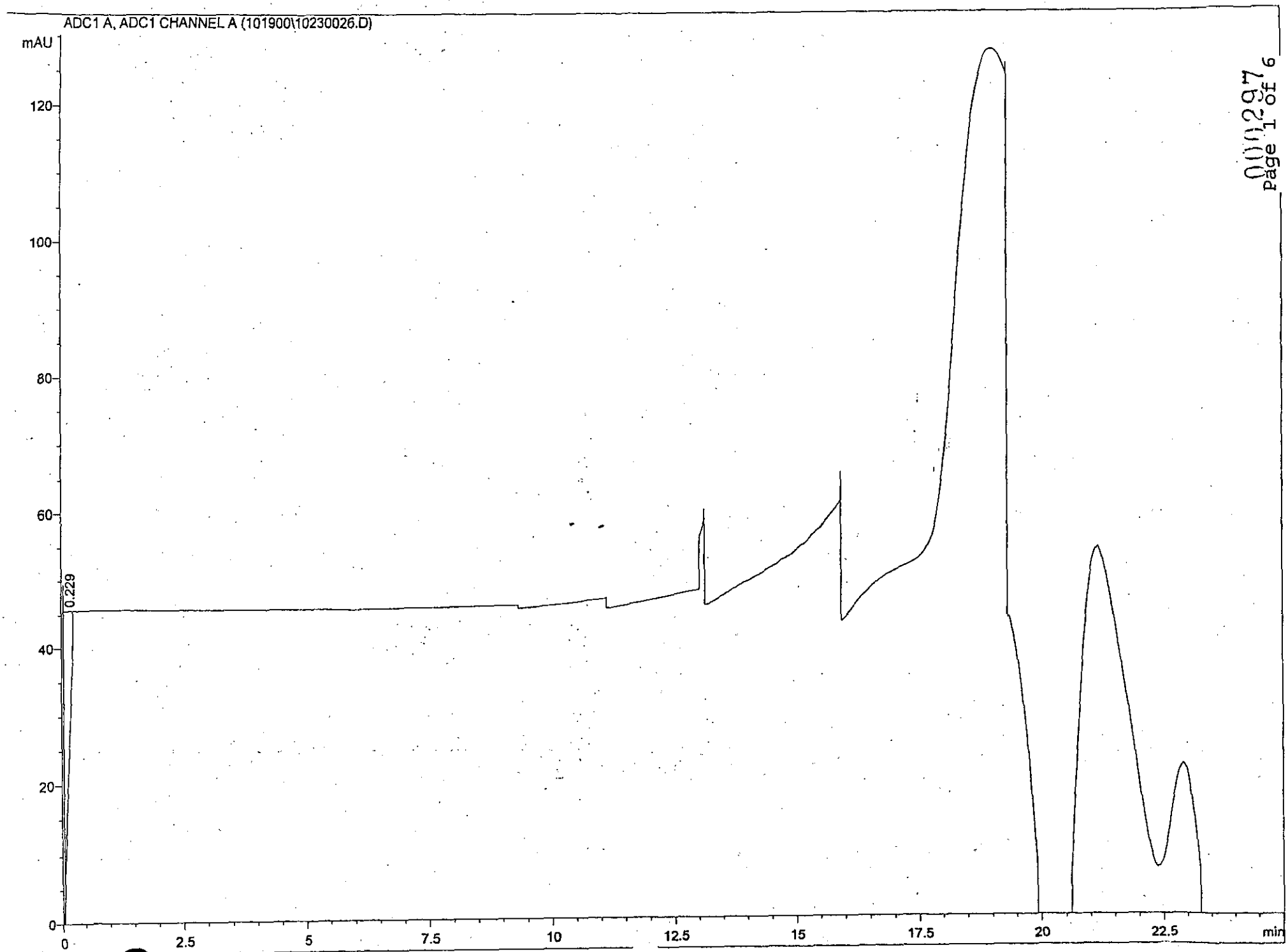
Peak #	RetTime [min]	Type	Width [min]	Area mAU *s	Area %	Name
1	5.746		0.0000	0.00000	0.0000	Naphthalene
2	7.115		0.0000	0.00000	0.0000	Acenaphthylene
3	7.714		0.0000	0.00000	0.0000	1-Methylnaphthalene
4	8.090		0.0000	0.00000	0.0000	2-Methylnaphthalene
5	8.363		0.0000	0.00000	0.0000	Acenaphthene
6	8.875		0.0000	0.00000	0.0000	Fluorene
7	9.730		0.0000	0.00000	0.0000	Phenanthrene
8	10.557		0.0000	0.00000	0.0000	Anthracene
9	11.395		0.0000	0.00000	0.0000	Fluoranthene
10	11.895		0.0000	0.00000	0.0000	Pyrene
11	13.300		0.0000	0.00000	0.0000	P-terphenyl D14
12	14.027		0.0000	0.00000	0.0000	Benzo(a)anthracene
13	14.590		0.0000	0.00000	0.0000	Chrysene
14	16.411		0.0000	0.00000	0.0000	Benzo(b)fluoranthene
15	17.490		0.0000	0.00000	0.0000	Benzo(k)fluoranthene
16	18.065		0.0000	0.00000	0.0000	Benzo(a)pyrene
17	19.627		0.0000	0.00000	0.0000	Dibenzo(ah)anthracene
18	20.085		0.0000	0.00000	0.0000	Benzo(ghi)perylene
19	21.097		0.0000	0.00000	0.0000	Indeno(123cd)pyrene
Totals :				0.00000	0.0000	

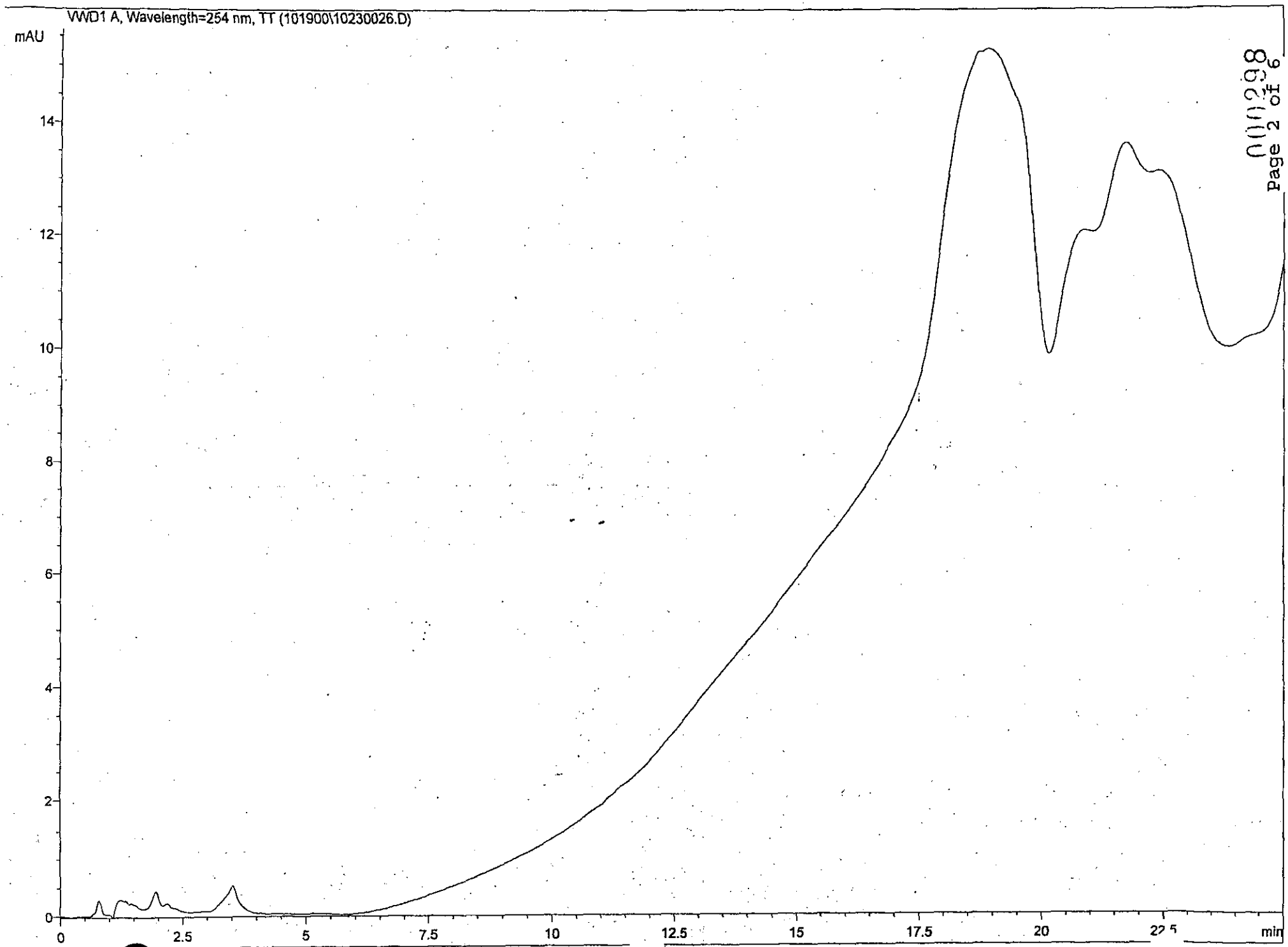
Uncalibrated Peaksm.a.
Results obtained with enhanced integrator!
3 Warnings or Errors :

Warning : Calibration warnings (see calibration table listing)
Warning : Calibrated compound(s) not found
Warning : Amount limits exceeded

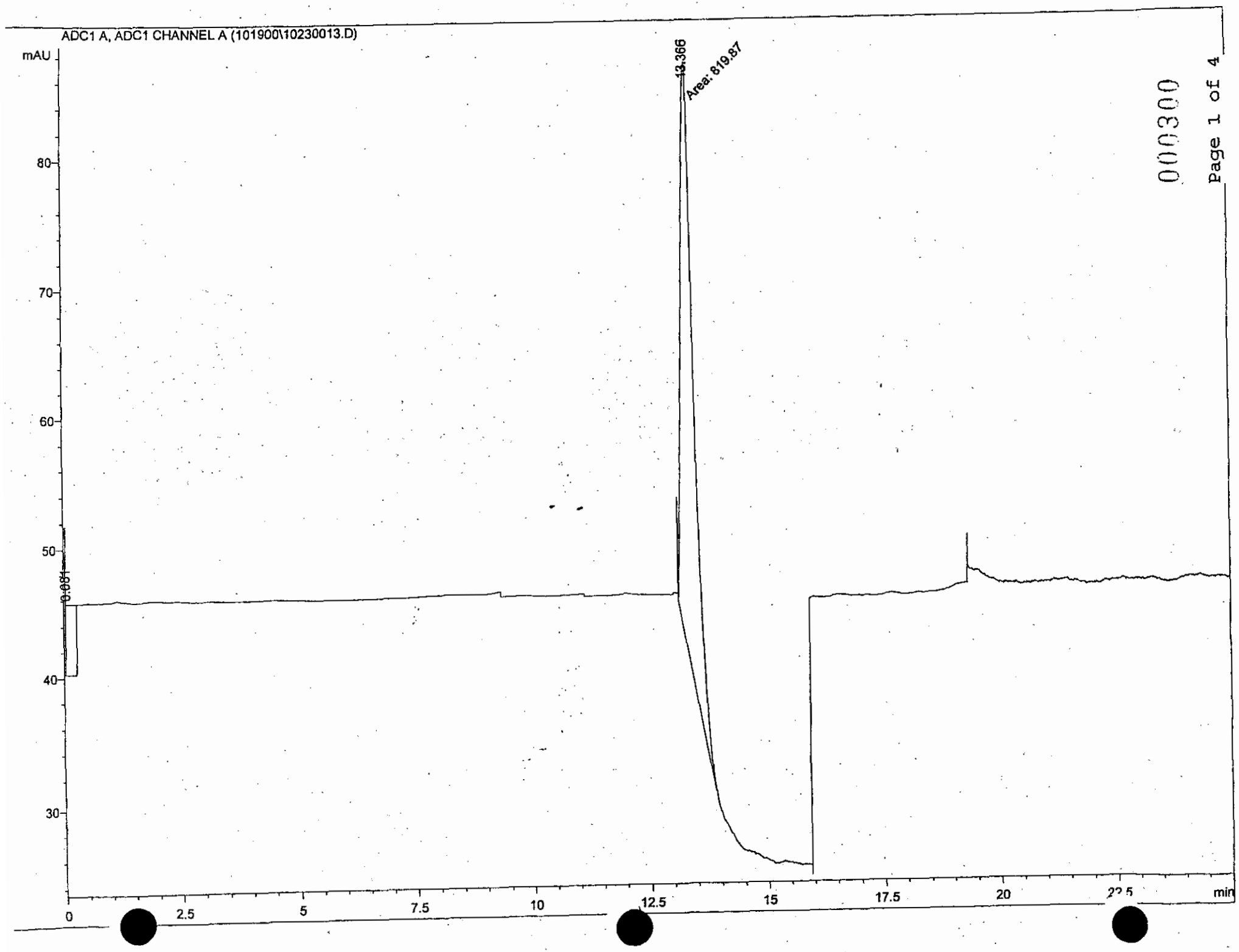
==========

*** End of Report ***

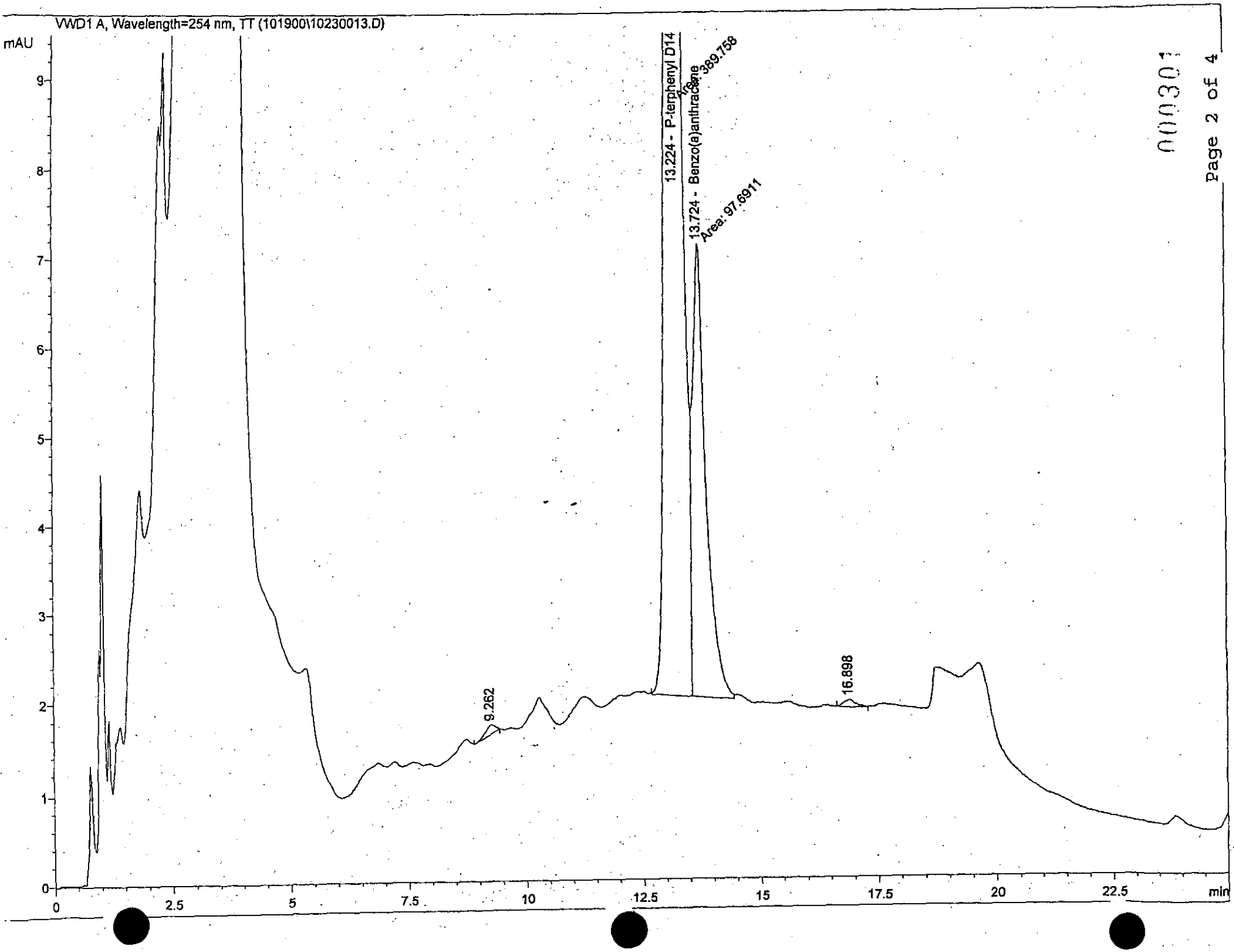

ADC1 A, ADC1 CHANNEL A (101900\10230026.D)
mAU
120
100
80
60
40
20
0
0.229
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min


VWD1 A, Wavelength=254 nm, TT (101900\10230026.D)
mAU
14
12
10
8
6
4
2
0
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

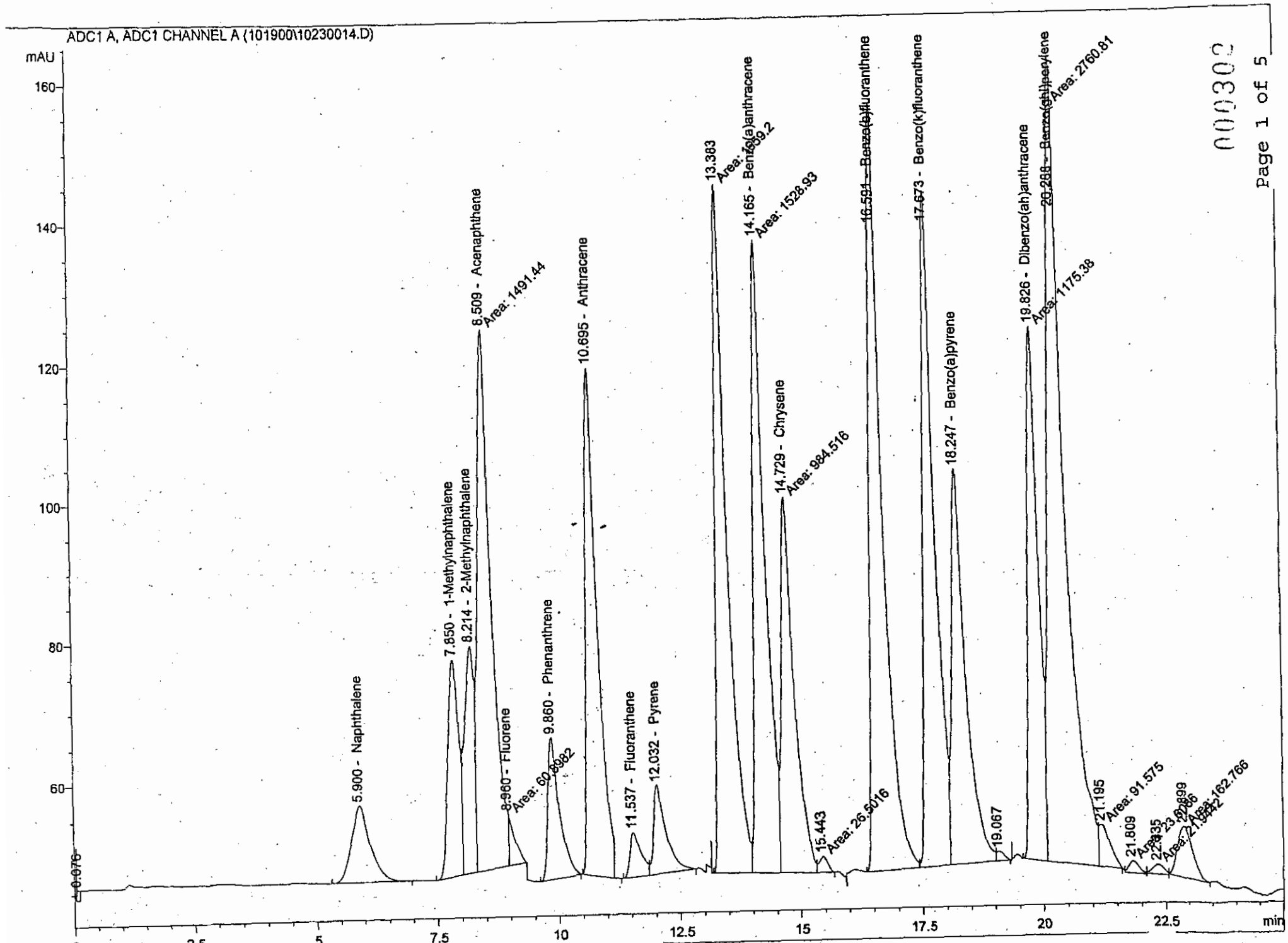
RAW DATA


ADC1 A, ADC1 CHANNEL A (101900\10230013.D)
mAU
80
70
60
50
40
30
0.081
13.366
Area: 819.87
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

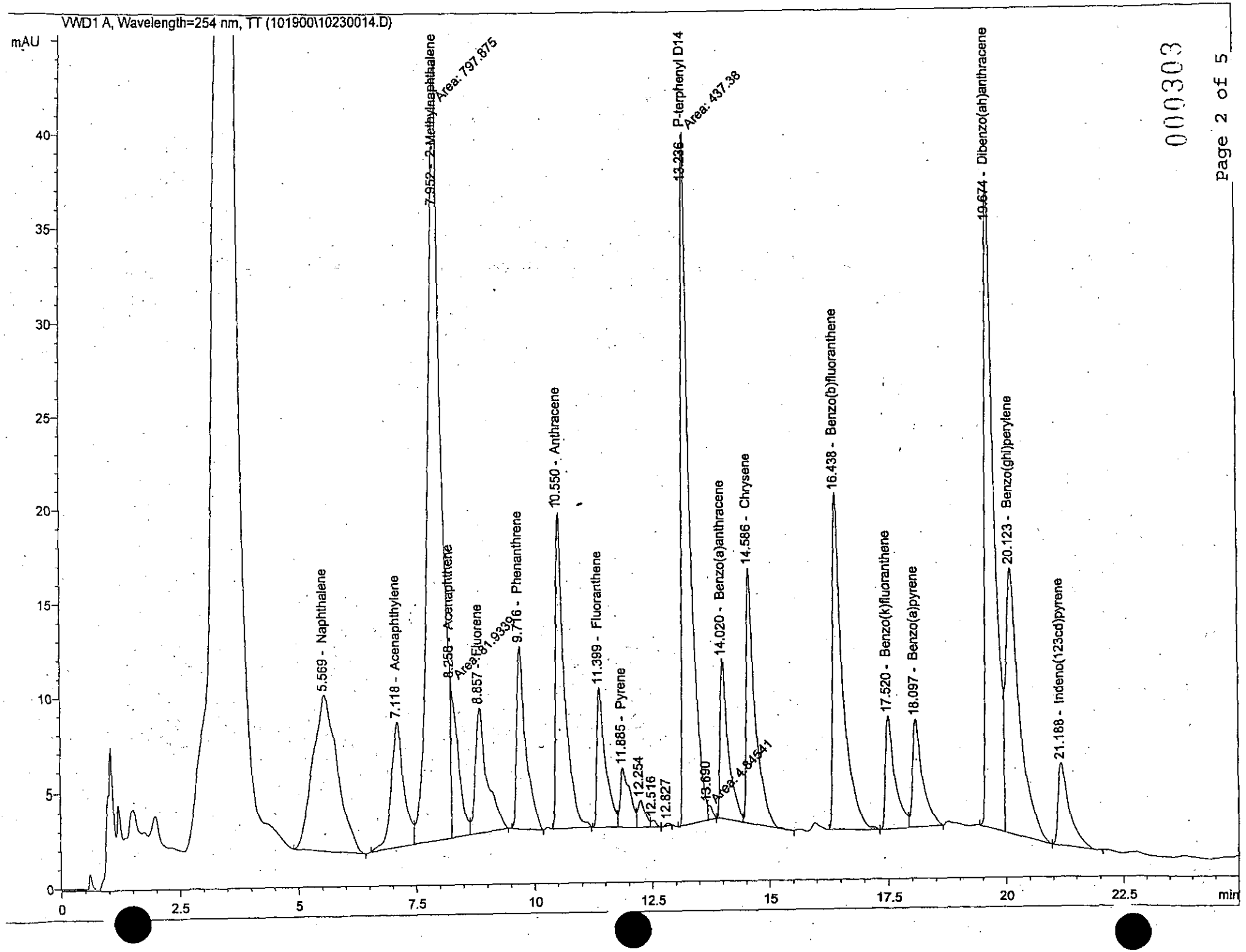
000300


VWD1 A, Wavelength=254 nm, TT (101900\10230013.D)
mAU
9
8
7
6
5
4
3
2
1
0
13.224 - P-terphenyl D14
Area: 389.758
13.724 - Benzo(a)anthracene
Area: 97.6911
9.262
16.898
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

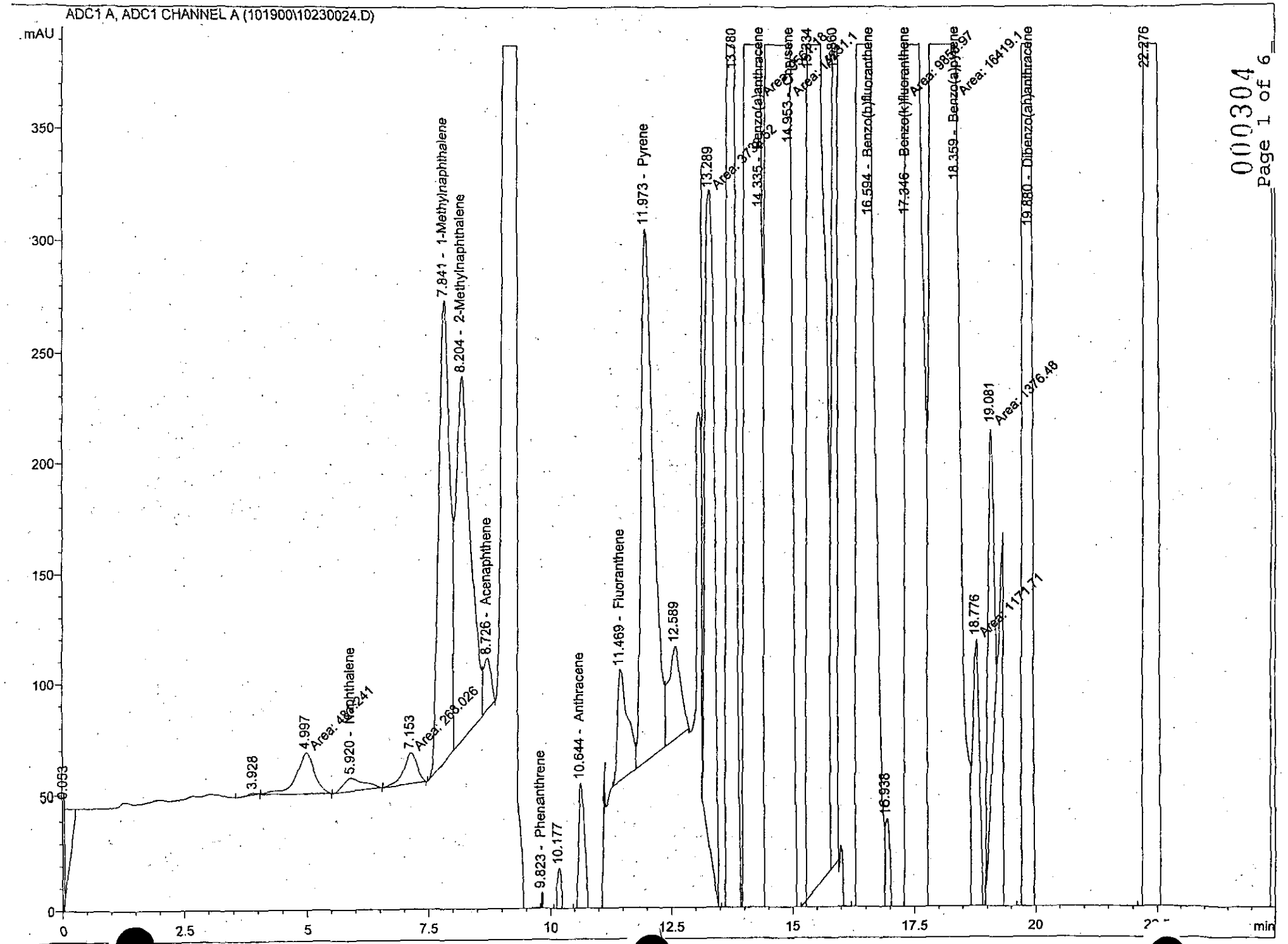
000301


ADC1 A, ADC1 CHANNEL A (101900\10230014.D)
mAU
160
140
120
100
80
60
0.076
5.900 - Naphthalene
7.850 - 1-Methylnaphthalene
8.214 - 2-Methylnaphthalene
8.509 - Acenaphthene
Area: 1491.44
8.960 - Fluorene
Area: 60.5082
9.860 - Phenanthrene
10.695 - Anthracene
11.537 - Fluoranthene
12.032 - Pyrene
13.383
Area: 559.2
14.165 - Benzo(a)anthracene
Area: 1528.93
14.729 - Chrysene
Area: 984.516
15.443
Area: 26.5016
16.591 - Benzo(b)fluoranthene
17.673 - Benzo(k)fluoranthene
18.247 - Benzo(a)pyrene
19.067
19.826 - Dibenzo(ah)anthracene
Area: 1175.38
20.288 - Benzo(ghi)perylene
Area: 2760.81
21.195
Area: 91.575
21.809
Area: 162.766
0
2.5
5
7.5
10
12.5
15
17.5
20
22.5
min

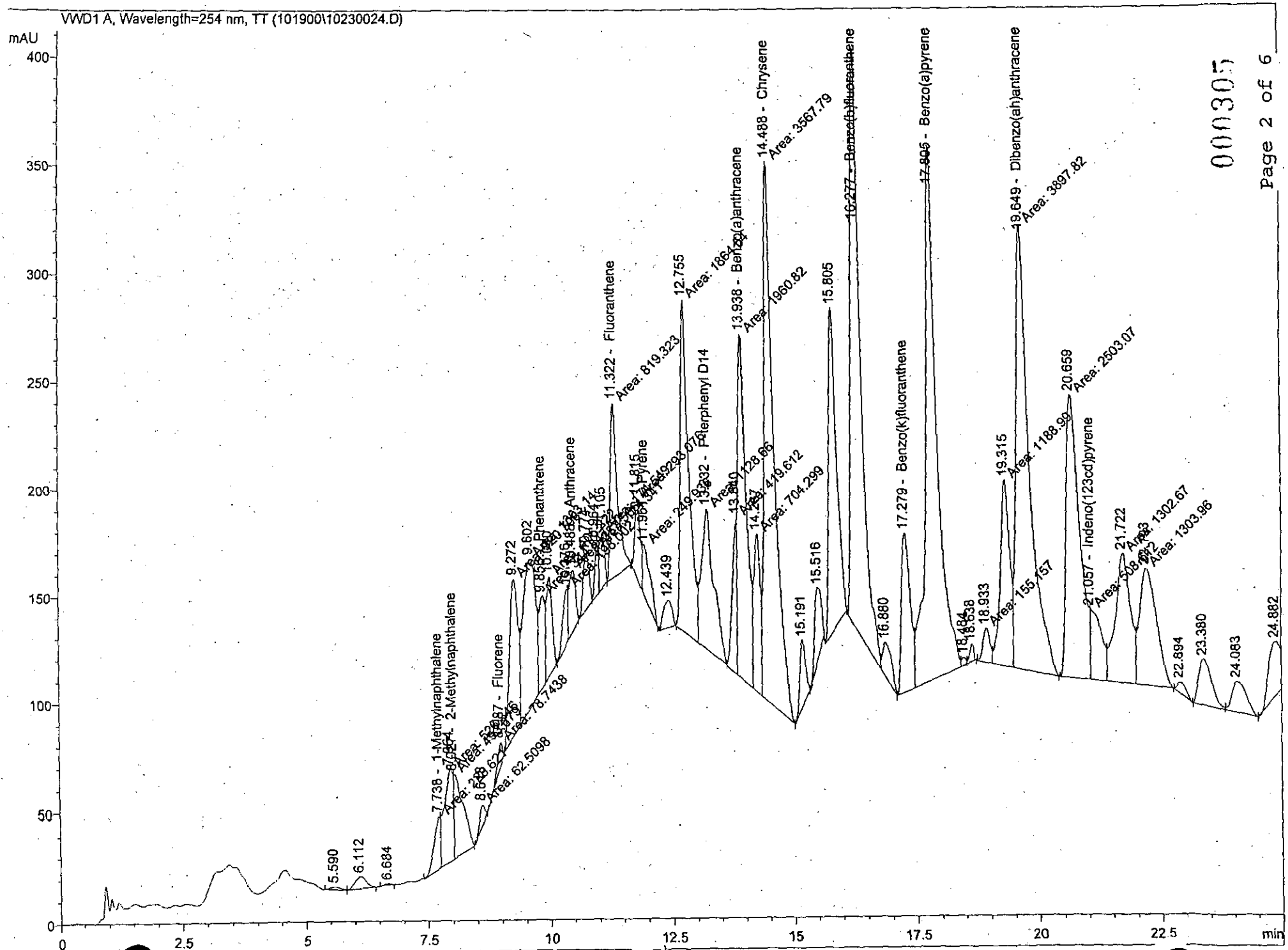
000302

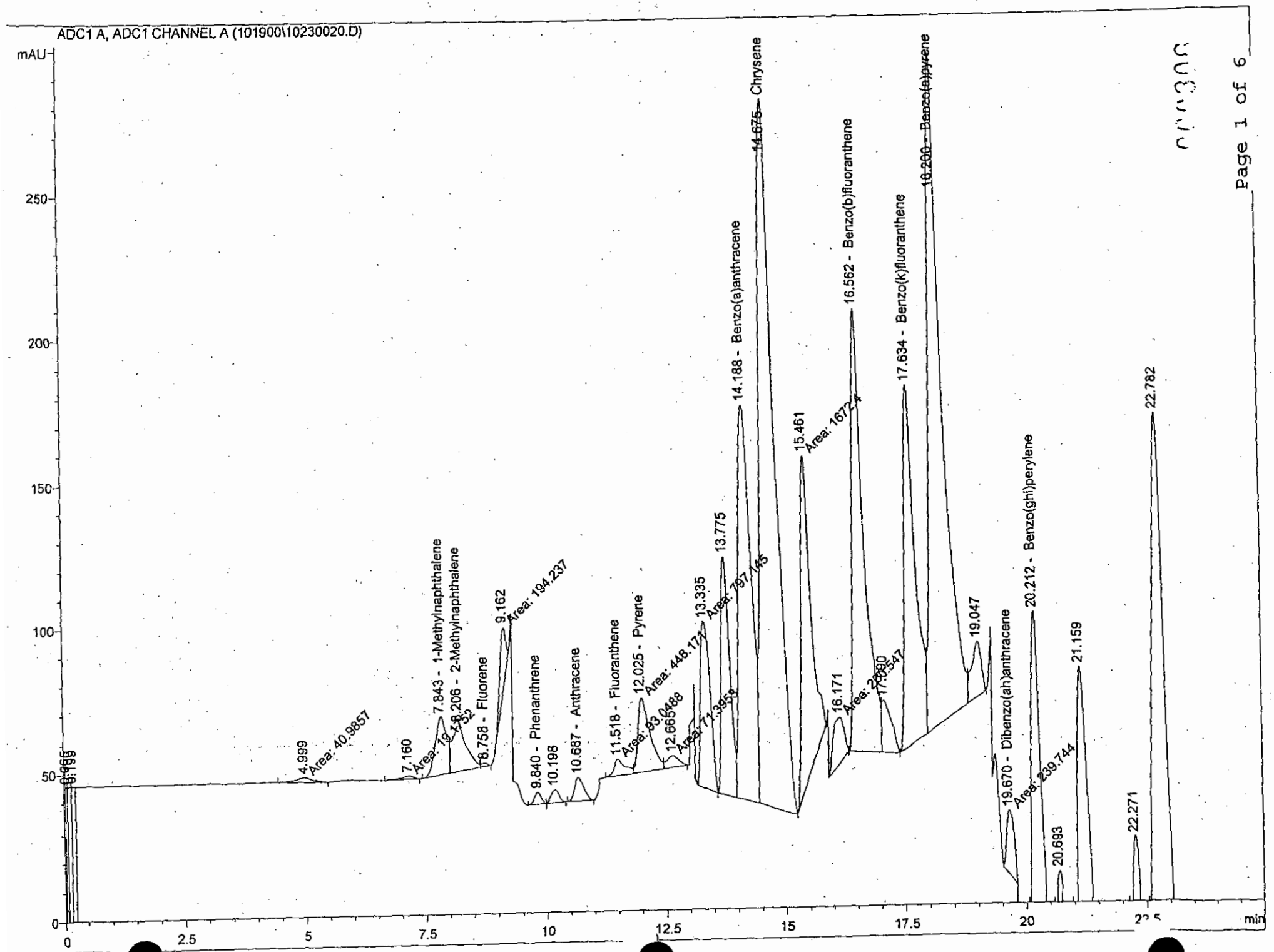

VWD1 A, Wavelength=254 nm, TT (101900\10230014.D)
mAU
5.569 - Naphthalene
7.118 - Acenaphthylene
7.952 - 2-Methylnaphthalene
Area: 797.875
8.258 - Acenaphthene
8.857 - Fluorene
Area: 81.9339
9.716 - Phenanthrene
10.550 - Anthracene
11.399 - Fluoranthene
11.885 - Pyrene
12.254
12.516
12.827
13.236 - P-terphenyl D14
Area: 437.38
13.690
14.020 - Benzo(a)anthracene
Area: 4.84541
14.586 - Chrysene
16.438 - Benzo(b)fluoranthene
17.520 - Benzo(k)fluoranthene
18.097 - Benzo(a)pyrene
19.674 - Dibenzo(ah)anthracene
20.123 - Benzo(ghi)perylene
21.188 - Indeno(123cd)pyrene
min

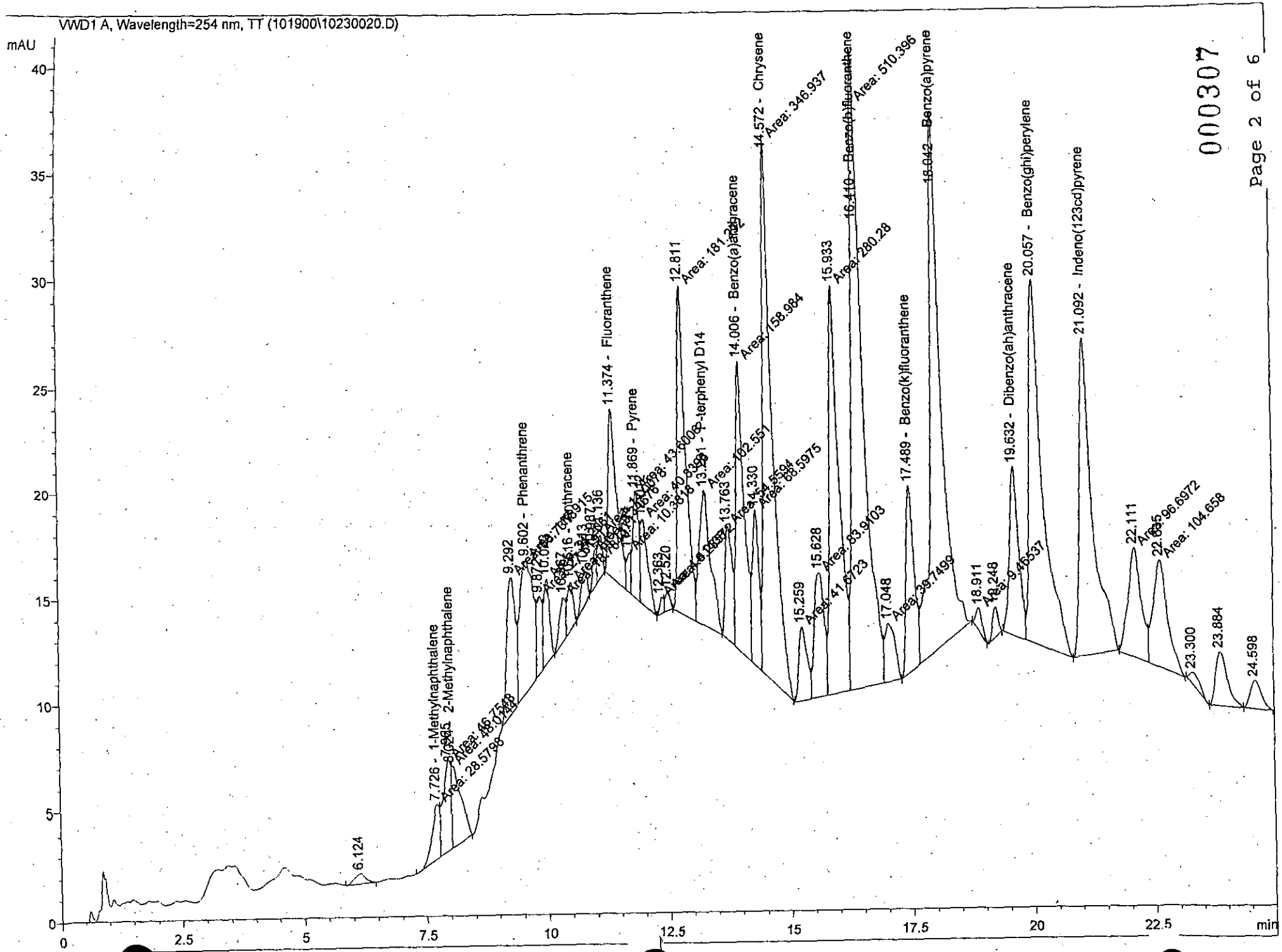
000303



000304
Page 1 of 6


VWD1 A, Wavelength=254 nm, TT (101900\10230024.D)
mAU
min
5.590
6.112
6.684
7.738 - 1-Methylnaphthalene
2-Methylnaphthalene
Fluorene
Area: 62.5098
Area: 78.7438
9.272
9.602
Phenanthrene
Anthracene
11.322 - Fluoranthene
Area: 819.323
12.439
12.755
Area: 1864.84
13.938 - Benzo(a)anthracene
Area: 1960.82
14.488 - Chrysene
Area: 3567.79
Area: 704.299
15.191
15.516
15.805
16.880
17.279 - Benzo(k)fluoranthene
17.805 - Benzo(a)pyrene
18.933
19.315
Area: 155.157
19.649 - Dibenzo(ah)anthracene
Area: 3897.82
20.659
Area: 2503.07
21.057 - Indeno(123cd)pyrene
21.722
Area: 1302.67
Area: 1303.96
22.894
23.380
24.083
24.882


ADC1 A, ADC1 CHANNEL A (101900\10230020.D)
mAU
min
4.999
Area: 40.9857
7.160
7.843 - 1-Methylnaphthalene
8.206 - 2-Methylnaphthalene
8.758 - Fluorene
9.162
Area: 194.237
9.840 - Phenanthrene
10.198
10.687 - Anthracene
11.518 - Fluoranthene
12.025 - Pyrene
Area: 448.171
12.665
13.335
13.775
Area: 797.145
14.188 - Benzo(a)anthracene
14.675 - Chrysene
15.461
Area: 1672.4
16.171
16.562 - Benzo(b)fluoranthene
17.634 - Benzo(k)fluoranthene
19.047
19.670 - Dibenzo(ah)anthracene
Area: 239.744
20.212 - Benzo(ghi)perylene
20.693
21.159
22.271
22.782


VWD1 A, Wavelength=254 nm, TT (101900\10230020.D)
mAU
min
6.124
7.726 - 1-Methylnaphthalene
2-Methylnaphthalene
9.292
9.602 - Phenanthrene
11.374 - Fluoranthene
11.869 - Pyrene
12.811
14.006 - Benzo(a)anthracene
14.572 - Chrysene
Area: 346.937
15.259
15.628
15.933
Area: 280.28
16.410 - Benzo(b)fluoranthene
Area: 510.396
17.048
17.489 - Benzo(k)fluoranthene
18.042 - Benzo(a)pyrene
18.911
19.632 - Dibenzo(ah)anthracene
20.057 - Benzo(ghi)perylene
21.092 - Indeno(123cd)pyrene
22.111
23.300
23.884
24.598
Area: 104.658
000307
Page 2 of 6

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 3:18:17 P**
Prep End Date: **10/20/00 8:00:00 P**

Prep Batch **7868** Prep Code: **FL-PRO_W-PR** Technician: **Zafer Sarihan**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-004B	Aqueous			1000	0	10/20/00	0	2	0.002
0010401-005B	Aqueous			1000	0	10/20/00	0	2	0.002
0010401-006B	Aqueous			1000	0	10/20/00	0	2	0.002
0010401-007B	Aqueous			1000	0	10/20/00	0	2	0.002
LCS-7868				1000	0	10/20/00	0	2	0.002
LCSD-7868				1000	0	10/20/00	0	2	0.002
MB-7868				1000	0	10/20/00	0	2	0.002

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7868** Batch ID: **7868** Test Code: **FL-PRO** Units: **mg/L** Analysis Date: **10/20/00 8:20:42 PM** Prep Date: **10/20/00**

Client ID: Run ID: **GC-2 (DUAL FID)_00102** SeqNo: **155180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Range Organics	BRL	0.4									
Surr: Dioctylphthalate	0.1831	0	0.2	0	91.6	50	150	0			
Surr: o-Terphenyl	0.3252	0	0.4	0	81.3	45	111	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

000319

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7868** Batch ID: **7868** Test Code: **FL-PRO** Units: **mg/L** Analysis Date: **10/20/00 9:26:45 PM** Prep Date: **10/20/00**

Client ID: Run ID: **GC-2 (DUAL FID)_00102** SeqNo: **155181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Range Organics	3.491	0.4	4.25	0	82.2	63	153	0			
Surr: Dioctylphthalate	0.1583	0	0.2	0	79.1	50	150	0			
Surr: o-Terphenyl	0.2875	0	0.4	0	71.9	45	111	0			

Sample ID: **LCSD-7868** Batch ID: **7868** Test Code: **FL-PRO** Units: **mg/L** Analysis Date: **10/20/00 10:32:55 PM** Prep Date: **10/20/00**

Client ID: Run ID: **GC-2 (DUAL FID)_00102** SeqNo: **155182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Range Organics	3.909	0.4	4.25	0	92	63	153	3.491	11.3	0	
Surr: Dioctylphthalate	0.1951	0	0.2	0	97.5	50	150	0.1583	0	0	
Surr: o-Terphenyl	0.3161	0	0.4	0	79	45	111	0.2875	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

000320

INITIAL CALIBRATION

Calibration Table

Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM

Calculate : External Standard
Based on : Peak Area

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

Curve Type : Linear
Origin : Connected
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)

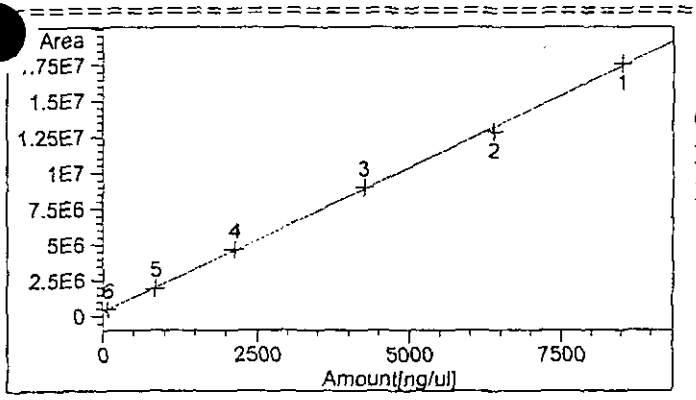
Signal 1: FID1 A,

RetTime [min]	Sig	Lvl	Amount [ng/ul]	Area	Amt/Area	Ref	Grp	Name
25.448	1	6	85.00000	4.57886e5	1.85636e-4			FLPRO
		5	850.00000	1.95217e6	4.35413e-4			
		4	2125.00000	4.68010e6	4.54051e-4			
		3	4250.00000	8.99601e6	4.72432e-4			
		2	6375.00000	1.28711e7	4.95294e-4			
		1	8500.00000	1.76093e7	4.82701e-4			

==========

Calibration Curves

==========



FLPRO at exp. RT: 25.448
FID1 A,
Correlation: 0.99969
Residual Std. Dev.: 185250.88415
Formula: y = mx + b
m: 2020.12170
b: 291691.77072
x: Amount [ng/ul]
y: Area

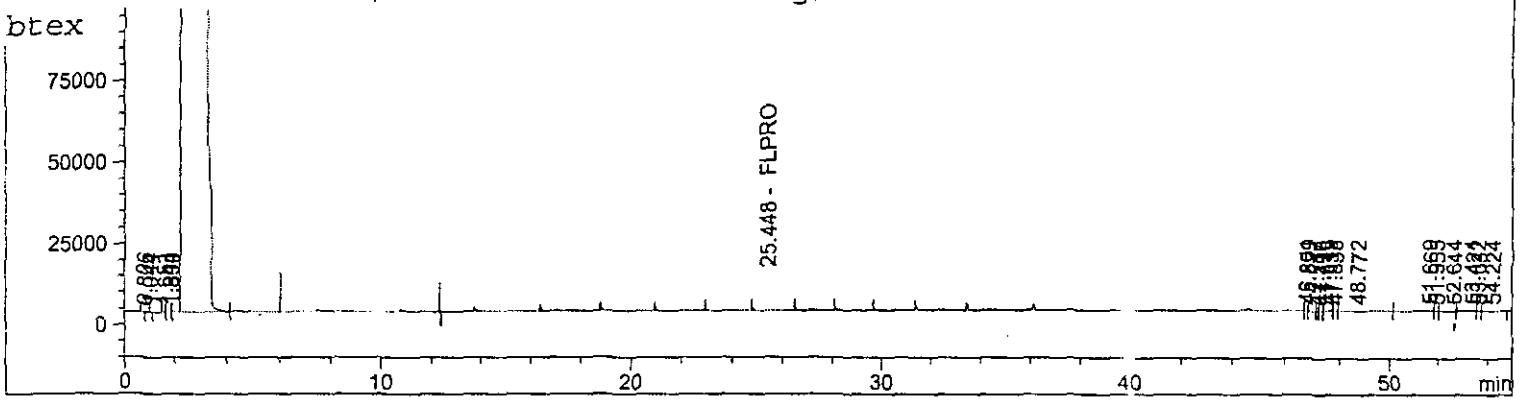
==========

==========

Injection Date : 10/17/00 6:32:54 PM
Sample Name : FLPRO 85
Acq. Operator : ARH

Seq. Line : 3
Vial : 6
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:03:09 AM by ARH
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	4.57886e5	1.83426e-4	83.98816		FLPRO

Totals : 83.98816

==========

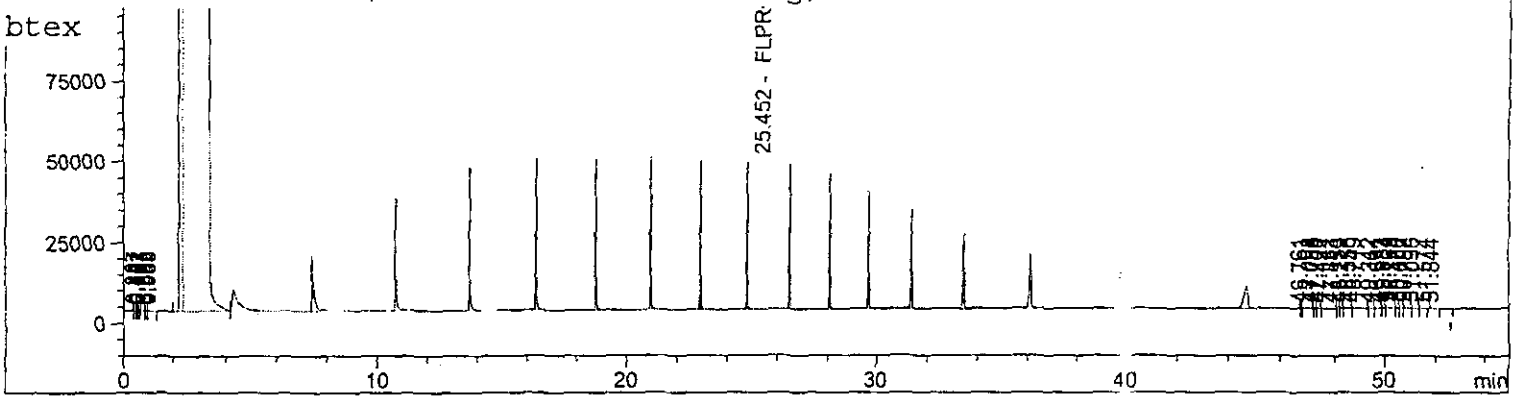
*** End of Report ***

Data File C:\HPCHEM\2\DATA\101700A\005F0201.D Sample Name: FLPRO 850

==========

Injection Date : 10/17/00 5:26:40 PM Seq. Line : 2
Sample Name : FLPRO 850 Vial : 5
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:03:19 AM by ARH
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.452	VV +	1.95217e6	4.21054e-4	821.96854		FLPRO

Totals : 821.96854

==========

*** End of Report ***

000325

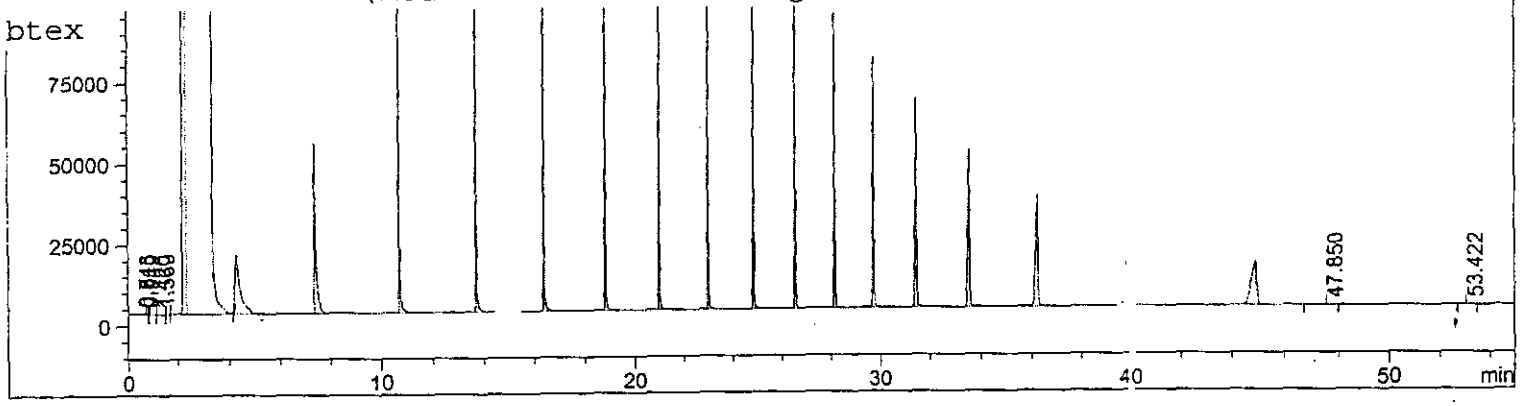
Data File C:\HPCHEM\2\DATA\101700A\004F0101.D Sample Name: FLPRO 2125

==========

Injection Date : 10/17/00 4:20:20 PM
Sample Name : FLPRO 2125
Acq. Operator : ARH

Seq. Line : 1
Vial : 4
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:03:39 AM by ARH
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	4.68010e6	4.64167e-4	2172.34622		FLPRO

Totals : 2172.34622

==========

*** End of Report ***

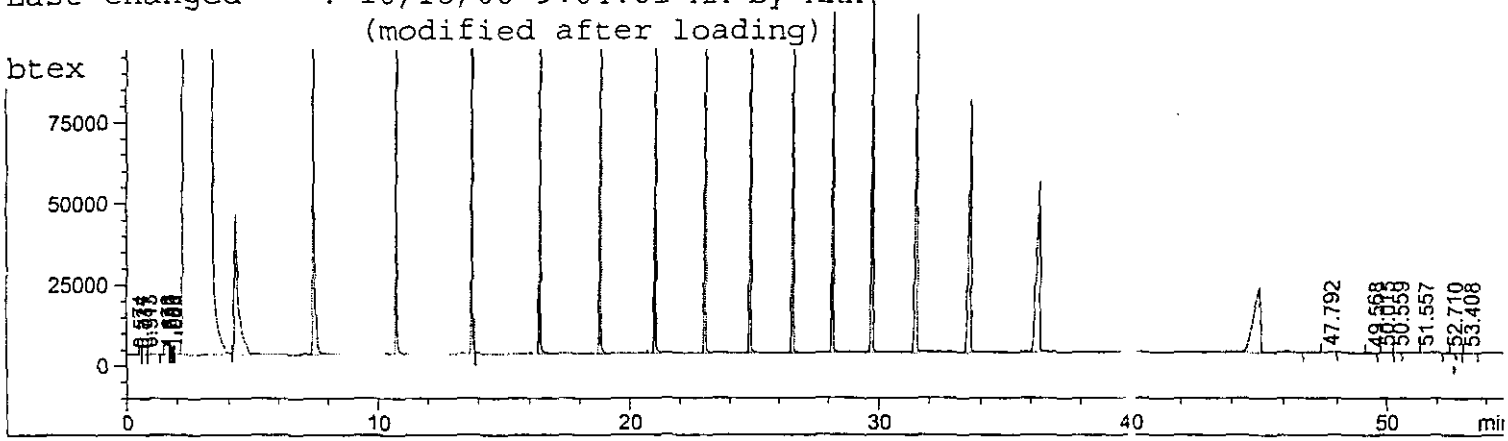
000326

==========

Injection Date : 10/17/00 2:17:38 PM
Sample Name : FLPRO 4250
Acq. Operator : ARH

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:04:01 AM by ARH
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	8.99601e6	4.78969e-4	4308.80834		FLPRO

Totals : 4308.80834

==========

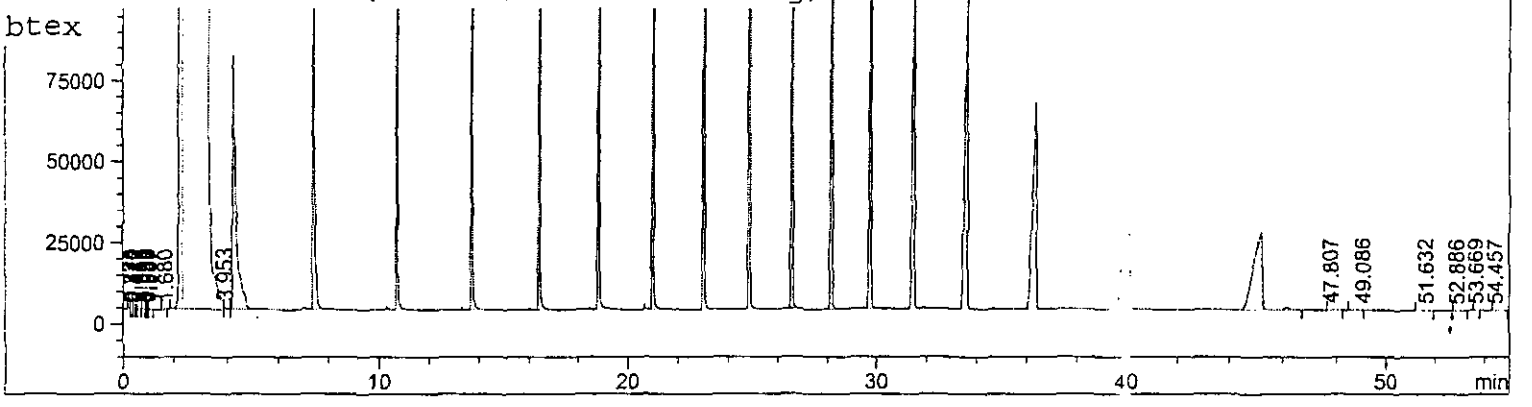
*** End of Report ***

==========

Injection Date : 10/17/00 1:11:06 PM
Sample Name : FLPRO 6375
Acq. Operator : ARH

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:04:12 AM by ARH
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	1.28711e7	4.83801e-4	6227.07148		FLPRO

Totals : 6227.07148

==========

*** End of Report ***

000328

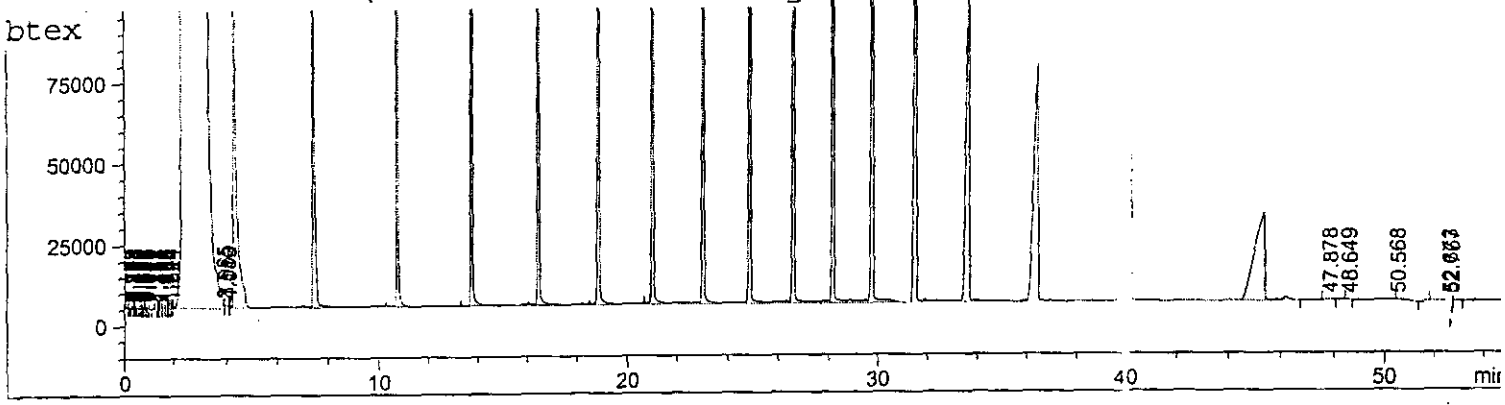
Data File C:\HPCHEM\2\DATA\101700\001F0101.D Sample Name: FLPRO 8500

==========

Injection Date : 10/17/00 12:05:17 PM
Sample Name : FLPRO 8500
Acq. Operator : ARH

Seq. Line : 1
Vial : 1
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:04:25 AM by ARH
(modified after loading)



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	1.76093e7	4.86820e-4	8572.53612		FLPRO

Totals : 8572.53612

==========

*** End of Report ***

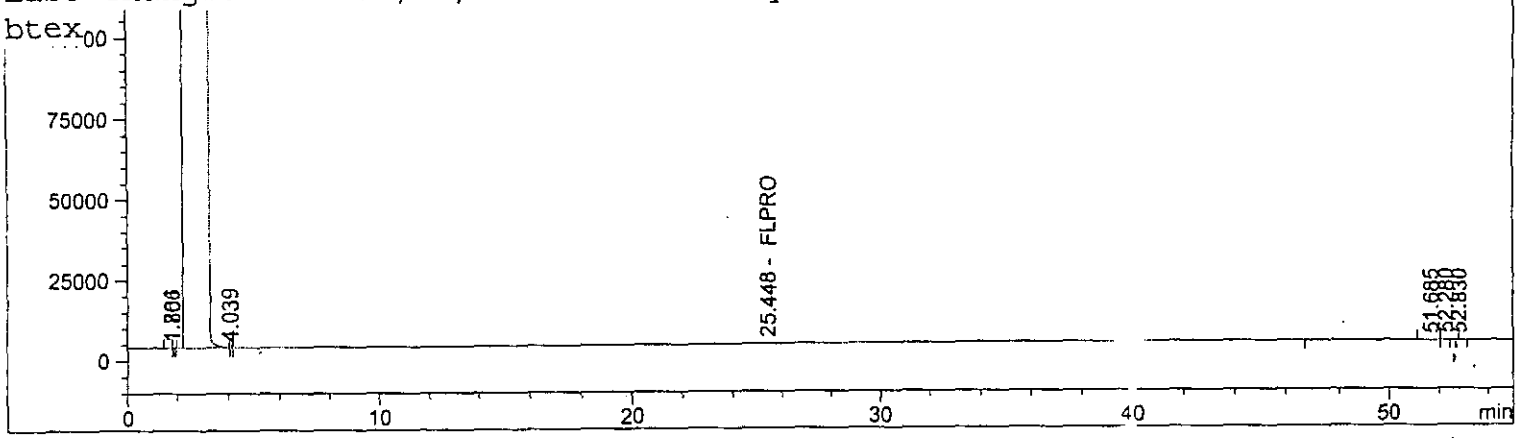
000320

Data File C:\HPCHEM\2\DATA\101700A\007F0401.D Sample Name: MECL2 BLK

==========

Injection Date : 10/17/00 7:39:13 PM Seq. Line : 4
Sample Name : MECL2 BLK Vial : 7
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	6.63034e4	1.83426e-4	12.16177		FLPRO

Totals : 12.16177

==========

*** End of Report ***

000330

CONTINUING CALIBRATION

AES 5890 GC/FID ANALYSIS LOG SHEET

Date: 10/20/00
Method: FLAPRO, M
Analysis: 8015

Coulmn ID: RTX - 5
Coulmn ID: RTX - 624

NO	File ID	Lab ID	Batch No.	ALS#	DF	Comments/Preparation	Status
1	001F0101	FLAPRO 2125		1			OK/RIN
2	001F0201	FLPRO 2125		1			OK/RIN
3	002F0301	MB 7868 W		2			OK/RIN
4	003F0401	LCS 7868 W		3			OK/RIN
5	004F0501	LCSD 7868 W		4			OK/RIN
6	005F0601	0010401-004B x 10		5	10		OK/RIN
7	006F0701	0010401-005B x 10		6	10		OK/RIN
8	007F0801	0010401-006B x 10		7	10		OK/RIN
9	008F0901	-007B x 10		8	10		OK/RIN
10	009F1001	MB 7621		9			OK/RIN
11	010F1101	LCS 7621		10			OK/RIN
12	001F1201	FLPRO 1700		1			OK/RIN
13	011F1301	0010401-001B x 10		11	10		OK/RIN
14	012F1401	-002B x 10		12	10		OK/RIN
	013F1501	-003B x 10		13	10		OK/RIN
16	001F1601	FLPRO 1700		1			OK/RIN
17	014F1701	0010401-001B		14			OK/RIN
18	015F1801	0010401-002B		15			OK/RIN
19	016F1901	0010401-003B		16			OK/RIN
20	017F2001	-004B		17			OK/RIN
21	018F2101	-001B		18			OK/RIN
22	019F2201	-002B		19			OK/RIN
23	020F2301	-007B		20			OK/RIN
24	001F2401	FLPRO 1700		1			OK/RIN
25							OK/RIN
26							OK/RIN
27							OK/RIN
28							OK/RIN
29							OK/RIN
30							OK/RIN
31							OK/RIN
32							OK/RIN
33							OK/RIN
							OK/RIN

Analyst: [signature]
Date: 10/23/00

Reviewed By: _____
Date: _____

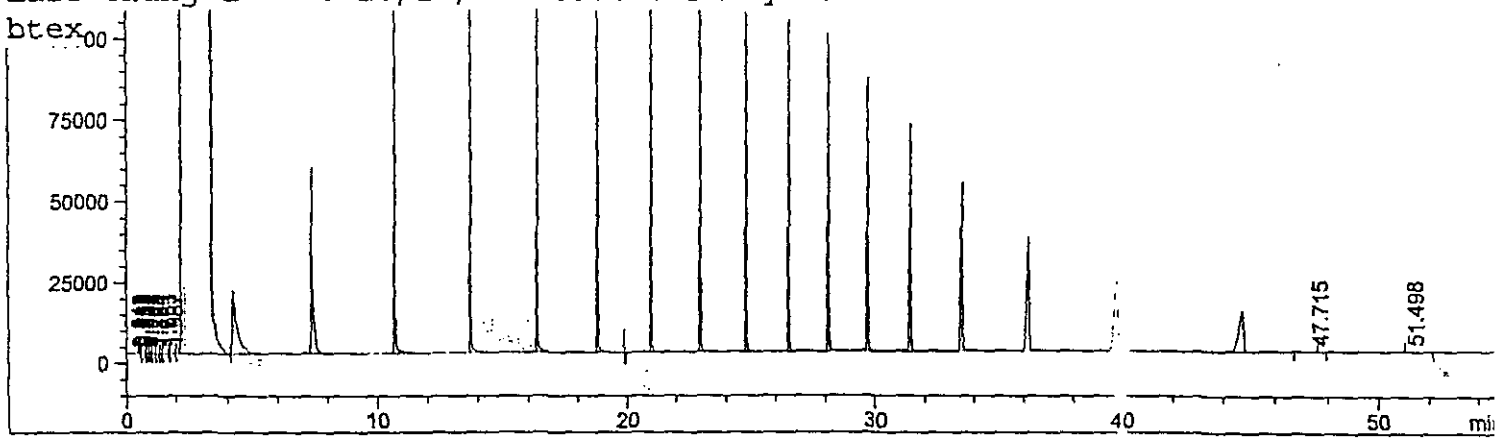
000332
000045

==========

Injection Date : 10/20/00 7:14:38 PM
Sample Name : FLPRO 2125
Acq. Operator : ARH

Seq. Line : 2
Vial : 1
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.452	VB +	5.07513e6	4.66569e-4	2367.89755		FLPRO

Totals : 2367.89755

==========

*** End of Report ***

$$\% D = \frac{2367.89755 - 2125}{2125} \times 100\% = 11.43\%$$

00033

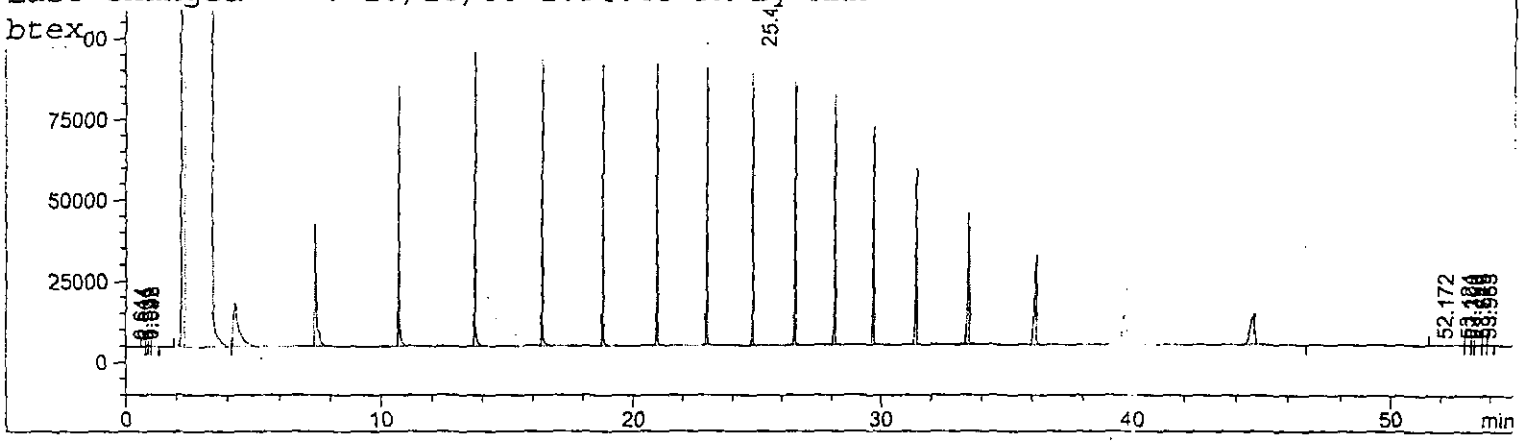
MC 10/25/00

Data File C:\HPCHEM\2\DATA\102000\001F1201.D Sample Name: FLPRO 1700

==========

Injection Date : 10/21/00 6:15:23 AM Seq. Line : 12
Sample Name : FLPRO 1700 Vial : 1
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	3.53798e6	4.54207e-4	1606.97508		FLPRO

Totals : 1606.97508

==========

*** End of Report ***

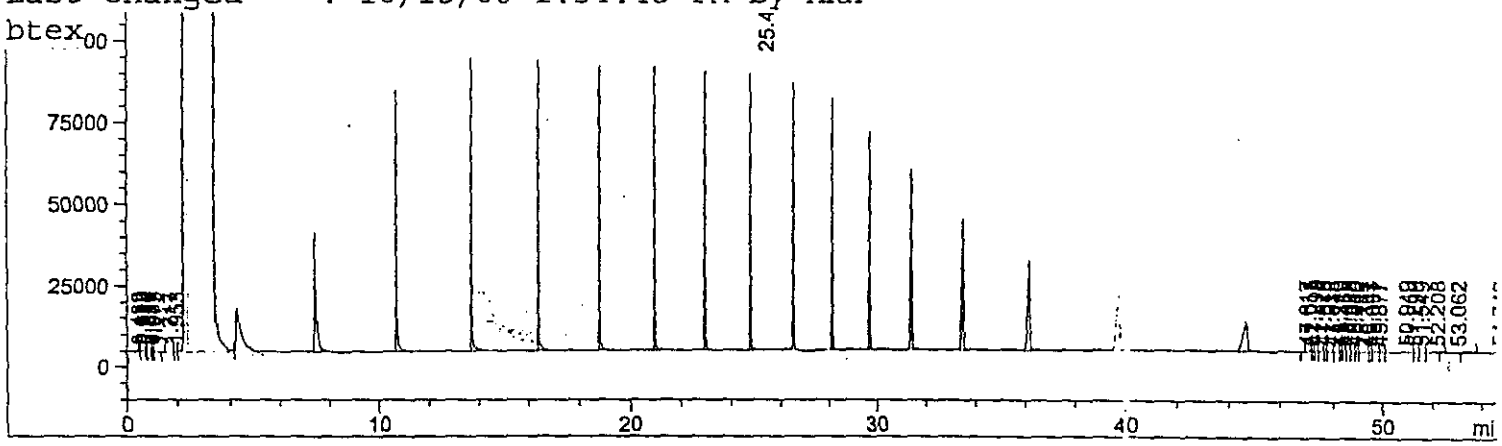
$$\% D = \left| \frac{1606.97508 - 1700}{1700} \right| \times 100\% = 5.5\% < 25\%$$

ML 10/25/00

00033.

Data File C:\HPCHEM\2\DATA\102000\001F1601.D Sample Name: FLPRO 170(

Injection Date	: 10/21/00 10:39:31 AM	Seq. Line	: 16
Sample Name	: FLPRO 1700	Vial	: 1
Acq. Operator	: ARH	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\HPCHEM\2\METHODS\FLPRO.M		
Last changed	: 5/20/00 1:51:20 PM by MW		
Analysis Method	: C:\HPCHEM\2\METHODS\FLPR1017.M		
Last changed	: 10/18/00 1:34:48 PM by ARH		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	10/18/00 12:20:28 PM
Multiplier	:	1.0000
Dilution	:	1.0000
Uncalibrated Peaks	:	not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	3.58700e6	4.54765e-4	1631.24107		FLPRO
Totals :				1631.24107		

*** End of Report ***

$$\% D = \left| \frac{1631.24107 - 1700}{1700} \right| \times 100\% = 4.04\% < 25\%$$

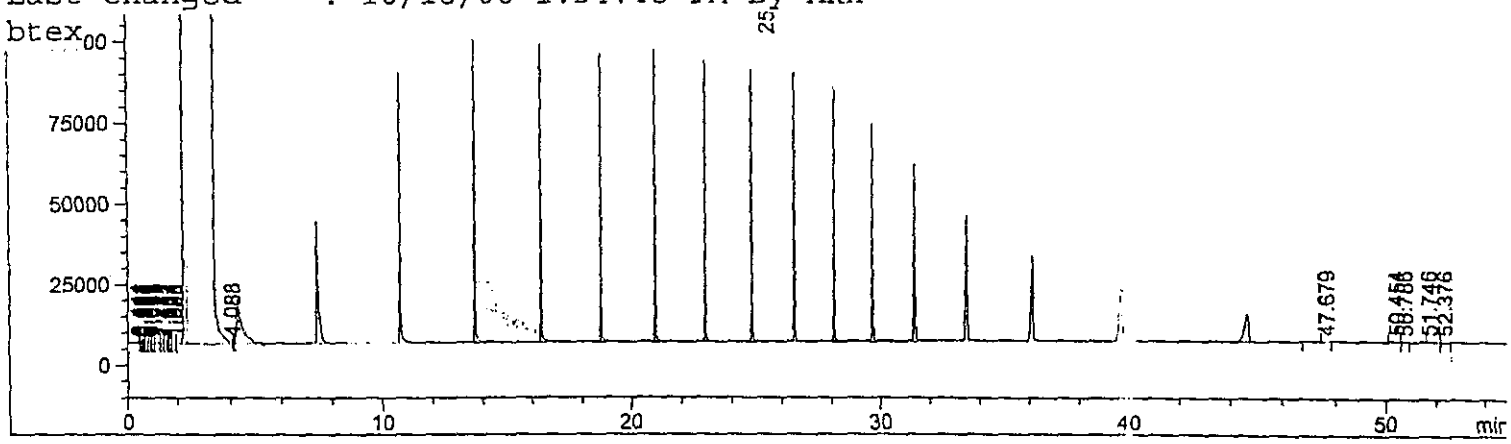
000335

Data File C:\HPCHEM\2\DATA\102000\001F2401.D Sample Name: FLPRO 1700

==========

Injection Date : 10/21/00 7:27:41 PM Seq. Line : 24
Sample Name : FLPRO 1700 Vial : 1
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	4.08989e6	4.59715e-4	1880.18473		FLPRO

Totals : 1880.18473

==========

*** End of Report ***

$$\%D = \frac{1880.18473 - 1700}{1700} \times 100\% = 10.6\% < 25\%$$

KL 10/26/00

000336

RAW DATA

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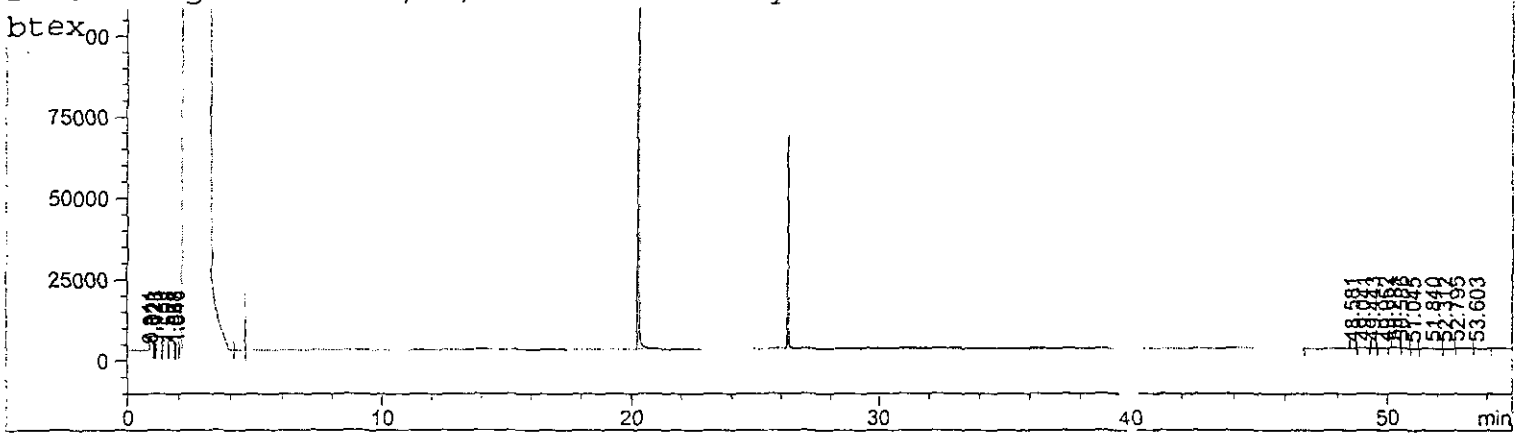
Injection Date : 10/20/00 8:20:42 PM Seq. Line : 3
Sample Name : MB 7868 W Vial : 2
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl
Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	1.17703e6	3.72344e-4	438.25886		FLPRO

Totals : 438.25886

==========

*** End of Report ***

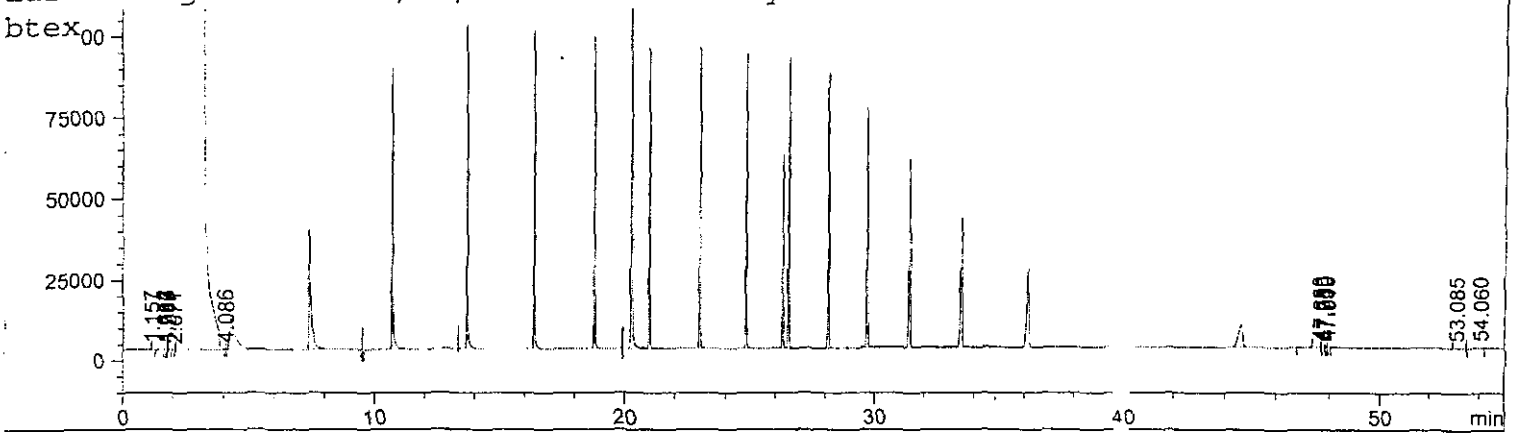
000338

Data File C:\HPCHEM\2\DATA\102000\003F0401.D Sample Name: LCS 7868 W

==========

Injection Date : 10/20/00 9:26:45 PM Seq. Line : 4
Sample Name : LCS 7868 W Vial : 3
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	4.41731e6	4.62332e-4	2042.26346		FLPRO
		- 6.41431e5				
Totals :		3.775879 e6		2042.26346		1745.71 ng/µL

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*** End of Report ***

000339

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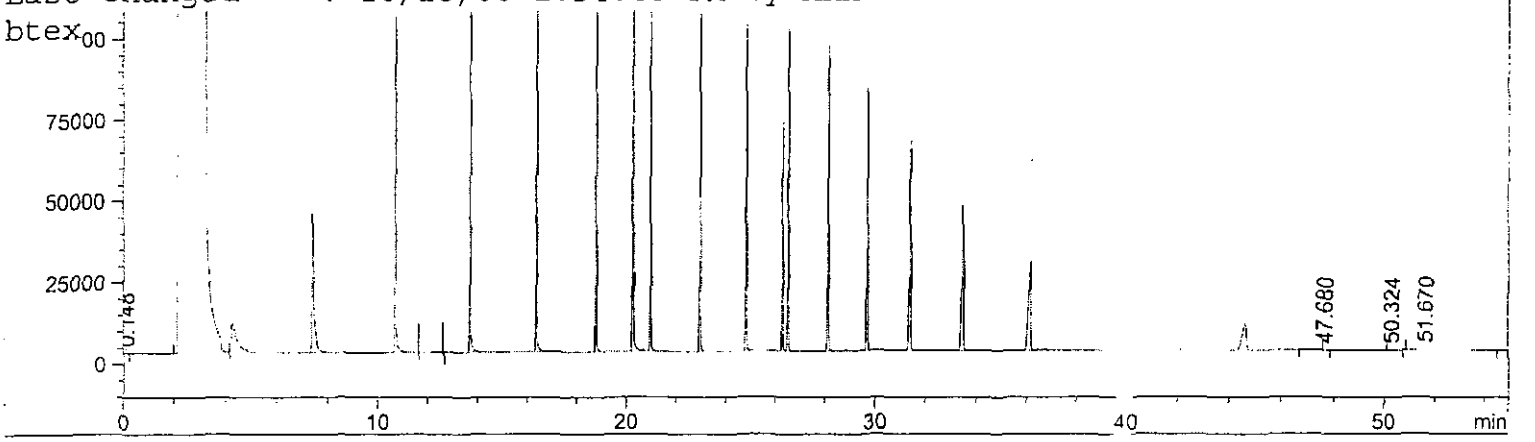
Injection Date : 10/20/00 10:32:55 PM
Sample Name : LCSD 7868 W
Acq. Operator : ARH

Seq. Line : 5
Vial : 4
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

==========

Sorted By : Signal
lib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	4.92270e6	4.65688e-4	2292.44245		FLPRO
Totals :		7.25443e5 / 4.197257e6		2292.44245		1954.61 ng/µl

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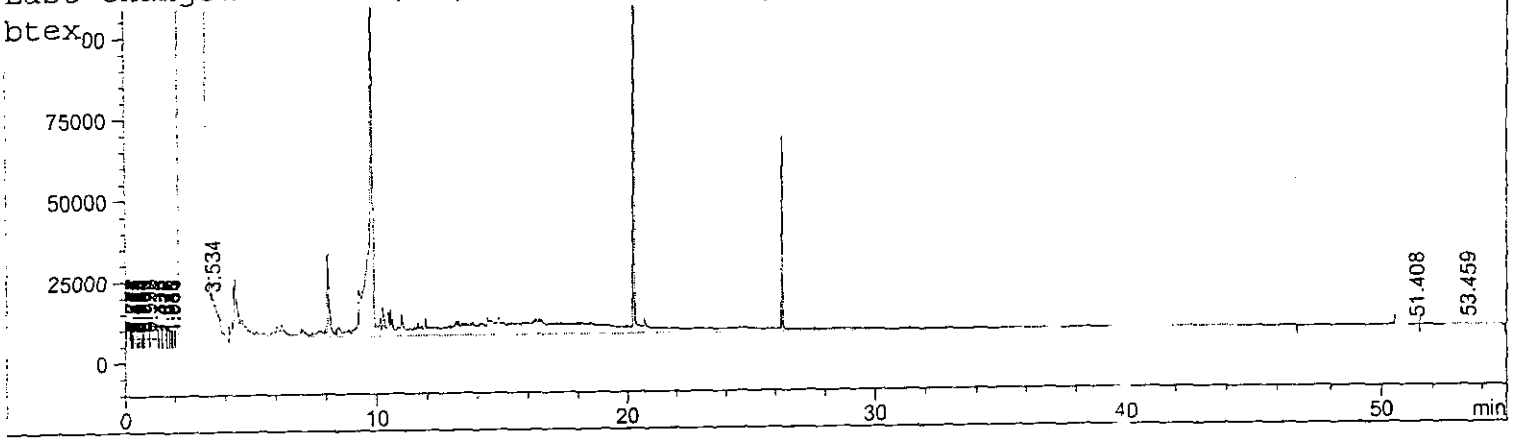
*** End of Report ***

000340

Data File C:\HPCHEM\2\DATA\102000\017F2001.D Sample Name: 0010401-004B

Injection Date	: 10/21/00 3:03:51 PM	Seq. Line	: 20
Sample Name	: 0010401-004B	Vial	: 17
Acq. Operator	: ARH	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\HPCHEM\2\METHODS\FLPRO.M		
Last changed	: 5/20/00 1:51:20 PM by MW		
Analysis Method	: C:\HPCHEM\2\METHODS\FLPR1017.M		
Last changed	: 10/18/00 1:34:48 PM by ARH		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	10/18/00 12:20:28 PM
Multiplier	:	1.0000
Dilution	:	1.0000
Uncalibrated Peaks	:	not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	5.29713e6	4.67761e-4	2477.78969		FLPRO
		- 6.57296e5				
Totals :		4.63984e6		2477.78969		2170.33 ng/µL

*** End of Report ***

00034

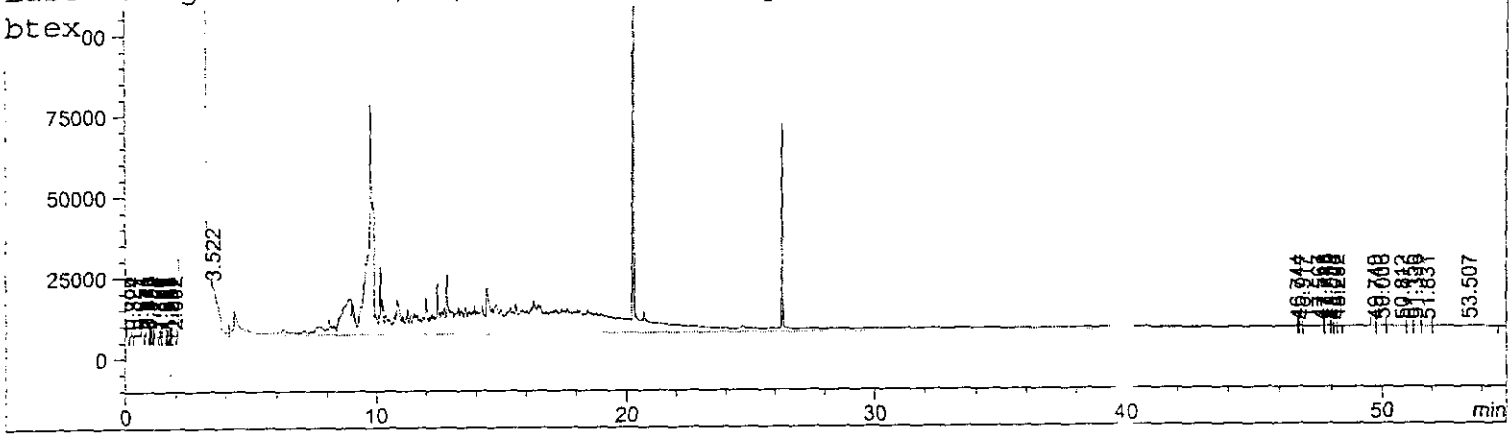
Instrument 2 10/23/00 8:43:10 AM ARH

==========

Injection Date : 10/21/00 4:09:58 PM
Sample Name : 0010401-005B
Acq. Operator : ARH

Seq. Line : 21
Vial : 18
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	7.83124e6	4.76582e-4	3732.22699		~~FLPRO~~
		7.34293e5				
Totals :		7.096947e6		3732.22699		3382.28 ng/µL

==========

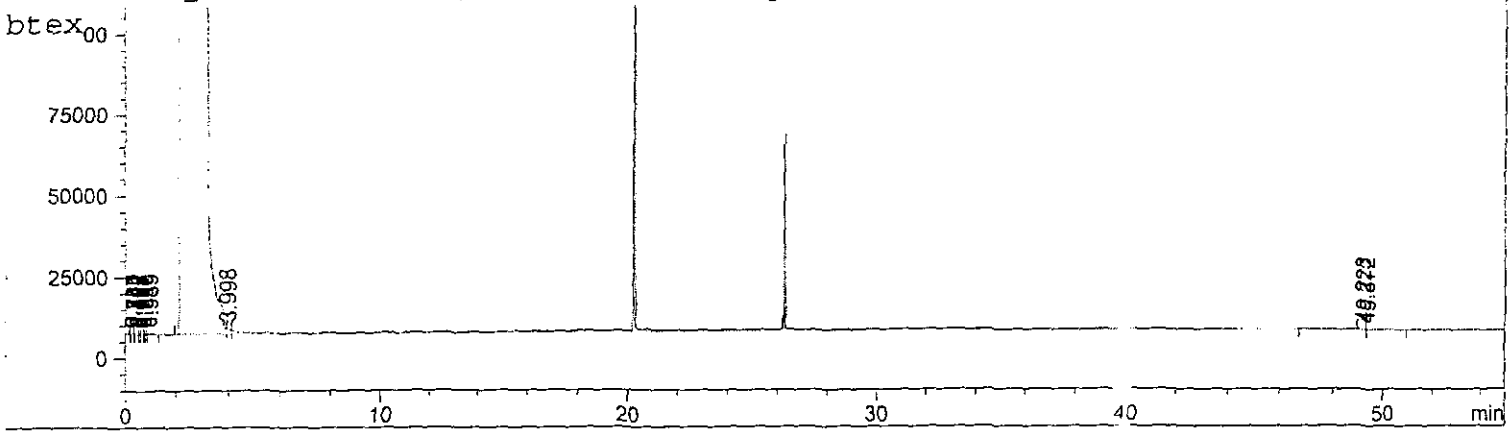
*** End of Report ***

==========

Injection Date : 10/21/00 5:15:56 PM
Sample Name : 0010401-006B
Acq. Operator : ARH

Seq. Line : 22
Vial : 19
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	1.55108e6	4.01927e-4	623.41973		FLPRO
Totals :		7.24166e5 / 8.26914e5		623.41973		332.36 ng/µL

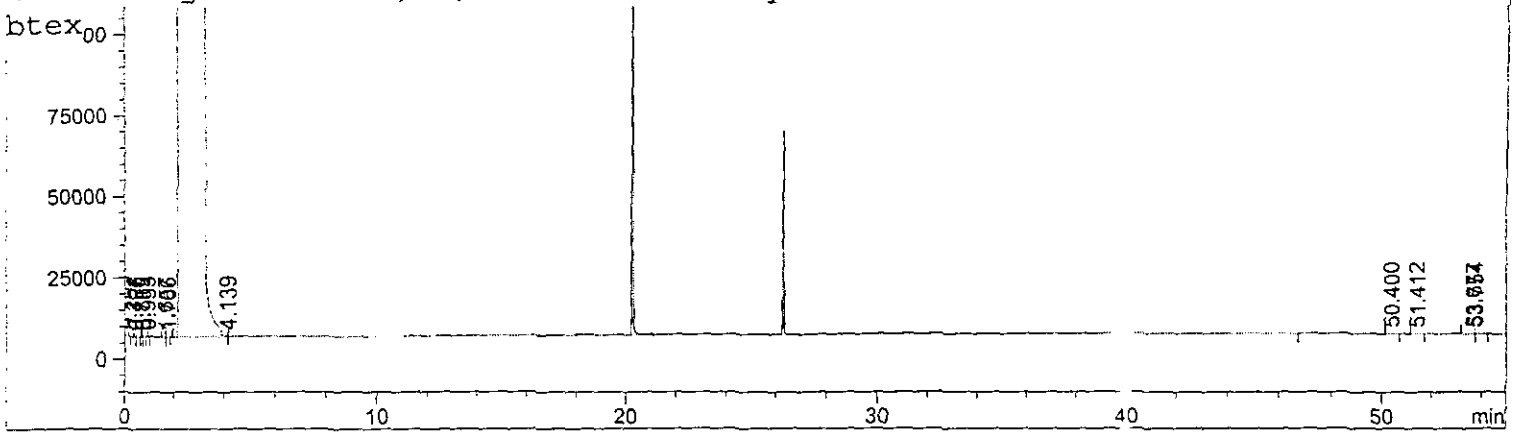
==========

*** End of Report ***

000343

Data File C:\HPCHEM\2\DATA\102000\020F2301.D Sample Name: 0010401-007B

Injection Date	: 10/21/00 6:21:44 PM	Seq. Line	: 23
Sample Name	: 0010401-007B	Vial	: 20
Acq. Operator	: ARH	Inj	: 1
		Inj Volume	: 1 µl
Acq. Method	: C:\HPCHEM\2\METHODS\FLPRO.M		
Last changed	: 5/20/00 1:51:20 PM by MW		
Analysis Method	: C:\HPCHEM\2\METHODS\FLPR1017.M		
Last changed	: 10/18/00 1:34:48 PM by ARH		



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	10/18/00 12:20:28 PM
Multiplier	:	1.0000
Dilution	:	1.0000
Uncalibrated Peaks	:	not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	1.07275e6	3.60419e-4	386.64167		FLPRO
Totals :		$\frac{-6.55805e^5}{4.16945e^5}$		386.64167		150.27 ng/µL

*** End of Report ***

ARH
10/23/00

000341

Petroleum Range Organics Analysis

Method FL-PRO

Soil Fraction

QC DATA

Analytical Environmental Services, Inc.

PREP BATCH REPORT

Prep Start Date: **10/20/00 11:00:00 A**
Prep End Date: **10/20/00 8:00:00 P**

Prep Batch **7621** Prep Code: **FL-PRO_S-PR** Technician: **Juliet Kearse**

Sample ID	Matrix	pH	wt (Kg)	Ini vol (mL)	Sol Added	Spk Added	Sol Recov	Fin Vol (mL)	factor
0010401-001B	Soil		0.03004		0	10/20/00	0	2	66.577896
0010401-002B	Soil		0.03011		0	10/20/00	0	2	66.423115
0010401-003B	Soil		0.03001		0	10/20/00	0	2	66.644452
LCS-7621			0.03		0	10/20/00	0	2	66.666667
MB-7621			0.03		0	10/20/00	0	2	66.666667

Analytical Environmental Services, Inc.

Date: 25-Oct-00

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-7621** Batch ID: **7621** Test Code: **FL-PRO** Units: **mg/Kg** Analysis Date: **10/21/00 4:03:11 AM** Prep Date: **10/11/00**

Client ID: Run ID: **GC-2 (DUAL FID)_00102** SeqNo: **155175**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Range Organics	BRL	4									
Surr: Dioctylphthalate	6.453	0	6.66	0	96.9	50	150	0			
Surr: o-Terphenyl	9.942	0	13.33	0	74.6	62	109	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Spike Recovery outside accepted recovery limits; B - Analyte detected in the associated Method Blank; J - Analyte detected below quantitation limits; R - RPD outside accepted recovery limits

000348

Analytical Environmental Services, Inc.

Date: *25-Oct-00*

CLIENT: Blasland, Bouck & Lee
Work Order: 0010401
Project: Navy Truck Fill Stand

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: **LCS-7621** Batch ID: **7621** Test Code: **FL-PRO** Units: **mg/Kg** Analysis Date: **10/21/00 5:09:14 AM** Prep Date: **10/11/00**

Client ID: Run ID: **GC-2 (DUAL FID)_00102** SeqNo: **155176**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Petroleum Range Organics	111.1	4	141.7	0	78.4	63	153	0			
Surr: Dioctylphthalate	6.251	0	6.66	0	93.9	50	150	0			
Surr: o-Terphenyl	9.475	0	13.33	0	71.1	62	109	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

000340

INITIAL CALIBRATION

Calibration Table

Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM

Calculate : External Standard
Based on : Peak Area

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

Curve Type : Linear
Origin : Connected
Weight : Equal

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

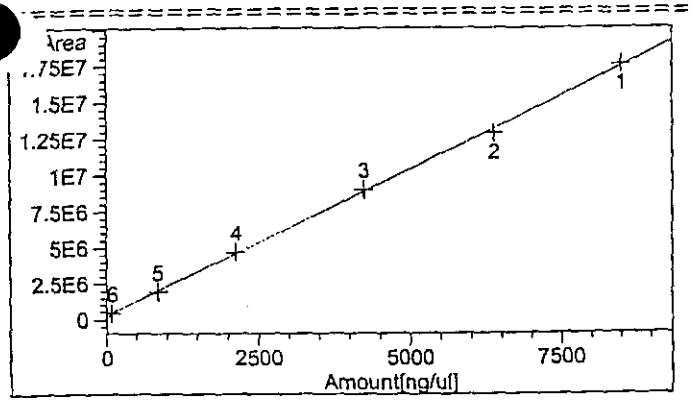
Calibration Report Options :
Printout of recalibrations within a sequence:
Calibration Table after Recalibration
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: FID1 A,

RetTime [min]	Sig	Lvl	Amount [ng/ul]	Area	Amt/Area	Ref	Grp	Name
25.448	1	6	85.00000	4.57886e5	1.85636e-4			FLPRO
		5	850.00000	1.95217e6	4.35413e-4			
		4	2125.00000	4.68010e6	4.54051e-4			
		3	4250.00000	8.99601e6	4.72432e-4			
		2	6375.00000	1.28711e7	4.95294e-4			
		1	8500.00000	1.76093e7	4.82701e-4			

000351

Calibration Curves



FLPRO at exp. RT: 25.448
FID1 A,
Correlation: 0.99969
Residual Std. Dev.: 185250.88415
Formula: y = mx + b
m: 2020.12170
b: 291691.77072
x: Amount [ng/ul]
y: Area

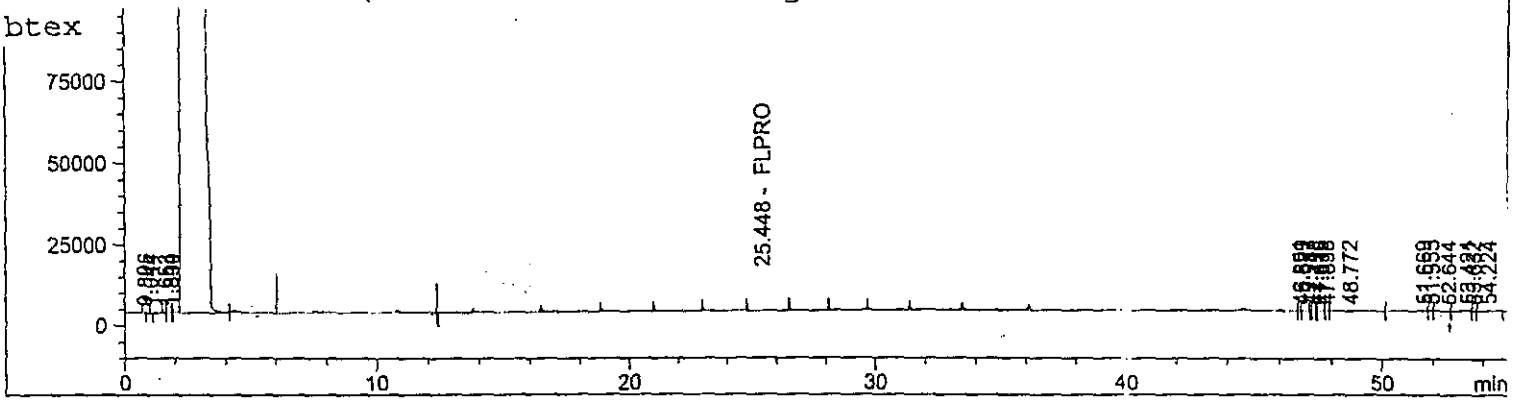
000352

==========

Injection Date : 10/17/00 6:32:54 PM
Sample Name : FLPRO 85
Acq. Operator : ARH

Seq. Line : 3
Vial : 6
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:03:09 AM by ARH
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	4.57886e5	1.83426e-4	83.98816		FLPRO

Totals : 83.98816

==========

*** End of Report ***

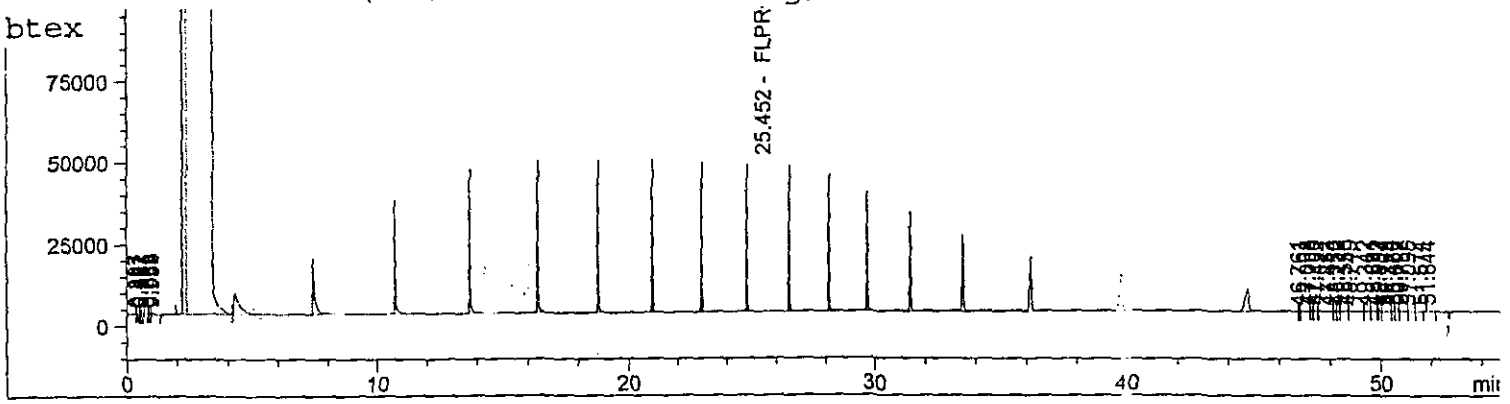
000353

==========

Injection Date : 10/17/00 5:26:40 PM
Sample Name : FLPRO 850
Acq. Operator : ARH

Seq. Line : 2
Vial : 5
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:03:19 AM by ARH
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.452	VV +	1.95217e6	4.21054e-4	821.96854		FLPRO

Totals : 821.96854

==========

*** End of Report ***

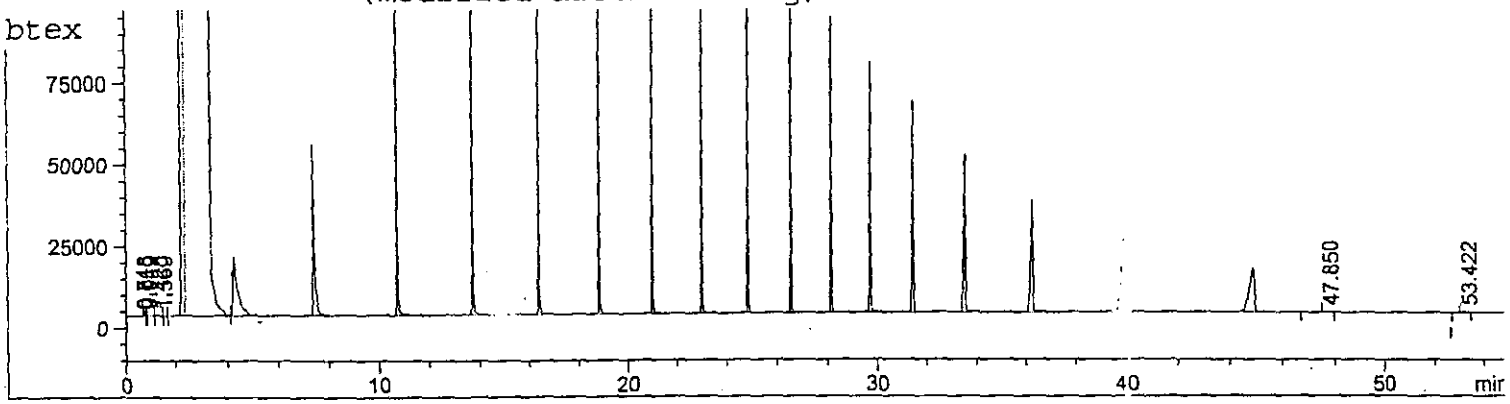
000354

Data File C:\HPCHEM\2\DATA\101700A\004F0101.D Sample Name: FLPRO 2125

==========

Injection Date : 10/17/00 4:20:20 PM Seq. Line : 1
Sample Name : FLPRO 2125 Vial : 4
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:03:39 AM by ARH
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	4.68010e6	4.64167e-4	2172.34622		FLPRO

Totals : 2172.34622

==========

*** End of Report ***

000355

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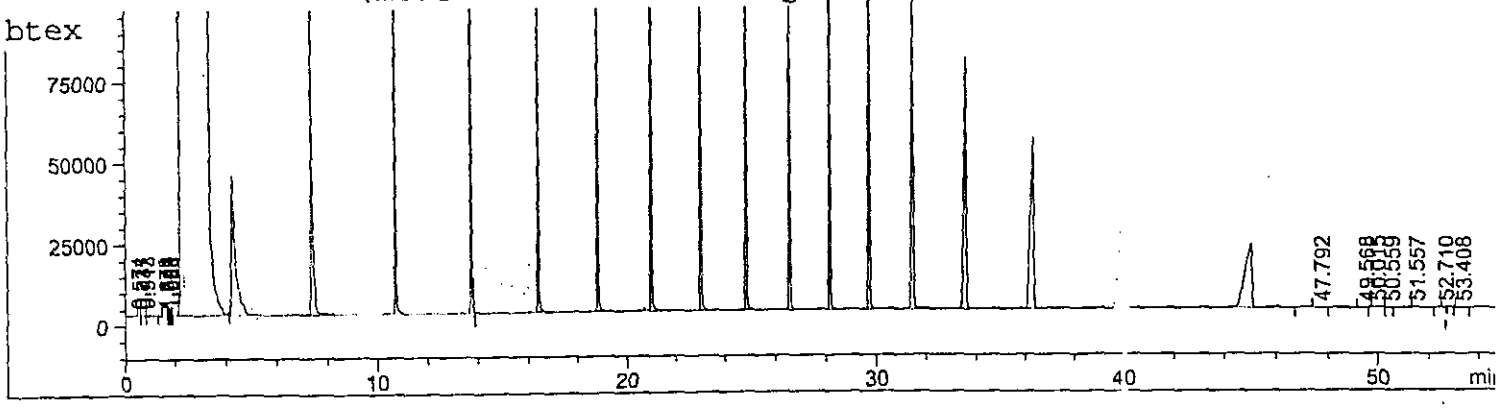
Injection Date : 10/17/00 2:17:38 PM
Sample Name : FLPRO 4250
Acq. Operator : ARH

Seq. Line : 3
Vial : 3
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:04:01 AM by ARH
(modified after loading)



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	8.99601e6	4.78969e-4	4308.80834		FLPRO
Totals :				4308.80834		

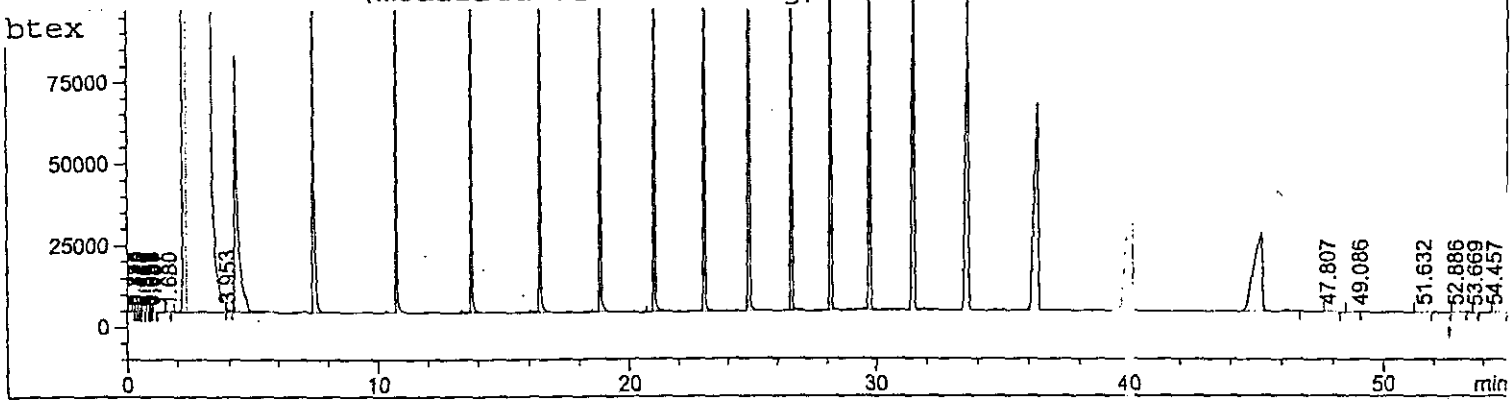
==========

*** End of Report ***

Injection Date : 10/17/00 1:11:06 PM
Sample Name : FLPRO 6375
Acq. Operator : ARH

Seq. Line : 2
Vial : 2
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:04:12 AM by ARH
(modified after loading)



External Standard Report

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	1.28711e7	4.83801e-4	6227.07148		FLPRO

Totals : 6227.07148

*** End of Report ***

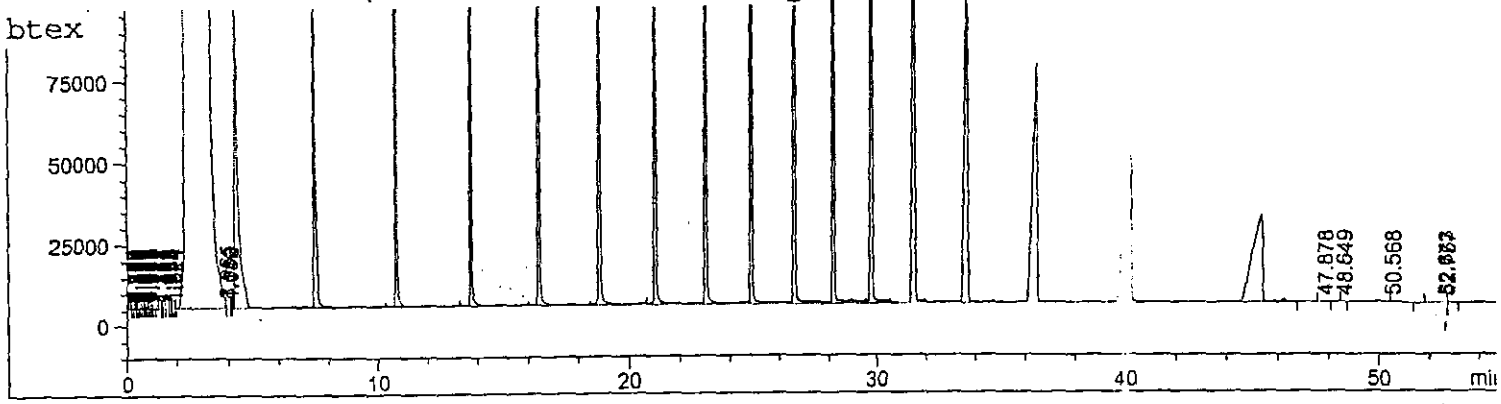
000357

==========

Injection Date : 10/17/00 12:05:17 PM
Sample Name : FLPRO 8500
Acq. Operator : ARH

Seq. Line : 1
Vial : 1
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 10/18/00 9:04:25 AM by ARH
(modified after loading)



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : Wednesday, October 18, 1900 9:03:00 AM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	1.76093e7	4.86820e-4	8572.53612		FLPRO

Totals : 8572.53612

==========

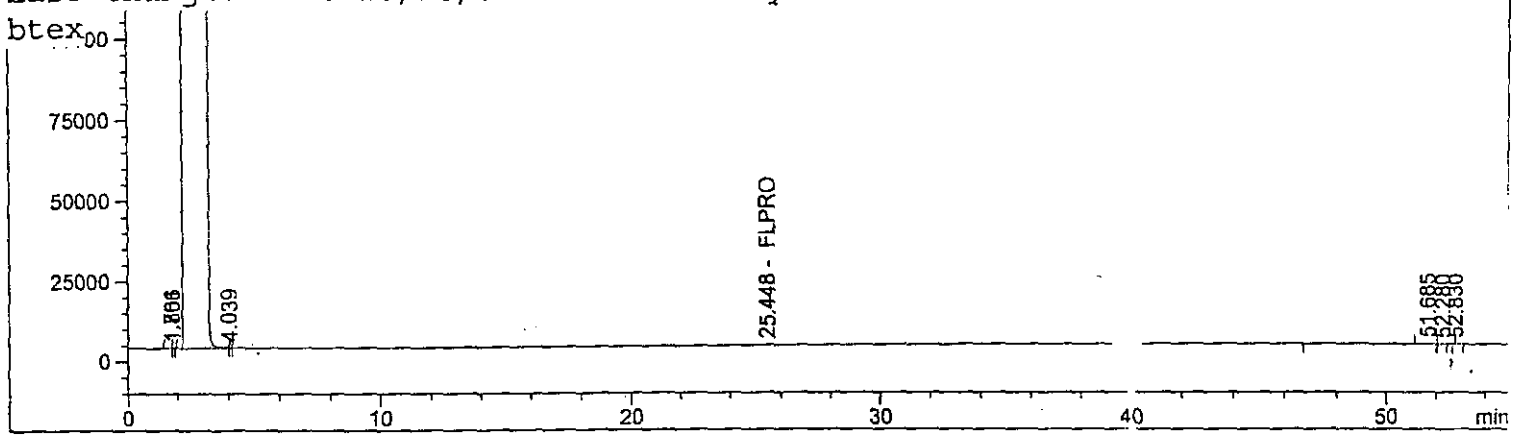
*** End of Report ***

000358

Data File C:\HPCHEM\2\DATA\101700A\007F0401.D Sample Name: MECL2 BLK

Injection Date	: 10/17/00 7:39:13 PM	Seq. Line :	4
Sample Name	: MECL2 BLK	Vial :	7
Acq. Operator	: ARH	Inj :	1
		Inj Volume :	1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	10/18/00 12:20:28 PM
Multiplier	:	1.0000
Dilution	:	1.0000
Uncalibrated Peaks	:	not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	6.63034e4	1.83426e-4	12.16177		FLPRO

Totals : 12.16177

*** End of Report ***

000359

CONTINUING CALIBRATION

AES 5890 GC/FID ANALYSIS LOG SHEET

Date: 10/20/00
Method: FLAPRO M
Analysis: 8015

Coulmn ID: RTX - 5
Coulmn ID: RTX - 624

NO	File ID	Lab ID	Batch No.	ALS#	DF	Comments/Preparation	Status
1	001F0101	FLAPRO 2125		1			OK/RIN
2	001F0201	FLPRO 2125		1			OK/RIN
3	002F0301	MB 7868 W		2			OK/RIN
4	003F0401	LCS 7868 W		3			OK/RIN
5	004F0501	LCSD 7868 W		4			OK/RIN
6	005F0601	~~0004~~ 0010401-004B x 10		5	10		OK/RIN
7	006F0701	0010401-005B x 10		6	10		OK/RIN
8	007F0801	0010401-006B x 10		7	10		OK/RIN
9	008F0901	-007B x 10		8	10		OK/RIN
10	009F1001	MB 7621		9			OK/RIN
11	010F1101	LCS 7621		10			OK/RIN
12	011F1201	FLPRO 1700		1			OK/RIN
13	011F1301	0010401-008B x 10		11	10		OK/RIN
14	012F1401	-009B x 10		12	10		OK/RIN
	013F1501	-010B x 10		13	10		OK/RIN
10	001F1601	FLPRO 1700		1			OK/RIN
17	014F1701	0010401-001B		14			OK/RIN
18	015F1801	0010401-002B		15			OK/RIN
19	016F1901	0010401-003B		16			OK/RIN
20	017F2001	-004B		17			OK/RIN
21	018F2101	-005B		18			OK/RIN
22	019F2201	-006B		19			OK/RIN
23	020F2301	-007B		20			OK/RIN
24	021F2401	FLPPO 1700		1			OK/RIN
25							OK/RIN
26							OK/RIN
27							OK/RIN
28							OK/RIN
29							OK/RIN
30							OK/RIN
31							OK/RIN
32							OK/RIN
33							OK/RIN
							OK/RIN

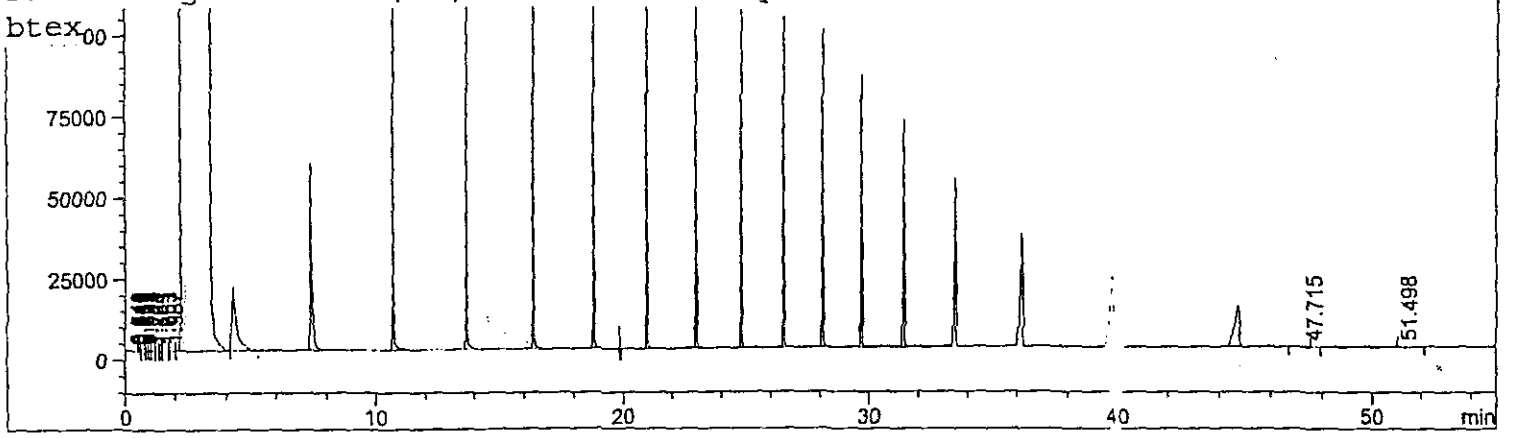
Analyst: [signature]
Date: 10/23/00

Reviewed By: _____
Date: _____

Data File C:\HPCHEM\2\DATA\102000\001F0201.D Sample Name: FLPRO 2125

Injection Date : 10/20/00 7:14:38 PM Seq. Line : 2
Sample Name : FLPRO 2125 Vial : 1
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



External Standard Report

Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.452	VB +	5.07513e6	4.66569e-4	2367.89755		FLPRO

Totals : 2367.89755

*** End of Report ***

$$\% D = \frac{2367.89755 - 2125}{2125} \times 100\% = 11.43\% < 25$$

µL 10/25/01

Instrument 2 10/23/00 8:37:30 AM ARH

010362

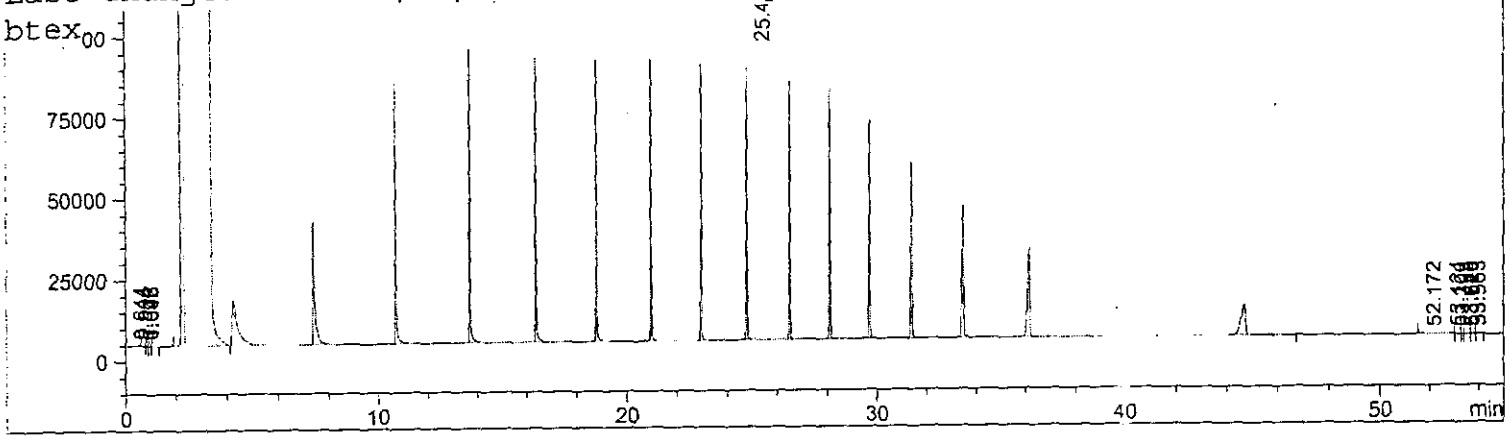
Data File C:\HPCHEM\2\DATA\102000\001F1201.D Sample Name: FLPRO 1700

==========

Injection Date : 10/21/00 6:15:23 AM
Sample Name : FLPRO 1700
Acq. Operator : ARH

Seq. Line : 12
Vial : 1
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	3.53798e6	4.54207e-4	1606.97508		FLPRO

Totals : 1606.97508

==========

*** End of Report ***

$$\% D = \left| \frac{1606.97508 - 1700}{1700} \right| \times 100\% = 5.5\% < 25\%$$

ML 10/25/00

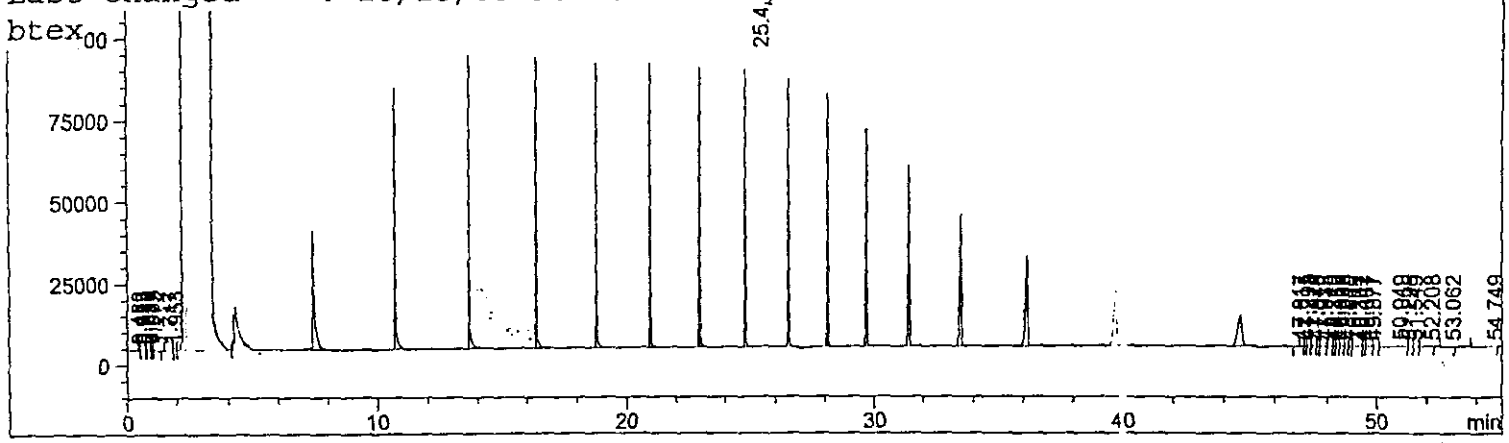
000252

Data File C:\HPCHEM\2\DATA\102000\001F1601.D Sample Name: FLPRO 1700

==========

Injection Date : 10/21/00 10:39:31 AM Seq. Line : 16
Sample Name : FLPRO 1700 Vial : 1
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



==========

External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	3.58700e6	4.54765e-4	1631.24107		FLPRO

Totals : 1631.24107

==========

*** End of Report ***

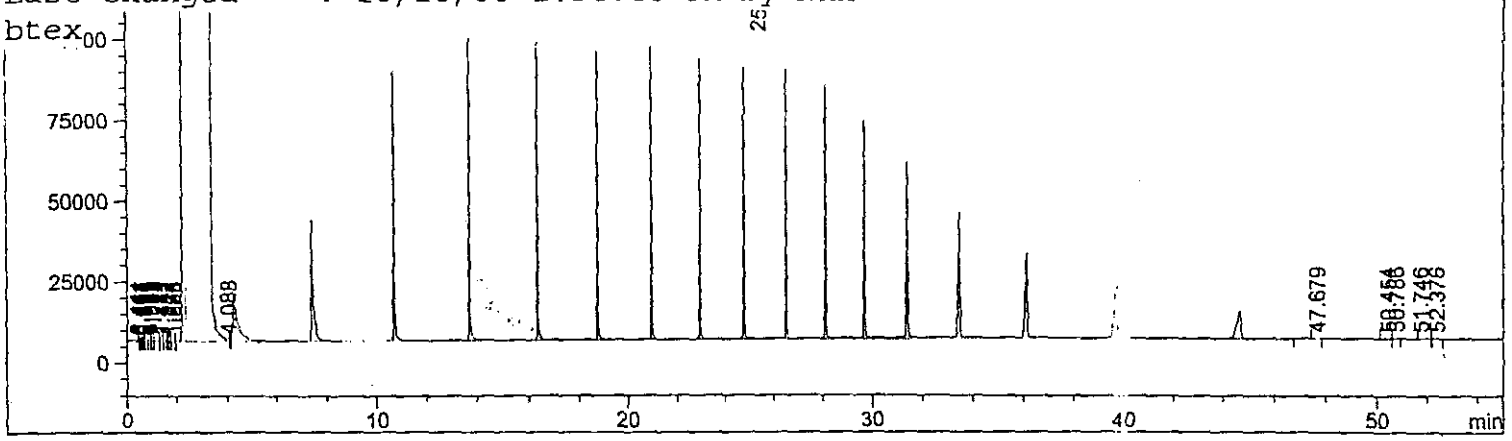
$$\% D = \left| \frac{1631.24107 - 1700}{1700} \right| \times 100\% = 4.04\% < 25\%$$

000364

Data File C:\HPCHEM\2\DATA\102000\001F2401.D Sample Name: FLPRO 1700

Injection Date	: 10/21/00 7:27:41 PM	Seq. Line	: 24
Sample Name	: FLPRO 1700	Vial	: 1
Acq. Operator	: ARH	Inj	: 1
		Inj Volume	: 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



External Standard Report

Sorted By	:	Signal
Calib. Data Modified	:	10/18/00 12:20:28 PM
Multiplier	:	1.0000
Dilution	:	1.0000
Uncalibrated Peaks	:	not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	4.08989e6	4.59715e-4	1880.18473		FLPRO

Totals : 1880.18473

*** End of Report ***

$$\%D = \frac{1880.18473 - 1700}{1700} \times 100\% = 10.6\% < 25\%$$

KL 10/25/00

000365

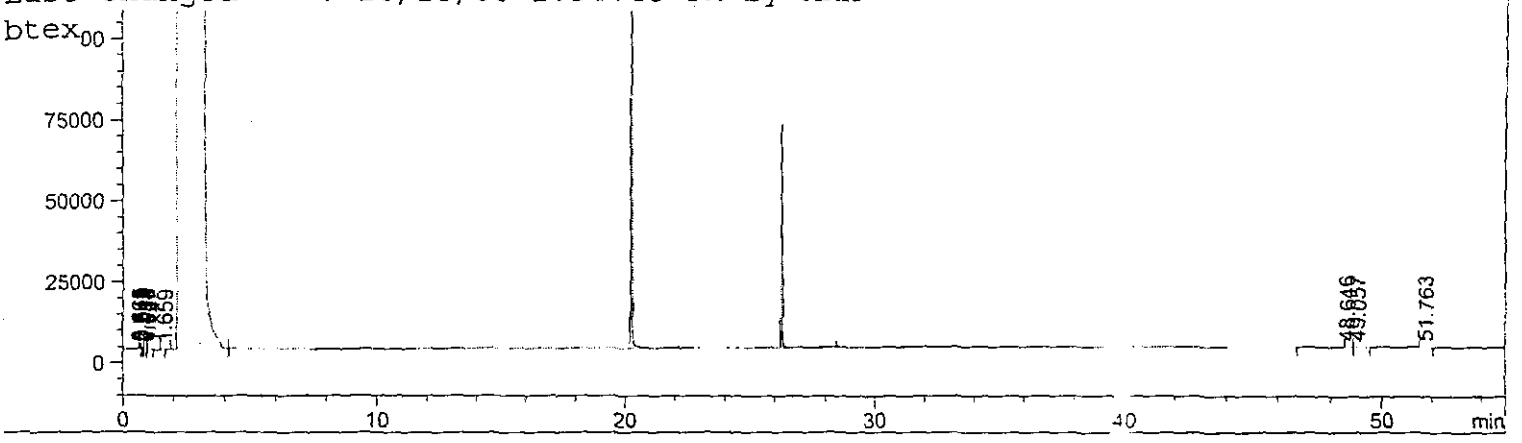
RAW DATA

Data File C:\HPCHEM\2\DATA\102000\009F1001.D Sample Name: MB 7621

==========

Injection Date : 10/21/00 4:03:11 AM Seq. Line : 10
Sample Name : MB 7621 Vial : 9
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
lib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	9.64723e5	3.45346e-4	333.16346		FLPRO

Totals : 333.16346

==========

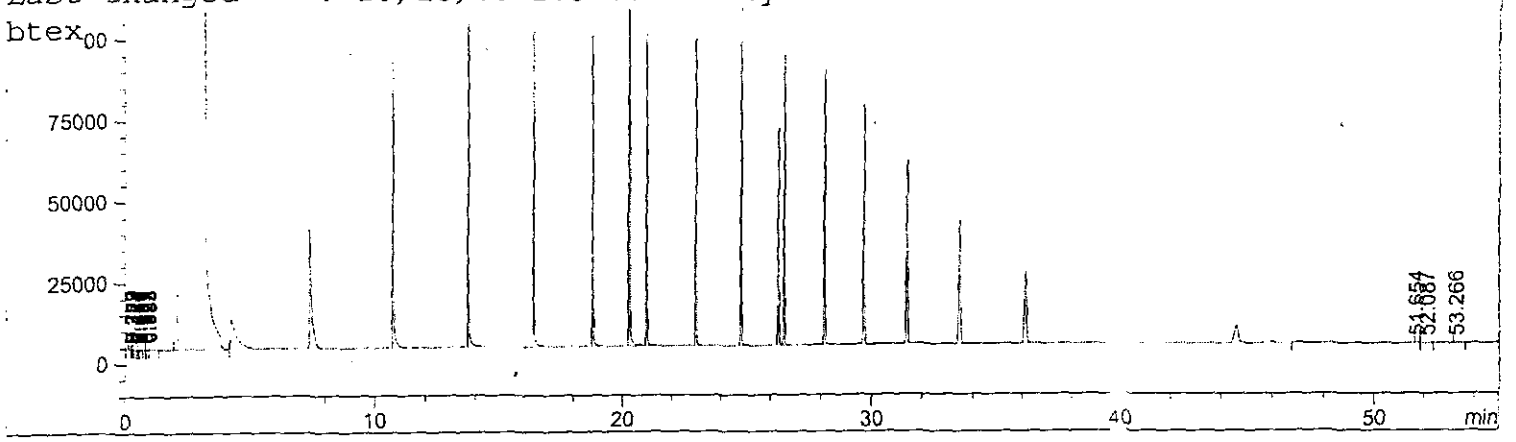
*** End of Report ***

000367

Injection Date : 10/21/00 5:09:14 AM
Sample Name : LCS 7621
Acq. Operator : ARH

Seq. Line : 11
Vial : 10
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



External Standard Report

Sorted By : Signal
lib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VB +	4.27601e6	4.61252e-4	1972.31767		FLPRO
Totals :				1972.31767		

1666.03

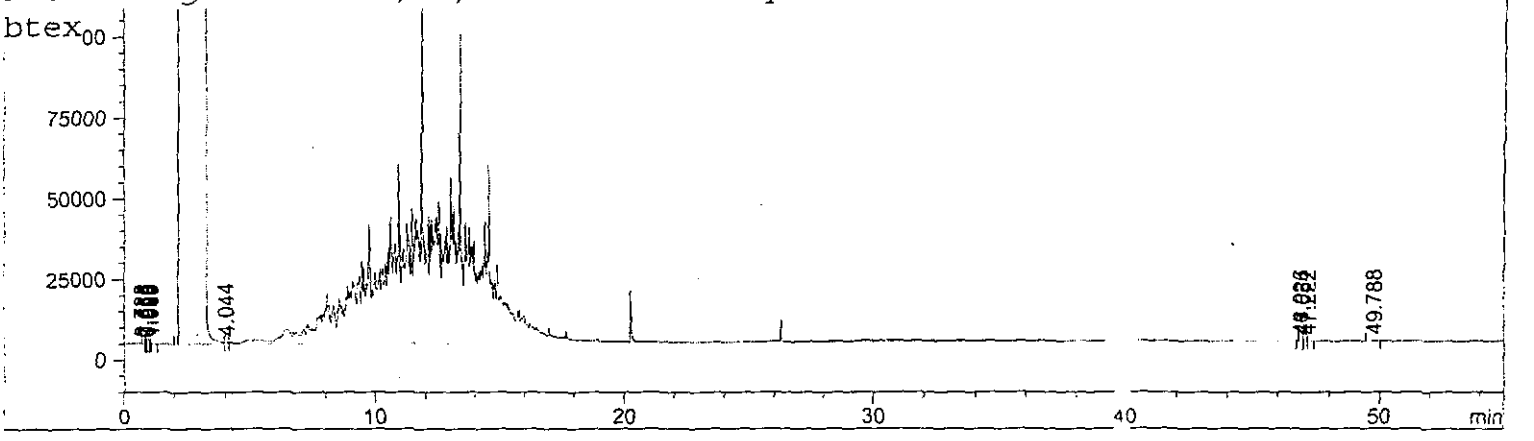
*** End of Report ***

Data File C:\HPCHEM\2\DATA\102000\011F1301.D Sample Name: 0010401-001B*10

==========

Injection Date : 10/21/00 7:21:28 AM Seq. Line : 13
Sample Name : 0010401-001B*10 Vial : 11
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	1.22078e7	4.83192e-4	5898.71305		FLPRO
	-SURR	6.7439 e4				
Totals :		1.214045 e7		5898.71305		

586617 ~~µg/µL~~ ng/µL

==========

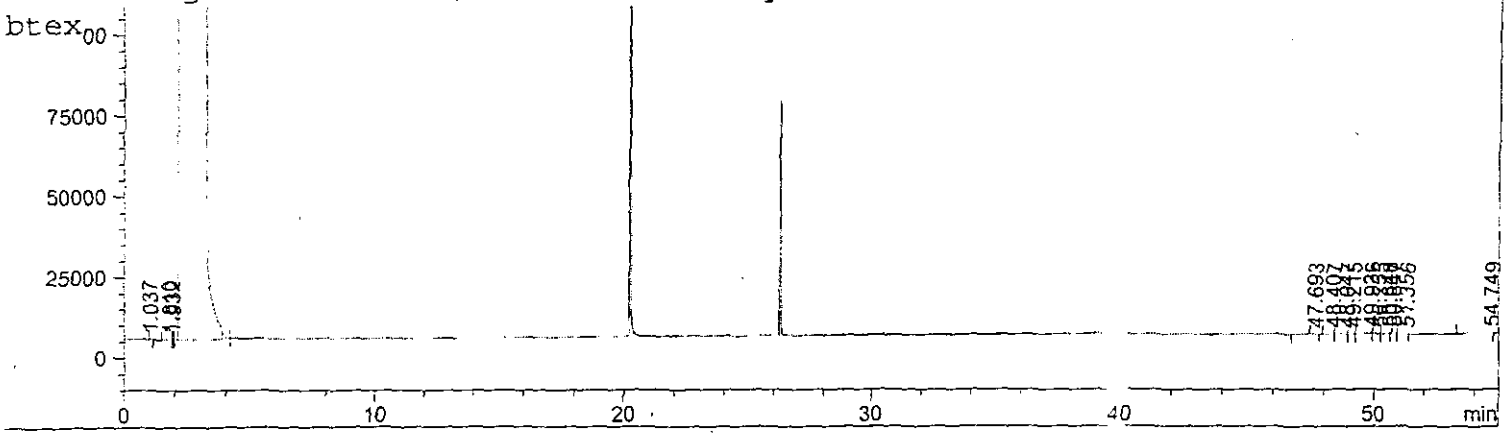
*** End of Report ***

Data File C:\HPCHEM\2\DATA\102000\015F1801.D Sample Name: 0010401-002B

==========

Injection Date : 10/21/00 12:51:34 PM Seq. Line : 18
Sample Name : 0010401-002B Vial : 15
Acq. Operator : ARH Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

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Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	1.24968e6	3.79476e-4	474.22358		FLPRO
		3.81121e5				192.23 ng/µL
Totals :		5.06559e5		474.22358		

==========

*** End of Report ***

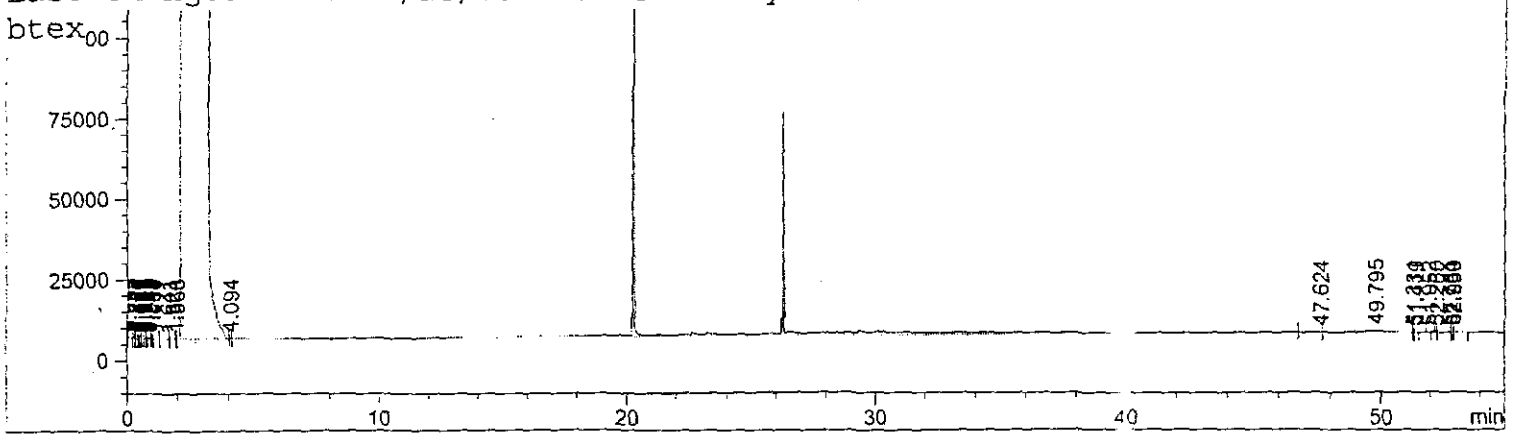
ARH
10/23/00

==========

Injection Date : 10/21/00 1:57:47 PM
Sample Name : 0010401-003
Acq. Operator : ARH

Seq. Line : 19
Vial : 16
Inj : 1
Inj Volume : 1 µl

Acq. Method : C:\HPCHEM\2\METHODS\FLPRO.M
Last changed : 5/20/00 1:51:20 PM by MW
Analysis Method : C:\HPCHEM\2\METHODS\FLPR1017.M
Last changed : 10/18/00 1:34:48 PM by ARH



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External Standard Report

==========

Sorted By : Signal
Calib. Data Modified : 10/18/00 12:20:28 PM
Multiplier : 1.0000
Dilution : 1.0000
Uncalibrated Peaks : not reported

Signal 1: FID1 A,
Results obtained with standard integrator!

RetTime [min]	Type	Area counts*s	Amt/Area	Amount [ng/ul]	Grp	Name
25.448	VV +	1.48289e6	3.97647e-4	589.66521		FLPRO
Totals :		6.89345e5 7.93545 e5		589.66521		315.55 ng/µL

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*** End of Report ***

FLORIDA

DEP Form # 62-770.900(3)
Form Title: Petroleum or Petroleum Products Water Sampling Log
Effective Date: September 23, 1997

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-11	SAMPLE ID: MW-11	DATE: 10/10/00
SITE NAME: Truck Fill Stand	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.25	DEPTH TO WATER (ft): 0.77	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (11.25 – 0.77) x 0.16 = 1.68

PURGE METHOD: Peristaltic, teflon Tubing	PURGING INITIATED AT: 1050	PURGING ENDED AT: 1100
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (µmhos)	COLOR	ODOR	APPEARANCE	Turb ~~OTHER~~
1.5		6.77	29.1	1.30	gray	No	v. cloudy	800
3		6.80	29.0	1.37	lt. gray	No	"	100
5		6.80	29.2	1.40	white	No	"	78

SAMPLING DATA

SAMPLED BY / AFFILIATION: Don Press / BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Disposable Teflon Bailer	SAMPLING INITIATED AT: 1105	SAMPLING ENDED AT: 1110

FIELD DECONTAMINATION: Y (N) | FIELD-FILTERED: Y (N) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
3	CG	40 ml	HCL	–	–	8021
	AG	1 liter	H_2SO_4	–	–	FCPRO
	AG	1 liter	Ice	–	–	8310

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: *this does not constitute all the information required by Chapter 62-160, F.A.C.*

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DEP Form # 62-770 900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date September 23, 1997

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-12	SAMPLE ID: MW-12	DATE: 10/18/00
SITE NAME: Truck Fill Stand	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.40	DEPTH TO WATER (ft): 1.94	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (11.40 – 1.94) x 0.16 = 1.5

PURGE METHOD:	PURGING INITIATED AT: 1120	PURGING ENDED AT: 1130
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. ~~(µmhos)~~ mS	COLOR	ODOR	APPEARANCE	Tur. ~~OTHER~~
1	1.5	6.70	29.4	1.47	White	No	cloudy	71
2	3	6.61	29.4	1.48	white	No	cloudy	70
3	5	6.62	29.3	1.51	No	No	clear	70

SAMPLING DATA

SAMPLED BY / AFFILIATION: Dan Press / BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Disposable Teflon Bailer	SAMPLING INITIATED AT: 1130	SAMPLING ENDED AT: 1140

FIELD DECONTAMINATION: Y (N) FIELD-FILTERED: Y (N) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

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DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date September 23, 1997

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-13	SAMPLE ID: MW-13	DATE: 10/18/90
SITE NAME: Truck Fill Stand	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 10.90	DEPTH TO WATER (ft): 0.39	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (10.90 - 0.39) x 0.16 =

PURGE METHOD: Peristaltic, Teflon tubing	PURGING INITIATED AT: 1230	PURGING ENDED AT: 1240
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. ~~(µmhos)~~ mS/cm	COLOR	ODOR	APPEARANCE	~~OTHER~~ Turb
1	1.5	6.86	32.5	8.02	white	No	v. cloudy	999+
2	3	6.90	32.6	8.15	"	"	"	999+
3	5	6.90	32.7	8.20	"	"	"	999+

SAMPLING DATA

SAMPLED BY / AFFILIATION: Dan Press / ASL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Disposable Teflon Bailer	SAMPLING INITIATED AT: 1240	SAMPLING ENDED AT: 1250
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)
WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

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DEP Form # 62-770.900(3)
Form Title Petroleum or Petroleum Products Water Sampling Log
Effective Date September 23, 1997

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-14	SAMPLE ID: MW-14	DATE: 10/18/00
SITE NAME: Truck Fill Stand	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 10.85	DEPTH TO WATER (ft): 0.83	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (10.85 – 0.83) x 0.16 = 1.6

PURGE METHOD: Peristaltic	PURGING INITIATED AT: 1205	PURGING ENDED AT: 1215
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS COND. (µmhos)	COLOR	ODOR	APPEARANCE	Turb ~~OTHER~~
1	1.5	6.82	32.3	3.82	white	No	V. cloudy	999+
2	3	6.92	32.7	4.10	white	No	V. cloudy	999+
3	5	6.93	32.5	4.12	"	"	"	999+

SAMPLING DATA

SAMPLED BY / AFFILIATION: Dan Press / OBL	SAMPLER(S) SIGNATURE(S): [illegible]	
SAMPLING METHOD(S): Disposable Teflon Bailer	SAMPLING INITIATED AT: 1215	SAMPLING ENDED AT: 1220

FIELD DECONTAMINATION: Y (N) | FIELD-FILTERED: Y (N) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	

REMARKS:

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

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BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 88012005 Page 1 of 3

Site Location Truck Fill Stand, NAS, Key West

Sample I.D. No. SB-2(1-2) Coded/Replicate No. —

Date Clear, sunny, dry, light breeze Time of Sampling: Begin 1000 End 1025

Weather 10/17/00

Site Description Truck fuelly station.

SAMPLING DATA

Collection Method S.S. Hand Auger

Depth (1-2)' bls Moisture Content —

Color Very light tan - white Odor yes

Description SAND; fine grained - medium grained, well sorted, loose, dry.

Analyses Required (Order of Collection)	Container Description
8021	3x 5gram Encores
FL-PRO	4oz wide mouth glass, teflon cap
8310	4oz wide mouth glass, teflon cap
% moisture	2 oz wide mouth glass, teflon cap

Sample Monitoring (TIP, OVA, HNU, etc.) OVA = net of 300 ppm

Remarks —

(Visitors, Field Decon) —

(QC Sample Locations/Time) —

Sampler(s) (Signatures) [illegible]

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 88012005 Page 2 of 3

Site Location Truck Fill stand, NAS Key West

Sample I.D. No. SB-4(1-2) Coded/Replicate No. —

Date 10/18/00 Time of Sampling: Begin 1530 End 1545

Weather Sunny, clear, cool, light breeze

Site Description Truck fueling stand.

SAMPLING DATA

Collection Method S.S. Hand Auger

Depth (1-2)' bls Moisture Content —

Color GRAY, Odor

Description CLAY, stiff, dry, gray, minor limestone pebbles/fragments, slight odor.

Analyses Required (Order of Collection)	Container Description
8021	3x 5gram Encores
FL-PRO	4 oz wide mouth glass, teflon cap
8310	4 oz wide mouth glass, teflon cap
% moisture	2 oz wide mouth glass, teflon cap

Sample Monitoring (TIP, OVA, HNU, etc.) OVA = net of 590 ppm

Remarks —

(Visitors, Field Decon)

(QC Sample Locations/Time) —

Sampler(s)
(Signatures)

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 80012005 Page 3 of 3

Site Location Truck fill stand, NAS Keywest

Sample I.D. No. SB-8(1-2) Coded/Replicate No. —

Date 10/17/00 Time of Sampling: Begin 1620 End 1640

Weather Clear, cool, sunny, light breeze

Site Description Truck fueling station.

SAMPLING DATA

Collection Method S.S. Hand Auger

Depth (1-2)' bls Moisture Content —

Color Gray Odor —

Description CLAY, stiff, dry, minor lime rock (fill material) and fines (very fine sand), organic odor.

Analyses Required (Order of Collection)	Container Description
8021	3x5 gram Encores
FC-PRO	4oz wide mouth glass, teflon cap
8310	4oz wide mouth glass, teflon cap
% moisture	2 oz wide mouth glass, teflon cap

Sample Monitoring (TIP, OVA, HNU, etc.) OVA of net = 120 ppm

Remarks —

(Visitors, Field Decon) —

(QC Sample Locations/Time) —

Sampler(s) (Signatures) D. R

Appendix B

BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

consultants with focus

SAR Tables 3-3 and 3-4

Sep. 08 2000 09:35AM P2

TABLE 3-3: SOIL AND SEDIMENT ANALYTICAL SUMMARY

Facility Name: Truck Fill Stand, NAS Key West **Facility ID#: 449400050**

Sample				OVA	Laboratory Analyses										
Boring No.	Date Collected	Depth to Water (ft)	Sample Interval (fbls)	Net OVA Reading (ppm)	Benzene (ppm)	Ethyl-benzene (ppm)	Toluene (ppm)	Total Xylenes (ppm)	Total VOAs (ppm)	MTBE (ppm)	Naph-thalene (ppm)	TRPHs (ppm)	Benzo (a pyrene (ppm)	Dibenzo (a,h) anthracene (ppm)	Comments
SCTL*					1.1	240	300	290	None	350	1,000	350	0.1	0.1	
A902-SB41	25-Aug-98	3	2	125	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<4.0	<0.100	<0.100	Adjacent to SB18 (low OVA)
A902-SB42	25-Aug-98	3	2	265	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**490**	**0.460**	<0.100	Adjacent to SB09 (medium OVA)
A902-SB43	25-Aug-98	3	2	1600	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**<4.0**	**<0.100**	<0.100	Adjacent to SB07 (high OVA)
A902-SD01	28-Jan-99	N/A	N/A	N/A	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.670	160	**<0.670**	**<0.670**	Approx. 25 feet NW of A902-MW02

* Soil cleanup target levels for direct exposure as specified in Table IV of Chapter 62-770, FAC.
Bold values exceed target levels.

PHONE NO. :

FROM : BBL

TABLE 3-4: GROUNDWATER MONITORING WELL ANALYTICAL SUMMARY

Facility Name: Truck Fill Stand, Building A902, NAS Key West

Facility ID#: 449400050

Sample Location	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	EDB	Total Lead	TRPHs	Naph-thalene	Acenaph-thene	Acenaph-thylene
Cleanup Target Level(1)		10	40	300	200		35	0.02	150	50	200	200	2100
Marine Surface Water Criteria (2)		71	475	605	370		33600	13	6	5	26	3	0.031
A902-GW-MW01	8/30/98	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.02	**26**	**14.8**	**130**	**28**	**20**
	12/2/98	4.3	<1.0	<1.0	<1.0	4.3	<1.0	<0.02	4	**10.8**	**52.0**	**21**	<5
A902-GW-DUP(3)	8/30/98	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.02	**25**	**10.0**	**160**	**28**	**18**
A902-GW-MW02	8/29/98	3.5	<1.0	<1.0	<1.0	3.5	<5.0	<0.02	<3	**5.9**	11.1	**14.0**	**13.0**
	12/2/99	2.7	<1.0	<1.0	<1.0	2.7	<1.0	<0.02	3	**5.8**	**81.0**	**7**	<5
A902-GW-MW03	8/29/98	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.02	5	1.0	<5.0	<5.0	<5.0
	12/2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
A902-GW-MW04	8/29/98	1.7	<1.0	<1.0	<1.0	1.7	<5.0	<0.02	<3	2.8	17.1	<5.0	<5.0
	12/2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
A902-GW-MW05	8/29/98	<1.0	<1.0	<1.0	1.5	1.5	<5.0	<0.02	**11**	1.1	<5.0	<5.0	<5.0
	12/2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
A902-GW-MW06	8/29/98	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.02	8	1.8	<5.0	<5.0	**6.0**
	12/2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
A902-GW-MW07	8/28/98	**25.6**	<1.0	38.4	2.5	66.5	<5.0	<0.02	4	<0.1	<5.0	<5.0	<5.0
	12/2/99	<1.0	<1.0	26.3	<1.0	26.3	<1.0	<0.02	**9**	0.3	6.00	<5	<5
A902-GW-MW08	8/30/98	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.02	4	0.5	8.8	<5.0	<5.0
	12/2/98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
A902-GW-EQ(4)	8/30/98	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.02	<3	<0.1	<5.0	<5	<5
A902-TB(5)	8/30/98	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.02	NA	NA	NA	NA	NA

NOTES:

(1)Groundwater cleanup target levels as specified in Table VIII of Chapter 62-770, Florida Administrative Code.

(2)Marine surface water criteria as specified in table VII of Chapter 62-770, Florida Administrative Code.

(3)This groundwater sample is a duplicate sample collected from A902-GW-MW01.

(4)This sample is an equipment rinsate blank.

(5)This sample is a trip blank analyzed for volatile organic aromatics only.

Concentrations reported in micrograms per liter for all chemicals except TRPH. TRPH is reported in milligrams per liter.

NA = not analyzed.

TRPH = total recoverable petroleum hydrocarbons.

Bold values exceed target levels.

Sep. 08 2000 09:36AM P3 PHONE NO. : FROM : BBL

Appendix C

BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

consultants with focus

PC&B Lab Report dated August 29, 2000

PC&B Environmental Laboratories, Inc.

210 Park Road, Oviedo, Florida 32765
Phone: 407-359-7194 Fax: 407-359-7197

08-29-2000

Amanda Shearer
Blasland, Bouck & Lee
3350 Buschwood Park Dr., Suite 100
Tampa, FL 33618-

Dear Amanda Shearer:

Enclosed are the results of the analysis of your samples received 08/23/2000.

Our laboratory is certified by the Florida DHRS (Lab #E83239) and operates under an FDEP approved Comprehensive Quality Assurance Plan (#900134G). Unless otherwise noted, all results are reported as received. All data were determined in accordance with published procedures (EPA-600/4-79-020), Methods for Chemical Analysis of Water and Wastes, Revised March 1983, or later and/or Standard Methods for the examination of Water and Wastewater, 18th Edition 1989, or later and/or Test Methods for Evaluating Solid Waste (EPA-SW-846, Revised January 1995, or later), unless stated otherwise in our CompQapp under method modifications.

If you have any questions, please do not hesitate to give me a call.

Sincerely,

Sheldon Stone
Laboratory Manager

PC&B Environmental Laboratories, Inc.

210 Park Road, Oviedo, Florida 32765
Phone: 407-359-7194 Fax: 407-359-7197

Client : *Blasland, Bouck & Lee*
3350 Buschwood Park Dr., Suite 100
Tampa, FL 33618-

Contact : Amanda Shearer
Phone : (813) 933-0697

Laboratory Reference Number : 200080209

Project Name : Truck Stand
Project Number : 88019

Chain of Custody : 19460

Laboratory ID	Matrix	Client ID	Status	Date/Time Sampled	
200080209-1	Water	MW-2	RUN	08/22/2000	11:15
200080209-2	Soil	SD-1	RUN	08/22/2000	10:30
200080209-3	Soil	SD-2	RUN	08/22/2000	10:40
200080209-4	Water	SW-1	RUN	08/22/2000	10:25
200080209-5	Water	SW-2	RUN	08/22/2000	10:35
200080209-6	Water	MW-3	RUN	08/22/2000	12:17
200080209-7	Water	~~MWD-8~~ mw-1 AS	RUN	08/22/2000	11:50
200080209-8	Water	MW-5	RUN	08/22/2000	12:50
200080209-9	Water	MW-6	RUN	08/22/2000	13:05
200080209-10	Water	MW-7	RUN	08/22/2000	12:36
200080209-11	Water	BBL-2	RUN	08/22/2000	13:30
200080209-12	Water	DUP-1	RUN	08/22/2000	

Number	Parameter	Description
10	EPA 602/8021	Aromatic Volatile Organics
10	EPA 8310	PAH's by HPLC
2	EPA 8310	PAH's by HPLC

PC&B Environmental Laboratories, Inc.

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Oviedo, FL 32765
407-359-7194 - (FAX) 359-7197

Case Narrative

Amanda Shearer
Blasland, Bouck & Lee
3350 Buschwood Park Dr., Suite 100
Tampa, FL 33618-

CASE NARRATIVE for Work Order: 200080209
Project Number: 88019
Project Name: Truck Stand

This Case Narrative is a summary of events and/or problems encountered with this Work Order.

For samples requesting EPA 601/602/8010/8020/8021 analysis, the GCMS method EPA 624/8260 was substituted in order to generate the highest quality data possible at no additional cost.

For EPA 8310 PAH analysis, hits below 5 ppb (water) cannot be confirmed.

For EPA 8310 PAH analysis, hits below 100 ppb (soil) cannot be confirmed.

Definition of Flags

DL	=	No surrogate result due to dilution or matrix interference.
J	=	Estimated Value, value not accurate.
L	=	Off-scale high. Actual value is greater than value given.
Q	=	Sample held beyond the accepted holding time.
T	=	Value reported is less than the laboratory method detection limit.
V	=	Analyte was both detected in the method blank and sample.

Report of Analysis

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
ONE: 407-359-7194
359-7197

Aromatic Volatile Organics

CLIENT NAME: Blasland, Bouck & Lee
PROJECT NAME: Truck Stand
PROJECT NUMBER: 88019
DATE RECEIVED: 08/23/2000
ANALYTICAL PROTOCOL: EPA 602/8021

Reference Number	200080209-1	200080209-4	200080209-5	200080209-6	200080209-7
Client Sample ID	MW-2	SW-1	SW-2	MW-3	~~MWD-6~~ MW-1
Date Sampled	08/22/2000	08/22/2000	08/22/2000	08/22/2000	08/22/2000
Date Extracted	08/24/2000	08/24/2000	08/24/2000	08/24/2000	08/24/2000
Date Analyzed	08/24/2000	08/24/2000	08/24/2000	08/24/2000	08/24/2000
Sample Matrix (as Received)	Water	Water	Water	Water	Water
Analysis Confirmed	GCMS	GCMS	GCMS	GCMS	GCMS
Dilution Factor	1	1	1	1	1
Result Units	ug/l	ug/l	ug/l	ug/l	ug/l
Benzene	36.8	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
MTBE	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m & p-Xylenes	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
(Surr) 1,2-Dichloroethane-d4 (%)	89	93	87	96	98
(Surr) Toluene-d8 (%)	100	101	112	112	123
(Surr) 4-Bromofluorobenzene (%)	113	138	134	137	102

= Undetected. The value preceeding the 'U' is the RL for the analyte, based on dilution. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G - FHRS Certification # E83239

Reviewed by : _____

Report of Analysis

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
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FAX: 359-7197

Aromatic Volatile Organics

CLIENT NAME: Blasland, Bouck & Lee
PROJECT NAME: Truck Stand
PROJECT NUMBER: 88019
DATE RECEIVED: 08/23/2000
ANALYTICAL PROTOCOL: EPA 602/8021

Reference Number	200080209-8	200080209-9	200080209-10	200080209-11	200080209-12
Client Sample ID	MW-5	MW-6	MW-7	BBL-2	DUP-1
Date Sampled	08/22/2000	08/22/2000	08/22/2000	08/22/2000	08/22/2000
Date Extracted	08/24/2000	08/24/2000	08/24/2000	08/24/2000	08/24/2000
Date Analyzed	08/24/2000	08/24/2000	08/24/2000	08/24/2000	08/24/2000
Sample Matrix (as Received)	Water	Water	Water	Water	Water
Analysis Confirmed	GCMS	GCMS	GCMS	GCMS	GCMS
Dilution Factor	1	1	1	1	1
Result Units	ug/l	ug/l	ug/l	ug/l	ug/l
Benzene	1.0 U	1.1	1.0 U	7.0	1.0 U
Chlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	1.0 U	1.0 U	1.0 U	13.8	1.0 U
MTBE	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m & p-Xylenes	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
(Surr) 1,2-Dichloroethane-d4 (%)	90	94	95	93	97
(Surr) Toluene-d8 (%)	110	107	132	105	118
(Surr) 4-Bromofluorobenzene (%)	123	104	114	113	116

U = Undetected. The value preceeding the 'U' is the RL for the analyte, based on dilution. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G - FHRS Certification # E83239

Reviewed by : _____

Quality Control Report for Spike Analysis

Aromatic Volatile Organics

Matrix: Water
Lab Sample ID: MW-QC
QC Batch ID: 0008MS3056
Spike Units: ug/l

Analysis Date: 08/24/2000
Preparation Date: 08/24/2000
Method: EPA 602
Analyst: DG

Analyte	Spike Amount	Sample Result	Spike Result	Percent Recovery	Lower Control Limit	Upper Control Limit
Benzene	50.0	0.0	45.0	90	63	140
Ethylbenzene	50.0	0.0	40.0	80	70	131
MTBE	50.0	0.0	41.0	82	60	155
Toluene	50.0	0.0	43.0	86	67	130
m & p-Xylenes	100.0	0.0	81.0	81	68	128
o-Xylene	50.0	0.0	45.0	90	69	130

Report of Analysis

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
PHONE: 407-359-7194
359-7197

PAH's by HPLC

CLIENT NAME: Blasland, Bouck & Lee
PROJECT NAME: Truck Stand
PROJECT NUMBER: 88019
DATE RECEIVED: 08/23/2000
ANALYTICAL PROTOCOL: EPA 8310

Reference Number	200080209-1	200080209-4	200080209-5	200080209-6	200080209-7
Client Sample ID	MW-2	SW-1	SW-2	MW-3	~~MWD-8~~ MW-1
Date Sampled	08/22/2000	08/22/2000	08/22/2000	08/22/2000	08/22/2000
Date Extracted	08/23/2000	08/23/2000	08/23/2000	08/23/2000	08/23/2000
Date Analyzed	08/23/2000	08/23/2000	08/23/2000	08/23/2000	08/23/2000
Sample Matrix (as Received)	Water	Water	Water	Water	Water
Analysis Confirmed	Yes	No	No	No	Yes
Dilution Factor	2	1	1	1	1
Result Units	ug/l	ug/l	ug/l	ug/l	ug/l
Acenaphthene	16.6	1.4 U	1.4 U	1.4 U	9.5
Acenaphthylene	17.4	0.2 U	0.2 U	0.2 U	2.6
Anthracene	0.04 U	0.02 U	0.02 U	0.02 U	0.63
Benzo(a)anthracene	0.18 U	0.09 U	0.09 U	0.09 U	0.09 U
Benzo(a)pyrene	8.08	0.39	0.72	0.06 U	0.06 U
Benzo(b)fluoranthene	13.28	0.13	0.07 U	0.07 U	0.07 U
Benzo(ghi)perylene	0.38 U	0.19 U	0.19 U	0.19 U	0.19 U
Benzo(k)fluoranthene	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
Chrysene	0.18 U	0.09 U	0.09 U	0.09 U	0.09 U
Dibenzo(ah)anthracene	0.16 U	0.08 U	0.08 U	0.08 U	0.08 U
Fluoranthene	0.5 U	0.3 U	0.3 U	0.3 U	2.2
Fluorene	38.2	0.2 U	0.2 U	0.2 U	1.2
Indeno(123cd)pyrene	0.12 U	0.06 U	0.06 U	0.06 U	0.06 U
Naphthalene	125	1.0 U	1.0 U	1.0 U	40.0
1-Methyl naphthalene	95.5	0.6 U	0.6 U	0.6 U	7.7
2-Methyl naphthalene	35.6	0.4 U	0.4 U	0.4 U	22.2
Phenanthrene	0.18 U	0.09 U	0.09 U	0.09 U	2.88
Pyrene	0.5 U	0.2 U	0.2 U	0.2 U	1.1
(Surr) Decafluorobiphenyl (%)	78	68	68	69	98

U = Undetected. The value preceeding the 'U' is the RL for the analyte, based on dilution. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G - FHRS Certification # E83239

Reviewed by : _____

Report of Analysis

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
PHONE: 407-359-7194
FAX: 359-7197

PAH's by HPLC

CLIENT NAME: Blasland, Bouck & Lee
PROJECT NAME: Truck Stand
PROJECT NUMBER: 88019
DATE RECEIVED: 08/23/2000
ANALYTICAL PROTOCOL: EPA 8310

Reference Number	200080209-8	200080209-9	200080209-10	200080209-11	200080209-12
Client Sample ID	MW-5	MW-6	MW-7	BBL-2	DUP-1
Date Sampled	08/22/2000	08/22/2000	08/22/2000	08/22/2000	08/22/2000
Date Extracted	08/23/2000	08/23/2000	08/23/2000	08/23/2000	08/23/2000
Date Analyzed	08/23/2000	08/23/2000	08/23/2000	08/23/2000	08/23/2000
Sample Matrix (as Received)	Water	Water	Water	Water	Water
Analysis Confirmed	No	No	No	No	No
Dilution Factor	1	1	1	1	1
Result Units	ug/l	ug/l	ug/l	ug/l	ug/l
Acenaphthene	1.4 U	2.1	1.4 U	1.4 U	1.4 U
Acenaphthylene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Anthracene	0.06	0.02 U	0.02 U	0.03	0.05
Benzo(a)anthracene	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Benzo(a)pyrene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Benzo(b)fluoranthene	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
Benzo(ghi)perylene	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Benzo(k)fluoranthene	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Chrysene	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Dibenzo(ah)anthracene	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Fluoranthene	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Fluorene	0.2 U	0.2 U	0.2 U	0.3	0.2 U
Indeno(123cd)pyrene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Naphthalene	1.5	1.0 U	1.3	2.8	1.4
1-Methyl naphthalene	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
2-Methyl naphthalene	0.4 U	0.4 U	0.4 U	0.5	0.4 U
Phenanthrene	0.09 U	0.09 U	0.09 U	0.11	0.09 U
Pyrene	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
(Surr) Decafluorobiphenyl (%)	67	56	58	63	64

U = Undetected. The value preceeding the 'U' is the RL for the analyte, based on dilution. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G - FHRS Certification # E83239

Reviewed by : _____

Report of Analysis

PC&B Environmental Laboratories, Inc.
210 Park Road
Oviedo, FL 32765
PHONE: 407-359-7194
FAX: 359-7197

PAH's by HPLC

CLIENT NAME: Blasland, Bouck & Lee
PROJECT NAME: Truck Stand
PROJECT NUMBER: 88019
DATE RECEIVED: 08/23/2000
ANALYTICAL PROTOCOL: EPA 8310

Reference Number	200080209-2		200080209-3	
Client Sample ID	SD-1		SD-2	
Date Sampled	08/22/2000		08/22/2000	
Date Extracted	08/23/2000		08/23/2000	
Date Analyzed	08/23/2000		08/23/2000	
Sample Matrix (as Received)	Soil		Soil	
Analysis Confirmed	GCMS		No	
Dilution Factor	5		1	
Result Units	ug/kg		ug/kg	
Acenaphthene	2870		265	
Acenaphthylene	250	U	50	U
Anthracene	4380		3	
Benzo(a)anthracene	8730		130	
Benzo(a)pyrene	7210		250	
Benzo(b)fluoranthene	10930		215	
Benzo(ghi)perylene	4970		370	
Benzo(k)fluoranthene	875		165	
Chrysene	9100		220	
Dibenzo(ah)anthracene	100	U	25	
Fluoranthene	19200		280	
Fluorene	2660		9	
Indeno(123cd)pyrene	6130		235	
Naphthalene	945		715	
1-Methyl naphthalene	630		145	
2-Methyl naphthalene	590		100	U
Phenanthrene	19650		155	
Pyrene	17760		180	
(Surr) Decafluorobipheynl (%)	0	DL	62	

U = *Undetected.* The value preceeding the 'U' is the RL for the analyte, based on dilution. Results reported on a Wet Weight basis.

FDEP CompQAPP # 900134G - FHRS Certification # E83239

Reviewed by : _____

Quality Control Report for Spike/Spike Duplicate Analysis

PAH's by HPLC

Matrix: Water
Lab Sample ID: TAP-WATER
QC Batch ID: 0008PAH117
Spike Units: ug/l

Analysis Date: 08/23/2000
Preparation Date: 08/23/2000
Method: EPA 8310
Analyst: ELA

Analyte	Spike Amount	Sample Result	Spike Result	Spike Percent Recovery	MSD Result	MSD Percent Recovery	RPD
Acenaphthene	50.0	0.0	44.5	89	45.1	90	1
Acenaphthylene	25.0	0.0	20.5	82	20.5	82	0
Anthracene	1.0	0.0	1.0	97	1.0	98	1
Benzo(a)anthracene	2.5	0.0	2.5	102	2.5	102	0
Benzo(a)pyrene	2.5	0.0	2.0	78	1.9	76	2
Benzo(b)fluoranthene	1.0	0.0	1.0	104	1.0	105	1
Benzo(ghi)perylene	4.0	0.0	3.8	96	3.8	95	2
Benzo(k)fluoranthene	1.0	0.0	1.1	106	1.0	103	3
Chrysene	2.5	0.0	2.5	98	2.4	98	0
Dibenzo(ah)anthracene	10.0	0.0	9.9	99	9.8	98	1
Fluoranthene	2.5	0.0	2.4	98	2.6	102	5
Fluorene	5.0	0.0	3.9	78	4.0	79	2
Indeno(123cd)pyrene	2.5	0.0	2.3	93	2.3	93	0
Naphthalene	25.0	0.0	23.0	92	23.2	93	1
Phenanthrene	2.5	0.0	2.4	94	2.4	96	2
Pyrene	5.0	0.0	5.1	103	5.1	103	0

Quality Control Limits

Analyte	Lower Limit	Upper Limit	RPD
Acenaphthene	45	133	33
Acenaphthylene	45	133	25
Anthracene	45	133	25
Benzo(a)anthracene	45	133	25
Benzo(a)pyrene	45	133	25
Benzo(b)fluoranthene	45	133	25
Benzo(ghi)perylene	45	133	25
Benzo(k)fluoranthene	45	133	25
Chrysene	45	133	25
Dibenzo(ah)anthracene	45	160	25
Fluoranthene	45	133	25
Fluorene	45	133	25
Indeno(123cd)pyrene	45	133	25
Naphthalene	45	133	25
Phenanthrene	45	133	30
Pyrene	45	133	25

Quality Control Report for Spike/Spike Duplicate Analysis

PAH's by HPLC

Matrix: Soil
Lab Sample ID: 20008070-1
QC Batch ID: 0008PAH118
Spike Units: ug/kg

Analysis Date: 08/23/2000
Preparation Date: 08/23/2000
Method: EPA 8310
Analyst: ELA

Analyte	Spike Amount	Sample Result	Spike Result	Spike Percent Recovery	MSD Result	MSD Percent Recovery	RPD
Acenaphthene	50.0	0.0	44.0	88	43.8	88	0
Acenaphthylene	25.0	0.0	20.1	80	20.3	81	1
Anthracene	1.0	0.0	0.9	93	0.9	95	2
Benzo(a)anthracene	2.5	0.0	2.5	98	2.5	98	0
Benzo(a)pyrene	2.5	0.0	1.9	78	2.3	92	17
Benzo(b)fluoranthene	1.0	0.0	1.0	100	1.0	103	3
Benzo(ghi)perylene	4.0	0.0	4.0	99	4.1	102	3
Benzo(k)fluoranthene	1.0	0.0	1.0	99	1.0	103	4
Chrysene	2.5	0.0	2.4	96	2.5	98	3
Dibenzo(ah)anthracene	10.0	0.0	9.5	95	9.7	97	2
Fluoranthene	2.5	0.0	2.3	93	2.4	96	3
Fluorene	5.0	0.0	3.8	76	3.8	75	0
Indeno(123cd)pyrene	2.5	0.0	2.3	92	2.3	92	0
Naphthalene	25.0	0.0	22.5	90	22.8	91	1
Phenanthrene	2.5	0.0	2.3	92	2.3	92	0
Pyrene	5.0	0.0	4.8	96	4.8	97	0

Quality Control Limits

Analyte	Lower Limit	Upper Limit	RPD
Acenaphthene	60	125	20
Acenaphthylene	60	125	20
Anthracene	60	125	20
Benzo(a)anthracene	60	125	20
Benzo(a)pyrene	60	125	20
Benzo(b)fluoranthene	60	125	20
Benzo(ghi)perylene	60	125	20
Benzo(k)fluoranthene	60	125	20
Chrysene	60	125	20
Dibenzo(ah)anthracene	60	125	20
Fluoranthene	60	125	20
Fluorene	60	125	20
Indeno(123cd)pyrene	60	125	20
Naphthalene	60	125	20
Phenanthrene	60	125	20
Pyrene	60	125	20

PC&B Environmental
210 Park Road, Oviedo, FL 32765
407-359-7194 (FAX) 407-359-7197

Chain of Custody

Work Order: Q14

Date: 8/22/00 Page 1 of 1

COMPANY: BBL
ADDRESS: 3350 Buschwood Park Drive Ste 100
Tampa, FL 33618
SAMPLED BY: Tim Terwilliger/Dan Press SIGN:
PHONE: 813 933 0697 FAX: 813 932 9514

ANALYSIS REQUESTED: BTEX/MTBE (8021); 8310

PRESERVATION

#	SAMPLE ID	DATE/TIME	AIR	WATER	SLUDGE	SOIL/SOLID	ORG. LIQUID	BTEX/MTBE (8021)	8310	Number of Containers
1	MW-2	8/22/00 1115		X				X	X	4
2	SD-1	1030				X			X	2
3	SD-2	1040				X			X	2
4	SW-1	1025		X				X	X	4
5	SW-2	1035		X				X	X	4
6	MW-3	1217		X				X	X	4
7	MWD-~~8~~ 1	1150		X				X	X	4
8	~~MW-4 DPO~~							~~X~~	~~X~~ DPO	
9	MW-5	1250		X				X	X	4
10	MW-6	1305		X				X	X	4
11	MW-7	1236		X				X	X	4
12	BBL-2	1330		X				X	X	4
13	DUP ~~[illegible]~~-1	—		X				X	X	4

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Daubert	8-10-00 1600	1:	8/21/00 1600
2:		2: Daubert	8-23-00 10:00
3:		3:	

PROJECT INFORMATION
PROJECT NAME: Truck Stand
PROJECT #: 88019
SITE ADDRESS: NAS, Key West
PROJECT MANAGER: Amanda Shearer

SAMPLE RECEIPT
Total # of Containers
Chain of Custody Seals
Recv'd in Good Condition
PO #:

SPECIAL INSTRUCTIONS/COMMENTS:
Analytical detection limits must meet Ch. 62-777, FAC target levels.

INVOICE TO: (IF DIFFERENT FROM ABOVE)

QUOTE/CONTRACT #:

WHITE: Project File YELLOW: Laboratory PINK: Sampler

FLORIDA

Water Sampling Log
Effective Date

Petroleum or Petroleum Products Water Sampling Log

MW-1 AS

FDEP FACILITY NO.:	WELL NO.: MWA-8	SAMPLE ID: MWA-8	DATE: 8/22/00
SITE NAME: Truck stand	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.90	DEPTH TO WATER (ft): 1.27	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =)

= (11.90 – 1.27) x 0.16 = 1.7

PURGE METHOD: Peristaltic	PURGING INITIATED AT: 11.37	PURGING ENDED AT: 1148
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	COND. (~~umhos~~ mS)	COLOR	ODOR	APPEARANCE	Turb. OTHER
1	1.7	6.80	28.0	1.23	None	None	clear	157
2	3	6.77	28.2	1.21	None	None	clear	66
3	5	6.74	28.1	1.22	None	None	clear	47

SAMPLING DATA

SAMPLED BY / AFFILIATION: DJR / BBL	SAMPLER(S) SIGNATURE(S): DJR	
SAMPLING METHOD(S): Teflon Tubing	SAMPLING INITIATED AT: 1150	SAMPLING ENDED AT: 1152

FIELD DECONTAMINATION: Y (N) | FIELD-FILTERED: Y (N) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	CG	40ml	HCL	–	–	BTEX / MTBE
	AG	1 lite	Ice	–	–	8310

REMARKS: –

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

Water Sampling Log
Effective Date: _____

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW - 2	SAMPLE ID: MW - 2	DATE: 8/22/00
SITE NAME: Truck Stand	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 1/2	TOTAL WELL DEPTH (ft): 11.40	DEPTH TO WATER (ft): 2.55	WELL CAPACITY (gal/ft): 0.01

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (11.40 - 2.55) x 0.01 = 0.29

PURGE METHOD: Peristaltic	PURGING INITIATED AT: 1105	PURGING ENDED AT: 1115
	PURGE RATE (gpm): 0.100	TOTAL VOLUME PURGED (gal): 1.0

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS COND. ~~(µmhos)~~	COLOR	ODOR	APPEARANCE	Turb OTHER DO
1	0.3	6.75	29.6	1.87	White	No	Very Cloudy	999+ 8.0
2	0.6	6.98	29.5	1.61	White/Gray	No	Very cloudy	— —
5	1.5	6.99	27.5	1.57	"	"	"	— —

SAMPLING DATA

SAMPLED BY/ AFFILIATION: Dan Press / BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Teflon Tubing	SAMPLING INITIATED AT: 1115 ✓	SAMPLING ENDED AT: 1124

FIELD DECONTAMINATION: Y (N) | FIELD-FILTERED: Y (N) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	CG	40ml	HCL	—	—	BTEX / MTBE
	AG	1,000 ml	Ice	—	—	8310

REMARKS: —

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

Form Title: Petroleum or Petroleum Products
Water Sampling Log
Effective Date: _____

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-3	SAMPLE ID: MW-3	DATE: 8/22/00
SITE NAME: Truck Fill	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.30	DEPTH TO WATER (ft): 2.39	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =
= (11.3 – 2.39) x 0.16 = 1.4

PURGE METHOD: Peristaltic	PURGING INITIATED AT: 1205	PURGING ENDED AT: 1215
	PURGE RATE (gpm): ~~0.20~~ DPT 0.5	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS COND. ~~(µmhos)~~	COLOR	ODOR	APPEARANCE	OTHER
1.5		7.02	30.8	1.00	White	No	V. cloudy	
3		7.03	31.5	1.01	white	No	V. cloudy	
5		7.04	31.4	1.00	white	No	V. cloudy	

SAMPLING DATA

SAMPLED BY/AFFILIATION: [signature] Press / BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Teflon Tubing	SAMPLING INITIATED AT: 1217	SAMPLING ENDED AT: 1220
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	CG	40	HCL	—	—	BTEX / MTBE
	AG	1 liter	Ice	—	—	8310

REMARKS: –

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

Water Sampling Log
Effective Date

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-5	SAMPLE ID: MW-5	DATE: 8/22/00
SITE NAME: Truck Stop	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.85	DEPTH TO WATER (ft): 2.71	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (11.85 – 2.71) x 0.16 = 1.46

PURGE METHOD: Peristaltic	PURGING INITIATED AT: 1239	PURGING ENDED AT: 1248
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 4.5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS COND. (~~µmhos~~)	COLOR	ODOR	APPEARANCE	Turb OTHER
1	1.5	7.17	31.4	0.705	Gray/White	No	cloudy	999+
2	3	7.15	30.3	0.711	white	No	V. cloudy	"
3	4.5	7.13	30.4	0.716	white	No	V. cloudy	"

SAMPLING DATA

SAMPLED BY / AFFILIATION: Dan Press / BBL		SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Teflon Bailer		SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1252

FIELD DECONTAMINATION: Y (N) | FIELD-FILTERED: Y (N) | DUPLICATE: (Y) N DUP-1

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	CG	40ml	HCL	–	–	BTEX/MTBE
	AG	1000 ml	Ice	–	–	BS10

REMARKS: DUP-1 taken

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

Water Sampling Log
Effective Date:

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-6	SAMPLE ID: MW-6	DATE: 8/22/00
SITE NAME: Truck Fill	SITE LOCATION: NAS, Key West		

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.50	DEPTH TO WATER (ft): 2.31	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (11.50 – 2.31) x 0.16 = 1.59

PURGE METHOD: Peristaltic Pump	PURGING INITIATED AT: 1254	PURGING ENDED AT: 1302
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 4.5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS COND. (umhos)	COLOR	ODOR	APPEARANCE	OTHER
1	1.4	6.99	29.0	1.08	white	No	s. cloudy	999+
2	2.8	6.97	28.5	1.16	whitish	No	s. cloudy	-"
3	4.2	6.96	28.3	1.14	white	No	cloudy	-"

SAMPLING DATA

SAMPLED BY / AFFILIATION: Dan Press / BAL	SAMPLER(S) SIGNATURE(S): [illegible]	
SAMPLING METHOD(S): Teflon bailer	SAMPLING INITIATED AT: 1305	SAMPLING ENDED AT: 1307

FIELD DECONTAMINATION: Y (N) | FIELD-FILTERED: Y (N) | DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	CG	40ml	HCL	–	–	BTEX / MTBE
	AG	1000ml	Ice	–	–	8310

REMARKS: —

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

Water Sampling Log
Effective Date

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: MW-7	SAMPLE ID: MW-7	DATE: 8/22/00
SITE NAME: Truck Stop		SITE LOCATION: NAS, Key West	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.70	DEPTH TO WATER (ft): 2.43	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (11.7 – 2.43) x 0.16 = 1.48

PURGE METHOD: Peristaltic	PURGING INITIATED AT: 1226	PURGING ENDED AT: 1235
	PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 4.5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS COND. (µmhos)	COLOR	ODOR	APPEARANCE	Turb OTHER
1	1.5	7.56	31.5	0.548	White	No	V. cloudy	999+
2	3	7.53	30.7	0.566	White	No	V. cloudy	"
3	4.5	7.55	30.8	0.529	White	No	V. cloudy	"

SAMPLING DATA

SAMPLED BY AFFILIATION: Dan Press / BSL	SAMPLER(S) SIGNATURE(S): [illegible]	
SAMPLING METHOD(S): Teflon Tubing	SAMPLING INITIATED AT: 1236	SAMPLING ENDED AT: 1238
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	CG	40 ml	HCL	–	–	BTEX / MTBE
	AG	1000 ml	Ice	–	–	8310

REMARKS: –

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

FLORIDA

Water Sampling Log
Effective Date

Petroleum or Petroleum Products
Water Sampling Log

FDEP FACILITY NO.:	WELL NO.: BGL-2	SAMPLE ID: BGL-2	DATE: 8/22/00
SITE NAME: Truck Fill		SITE LOCATION: NAS, Key West	

PURGE DATA

WELL DIAMETER (in): 2	TOTAL WELL DEPTH (ft): 11.73	DEPTH TO WATER (ft): 1.09	WELL CAPACITY (gal/ft): 0.16

1 WELL VOLUME (gal) = (TOTAL WELL DEPTH – DEPTH TO WATER) x WELL CAPACITY =

= (11.73 - 1.09) x 0.16 = 1.7

PURGE METHOD: Peristaltic		PURGING INITIATED AT: 1315	PURGING ENDED AT: 1325
		PURGE RATE (gpm): 0.5	TOTAL VOLUME PURGED (gal): 5

WELL VOLS. PURGED	CUMUL. VOLUME PURGED (gal)	pH	TEMP. (°C)	mS COND. ~~(µmhos)~~	COLOR	ODOR	APPEARANCE	OTHER
1	1.7	7.14	29.8	7.29	white	organic	sl. cloudy	999+
2	3.4	7.04	29.9	7.00	white	organic	sl. cloudy	999+
3	5	7.09	30.1	7.14	white	organic	cloudy	999+

SAMPLING DATA

SAMPLED BY AFFILIATION: Dan Ross / BBL	SAMPLER(S) SIGNATURE(S): [signature]	
SAMPLING METHOD(S): Teflon bailer	SAMPLING INITIATED AT: 1330	SAMPLING ENDED AT: 1531
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATIONS			SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD
NO.	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOLUME ADDED IN FIELD (ml)	FINAL pH	
	AG	40ml	HCl	–	–	BTEX / MTBE
	AG	1000ml	Ice	–	–	8310

REMARKS: –

MATERIAL CODES: AG = AMBER GLASS; CG = CLEAR GLASS; HDP = HIGH DENSITY POLYETHYLENE; O = OTHER (SPECIFY)

WELL CAPACITY: 1.25" = 0.06 gal/ft; 2" = 0.16 gal/ft; 4" = 0.65 gal/ft; 6" = 1.47 gal/ft; 8" = 2.61 gal/ft; 12" = 5.88 gal/ft

NOTE: this does not constitute all the information required by Chapter 62-160, F.A.C.

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 880.12 Page 1 of 4

Site Location Truck Fill Stand, Boca Chica, FL

Sample I.D. No. SD-1 Coded/Replicate No. —

Date 8/22/00 Time of Sampling: Begin 1030 End —

Weather Clear, ~90°F

Site Description Truck fill stand containing asphalt/concrete paved areas and containment berms. Pooled water area down slope from truck fill stand - natural swamp area.

SAMPLING DATA

Collection Method Soil jar from lab; clean nitrile disposable gloves.

Depth 0-6" Moisture Content ~25%

Color Grey, brown Odor none

Description Sandy, some plant roots, shells, shell fragments. Most water overflowed as sediment was added to sample jar.

Analyses Required (Order of Collection)	Container Description
8310	250 mL ~~(1A) 500 mL~~ glass (clear) jar.

Sample Monitoring (TLP, OVA, HNU, etc.) n/a

Remarks none

(Visitors, Field Decon) n/A

(QC Sample Locations/Time) n/A

Sampler(s) (Signatures) Jim Twilligar

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

SOIL/SEDIMENT SAMPLING LOG

Project No. 880.12 Page 2 of 4

Site Location Truck Fill Stand, Boca Chica, FL

Sample I.D. No. SD-2 Coded/Replicate No. —

Date 8/22/00 Time of Sampling Begin 1040 End —

Weather (Same as SD-1)

Site Description (same)

SAMPLING DATA

Collection Method (Same)

Depth 0-6" Moisture Content ~25%

Color (Same) Odor none

Description (same)

Analyses Required (Order of Collection)	Container Description
8310	(TA) ~~500 mL~~ 250 mL glass (clear) jar

Sample Monitoring (TP, OVA, HNU, etc.) n/a

Remarks none

(Visitors, Field Decon) n/a

(QC Sample Locations/Time) n/a

Sampler(s) (Signatures) Jim Zeilbig

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

~~SOIL/SEDIMENT~~ SAMPLING LOG
Surface water

Project No. 880.12 Page 3 of 4

Site Location Truck Fill Stand, Boca, Chica, FL

Sample I.D. No. SW-1 Coded/Replicate No. —

Date 8/22/00 Time of Sampling: Begin 1025 End —

Weather clear, 90°F

Site Description (Same as SD-1)

SAMPLING DATA

Collection Method Sample jars from lab; soil jar from lab for 1 L bottles

Depth 0-6" (above sediment) Moisture Content 100%

Color light brown to none Odor none

Description Collected surface water directly above planned sediment sample. Collected surface water sample first.

Analysis Required (Order of Collection)	Container Description
8021	40 mL vial (clear glass)
8310	1 L amber jar

Sample Monitoring (TIP, OVA, HNU, etc.) none

Remarks none

(Visitors, Field Decon) n/a

(QC Sample Locations/Time) n/a

Sampler(s) (Signatures) [illegible]

BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

~~SOIL/SEDIMENT~~ SAMPLING LOG
Surface water

Project No. 880.12 Page 4 of 4

Site Location Truck Fill Stand, Boca Chica, FL

Sample I.D. No. SW-2 Coded/Replicate No. —

Date 8/22/00 Time of Sampling: Begin 1035 End —

Weather (Same)

Site Description (Same)

SAMPLING DATA

Collection Method (Same as SW-1)

Depth 0-6" above sediment Moisture Content 100%

Color none Odor none

Description (Same as SW-1) directly above planned SD-2 location.

Analyses Required (Order of Collection)	Container Description
8021	40 mL clear glass vial
8310	1 L amber glass jar

Sample Monitoring (TIP, OVA, HNU, etc.) n/a

Remarks none

(Visitors, Field Decon) n/a

(QC Sample Locations/Time) n/a

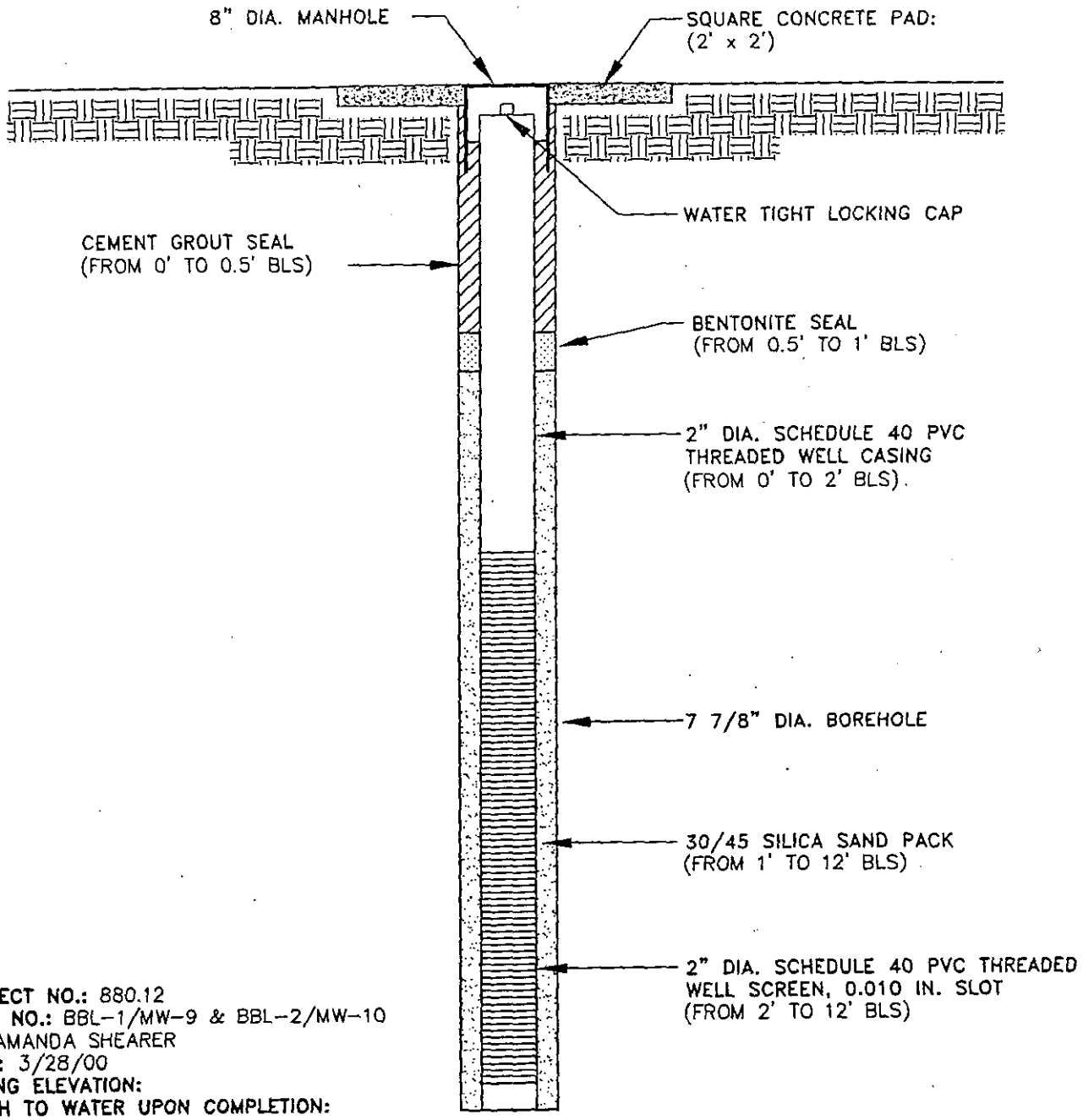
Sampler(s) (Signatures) Tim Teilling

Appendix D

BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

consultants with focus

Monitoring Well Completion Diagram



PROJECT NO.: 880.12
WELL NO.: BBL-1/MW-9 & BBL-2/MW-10
BY: AMANDA SHEARER
DATE: 3/28/00
CASING ELEVATION:
DEPTH TO WATER UPON COMPLETION:
UNIT MONITORED: SURFICIAL

DRILLER: PRECISION DRILLING
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL DEPTH: 12 FEET
SAMPLE TYPE:
SAMPLE INTERVAL:

(DRAWING NOT TO SCALE)

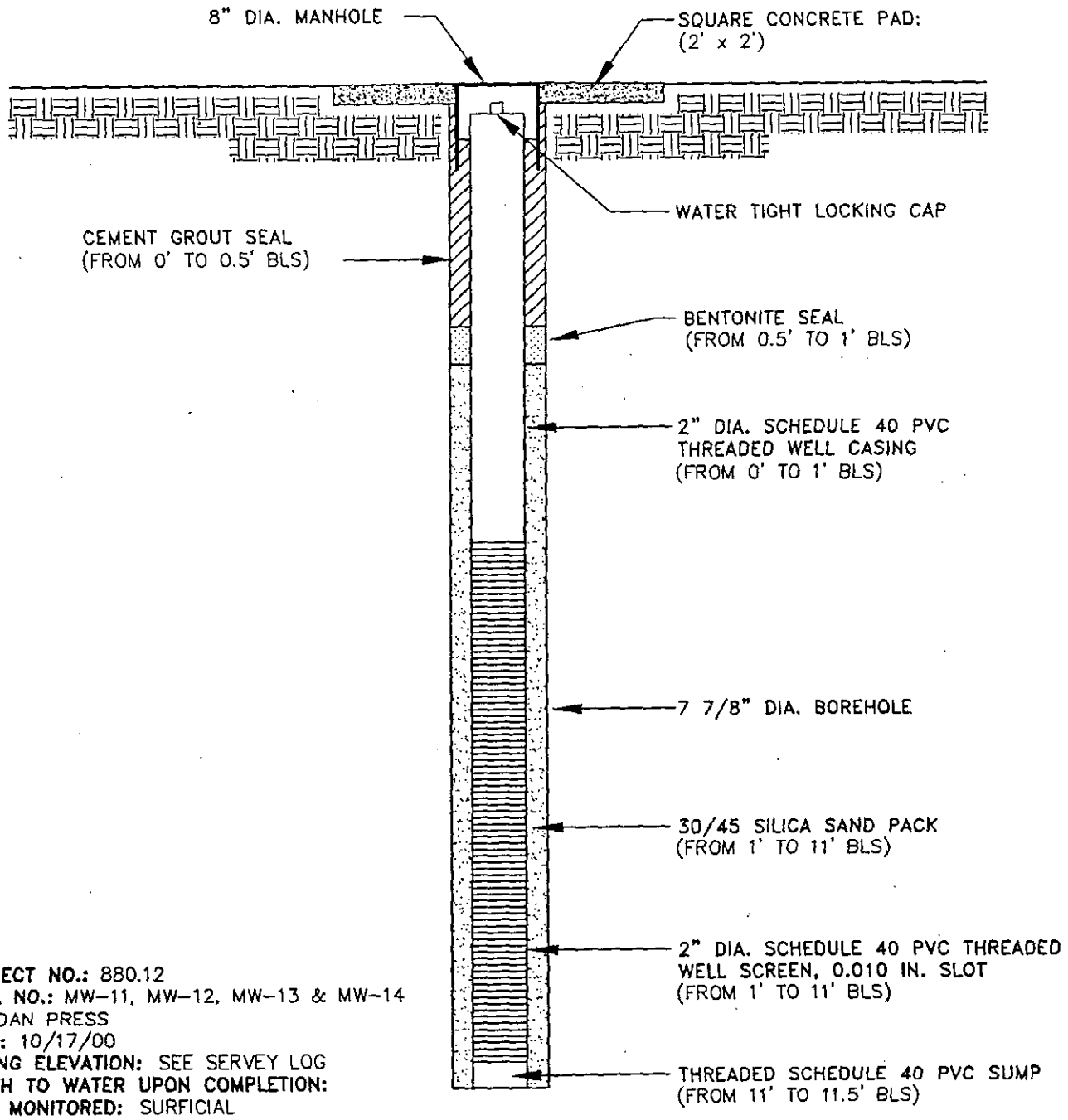
NAVAL AIR STARION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

SHALLOW MONITORING WELL CONSTRUCTION DETAIL

BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

APPENDIX **D-1**

P: STD-PC2/AP
1/19/01 TAM-54-JAR
880\88012\002\88012N03.DWG



PROJECT NO.: 880.12
WELL NO.: MW-11, MW-12, MW-13 & MW-14
BY: DAN PRESS
DATE: 10/17/00
CASING ELEVATION: SEE SERVEY LOG
DEPTH TO WATER UPON COMPLETION:
UNIT MONITORED: SURFICIAL

DRILLER: PRECISION DRILLING
DRILLING METHOD: HOLLOW STEM AUGER
TOTAL DEPTH: 11 FEET
SAMPLE TYPE: CONTINUOUS
SAMPLE INTERVAL: 0-11' BLS

(DRAWING NOT TO SCALE)

NAVAL AIR STARION KEY WEST
BOCA CHICA, FLORIDA
SUPPLEMENTAL ASSESSMENT BLDG A-902
TRUCK FILL STAND

SHALLOW MONITORING WELL CONSTRUCTION DETAIL

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

APPENDIX **D-2**

P: STD-PC2/AP
1/19/01 TAM-54-JAR
880\88012\002\88012N01.DWG

Appendix E

BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

consultants with focus

STL Precision Lab Report dated April 3, 2000

STL Precision
a division of Severn Trent Laboratories, Inc.

BLASL0000092
Amanda Shearer
Blasland Bouck & Lee/Montverde
15741 Vinola Court
Montverde, FL 34756

Page 1
April 3, 2000
Submission # 3001569
Order # 29143
FDEP CompQAP# 990102
FL-DOH Certification# E86349, 86413, 86565

Site Location/Project
Key West, FL
880.12-US Naval Air Station

Sample I.D.: Trip
Collected: 03/29/00 00:00
Received: 03/30/00 18:00
Collected by: Kevin Fox

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
8021.B VOA {602} Compounds in Water by GC			MEDF	1			
Methyl-tert-butyl-ether	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
Benzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
Toluene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
Chlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
Ethylbenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
m & p Xylene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
o-Xylene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
1,3-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
1,4-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB
1,2-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	JB

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effected Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Authorized Laboratory Management

BLASL0000092
Amanda Shearer
Blasland Bouck & Lee/Montverde
15741 Vinola Court
Montverde, FL 34756

April 3, 2000
Submission # 3001569
Order # 29144
FDEP CompQAP# 990102
FL-DOH Certification# E86349, 86413, 86565

Site Location/Project
Key West, FL
880.12-US Naval Air Station

Sample I.D.: BBL-1/MW-9
Collected: 03/29/00 16:46
Received: 03/30/00 18:00
Collected by: Kevin Fox

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
8021.B VOA (602) Compounds in Water by GC			MEDF	1			
Methyl-tert-butyl-ether	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Benzene	1.61	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Toluene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Chlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Ethylbenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
m & p Xylene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Xylene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
1,3-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
1,4-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
1,2-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
8270C PAHs (610) in WATER by GC/MS (Ion Trap)			MEDF	1			
Naphthalene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
Acenaphthene	BDL	ug/L	3510/8270C	3.000	03/31/2000	04/01/2000	EJT
Phenanthrene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
Fluoranthene	BDL	ug/L	3510/8270C	0.300	03/31/2000	04/01/2000	EJT

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Sample I.D.: BBL-1/MW-9
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PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	03/31/2000	04/01/2000	EJT
Fluorene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
Anthracene	BDL	ug/L	3510/8270C	0.300	03/31/2000	04/01/2000	EJT
Pyrene	BDL	ug/L	3510/8270C	0.300	03/31/2000	04/01/2000	EJT
Chrysene	BDL	ug/L	3510/8270C	1.000	03/31/2000	04/01/2000	EJT
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	03/31/2000	04/01/2000	EJT
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
FL-PRO (Petroleum Residual Organic)-{WATER}			MEDF				

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Sample I.D.: BBL-1/MW-9
Collected: 03/29/00 16:46
Received: 03/30/00 18:00
Collected by: Kevin Fox

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Petroleum Range Organics (C8-C40)	BDL	mg/L	FL-PRO (DEP UST	0.500	03/31/2000	04/01/2000	NMG

BDL: Indicates Analyte is Below Detection LimitMEDF: Matrix Effected Dilution Factor***
Work Subcontracted to Outside Labs Denoted by HRS Cert ID in Analyst Field
Qualifier following result conforms to FAC 62-160 Table 7***Unless otherwise noted, mg/Kg denotes wet weight***
***62-770: If the MDL using the most sensitive and currently available technology is higher than a specific criterion, the PQL shall be used.
Certs:Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826

Michael Spitzer
Authorized Laboratory Management

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Amanda Shearer
Blasland Bouck & Lee/Montverde
15741 Vinola Court
Montverde, FL 34756

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Submission # 3001569
Order # 29145
FDEP CompQAP# 990102
FL-DOH Certification# E86349, 86413, 86565

Site Location/Project
Key West, FL
880.12-US Naval Air Station

Sample I.D.: BBL-2/MW-10
Collected: 03/29/00 16:18
Received: 03/30/00 18:00
Collected by: Kevin Fox

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
8021.B VOA (602) Compounds in Water by GC			MEDF	1			
Methyl-tert-butyl-ether	2.43	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Benzene	9.81	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Toluene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Chlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
Ethylbenzene	15.2	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
m & p Xylene	13.9	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
o- Xylene	1.43	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
1,3-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
1,4-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
1,2-Dichlorobenzene	BDL	ug/L	5030/8021B	1.000	03/31/2000	03/31/2000	ME
8270C PAHs (610) in WATER by GC/MS (Ion Trap)			MEDF	1			
Naphthalene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
2-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
1-Methylnaphthalene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
Acenaphthene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
Phenanthrene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
Fluoranthene	BDL	ug/L	3510/8270C	0.500	03/31/2000	04/01/2000	EJT

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Sample I.D.: BBL-2/MW-10
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Received: 03/30/00 18:00
Collected by: Kevin Fox

PARAMETER	RESULT	UNITS	METHOD	DETECTION LIMIT	DATE EXT.	DATE ANALY.	ANALYST
Benzo(a)anthracene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Benzo(b)fluoranthene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Benzo(a)pyrene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Benzo(ghi)perylene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Acenaphthylene	BDL	ug/L	3510/8270C	3.000	03/31/2000	04/01/2000	EJT
Fluorene	BDL	ug/L	3510/8270C	5.000	03/31/2000	04/01/2000	EJT
Anthracene	BDL	ug/L	3510/8270C	0.300	03/31/2000	04/01/2000	EJT
Pyrene	BDL	ug/L	3510/8270C	0.300	03/31/2000	04/01/2000	EJT
Chrysene	BDL	ug/L	3510/8270C	1.000	03/31/2000	04/01/2000	EJT
Benzo(k)fluoranthene	BDL	ug/L	3510/8270C	0.500	03/31/2000	04/01/2000	EJT
Indeno(1,2,3-cd)pyrene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
Dibenzo(a,h)anthracene	BDL	ug/L	3510/8270C	0.200	03/31/2000	04/01/2000	EJT
FL-PRO (Petroleum Residual Organic)-(WATER)			MSDF	1			