US EPA RECORDS CENTER REGION 5
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PPT PAH ANALYSIS
City of St. Louis Park, MN
Sampling of 12-17-86

Sampling Group #10

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SECTION I

ANALYSIS OF TRACE PAH IN WATER SAMPLES

FROM THE CITY OF ST. LOUIS PARK, MN

GAC TREATMENT PLANT

SAMPLE SET NO. 10

RECEIVED DECEMBER 18, 1986

ERT Project No. D809-143

February 9, 1987

Prepared for

Mr. James N. Grube
Director of Public Health
City of St. Louis Park
5005 Minnetonka, Blvd.
St. Louis Park, MN 55416

Prepared by

Analytical Chemistry Laboratory
ERT, A Resource Engineering Company
33 Industrial Way, Wilmington, Massachusetts 01887

ANALYSIS OF TRACE PAH IN WATER SAMPLES FROM THE CITY OF ST. LOUIS PARK, MN GAC TREATMENT PLANT

INTRODUCTION

This report represents the results of analysis conducted on various water samples (set no. 10) received by the ERT Analytical Chemistry Laboratory on December 18, 1986. The samples were to be analyzed for selected polyaromatic hydrocarbons (PAH) and heterocycles.

SAMPLE RECEIPT AND CHAIN OF CUSTODY

Routine inspection of the samples revealed them to be packaged properly and received in good condition.

Upon receipt, information from the submitted samples was recorded in the Master Log Book (and the LIMS computer system) and assigned ERT Control Numbers. These unique sample labels were affixed to respective sample containers and subsequently utilized throughout the laboratory analysis procedures for positive traceability.

ANALYTICAL PROCEDURES

The water samples were analyzed according to procedures as outlined in: ERT Standard Analytical Method (SAM) #020-6 "Analytical Method for Low-level PAH and Heterocycles in Water", as provided in the Quality Assurance Project Plan for Sampling and Analysis - GAC Plant Testing, June - August, 1986, ERT Document No. P-D209-129-1, July, 1986.

QUALITY CONTROL PROCEDURES

Quality control procedures as described in the Quality Assurance Project Plan for Sampling and Analysis - GAC Plant Testing, June - August, 1986, ERT Document No. P-D209-129-1, July, 1986 were implemented for all analyses. Laboratory method (reagent) blanks, laboratory solvent blanks, laboratory duplicated samples, and laboratory method spike (fortified control) samples were analyzed concurrently with the submitted samples based on the following frequency:

a) Laboratory method blank, 5% - one for every (20) samples submitted.

b) Laboratory solvent blank, 10% - one for every (10) samples submitted.

c) Laboratory method spikes, 5% - one for every (20) samples submitted.

All samples and quality control samples were fortified prior to extraction with selected deuterated PAH surrogate compounds. i.e., naphthalene-d^8, fluorene-d^{10}, and chrysene-d^{12}, at a sample concentration level of approximately 10 ng/l (ppt). The following criteria, based on percent recovery, was to be utilized for the determination of data validity for each sample:

Surrogate	Minimum Mean (%)	Mean (%)	Standard Deviation (%)	95% Confidence Limits
Naphthalene-d^8	42	72	15	42
Fluorene-d^{10}	60	94	17	60
Chrysene-d^{12}	20	30	12	10

Various corrective action steps, as described in the QA plan, were to be initiated whenever the recovery of any one surrogate is found to be below the 95% confidence limit.

RESULTS OF ANALYSIS

The sampling report, analytical results report, the method spike recovery report, and the surrogate recovery report, are presented in the attached tables.

DISCUSSION

It should be noted that the analytical results for the method spike recovery sample for the eight (8) selected compounds were found to be within the method spike criteria for data validity. The average recovery for the target compounds was 79% within the 20% - 150% target range.

A review of the surrogate recoveries indicated that one of the submitted samples ERT no. 41040, FLD. ID. T-10 below the lower 95% confidence limit as stated in the QA plan. Analytical results for sample concentration were corrected for batch method blank results according to procedures as stated on page 17 of the QAPP, QAD209-129. July, 1986.

ERT ANALYTICAL LABORATORY

SAMPLING REPORT

CITY OF ST. LOUIS PARK, MN

PPT ANALYSIS OF PAH IN WATER

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	T-10
2.	ERT SAMPLE NUMBER:	41040
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	12/17/86
5.	DATE RECEIVED:	12/18/86
6.	DATE EXTRACTED:	12/23/86
7.	DATE ANALYZED:	01/29/87
8.	GC/MS FILE #:	41040B
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP43
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 41042
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 41043
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 41039
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 73

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	TD-10
2.	ERT SAMPLE NUMBER:	41041
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	12/17/86
5.	DATE RECEIVED:	12/18/86
6.	DATE EXTRACTED:	12/23/86
7.	DATE ANALYZED:	01/29/87
8.	GC/MS FILE #:	41041
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP43
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 41042
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 41043
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 41039
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 73

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	MS-10
2.	ERT SAMPLE NUMBER:	41042
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	12/17/86
5.	DATE RECEIVED:	12/18/86
6.	DATE EXTRACTED:	12/23/86
7.	DATE ANALYZED:	01/29/87
8.	GC/MS FILE #:	41042
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP43
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 41042
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 41043
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 41039
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 73

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	B-10
2.	ERT SAMPLE NUMBER:	41043
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	12/17/86
5.	DATE RECEIVED:	12/18/86
6.	DATE EXTRACTED:	12/23/86
7.	DATE ANALYZED:	01/29/87
8.	GC/MS FILE #:	41043
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP43
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 41042
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 41043
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 41039
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 73

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY

ANALYTICAL RESULTS REPORT

CITY OF ST. LOUIS PARK, MN

PPT ANALYSIS OF PAH IN WATER

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: T-10 ERT NO.: 41040

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	ND
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	6.1
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	3.5
DIBENZOFURAN	ND
FLOURENE	ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	9.6
TOTAL PAH'S	9.6

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-10 ERT NO.: 41041

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	ND
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	17
INDENE	5.5
NAPHTHALENE	ND
BENZO (B) THIOPHENE	< 2.2
INDOLE	ND
2-METHYLNAPHTHALENE	< 3.2
1-METHYLNAPHTHALENE	ND
BIPHENYL	< 17
ACENAPHTHYLENE	ND
ACENAPHTHENE	6.4
DIBENZOFURAN	4.7
FLOURENE	1.4
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	< 1.5
PERYLENE	ND
TOTAL OTHER PAH	35
TOTAL PAH'S	35

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MS-10 ERT NO.: 41042

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	27
BENZO (A) ANTHRACENE	ND
CHRYSENE	8.0
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	< 5.3
TOTAL CARCINOGENIC PAH	35

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	ND
INDENE	24
NAPHTHALENE	110
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	27
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	ND
DIBENZOFURAN	ND
FLOURENE	23
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	11
PERYLENE	ND
OTAL OTHER PAH	195
TOTAL PAH'S	230

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: B-10 ERT NO.: 41043

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	3.4
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	3.4

OTHER PAH'S

2,3-BENZOFURAN	< 1.9
2,3-DIHYDROINDENE	4.0
INDENE	< 2.9
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	6.3
1-METHYLNAPHTHALENE	3.5
BIPHENYL	ND
ACENAPHTHYLENE	12
ACENAPHTHENE	< 1.3
DIBENZOFURAN	2.4
FLOURENE	1.5
DIBENZOTHIOPHENE	ND
PHENANTHRENE	5.7
ANTHRACENE	8.4
ACRIDINE	< 2.5
CARBAZOLE	5.9
FLUORANTHENE	< 4.4
PYRENE	ND
BENZO (E) PYRENE	< 1.5
PERYLENE	ND
OTAL OTHER PAH	50
TOTAL PAH'S	53

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY

MATRIX SPIKE RECOVERY REPORT

CITY OF ST. LOUIS PARK, MN

PPT PAH ANALYSIS IN WATER

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
SURROGATE RECOVERY REPORT
POLYAROMATIC HYDROCARBONS

FIELD ID: MS-10 ERT NO.: 41042

PARAMETERS	SPIKE LEVE(NG/L)	% RECOVERY
NAPHTHALENE	114	98
FLUORENE	26.9	86
CHRYSENE	21.4	37
BENZO (G,H,I) PERYLENE	19.4	19
INDENE	20.0	119
QUINOLINE	22.5	120
BENZO (E) PYRENE	16.7	63
2-METHYLNAPHTHALENE	28.9	92
		==========
AVERAGE % RECOVERY		79

AVERAGE % RECOVERY TARGET RANGE = 20% - 150%

ERT ANALYTICAL LABORATORY

SURROGATE RECOVERY REPORT

CITY OF ST. LOUIS PARK, MN

PPT PAH ANALYSIS IN WATER

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
SURROGATE RECOVERY REPORT
POLYAROMATIC HYDROCARBONS

FIELD ID: T-10 ERT NO.: 41040

SURROGATE	SPIKE LEVE(NG/L)	% RECOVERY	95% CONFIDENCE LIMITS
NAPHTHALENE - D8	9.9	37*	42-102
FLUORENE - D10	9.5	113	60-128
CHRYSENE - D12	9.8	16	10-54

* OUTSIDE LOWER 95% CONFIDENCE INTERVAL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
SURROGATE RECOVERY REPORT
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-10 ERT NO.: 41041

SURROGATE	SPIKE LEVE(NG/L)	% RECOVERY	95% CONFIDENCE LIMITS
NAPHTHALENE - D8	9.9	63	42-102
FLUORENE - D10	9.5	184*	60-128
CHRYSENE - D12	9.8	22	10-54

* OUTSIDE HIGHER 95% CONFIDENCE INTERVAL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
SURROGATE RECOVERY REPORT
POLYAROMATIC HYDROCARBONS

FIELD ID: MS-10 ERT NO.: 41042

SURROGATE	SPIKE LEVE(NG/L)	% RECOVERY	95% CONFIDENCE LIMITS
NAPHTHALENE - D8	9.9	66	42-102
FLUORENE - D10	9.5	55	60-128
CHRYSENE - D12	9.8	55	10-54

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
SURROGATE RECOVERY REPORT
POLYAROMATIC HYDROCARBONS

FIELD ID: B-10 ERT NO.: 41043

SURROGATE	SPIKE LEVE(NG/L)	% RECOVERY	95% CONFIDENCE LIMITS
NAPHTHALENE - D8	9.9	55	42-102
FLUORENE - D10	9.5	156*	60-128
CHRYSENE - D12	9.8	31	10-54

* OUTSIDE HIGHER 95% CONFIDENCE INTERVAL

ERT ANALYTICAL LABORATORY

METHOD DETECTION LIMITS

CITY OF ST. LOUIS PARK, MN

ppt PAH ANALYSIS IN WATER

ERT ANALYTICAL LABORATORY
PPT ANALYSIS OF PAH in WATER
METHOD DETECTION LIMITS

CARCINOGENIC PAH'S

PARAMETERS	MDL	0.64 MDL
QUINOLINE	1.90	1.20
BENZO (A) ANTHRACENE	4.40	2.80
CHRYSENE	4.40	2.80
BENZOFLUORANTHENES	9.70	6.20
BENZO (A) PYRENE	3.40	2.20
INDENO (1,2,3-CD) PYRENE	4.40	2.80
DIBENZO (A,H) ANTHRACENE	3.40	2.20
DIBENZO (G,H,I) PERYLENE	5.30	3.40

OTHER PAH'S

PARAMETERS	MDL	0.64 MDL
2,3-BENZOFURAN	1.90	1.20
2,3-DIHYDROINDENE	3.40	2.20
INDENE	2.90	1.80
NAPHTHALENE	47.00	30.00
BENZO (B) THIOPHENE	2.20	1.40
INDOLE	1.90	1.20
2-METHYLNAPHTHALENE	5.00	3.20
1-METHYLNAPHTHALENE	3.10	2.00
BIPHENYL	17.00	11.00
ACENAPHTHYLENE	1.70	1.10
ACENAPHTHENE	1.30	0.83
DIBENZOFURAN	1.20	0.77
FLOURENE	0.88	0.56
DIBENZOTHIOPHENE	6.30	4.00
PHENANTHRENE	3.10	2.00
ANTHRACENE	3.40	2.20
ACRIDINE	2.50	1.60
CARBAZOLE	2.60	1.70
FLUORANTHENE	4.40	2.80
PYRENE	4.10	2.60
BENZO (E) PYRENE	1.50	0.96
PERYLENE	1.60	1.00

0.64 MDL = LOWER CONTROL LIMIT OF 95% CONFIDENCE INTERVAL OF MDL

CHAIN OF CUSTODY RECORDS

CITY OF ST. LOUIS PARK

Sampled December 12, 1986

CHAIN OF CUST Y RECORD

Client/Project Name	Project Location
City of St Louis Park Water Dept	St Louis Park MN
Project No.	Field Logbook No.
Sampler: (*Signature*)	Chain of Custody Tape No. 103586 / 103587 + 101775 + 101776

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	PPT	PAH					REMARKS
T-10	12/17/86		41040	4X1L Amber	X						
TD-10			41041	4X1L Amber	X						
MS-10			41042	4X1L Amber	X						
BS-10			41043	4X1L Amber	X						
SO1			41044	4X1L Amber	X						
TD-10A			41045	4X1L Amber	X	X					Rec'd [illegible]
SOP-1			41046			X					

Relinquished by: (*Signature*)	Date	Time	Received by: (*Signature*)	Date	Time
	12-17-86	10:50AM			
Relinquished by: (*Signature*)	Date	Time	Received by: (*Signature*)	Date	Time
Relinquished by: (*Signature*)	Date	Time	Received for Laboratory: (*Signature*)	Date	Time
				12/18/86	10:00

Sample Disposal Method:	Disposed of by: (*Signature*)	Date	Time

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

ANALYTICAL LABORATORY
Robert Burke
St Louis Park Water Dept.
5905 Minnetonka Blvd
St Louis Park MN 55416.

ERT

No. 7435

1974-3-84

SECTION II

ERT
A COMSAT COMPANY
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

NO. 1

QUALITY ASSURANCE FORM

SUBJECT: DATA APPROVAL

CLIENT: City of St Louis Pk PROJECT NO: D209-143

ANALYSIS PARAMETER(S): PPT PAH Heterocycles

:

PLEASE REVIEW AND APPROVE/DISAPPROVE THE ATTACHED DATA SHEET(S) AND/OR NOTEBOOK(S) AND ROUTE THROUGH THE PERSONNEL LISTED BELOW. IF YOU DISAPPROVE OF ANYTHING PLEASE RETURN THIS PACKAGE TO THE INITIATOR. THE CORRECTIONS WILL BE MADE AND THE APPROVAL PROCESS WILL BEGIN AGAIN.

INCLUDED IN THIS DATA PACKAGE (PLEASE LIST BELOW):

initial sheet(1) COC(2) daily log(3-4) extraction sheet (5) surrogate sheets (6-8) LF sheet (9) dilution sheets (10-11

ROUTING			SIGNATURE	
TITLE	NAME	DATE	APPROVAL	DISAPPROVAL (SEE SIDE 2)
INITIATOR	Karen Perito	12-24 86		
	A Varadice	12/24/86	AP	
	Louis L Pounds	1/28/86		
Q.A. UNIT				

(OVER)

CL020/11-84

ERT

SUBJECT: DATA APPROVAL

COMMENT AND/OR RECOMMENDED ACTION: (ALL COMMENTS AND/OR RECOMMENDED ACTIONS MUST BE ANSWERED. INITIAL AND DATE ALL ANSWERS TO COMMENTS.)

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

INITIAL PAGE

SIGNATURE	INITIALS
Karen Perita	KP
Pamela A. Lose	PAL
Martha L. Kreamyja	MK
Michael Ghyn	MG
Art Paradise	AP
Louis H. Pounds	LHP

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
City of St Louis Park Water Dept	St Louis Park MN
Project No.	Field Logbook No.
Sampler: (Signature) Scott Anderson	Chain of Custody Tape No. 103586 & 103587 101775 & 101776

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	PPT	PAH	PHENOL				REMARKS
T-10	12/17/86		41040	4X1L Amber	X						
TD-10	↓		41041	4X1L Amber	X						
MS-10			41042	4X1L Amber	X						
B-10			41043	4X1L Amber	X						
SO1			41044	4X1L Amber	X						
TD-10A			41045	4X1L Amber	X						Rec'd 1 Broken
SOP-1			41046			X					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Anderson	12-17-86	10:50AM			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature) Michael J Ly	12/18/86	10:00
Sample Disposal Method:	Disposed of by: (Signature)			Date	Time

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

ANALYTICAL LABORATORY

Robert Burke
St Louis Park Water Dept.
5005 Minnetonka Blvd
St Louis Park MN 55416

ERT

№ 7435

1974-3-84

SECTION III

QUALITY ASSURANCE FORM -

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY

12-23-86 Samples 41040, 041, 042, 043, 044, 045, LF 860184, MB 860952 and MB860953 (solvent blank) were extracted following SOP 030-6 modified. The second 2 litre aliquots were basified to pH 9 only; because emulsions were beginning to form on 41043 and 41045 these broke up during the first shake outs. LF 860184 was spiked with 4.0 ml MS 860359. All samples except MB 860953 were spiked with 2.0 ml MS 860398. All samples were sealed with ground glass stoppers & teflon tape, and stored in RL. KPat

12-24-86 Samples 41041, 41042, 41043, 41044, 41045 and MB860953 were K-D'd, solvent switched to Benzene and blown down under a nitrogen stream to a final volume of 0.5 ml in Benzene. All but 3.0 ml of 41044 was lost in the steam bath due to a faulty spring. The remainder of the sample was concentrated to 0.5 ml with the others. Extracts were stored in RL KPat

QUALITY ASSURANCE FORM -

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY

24DEC86 Samples 41040, LF861082, MB860952 were K-D'd, solvent switched to benzene, and concentrated under a nitrogen stream to a final volume of 0.5ml according to method SOP-020-6 modified. 4.0ml of MS860358 and MS860359 were also concentrated in benzene under a nitrogen stream to a final volume of 0.5ml according to the same method. Samples were transferred to autosampler vials and stored in R1. mc

PG 10

ERT

MS860358

DATE: _____

ANALYSIS: 7

PREPARATION OF SERIAL DILUTION STANDARDS

Client: _____ Sample Matrix: Water Project No: _____

Analysis: ppt PAH's Surrogate Storage Requirements: Freezer

Dilutions By: CRJ Date: 11-18-86 Approved By: [illegible] 11/18/86

Conc. of Stock Used for Dilution: See below Date Stock was Prepared: 5-27-86, 5-28-86

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution ng/ml	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
SS 1382 1:1000 Fluorene D_{10} 952.0	1.0		Acetone	9.52	
SS 1384 Pyrene D_{10} 1005.0	1.0		B+J	10.1	
SS 1385 naphthalene D_8 987.0	1.0	100 ml	Lot # AN 402	9.87	
SS 1381 Perylene D_{12} 940.0	1.0			9.40	
SS 1383 Chrysene D_{12} 978.6	1.0		↓	~~9.78~~ 9.79	
		Replaces	MS860352		

CL028/03-85

ERT

MS860398

DATE: 12-20-86

ANALYSIS:

8

PREPARATION OF SERIAL DILUTION STANDARDS

Client: _____ Sample Matrix: _____ Project No: _____

Analysis: ppt PAH's QC Fort Storage Requirements: _____

Dilutions By: ERT Date: 12-20-86 Approved By: [signature] 12-23-86

Conc. of Stock Used for Dilution: See below Date Stock was Prepared: 1388, 1391, 1396 6-27 1387, 1386 1755, 1756, 1757 -11-20-86

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution ng/ml	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration ng/ml	Disposition of Standards and/or Storage Location
#1388 16710			B&J		
Benzo(e)pyrene	1ml		Acetone	16.7	
#1391 2894			Lot #AN		
2-Methyl naphthalene	1ml		402	28.9	
#1396 11430.4					
Naphthalene	1ml			114.3	
#1387 2001.9					
Indene	1ml	100ml		20.0	
#1386 1941.3					
Benzo(GHI)perylene	1ml			19.4	
#1755 2251.7					
Quinoline	1ml			22.5	
#1756 2142.1					
Chrysene	1ml			21.4	
#1757 2691.0					
Fluorene	1ml			26.9	
	Replaces		MS860358		

CL028/03-85

ERT

MS8603999

DATE: 1-17-87
ANALYSIS: PPL Pam

PREPARATION OF SERIAL DILUTION STANDARDS

9

Client: _____ Sample Matrix: Internal Standard Mix Project No: _____

Analysis: _____ Storage Requirements: _____

Dilutions By: Kaur Perito Date: 1-17-87 Approved By: [signature] 1/20/87

Conc. of Stock Used for Dilution: see below Date Stock was Prepared: _____

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
Acenaphthene d10	15.5 ml	25 ml	Benzene	.99 µg/ml	
SS # 1843			B+J		
conc. 1612 µg/ml			AM 8917		
Phenanthrene d10	21.8 ml	25 ml	"	.97 µg/ml	
SS # 1843					
conc. 1114 µg/ml					
Benzo(a)pyrene	17.3 ml	25 ml	"	.99 µg/ml	
SS # 1844					
conc. 1444 µg/ml					

CL028/03-85

ERT

DATE: 1/23/87

ANALYSIS:

MS870007

PREPARATION OF SERIAL DILUTION STANDARDS

10

Client: St. Louis Park Sample Matrix: Project No:

Analysis: PAH Storage Requirements:

Dilutions By: JMP Date: 1/23/87 Approved By: [illegible] 1/23/87

Conc. of Stock Used for Dilution: See below (also SS book #11) Date Stock was Prepared: 1/23/87

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
Surrogate		Mixed Std.			
Napthalene-d_8	10 ml	25 ml	Benzene	~~1000~~ 975.6 ng/ml	
SS# 1851 (2439 ug/ml)					
Pyrene		"			
SS # 1852 (2520 ug/ml)	10 ml			1008 ng/ml	
Chrysene-d_{12}		"			
SS # 1853 (1902 ug/ml)	13 ml			989 ng/ml	
Perylene-d_{12}		"			
SS # 1858 (1190 ug/ml)	21 ml			1000 ng/ml	
Fluorene-d_{10}		"			
SS# 1859 (1549 ug/ml)	16 ml			1004 ng/ml	

CL028/03-85

ERT

DATE: 1/23/87

ANALYSIS:

MS870008

PREPARATION OF SERIAL DILUTION STANDARDS

11

Client: St. Louis Park Sample Matrix: Project No:

Analysis: PAH Storage Requirements:

Dilutions By: AMP Date: 1/23/87 Approved By: LAP 1/23/87

Conc. of Stock Used for Dilution: See below Date Stock was Prepared:

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
LAP 1/27/87					
MS870005 14	2 ml	50 ml	Benzene	40 ng/ml	
MS870006	2 ml	↓	Lot # AM897	↓	
MS870007	2 ml	↓	BET	↓	

CL028/03-85

ERT

DATE: 1/23/87

ANALYSIS:

MS870009

PREPARATION OF SERIAL DILUTION STANDARDS

12

Client: St. Louis Park

Sample Matrix:

Project No:

Analysis: PAH

Storage Requirements:

Dilutions By: AMP

Date: 1/23/87

Approved By: AP 1/23/87

Conc. of Stock Used for Dilution: See below

Date Stock was Prepared: 1/23/87

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
AP 1/27/87					
MS870014	500 ul	25 ml	Benzene	20 mg/ml	
MS870006	↓	↓	Fuel AM187-1	↓	
MS870007	↓	↓	BEA	↓	

CL028/03-85

ERT

DATE: 1/23/87

ANALYSIS: 1/23/87

MS870012

13

PREPARATION OF SERIAL DILUTION STANDARDS

Client: St. Louis Park Sample Matrix: Project No:

Analysis: PAH Storage Requirements:

Dilutions By: QMP Date: 1/23/87 Approved By: LAP 1/23/87

Conc. of Stock Used for Dilution: See below Date Stock was Prepared: 1/23/87

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
	LAP 1-27-87				
MS870005 14	2ml	10ml	Benzene	200ng/ml	
MS870006	↓	↓	Lot# AM897	↓	
MS870007	↓	↓	RET	↓	

CL028/03-85

ERT

DATE: 1/23/87

ANALYSIS:

MS870011

PREPARATION OF SERIAL DILUTION STANDARDS

14

Client: St. Louis Park Sample Matrix: Project No:

Analysis: PAH Storage Requirements:

Dilutions By: QMP Date: 1/23/87 Approved By: DAP 1/27/87

Conc. of Stock Used for Dilution: See below Date Stock was Prepared: 1/23/87

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
14	DAP 1-27-87				
MS870003	4 ml	25 ml	Benzene	160 ng/ml	
MS870006	↓	↓	Lot # AM8897	↓	
MS870007	↓	↓	BEJ	↓	

CL028/03-85

ERT

DATE: 1/26/87

ANALYSIS:

MS870014

PREPARATION OF SERIAL DILUTION STANDARDS

15

Client: St. Louis Park Sample Matrix: Project No:

Analysis: PAH Storage Requirements:

Dilutions By: AMP Date: 1/26/87 Approved By: LAP 1/27/87

Conc. of Stock Used for Dilution: See below Date Stock was Prepared: 1/26/87

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
PAH mix SS# 1512					
[Polynuclear Aromatics					
Hydrocarbon Meth #610]					
Contains the following:					
Acenaphthene	100ul	10 ml	Benzene	1000 ng/ul	
Acenaphthylene			Lot # AM897		
Anthracene			B&J		
Benzo(a)anthracene					
Benzo(a)pyrene					
Benzo(b)fluoranthene					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene					
Chrysene					
Dibenzo(a,h)anthracene					
Fluorene					
Indeno(1,2,3-cd)pyrene					
Naphthalene					
Phenanthrene					
Pyrene					

CL028/03-85

ERT

DATE: 1/26/87

ANALYSIS:

MS 870015

PREPARATION OF SERIAL DILUTION STANDARDS

Client: St. Louis Park Sample Matrix: Project No:

Analysis: PAH Storage Requirements:

Dilutions By: [illegible] Date: 1/26/87 Approved By: [illegible] 1/27/87

Conc. of Stock Used for Dilution: see below Date Stock was Prepared: 1/26/87

(See Page of This Notebook or Attached Sheet for Super Stock Raw Data)

Concentration Of of Standard Used for the Dilution	Volume (ml) of Standard Taken	Volume (ml) Diluted To	Solvent Used	Final Concentration	Disposition of Standards and/or Storage Location
MS870014	2ml	25ml	Benzene	200 ng/ml	
MS870006	↓	↓	Lot AM897	↓	
MS870007			B&J		

CL028/03-85

ERT

Method: SLP 030-6 mod

Client: St Louis Park

Project No. D209-143

EXTRACTION OF WATER SAMPLES

Date: 12-23-86

Analysis: PPT PAH

Notebook/Page: 5

ERT No. *	Sample ID	Date Sampled	Volume Extracted (ml)	Date Extracted/ By KD	Surrogate Added (✓)	Solvent Used	pH < 2 (✓)	Amount Solvent Added	pH > 11 (✓) *	Amount Solvent Added ml	Emulsion (Y or N)	Date Continuous Ext./By	Date K-D/By	Volume Final Extract (ml) **
41040	T-10	12-17-86	4000	12-23-86	✓	$MeCl_2$				(3)80	N		(WD) 23DEC86	0.5ml
41041	TD-10					B+J							12-24-86	0.5
41042	MS-10					AO 675								
41043	B-10										Y			
~~41044~~	~~SO-1~~			Not SLP-GAC Sample							N			
~~41045~~	~~TD-10A~~		~~3000~~	Not Reported only 3 l Sample							Y	LAP 1/29/87		
~~41037~~	~~MB860952 SO-1 1.0 KD~~	NA	~~4000~~	QA/ Lost							N		(WD) 24DEC86	0.5
~~41038~~	~~LF860082~~			QA Lost										
41039	MB860953		480										12-24-86	0.5

Comments: * 1/28/86 Added 25ul of IS (MS860399) to each of the 0.5ml extracts. LAP 1/28/87

** Benzene B+J AO 040 AP

* see daily log, 12-23-86

Checked By:

1985/6-84

ERT 18

SURROGATE FORTIFICATION AND RECOVERY

Method: SOP 020-6 MOD

Date: 12-18-86

Client: City of St. Louis Park

Analysis: PPT PAH

Project: D209-143

Notebook/Page: 60

ERT No.	Sample ID	MS 820358 Surrogate Spike Name/Log No.	A Concentration of Spike	B Volume of Spike ml	C Volume of Sample ml	D Expected Concentration ng	E Observed Concentration ng/L	F % Recovery
41040	T-10	Fluorene D_{10}	9.52	4.0	4000	38.08	10.72	~~36.99~~ 112.8
		Pyrene D_{10}	10.1			40.4	7.97	79.3
		Napthalene D_8	9.87			39.48	3.66	(3.0) ~~36.99~~ ~~112.8~~
		Perylene D_{12}	9.40			37.6	1.18	12.5
		Chrysene D_{12}	9.79			39.16	~~1.18~~ 1.55	15.8
41041	TD-10	Fluorene D_{10}	9.52	4.0	4000	38.08	17.52	184.4
		Pyrene D_{10}	10.1			40.4	11.59	115.3
		Napthalene D_8	9.87			39.48	6.31	63.71
		Perylene D_{12}	9.40			37.6	2.40	25.5
		Chrysene D_{12}	9.79			39.16	2.14	21.81
41042	MS-10	Fluorene D_{10}	9.52	4.0	4000	38.08	5.24	55.15
		Pyrene D_{10}	10.1			40.4	7.13	70.9
		Napthalene D_8	9.87			39.48	6.57	66.36
		Perylene D_{12}	9.40			37.6	6.25	66.47
		Chrysene D_{12}	9.79			39.16	5.34	54.54

Calculations: (AxB) ÷ c = D (use conversion for units); $\frac{E}{D} \times 100 = F$

Comments: MS 860 358

Checked By:

1982/6-84

ERT 19

SURROGATE FORTIFICATION AND RECOVERY

Method: SOP 020-6 MOD

Date: 12-18-86

Client: City of St. Louis Park

Analysis: PPT PAH

Project: D209-143

Notebook/Page: 7

ERT No.	Sample ID	MS 860358 Surrogate Spike Name/Log No.	A Concentration of Spike	B Volume of Spike ml	C Volume of Sample	D Expected Concentration	E Observed Concentration	F % Recovery (PAP 2-10-87)
41043	B-10	Fluorene D_{10}	9.52	4.0	4000	38.08	14.79	155.67
		Pyrene D_{10}	10.1			40.4	11.73	116.72
		Napthalene D_8	9.87			39.48	5.49	55.42
		Perylene D_{12}	9.40			37.6	3.69	39.22
		Chrysene D_{12}	9.79			39.16	3.05	31.10
~~41044~~	~~SO-1~~	~~Fluorene D_{10}~~	~~9.52~~	~~4.0~~	~~4000~~	~~38.08~~		
		Pyrene D_{10}	10.1			40.4	Not Reported	
		Napthalene D_8	9.87			39.48		
		Perylene D_{12}	9.40			37.6		
		Chrysene D_{12}	9.79			~~39.16~~		
~~41045~~	TD-10A	~~Fluorene D_{10}~~	~~9.52~~	~~4.0~~	~~3000~~	~~38.08~~		
		Pyrene D_{10}	10.1			40.4	Only 3 liter	
		Napthalene D_8	9.87			39.48	sample - spiked	
		Perylene D_{12}	9.40			37.6	with 4ml Surr. Mix	
		Chrysene D_{12}	9.79			39.16	Should have 3ml	
							Data Not Reported	
							PAP	
							2/10/87	

Calculations: (AxB) ÷ c = D (use conversion for units); $\frac{E}{D} \times 100 = F$

Comments: MS 860358

Checked By:

982/6-84

ERT

SURROGATE FORTIFICATION AND RECOVERY

Method: SOP 020-6 Mod

Date: 12-18-86

Client: ~~D209-143~~ KP 12-18-86 City of St Louis Park

Analysis: PPT PAH

Project: D209-143

Notebook/Page: 8

ERT No.	Sample ID	MS860358 Surrogate Spike Name/Log No.	A Concentration of Spike	B Volume of Spike ml	C Volume of Sample	D Expected Concentration	E Observed Concentration	F % Recovery
41037	MB860952	Fluorene D_{10}	9.52	4.0	4000	38.08		
		Pyrene D_{10}	10.1			40.4		
		Naphthalene D_8	9.87			39.48		
		Perylene D_{12}	9.40			37.6		
		Chrysene D_{12}	9.79			39.16		
41038	LF861082	Fluorene D_{10}	9.52	4.0	4000	38.08		
		Pyrene D_{10}	10.1			40.4		
		Naphthalene D_8	9.87			39.48		
		Perylene D_{12}	9.40			37.6		
		Chrysene D_{12}	9.79			39.16		
41039	MB860953	Fluorene D_{10}	9.52	4.0		38.08		
		Pyrene D_{10}	10.1			40.4		
		Naphthalene D_8	9.87			39.48		
		Perylene D_{12}	9.40			37.6		
		Chrysene D_{12}	9.79			39.16		

Calculations: (AxB) ÷ c = D (use conversion for units); $\frac{E}{D}$ x 100 = F

Comments: MS 860 358

Checked By:

1982/6-84

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC

QUALITY ASSURANCE FORM

Page No.: _____

MS860398

SUBJECT: ANALYTICAL RESULTS OF QA/QC FORTIFIED SAMPLES

Client: St Louis PK Sample Matrix: H_2O

Project No.: D209-143 Analyte: PPt PAH

ERT Sample No.	Spiked By/Date	Volume (ml) ~~Weight (g)~~ Sample Spiked	Conc. of Standard Used (date mfg.) ng/ml	Volume (ml) Spiked in 4 L SAMPLE	Expected Concentration Blind Sample ng/L	Analytical Result Obs	Analytical Result BLANK Corrected	Comments	Reported % Rec.
410356	KP 12-23-86		16.7	4.0 ml	16.7	11.7	10.5	Benzo(e)pyrene	63
LF861082			28.9		28.9	32.7	26.5	2-methyl napthalene	92
			114.3		114.3	112.3	112	Napthalene	98
			20.0		20.0	26.3	23.9	Indene	119
			19.4		19.4	3.7	3.7	Benzo(ghi)perylene	19
			22.5		22.5	30.3	26.9	Quinoline	120
			21.4		21.4	8.0	8.0	Chrysene	37
			26.9		26.9	24.7	23.2	Fluorene	86

CL015.4

SECTION IV

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

QUALITY ASSURANCE FORM -

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY Louie A. Pound (LAP)

1/17/87 Lost the ppt PAH Standards in the move. New Standards would need to be made-up before deadline of sample for set #10. New Internal Standard made-up. (LAP)

1/23/87 New Standards made-up
Surrogate mix std : MS870007
PAH Mix Std : MS870005
Supelco PAH 601 Mix Std : MS870006

1/26/87 Check Std from PAH mix missing two compounds. Remade MS870005 - to be complete. New Standard # MS870014

1/27/87 DFTPP 43 check out okay
Start of New ~~Calibration~~ Calibration for SLP
STD 65 [20ppt] 1.0 ul MS870009 (0.5ml + 25 ul IS MS860399)
STD 66 [40ppt] 1.0 ul MS870008 (" ")
STD 67 [100ppt] 1.0 ul MS870010 (" ")
STD 68 [160 ppt] 1.0 ul MS870016 (" ")
STD 69 [200 ppt] 1.0 ul MS870015 (" ")
(LAP)

1/28/87 Spiked all samples with IS MS860399 (LAP)

CL016/11-84

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

QUALITY ASSURANCE FORM -

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY Lorie G. Pound (LGP)

1/29/87 DFTPP 43 shot and checked out okay.
Sample order of GC/MS runs on MSD

Check Std	STD 73	1.0 ul	MS870008 (0.5ml + 25ul IS MS860399)
MS-10	41042	1.0 ul	(0.5ml + 25ul IS MS860399)
T-10	41040B	1.0 ul	(" ")
TD-10	41041	1.0 ul	(" ")
B-10	41043B	1.0 ul	(" ")
TD-10A	41045A	1.0 ul	(" ")
Solvent Blank	41039A	1.0 ul	(" ")

2/9/87 Reported data to St. Louis Park (LGP)

CL016/11-84

CAL CURVE	:							Cal Curve	
STD. CONC.	:	20 ng/ml	40 ng/ml	100 ng/ml	160ng/ml	200ng/ml		01/27/87	
GC/MS File #	:	STD65	STD66	STD67	STD68	STD69		cc012787	
Internal Std.		Area	Area	Area	Area	Area	AVG	SD	% RSD
Acenaphthene-d10		710792	495485	470636	517515	695301	577946	103332	17.879
Phenanthrene-d10		641839	676948	742512	789760	732744	716761	51857	7.235
Benz(a)pyrene-d12		457260	544609	559682	525620	561054	529645	38389	7.248
Group I		RF	RF	RF	RF	RF	AVG	SD	% RSD
benzofuran		1.194	1.368	1.466	1.578	0.990	1.319	0.207	15.721
dihydroinden		0.744	0.868	0.885	0.925	0.574	0.799	0.128	16.000
indene		1.255	1.316	1.335	1.394	0.838	1.228	0.200	16.293
Naphthalene-d8 (Surr.)		1.593	2.007	2.272	2.321	1.422	1.923	0.360	18.699
Naphthalene		2.854	3.443	3.762	2.931	1.829	2.964	0.658	22.213
Benz(b)thio		1.408	1.827	2.009	2.148	1.289	1.736	0.335	19.280
Quinoline		0.762	1.219	1.109	1.198	0.691	0.996	0.224	22.500
Indole		1.458	1.760	1.675	1.636	1.013	1.508	0.266	17.653
2-methyl		1.155	1.472	1.551	1.602	0.962	1.348	0.248	18.375
1-methyl		1.072	1.441	1.519	1.618	0.964	1.323	0.257	19.434
Biphenyl		4.104	3.303	2.177	1.987	1.219	2.558	1.021	39.901 *
Acenaphthylene		1.532	2.330	2.088	1.686	1.044	1.736	0.447	25.755
Acenaphthene		1.329	0.920	1.706	1.315	0.836	1.221	0.314	25.736
Dibenzofuran		1.125	1.848	1.678	1.698	1.077	1.485	0.319	21.510
Group II									
urene-d10 (Surr.)		0.686	0.648	0.623	0.680	0.630	0.653	0.025	3.899
Fluorene		1.383	1.247	1.138	0.902	0.879	1.110	0.195	17.584
Dibenzothiophene		1.249	1.189	1.050	1.055	1.035	1.116	0.087	7.762
Phenanthrene		2.153	2.541	2.014	1.461	1.412	1.916	0.428	22.347
Anthracene		1.340	1.298	1.291	0.978	0.972	1.176	0.165	14.024
Acridine		0.590	0.782	0.676	0.626	0.621	0.659	0.067	10.215
Carbazole		0.857	0.834	0.775	0.823	0.833	0.824	0.027	3.288
Fluoranthene		1.659	1.434	1.421	1.139	1.154	1.361	0.195	14.322
Pyrene-d10 (Surr.)		0.847	0.939	0.786	0.845	0.836	0.851	0.049	5.809
Pyrene		1.756	1.503	1.433	1.137	1.158	1.397	0.230	16.495
Group III									
Benz(a)anthracene		1.926	1.660	1.695	1.371	1.342	1.599	0.218	13.636
Chrysene-d12 (Surr.)		1.141	1.118	0.893	0.963	0.927	1.008	0.102	10.088
Chrysene		2.146	1.739	1.774	1.458	1.401	1.704	0.266	15.614
Benzofluoranthenes		2.929	2.374	1.926	1.586	1.732	2.109	0.488	23.136
Benz(e)pyrene		3.976	1.750	1.074	1.194	1.283	1.856	1.085	58.465 *
Benz(a)pyrene		2.959	1.836	1.682	1.395	1.465	1.867	0.568	30.401
Perylene-d12 (Surr.)		1.192	1.012	0.911	0.897	1.014	1.005	0.105	10.474
Perylene		2.353	1.703	1.256	1.354	1.503	1.634	0.390	23.878
Indeno(123,cd)pyrene		2.406	2.073	2.132	1.762	1.987	2.072	0.209	10.086
Dibenz(ah)anthracene		2.055	1.669	1.817	1.504	1.614	1.732	0.190	10.992
Dibenzo(ghi)perylene		2.945	2.013	2.053	1.702	1.821	2.107	0.438	20.793

CAL CURVE :						Cal Curve		
STD. CONC. :	20 ng/ml	40 ng/ml	100 ng/ml	160ng/ml	200ng/ml	01/27/87		
GC/MS File # :	STD65	STD66	STD67	STD68	STD69	cc012787		
Internal Std.	RT	RT	RT	RT	RT	AVG	SD	% RSD
Acenaphthene-d10	17.078	17.078	17.078	17.080	17.079	17.079	0.001	0.005
Phenanthrene-d10	20.850	20.850	20.850	20.850	20.842	20.848	0.003	0.015
Benz(a)pyrene-d12	31.068	31.057	31.057	31.060	31.050	31.058	0.006	0.019
Group I	RT	RT	RT	RT	RT	AVG	SD	% RSD
benzofuran	9.356	9.347	9.340	9.342	9.341	9.345	0.006	0.063
dihydroinden	10.042	10.032	10.028	10.030	10.029	10.032	0.005	0.051
indene	10.202	10.199	10.196	10.197	10.194	10.198	0.003	0.027
Naphthalene-d8 (Surr.)	12.603	12.600	12.601	12.602	12.602	12.602	0.001	0.008
Naphthalene	12.641	12.639	12.640	12.641	12.641	12.640	0.001	0.006
Benz(b)thio	12.797	12.796	12.796	12.798	12.798	12.797	0.001	0.007
Quinoline	13.538	13.526	13.524	13.525	13.524	13.527	0.005	0.040
Indole	14.360	14.358	14.357	14.358	14.358	14.358	0.001	0.007
2-methyl	14.378	14.377	14.377	14.378	14.378	14.378	0.000	0.003
1-methyl	14.660	14.649	14.648	14.649	14.649	14.651	0.005	0.031
Biphenyl	15.618	15.618	15.618	15.619	15.608	15.616	0.004	0.026
Acenaphthylene	16.681	16.681	16.680	16.682	16.682	16.681	0.001	0.004
Acenaphthene	17.158	17.158	17.156	17.155	17.148	17.155	0.004	0.021
Dibenzofuran	17.577	17.576	17.575	17.575	17.573	17.575	0.001	0.008
Group II								
rene-d10 (Surr.)	18.390	18.388	18.381	18.381	18.381	18.384	0.004	0.022
Fluorene	18.455	18.454	18.450	18.448	18.447	18.451	0.003	0.017
Dibenzothiophene	20.588	20.589	20.589	20.590	20.590	20.589	0.001	0.004
Phenanthrene	20.906	20.895	20.894	20.896	20.897	20.898	0.004	0.021
Anthracene	21.017	21.016	21.007	21.008	21.008	21.011	0.004	0.021
Acridine	21.154	21.152	21.141	21.142	21.142	21.146	0.006	0.026
Carbazole	21.510	21.500	21.499	21.498	21.490	21.499	0.006	0.030
Fluoranthene	23.975	23.970	23.971	23.970	23.966	23.970	0.003	0.012
Pyrene-d10 (Surr.)	24.508	24.506	24.500	24.498	24.499	24.502	0.004	0.016
Pyrene	24.546	24.546	24.538	24.538	24.538	24.541	0.004	0.016
Group III								
Benz(a)anthracene	27.637	27.629	27.629	27.622	27.623	27.628	0.005	0.019
Chrysene-d12 (Surr.)	27.686	27.683	27.674	27.676	27.677	27.679	0.005	0.016
Chrysene	27.743	27.737	27.732	27.734	27.732	27.736	0.004	0.015
Benzofluoranthenes	30.286	30.281	30.298	30.299	30.275	30.288	0.009	0.031
Benz(e)pyrene	30.992	30.991	30.979	30.983	30.983	30.986	0.005	0.016
Benz(a)pyrene	31.129	31.114	31.115	31.118	31.108	31.117	0.007	0.022
Perylene-d12 (Surr.)	31.291	31.282	31.275	31.274	31.272	31.279	0.007	0.022
Perylene	31.360	31.343	31.337	31.338	31.337	31.343	0.009	0.028
Indeno(123,cd)pyrene	34.622	34.597	34.590	34.588	34.589	34.597	0.013	0.037
Dibenz(ah)anthracene	34.684	34.666	34.647	34.648	34.647	34.658	0.015	0.042
Dibenzo(ghi)perylene	35.588	35.574	35.549	35.553	35.553	35.563	0.015	0.042

CAL CURVE	:						Cal Curve
STD. CONC.	:	20 ng/ml	40 ng/ml	100 ng/ml	160ng/ml	200ng/ml	01/27/87
GC/MS File #	:	STD65	STD66	STD67	STD68	STD69	cc012787

Internal Std.

Acenaphthene-d10
Phenanthrene-d10
Benz(a)pyrene-d12

Group I	RRT	RRT	RRT	RRT	RRT	AVG	SD	% RSD
benzofuran	0.548	0.547	0.547	0.547	0.547	0.547	0.000	0.063
dihydroinden	0.588	0.587	0.587	0.587	0.587	0.587	0.000	0.051
indene	0.597	0.597	0.597	0.597	0.597	0.597	0.000	0.027
Naphthalene-d8 (Surr.)	0.738	0.738	0.738	0.738	0.738	0.738	0.000	0.008
Naphthalene	0.740	0.740	0.740	0.740	0.740	0.740	0.000	0.006
Benz(b)thio	0.749	0.749	0.749	0.749	0.749	0.749	0.000	0.007
Quinoline	0.793	0.792	0.792	0.792	0.792	0.792	0.000	0.040
Indole	0.841	0.841	0.841	0.841	0.841	0.841	0.000	0.007
2-methyl	0.842	0.842	0.842	0.842	0.842	0.842	0.000	0.003
1-methyl	0.858	0.858	0.858	0.858	0.858	0.858	0.000	0.031
Biphenyl	0.915	0.915	0.915	0.915	0.914	0.914	0.000	0.026
Acenaphthylene	0.977	0.977	0.977	0.977	0.977	0.977	0.000	0.004
Acenaphthene	1.005	1.005	1.005	1.005	1.004	1.005	0.000	0.021
Dibenzofuran	1.029	1.029	1.029	1.029	1.029	1.029	0.000	0.008
Group II								
rene-d10 (Surr.)	0.882	0.882	0.882	0.882	0.882	0.882	0.000	0.022
Fluorene	0.885	0.885	0.885	0.885	0.885	0.885	0.000	0.017
Dibenzothiophene	0.987	0.987	0.987	0.988	0.988	0.987	0.000	0.004
Phenanthrene	1.003	1.002	1.002	1.002	1.002	1.002	0.000	0.021
Anthracene	1.008	1.008	1.008	1.008	1.008	1.008	0.000	0.021
Acridine	1.015	1.014	1.014	1.014	1.014	1.014	0.000	0.026
Carbazole	1.032	1.031	1.031	1.031	1.031	1.031	0.000	0.030
Fluoranthene	1.150	1.150	1.150	1.150	1.149	1.150	0.000	0.012
Pyrene-d10 (Surr.)	1.175	1.175	1.175	1.175	1.175	1.175	0.000	0.016
Pyrene	1.177	1.177	1.177	1.177	1.177	1.177	0.000	0.016
Group III								
Benz(a)anthracene	0.890	0.889	0.889	0.889	0.889	0.889	0.000	0.019
Chrysene-d12 (Surr.)	0.891	0.891	0.891	0.891	0.891	0.891	0.000	0.016
Chrysene	0.893	0.893	0.893	0.893	0.893	0.893	0.000	0.015
Benzofluoranthenes	0.975	0.975	0.975	0.975	0.974	0.975	0.000	0.031
Benz(e)pyrene	0.998	0.998	0.997	0.997	0.997	0.997	0.000	0.016
Benz(a)pyrene	1.002	1.001	1.002	1.002	1.001	1.002	0.000	0.022
Perylene-d12 (Surr.)	1.007	1.007	1.007	1.007	1.007	1.007	0.000	0.022
Perylene	1.009	1.009	1.009	1.009	1.009	1.009	0.000	0.028
Indeno(123,cd)pyrene	1.114	1.114	1.113	1.113	1.113	1.114	0.000	0.037
Dibenz(ah)anthracene	1.116	1.116	1.115	1.115	1.115	1.116	0.000	0.042
Dibenzo(ghi)perylene	1.145	1.145	1.144	1.144	1.144	1.145	0.000	0.042

STD # : STD73 Extract Vol., ml 1.000
STD CONC. : DAILY 40 ppt PAH Sample Vol., L 1.000
GC/MS File # : STD73.I Date Analyze : 01/29/87

Internal Std.	Conc. ng/ml	RT (min)	Area	AVG. Area	Delta %
Acenaphthene-d10	50.0	17.064	238467	577946	-58.7%
Phenanthrene-d10	50.0	20.840	404943	716761	-43.5%
Benz(a)pyrene-d12	50.0	31.045	418532	529645	-21.0%

Group I	Conc. ng/ml	AVG. RRT	RRT Delta %	RT (min)	Area	RF	Cal. RF's	Delta %
benzofuran	40.0	0.547	0.04%	9.341	307734	1.613	1.319	22.3%
dihydroinden	40.0	0.587	0.07%	10.031	172225	0.903	0.799	13.0%
indene	40.0	0.597	0.01%	10.190	277447	1.454	1.228	18.5%
Naphthalene-d8 (Surr.)	40.0	0.738	-0.01%	12.590	463517	2.430	1.923	26.3%
Naphthalene	40.0	0.740	-0.01%	12.629	718874	3.768	2.964	27.1%
Benz(b)thio	40.0	0.749	-0.04%	12.781	382309	2.004	1.736	15.4%
Quinoline	40.0	0.792	-0.08%	13.505	236409	1.239	0.996	24.5%
Indole	40.0	0.841	0.05%	14.354	311950	1.635	1.508	8.4%
2-methyl	40.0	0.842	-0.03%	14.361	314716	1.650	1.348	22.3%
1-methyl	40.0	0.858	-0.03%	14.634	316873	1.661	1.323	25.6%
Biphenyl	40.0	0.914	0.02%	15.606	865382	4.536	2.558	77.3% *
Acenaphthylene	40.0	0.977	0.01%	16.670	492364	2.581	1.736	48.7% *
Acenaphthene	40.0	1.005	0.00%	17.141	362733	1.901	1.221	55.7% *
Dibenzofuran	40.0	1.029	0.01%	17.563	409105	2.144	1.485	44.4% *
Group II								
Flourene-d10 (Surr.)	40.0	0.882	-0.01%	18.373	208825	0.645	0.653	-1.3%
Fluorene	40.0	0.885	-0.02%	18.439	390051	1.204	1.110	8.5%
Dibenzothiophene	40.0	0.987	-0.03%	20.573	342246	1.056	1.116	-5.3%
Phenanthrene	40.0	1.002	-0.02%	20.884	662246	2.044	1.916	6.7%
Anthracene	40.0	1.008	0.00%	21.002	504033	1.556	1.176	32.3%
Acridine	40.0	1.014	-0.03%	21.130	204911	0.633	0.659	-4.0%
Carbazole	40.0	1.031	0.01%	21.491	339078	1.047	0.824	27.0%
Fluoranthene	40.0	1.150	-0.00%	23.958	552528	1.706	1.361	25.3%
Pyrene-d10 (Surr.)	40.0	1.175	0.01%	24.494	357503	1.104	0.851	29.7%
Pyrene	40.0	1.177	0.01%	24.533	571484	1.764	1.397	26.3%
Group III								
Benz(a)anthracene	40.0	0.889	0.03%	27.615	522568	1.561	1.599	-2.4%
Chyrsene-d12 (Surr.)	40.0	0.891	0.03%	27.667	324565	0.969	1.008	-3.9%
Chyrsene	40.0	0.893	0.04%	27.726	525686	1.570	1.704	-7.8%
Benzofluoranthenes	80.0	0.975	0.01%	30.268	1473610	2.201	2.109	4.3%
Benz(e)pyrene	40.0	0.997	0.02%	30.969	496593	1.483	1.856	-20.1%
Benz(a)pyrene	40.0	1.002	0.03%	31.102	652723	1.949	1.867	4.4%
Perylene-d12 (Surr.)	40.0	1.007	0.02%	31.263	330494	0.987	1.005	-1.8%
Perylene	40.0	1.009	0.01%	31.323	647130	1.933	1.634	18.3%
Indeno(123,cd)pyrene	40.0	1.114	0.02%	34.577	718095	2.145	2.072	3.5%
Dibenz(ah)anthracene	40.0	1.116	0.00%	34.634	594533	1.776	1.732	2.5%
Benzo(ghi)perylene	40.0	1.145	0.02%	35.543	664925	1.986	2.107	-5.7%

CALIBRATION RF's from : 27-Jan-87 USED THE AVERAGE RRT and INT.STD. Areas TO COMPUTE DELTA %

*** Internal Standard ***

Operator: LOUIE G. POUNDS 29 Jan 87 10:55 am
Method File Name : PAH.M
Sample Info : 40 ppt PAH DAILY CHECK STD.; THU. 29 JAN. 87
Misc Info: 1.0 UL OF STD MS870008 (0.5ML + 25UL IS MS860399)
Integration File Name : DATA:STD73.I
Bottle Number : 0

ST. LOUIS PARK PPT PAH

Last Update: 12 Nov 86 7:13 pm
Reference Peak Window: 1.00 % of Retention Time
Non-Reference Peak Window: 1.00 % of Retention Time
Sample Amount: 0.000 Uncalibrated Peak RF: 1.000 Multiplier: 1.000

Peak Num	Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amount
1		1VV	9.341	Mass	118.00	amu	2,3-BENZOFUR	307734	43.86 ng/mL
2		1BV	10.031	Mass	118.00	amu	2,3-DIHYDROI	172225	45.28 ng/mL
3		1PV	10.190	Mass	116.00	amu	INDENE	277447	62.68 ng/mL
4		1BV	12.590	Mass	136.00	amu	NAPHTHALENE,	463517	43.28 ng/mL
5		1PV	12.629	Mass	128.00	amu	NAPTHALENE	718874	45.89 ng/mL
6		1PV	12.781	Mass	134.00	amu	BENZO(b)THIO	382309	33.55 ng/mL
7		1PV	13.505	Mass	129.00	amu	QUINOLINE	236409	50.52 ng/mL
		1PV	14.354	Mass	117.00	amu	INDOLE	311950	51.54 ng/mL
		1VV	14.361	Mass	141.00	amu	2-METHYLNAPT	314716	40.64 ng/mL
10		1PV	14.634	Mass	141.00	amu	1-METHYLNAPT	316873	45.94 ng/mL
11		1PV	15.606	Mass	154.00	amu	BIPHENYL	865382	
12		1VV	16.670	Mass	152.00	amu	ACENAPHTHYLE	492364	75.87 ng/mL
13	+ISTD	1BV	17.064	Mass	164.00	amu	ACENAPTHTHEN	238467	53.00 ng/mL
14		1VV	17.141	Mass	154.00	amu	ACENAPHTHENE	362733	58.09 ng/mL
15		1BV	17.563	Mass	168.00	amu	DIBENZOFURAN	409105	33.29 ng/mL
16		2BV	18.373	Mass	176.00	amu	FLUORENE, d1	208825	65.36 ng/mL
17		2BV	18.439	Mass	166.00	amu	FLUORENE	390051	82.24 ng/mL
18		2BV	20.573	Mass	184.00	amu	DIBENZOTHIOP	342246	37.71 ng/mL
19	+ISTD	2PV	20.840	Mass	188.00	amu	PHENANTHRENE	404943	62.50 ng/mL
20		2PV	20.884	Mass	178.00	amu	PHENANTHRENE	662246	1.388 ng/mL
21		2VV	21.002	Mass	178.00	amu	ANTHRACENE	504033	85.18 ng/mL
22		2VV	21.130	Mass	179.00	amu	ACRIDINE	204911	61.46 ng/mL
23		1PV	21.491	Mass	167.00	amu	CARBAZOLE	339078	38.09 ng/mL
24		1BV	23.958	Mass	202.00	amu	FLUORANTHENE	552528	30.16 ng/mL
25		2BV	24.494	Mass	212.00	amu	PYRENE, d10	357503	65.66 ng/mL
26		2PV	24.533	Mass	202.00	amu	PYRENE	571484	63.13 ng/mL
27		3BV	27.615	Mass	228.00	amu	BENZ(a)ANTHR	522568	47.05 ng/mL
28		3BV	27.667	Mass	240.00	amu	CHYRSENE, d(	324565	84.85 ng/mL
29		3VB	27.726	Mass	228.00	amu	CHYRSENE	525686	41.30 ng/mL
30		3VV	30.268	Mass	252.00	amu	BENZOFLUORAN	1473610	102.7 ng/mL
31		3	-------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
32		3VV	30.969	Mass	252.00	amu	BENZ(e)PYREN	496593	32.48 ng/mL
	+ISTD	3PV	31.045	Mass	264.00	amu	BENZ(a)PYREN	418532	49.60 ng/mL
		3VV	31.102	Mass	252.00	amu	BENZ(a)PYREN	652723	64.98 ng/mL
35		3VV	31.263	Mass	264.00	amu	PERYLENE, d1	330494	50.97 ng/mL
36		3VV	31.323	Mass	252.00	amu	PERYLENE	647130	68.45 ng/mL
37		3BV	34.577	Mass	276.00	amu	INDENO(1,2,3	718095	63.48 ng/mL
38		3PV	34.634	Mass	278.00	amu	DIBENZ(a,h)A	594533	67.80 ng/mL
39		3BV	35.543	Mass	276.00	amu	BENZO(g,h,i)	664925	60.71 ng/mL
--------		VV	10.025	Mass	116.00		-Uncalibrated-	49574	49574 ng/mL

ERT #	: 41040	Extract Vol., ml	0.500
Field ID	: T-10	Sample Vol., L	4.000
GC/MS File #	: 41040B	Date Analyze: 01/29/87	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	50.000	17.103	405962
Phenanthrene-d10	50.000	20.877	639585
Benz(a)pyrene-d12	50.000	31.089	824793

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.319	0.000	0.000	1	0.000
dihydroinden	0.799	0.589	10.076	522242	10.062
indene	1.228	0.598	10.236	114662	1.438
Naphthalene-d8 (Surr.)	1.923	0.738	12.628	457397	3.662
Naphthalene	2.964	0.741	12.666	2077893	10.793
Benz(b)thio	1.736	0.750	12.819	117986	1.046
Quinoline	0.996	0.792	13.543	314046	4.856
Indole	1.508	0.839	14.346	41186	0.420
2-methyl	1.348	0.842	14.402	288527	3.294
1-methyl	1.323	0.858	14.676	196380	2.285
Biphenyl	2.558	0.914	15.638	1525057	9.178
Acenaphthylene	1.736	0.977	16.708	285219	2.529
Acenaphthene	1.221	1.004	17.176	380007	4.791
Dibenzofuran	1.485	1.029	17.596	242639	2.515
Group II					
Flourene-d10 (Surr.)	0.653	0.882	18.420	716552	10.716
Fluorene	1.110	0.885	18.473	288165	2.538
Dibenzothiophene	1.116	0.987	20.610	108688	0.952
Phenanthrene	1.916	1.002	20.921	862932	4.400
Anthracene	1.176	1.007	21.027	132545	1.102
Acridine	0.659	0.000	0.000	1	0.000
Carbazole	0.824	1.033	21.571	105481	1.250
Fluoranthene	1.361	1.149	23.992	263177	1.889
Pyrene-d10 (Surr.)	0.851	1.175	24.530	693473	7.967
Pyrene	1.397	1.177	24.568	193458	1.353
Group III					
Benz(a)anthracene	1.599	0.890	27.654	69878	0.331
Chrysene-d12 (Surr.)	1.008	0.891	27.705	206004	1.548
Chrysene	1.704	0.893	27.757	67929	0.302
Benzofluoranthenes	2.109	0.979	30.435	1042701	3.746
Benz(e)pyrene	1.856	0.998	31.023	93791	0.383
Benz(a)pyrene	1.867	1.002	31.145	48378	0.196
Perylene-d12 (Surr.)	1.005	1.007	31.314	155974	1.176
Perylene	1.634	0.000	0.000	1	0.000
Indeno(123,cd)pyrene	2.072	0.000	0.000	1	0.000
Dibenz(ah)anthracene	1.732	0.000	0.000	1	0.000
Dibenzo(ghi)perylene	2.107	0.000	0.000	1	0.000

ERT #: 41040

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 1/29/87	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	3.66	9.90	36.99	42-102	2.430	29.27%
Flourene-d10 (Surr.)	10.72	9.50	112.80	60-128	0.645	114.27%
Chrysene-d12 (Surr.)	1.55	9.80	15.80	10-54	0.969	16.44%
Pyrene-d10 (Surr.)	7.97	10.05	79.27		0.987	68.32%
Perylene-d12 (Surr.)	1.18	9.40	12.51		0.887	14.18%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.		ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	4.86	-3.4	~~4.9~~ ND
BENZO (A) ANTHRACENE	2.80	4.40	0.33		ND
CHRYSENE	2.80	4.40	0.30		ND
BENZOFLUORANTHENES	6.20	9.70	3.75		ND
BENZO (A) PYRENE	2.20	3.40	0.20		ND
INDENO (1,2,3-CD) PYRENE	2.80	4.40	0.00		ND
DIBENZO (A,H) ANTHRACENE	2.20	3.40	0.00		ND
BENZO (G,H,I) PERYLENE	3.40	5.30	0.00		ND
TOTAL CARCINOGENIC PAH					~~4.86~~ ND

OTHER PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.		ANALYTICAL RESULT (NG/L)
2,3-BENZOFURAN	1.20	1.90	0.00		ND
2,3-DIHYDROINDENE	2.20	3.40	10.06	-4.0	~~10.1~~ 6.1
INDENE	1.80	2.90	1.44		ND
NAPHTHALENE	30.00	47.00	10.79		ND
BENZO (B) THIOPHENE	1.40	2.20	1.05		ND
INDOLE	1.20	1.90	0.42		ND
2-METHYLNAPHTHALENE	3.20	5.00	3.29	-6.3	~~<5.0~~ ND
1-METHYLNAPHTHALENE	2.00	3.10	2.29	-3.5	~~<3.1~~ ND
BIPHENYL	11.00	17.00	9.18		ND
ACENAPHTHYLENE	1.10	1.70	2.53	-12	~~2.5~~ ND
ACENAPHTHENE	0.83	1.30	4.79	-1.29	~~4.8~~ 3.5
DIBENZOFURAN	0.77	1.20	2.52	-2.4	~~2.5~~ ND
FLOURENE	0.56	0.88	2.54	-1.47 = ~~1.07~~	~~2.5~~ ND
DIBENZOTHIOPHENE	4.00	6.30	0.95		ND
PHENANTHRENE	2.00	3.10	4.40	-5.75	~~4.4~~ ND
ANTHRACENE	2.20	3.40	1.10		ND
ACRIDINE	1.60	2.50	0.00		ND
CARBAZOLE	1.70	2.60	1.25		ND
FLUORANTHENE	2.80	4.40	1.89		ND
PYRENE	2.60	4.10	1.35		ND
BENZO (E) PYRENE	0.96	1.50	0.38		ND
PERYLENE	1.00	1.60	0.00		ND
TOTAL OTHER PAH					~~26.8~~ 9.6
TOTAL PAH'S					~~31.7~~ 9.6

LAP 2-3-87

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ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: T-10 ERT NO.: 41040

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	~~4.9~~
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	~~4.9~~ ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	~~10~~ 6.1
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	~~< 5.0~~ ND
1-METHYLNAPHTHALENE	~~< 3.1~~ ND
BIPHENYL	ND
ACENAPHTHYLENE	~~2.5~~
ACENAPHTHENE	~~4.8~~ 3.5
DIBENZOFURAN	~~2.5~~ ND
FLOURENE	~~2.5~~ ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	~~4.4~~ ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	~~27~~ 9.6
TOTAL PAH'S	~~32~~ 9.6

ND = Concentration < 95% Confidence Interval of MDL

2-3-87

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: T-10 ERT NO.: 41040

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	ND
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	6.1
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	3.5
DIBENZOFURAN	ND
FLOURENE	ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
OTAL OTHER PAH	9.6
TOTAL PAH'S	9.6

ND = Concentration < 95% Confidence Interval of MDL

Non-Reference Peak Window: .00 % of Reten Time .

Sample Amount: 0.000 Uncalibrated Peak RF: 1.000 Multiplier: 1.000

7/30/87 TC 41040B T-10 2-3-

Peak Num	Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amount
1		1	-------	Mass	118.00	amu	2,3-BENZOFUR	*** Not Found ***	
		1VV	10.076	Mass	118.00	amu	2,3-DIHYDROI	522242	80.39 ng/mL
		1VV	10.236	Mass	116.00	amu	INDENE	114662	18.54 ng/mL
4		1PV	12.628	Mass	136.00	amu	NAPHTHALENE,	457397	23.06 ng/mL
5		1PV	12.666	Mass	128.00	amu	NAPTHALENE	2077893	92.05 ng/mL
6		1BV	12.819	Mass	134.00	amu	BENZO(b)THIO	117986	12.04 ng/mL
7		1VV	13.543	Mass	129.00	amu	QUINOLINE	314046	39.94 ng/mL
8		1PV	14.346	Mass	117.00	amu	INDOLE	41186	3.217 ng/mL
9		1PB	14.402	Mass	141.00	amu	2-METHYLNAPT	288527	19.64 ng/mL
10		1BV	14.676	Mass	141.00	amu	1-METHYLNAPT	196380	11.52 ng/mL
11		1VV	15.638	Mass	154.00	amu	BIPHENYL	1525057	
12		1VV	16.708	Mass	152.00	amu	ACENAPHTHYLE	285219	22.84 ng/mL
13	+ISTD	1VV	17.103	Mass	164.00	amu	ACENAPTHTHEN	405962	53.00 ng/mL
14		1VV	17.176	Mass	154.00	amu	ACENAPHTHENE	380007	33.69 ng/mL
15		1BV	17.596	Mass	168.00	amu	DIBENZOFURAN	242639	11.22 ng/mL
16		2VB	18.420	Mass	176.00	amu	FLUORENE, d1	716552	154.3 ng/mL
17		2BV	18.473	Mass	166.00	amu	FLUORENE	288165	34.84 ng/mL
18		2PV	20.610	Mass	184.00	amu	DIBENZOTHIOP	108688	8.415 ng/mL
19	+ISTD	2BV	20.877	Mass	188.00	amu	PHENANTHRENE	639585	62.50 ng/mL
20		2PV	20.921	Mass	178.00	amu	PHENANTHRENE	862932	
21		2VV	21.027	Mass	178.00	amu	ANTHRACENE	132545	
22		2	-------	Mass	179.00	amu	ACRIDINE	*** Not Found ***	
23		1PV	21.571	Mass	167.00	amu	CARBAZOLE	105481	2.117 ng/mL
24		1BV	23.992	Mass	202.00	amu	FLUORANTHENE	263177	
25		2PV	24.530	Mass	212.00	amu	PYRENE, d10	693473	80.84 ng/mL
26		2BV	24.568	Mass	202.00	amu	PYRENE	193458	10.38 ng/mL
		3VV	27.654	Mass	228.00	amu	BENZ(a)ANTHR	69878	
		3VB	27.705	Mass	240.00	amu	CHYRSENE, d(	206004	23.89 ng/mL
29		3VB	27.757	Mass	228.00	amu	CHYRSENE	67929	2.086 ng/mL
30		3VV	30.366	Mass	252.00	amu	BENZOFLUORAN	656663	19.21 ng/mL
31		3VV	30.503	Mass	252.00	amu	BENZOFLUORAN	386038	13.71 ng/mL
32		3VV	31.023	Mass	252.00	amu	BENZ(e)PYREN	93791	5.350 ng/mL
33	+ISTD	3PV	31.089	Mass	264.00	amu	BENZ(a)PYREN	824793	49.60 ng/mL
34		3VV	31.145	Mass	252.00	amu	BENZ(a)PYREN	48378	
35		3VV	31.314	Mass	264.00	amu	PERYLENE, d1	155974	0.6326 ng/mL
36		3	--------	Mass	252.00	amu	PERYLENE	*** Not Found ***	
37		3	--------	Mass	276.00	amu	INDENO(1,2,3	*** Not Found ***	
38		3	--------	Mass	278.00	amu	DIBENZ(a,h)A	*** Not Found ***	
39		3	--------	Mass	276.00	amu	BENZO(g,h,i)	*** Not Found ***	
--------		PV	9.011	Mass	118.00		-Uncalibrated-	166453	166453 ng/mL
--------		VV	9.007	Mass	116.00		-Uncalibrated-	286832	286832 ng/mL
--------		VV	9.069	Mass	118.00		-Uncalibrated-	99835	99835 ng/mL
--------		PV	9.286	Mass	118.00		-Uncalibrated-	38859	38859 ng/mL
--------		BV	10.066	Mass	116.00		-Uncalibrated-	102534	102534 ng/mL
--------		PV	11.411	Mass	116.00		-Uncalibrated-	515737	515737 ng/mL
--------		VH	11.846	Mass	118.00		-Uncalibrated-	60296	60296 ng/mL
--------		PH	12.043	Mass	129.00		-Uncalibrated-	39572	39572 ng/mL
--------		PH	12.046	Mass	128.00		-Uncalibrated-	27239	27239 ng/mL
--------		PH	12.071	Mass	134.00		-Uncalibrated-	38092	38092 ng/mL
--------		PH	12.102	Mass	136.00		-Uncalibrated-	18116	18116 ng/mL
------		VH	12.168	Mass	134.00		-Uncalibrated-	30984	30984 ng/mL
------		VV	12.154	Mass	129.00		-Uncalibrated-	79993	79993 ng/mL
--------		VH	12.627	Mass	134.00		-Uncalibrated-	88937	88937 ng/mL
--------		VV	12.668	Mass	129.00		-Uncalibrated-	238508	238508 ng/mL
--------		VV	13.348	Mass	136.00		-Uncalibrated-	186305	186305 ng/mL
--------		PV	13.346	Mass	134.00		-Uncalibrated-	136596	136596 ng/mL
--------		VV	13.770	Mass	129.00		-Uncalibrated-	365270	365270 ng/mL
--------		VB	13.897	Mass	129.00		-Uncalibrated-	412079	412079 ng/mL
--------		PV	14.210	Mass	154.00		-Uncalibrated-	15559	15559 ng/mL

--------	VV	14.402	Mass	117.00	-Uncalibrated-	67660	67660	ng/mL
--------	VV	14.486	Mass	154.00	-Uncalibrated-	55212	55212	ng/mL
--------	VV	14.480	Mass	117.00	-Uncalibrated-	73613	73613	ng/mL
--------	VV	15.150	Mass	117.00	-Uncalibrated-	249939	249939	ng/mL
--------	VV	15.658	Mass	117.00	-Uncalibrated-	79105	79105	ng/mL
--------	BV	15.851	Mass	141.00	-Uncalibrated-	56774	56774	ng/mL
------	PV	15.932	Mass	117.00	-Uncalibrated-	38315	38315	ng/mL
------	VV	16.004	Mass	141.00	-Uncalibrated-	113022	113022	ng/mL
--------	BV	16.143	Mass	168.00	-Uncalibrated-	41793	41793	ng/mL
--------	BV	16.149	Mass	164.00	-Uncalibrated-	79483	79483	ng/mL
--------	BV	16.228	Mass	152.00	-Uncalibrated-	123955	123955	ng/mL
--------	VV	16.271	Mass	152.00	-Uncalibrated-	16962	16962	ng/mL
--------	VV	16.372	Mass	168.00	-Uncalibrated-	125856	125856	ng/mL
--------	VV	16.424	Mass	168.00	-Uncalibrated-	34499	34499	ng/mL
--------	VV	16.611	Mass	164.00	-Uncalibrated-	235371	235371	ng/mL
--------	VV	16.768	Mass	164.00	-Uncalibrated-	117154	117154	ng/mL
--------	PV	17.083	Mass	168.00	-Uncalibrated-	98515	98515	ng/mL
--------	VV	17.175	Mass	152.00	-Uncalibrated-	225471	225471	ng/mL
--------	VV	17.213	Mass	168.00	-Uncalibrated-	62308	62308	ng/mL
--------	VV	17.296	Mass	152.00	-Uncalibrated-	94420	94420	ng/mL
--------	PV	18.860	Mass	168.00	-Uncalibrated-	110029	110029	ng/mL
--------	VV	18.894	Mass	166.00	-Uncalibrated-	172357	172357	ng/mL
--------	VV	18.885	Mass	152.00	-Uncalibrated-	122612	122612	ng/mL
--------	VV	18.984	Mass	166.00	-Uncalibrated-	98490	98490	ng/mL
--------	VV	19.293	Mass	166.00	-Uncalibrated-	127111	127111	ng/mL
--------	VV	19.280	Mass	152.00	-Uncalibrated-	94846	94846	ng/mL
--------	VH	19.636	Mass	184.00	-Uncalibrated-	342307	342307	ng/mL
--------	VH	19.755	Mass	184.00	-Uncalibrated-	28791	28791	ng/mL
--------	VV	19.900	Mass	178.00	-Uncalibrated-	89223	89223	ng/mL
--------	VV	19.975	Mass	178.00	-Uncalibrated-	38487	38487	ng/mL
--------	VV	20.062	Mass	178.00	-Uncalibrated-	69810	69810	ng/mL
------	VV	20.081	Mass	184.00	-Uncalibrated-	63149	63149	ng/mL
------	BV	20.326	Mass	167.00	-Uncalibrated-	80693	80693	ng/mL
--------	PV	20.554	Mass	179.00	-Uncalibrated-	119598	119598	ng/mL
--------	PV	20.554	Mass	167.00	-Uncalibrated-	116850	116850	ng/mL
--------	PV	20.554	Mass	178.00	-Uncalibrated-	63933	63933	ng/mL
--------	VV	20.804	Mass	179.00	-Uncalibrated-	56650	56650	ng/mL
--------	VV	20.877	Mass	184.00	-Uncalibrated-	112956	112956	ng/mL
--------	VV	20.923	Mass	179.00	-Uncalibrated-	146784	146784	ng/mL
--------	VV	21.022	Mass	179.00	-Uncalibrated-	132000	132000	ng/mL
--------	PV	21.579	Mass	179.00	-Uncalibrated-	121517	121517	ng/mL
--------	VV	21.658	Mass	179.00	-Uncalibrated-	50738	50738	ng/mL
--------	VV	23.050	Mass	212.00	-Uncalibrated-	47714	47714	ng/mL
--------	BV	26.697	Mass	228.00	-Uncalibrated-	46630	46630	ng/mL
--------	PV	29.614	Mass	252.00	-Uncalibrated-	11274	11274	ng/mL
--------	VV	29.715	Mass	252.00	-Uncalibrated-	18866	18866	ng/mL
--------	PV	29.910	Mass	264.00	-Uncalibrated-	1964769	1964769	ng/mL
--------	VV	29.902	Mass	252.00	-Uncalibrated-	236901	236901	ng/mL
--------	VV	29.989	Mass	264.00	-Uncalibrated-	1937611	1937611	ng/mL
--------	VV	30.022	Mass	252.00	-Uncalibrated-	246709	246709	ng/mL
--------	VV	30.193	Mass	252.00	-Uncalibrated-	221615	221615	ng/mL
--------	VV	30.334	Mass	264.00	-Uncalibrated-	624275	624275	ng/mL
--------	VV	30.416	Mass	264.00	-Uncalibrated-	440134	440134	ng/mL
--------	VV	30.497	Mass	264.00	-Uncalibrated-	561558	561558	ng/mL
--------	VV	30.653	Mass	252.00	-Uncalibrated-	100840	100840	ng/mL
--------	VV	30.844	Mass	252.00	-Uncalibrated-	378263	378263	ng/mL
------	BV	33.551	Mass	278.00	-Uncalibrated-	28980	28980	ng/mL

or : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.401 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #22's Description at 21.168 +/- 0.106 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #36's Description at 31.374 +/- 0.157 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.666 +/- 0.173 min.

No Peak of Calibration Peak #38's Description at 34.724 +/- 0.174 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #39's Description at 35.651 +/- 0.178 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

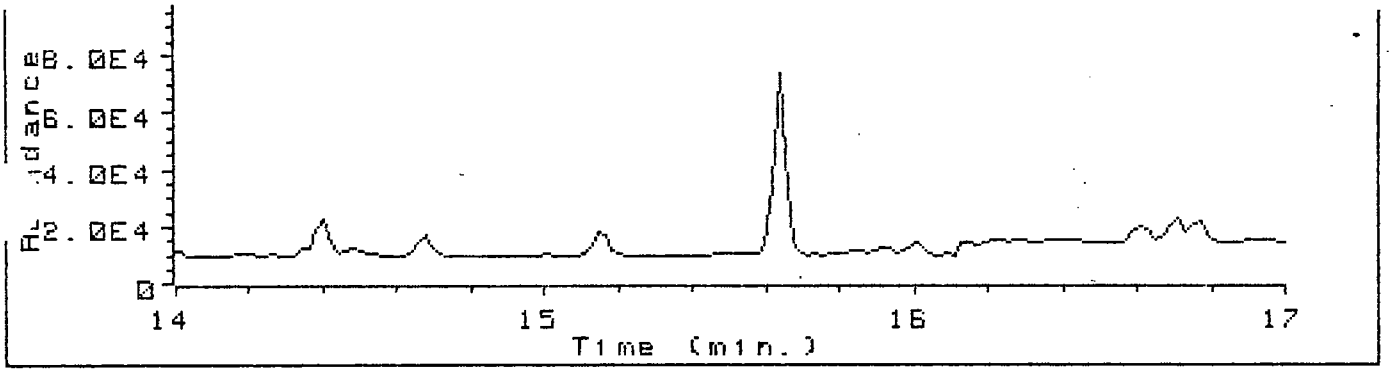
Report by Retention Time

Operator: LOUIE G. POUNDS 29 Jan 87 5:20 pm
Method File Name : PAH.M
Sample Info : 41040B T-10
Misc Info: 1.0 UL
Integration File Name : DATA:41040B.I
Bottle Number : 0

Ret Time	Signal Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
9.011	Mass 118.00 amu	PV	166453	7388	36.72	18.75	58.03	31.87
9.007	Mass 116.00 amu	VV	286832	10890	63.28	28.13	100.00	55.62
9.069	Mass 118.00 amu	VV	99835	3710	100.00	11.25	100.00	19.12
9.286	Mass 118.00 amu	PV	38859	1519	100.00	4.38	100.00	7.44
10.076	Mass 118.00 amu	VV	522242	22705	83.59	58.83	100.00	100.00
10.066	Mass 116.00 amu	BV	102534	3695	16.41	10.05	19.63	19.88
10.236	Mass 116.00 amu	VV	114662	4140	100.00	11.24	100.00	22.23
.411	Mass 116.00 amu	PV	515737	17383	100.00	50.57	100.00	100.00
11.846	Mass 118.00 amu	VH	60296	2009	100.00	6.79	100.00	11.55
12.043	Mass 129.00 amu	PH	39572	1845	59.23	2.73	100.00	9.60
12.046	Mass 128.00 amu	PH	27239	1185	40.77	1.29	68.83	1.31
12.071	Mass 134.00 amu	PH	38092	1711	100.00	9.23	100.00	27.89
12.102	Mass 136.00 amu	PH	18116	614	100.00	2.74	100.00	3.96
12.168	Mass 134.00 amu	VH	30984	1307	27.92	7.51	38.73	22.68
12.154	Mass 129.00 amu	VV	79993	2356	72.08	5.52	100.00	19.41
12.628	Mass 136.00 amu	PV	457397	16467	83.72	69.11	100.00	100.00
12.627	Mass 134.00 amu	VH	88937	3068	16.28	21.56	19.44	65.11
12.668	Mass 129.00 amu	VV	238508	8804	10.30	16.45	11.48	57.88
12.666	Mass 128.00 amu	PV	2077893	78178	89.70	98.71	100.00	100.00
12.819	Mass 134.00 amu	BV	117986	3892	100.00	28.60	100.00	86.38
13.348	Mass 136.00 amu	VV	186305	6329	57.70	28.15	100.00	40.73
13.346	Mass 134.00 amu	PV	136596	4928	42.30	33.11	73.32	100.00
.543	Mass 129.00 amu	VV	314046	5014	100.00	21.67	100.00	76.21
13.770	Mass 129.00 amu	VV	365270	6246	100.00	25.20	100.00	88.64
13.897	Mass 129.00 amu	VB	412079	5250	100.00	28.43	100.00	100.00
14.210	Mass 154.00 amu	PV	15559	307	100.00	0.78	100.00	1.02
14.346	Mass 117.00 amu	PV	41186	2409	100.00	7.49	100.00	16.48

14.365	Mass	154.00	amu	VV	14436	528	100.00	0.73	100.00	0.95
14.402	Mass	141.00	amu	PB	288527	10882	81.00	44.07	100.00	100.00
14.402	Mass	117.00	amu	VV	67660	2086	19.00	12.31	23.45	27.07
14.486	Mass	154.00	amu	VV	55212	946	42.86	2.77	75.00	3.62
.480	Mass	117.00	amu	VV	73613	2120	57.14	13.39	100.00	29.45
14.676	Mass	141.00	amu	BV	196380	7785	100.00	30.00	100.00	68.06
15.150	Mass	117.00	amu	VV	249939	8247	100.00	45.46	100.00	100.00
15.638	Mass	154.00	amu	VV	1525057	57354	100.00	76.63	100.00	100.00
15.658	Mass	117.00	amu	VV	79105	2966	100.00	14.39	100.00	31.65
15.851	Mass	141.00	amu	BV	56774	1987	100.00	8.67	100.00	19.68
15.932	Mass	117.00	amu	PV	38315	1721	100.00	6.97	100.00	15.33
16.004	Mass	141.00	amu	VV	113022	3398	100.00	17.26	100.00	39.17
16.143	Mass	168.00	amu	BV	41793	1535	34.46	5.84	52.58	17.22
16.149	Mass	164.00	amu	BV	79483	2063	65.54	9.49	100.00	19.58
16.228	Mass	152.00	amu	BV	123955	1505	100.00	12.87	100.00	43.46
16.271	Mass	152.00	amu	VV	16962	822	100.00	1.76	100.00	5.95
16.372	Mass	168.00	amu	VV	125856	932	100.00	17.59	100.00	51.87
.424	Mass	168.00	amu	VV	34499	1248	100.00	4.82	100.00	14.22
16.611	Mass	164.00	amu	VV	235371	4345	100.00	28.09	100.00	57.98
16.708	Mass	152.00	amu	VV	285219	7411	100.00	29.60	100.00	100.00
16.768	Mass	164.00	amu	VV	117154	2531	100.00	13.98	100.00	28.86
17.083	Mass	168.00	amu	PV	98515	3389	100.00	13.77	100.00	40.60
17.103	Mass	164.00	amu	VV	405962	14499	100.00	48.45	100.00	100.00
17.175	Mass	152.00	amu	VV	225471	7535	37.24	23.40	59.33	79.05
17.176	Mass	154.00	amu	VV	380007	13000	62.76	19.09	100.00	24.92
17.213	Mass	168.00	amu	VV	62308	1782	100.00	8.71	100.00	25.68
17.296	Mass	152.00	amu	VV	94420	2481	100.00	9.80	100.00	33.10
17.596	Mass	168.00	amu	BV	242639	5820	100.00	33.91	100.00	100.00
18.420	Mass	176.00	amu	VB	716552	24868	100.00	100.00	100.00	100.00
18.473	Mass	166.00	amu	BV	288165	7967	100.00	42.00	100.00	100.00
.860	Mass	168.00	amu	PV	110029	2977	100.00	15.37	100.00	45.35
18.894	Mass	166.00	amu	VV	172357	5102	58.43	25.12	100.00	59.81
18.885	Mass	152.00	amu	VV	122612	3121	41.57	12.73	71.14	42.99
18.984	Mass	166.00	amu	VV	98490	3331	100.00	14.35	100.00	34.18
19.293	Mass	166.00	amu	VV	127111	4170	57.27	18.53	100.00	44.11
19.280	Mass	152.00	amu	VV	94846	2702	42.73	9.84	74.62	33.25

19.636	Mass	184.00	amu	VH	342307	12635	100.00	52.19	100.00	100.00
19.755	Mass	184.00	amu	VH	28791	818	100.00	4.39	100.00	8.41
19.900	Mass	178.00	amu	VV	89223	1855	100.00	7.10	100.00	10.34
9.975	Mass	178.00	amu	VV	38487	1150	100.00	3.06	100.00	4.46
20.062	Mass	178.00	amu	VV	69810	1490	100.00	5.55	100.00	8.09
20.081	Mass	184.00	amu	VV	63149	2072	100.00	9.63	100.00	18.45
20.326	Mass	167.00	amu	BV	80693	2213	100.00	26.63	100.00	69.06
20.554	Mass	179.00	amu	PV	119598	3978	39.82	19.07	100.00	81.48
20.554	Mass	167.00	amu	PV	116850	3664	38.90	38.56	97.70	100.00
20.554	Mass	178.00	amu	PV	63933	1852	21.28	5.09	53.46	7.41
20.610	Mass	184.00	amu	PV	108688	2683	100.00	16.57	100.00	31.75
20.804	Mass	179.00	amu	VV	56650	1795	100.00	9.03	100.00	38.59
20.877	Mass	188.00	amu	BV	639585	21523	84.99	100.00	100.00	100.00
20.877	Mass	184.00	amu	VV	112956	3300	15.01	17.22	17.66	33.00
20.923	Mass	179.00	amu	VV	146784	4272	14.54	23.40	17.01	100.00
20.921	Mass	178.00	amu	PV	862932	26260	85.46	68.65	100.00	100.00
21.022	Mass	179.00	amu	VV	132000	3718	49.90	21.04	99.59	89.93
21.027	Mass	178.00	amu	VV	132545	3758	50.10	10.55	100.00	15.36
1.579	Mass	179.00	amu	PV	121517	3356	53.53	19.37	100.00	82.79
1.571	Mass	167.00	amu	PV	105481	2447	46.47	34.81	86.80	90.27
21.658	Mass	179.00	amu	VV	50738	1601	100.00	8.09	100.00	34.57
23.050	Mass	212.00	amu	VV	47714	1437	100.00	6.44	100.00	6.88
23.992	Mass	202.00	amu	BV	263177	7752	100.00	57.63	100.00	100.00
24.530	Mass	212.00	amu	PV	693473	22535	100.00	93.56	100.00	100.00
24.568	Mass	202.00	amu	BV	193458	5844	100.00	42.37	100.00	73.51
26.697	Mass	228.00	amu	BV	46630	1895	100.00	25.28	100.00	66.73
27.654	Mass	228.00	amu	VV	69878	1899	100.00	37.89	100.00	100.00
27.705	Mass	240.00	amu	VB	206004	5894	100.00	100.00	100.00	100.00
27.757	Mass	228.00	amu	VB	67929	2003	100.00	36.83	100.00	97.21
29.614	Mass	252.00	amu	PV	11274	752	100.00	0.47	100.00	1.72
29.715	Mass	252.00	amu	VV	18866	719	100.00	0.79	100.00	2.87
9.910	Mass	264.00	amu	PV	1964769	31471	89.24	30.18	100.00	100.00
9.902	Mass	252.00	amu	VV	236901	3647	10.76	9.87	12.06	36.08
29.989	Mass	264.00	amu	VV	1937611	25993	100.00	29.77	100.00	98.62
30.022	Mass	252.00	amu	VV	246709	3349	100.00	10.28	100.00	37.57
30.193	Mass	252.00	amu	VV	221615	3160	100.00	9.24	100.00	33.75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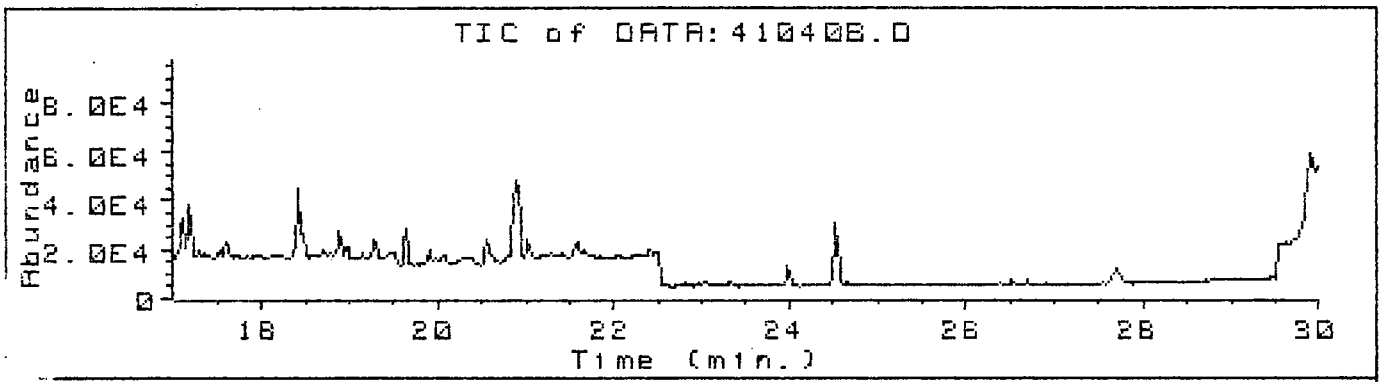
Time (min.)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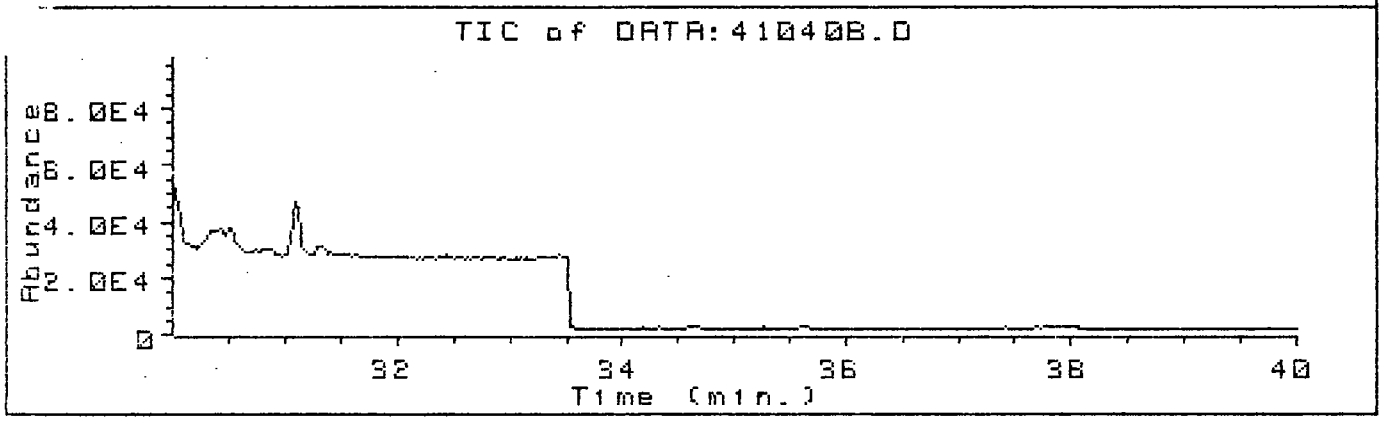
Time (min.)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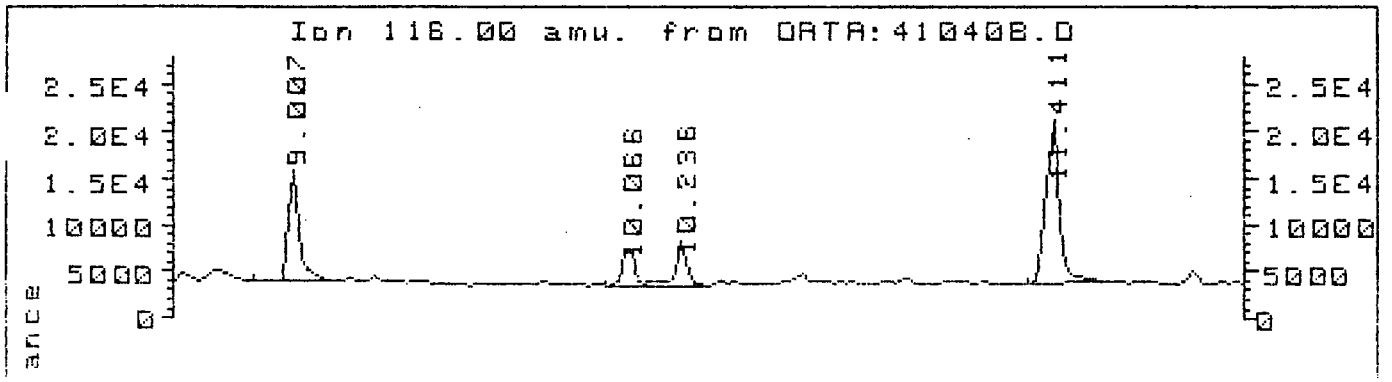
Time (min.)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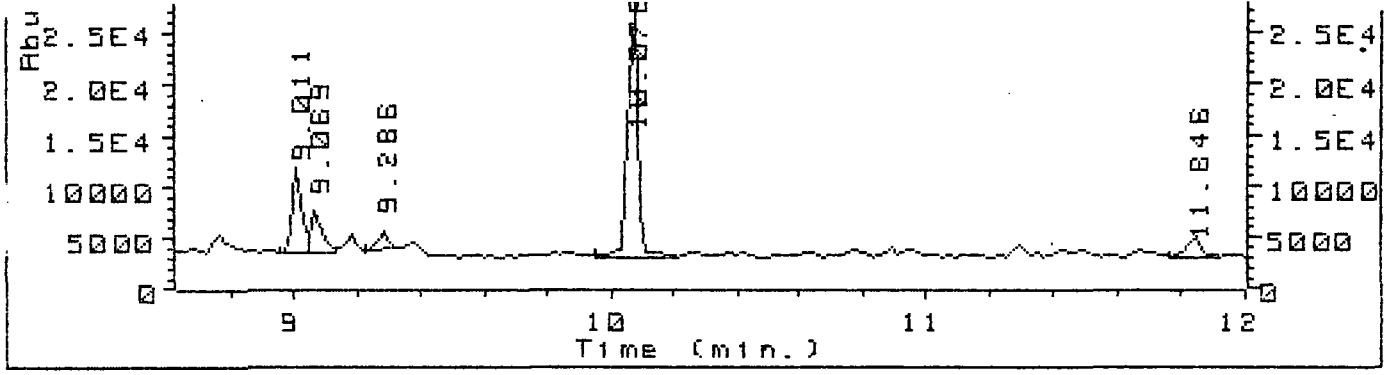
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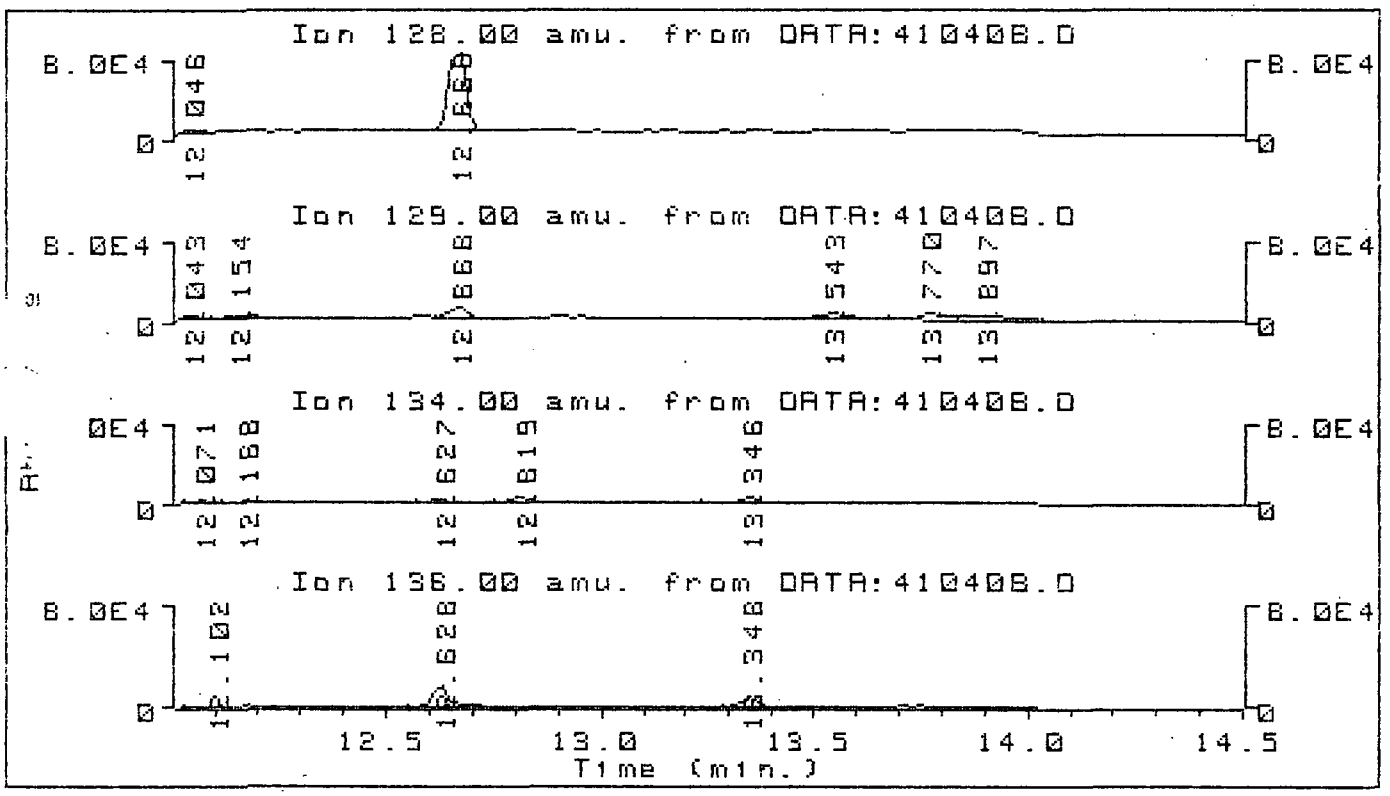
9
10
11
12
Time (min.)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Ion 129.00 amu. from DATA:41040B.D
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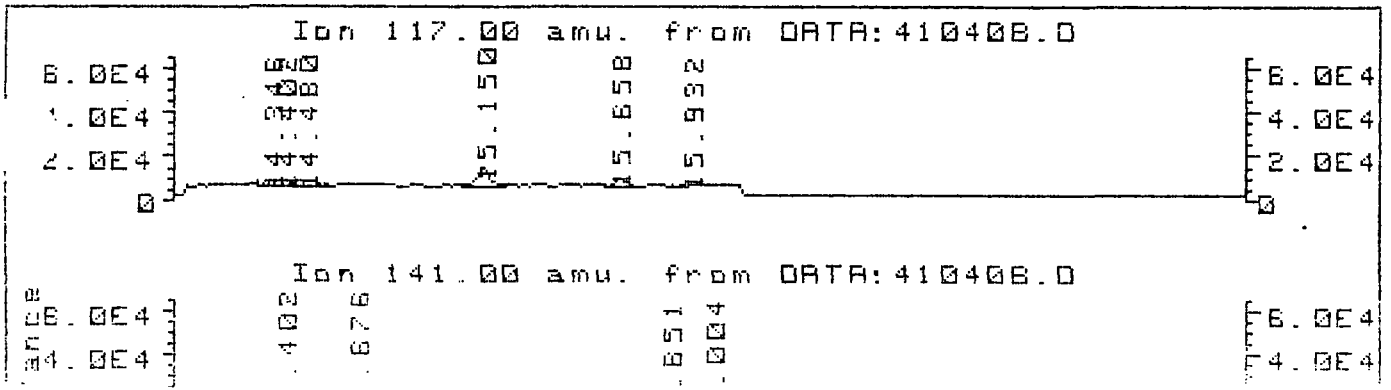
Time (min.)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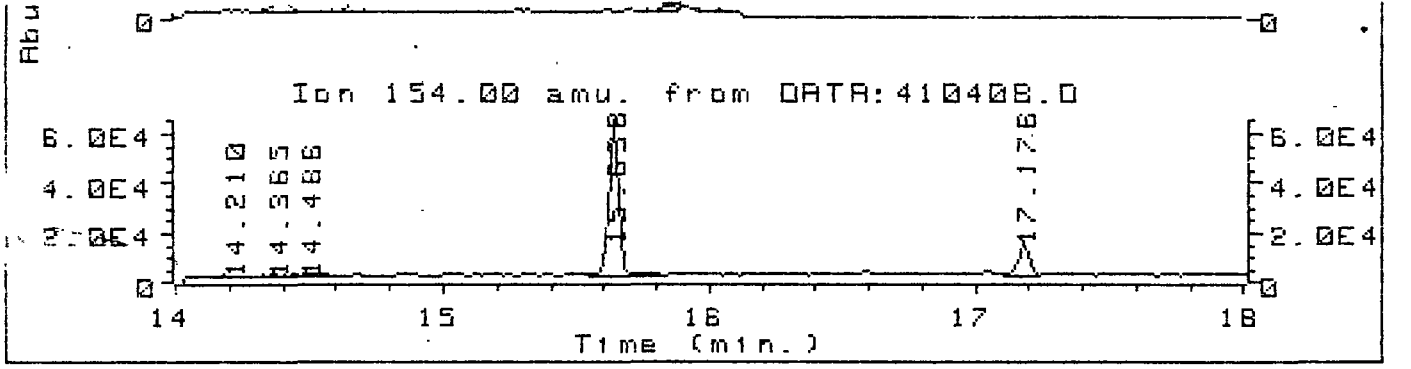
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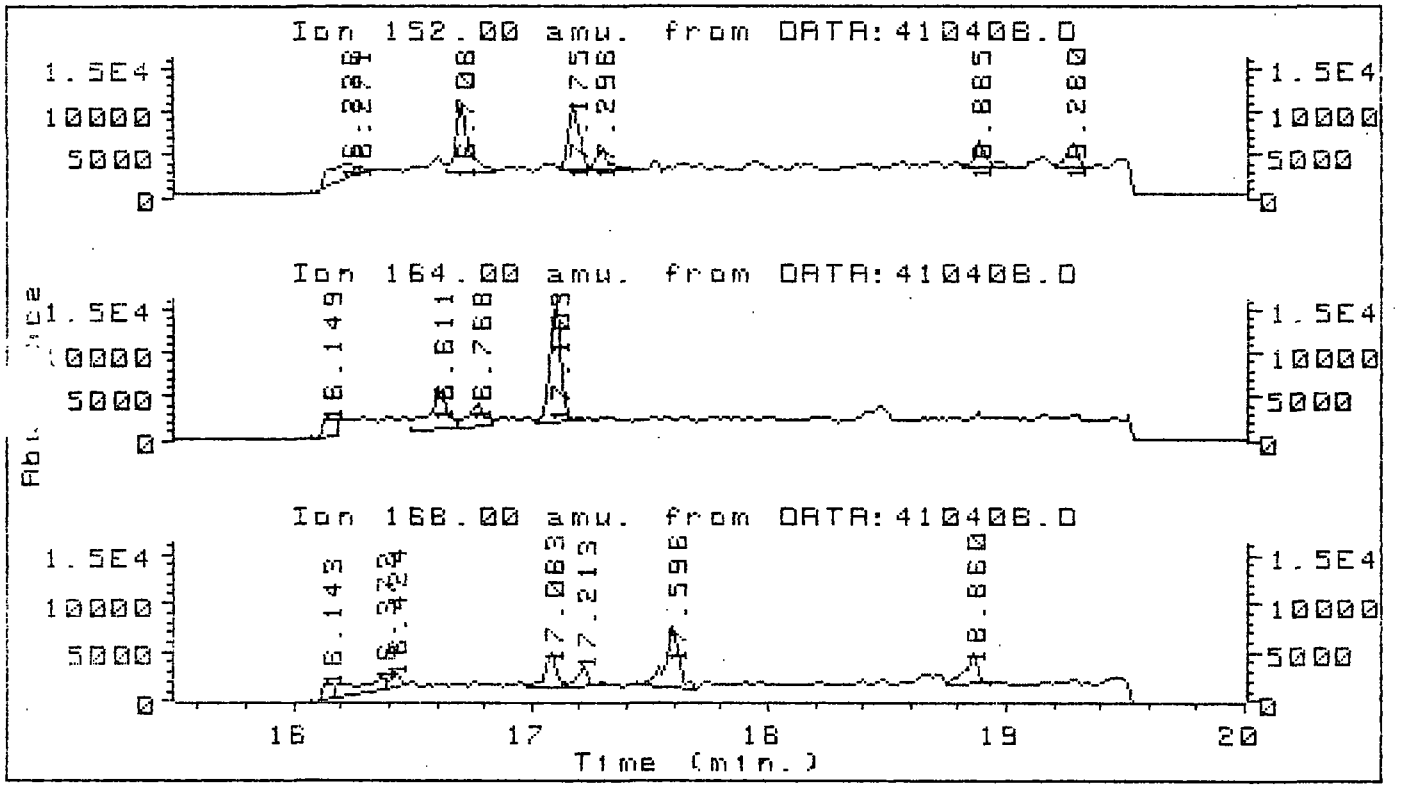
16
17
18
Time (min.)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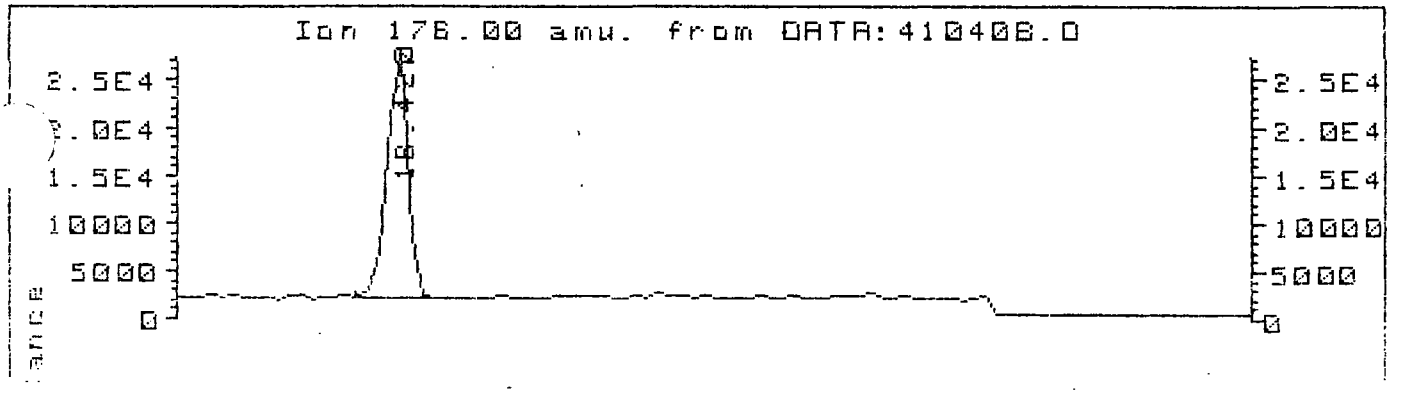
17
18
19
20
Time (min.)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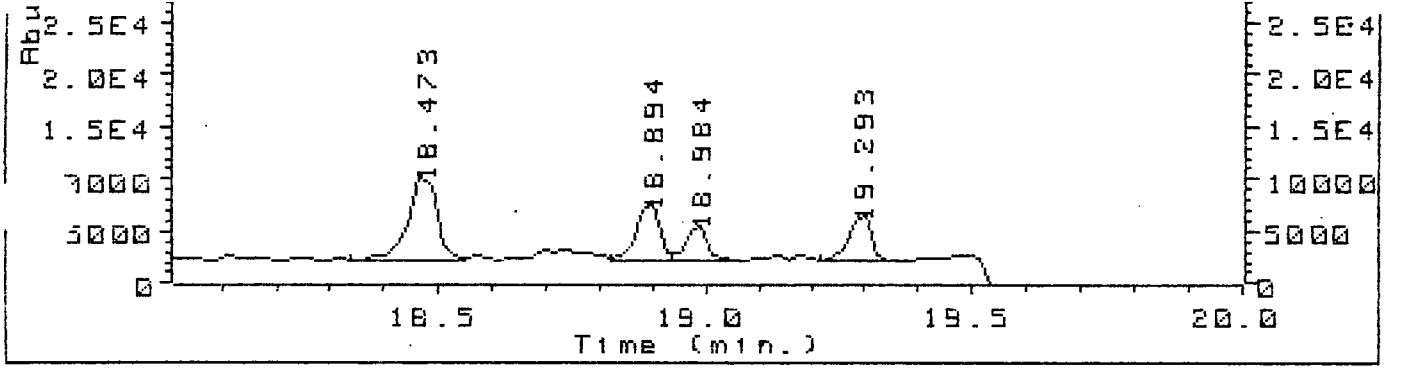
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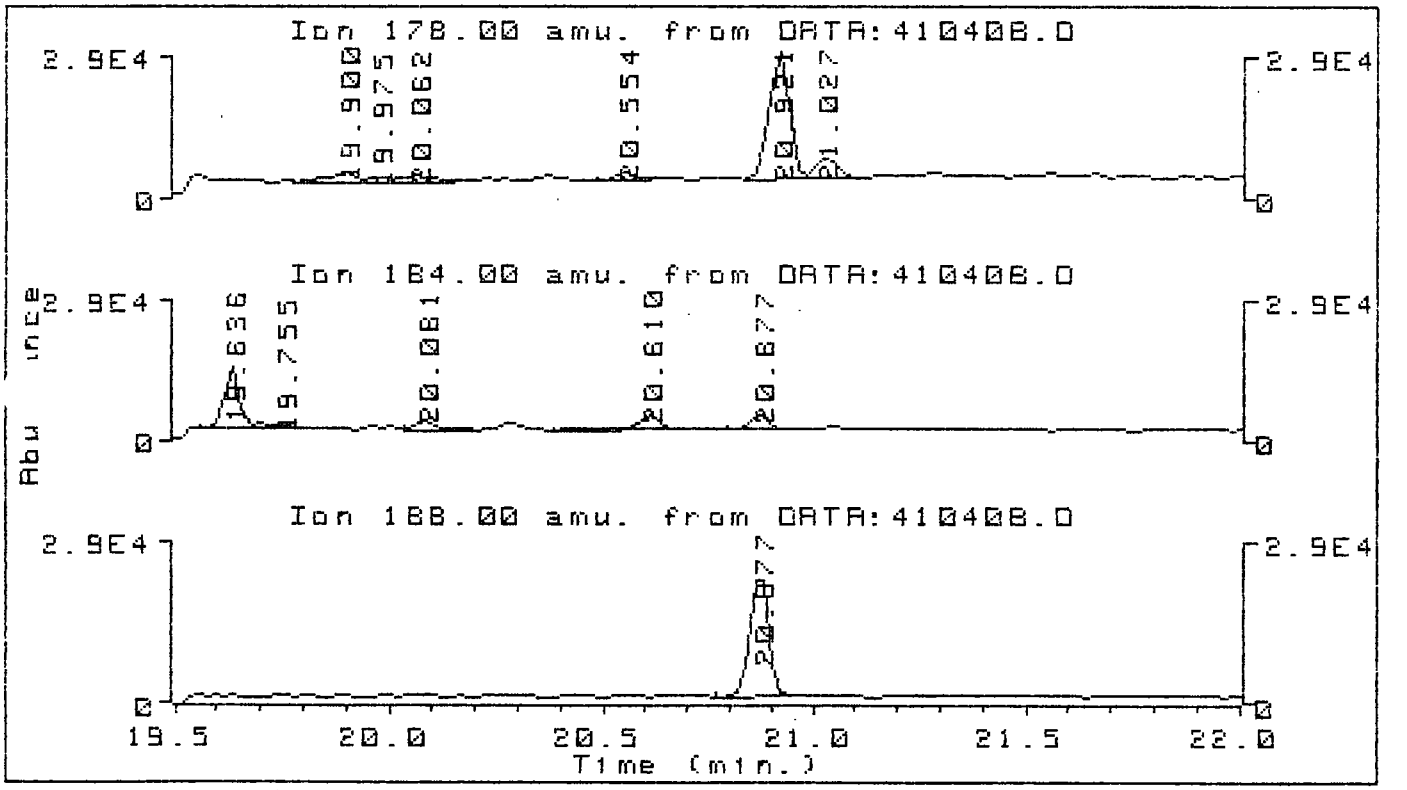
19.5
20.0
Time (min.)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20.877
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Abu
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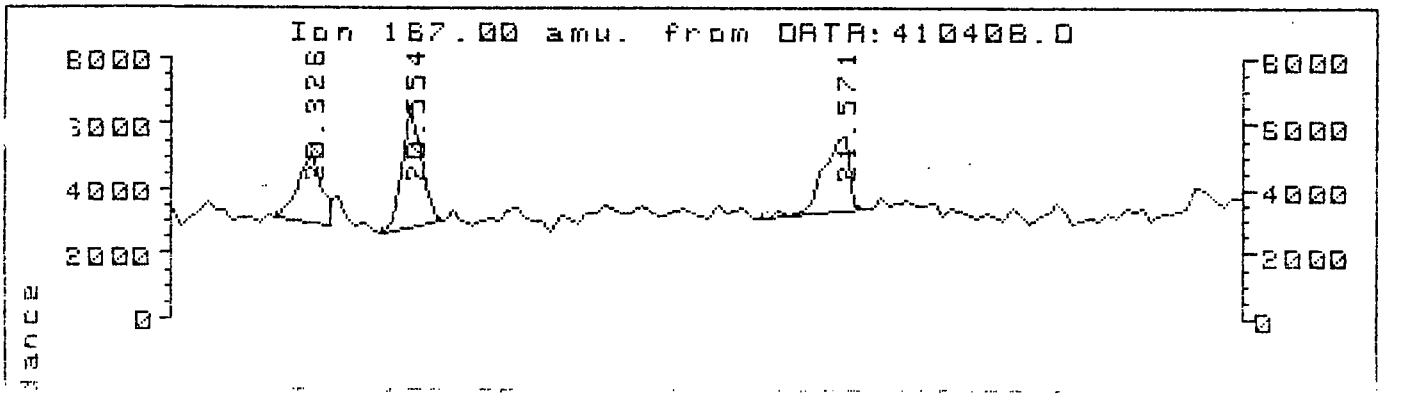
Time (min.)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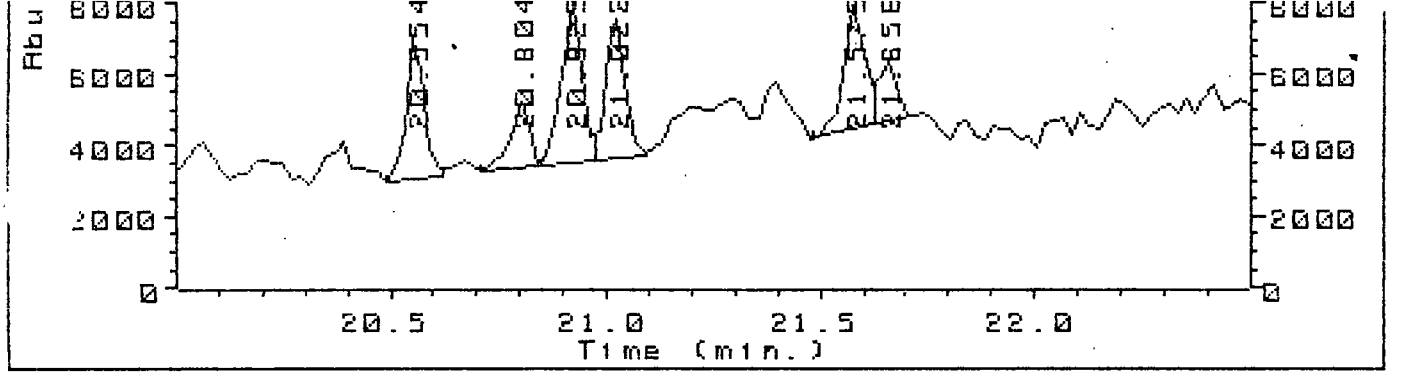
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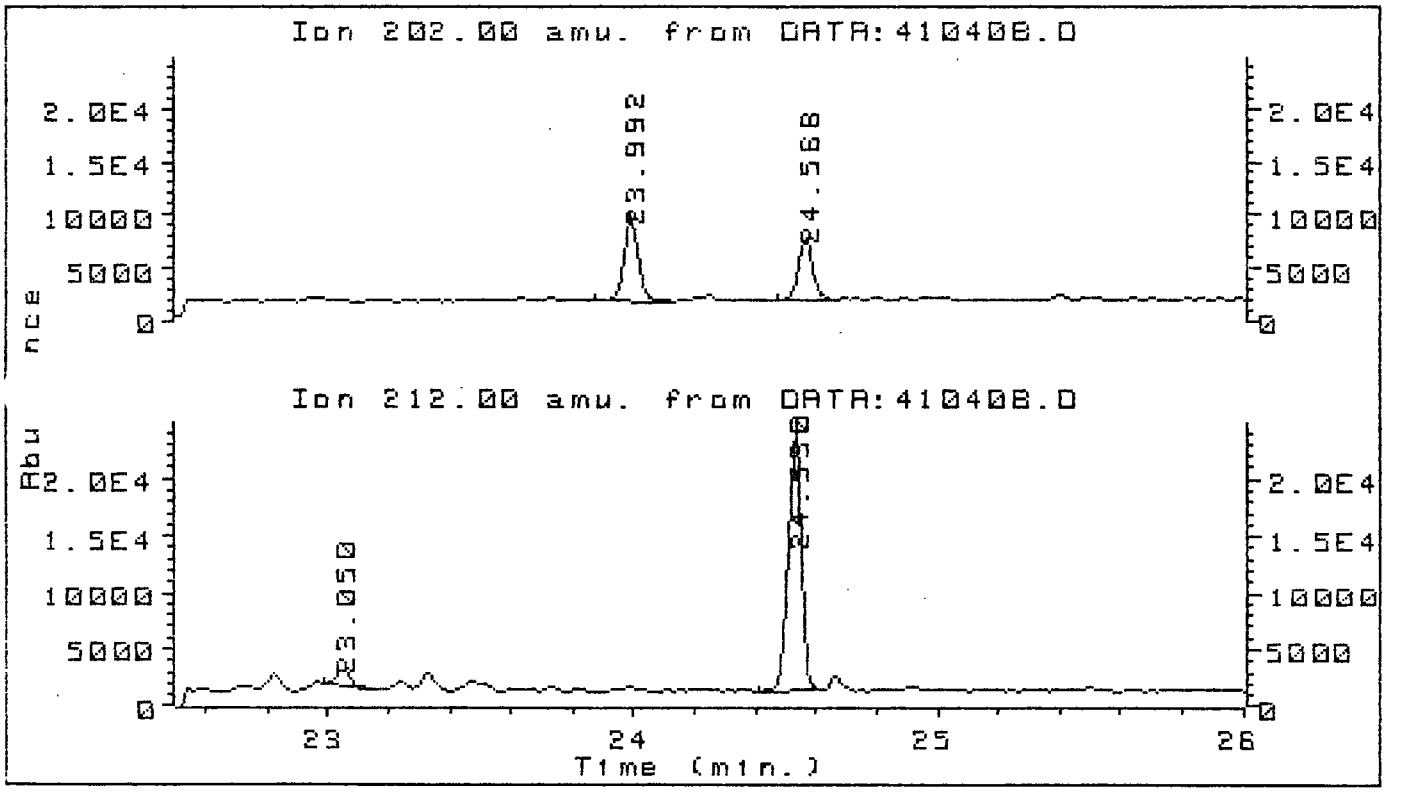
Time (min.)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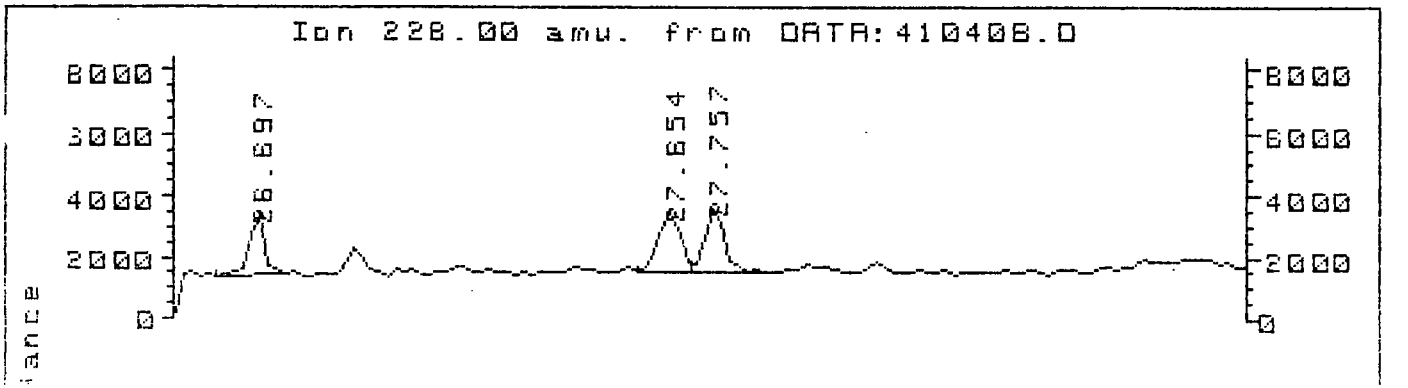
23
24
25
26
Time (min.)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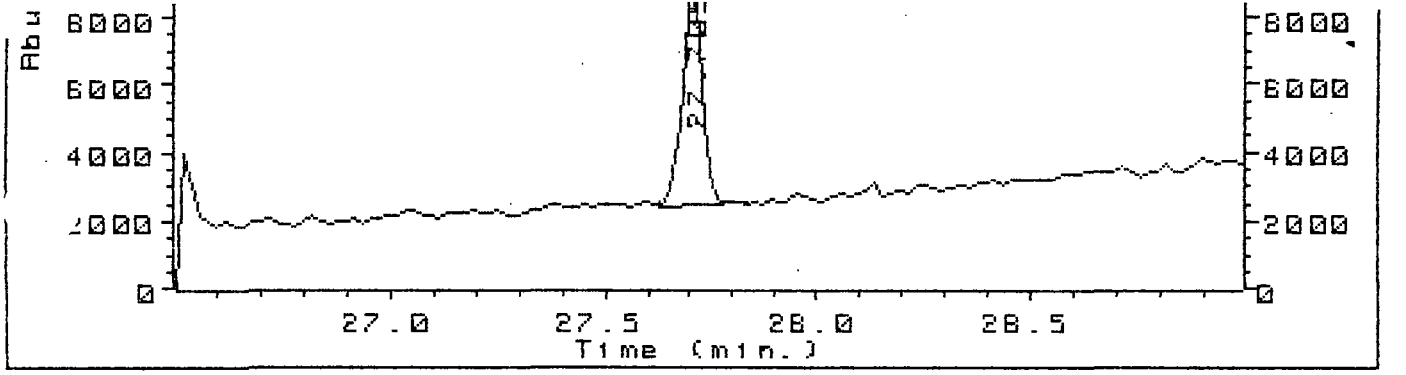
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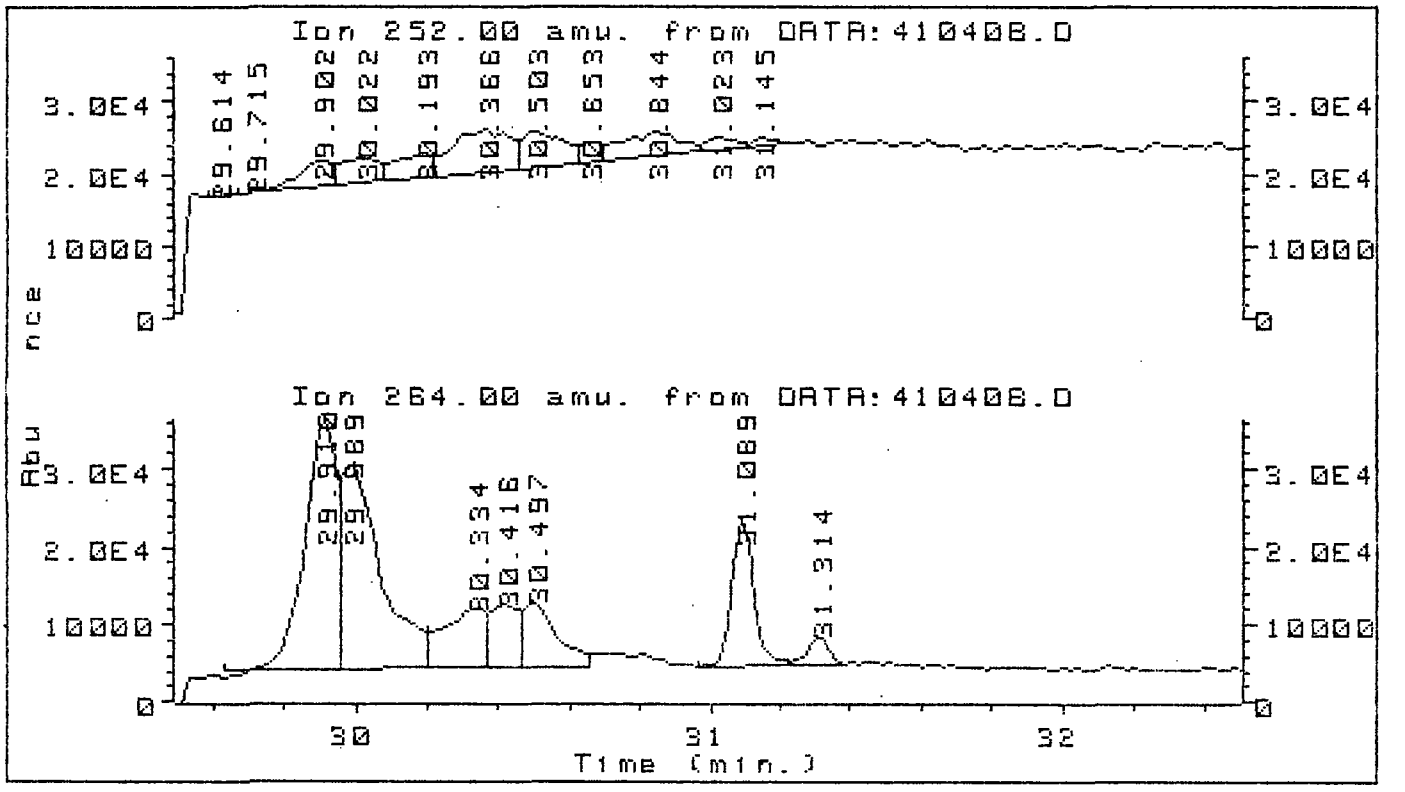
Time (min.)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Abu
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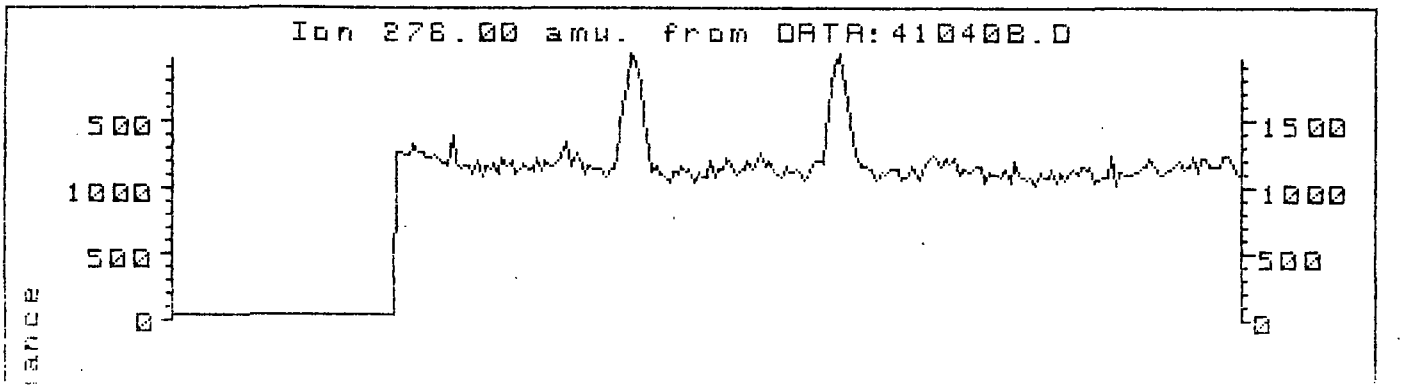
32
Time (min.)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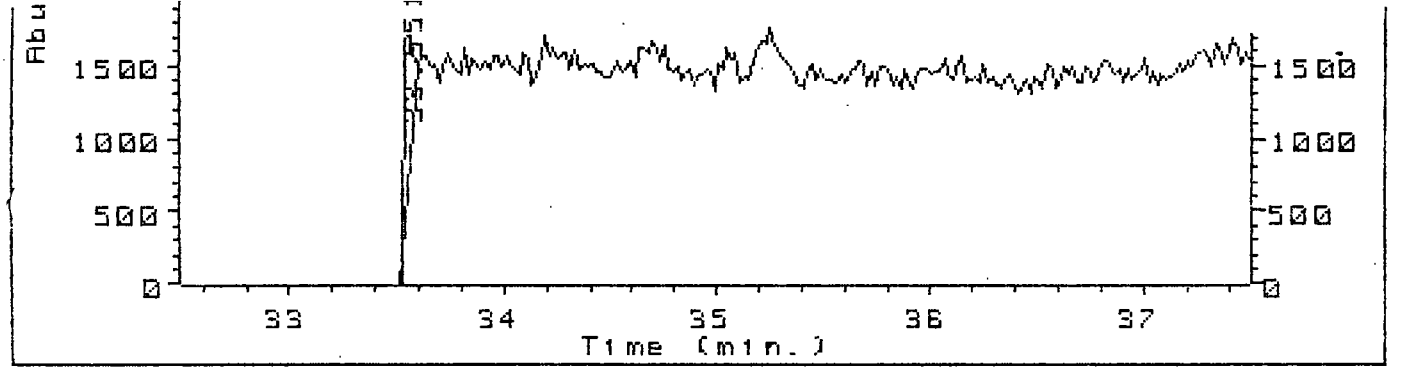

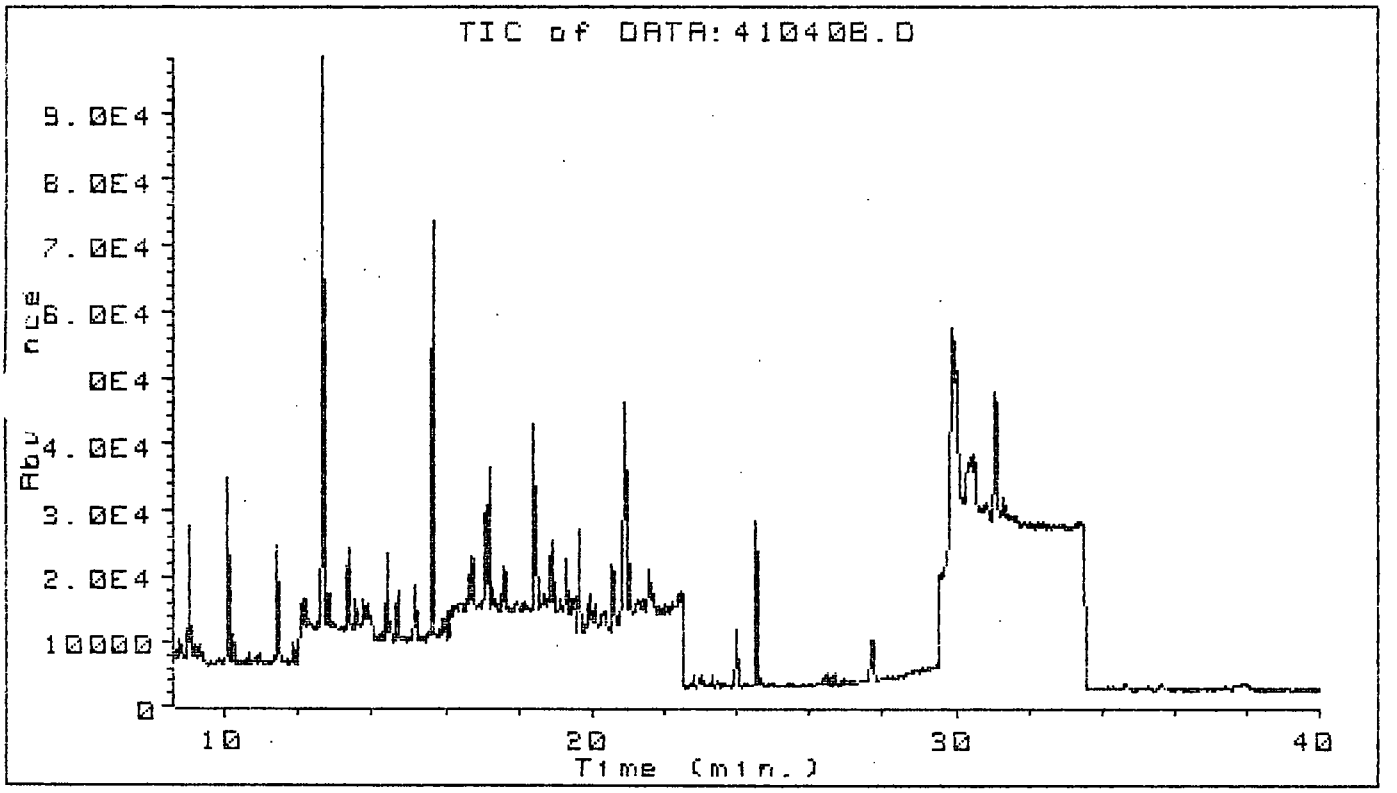

*** Internal Standard ***

Operator: LOUIE G. POUNDS 29 Jan 87 5:20 pm
Method File Name : PAH.M
Sample Info : 41040B T-10
Inject Info: 1.0 UL
Integration File Name : DATA:41040B.I
Bottle Number : 0

1/30/87 LC

ST. LOUIS PARK PPT PAH

Last Update: 12 Nov 86 7:13 pm

ERT #	: 41041	Extract Vol., ml	0.500
Field ID	: TD-10	Sample Vol., L	4.000
GC/MS File #	: 41041	Date Analyze: 01/29/87	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	50.000	17.057	249987
Phenanthrene-d10	50.000	20.827	486757
Benz(a)pyrene-d12	50.000	31.061	1027111

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.319	0.000	0.000	1	0.000
dihydroinden	0.799	0.588	10.024	681910	21.336
indene	1.228	0.597	10.184	271614	5.532
Naphthalene-d8 (Surr.)	1.923	0.738	12.583	485129	6.307
Naphthalene	2.964	0.740	12.620	2862450	24.145
Benz(b)thio	1.736	0.749	12.773	144197	2.077
Quinoline	0.996	0.791	13.491	222377	5.584
Indole	1.508	0.842	14.365	110196	1.827
2-methyl	1.348	0.842	14.359	373967	6.934
1-methyl	1.323	0.858	14.630	239665	4.529
Biphenyl	2.558	0.914	15.591	1311671	12.820
Acenaphthylene	1.736	0.976	16.656	671201	9.667
Acenaphthene	1.221	1.004	17.130	377825	7.736
Dibenzofuran	1.485	1.029	17.549	423995	7.137
Group II					
lourene-d10 (Surr.)	0.653	0.882	18.375	891339	17.516
Fluorene	1.110	0.885	18.428	338545	3.917
Dibenzothiophene	1.116	0.988	20.569	209353	2.410
Phenanthrene	1.916	1.002	20.874	1171520	7.850
Anthracene	1.176	1.002	20.874	435067	4.751
Acridine	0.659	0.000	0.000	1	0.000
Carbazole	0.824	1.033	21.519	691599	10.773
Fluoranthene	1.361	1.151	23.970	252243	2.379
Pyrene-d10 (Surr.)	0.851	1.176	24.500	767758	11.589
Pyrene	1.397	1.178	24.538	188821	1.735
Group III					
Benz(a)anthracene	1.599	0.889	27.611	45639	0.174
Chrysene-d12 (Surr.)	1.008	0.890	27.659	354208	2.138
Chrysene	1.704	0.893	27.723	174646	0.624
Benzofluoranthenes	2.109	0.977	30.345	184289	0.532
Benz(e)pyrene	1.856	0.998	30.984	844717	2.770
Benz(a)pyrene	1.867	1.001	31.100	133989	0.437
Perylene-d12 (Surr.)	1.005	1.007	31.292	396286	2.399
Perylene	1.634	1.006	31.240	136948	0.510
Indeno(123,cd)pyrene	2.072	0.000	0.000	1	0.000
Dibenz(ah)anthracene	1.732	0.000	0.000	1	0.000
Benzo(ghi)perylene	2.107	1.147	35.612	611897	1.767

ERT #: 41041

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 1/29/87	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	6.31	9.90	63.71	42-102	2.430	50.42%
Flourene-d10 (Surr.)	17.52	9.50	184.37	60-128	0.645	186.78%
Chrysene-d12 (Surr.)	2.14	9.80	21.81	10-54	0.969	22.70%
Pyrene-d10 (Surr.)	11.59	10.05	115.31		0.987	99.38%
Perylene-d12 (Surr.)	2.40	9.40	25.52		0.887	28.92%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	Blank	ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	5.58	3.4	~~5.6~~ ND
BENZO (A) ANTHRACENE	2.80	4.40	0.17		ND
CHRYSENE	2.80	4.40	0.62		ND
BENZOFLUORANTHENES	6.20	9.70	0.53		ND
BENZO (A) PYRENE	2.20	3.40	0.44		ND
INDENO (1,2,3-CD) PYRENE	2.80	4.40	0.00		ND
DIBENZO (A,H) ANTHRACENE	2.20	3.40	0.00		ND
BENZO (G,H,I) PERYLENE	3.40	5.30	1.77		ND
TOTAL CARCINOGENIC PAH					~~5.58~~ ND

OTHER PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	Blank	ANALYTICAL RESULT (NG/L)
2,3-BENZOFURAN	1.20	1.90	0.00		ND
2,3-DIHYDROINDENE	2.20	3.40	21.34	-4.0	~~21.3~~ 17
INDENE	1.80	2.90	5.53		5.5 ✓
NAPHTHALENE	30.00	47.00	24.15		ND ✓
BENZO (B) THIOPHENE	1.40	2.20	2.08		< 2.2 ✓
INDOLE	1.20	1.90	1.83	-1.1	~~< 1.9~~ ND
2-METHYLNAPHTHALENE	3.20	5.00	6.93	-2.5	~~6.9~~ < 3.20
1-METHYLNAPHTHALENE	2.00	3.10	4.53	-3.5	~~4.5~~ ND
BIPHENYL	11.00	17.00	12.82		< 17 ✓
ACENAPHTHYLENE	1.10	1.70	9.67	12.0	~~9.7~~ ND
ACENAPHTHENE	0.83	1.30	7.74	-1.3	~~7.7~~ 6.4
DIBENZOFURAN	0.77	1.20	7.14	-2.4	~~7.1~~ 4.7
FLOURENE	0.56	0.88	3.92	-1.47	~~3.9~~ 1.4
DIBENZOTHIOPHENE	4.00	6.30	2.41		ND ✓
PHENANTHRENE	2.00	3.10	7.85	5.6	~~7.8~~ ND
ANTHRACENE	2.20	3.40	4.75	8.4	~~4.8~~ ND
ACRIDINE	1.60	2.50	0.00		ND ✓
CARBAZOLE	1.70	2.60	10.77	5.9	~~10.8~~ ND
FLUORANTHENE	2.80	4.40	2.38		ND ✓
PYRENE	2.60	4.10	1.74		ND ✓
BENZO (E) PYRENE	0.96	1.50	2.77	1.3	~~2.8~~ < 1.5
PERYLENE	1.00	1.60	0.51		ND ✓
TOTAL OTHER PAH					~~92.9~~ 35
TOTAL PAH'S					~~98.5~~ 35

AP 2-3-87

64
184
22

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-10

ERT NO.: 41041

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	~~5.6~~ ND
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	~~5.6~~ ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	~~21~~ 17
INDENE	5.5
NAPHTHALENE	ND
BENZO (B) THIOPHENE	< 2.2
INDOLE	~~< 1.9~~ ND
2-METHYLNAPHTHALENE	~~6.9~~ <3.20
1-METHYLNAPHTHALENE	~~4.5~~ ND
BIPHENYL	< 17
ACENAPHTHYLENE	~~9.7~~ ND
ACENAPHTHENE	~~7.7~~ 6.4
DIBENZOFURAN	~~7.1~~ 4.7
FLOURENE	~~3.9~~ 1.4
DIBENZOTHIOPHENE	ND
PHENANTHRENE	~~7.8~~ ND
ANTHRACENE	~~4.8~~ ND
ACRIDINE	ND
CARBAZOLE	~~11~~ ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	~~2.8~~ <1.5
PERYLENE	ND
TOTAL OTHER PAH	~~93~~ 35
TOTAL PAH'S	~~99~~ 35

ND = Concentration < 95% Confidence Interval of MDL

2-3-87

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-10 ERT NO.: 41041

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	ND
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	17
INDENE	5.5
NAPHTHALENE	ND
BENZO (B) THIOPHENE	< 2.2
INDOLE	ND
2-METHYLNAPHTHALENE	< 3.2
1-METHYLNAPHTHALENE	ND
BIPHENYL	< 17
ACENAPHTHYLENE	ND
ACENAPHTHENE	6.4
DIBENZOFURAN	4.7
FLOURENE	1.4
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	< 1.5
PERYLENE	ND
TOTAL OTHER PAH	35
TOTAL PAH'S	35

ND = Concentration < 95% Confidence Interval of MDL

*** Internal Standard ***

Operator: LOUIE G. POUNDS 29 Jan 87 7:24 pm
Method File Name : PAH.M
Sample Info : ERT#41041 TD-10 .; THU. 29 JAN. 87
Misc Info: 1.0 UL OF SAMPLE (0.5 ML + 25UL IS MS860399)
Integration File Name : DATA:41041.I
Bottle Number : 0

LGP 2-3-87

ST. LOUIS PARK PPT PAH

Last Update: 12 Nov 86 7:13 pm
Reference Peak Window: 1.00 % of Retention Time
Non-Reference Peak Window: 1.00 % of Retention Time
Sample Amount: 0.000 Uncalibrated Peak RF: 1.000 Multiplier: 1.000

Peak Num	Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amount
1		1	--------	Mass	118.00	amu	2,3-BENZOFUR	*** Not Found ***	
2		1PV	10.024	Mass	118.00	amu	2,3-DIHYDROI	681910	170.1 ng/mL
3		1VV	10.184	Mass	116.00	amu	INDENE	271614	58.82 ng/mL
4		1PV	12.583	Mass	136.00	amu	NAPHTHALENE,	485129	43.21 ng/mL
5		1PV	12.620	Mass	128.00	amu	NAPTHALENE	2862450	231.0 ng/mL
6		1VV	12.773	Mass	134.00	amu	BENZO(b)THIO	144197	16.73 ng/mL
7		1VV	13.491	Mass	129.00	amu	QUINOLINE	222377	45.57 ng/mL
8		1PV	14.365	Mass	117.00	amu	INDOLE	110196	16.81 ng/mL
		1PV	14.359	Mass	141.00	amu	2-METHYLNAPT	373967	46.71 ng/mL
		1PV	14.630	Mass	141.00	amu	1-METHYLNAPT	239665	30.87 ng/mL
11		1PV	15.591	Mass	154.00	amu	BIPHENYL	1311671	
12		1VH	16.656	Mass	152.00	amu	ACENAPHTHYLE	671201	100.0 ng/mL
13	+ISTD	1VV	17.057	Mass	164.00	amu	ACENAPTHTHEN	249987	53.00 ng/mL
14		1VV	17.130	Mass	154.00	amu	ACENAPHTHENE	377825	57.69 ng/mL
15		1VV	17.549	Mass	168.00	amu	DIBENZOFURAN	423995	32.90 ng/mL
16		2VV	18.375	Mass	176.00	amu	FLUORENE, d1	891339	258.9 ng/mL
17		2VV	18.428	Mass	166.00	amu	FLUORENE	338545	57.49 ng/mL
18		2PV	20.569	Mass	184.00	amu	DIBENZOTHIOP	209353	19.70 ng/mL
19	+ISTD	2PV	20.827	Mass	188.00	amu	PHENANTHRENE	486757	62.50 ng/mL
20		2PV	20.874	Mass	178.00	amu	PHENANTHRENE	1171520	56.00 ng/mL
21		2VV	20.969	Mass	178.00	amu	ANTHRACENE	435067	56.35 ng/mL
22		2	--------	Mass	179.00	amu	ACRIDINE	*** Not Found ***	
23		1VV	21.519	Mass	167.00	amu	CARBAZOLE	691599	79.72 ng/mL
24		1VV	23.970	Mass	202.00	amu	FLUORANTHENE	252243	1.237 ng/mL
25		2BH	24.500	Mass	212.00	amu	PYRENE, d10	767758	118.0 ng/mL
26		2VV	24.538	Mass	202.00	amu	PYRENE	188821	14.44 ng/mL
27		3PV	27.611	Mass	228.00	amu	BENZ(a)ANTHR	45639	
28		3VV	27.659	Mass	240.00	amu	CHYRSENE, d(	354208	34.91 ng/mL
29		3VV	27.723	Mass	228.00	amu	CHYRSENE	174646	5.016 ng/mL
30		3VV	30.271	Mass	252.00	amu	BENZOFLUORAN	107641	
31		3VV	30.419	Mass	252.00	amu	BENZOFLUORAN	76648	0.4452 ng/mL
32		3VV	30.984	Mass	252.00	amu	BENZ(e)PYREN	844717	23.28 ng/mL
33	+ISTD	3VV	31.061	Mass	264.00	amu	BENZ(a)PYREN	1027111	49.60 ng/mL
		3VV	31.100	Mass	252.00	amu	BENZ(a)PYREN	133989	1.237 ng/mL
		3VV	31.292	Mass	264.00	amu	PERYLENE, d1	396286	17.12 ng/mL
36		3VV	31.240	Mass	252.00	amu	PERYLENE	136948	4.162 ng/mL
37		3	--------	Mass	276.00	amu	INDENO(1,2,3	*** Not Found ***	
38		3	--------	Mass	278.00	amu	DIBENZ(a,h)A	*** Not Found ***	
39		3BV	35.612	Mass	276.00	amu	BENZO(g,h,i)	611897	24.75 ng/mL
----------		BV	8.730	Mass	118.00		-Uncalibrated-	87694	87694 ng/mL
----------		VV	8.966	Mass	118.00		-Uncalibrated-	1908234	1908234 ng/mL

--------	VV	9.228	Mass	118.00	-Uncalibrated-	325984	325984	ng/mL
--------	BV	10.043	Mass	116.00	-Uncalibrated-	542776	542776	ng/mL
--------	VV	10.327	Mass	116.00	-Uncalibrated-	250958	250958	ng/mL
--------	PV	11.076	Mass	116.00	-Uncalibrated-	60779	60779	ng/mL
--------	BV	11.249	Mass	118.00	-Uncalibrated-	54684	54684	ng/mL
--------	PV	11.410	Mass	116.00	-Uncalibrated-	293866	293866	ng/mL
--------	BV	11.808	Mass	116.00	-Uncalibrated-	63826	63826	ng/mL
--------	BV	12.108	Mass	129.00	-Uncalibrated-	76760	76760	ng/mL
--------	BV	12.243	Mass	134.00	-Uncalibrated-	63821	63821	ng/mL
--------	VV	12.583	Mass	134.00	-Uncalibrated-	129450	129450	ng/mL
--------	VH	12.623	Mass	129.00	-Uncalibrated-	323609	323609	ng/mL
--------	VV	13.309	Mass	136.00	-Uncalibrated-	541249	541249	ng/mL
--------	PV	13.298	Mass	134.00	-Uncalibrated-	506476	506476	ng/mL
--------	VB	13.845	Mass	129.00	-Uncalibrated-	556080	556080	ng/mL
--------	VV	14.426	Mass	117.00	-Uncalibrated-	47048	47048	ng/mL
--------	VV	15.102	Mass	117.00	-Uncalibrated-	128522	128522	ng/mL
--------	VV	15.232	Mass	117.00	-Uncalibrated-	100176	100176	ng/mL
--------	BV	15.805	Mass	141.00	-Uncalibrated-	75272	75272	ng/mL
--------	VV	15.957	Mass	141.00	-Uncalibrated-	131871	131871	ng/mL
--------	BV	16.007	Mass	154.00	-Uncalibrated-	318785	318785	ng/mL
--------	BV	16.153	Mass	164.00	-Uncalibrated-	53177	53177	ng/mL
--------	BH	16.173	Mass	152.00	-Uncalibrated-	213795	213795	ng/mL
--------	VV	16.174	Mass	154.00	-Uncalibrated-	76419	76419	ng/mL
--------	VV	16.209	Mass	164.00	-Uncalibrated-	65577	65577	ng/mL
--------	VV	16.260	Mass	154.00	-Uncalibrated-	121218	121218	ng/mL
--------	VH	16.288	Mass	152.00	-Uncalibrated-	138511	138511	ng/mL
--------	VV	16.319	Mass	154.00	-Uncalibrated-	274237	274237	ng/mL
--------	VV	16.381	Mass	168.00	-Uncalibrated-	211613	211613	ng/mL
--------	VV	16.464	Mass	154.00	-Uncalibrated-	468856	468856	ng/mL
--------	VV	16.571	Mass	164.00	-Uncalibrated-	350447	350447	ng/mL
--------	VV	16.714	Mass	154.00	-Uncalibrated-	417839	417839	ng/mL
--------	VV	16.730	Mass	164.00	-Uncalibrated-	102051	102051	ng/mL
--------	VV	17.000	Mass	154.00	-Uncalibrated-	153468	153468	ng/mL
--------	VV	17.040	Mass	168.00	-Uncalibrated-	162495	162495	ng/mL
--------	VH	17.129	Mass	152.00	-Uncalibrated-	439417	439417	ng/mL
--------	VV	17.171	Mass	168.00	-Uncalibrated-	151153	151153	ng/mL
--------	BV	18.388	Mass	164.00	-Uncalibrated-	141842	141842	ng/mL
--------	VV	18.676	Mass	166.00	-Uncalibrated-	188515	188515	ng/mL
--------	VV	18.819	Mass	168.00	-Uncalibrated-	82178	82178	ng/mL
--------	VV	18.845	Mass	166.00	-Uncalibrated-	286715	286715	ng/mL
--------	VH	18.844	Mass	152.00	-Uncalibrated-	358628	358628	ng/mL
--------	VV	18.937	Mass	166.00	-Uncalibrated-	138521	138521	ng/mL
--------	VV	19.243	Mass	166.00	-Uncalibrated-	248111	248111	ng/mL
--------	VH	19.240	Mass	152.00	-Uncalibrated-	482641	482641	ng/mL
--------	VH	19.476	Mass	152.00	-Uncalibrated-	472368	472368	ng/mL
--------	PH	19.591	Mass	184.00	-Uncalibrated-	135575	135575	ng/mL
--------	VV	19.652	Mass	184.00	-Uncalibrated-	19741	19741	ng/mL
--------	PV	19.753	Mass	178.00	-Uncalibrated-	11811	11811	ng/mL
--------	VV	19.854	Mass	178.00	-Uncalibrated-	109543	109543	ng/mL
--------	BV	20.040	Mass	184.00	-Uncalibrated-	184493	184493	ng/mL
--------	VV	20.030	Mass	178.00	-Uncalibrated-	88185	88185	ng/mL
--------	BV	20.280	Mass	167.00	-Uncalibrated-	124103	124103	ng/mL
--------	BV	20.338	Mass	179.00	-Uncalibrated-	64862	64862	ng/mL
--------	VV	20.336	Mass	167.00	-Uncalibrated-	52960	52960	ng/mL
--------	VV	20.333	Mass	178.00	-Uncalibrated-	73687	73687	ng/mL
--------	PV	20.536	Mass	179.00	-Uncalibrated-	328161	328161	ng/mL
--------	PV	20.522	Mass	167.00	-Uncalibrated-	307645	307645	ng/mL
--------	PV	20.528	Mass	178.00	-Uncalibrated-	144643	144643	ng/mL
--------	VV	20.625	Mass	178.00	-Uncalibrated-	65449	65449	ng/mL
--------	VV	20.827	Mass	184.00	-Uncalibrated-	81191	81191	ng/mL
--------	VV	20.883	Mass	179.00	-Uncalibrated-	185515	185515	ng/mL
--------	VV	20.970	Mass	179.00	-Uncalibrated-	2465485	2465485	ng/mL
--------	VV	20.968	Mass	167.00	-Uncalibrated-	280401	280401	ng/mL
--------	VV	21.337	Mass	167.00	-Uncalibrated-	130267	130267	ng/mL

---------	VV	21.537	Mass	178.00	-Uncalibrated-	56891	56891	ng/mL
---------	VV	21.633	Mass	179.00	-Uncalibrated-	164899	164899	ng/mL
---------	VV	22.224	Mass	179.00	-Uncalibrated-	55462	55462	ng/mL
---------	PV	22.310	Mass	167.00	-Uncalibrated-	99803	99803	ng/mL
---------	PBA	22.427	Mass	179.00	-Uncalibrated-	50072	50072	ng/mL
---------	PBA	22.428	Mass	167.00	-Uncalibrated-	33412	33412	ng/mL
---------	VV	22.783	Mass	212.00	-Uncalibrated-	42033	42033	ng/mL
---------	VV	23.008	Mass	212.00	-Uncalibrated-	47899	47899	ng/mL
---------	PV	23.104	Mass	212.00	-Uncalibrated-	149511	149511	ng/mL
---------	BV	23.598	Mass	202.00	-Uncalibrated-	237779	237779	ng/mL
---------	BV	23.926	Mass	212.00	-Uncalibrated-	76735	76735	ng/mL
---------	VH	24.627	Mass	212.00	-Uncalibrated-	150141	150141	ng/mL
---------	PV	24.884	Mass	212.00	-Uncalibrated-	12353	12353	ng/mL
---------	VV	25.455	Mass	202.00	-Uncalibrated-	88581	88581	ng/mL
---------	BV	26.647	Mass	228.00	-Uncalibrated-	104540	104540	ng/mL
---------	VV	27.350	Mass	240.00	-Uncalibrated-	208494	208494	ng/mL
---------	PV	27.339	Mass	228.00	-Uncalibrated-	70420	70420	ng/mL
---------	VV	27.454	Mass	228.00	-Uncalibrated-	53399	53399	ng/mL
---------	PV	27.473	Mass	240.00	-Uncalibrated-	209760	209760	ng/mL
---------	PV	27.926	Mass	240.00	-Uncalibrated-	103005	103005	ng/mL
---------	PV	27.927	Mass	228.00	-Uncalibrated-	616339	616339	ng/mL
---------	VV	28.098	Mass	240.00	-Uncalibrated-	99354	99354	ng/mL
---------	VV	28.106	Mass	228.00	-Uncalibrated-	105379	105379	ng/mL
---------	VV	28.219	Mass	228.00	-Uncalibrated-	58404	58404	ng/mL
---------	VV	28.392	Mass	228.00	-Uncalibrated-	380733	380733	ng/mL
---------	PV	28.410	Mass	240.00	-Uncalibrated-	47533	47533	ng/mL
---------	VV	28.503	Mass	240.00	-Uncalibrated-	528947	528947	ng/mL
---------	VV	28.496	Mass	228.00	-Uncalibrated-	424369	424369	ng/mL
---------	VV	28.627	Mass	228.00	-Uncalibrated-	160559	160559	ng/mL
---------	VV	28.668	Mass	240.00	-Uncalibrated-	48557	48557	ng/mL
---------	VV	28.661	Mass	228.00	-Uncalibrated-	111392	111392	ng/mL
---------	VV	28.763	Mass	228.00	-Uncalibrated-	65917	65917	ng/mL
---------	VV	28.825	Mass	228.00	-Uncalibrated-	112477	112477	ng/mL
---------	PV	28.879	Mass	240.00	-Uncalibrated-	23073	23073	ng/mL
---------	PBA	28.943	Mass	240.00	-Uncalibrated-	14873	14873	ng/mL
---------	VV	29.678	Mass	264.00	-Uncalibrated-	219547	219547	ng/mL
---------	PV	29.911	Mass	264.00	-Uncalibrated-	12665	12665	ng/mL
---------	PV	29.898	Mass	252.00	-Uncalibrated-	142822	142822	ng/mL
---------	VV	30.021	Mass	252.00	-Uncalibrated-	158727	158727	ng/mL
---------	VV	30.170	Mass	252.00	-Uncalibrated-	125559	125559	ng/mL
---------	VV	30.585	Mass	252.00	-Uncalibrated-	157871	157871	ng/mL
---------	VV	30.690	Mass	264.00	-Uncalibrated-	319993	319993	ng/mL
---------	VV	30.686	Mass	252.00	-Uncalibrated-	156185	156185	ng/mL
---------	PV	30.810	Mass	264.00	-Uncalibrated-	21905	21905	ng/mL
---------	VV	30.822	Mass	252.00	-Uncalibrated-	285214	285214	ng/mL
---------	VV	30.927	Mass	264.00	-Uncalibrated-	197269	197269	ng/mL
---------	VV	31.457	Mass	264.00	-Uncalibrated-	91587	91587	ng/mL
---------	VV	31.516	Mass	264.00	-Uncalibrated-	18925	18925	ng/mL
---------	VV	31.585	Mass	264.00	-Uncalibrated-	36579	36579	ng/mL
---------	VV	31.676	Mass	264.00	-Uncalibrated-	55800	55800	ng/mL
---------	VV	31.837	Mass	264.00	-Uncalibrated-	203818	203818	ng/mL
---------	VV	31.912	Mass	264.00	-Uncalibrated-	98591	98591	ng/mL
---------	VV	31.953	Mass	264.00	-Uncalibrated-	179332	179332	ng/mL
---------	VV	32.127	Mass	264.00	-Uncalibrated-	45832	45832	ng/mL
---------	VV	32.229	Mass	264.00	-Uncalibrated-	111334	111334	ng/mL
---------	BV	32.230	Mass	252.00	-Uncalibrated-	92111	92111	ng/mL
---------	PV	32.427	Mass	264.00	-Uncalibrated-	35292	35292	ng/mL
---------	PBA	32.421	Mass	252.00	-Uncalibrated-	44389	44389	ng/mL
---------	BV	33.541	Mass	278.00	-Uncalibrated-	27912	27912	ng/mL

Error : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.376 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #22's Description at 21.118 +/- 0.106 min.
Error : Could not find Calibration Peak

Error : Could not find Calibration Peak.
No Peak of Calibration Peak #38's Description at 34.704 +/- 0.174 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

Operator: LOUIE G. POUNDS 29 Jan 87 7:24 pm
Method File Name : PAH.M
Sample Info : ERT#41041 TD-10 .; THU. 29 JAN. 87
Misc Info: 1.0 UL OF SAMPLE (0.5 ML + 25UL IS M5860399)
Integration File Name : DATA:41041.I
Bottle Number : 0

Ret Time	Signal	Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
8.730	Mass	118.00 amu	BV	87694	2168	100.00	2.49	100.00	4.60
8.966	Mass	118.00 amu	VV	1908234	34680	33.18	54.25	49.65	100.00
8.957	Mass	116.00 amu	VV	3843543	55993	66.82	72.15	100.00	100.00
9.145	Mass	118.00 amu	VV	459068	11411	100.00	13.05	100.00	24.06
9.228	Mass	118.00 amu	VV	325984	6456	100.00	9.27	100.00	17.08
10.024	Mass	118.00 amu	PV	681910	26741	100.00	19.39	100.00	35.74
10.043	Mass	116.00 amu	BV	542776	11643	100.00	10.19	100.00	14.12
[illegible].184	Mass	116.00 amu	VV	271614	8622	100.00	5.10	100.00	7.07
10.327	Mass	116.00 amu	VV	250958	5737	100.00	4.71	100.00	6.53
11.076	Mass	116.00 amu	PV	60779	2318	100.00	1.14	100.00	1.58
11.249	Mass	118.00 amu	BV	54684	1654	100.00	1.55	100.00	2.87
11.410	Mass	116.00 amu	PV	293866	6744	100.00	5.52	100.00	7.65
11.808	Mass	116.00 amu	BV	63826	2152	100.00	1.20	100.00	1.66
12.108	Mass	129.00 amu	BV	76760	2283	100.00	6.51	100.00	13.80
12.243	Mass	134.00 amu	BV	63821	2173	100.00	7.56	100.00	12.60
12.583	Mass	136.00 amu	PV	485129	16249	78.94	47.27	100.00	89.63
12.583	Mass	134.00 amu	VV	129450	3770	21.06	15.34	26.68	25.56
12.623	Mass	129.00 amu	VH	323609	11177	10.16	27.45	11.31	58.19
12.620	Mass	128.00 amu	PV	2862450	95383	89.84	100.00	100.00	100.00
12.773	Mass	134.00 amu	VV	144197	4054	100.00	17.09	100.00	28.47
13.309	Mass	136.00 amu	VV	541249	17157	51.66	52.73	100.00	100.00
[illegible].298	Mass	134.00 amu	PV	506476	15996	48.34	60.01	93.58	100.00
[illegible].491	Mass	129.00 amu	VV	222377	5391	100.00	18.86	100.00	39.99
13.645	Mass	129.00 amu	VB	556080	4908	100.00	47.17	100.00	100.00
14.359	Mass	141.00 amu	PV	373967	11961	77.24	45.56	100.00	100.00
14.365	Mass	117.00 amu	PV	110196	3077	22.76	28.55	25.47	85.74

14.630	Mass	141.00	amu	PV	239665	7831	100.00	29.20	100.00	64.09
15.102	Mass	117.00	amu	VV	128522	3363	100.00	33.30	100.00	100.00
15.232	Mass	117.00	amu	VV	100176	4013	100.00	25.96	100.00	77.94
15.591	Mass	154.00	amu	PV	1311671	47742	100.00	37.26	100.00	100.00
15.805	Mass	141.00	amu	BV	75272	2281	100.00	9.17	100.00	20.13
15.957	Mass	141.00	amu	VV	131871	3954	100.00	16.07	100.00	35.26
16.007	Mass	154.00	amu	BV	318785	3431	100.00	9.06	100.00	24.30
16.153	Mass	164.00	amu	BV	53177	1909	100.00	5.52	100.00	15.17
16.173	Mass	152.00	amu	BH	213795	3342	73.67	7.70	100.00	31.85
16.174	Mass	154.00	amu	VV	76419	1817	26.33	2.17	35.74	5.83
16.209	Mass	164.00	amu	VV	65577	1846	100.00	6.81	100.00	18.71
16.260	Mass	154.00	amu	VV	121218	3523	100.00	3.44	100.00	9.24
16.288	Mass	152.00	amu	VH	138511	2446	100.00	4.99	100.00	20.64
16.319	Mass	154.00	amu	VV	274237	4950	100.00	7.79	100.00	20.91
16.381	Mass	168.00	amu	VV	211613	2474	100.00	20.52	100.00	49.91
16.464	Mass	154.00	amu	VV	468856	5556	100.00	13.32	100.00	35.74
.571	Mass	164.00	amu	VV	350447	8449	100.00	36.39	100.00	100.00
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16.714	Mass	154.00	amu	VV	417839	4475	100.00	11.87	100.00	31.86
16.730	Mass	164.00	amu	VV	102051	2380	100.00	10.60	100.00	29.12
17.000	Mass	154.00	amu	VV	153468	3623	100.00	4.36	100.00	11.70
17.040	Mass	168.00	amu	VV	162495	3831	100.00	15.75	100.00	38.32
17.057	Mass	164.00	amu	VV	249987	7499	100.00	25.96	100.00	71.33
17.129	Mass	152.00	amu	VH	439417	9794	53.77	15.83	100.00	65.47
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17.549	Mass	168.00	amu	VV	423995	6373	100.00	41.11	100.00	100.00
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18.676	Mass	166.00	amu	VV	188515	5264	100.00	15.70	100.00	55.68
18.819	Mass	168.00	amu	VV	82178	1852	100.00	7.97	100.00	19.38
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19.476	Mass	152.00	amu	VH	472368	7044	100.00	17.01	100.00	70.38
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20.336	Mass	167.00	amu	VV	52960	2731	27.65	3.08	71.87	7.66
20.333	Mass	178.00	amu	VV	73687	2038	38.48	3.42	100.00	6.29
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20.827	Mass	188.00	amu	PV	486757	16972	85.70	100.00	100.00	100.00
20.827	Mass	184.00	amu	VV	81191	2360	14.30	12.88	16.68	38.78
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20.970	Mass	179.00	amu	VV	2465485	84915	77.51	44.28	100.00	100.00
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21.337	Mass	167.00	amu	VV	130267	3586	100.00	7.57	100.00	18.84
21.352	Mass	179.00	amu	VV	370255	8012	100.00	6.65	100.00	15.02
21.519	Mass	167.00	amu	VV	691599	19960	100.00	40.20	100.00	100.00
21.537	Mass	179.00	amu	VV	1882958	65256	97.07	33.82	100.00	76.37
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22.783	Mass	212.00	amu	VV	42033	1300	100.00	3.37	100.00	5.47
23.008	Mass	212.00	amu	VV	47899	1299	100.00	3.84	100.00	6.24
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23.926	Mass	212.00	amu	BV	76735	2070	100.00	6.16	100.00	9.99
23.970	Mass	202.00	amu	VV	252243	6372	100.00	32.87	100.00	100.00
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28.392	Mass	228.00	amu	VV	380733	9076	100.00	15.33	100.00	61.77
28.410	Mass	240.00	amu	PV	47533	1576	100.00	2.90	100.00	8.99
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28.627	Mass	228.00	amu	VV	160559	4203	100.00	6.46	100.00	26.05
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29.898	Mass	252.00	amu	PV	142822	3530	91.85	5.80	100.00	16.91
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30.271	Mass	252.00	amu	VV	107641	1845	100.00	4.37	100.00	12.74
30.419	Mass	252.00	amu	VV	76648	1393	100.00	3.11	100.00	9.07
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30.822	Mass	252.00	amu	VV	285214	3908	92.87	11.58	100.00	33.76
30.927	Mass	264.00	amu	VV	197269	5764	100.00	6.42	100.00	19.21
30.984	Mass	252.00	amu	VV	844717	15962	100.00	34.30	100.00	100.00
31.061	Mass	264.00	amu	VV	1027111	23287	100.00	33.44	100.00	100.00
31.100	Mass	252.00	amu	VV	133989	2637	100.00	5.44	100.00	15.86
31.240	Mass	252.00	amu	VV	136948	2028	100.00	5.56	100.00	16.21
31.292	Mass	264.00	amu	VV	396286	6626	100.00	12.90	100.00	38.58
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31.953	Mass	264.00	amu	VV	179332	3022	100.00	5.84	100.00	17.46
32.127	Mass	264.00	amu	VV	45832	1158	100.00	1.49	100.00	4.46
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33.541	Mass	278.00	amu	BV	27912	1152	100.00	100.00	100.00	100.00
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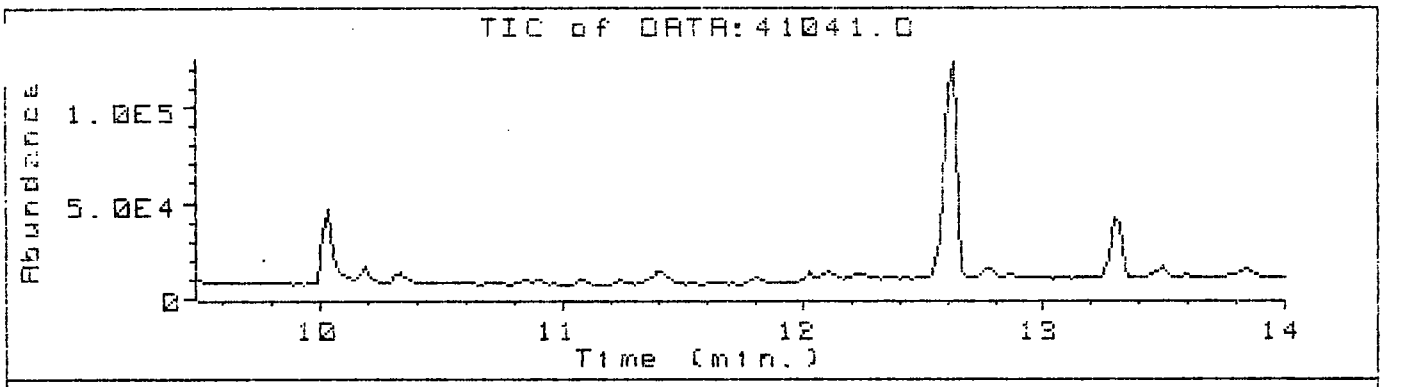
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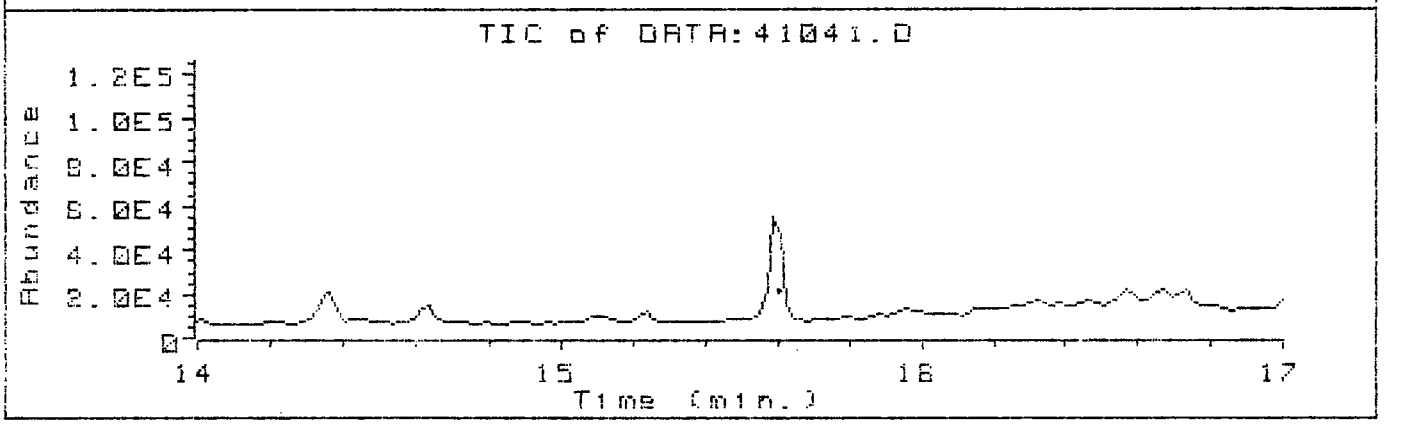
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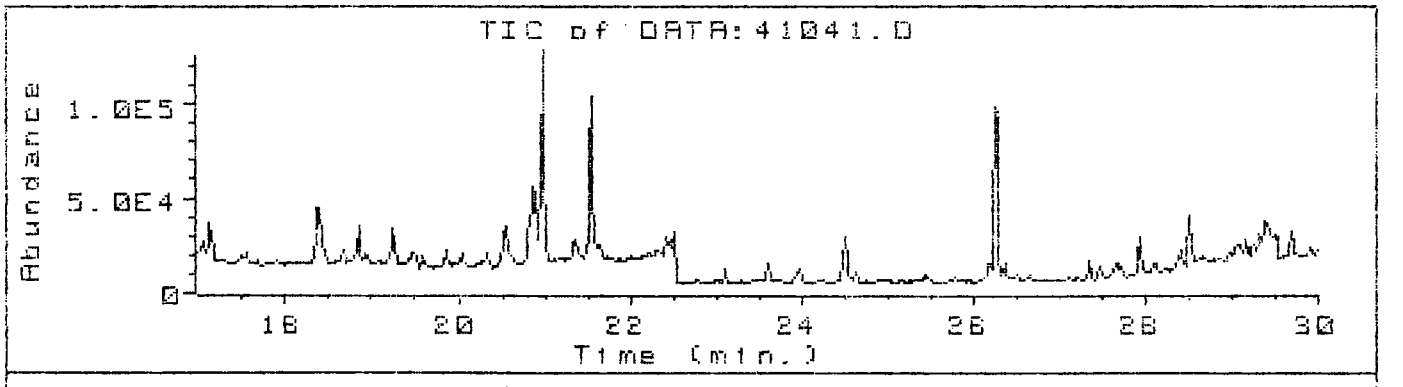
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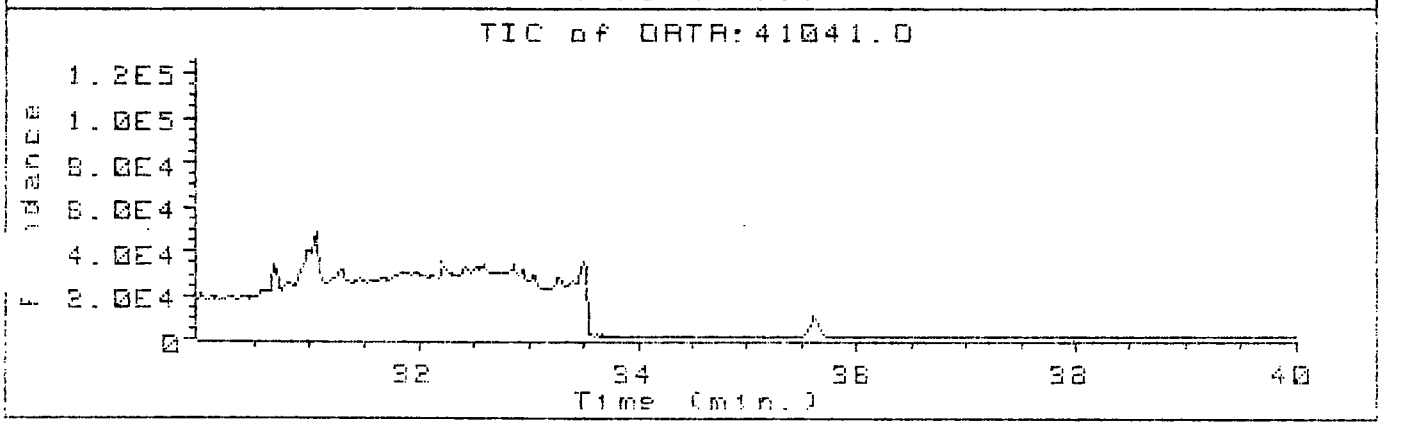
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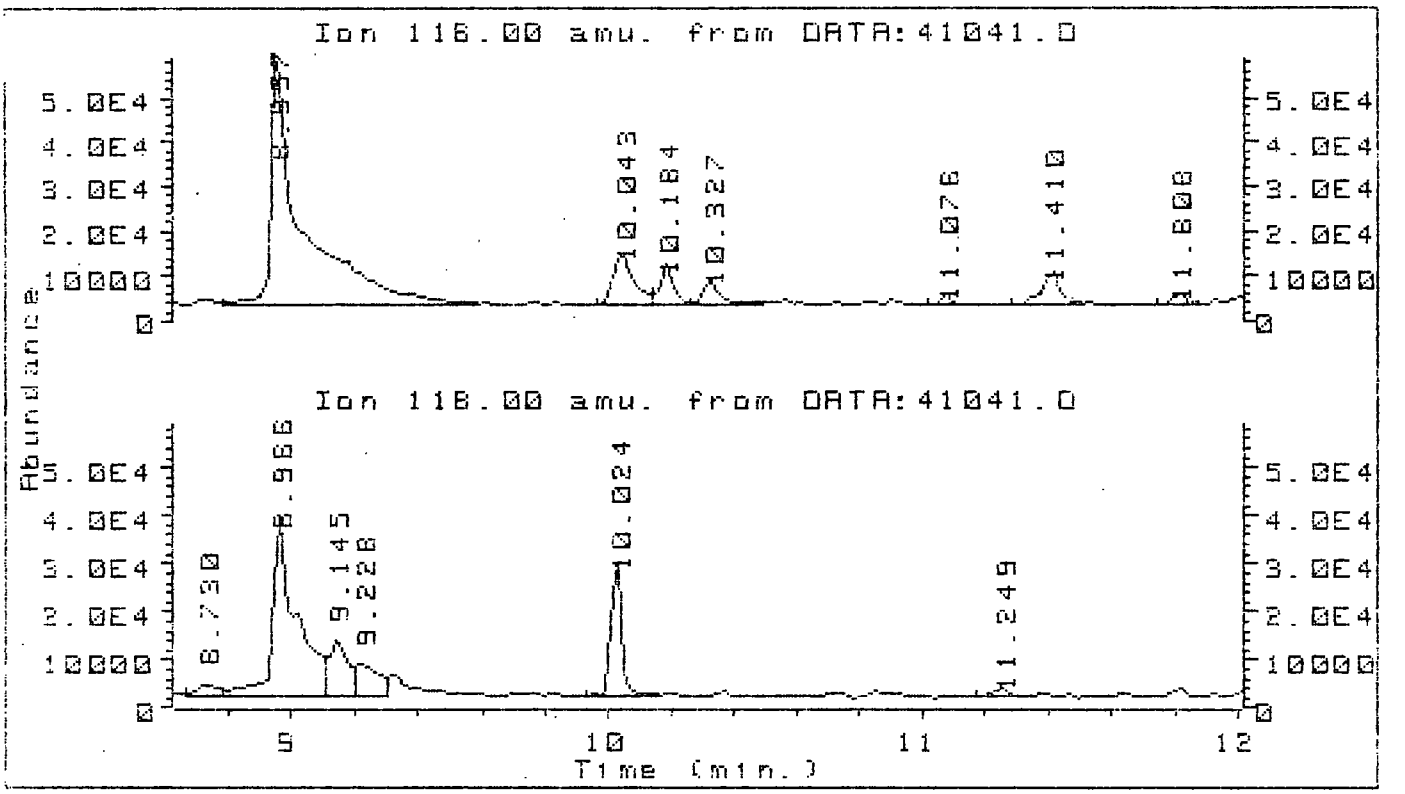
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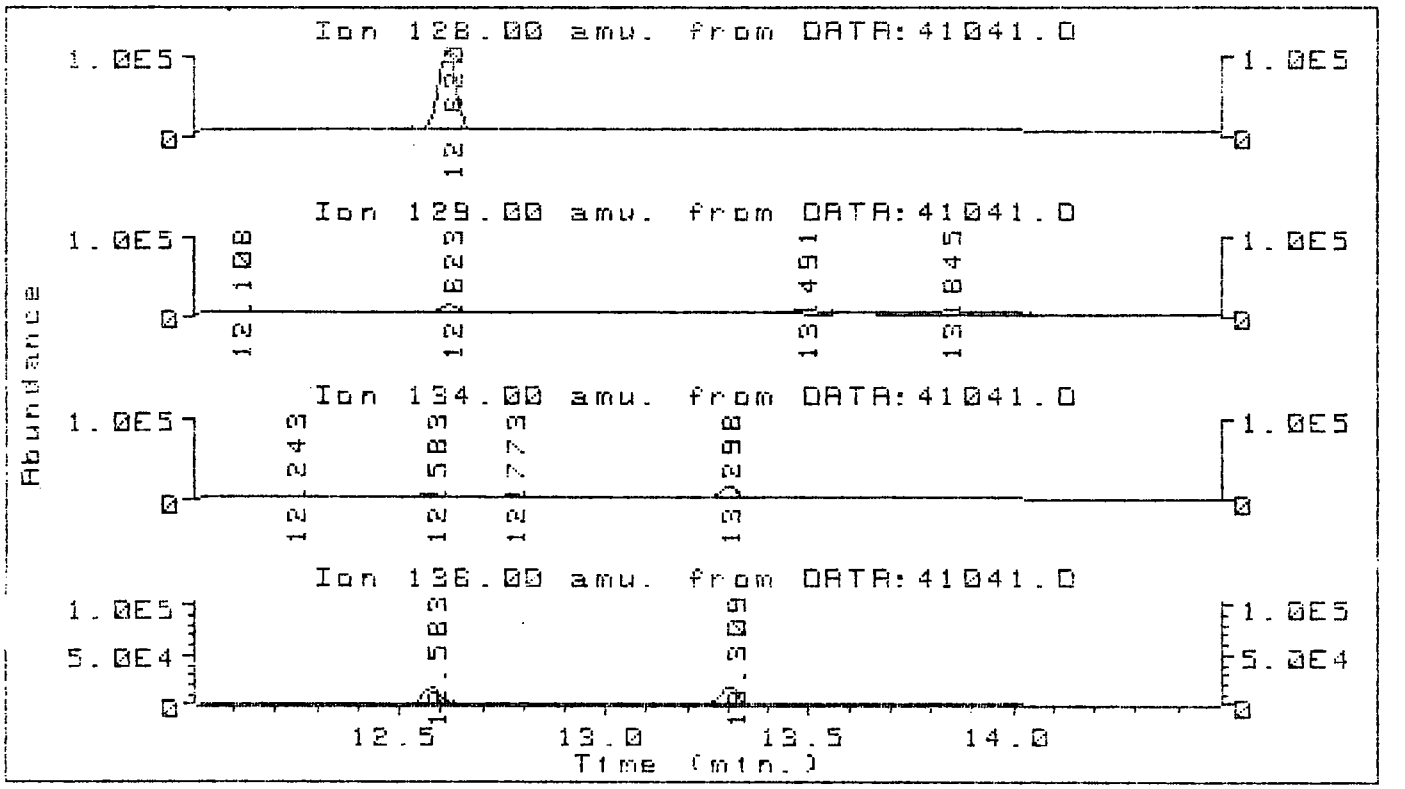
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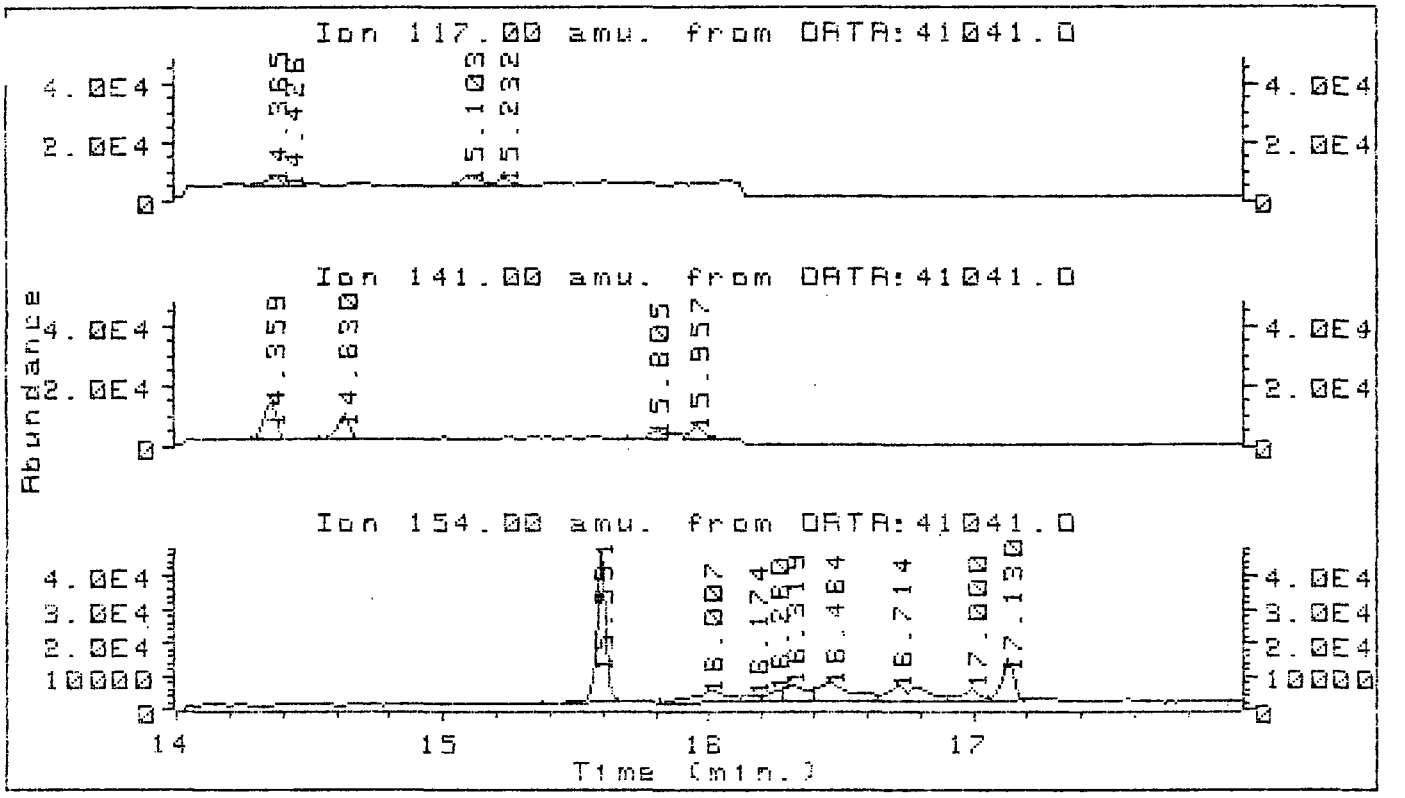
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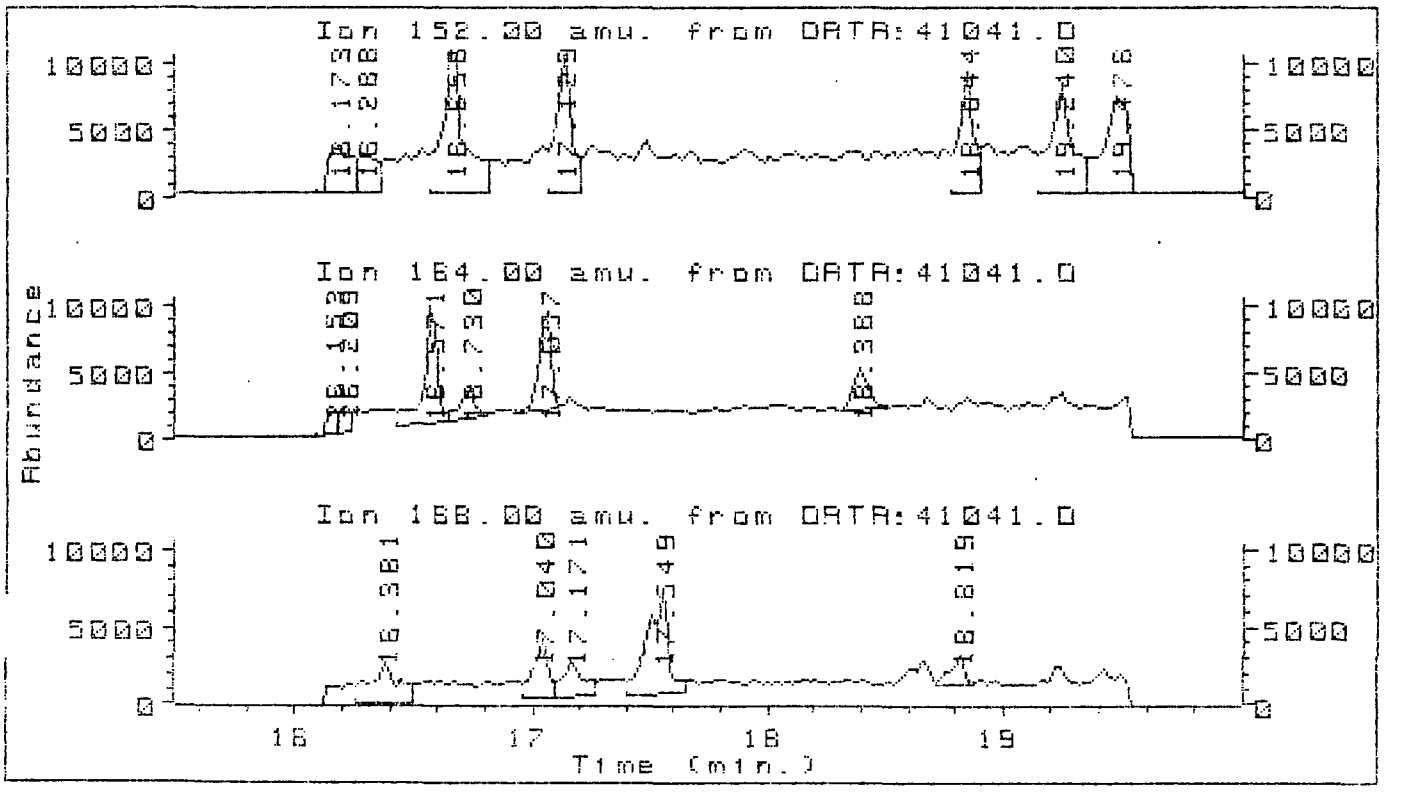
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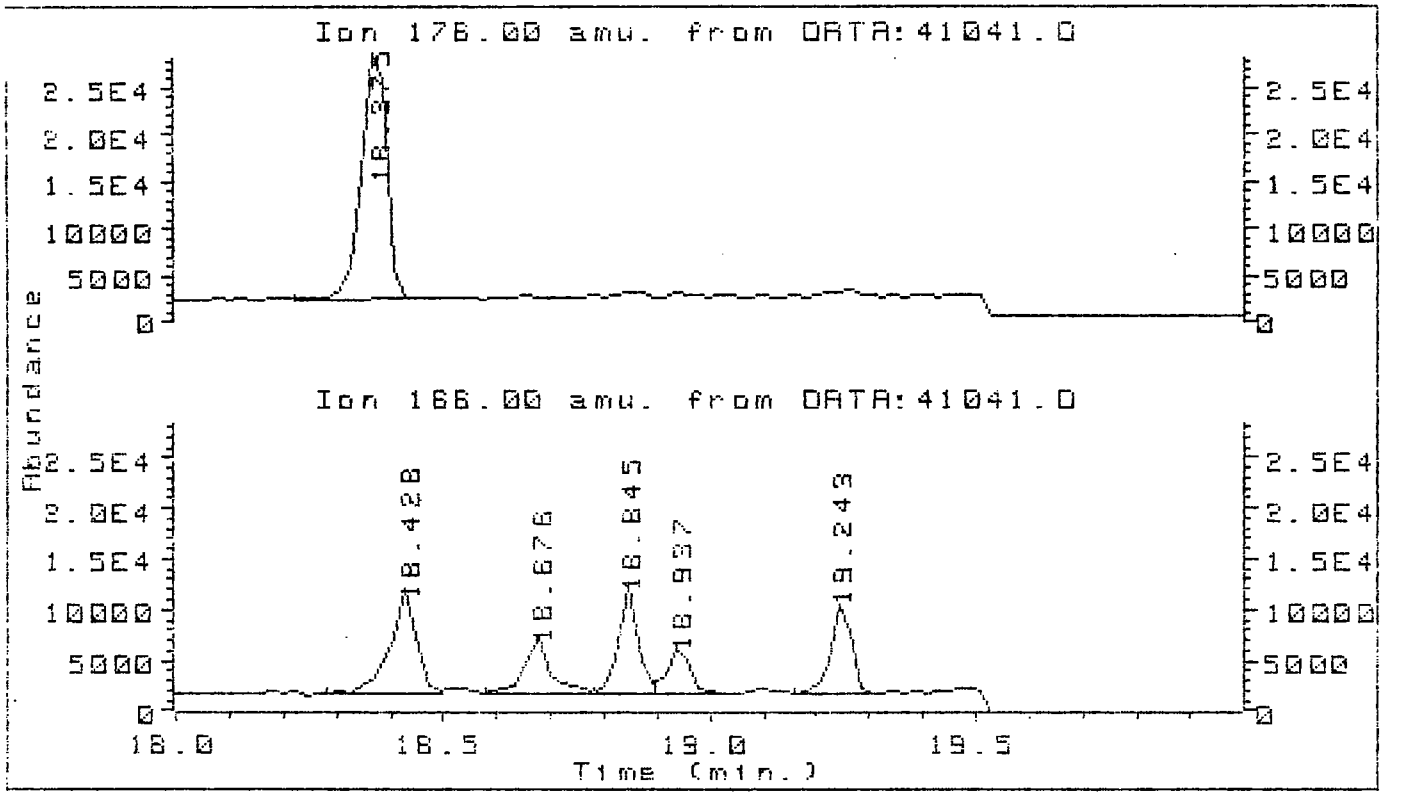
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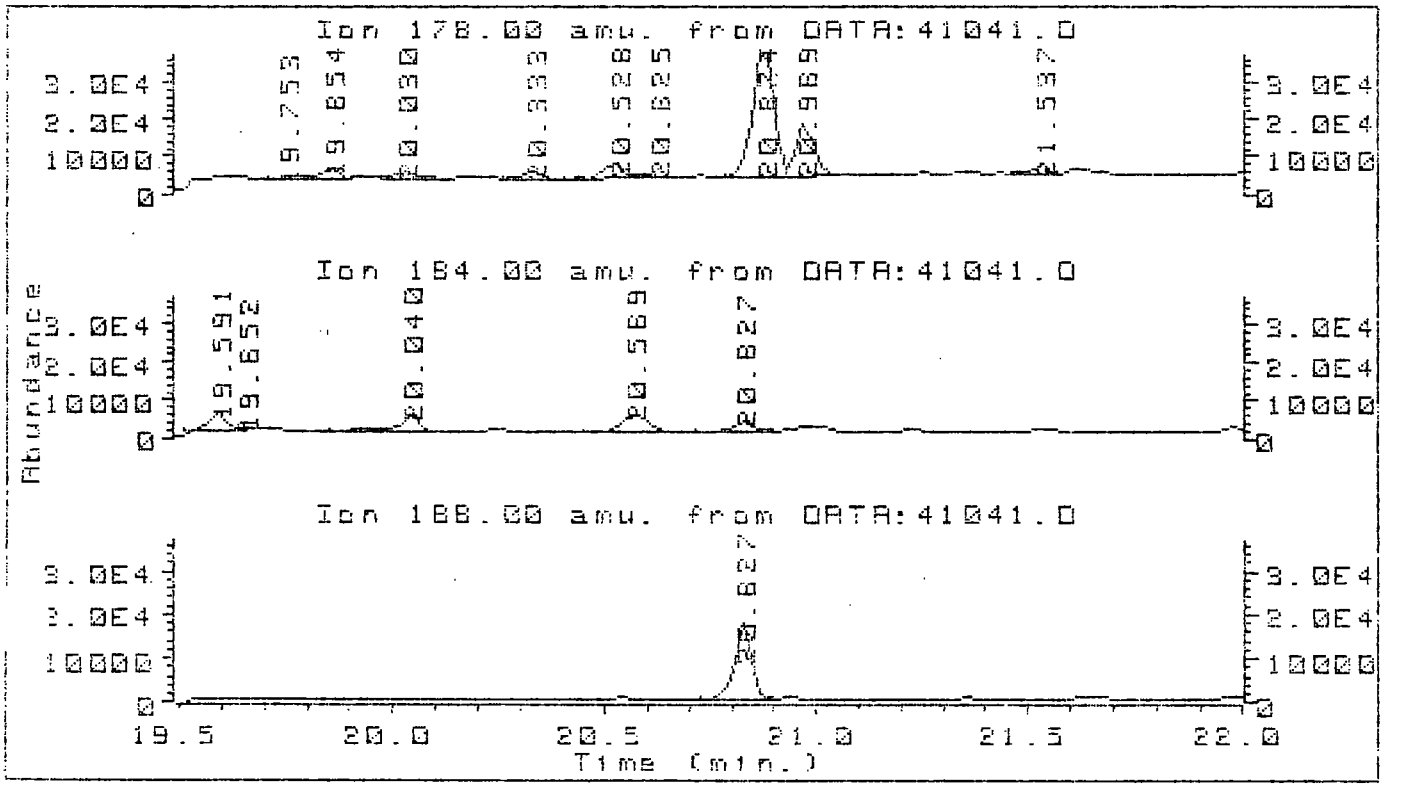
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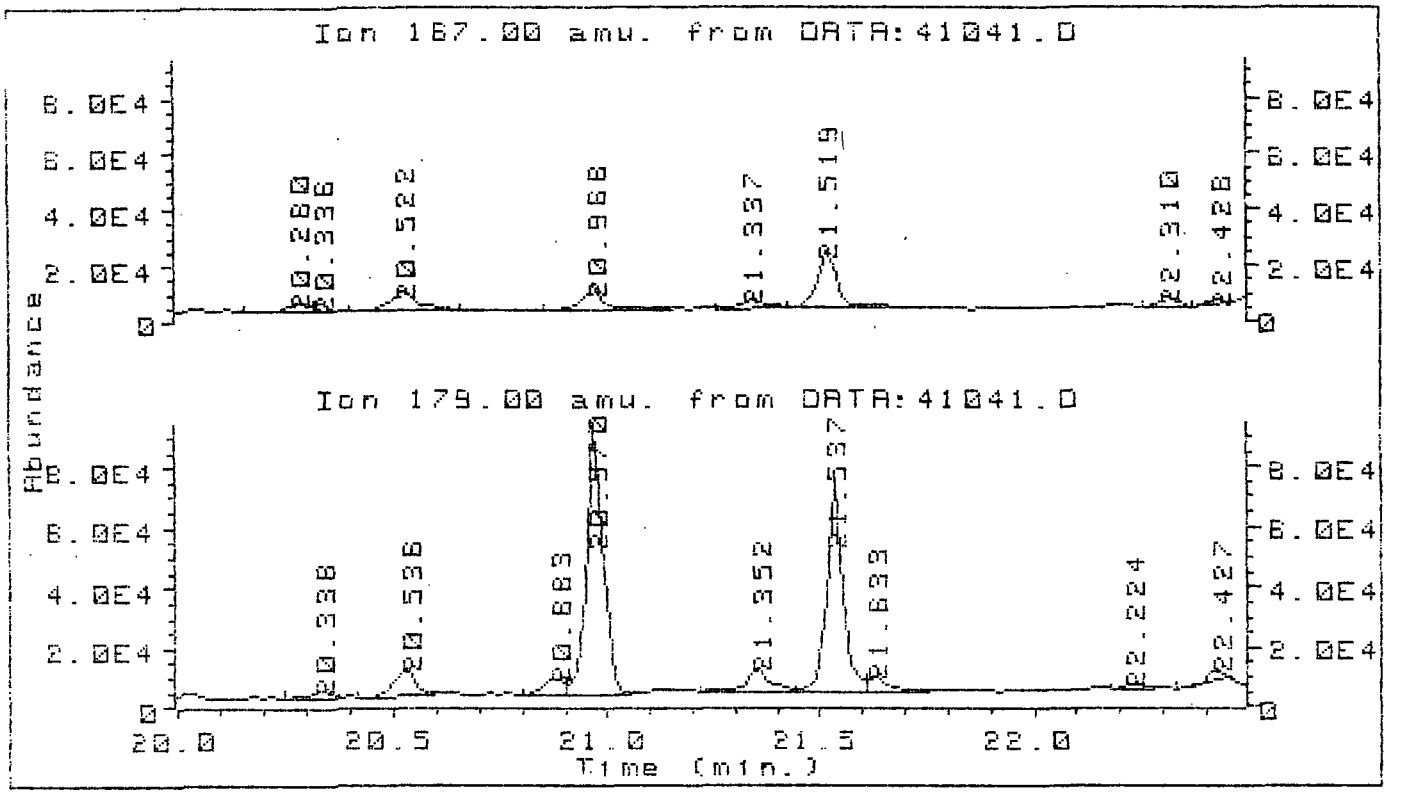
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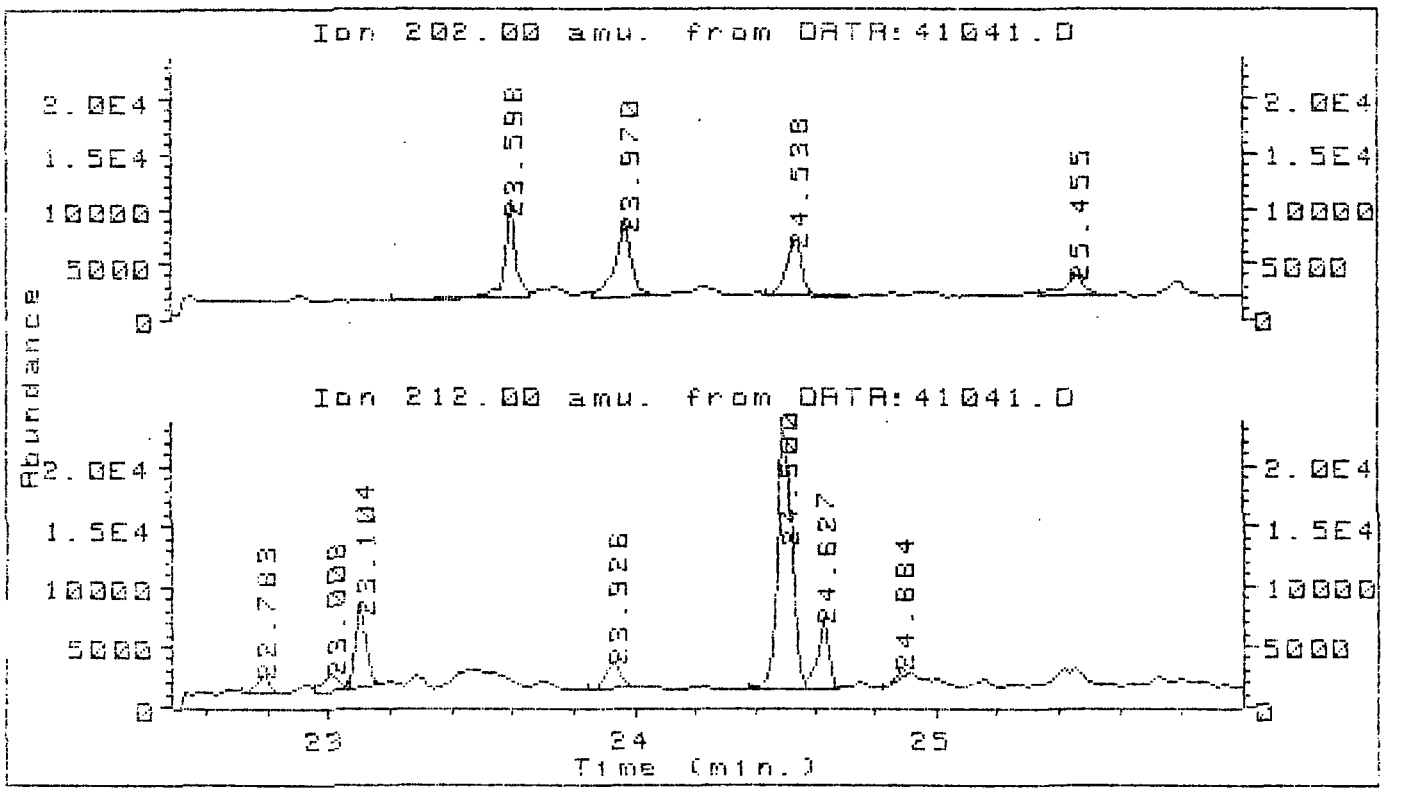
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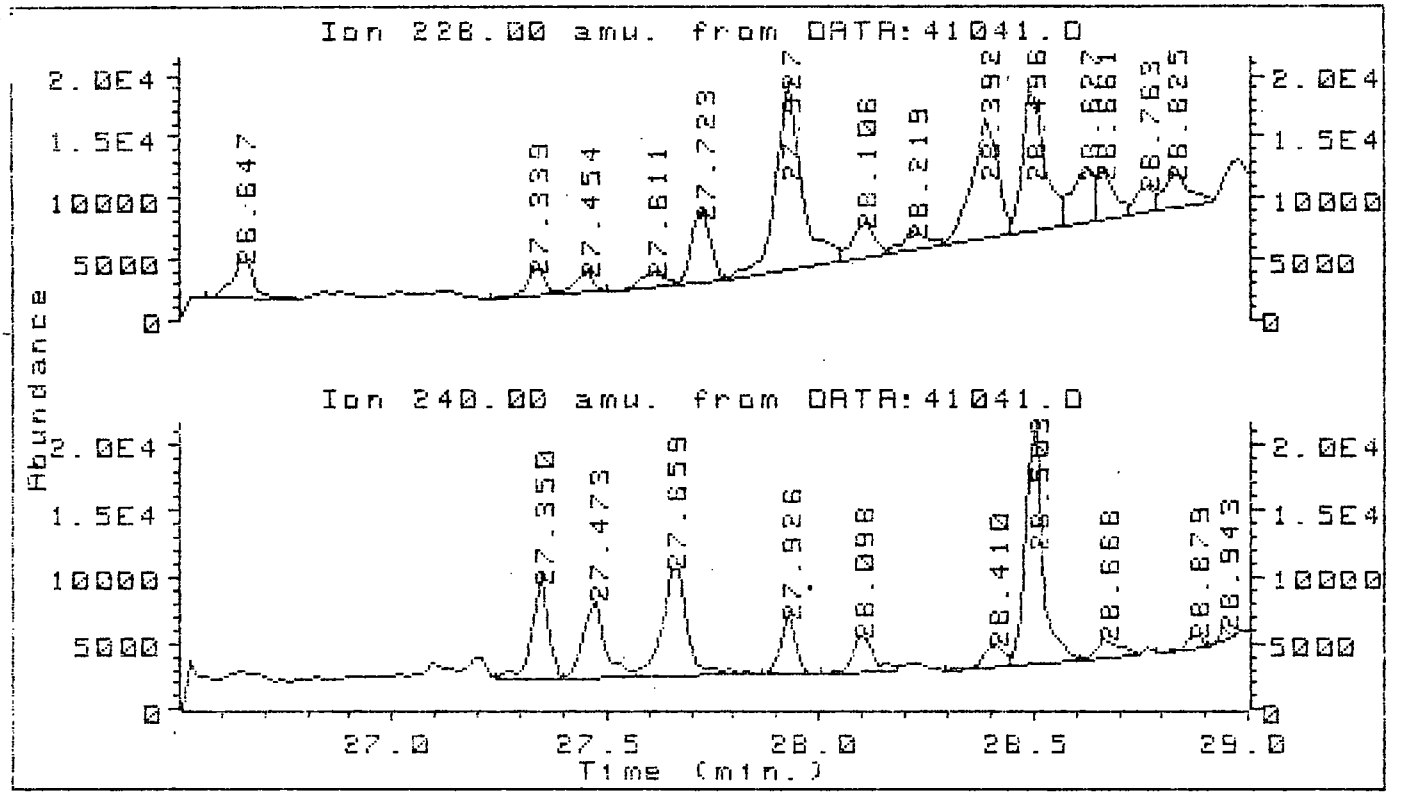
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Abundance
Time (min.)
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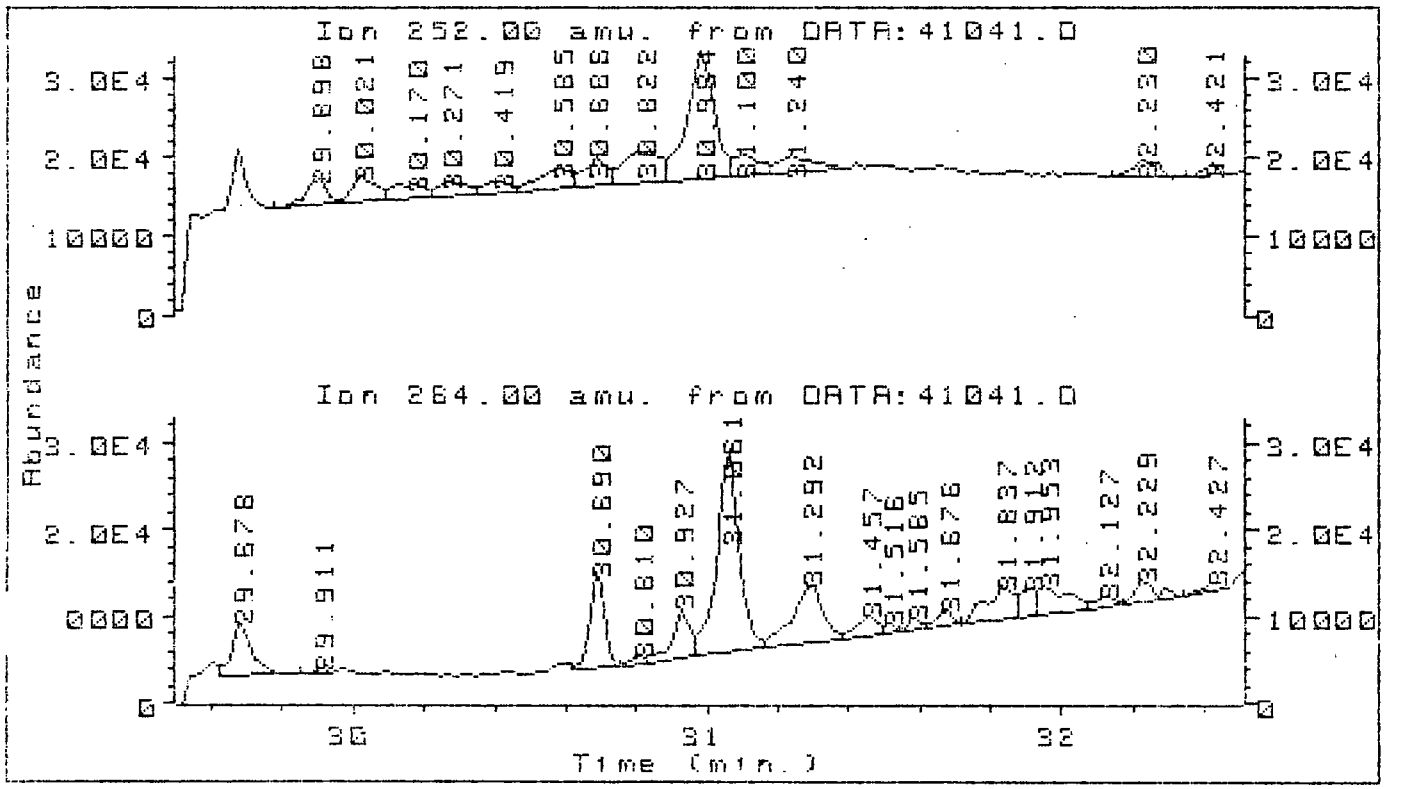
27.5
28.0
28.5
29.0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Time (min.)
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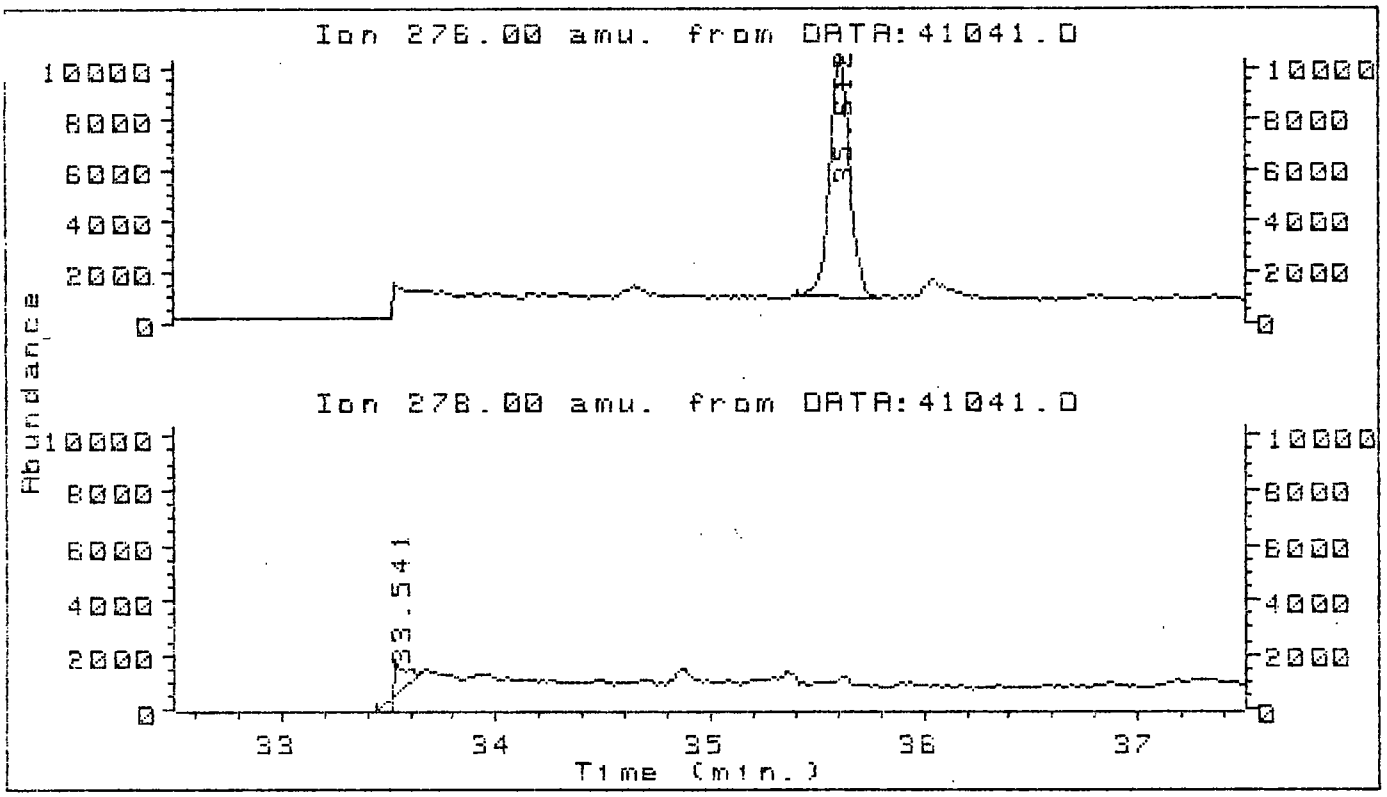
31
32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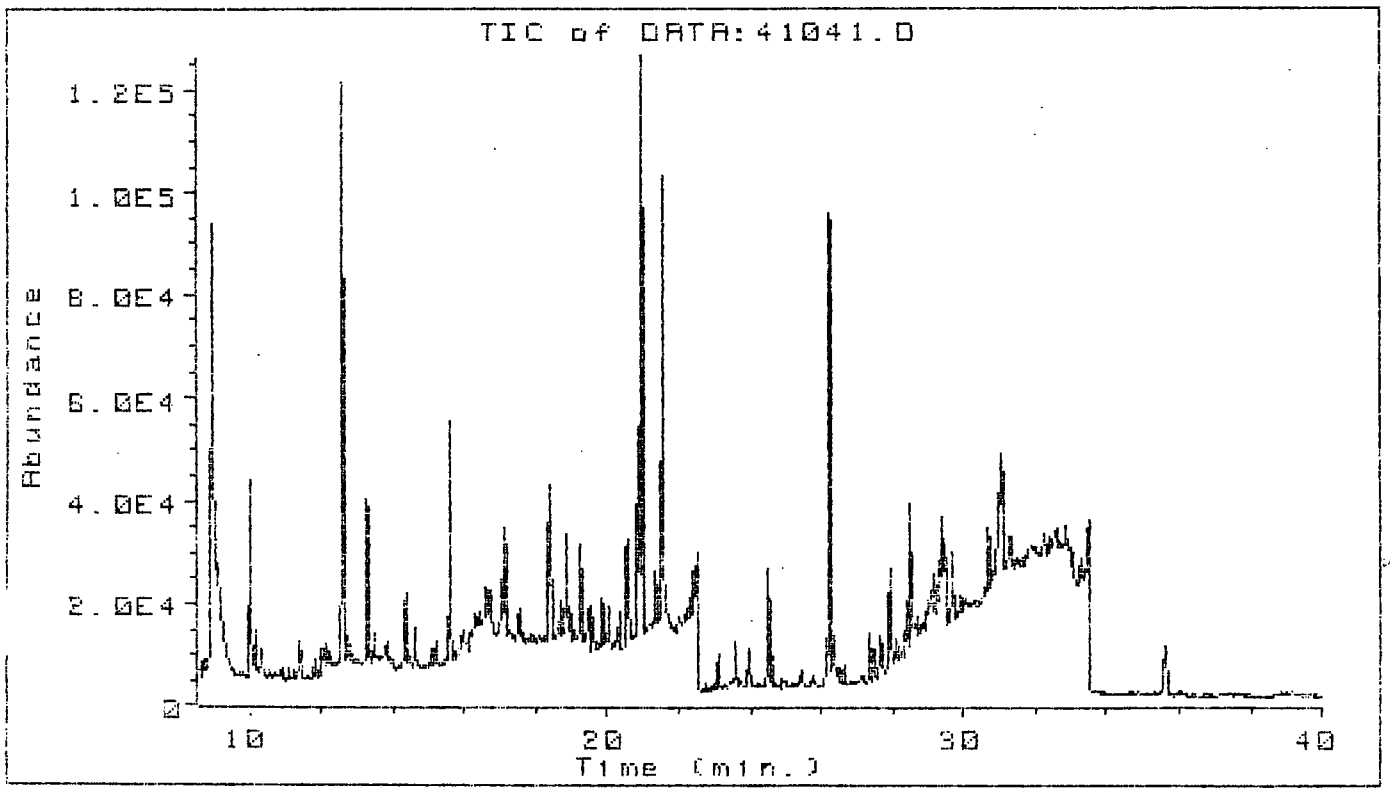
6000
4000
2000
0
33.541
33
34
35
36
37
Time (min.)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Abundance
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8.0E4
6.0E4
4.0E4
2.0E4
0
10
20
30
40
Time (min.)

ERT #	: 41042	Extract Vol., ml	0.500
Field ID	: MS-10	Sample Vol., L	4.000
GC/MS File #	: 41042	Date Analyze: 01/29/87	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	50.000	17.049	177037
Phenanthrene-d10	50.000	20.834	275754
Benz(a)pyrene-d12	50.000	31.038	282333

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.319	0.000	0.000	1	0.000
dihydroinden	0.799	0.000	0.000	1	0.000
indene	1.228	0.597	10.183	914076	26.286
Naphthalene-d8 (Surr.)	1.923	0.738	12.574	357858	6.570
Naphthalene	2.964	0.740	12.613	9431533	112.338
Benz(b)thio	1.736	0.000	0.000	1	0.000
Quinoline	0.996	0.791	13.494	854545	30.299
Indole	1.508	0.846	14.422	50484	1.182
2-methyl	1.348	0.842	14.354	1250863	32.749
1-methyl	1.323	0.858	14.629	45407	1.212
Biphenyl	2.558	0.915	15.595	339503	4.685
Acenaphthylene	1.736	0.000	0.000	1	0.000
Acenaphthene	1.221	0.000	0.000	1	0.000
Dibenzofuran	1.485	0.000	0.000	1	0.000
Group II					
Flourene-d10 (Surr.)	0.653	0.881	18.359	151031	5.239
Fluorene	1.110	0.885	18.431	1209681	24.707
Dibenzothiophene	1.116	0.000	0.000	1	0.000
Phenanthrene	1.916	1.002	20.876	77221	0.913
Anthracene	1.176	0.000	0.000	1	0.000
Acridine	0.659	0.000	0.000	1	0.000
Carbazole	0.824	0.000	0.000	1	0.000
Fluoranthene	1.361	0.000	0.000	1	0.000
Pyrene-d10 (Surr.)	0.851	1.175	24.483	267411	7.125
Pyrene	1.397	0.000	0.000	1	0.000
Group III					
Benz(a)anthracene	1.599	0.000	0.000	1	0.000
Chrysene-d12 (Surr.)	1.008	0.891	27.663	243466	5.345
Chrysene	1.704	0.893	27.717	616522	8.012
Benzofluoranthenes	2.109	0.000	0.000	1	0.000
Benz(e)pyrene	1.856	0.997	30.959	984511	11.745
Benz(a)pyrene	1.867	0.000	0.000	1	0.000
Perylene-d12 (Surr.)	1.005	1.007	31.255	283676	6.248
Perylene	1.634	0.000	0.000	1	0.000
Indeno(123,cd)pyrene	2.072	0.000	0.000	1	0.000
Dibenz(ah)anthracene	1.732	0.000	0.000	1	0.000
Dibenzo(ghi)perylene	2.107	1.145	35.529	353491	3.714

ERT #: 41042

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 1/29/87	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	6.57	9.90	66.36	42-102	2.430	52.52%
Flourene-d10 (Surr.)	5.24	9.50	55.15	60-128	0.645	55.87%
Chrysene-d12 (Surr.)	5.34	9.80	54.54	10-54	0.969	56.76%
Pyrene-d10 (Surr.)	7.13	10.05	70.90		0.987	61.10%
Perylene-d12 (Surr.)	6.25	9.40	66.47		0.887	75.32%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.		ANALYTICAL RESULT (NG/L)	
QUINOLINE	1.20	1.90	30.30	-3.4=26.9 22.5	~~30.3~~ 26.9	~~135~~ 120
BENZO (A) ANTHRACENE	2.80	4.40	0.00		ND	
CHRYSENE	2.80	4.40	8.01	21.4	8.0	~~13~~ 37
BENZOFLUORANTHENES	6.20	9.70	0.00		ND	
BENZO (A) PYRENE	2.20	3.40	0.00		ND	
INDENO (1,2,3-CD) PYRENE	2.80	4.40	0.00		ND	
DIBENZO (A,H) ANTHRACENE	2.20	3.40	0.00		ND	
BENZO (G,H,I) PERYLENE	3.40	5.30	3.71	19.4	< 5.3	19
		TOTAL CARCINOGENIC PAH			38.31	

OTHER PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.		ANALYTICAL RESULT (NG/L)	
2,3-BENZOFURAN	1.20	1.90	0.00		ND	
2,3-DIHYDROINDENE	2.20	3.40	0.00	-2.4=23.9	ND	119 ✓
INDENE	1.80	2.90	26.29	20.0	23.9 ~~26.3~~	~~132~~
NAPHTHALENE	30.00	47.00	112.34	114.3	112.3	98 ✓
BENZO (B) THIOPHENE	1.40	2.20	0.00	Unst	ND	
INDOLE	1.20	1.90	1.18		ND	
2-METHYLNAPHTHALENE	3.20	5.00	32.75	-6.3=26.5 28.9	26.5 ~~32.7~~	~~113~~ 92
1-METHYLNAPHTHALENE	2.00	3.10	1.21		ND	
BIPHENYL	11.00	17.00	4.69		ND	
ACENAPHTHYLENE	1.10	1.70	0.00		ND	
ACENAPHTHENE	0.83	1.30	0.00		ND	
DIBENZOFURAN	0.77	1.20	0.00		ND	
FLOURENE	0.56	0.88	24.71	-1.47=23.2 26.9	23.2 ~~24.7~~	~~42~~ 86
DIBENZOTHIOPHENE	4.00	6.30	0.00		ND	
PHENANTHRENE	2.00	3.10	0.91		ND	
ANTHRACENE	2.20	3.40	0.00		ND	
ACRIDINE	1.60	2.50	0.00		ND	
CARBAZOLE	1.70	2.60	0.00		ND	
FLUORANTHENE	2.80	4.40	0.00		ND	
PYRENE	2.60	4.10	0.00		ND	
BENZO (E) PYRENE	0.96	1.50	11.75	-1.29=10.46 16.7	10.5 ~~11.7~~	~~30~~ 63
PERYLENE	1.00	1.60	0.00		ND	
		TOTAL OTHER PAH			207.8	
		TOTAL PAH'S			246.1	

LAP 2-3-87

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MS-10 ERT NO.: 41042

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	~~30~~ 27
BENZO (A) ANTHRACENE	ND
CHRYSENE	8.0
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	< 5.3
TOTAL CARCINOGENIC PAH	~~38~~ 35

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	ND
INDENE	~~26~~ 24
NAPHTHALENE	110
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	~~33~~ 27
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	ND
DIBENZOFURAN	ND
FLOURENE	~~25~~ 23
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	~~12~~ 11
PERYLENE	ND
TOTAL OTHER PAH	~~210~~ 195
TOTAL PAH'S	~~250~~ 230

ND = Concentration < 95% Confidence Interval of MDL

2-3-87

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MS-10 ERT NO.: 41042

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	27
BENZO (A) ANTHRACENE	ND
CHRYSENE	8.0
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	< 5.3
TOTAL CARCINOGENIC PAH	35

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	ND
INDENE	24
NAPHTHALENE	110
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	27
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	ND
DIBENZOFURAN	ND
FLOURENE	23
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	11
PERYLENE	ND
TOTAL OTHER PAH	195
TOTAL PAH'S	230

ND = Concentration < 95% Confidence Interval of MDL

*** Internal Standard ***

Operator: LOUIE G. POUNDS 29 Jan 87
Method File Name : PAH.M
Sample Info : ERT#41042 MS-10 LAB FORT .; THU. 29 JAN. 87
Misc Info: 1.0 UL SAMPLE (0.5ML + 25UL IS MS860399)
Integration File Name : DATA:41042.I
Bottle Number : 0

ST. LOUIS PARK FPT PAH

Last Update: 12 Nov 86 7:13 pm
Reference Peak Window: 1.00 % of Retention Time
Non-Reference Peak Window: 1.00 % of Retention Time
Sample Amount: 0.000 Uncalibrated Peak RF: 1.000 Multiplier: 1.000

Peak Num	Peak Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amou
1		1	--------	Mass	118.00	amu	2,3-BENZOFUR	*** Not	Foun
2		1	--------	Mass	118.00	amu	2,3-DIHYDROI	*** Not	Foun
3		1	~~10.183~~	Mass	116.00	amu	INDENE	914076	Foun
4		1BV	12.574	Mass	136.00	amu	NAPHTHALENE,	357858	10.44
5		1PV	12.613	Mass	128.00	amu	NAPTHALENE	9431533	336.5
6		1	--------	Mass	134.00	amu	BENZO(b)THIO	*** Not	Foun
7		1PV	13.494	Mass	129.00	amu	QUINOLINE	854545	73.92
8		1VV	14.422	Mass	117.00	amu	INDOLE	50484	2.640
9		1PV	14.354	Mass	141.00	amu	2-METHYLNAPT	1250863	69.49
10		1VB	14.629	Mass	141.00	amu	1-METHYLNAPT	45407	
11		1PV	15.595	Mass	154.00	amu	BIPHENYL	339503	
12		1	--------	Mass	152.00	amu	ACENAPHTHYLE	*** Not	Found
13	+ISTD	1	~~17.049~~	Mass	164.00	amu	ACENAPTHTHEN	177037	Not Found
14		1	--------	Mass	154.00	amu	ACENAPHTHENE	*** Not	Found
15		1	--------	Mass	168.00	amu	DIBENZOFURAN	*** Not	Found
16		2PV	18.359	Mass	176.00	amu	FLUORENE, d1	151031	70.07
17		2PV	18.431	Mass	166.00	amu	FLUORENE	1209681	398.7
18		2	--------	Mass	184.00	amu	DIBENZOTHIOP	*** Not	Found
19	+ISTD	2PB	20.834	Mass	188.00	amu	PHENANTHRENE	275754	62.50
20		2BV	20.876	Mass	178.00	amu	PHENANTHRENE	77221	
21		2	--------	Mass	178.00	amu	ANTHRACENE	*** Not	Found
22		2	--------	Mass	179.00	amu	ACRIDINE	*** Not	Found
23		1	--------	Mass	167.00	amu	CARBAZOLE	*** Not	Found
24		1	--------	Mass	202.00	amu	FLUORANTHENE	*** Not	Found
25		2BV	24.483	Mass	212.00	amu	PYRENE, d10	267411	72.21
26		2	--------	Mass	202.00	amu	PYRENE	*** Not	Found
27		3BB	~~27.717~~	Mass	228.00	amu	BENZ(a)ANTHR	616522	85.33
28		3PV	27.663	Mass	240.00	amu	CHYRSENE, d(	243466	94.92
29		3	~~27.717~~	Mass	228.00	amu	CHYRSENE	616522	Not Found
30		3	--------	Mass	252.00	amu	BENZOFLUORAN	*** Not	Found
31		3	--------	Mass	252.00	amu	BENZOFLUORAN	*** Not	Found
32		3PV	30.959	Mass	252.00	amu	BENZ(e)PYREN	984511	90.67
33	+ISTD	3BV	31.038	Mass	264.00	amu	BENZ(a)PYREN	292333	49.60
34		3	--------	Mass	252.00	amu	BENZ(a)PYREN	*** Not	Found
35		3VB	31.255	Mass	264.00	amu	PERYLENE, d1	283676	68.99
36		3	--------	Mass	252.00	amu	PERYLENE	*** Not	Found
37		3	--------	Mass	276.00	amu	INDENO(1,2,3	*** Not	Found
38		3	--------	Mass	278.00	amu	DIBENZ(a,h)A	*** Not	Found
39		3BB	35.529	Mass	276.00	amu	BENZO(g,h,i)	353491	48.52
----------		BV	10.183	Mass	116.00		-Uncalibrated-	914076	91407
----------		PV	12.620	Mass	129.00		-Uncalibrated-	1018433	101843

--------	VV	18.427	Mass	164.00	-Uncalibrated-	214055	214055	ng/mL
--------	PV	20.497	Mass	179.00	-Uncalibrated-	96567	96567	ng/mL
--------	BB	20.490	Mass	167.00	-Uncalibrated-	66768	66768	ng/mL
--------	VV	29.809	Mass	252.00	-Uncalibrated-	12058	12058	ng/mL

Error: Could not find Time Reference Peak
No Peak of Calibration Peak #13's Description at 17.141 +/- 0.086 min.
ror: Could not find Time Reference Peak
Error : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.387 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #2's Description at 10.076 +/- 0.050 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #3's Description at 10.234 +/- 0.051 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #6's Description at 12.807 +/- 0.064 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #12's Description at 16.679 +/- 0.083 min.
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No Peak of Calibration Peak #14's Description at 17.158 +/- 0.086 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #15's Description at 17.576 +/- 0.088 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #18's Description at 20.577 +/- 0.103 min.
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No Peak of Calibration Peak #21's Description at 20.996 +/- 0.105 min.
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No Peak of Calibration Peak #22's Description at 21.125 +/- 0.106 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #23's Description at 21.480 +/- 0.107 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #24's Description at 23.953 +/- 0.120 min.
"or : Could not find Calibration Peak
No Peak of Calibration Peak #26's Description at 24.527 +/- 0.123 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #29's Description at 27.709 +/- 0.139 min.
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No Peak of Calibration Peak #30's Description at 30.254 +/- 0.151 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.305 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #34's Description at 31.095 +/- 0.155 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #36's Description at 31.324 +/- 0.157 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.613 +/- 0.173 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #38's Description at 34.671 +/- 0.173 min.
Error: Could not find all Calibration Peaks

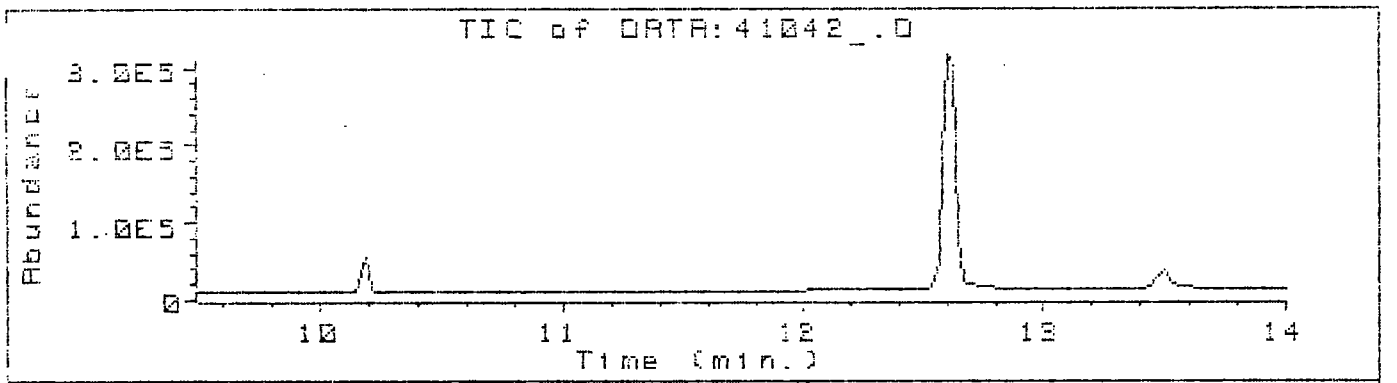
*** Area Percent ***

Report by Retention Time

Operator: LOUIE G. POUNDS 29 Jan 87 2:07 pm
Method File Name : PAH.M
ple Info : ERT#41042 MS-10 LAB FORT .; THU. 29 JAN. 87
sc Info: 1.0 UL SAMPLE (0.5ML + 25UL IS MS860399)
Integration File Name : DATA:41042.I
Bottle Number : 0

Ret Time	Signal Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
10.103	Mass 116.00 amu	BV	914076	41147	100.00	100.00	100.00	100.00

12.574	Mass	130.00	amu	BV	337838	10751	100.00	100.00	100.00	100.00
12.620	Mass	129.00	amu	PV	1018433	29084	9.75	54.38	10.80	100.00
12.613	Mass	128.00	amu	PV	9431533	279034	90.25	97.78	100.00	100.00
13.494	Mass	129.00	amu	PV	854545	18255	79.94	45.62	100.00	83.91
492	Mass	128.00	amu	PV	214440	4585	20.06	2.22	25.09	2.27
14.354	Mass	141.00	amu	PV	1250863	30382	100.00	96.50	100.00	100.00
14.422	Mass	117.00	amu	VV	50484	1105	100.00	100.00	100.00	100.00
14.629	Mass	141.00	amu	VB	45407	1074	100.00	3.50	100.00	3.63
15.595	Mass	154.00	amu	PV	339503	11539	100.00	100.00	100.00	100.00
17.049	Mass	164.00	amu	PV	177037	4428	100.00	45.27	100.00	82.71
18.359	Mass	176.00	amu	PV	151031	4372	100.00	100.00	100.00	100.00
18.431	Mass	166.00	amu	PV	1209681	33639	84.97	100.00	100.00	100.00
18.427	Mass	164.00	amu	VV	214055	5607	15.03	54.73	17.70	100.00
20.497	Mass	179.00	amu	PV	96567	2360	59.12	100.00	100.00	100.00
20.490	Mass	167.00	amu	BB	66768	1680	40.88	100.00	69.14	100.00
20.834	Mass	188.00	amu	PB	275754	7560	100.00	100.00	100.00	100.00
20.876	Mass	170.00	amu	BV	77221	1625	100.00	100.00	100.00	100.00
24.483	Mass	212.00	amu	BV	267411	7775	100.00	100.00	100.00	100.00
.663	Mass	240.00	amu	PV	243466	6840	100.00	100.00	100.00	100.00
27.717	Mass	228.00	amu	BB	616522	16460	100.00	100.00	100.00	100.00
29.609	Mass	252.00	amu	VV	12058	244	100.00	1.21	100.00	1.22
30.959	Mass	252.00	amu	PV	984511	24322	100.00	98.79	100.00	100.00
31.038	Mass	264.00	amu	BV	282333	6419	100.00	49.88	100.00	99.53
31.255	Mass	264.00	amu	VB	283676	6462	100.00	50.12	100.00	100.00
35.529	Mass	276.00	amu	BB	353491	5077	100.00	100.00	100.00	100.00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Abundance
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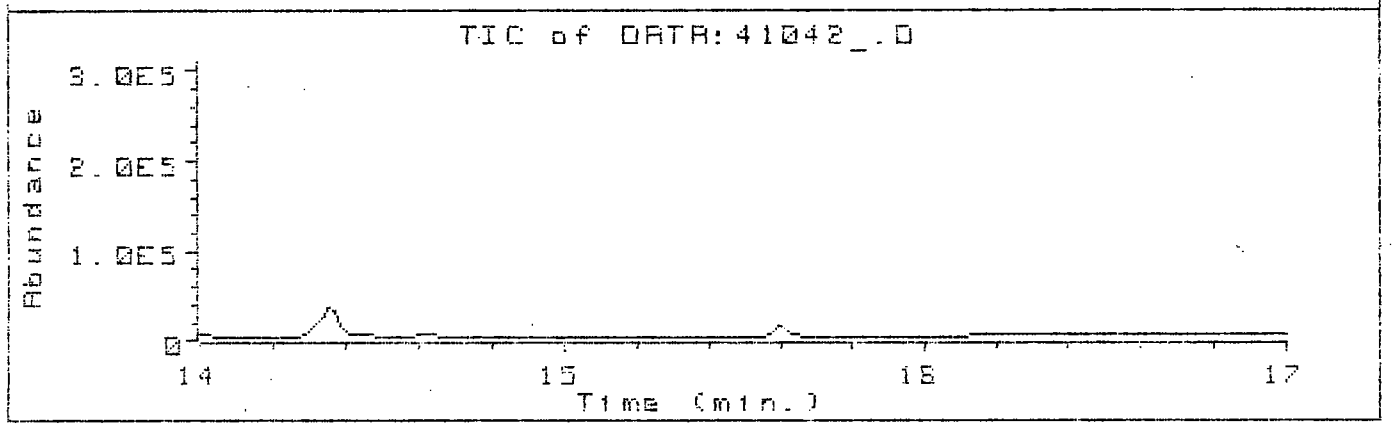
10
11
12
13
14
Time (min.)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Abundance
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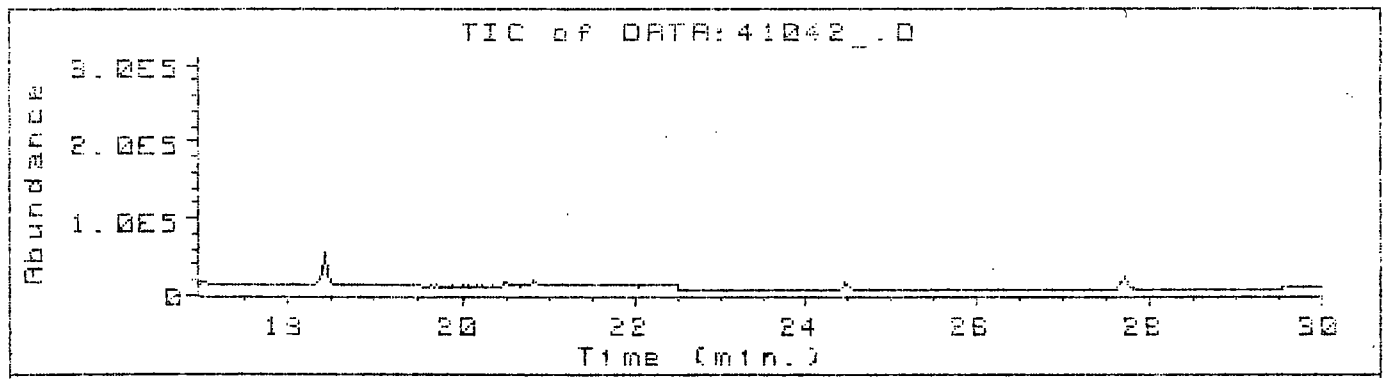
2.0E5
1.0E5
0
14
15
16
17
Time (min.)


TIC of DATA:41042_.D
Abundance
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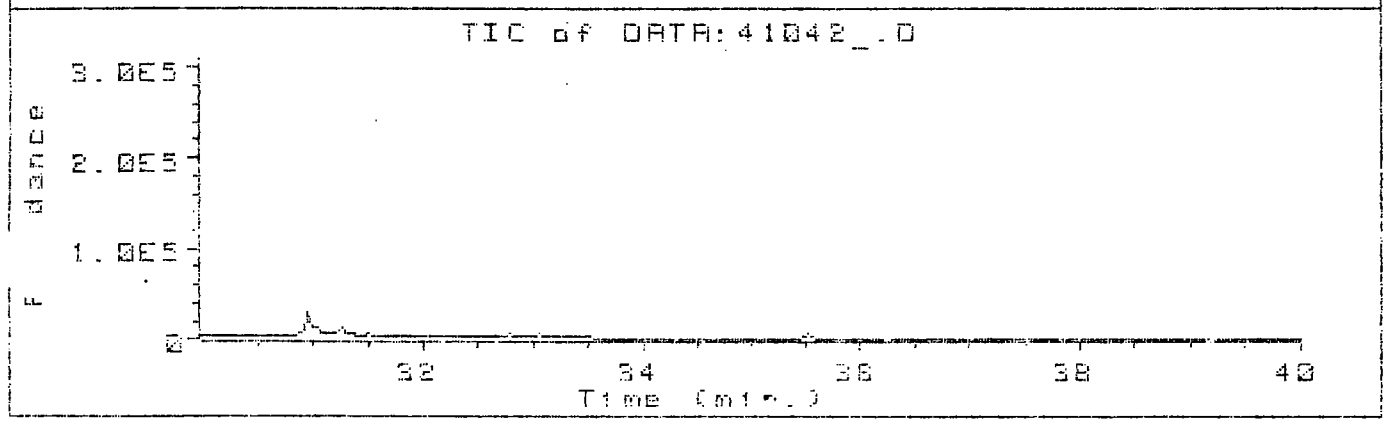
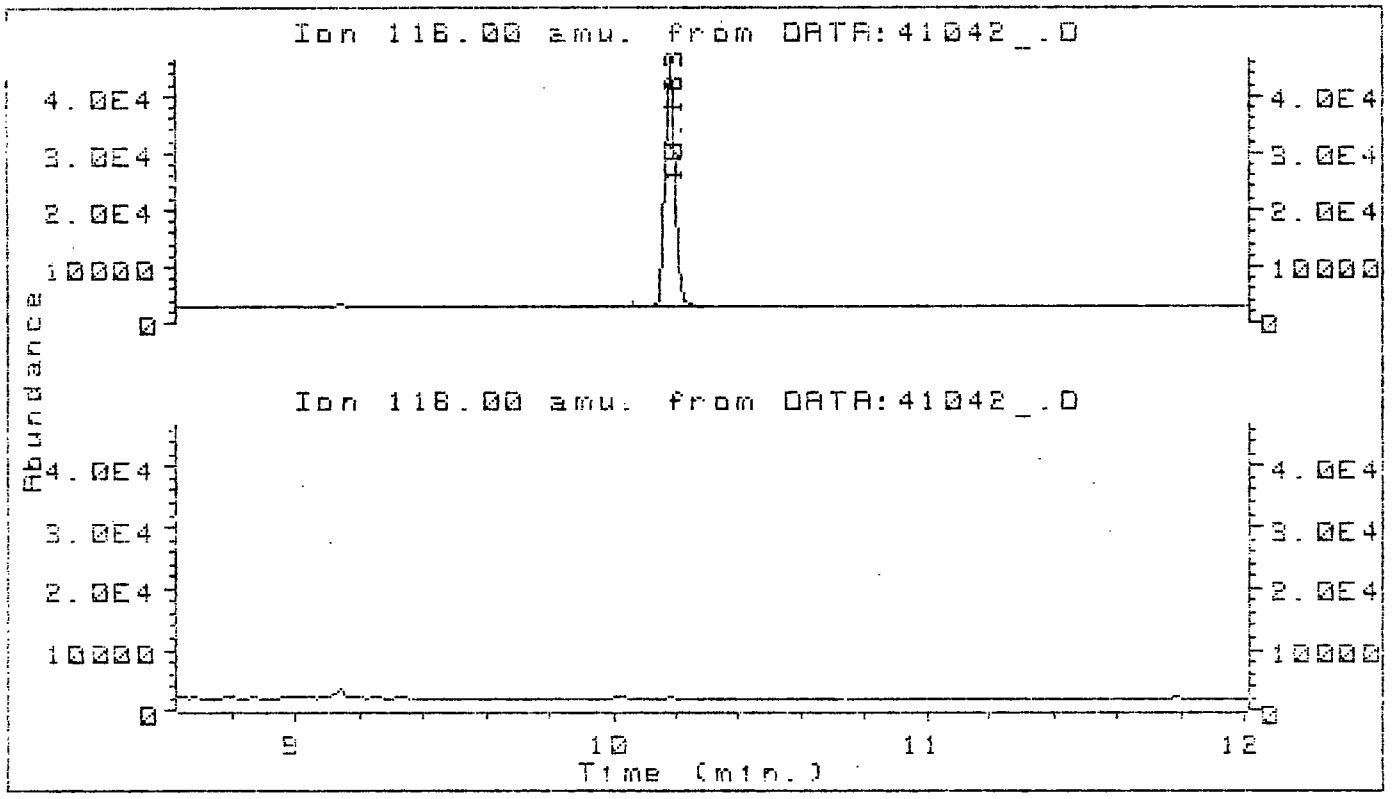
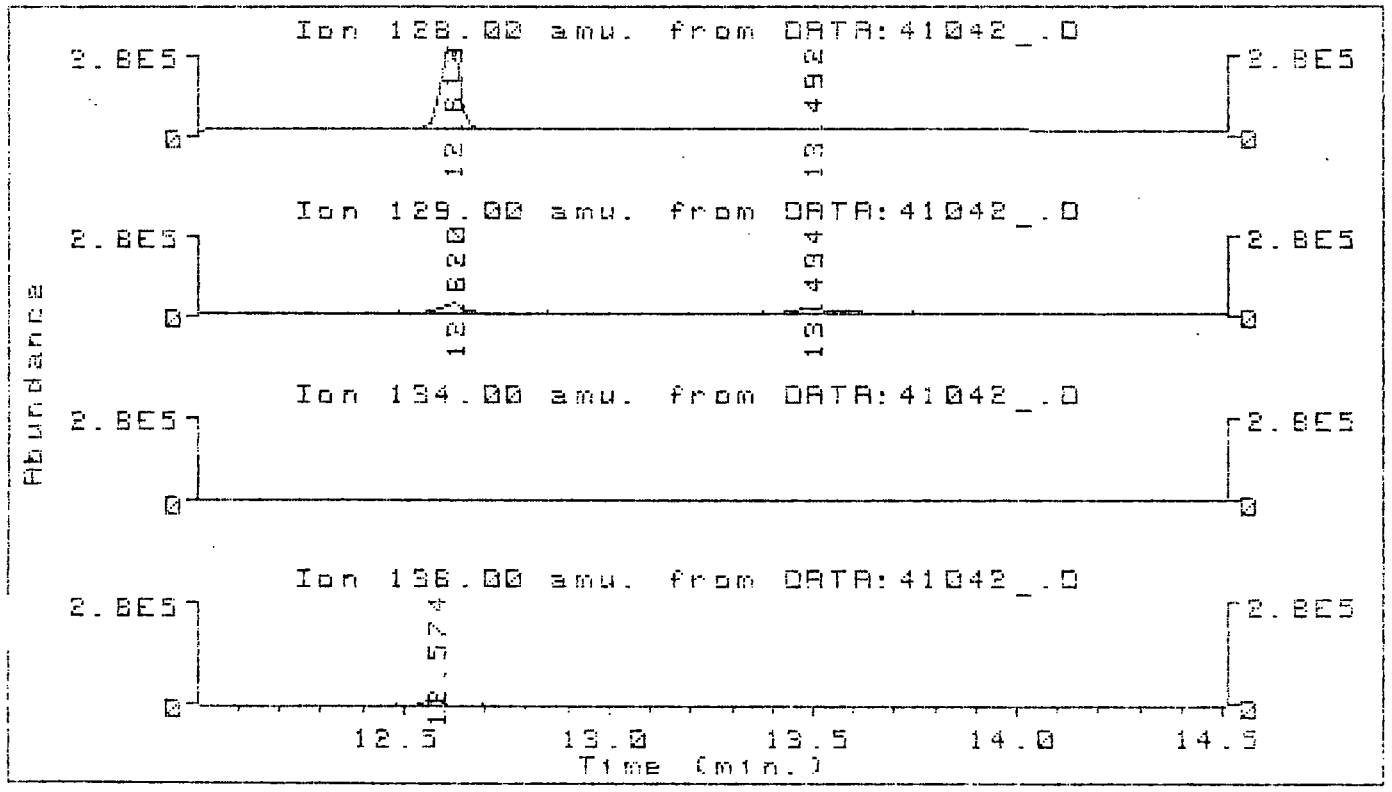
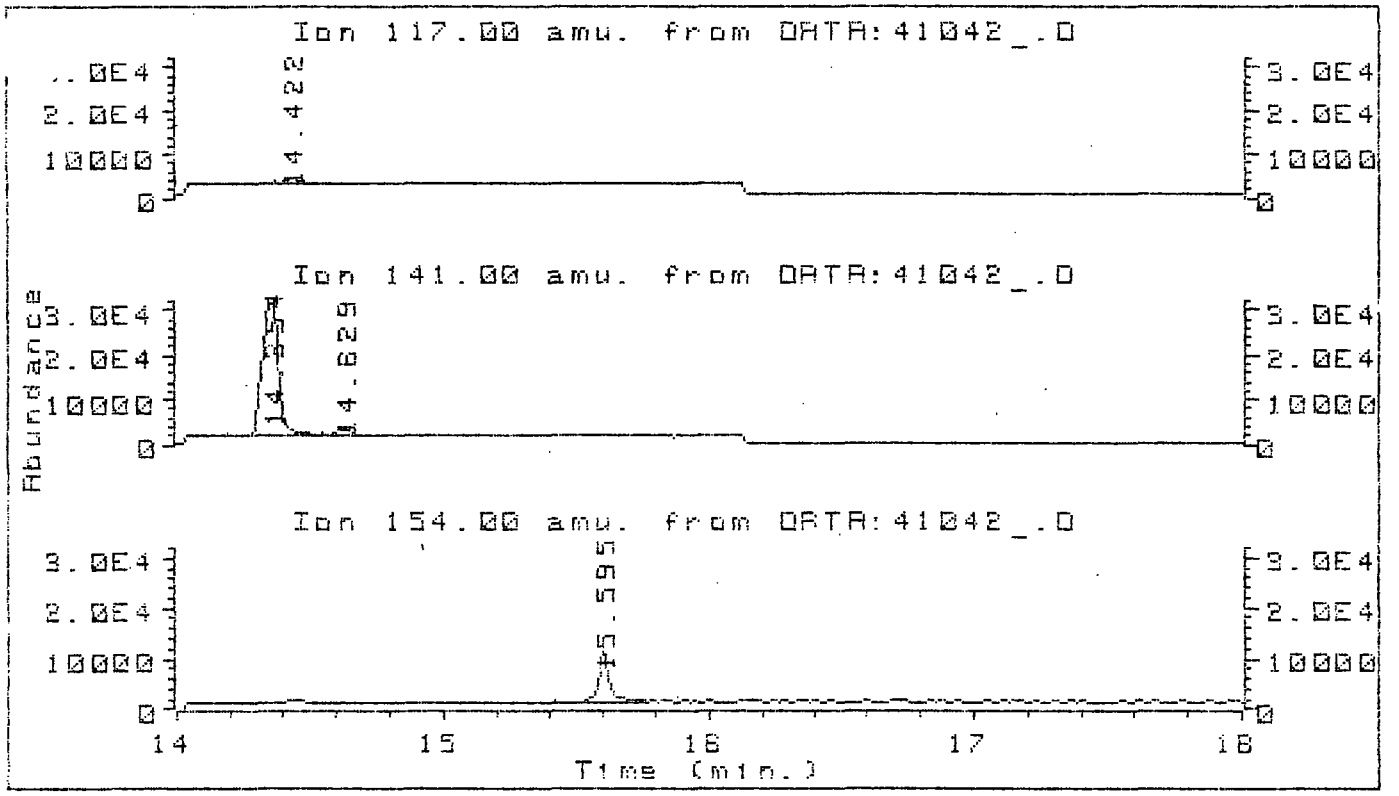
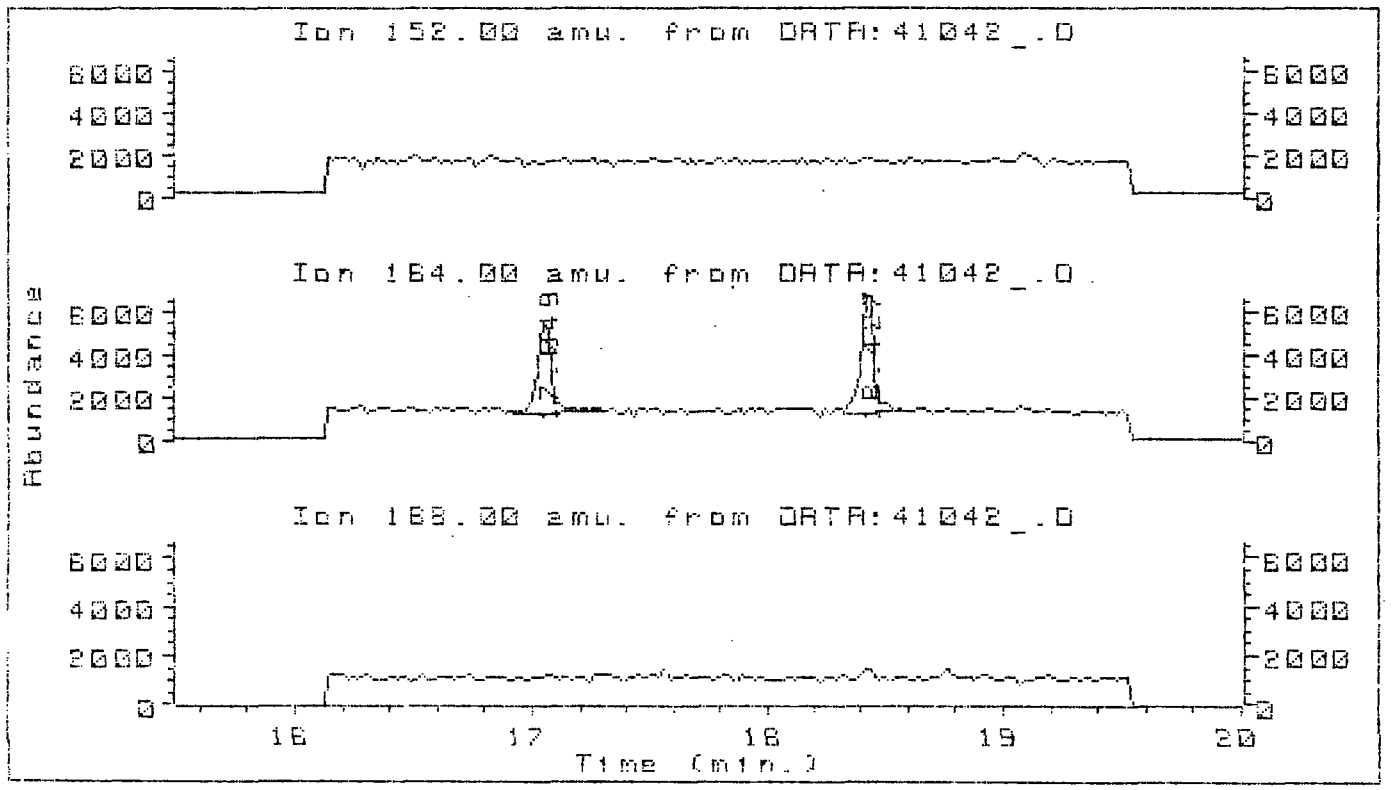
2.0E5
1.0E5
0
18
20
22
24
26
28
30
Time (min.)


TIC of DATA:41042_.D
3.0E5
2.0E5
1.0E5
0
32
34
36
38
40
Time (min.)


Ion 116.00 amu. from DATA:41042_.D
Ion 118.00 amu. from DATA:41042_.D
Abundance
4.0E4
3.0E4
2.0E4
10000
0
9
10
11
12
Time (min.)


Ion 128.00 amu. from DATA:41042_.D
Ion 129.00 amu. from DATA:41042_.D
Ion 134.00 amu. from DATA:41042_.D
Ion 136.00 amu. from DATA:41042_.D
Abundance
2.8E5
0
12.5
13.0
13.5
14.0
14.5
Time (min.)


Ion 117.00 amu. from DATA:41042_.D
Ion 141.00 amu. from DATA:41042_.D
Ion 154.00 amu. from DATA:41042_.D
Abundance
Time (min.)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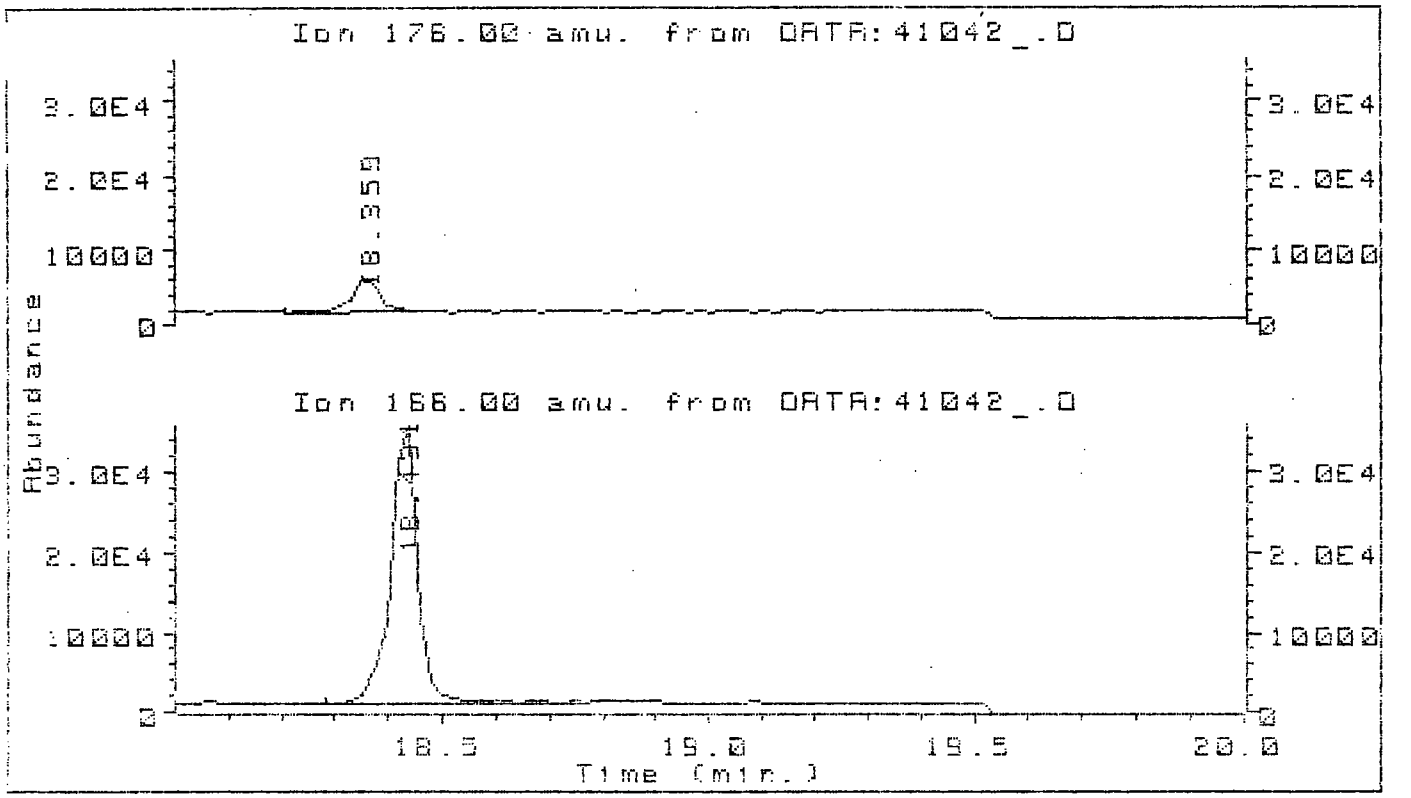
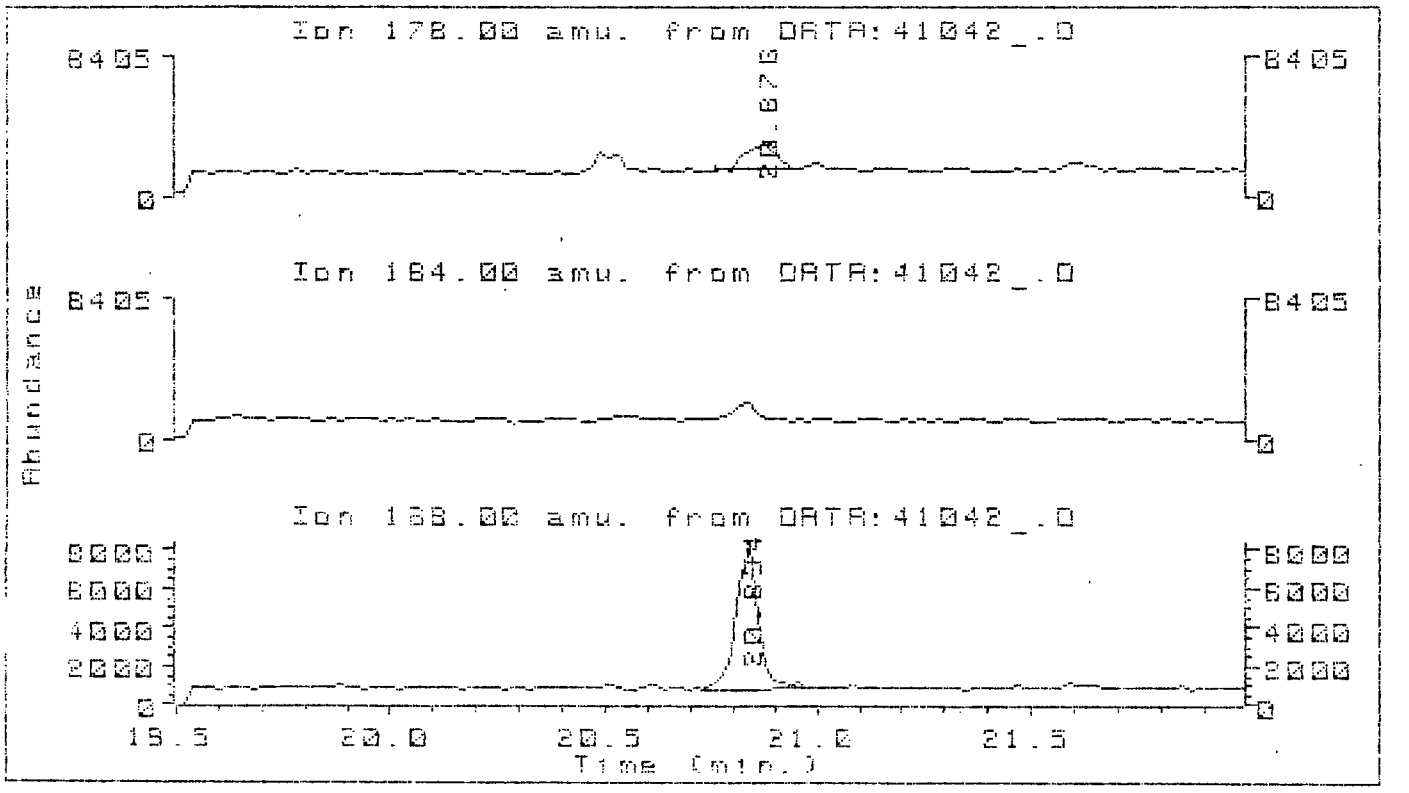
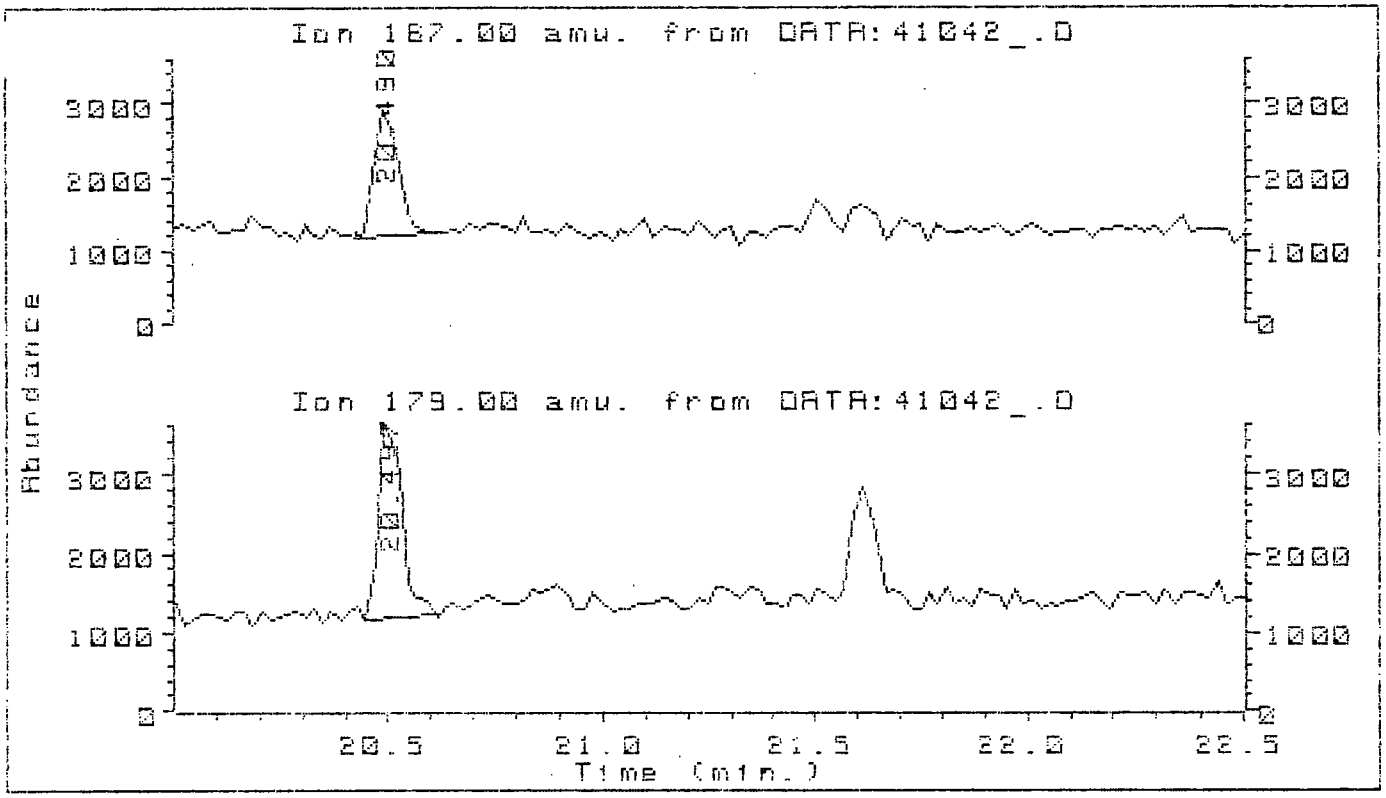
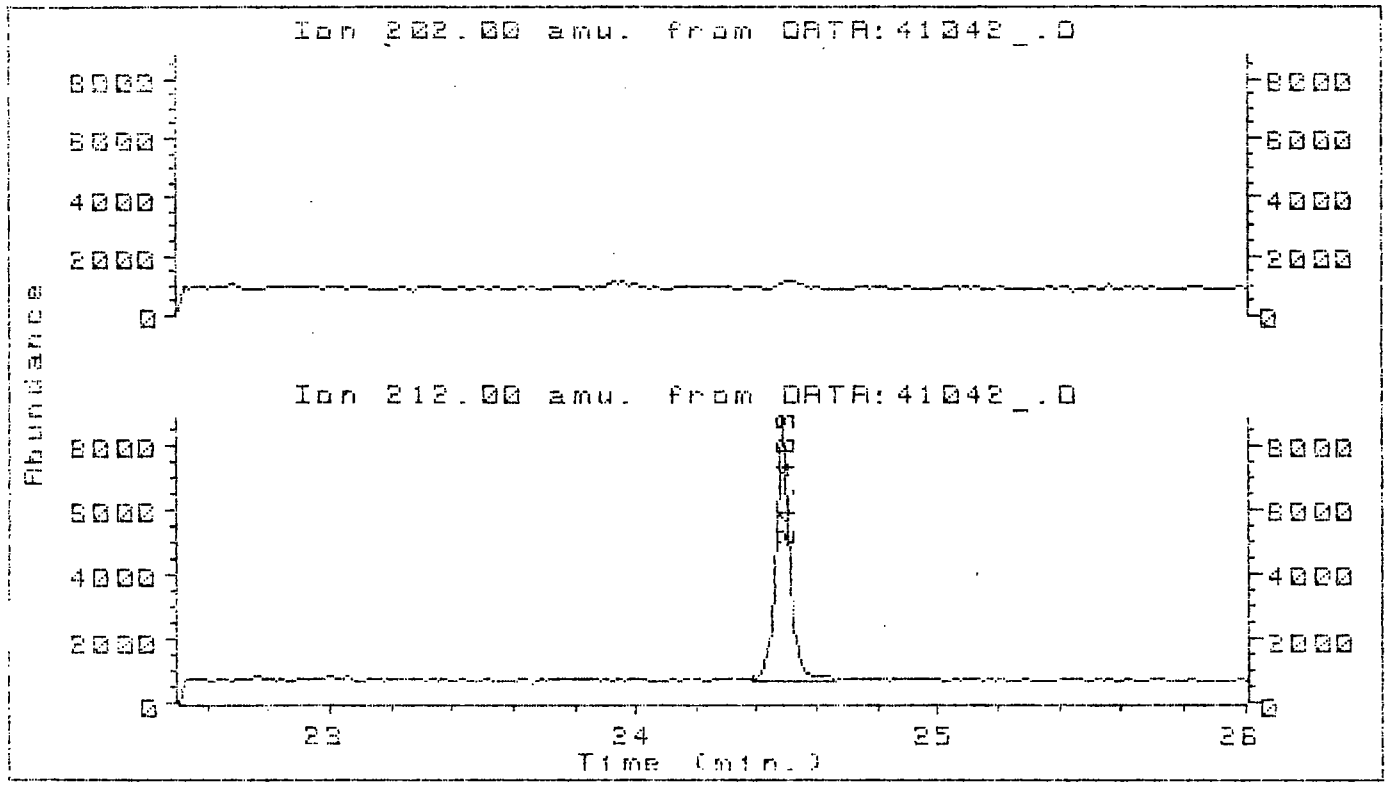
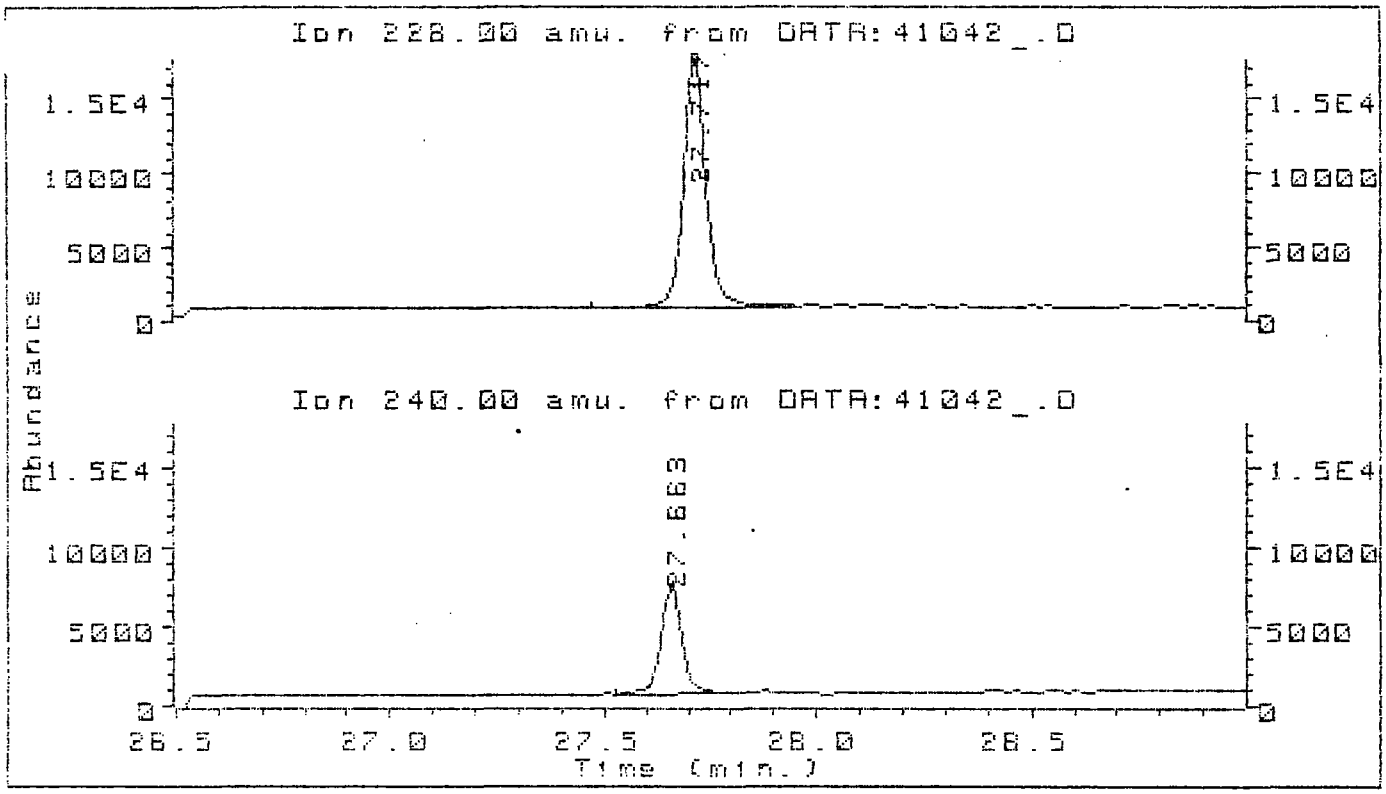
Ion 164.00 amu. from DATA:41042_.D
Ion 168.00 amu. from DATA:41042_.D
Abundance
Time (min.)


Ion 176.00 amu. from DATA:41042_.D
3.0E4
2.0E4
10000
0
18.350
Abundance
Ion 166.00 amu. from DATA:41042_.D
18.454
18.5
19.0
19.5
20.0
Time (min.)


Ion 178.00 amu. from DATA:41042_.D
8405
0
20.675
Abundance
Ion 184.00 amu. from DATA:41042_.D
Ion 188.00 amu. from DATA:41042_.D
8000
6000
4000
2000
20.834
19.5
20.0
20.5
21.0
21.5
Time (min.)


Ion 187.00 amu. from DATA:41042_.D
Ion 179.00 amu. from DATA:41042_.D
Abundance
3000
2000
1000
0
20.5
21.0
21.5
22.0
22.5
Time (min.)


Ion 202.00 amu. from DATA:41042_.D
Ion 212.00 amu. from DATA:41042_.D
Abundance
8000
6000
4000
2000
0
23
24
25
26
Time (min.)


Ion 228.00 amu. from DATA:41042_.D
Ion 240.00 amu. from DATA:41042_.D
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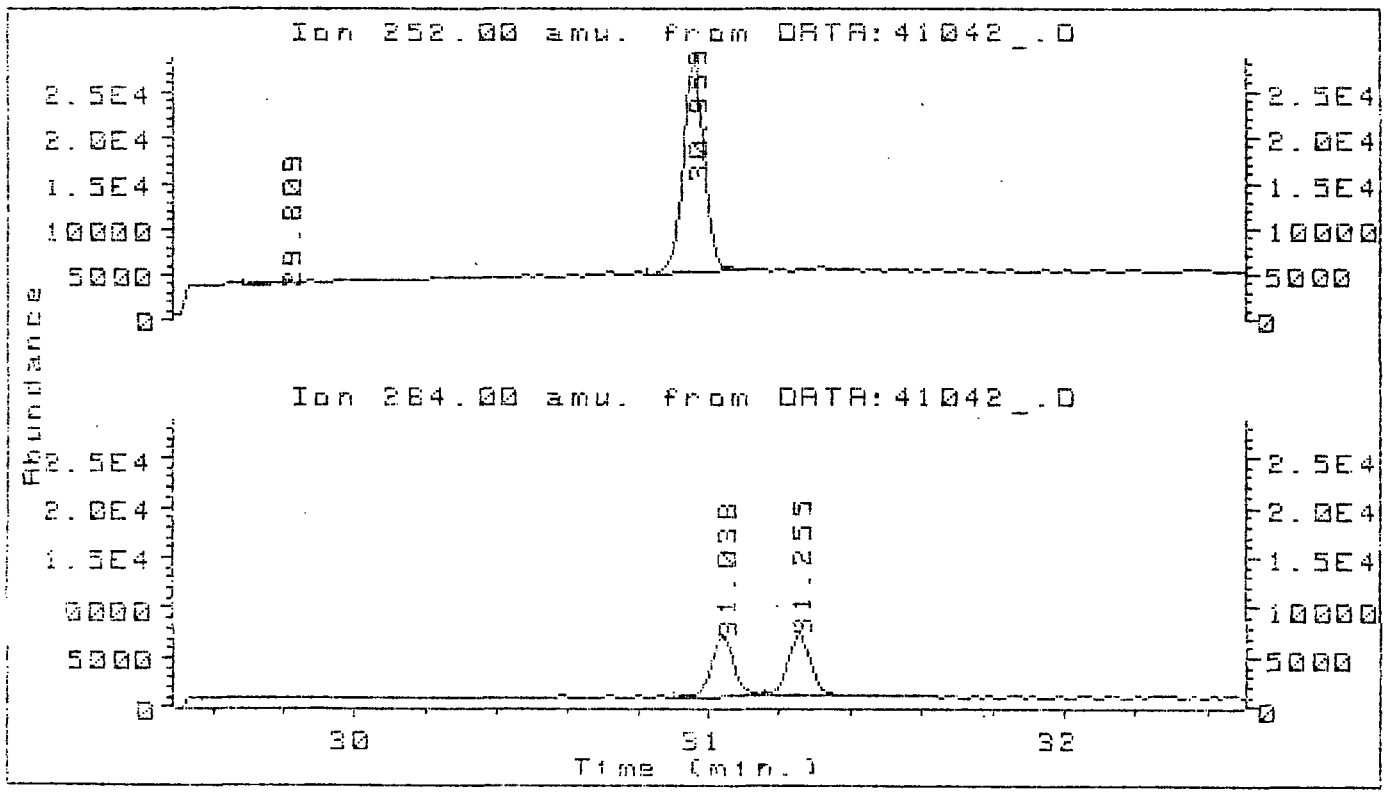
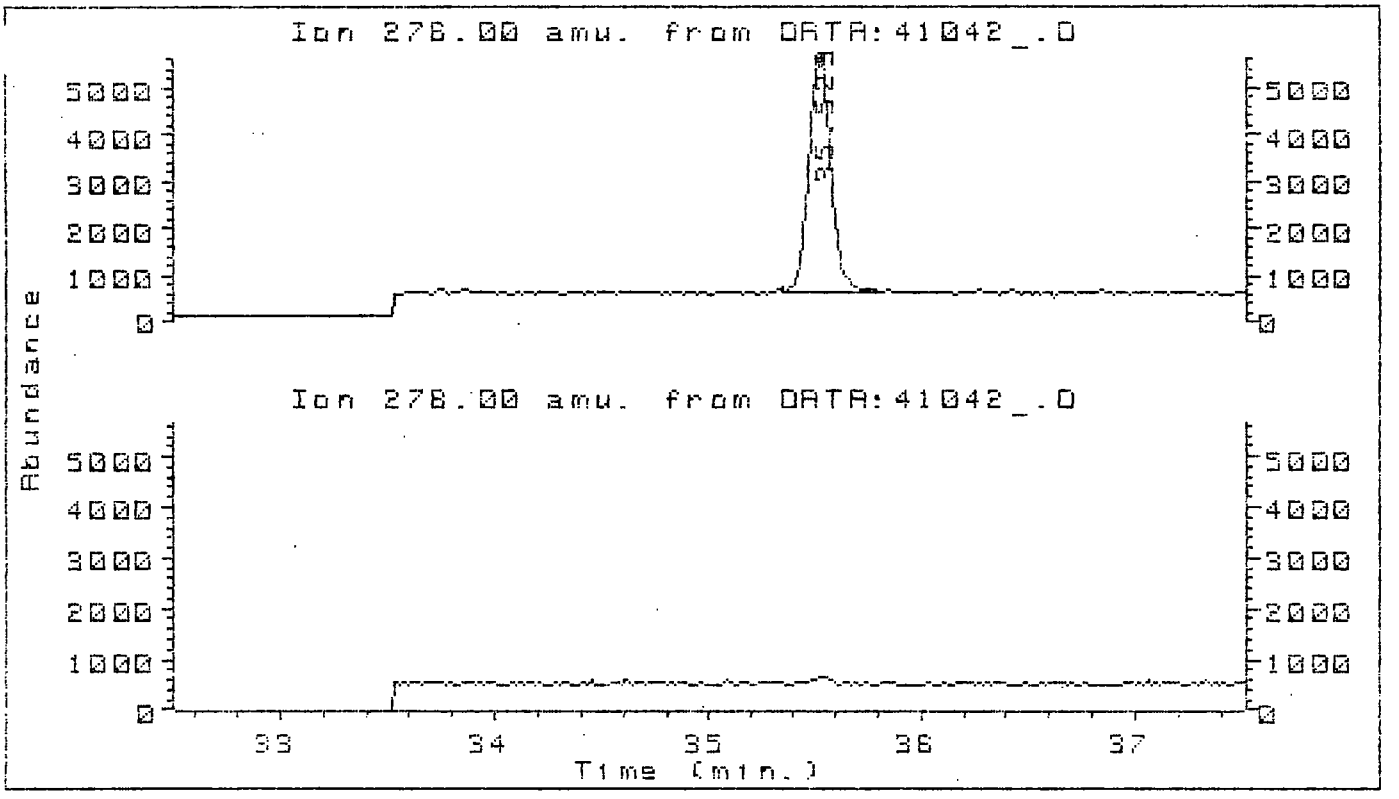
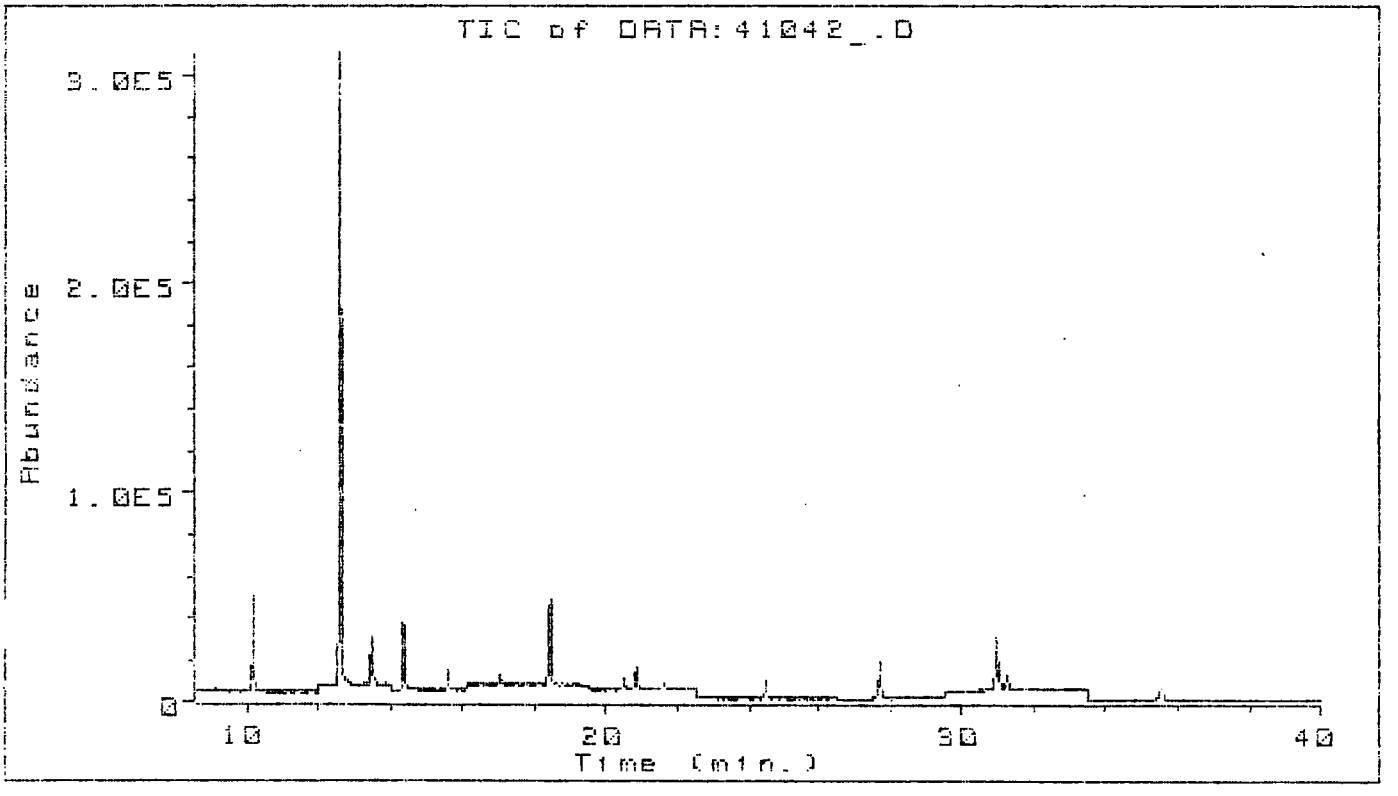
Abundance
1.5E4
10000
5000
0
26.5
27.0
27.5
28.0
28.5
Time (min.)


Ion 252.00 amu. from DATA:41042_.D
29.809
30.959
Ion 284.00 amu. from DATA:41042_.D
31.038
31.255
Abundance
2.5E4
2.0E4
1.5E4
10000
5000
0
30
31
32
Time (min.)


Ion 278.00 amu. from DATA:41042_.D
5000
4000
3000
2000
1000
0
Abundance
Ion 278.00 amu. from DATA:41042_.D
33
34
35
36
37
Time (min.)


TIC of DATA:41042_.D
3.0E5
2.0E5
1.0E5
0
Abundance
10
20
30
40
Time (min.)

ERT #	: 41043	Extract Vol., ml	0.500
Field ID	: B-10	Sample Vol., L	4.000
GC/MS File #	: 41043B	Date Analyze: 01/29/87	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	50.000	17.074	394265
Phenanthrene-d10	50.000	20.850	683969
Benz(a)pyrene-d12	50.000	31.061	909825

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.319	0.547	9.341	124354	1.494
dihydroinden	0.799	0.588	10.045	203649	4.040
indene	1.228	0.598	10.207	185255	2.392
Naphthalene-d8 (Surr.)	1.923	0.739	12.610	665567	5.487
Naphthalene	2.964	0.740	12.641	4015065	21.474
Benz(b)thio	1.736	0.749	12.795	61622	0.563
Quinoline	0.996	0.792	13.518	211551	3.368
Indole	1.508	0.842	14.380	107098	1.126
2-methyl	1.348	0.842	14.378	534545	6.284
1-methyl	1.323	0.858	14.652	289066	3.464
Biphenyl	2.558	0.915	15.617	833437	5.165
Acenaphthylene	1.736	0.977	16.679	1319084	12.045
Acenaphthene	1.221	1.005	17.156	99436	1.291
Dibenzofuran	1.485	1.026	17.518	225692	2.409
Group II					
Flourene-d10 (Surr.)	0.653	0.882	18.396	1057504	14.789
Fluorene	1.110	0.885	18.444	178696	1.471
Dibenzothiophene	1.116	0.987	20.583	117074	0.959
Phenanthrene	1.916	1.002	20.896	1205328	5.748
Anthracene	1.176	1.007	21.005	1077995	8.378
Acridine	0.659	1.016	21.190	161917	2.246
Carbazole	0.824	1.033	21.533	530472	5.880
Fluoranthene	1.361	1.150	23.968	577116	3.874
Pyrene-d10 (Surr.)	0.851	1.176	24.510	1091925	11.730
Pyrene	1.397	1.177	24.549	393464	2.573
Group III					
Benz(a)anthracene	1.599	0.889	27.624	275250	1.183
Chrysene-d12 (Surr.)	1.008	0.891	27.675	447345	3.048
Chrysene	1.704	0.893	27.732	265074	1.069
Benzofluoranthenes	2.109	0.976	30.309	781038	2.543
Benz(e)pyrene	1.856	0.998	30.985	348808	1.291
Benz(a)pyrene	1.867	1.002	31.131	291138	1.071
Perylene-d12 (Surr.)	1.005	1.007	31.289	539431	3.687
Perylene	1.634	1.009	31.346	59484	0.250
Indeno(123,cd)pyrene	2.072	1.115	34.621	168508	0.559
Dibenz(ah)anthracene	1.732	0.000	0.000	1	0.000
Dibenzo(ghi)perylene	2.107	1.146	35.586	169953	0.554

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ERT #: 41043

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 1/29/87	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	5.49	9.90	55.42	42-102	2.430	43.86%
Flourene-d10 (Surr.)	14.79	9.50	155.67	60-128	0.645	157.70%
Chrysene-d12 (Surr.)	3.05	9.80	31.10	10-54	0.969	32.36%
Pyrene-d10 (Surr.)	11.73	10.05	116.72		0.987	100.59%
Perylene-d12 (Surr.)	3.69	9.40	39.22		0.887	44.44%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	0.5 MDL	ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	3.37	0.95	3.4
BENZO (A) ANTHRACENE	2.80	4.40	1.18		ND
CHRYSENE	2.80	4.40	(1.07)	2.20	ND
BENZOFLUORANTHENES	6.20	9.70	2.54		ND
BENZO (A) PYRENE	2.20	3.40	1.07		ND
INDENO (1,2,3-CD) PYRENE	2.80	4.40	0.56		ND
DIBENZO (A,H) ANTHRACENE	2.20	3.40	0.00		ND
DIBENZO (G,H,I) PERYLENE	3.40	5.30	0.55	2.65	ND
TOTAL CARCINOGENIC PAH					3.37

OTHER PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	0.5 MDL	ANALYTICAL RESULT (NG/L)
2,3-BENZOFURAN	1.20	1.90	1.49	0.95	< 1.9
2,3-DIHYDROINDENE	2.20	3.40	4.04	1.7	4.0
INDENE	1.80	2.90	2.39	1.5	< 2.9
NAPHTHALENE	30.00	47.00	21.47	23.5	ND
BENZO (B) THIOPHENE	1.40	2.20	0.56	1.1	ND
INDOLE	1.20	1.90	1.13	0.95	ND
2-METHYLNAPHTHALENE	3.20	5.00	6.28	2.5	6.3
1-METHYLNAPHTHALENE	2.00	3.10	3.46	1.6	3.5
BIPHENYL	11.00	17.00	5.16	8.5	ND
ACENAPHTHYLENE	1.10	1.70	12.05	0.85	12.0
ACENAPHTHENE	0.83	1.30	1.29		< 1.3
DIBENZOFURAN	0.77	1.20	2.41	0.60	2.4
FLOURENE	0.56	0.88	1.47	0.44	1.5
DIBENZOTHIOPHENE	4.00	6.30	0.96		ND
PHENANTHRENE	2.00	3.10	5.75	1.6	5.7
ANTHRACENE	2.20	3.40	8.38	1.7	8.4
ACRIDINE	1.60	2.50	2.25	1.3	< 2.5
CARBAZOLE	1.70	2.60	5.88	1.3	5.9
FLUORANTHENE	2.80	4.40	3.87	2.2	< 4.4
PYRENE	2.60	4.10	2.57	2.1	ND
BENZO (E) PYRENE	0.96	1.50	1.29	0.75	< 1.5
PERYLENE	1.00	1.60	0.25		ND
TOTAL OTHER PAH					49.7
TOTAL PAH'S					53.1

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: B-10 ERT NO.: 41043

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	3.4
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
DIBENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	3.4

OTHER PAH'S

2,3-BENZOFURAN	< 1.9
2,3-DIHYDROINDENE	4.0
INDENE	< 2.9
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	6.3
1-METHYLNAPHTHALENE	3.5
BIPHENYL	ND
ACENAPHTHYLENE	12
ACENAPHTHENE	< 1.3
DIBENZOFURAN	2.4
FLOURENE	1.5
DIBENZOTHIOPHENE	ND
PHENANTHRENE	5.7
ANTHRACENE	8.4
ACRIDINE	< 2.5
CARBAZOLE	5.9
FLUORANTHENE	< 4.4
PYRENE	ND
BENZO (E) PYRENE	< 1.5
PERYLENE	ND
TOTAL OTHER PAH	50
TOTAL PAH'S	53

ND = Concentration < 95% Confidence Interval of MDL

Non-Reference Peak Window: 1.00 % of Retention Time

Sample Amount: 0.000 Uncalibrated Peak RF: 1.000 Multiplier: 1.000

B-10 ERT # 41043B 8:36 pm 1/30/87 PC

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Peak Num	Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amount
1		1VB	9.341	Mass	118.00	amu	2,3-BENZOFUR	124354	13.55 ng/mL
		1VV	10.045	Mass	118.00	amu	2,3-DIHYDROI	203649	32.48 ng/mL
		1VV	10.207	Mass	116.00	amu	INDENE	185255	27.93 ng/mL
4		1PV	12.610	Mass	136.00	amu	NAPHTHALENE,	665567	36.96 ng/mL
5		1VV	12.641	Mass	128.00	amu	NAPTHALENE	4015065	203.2 ng/mL
6		1VV	12.795	Mass	134.00	amu	BENZO(b)THIO	61622	9.838 ng/mL
7		1BV	13.518	Mass	129.00	amu	QUINOLINE	211551	28.43 ng/mL
8		1VV	14.380	Mass	117.00	amu	INDOLE	107098	10.03 ng/mL
9		1VV	14.378	Mass	141.00	amu	2-METHYLNAPT	534545	41.88 ng/mL
10		1BV	14.652	Mass	141.00	amu	1-METHYLNAPT	289066	21.68 ng/mL
11		1VV	15.617	Mass	154.00	amu	BIPHENYL	833437	
12		1VV	16.679	Mass	152.00	amu	ACENAPHTHYLE	1319084	125.7 ng/mL
13	+ISTD	1VV	17.074	Mass	164.00	amu	ACENAPTHTHEN	394265	53.00 ng/mL
14		1VV	17.156	Mass	154.00	amu	ACENAPHTHENE	99436	5.176 ng/mL
15		1PV	17.518	Mass	168.00	amu	DIBENZOFURAN	225692	10.73 ng/mL
16		2BV	18.396	Mass	176.00	amu	FLUORENE, d1	1057504	217.0 ng/mL
17		2PV	18.444	Mass	166.00	amu	FLUORENE	178696	17.34 ng/mL
18		2PV	20.583	Mass	184.00	amu	DIBENZOTHIOP	117074	8.469 ng/mL
19	+ISTD	2PV	20.850	Mass	188.00	amu	PHENANTHRENE	683969	62.50 ng/mL
20		2PV	20.896	Mass	178.00	amu	PHENANTHRENE	1205328	10.37 ng/mL
21		2VV	21.005	Mass	178.00	amu	ANTHRACENE	1077995	112.4 ng/mL
22		2VV	21.190	Mass	179.00	amu	ACRIDINE	161917	22.59 ng/mL
23		1VV	21.533	Mass	167.00	amu	CARBAZOLE	530472	35.72 ng/mL
24		1VV	23.968	Mass	202.00	amu	FLUORANTHENE	577116	11.29 ng/mL
25		2BV	24.510	Mass	212.00	amu	PYRENE, d10	1091925	119.4 ng/mL
26		2VV	24.549	Mass	202.00	amu	PYRENE	393464	23.35 ng/mL
		3PV	27.624	Mass	228.00	amu	BENZ(a)ANTHR	275250	8.321 ng/mL
		3VV	27.675	Mass	240.00	amu	CHYRSENE, d(	447345	51.94 ng/mL
29		3VV	27.732	Mass	228.00	amu	CHYRSENE	265074	9.068 ng/mL
30		3VV	30.309	Mass	252.00	amu	BENZOFLUORAN	781038	21.12 ng/mL
31		3	--------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
32		3VV	30.985	Mass	252.00	amu	BENZ(e)PYREN	348808	12.17 ng/mL
33	+ISTD	3VV	31.061	Mass	264.00	amu	BENZ(a)PYREN	909825	49.60 ng/mL
34		3VV	31.131	Mass	252.00	amu	BENZ(a)PYREN	291138	9.692 ng/mL
35		3VV	31.289	Mass	264.00	amu	PERYLENE, d1	539431	34.48 ng/mL
36		3VV	31.346	Mass	252.00	amu	PERYLENE	59484	1.070 ng/mL
37		3BV	34.621	Mass	276.00	amu	INDENO(1,2,3	168508	12.91 ng/mL
38		3	--------	Mass	278.00	amu	DIBENZ(a,h)A	*** Not Found ***	
39		3BV	35.586	Mass	276.00	amu	BENZO(g,h,i)	169953	9.943 ng/mL
---------		VV	8.981	Mass	118.00		-Uncalibrated-	584268	584268 ng/mL
---------		PV	8.975	Mass	116.00		-Uncalibrated-	730738	730738 ng/mL
---------		VV	9.226	Mass	116.00		-Uncalibrated-	101321	101321 ng/mL
---------		VV	9.250	Mass	118.00		-Uncalibrated-	132500	132500 ng/mL
---------		VV	10.104	Mass	118.00		-Uncalibrated-	70637	70637 ng/mL
---------		BV	10.595	Mass	118.00		-Uncalibrated-	54537	54537 ng/mL
---------		VV	10.592	Mass	116.00		-Uncalibrated-	106936	106936 ng/mL
---------		VV	10.871	Mass	118.00		-Uncalibrated-	43861	43861 ng/mL
---------		PV	11.272	Mass	118.00		-Uncalibrated-	140915	140915 ng/mL
---------		BV	11.406	Mass	116.00		-Uncalibrated-	363633	363633 ng/mL
---------		BV	11.826	Mass	118.00		-Uncalibrated-	56734	56734 ng/mL
---------		BV	11.829	Mass	116.00		-Uncalibrated-	48639	48639 ng/mL
---------		PH	12.050	Mass	134.00		-Uncalibrated-	123929	123929 ng/mL
---------		PH	12.071	Mass	136.00		-Uncalibrated-	24605	24605 ng/mL
---------		VV	12.237	Mass	134.00		-Uncalibrated-	77960	77960 ng/mL
---------		VV	12.494	Mass	134.00		-Uncalibrated-	911669	911669 ng/mL
---------		VV	12.608	Mass	134.00		-Uncalibrated-	195920	195920 ng/mL
---------		VB	12.648	Mass	129.00		-Uncalibrated-	444909	444909 ng/mL
---------		VV	12.675	Mass	136.00		-Uncalibrated-	69165	69165 ng/mL
---------		VV	12.764	Mass	128.00		-Uncalibrated-	137927	137927 ng/mL

---------	PV	13.324	Mass	134.00	-Uncalibrated-	558581	558581	ng/mL
---------	VV	13.516	Mass	128.00	-Uncalibrated-	55164	55164	ng/mL
---------	VB	13.870	Mass	129.00	-Uncalibrated-	637298	637298	ng/mL
---------	VV	14.202	Mass	117.00	-Uncalibrated-	112464	112464	ng/mL
---------	VV	14.458	Mass	117.00	-Uncalibrated-	164742	164742	ng/mL
---------	PV	15.129	Mass	117.00	-Uncalibrated-	74824	74824	ng/mL
---------	VV	15.638	Mass	117.00	-Uncalibrated-	581697	581697	ng/mL
---------	BV	15.826	Mass	141.00	-Uncalibrated-	103495	103495	ng/mL
---------	VV	15.898	Mass	141.00	-Uncalibrated-	61314	61314	ng/mL
---------	PV	15.912	Mass	117.00	-Uncalibrated-	294316	294316	ng/mL
---------	VV	15.976	Mass	141.00	-Uncalibrated-	176055	176055	ng/mL
---------	BV	16.165	Mass	168.00	-Uncalibrated-	90040	90040	ng/mL
---------	BV	16.175	Mass	164.00	-Uncalibrated-	55938	55938	ng/mL
---------	BV	16.193	Mass	152.00	-Uncalibrated-	295482	295482	ng/mL
---------	VB	16.219	Mass	164.00	-Uncalibrated-	48614	48614	ng/mL
---------	VV	16.333	Mass	152.00	-Uncalibrated-	120072	120072	ng/mL
---------	VV	16.404	Mass	168.00	-Uncalibrated-	214759	214759	ng/mL
---------	VV	16.400	Mass	152.00	-Uncalibrated-	94536	94536	ng/mL
---------	VV	16.491	Mass	152.00	-Uncalibrated-	62591	62591	ng/mL
---------	VV	16.489	Mass	154.00	-Uncalibrated-	202348	202348	ng/mL
---------	VH	16.593	Mass	164.00	-Uncalibrated-	111019	111019	ng/mL
---------	VV	16.595	Mass	152.00	-Uncalibrated-	138940	138940	ng/mL
---------	VH	16.744	Mass	164.00	-Uncalibrated-	278265	278265	ng/mL
---------	VV	16.740	Mass	154.00	-Uncalibrated-	242926	242926	ng/mL
---------	VV	17.018	Mass	154.00	-Uncalibrated-	236560	236560	ng/mL
---------	PV	17.036	Mass	168.00	-Uncalibrated-	175331	175331	ng/mL
---------	VV	17.052	Mass	152.00	-Uncalibrated-	105312	105312	ng/mL
---------	VV	17.156	Mass	152.00	-Uncalibrated-	74647	74647	ng/mL
---------	VV	17.269	Mass	152.00	-Uncalibrated-	100890	100890	ng/mL
---------	PBA	17.899	Mass	154.00	-Uncalibrated-	46867	46867	ng/mL
---------	PV	18.402	Mass	164.00	-Uncalibrated-	78765	78765	ng/mL
---------	VV	18.695	Mass	166.00	-Uncalibrated-	336884	336884	ng/mL
---------	VV	18.841	Mass	168.00	-Uncalibrated-	325876	325876	ng/mL
---------	VV	18.865	Mass	166.00	-Uncalibrated-	299557	299557	ng/mL
---------	PV	18.862	Mass	152.00	-Uncalibrated-	264509	264509	ng/mL
---------	VV	18.964	Mass	166.00	-Uncalibrated-	221685	221685	ng/mL
---------	VV	19.135	Mass	152.00	-Uncalibrated-	101543	101543	ng/mL
---------	VV	19.266	Mass	166.00	-Uncalibrated-	263896	263896	ng/mL
---------	VV	19.261	Mass	152.00	-Uncalibrated-	164323	164323	ng/mL
---------	VV	19.437	Mass	168.00	-Uncalibrated-	197023	197023	ng/mL
---------	VB	19.517	Mass	168.00	-Uncalibrated-	169204	169204	ng/mL
---------	PV	19.606	Mass	184.00	-Uncalibrated-	78313	78313	ng/mL
---------	VV	19.665	Mass	184.00	-Uncalibrated-	45644	45644	ng/mL
---------	VV	19.871	Mass	178.00	-Uncalibrated-	113382	113382	ng/mL
---------	VV	20.054	Mass	184.00	-Uncalibrated-	236338	236338	ng/mL
---------	VV	20.040	Mass	178.00	-Uncalibrated-	96131	96131	ng/mL
---------	PH	20.069	Mass	167.00	-Uncalibrated-	32447	32447	ng/mL
---------	PV	20.299	Mass	167.00	-Uncalibrated-	223355	223355	ng/mL
---------	PV	20.358	Mass	179.00	-Uncalibrated-	79198	79198	ng/mL
---------	VV	20.351	Mass	178.00	-Uncalibrated-	99230	99230	ng/mL
---------	VV	20.543	Mass	179.00	-Uncalibrated-	147209	147209	ng/mL
---------	PV	20.542	Mass	167.00	-Uncalibrated-	209524	209524	ng/mL
---------	PV	20.540	Mass	178.00	-Uncalibrated-	68800	68800	ng/mL
---------	VV	20.642	Mass	178.00	-Uncalibrated-	65965	65965	ng/mL
---------	PV	20.779	Mass	179.00	-Uncalibrated-	73799	73799	ng/mL
---------	VV	20.840	Mass	184.00	-Uncalibrated-	110243	110243	ng/mL
---------	VV	20.899	Mass	179.00	-Uncalibrated-	228087	228087	ng/mL
---------	VV	20.981	Mass	167.00	-Uncalibrated-	98757	98757	ng/mL
---------	VV	20.997	Mass	179.00	-Uncalibrated-	762055	762055	ng/mL
---------	VV	21.021	Mass	184.00	-Uncalibrated-	47884	47884	ng/mL
---------	VV	21.272	Mass	179.00	-Uncalibrated-	94293	94293	ng/mL
---------	VV	21.375	Mass	179.00	-Uncalibrated-	212970	212970	ng/mL
---------	VV	21.560	Mass	179.00	-Uncalibrated-	1510221	1510221	ng/mL
---------	VV	21.558	Mass	178.00	-Uncalibrated-	48608	48608	ng/mL
---------	PV	21.763	Mass	184.00	-Uncalibrated-	78835	78835	ng/mL

--------	VV	22.175	Mass	179.00	-Uncalibrated-	72672	72672	ng/mL
--------	PV	22.339	Mass	167.00	-Uncalibrated-	10287	10287	ng/mL
--------	PH	22.558	Mass	202.00	-Uncalibrated-	23500	23500	ng/mL
--------	PV	22.924	Mass	212.00	-Uncalibrated-	167283	167283	ng/mL
--------	PV	23.551	Mass	202.00	-Uncalibrated-	114586	114586	ng/mL
--------	PV	24.227	Mass	202.00	-Uncalibrated-	339951	339951	ng/mL
--------	VV	24.411	Mass	202.00	-Uncalibrated-	79814	79814	ng/mL
--------	VV	24.649	Mass	212.00	-Uncalibrated-	83863	83863	ng/mL
--------	VB	24.985	Mass	202.00	-Uncalibrated-	134200	134200	ng/mL
--------	VV	25.789	Mass	212.00	-Uncalibrated-	59586	59586	ng/mL
--------	BH	26.669	Mass	228.00	-Uncalibrated-	95401	95401	ng/mL
--------	VV	27.363	Mass	240.00	-Uncalibrated-	137485	137485	ng/mL
--------	PV	27.352	Mass	228.00	-Uncalibrated-	70994	70994	ng/mL
--------	PV	27.477	Mass	240.00	-Uncalibrated-	131804	131804	ng/mL
--------	VV	27.465	Mass	228.00	-Uncalibrated-	61694	61694	ng/mL
--------	VV	27.943	Mass	240.00	-Uncalibrated-	43629	43629	ng/mL
--------	VV	27.950	Mass	228.00	-Uncalibrated-	339425	339425	ng/mL
--------	VV	28.391	Mass	228.00	-Uncalibrated-	127745	127745	ng/mL
--------	PV	28.511	Mass	240.00	-Uncalibrated-	15511	15511	ng/mL
--------	PV	28.538	Mass	228.00	-Uncalibrated-	106344	106344	ng/mL
--------	VV	28.616	Mass	228.00	-Uncalibrated-	143903	143903	ng/mL
--------	VV	28.775	Mass	228.00	-Uncalibrated-	58475	58475	ng/mL
--------	VV	28.837	Mass	228.00	-Uncalibrated-	89513	89513	ng/mL
--------	PV	29.695	Mass	264.00	-Uncalibrated-	71319	71319	ng/mL
--------	VV	29.878	Mass	264.00	-Uncalibrated-	2315864	2315864	ng/mL
--------	PV	30.036	Mass	252.00	-Uncalibrated-	11694	11694	ng/mL
--------	VV	30.163	Mass	252.00	-Uncalibrated-	57872	57872	ng/mL
--------	VV	30.317	Mass	264.00	-Uncalibrated-	654108	654108	ng/mL
--------	VV	30.554	Mass	252.00	-Uncalibrated-	186690	186690	ng/mL
--------	VV	30.589	Mass	264.00	-Uncalibrated-	38272	38272	ng/mL
--------	VV	30.636	Mass	252.00	-Uncalibrated-	87421	87421	ng/mL
--------	VV	30.681	Mass	264.00	-Uncalibrated-	32870	32870	ng/mL
--------	VV	30.778	Mass	252.00	-Uncalibrated-	235594	235594	ng/mL
--------	BV	30.909	Mass	264.00	-Uncalibrated-	61531	61531	ng/mL
--------	VV	31.223	Mass	252.00	-Uncalibrated-	49846	49846	ng/mL
--------	VV	31.451	Mass	264.00	-Uncalibrated-	84689	84689	ng/mL
--------	PV	31.747	Mass	264.00	-Uncalibrated-	25548	25548	ng/mL
--------	VV	31.825	Mass	264.00	-Uncalibrated-	102671	102671	ng/mL
--------	VV	31.939	Mass	264.00	-Uncalibrated-	28383	28383	ng/mL
--------	PV	32.203	Mass	252.00	-Uncalibrated-	166933	166933	ng/mL
--------	PBA	32.416	Mass	252.00	-Uncalibrated-	48129	48129	ng/mL
--------	BB	33.530	Mass	278.00	-Uncalibrated-	27148	27148	ng/mL

Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.326 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #38's Description at 34.699 +/- 0.173 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

Operator: LOUIE G. POUNDS 29 Jan 87 8:36 pm
Method File Name : PAH.M
Sample Info : ERT #41043B, FLD ID B-10
c Info: 1.0 UL INJ VOL
egration File Name : DATA:41043B.I
Bottle Number : 0

Ret Time	Signal	Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
8.981	Mass	118.00 amu	VV	584268	12232	44.43	41.39	79.96	100.00
8.973	Mass	116.00 amu	PV	730738	23485	55.57	47.56	100.00	100.00

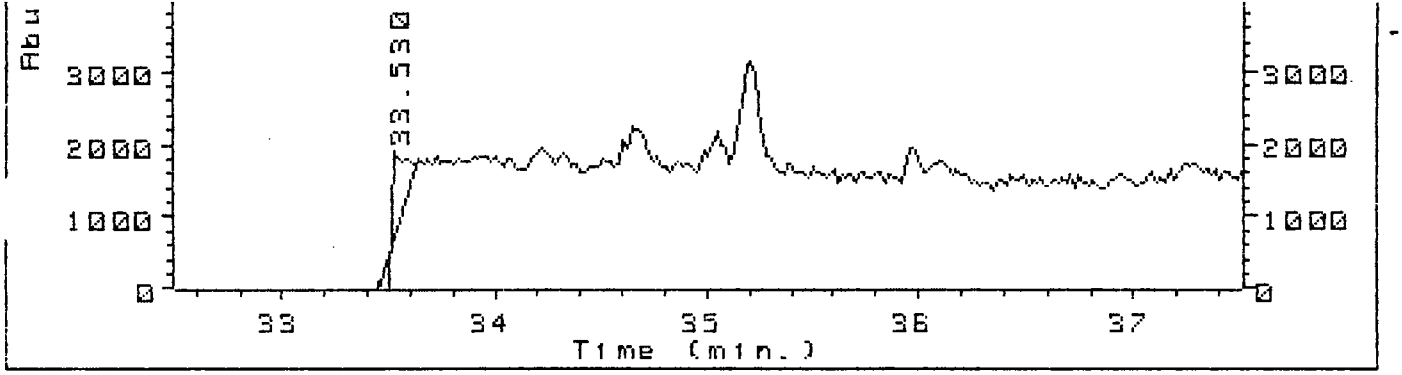
9.250	Mass	118.00	amu	VV	132500	3669	100.00	9.39	100.00	22.68
9.341	Mass	118.00	amu	VB	124354	3223	100.00	8.81	100.00	21.28
10.045	Mass	118.00	amu	VV	203649	8673	100.00	14.43	100.00	34.86
10.104	Mass	118.00	amu	VV	70637	3381	100.00	5.00	100.00	12.09
10.207	Mass	116.00	amu	VV	185255	6956	100.00	12.06	100.00	25.35
10.595	Mass	118.00	amu	BV	54537	1743	33.77	3.86	51.00	9.33
10.592	Mass	116.00	amu	VV	106936	4459	66.23	6.96	100.00	14.63
10.871	Mass	118.00	amu	VV	43861	1669	100.00	3.11	100.00	7.51
11.272	Mass	118.00	amu	PV	140915	5621	100.00	9.98	100.00	24.12
11.406	Mass	116.00	amu	BV	363633	11680	100.00	23.67	100.00	49.76
11.826	Mass	118.00	amu	BV	56734	1901	53.84	4.02	100.00	9.71
11.829	Mass	116.00	amu	BV	48639	1895	46.16	3.17	85.73	6.66
12.050	Mass	134.00	amu	PH	123929	5679	100.00	6.42	100.00	13.59
12.071	Mass	136.00	amu	PH	24605	1123	100.00	1.24	100.00	2.01
12.237	Mass	134.00	amu	VV	77960	1935	100.00	4.04	100.00	8.55
12.494	Mass	134.00	amu	VV	911669	38069	100.00	47.24	100.00	100.00
.610	Mass	136.00	amu	PV	665567	25741	77.26	33.57	100.00	54.40
..608	Mass	134.00	amu	VV	195920	6128	22.74	10.15	29.44	21.49
12.648	Mass	129.00	amu	VB	444909	16908	9.98	34.39	11.08	69.81
12.641	Mass	128.00	amu	VV	4015065	148257	90.02	95.41	100.00	100.00
12.675	Mass	136.00	amu	VV	69165	3285	100.00	3.49	100.00	5.65
12.764	Mass	128.00	amu	VV	137927	2198	100.00	3.28	100.00	3.44
12.795	Mass	134.00	amu	VV	61622	1792	100.00	3.19	100.00	6.76
13.319	Mass	136.00	amu	VV	1223447	34739	68.65	61.70	100.00	100.00
13.324	Mass	134.00	amu	PV	558581	20129	31.35	28.95	45.66	61.27
13.518	Mass	129.00	amu	BV	211551	6692	79.32	16.35	100.00	33.20
13.516	Mass	128.00	amu	VV	55164	1912	20.68	1.31	26.08	1.37
13.870	Mass	129.00	amu	VB	637298	6986	100.00	49.26	100.00	100.00
14.202	Mass	117.00	amu	VV	112464	3714	100.00	8.42	100.00	19.33
14.378	Mass	141.00	amu	VV	534545	21964	83.31	45.90	100.00	100.00
14.380	Mass	117.00	amu	VV	107098	3502	16.69	8.02	20.04	18.41
.458	Mass	117.00	amu	VV	164742	6164	100.00	12.34	100.00	28.32
14.652	Mass	141.00	amu	BV	289066	12448	100.00	24.82	100.00	54.08
15.129	Mass	117.00	amu	PV	74824	1928	100.00	5.60	100.00	12.86
15.617	Mass	154.00	amu	VV	833437	32375	100.00	50.16	100.00	100.00
15.638	Mass	117.00	amu	VV	581697	22754	100.00	43.57	100.00	100.00

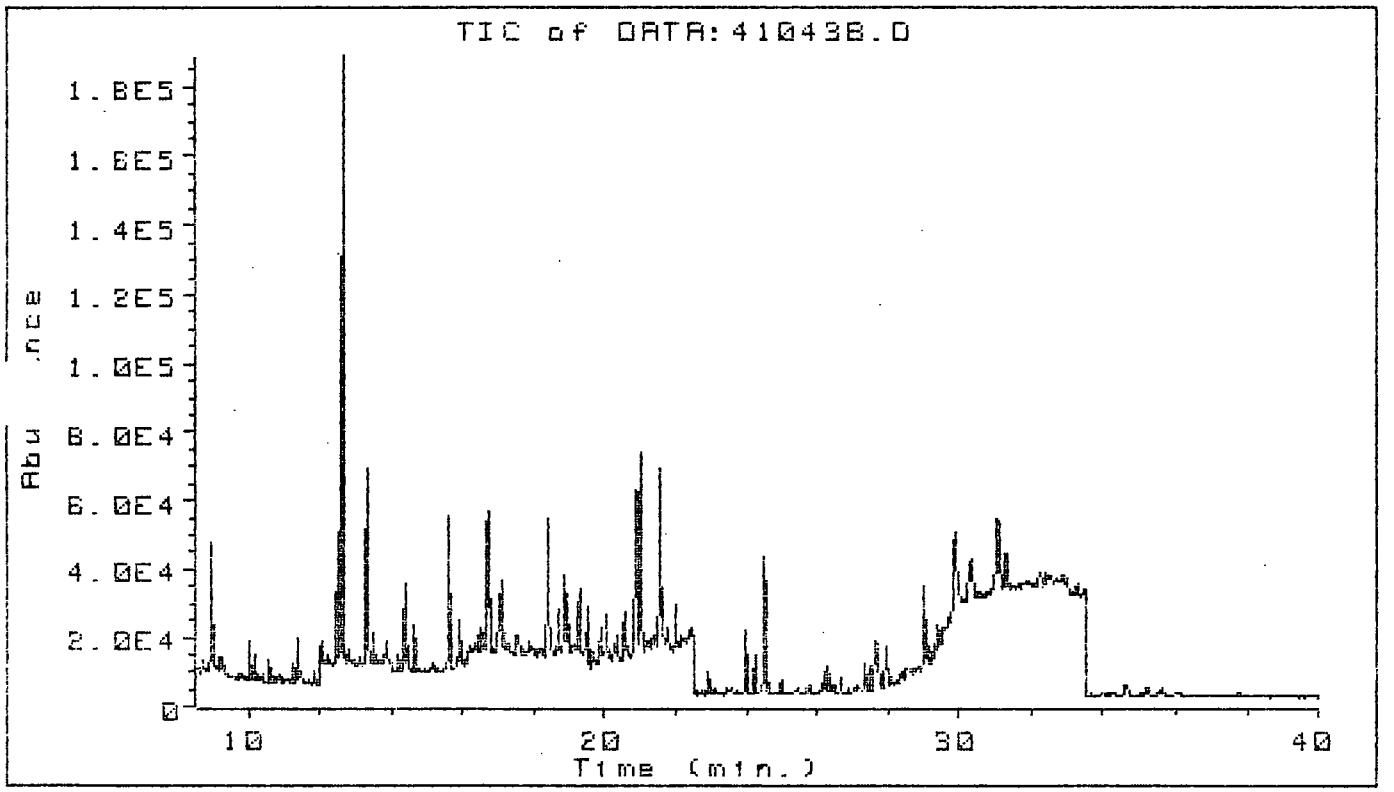
15.118	Mass	141.00	amu	[illegible]	102[illegible]	322[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15.898	Mass	141.00	amu	VV	61314	1935	17.24	5.27	20.83	-11.47
15.912	Mass	117.00	amu	PV	294316	11924	82.76	22.04	100.00	50.60
15.976	Mass	141.00	amu	VV	176055	6580	100.00	15.12	100.00	32.94
.165	Mass	168.00	amu	BV	90040	1718	61.68	6.44	100.00	27.63
16.175	Mass	164.00	amu	BV	55938	1389	38.32	5.79	62.13	14.19
16.193	Mass	152.00	amu	BV	295482	3267	100.00	10.40	100.00	22.40
16.219	Mass	164.00	amu	VB	48614	1117	100.00	5.03	100.00	12.33
16.333	Mass	152.00	amu	VV	120072	2529	100.00	4.23	100.00	9.10
16.404	Mass	168.00	amu	VV	214759	3005	69.44	15.36	100.00	65.90
16.400	Mass	152.00	amu	VV	94536	2184	30.56	3.33	44.02	7.17
16.491	Mass	152.00	amu	VV	62591	2325	23.62	2.20	30.93	4.75
16.489	Mass	154.00	amu	VV	202348	7275	76.38	12.18	100.00	24.28
16.593	Mass	164.00	amu	VH	111019	3883	44.41	11.48	79.90	28.16
16.595	Mass	152.00	amu	VV	138940	2650	55.59	4.89	100.00	10.53
16.679	Mass	152.00	amu	VV	1319084	36939	100.00	46.42	100.00	100.00
16.744	Mass	164.00	amu	VH	278265	10007	53.39	28.78	100.00	70.58
16.740	Mass	154.00	amu	VV	242926	5538	46.61	14.62	87.30	29.15
17.018	Mass	154.00	amu	VV	236560	7399	100.00	14.24	100.00	28.38
.036	Mass	168.00	amu	PV	175331	4843	100.00	12.54	100.00	53.80
17.052	Mass	152.00	amu	VV	105312	2147	100.00	3.71	100.00	7.98
17.074	Mass	164.00	amu	VV	394265	15753	100.00	40.78	100.00	100.00
17.156	Mass	152.00	amu	VV	74647	2051	42.88	2.63	75.07	5.66
17.156	Mass	154.00	amu	VV	99436	3104	57.12	5.98	100.00	11.93
17.269	Mass	152.00	amu	VV	100890	1892	100.00	3.55	100.00	7.65
17.518	Mass	168.00	amu	PV	225692	4127	100.00	16.14	100.00	69.26
17.899	Mass	154.00	amu	PBA	46867	1659	100.00	2.82	100.00	5.62
18.396	Mass	176.00	amu	BV	1057504	35299	93.07	100.00	100.00	100.00
18.402	Mass	164.00	amu	PV	78765	1994	6.93	8.15	7.45	19.98
18.444	Mass	166.00	amu	PV	178696	3851	100.00	13.74	100.00	53.04
18.695	Mass	166.00	amu	VV	336884	10257	100.00	25.90	100.00	100.00
18.841	Mass	168.00	amu	VV	325876	8191	100.00	23.31	100.00	100.00
.865	Mass	166.00	amu	VV	299557	10848	53.11	23.03	100.00	88.92
.862	Mass	152.00	amu	PV	264509	6782	46.89	9.31	88.30	20.05
18.964	Mass	166.00	amu	VV	221685	6268	100.00	17.04	100.00	65.80
19.135	Mass	152.00	amu	VV	101543	1896	100.00	3.57	100.00	7.70
19.266	Mass	166.00	amu	VV	263896	9745	61.63	20.29	100.00	70.33
19.261	Mass	152.00	amu	VV	164323	4899	38.37	5.78	62.27	12.46

19.457	Mass	168.00	amu	V	197023	5194	100.00	14.09	100.00	60.46
19.517	Mass	168.00	amu	VB	169204	6502	100.00	12.10	100.00	51.92
19.606	Mass	184.00	amu	PV	78313	2977	100.00	10.96	100.00	33.14
.665	Mass	184.00	amu	VV	45644	1710	100.00	6.39	100.00	19.31
19.871	Mass	178.00	amu	VV	113382	2980	100.00	4.09	100.00	9.41
20.054	Mass	184.00	amu	VV	236338	8037	71.09	33.09	100.00	100.00
20.040	Mass	178.00	amu	VV	96131	2327	28.91	3.46	40.68	7.98
20.069	Mass	167.00	amu	PH	32447	1059	100.00	2.94	100.00	6.12
20.299	Mass	167.00	amu	PV	223355	4441	100.00	20.22	100.00	42.10
20.358	Mass	179.00	amu	PV	79198	2571	44.39	2.27	79.81	5.24
20.351	Mass	178.00	amu	VV	99230	2717	55.61	3.58	100.00	8.23
20.543	Mass	179.00	amu	VV	147209	5402	34.59	4.22	70.26	9.75
20.542	Mass	167.00	amu	PV	209524	5557	49.24	18.96	100.00	39.50
20.540	Mass	178.00	amu	PV	68800	2173	16.17	2.48	32.84	5.71
20.583	Mass	184.00	amu	PV	117074	2959	100.00	16.39	100.00	49.54
20.642	Mass	178.00	amu	VV	65965	1864	100.00	2.38	100.00	5.47
20.779	Mass	179.00	amu	PV	73799	2058	100.00	2.11	100.00	4.89
20.850	Mass	188.00	amu	PV	683969	21636	86.12	100.00	100.00	100.00
.840	Mass	184.00	amu	VV	110243	3340	13.88	15.43	16.12	46.65
20.899	Mass	179.00	amu	VV	228087	7642	15.91	6.54	18.92	15.10
20.896	Mass	178.00	amu	PV	1205328	40532	84.09	43.43	100.00	100.00
20.981	Mass	167.00	amu	VV	98757	2326	100.00	8.94	100.00	18.62
20.997	Mass	179.00	amu	VV	762055	22957	41.41	21.84	70.69	50.46
21.005	Mass	178.00	amu	VV	1077995	33494	58.59	38.84	100.00	89.44
21.021	Mass	184.00	amu	VV	47884	1660	100.00	6.70	100.00	20.26
21.190	Mass	179.00	amu	VV	161917	2296	100.00	4.64	100.00	10.72
21.272	Mass	179.00	amu	VV	94293	2378	100.00	2.70	100.00	6.24
21.375	Mass	179.00	amu	VV	212970	3657	100.00	6.10	100.00	14.10
21.533	Mass	167.00	amu	VV	530472	9365	100.00	48.01	100.00	100.00
21.560	Mass	179.00	amu	VV	1510221	42412	96.88	43.28	100.00	100.00
21.558	Mass	178.00	amu	VV	48608	1682	3.12	1.75	3.22	4.03
21.763	Mass	184.00	amu	PV	78835	3746	100.00	11.04	100.00	33.36
.793	Mass	179.00	amu	VV	147028	2282	100.00	4.21	100.00	9.74
22.175	Mass	179.00	amu	VV	72672	1518	100.00	2.08	100.00	4.81
22.339	Mass	167.00	amu	PV	10287	684	100.00	0.93	100.00	1.94
22.558	Mass	202.00	amu	PH	23500	823	100.00	1.41	100.00	4.07
22.924	Mass	212.00	amu	PV	167283	5689	100.00	11.93	100.00	15.32

23.551	Mass	202.00	amu	PV	114586	1673	100.00	6.89	100.00	19.85
23.968	Mass	202.00	amu	VV	577116	18236	100.00	34.71	100.00	100.00
24.227	Mass	202.00	amu	PV	339951	10136	100.00	20.45	100.00	58.91
.411	Mass	202.00	amu	VV	79814	2077	100.00	4.80	100.00	13.83
24.510	Mass	212.00	amu	BV	1091925	36003	100.00	77.85	100.00	100.00
24.549	Mass	202.00	amu	VV	393464	12153	100.00	23.67	100.00	68.18
24.649	Mass	212.00	amu	VV	83863	3318	100.00	5.98	100.00	7.68
24.985	Mass	202.00	amu	VB	134200	3799	100.00	8.07	100.00	23.25
25.789	Mass	212.00	amu	VV	59586	1966	100.00	4.25	100.00	5.46
26.669	Mass	228.00	amu	BH	95401	4292	100.00	5.84	100.00	28.11
27.363	Mass	240.00	amu	VV	137485	5281	65.95	17.72	100.00	30.73
27.352	Mass	228.00	amu	PV	70994	2573	34.05	4.35	51.64	20.92
27.477	Mass	240.00	amu	PV	131804	4389	68.12	16.99	100.00	29.46
27.465	Mass	228.00	amu	VV	61694	2422	31.88	3.78	46.81	18.18
27.624	Mass	228.00	amu	PV	275250	7994	100.00	16.85	100.00	81.09
27.675	Mass	240.00	amu	VV	447345	12990	100.00	57.66	100.00	100.00
27.732	Mass	228.00	amu	VV	265074	8401	100.00	16.22	100.00	78.10
.943	Mass	240.00	amu	VV	43629	1588	11.39	5.62	12.85	9.75
27.950	Mass	228.00	amu	VV	339425	8907	88.61	20.77	100.00	100.00
28.391	Mass	228.00	amu	VV	127745	2522	100.00	7.82	100.00	37.64
28.511	Mass	240.00	amu	PV	15511	670	100.00	2.00	100.00	3.47
28.538	Mass	228.00	amu	PV	106344	2343	100.00	6.51	100.00	31.33
28.616	Mass	228.00	amu	VV	143903	2391	100.00	8.81	100.00	42.40
28.775	Mass	228.00	amu	VV	58475	1631	100.00	3.58	100.00	17.23
28.837	Mass	228.00	amu	VV	89513	2348	100.00	5.48	100.00	26.37
29.695	Mass	264.00	amu	PV	71319	2518	100.00	1.47	100.00	3.08
29.878	Mass	264.00	amu	VV	2315864	23008	100.00	47.61	100.00	100.00
30.036	Mass	252.00	amu	PV	11694	804	100.00	0.50	100.00	1.50
30.163	Mass	252.00	amu	VV	57872	1347	100.00	2.49	100.00	7.41
30.317	Mass	264.00	amu	VV	654108	5700	45.58	13.45	83.75	28.24
.309	Mass	252.00	amu	VV	781038	9137	54.42	33.60	100.00	100.00
30.554	Mass	252.00	amu	VV	186690	3435	100.00	8.03	100.00	23.90
30.589	Mass	264.00	amu	VV	38272	666	100.00	0.79	100.00	1.65
30.636	Mass	252.00	amu	VV	87421	1815	100.00	3.76	100.00	11.19
30.681	Mass	264.00	amu	VV	32870	1156	100.00	0.68	100.00	1.42

30.778	Mass	252.00	amu	VV	235594	2628	100.00	10.13	100.00	30.16
30.909	Mass	264.00	amu	BV	61531	1897	100.00	1.26	100.00	-2.66
30.985	Mass	252.00	amu	VV	348808	6015	100.00	15.00	100.00	44.66
.061	Mass	264.00	amu	VV	909825	21310	100.00	18.70	100.00	39.29
31.131	Mass	252.00	amu	VV	291138	6089	100.00	12.52	100.00	37.28
31.223	Mass	252.00	amu	VV	49846	1460	100.00	2.14	100.00	6.38
31.289	Mass	264.00	amu	VV	539431	11300	100.00	11.09	100.00	23.29
31.346	Mass	252.00	amu	VV	59484	1434	100.00	2.56	100.00	7.62
31.451	Mass	264.00	amu	VV	84689	1525	100.00	1.74	100.00	3.66
31.747	Mass	264.00	amu	PV	25548	1299	100.00	0.53	100.00	1.10
31.825	Mass	264.00	amu	VV	102671	1778	100.00	2.11	100.00	4.43
31.939	Mass	264.00	amu	VV	28383	1017	100.00	0.58	100.00	1.23
32.203	Mass	252.00	amu	PV	166933	2709	100.00	7.18	100.00	21.37
32.416	Mass	252.00	amu	PBA	48129	1500	100.00	2.07	100.00	6.16
33.530	Mass	278.00	amu	BB	27148	1205	100.00	100.00	100.00	100.00
34.621	Mass	276.00	amu	BV	168508	2740	100.00	49.79	100.00	99.15
.586	Mass	276.00	amu	BV	169953	2303	100.00	50.21	100.00	100.00





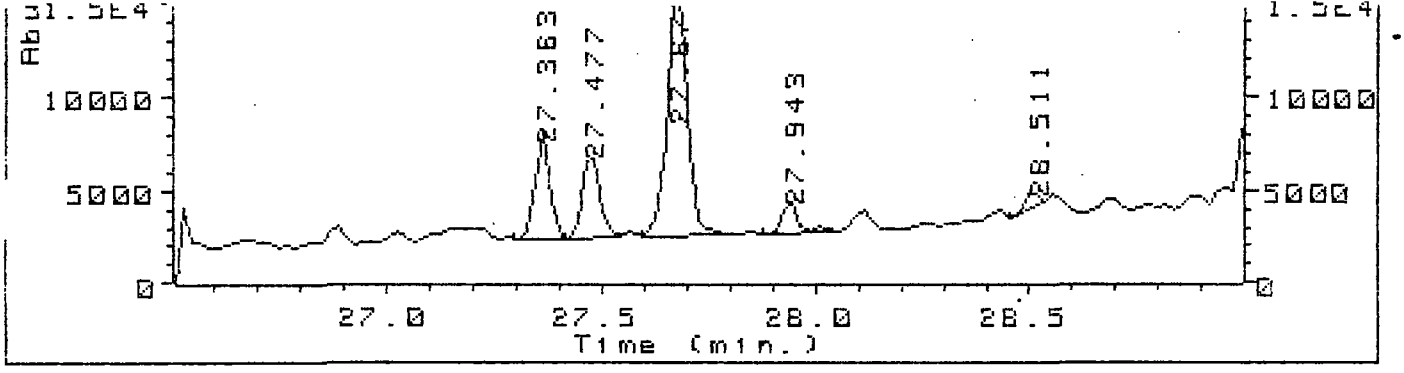
*** Internal Standard ***

Operator: LOUIE G. POUNDS 29 Jan 87 8:36 pm
'hod File Name : PAH.M
ple Info : ERT #41043B, FLD ID B-10
Misc Info: 1.0 UL INJ VOL
Integration File Name : DATA:41043B.I
Bottle Number : 0

Joe, injected 1.5 ul
1/30/87 JC

ST. LOUIS PARK PPT PAH

Last Update: 12 Nov 86 7:13 pm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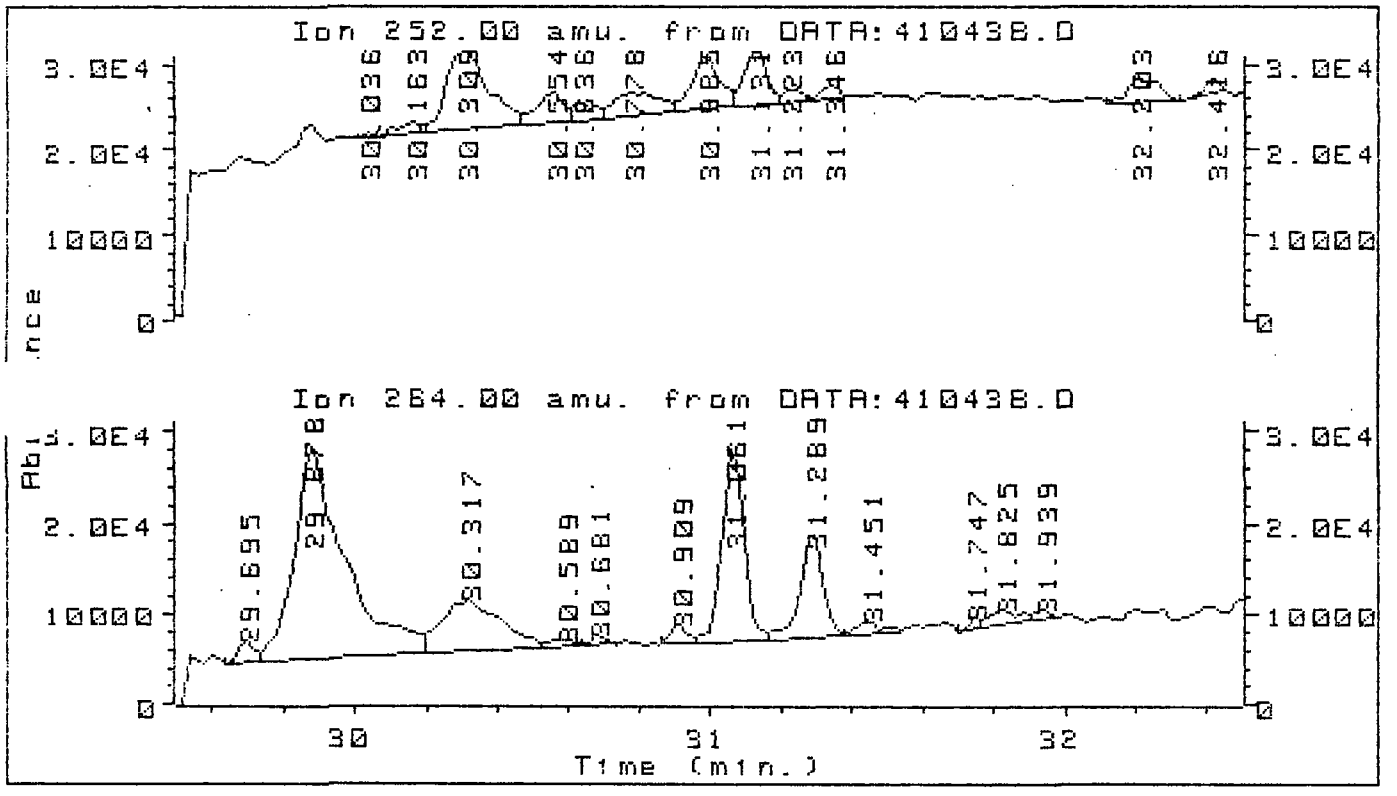
27.5
28.0
28.5
Time (min.)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31.747
31.825
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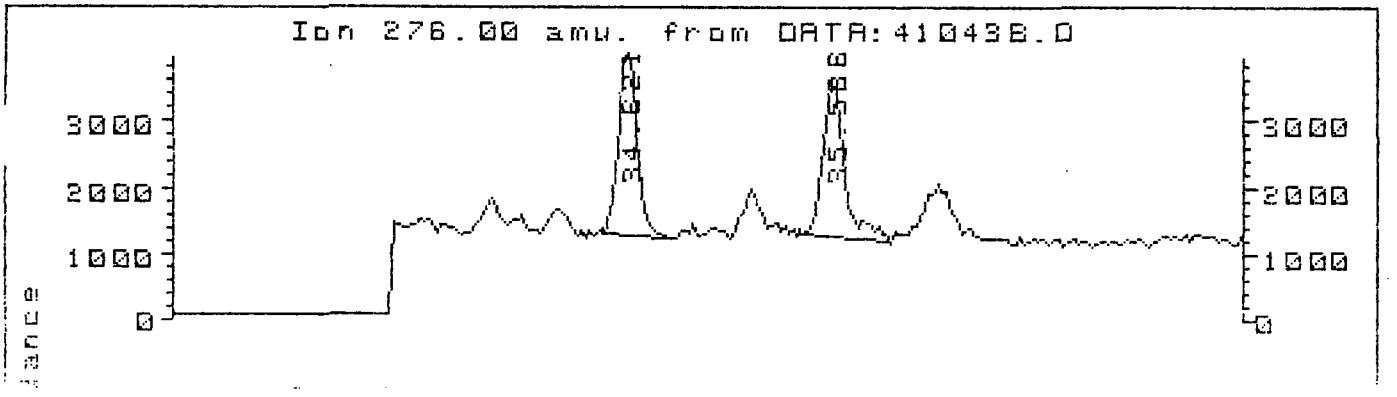
30
31
32
Time (min.)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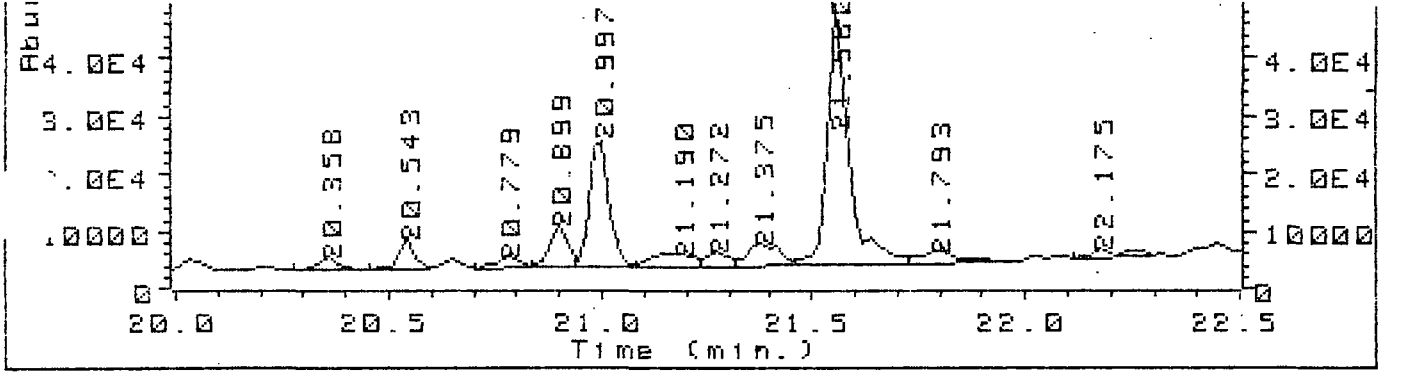
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20.997
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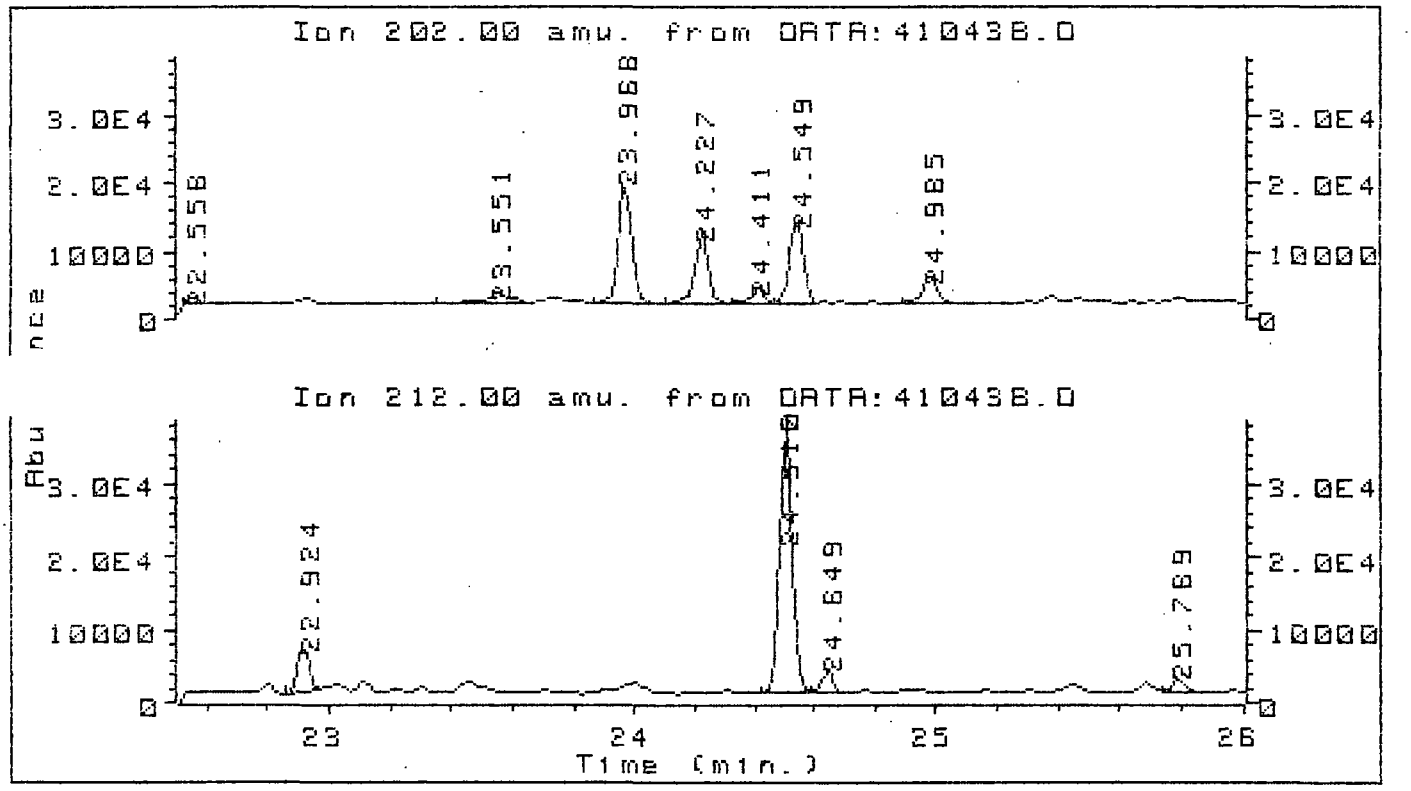
22.175
20.0
20.5
21.0
21.5
22.0
22.5
Time (min.)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24.411
24.549
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Abu
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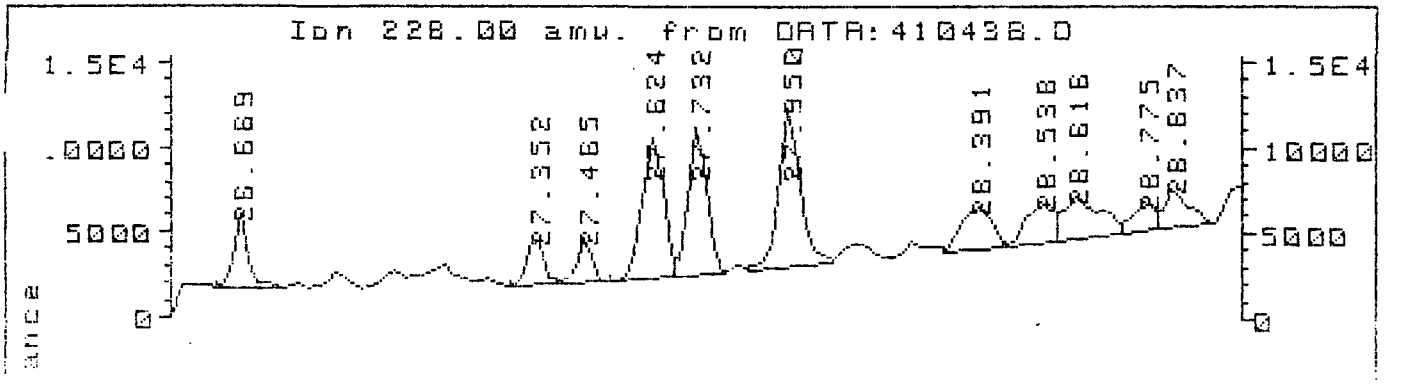
23
24
25
26
Time (min.)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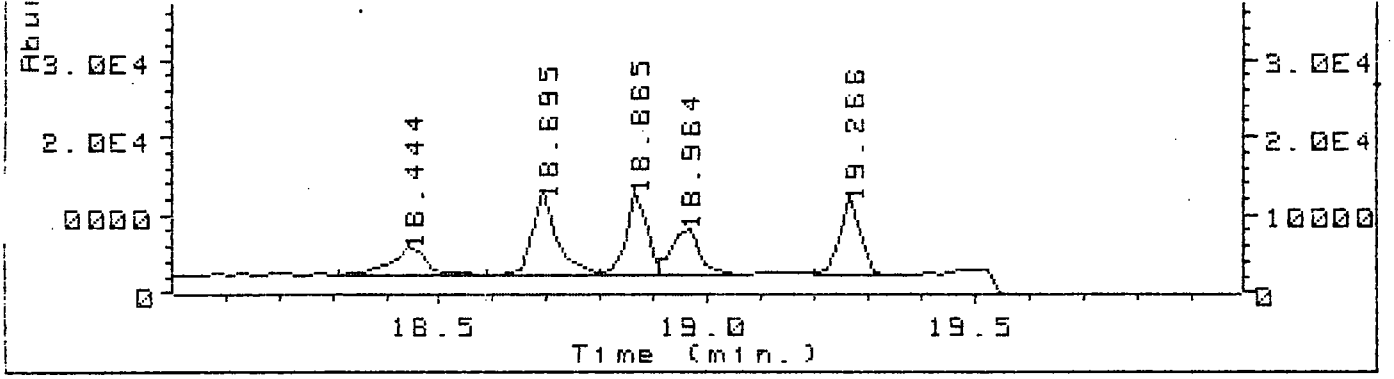
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18.5
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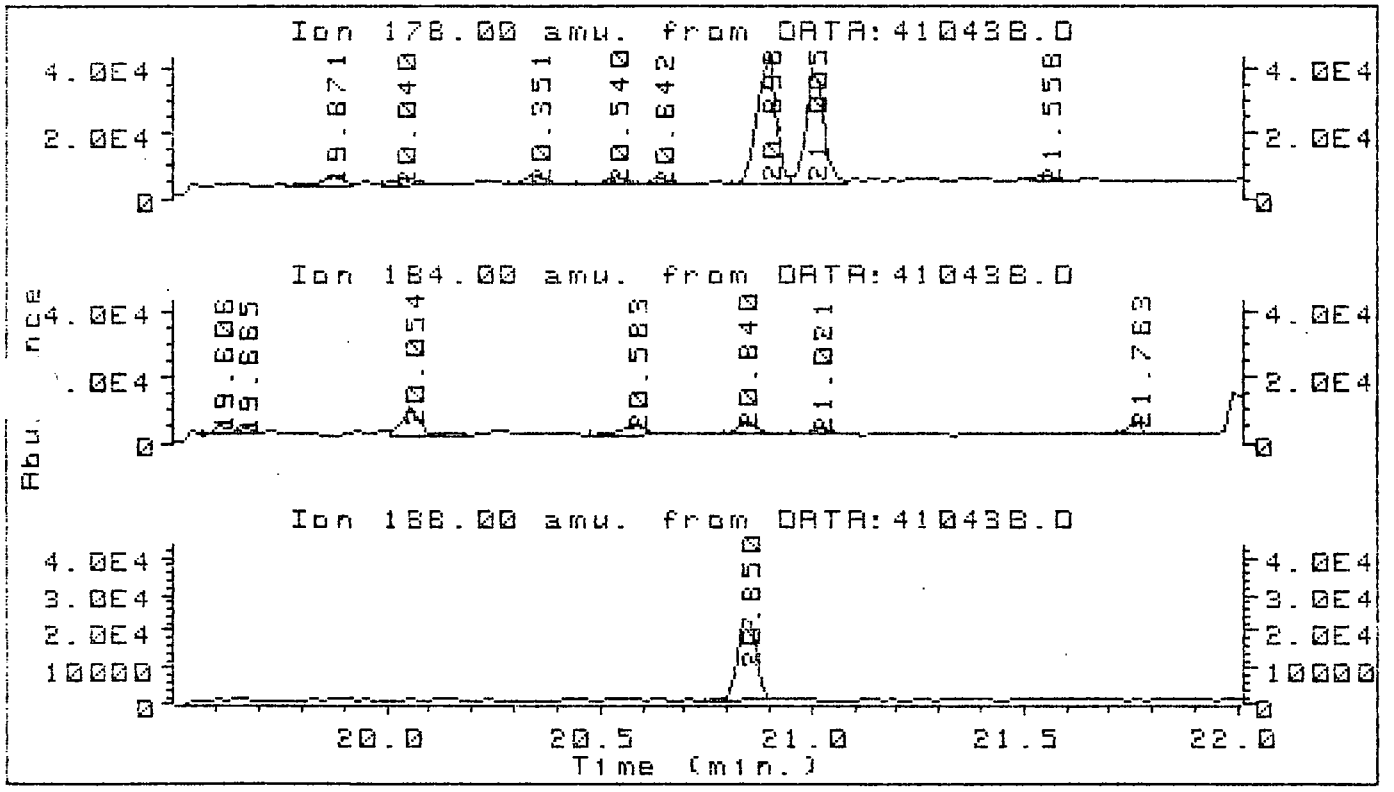
19.5
Time (min.)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19.606
19.665
20.054
20.583
20.840
21.021
21.763
Abu. nce
Ion 188.00 amu. from DATA:41043B.D
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2.0E4
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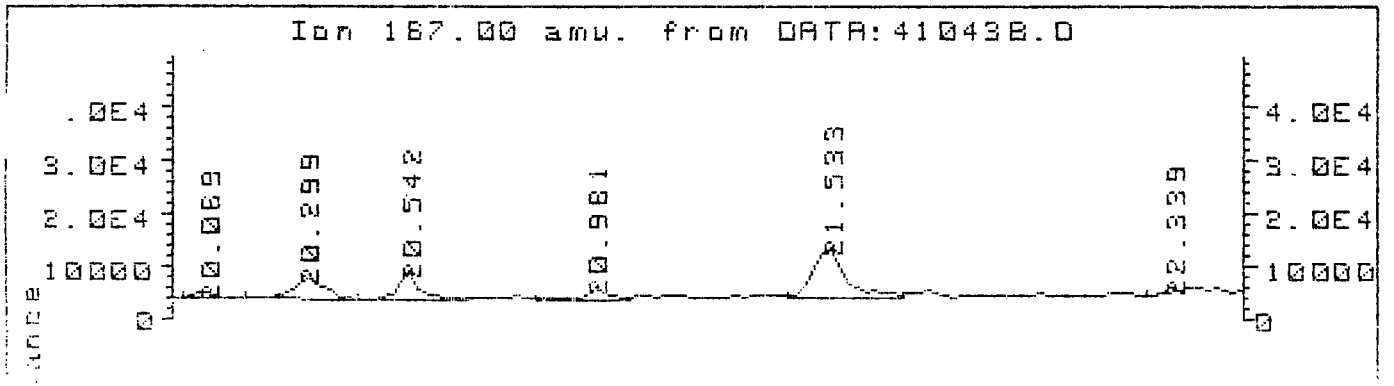
20.5
21.0
21.5
22.0
Time (min.)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20.981
21.533
22.339
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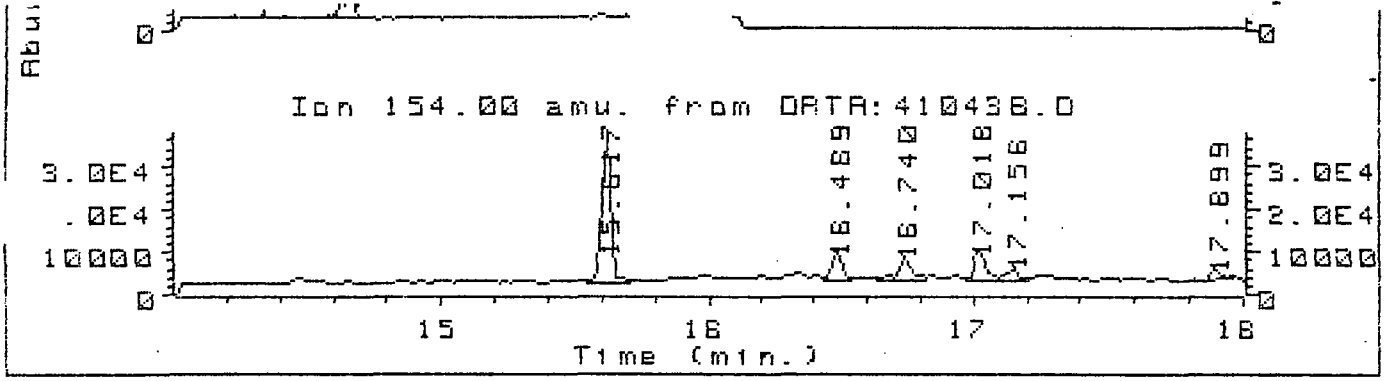
3.0E4
2.0E4
10000
0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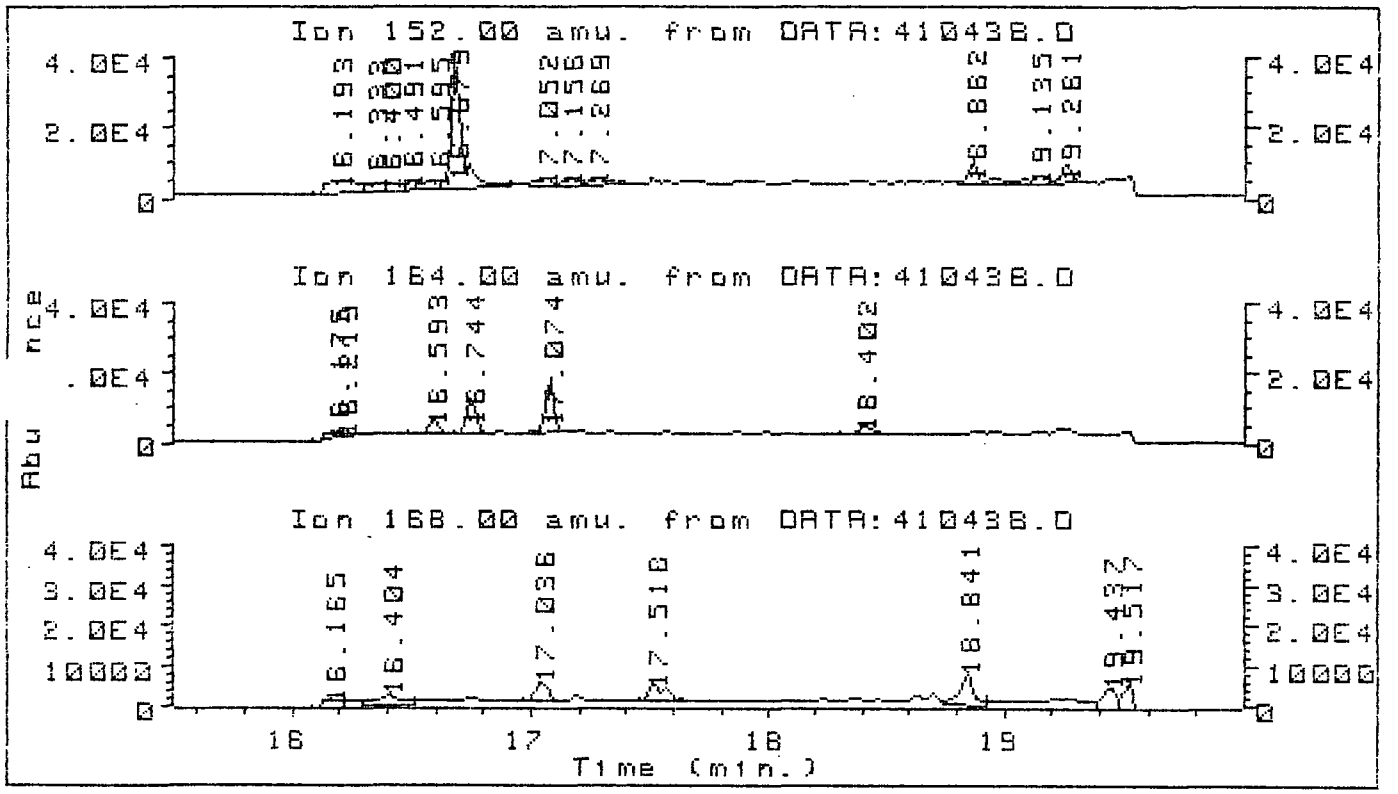
17.899
15
16
17
18
Time (min.)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Ion 164.00 amu. from DATA:41043B.D
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.0E4
0
16.593
16.744
17.074
18.402
Ion 168.00 amu. from DATA:41043B.D
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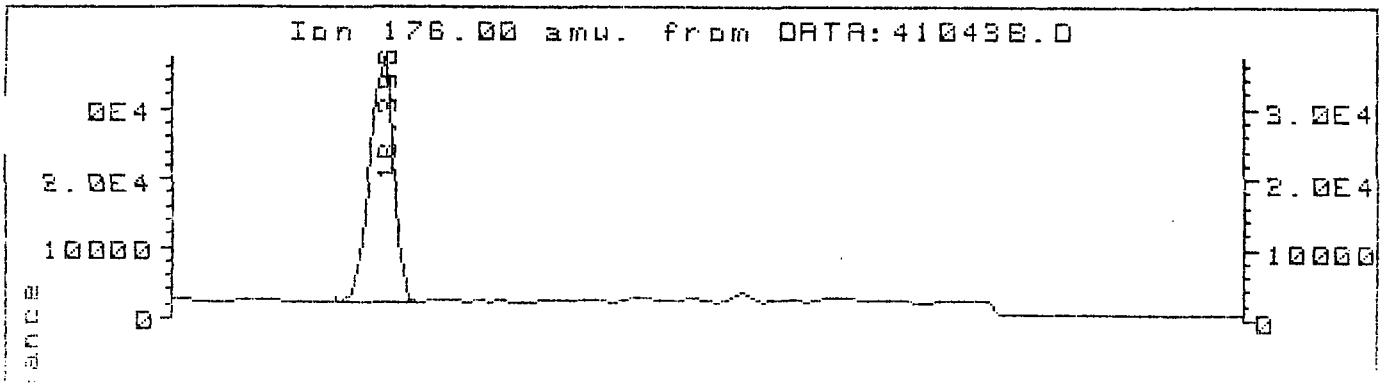
16.404
17.036
17.518
18.841
19.432
16
17
18
19
Time (min.)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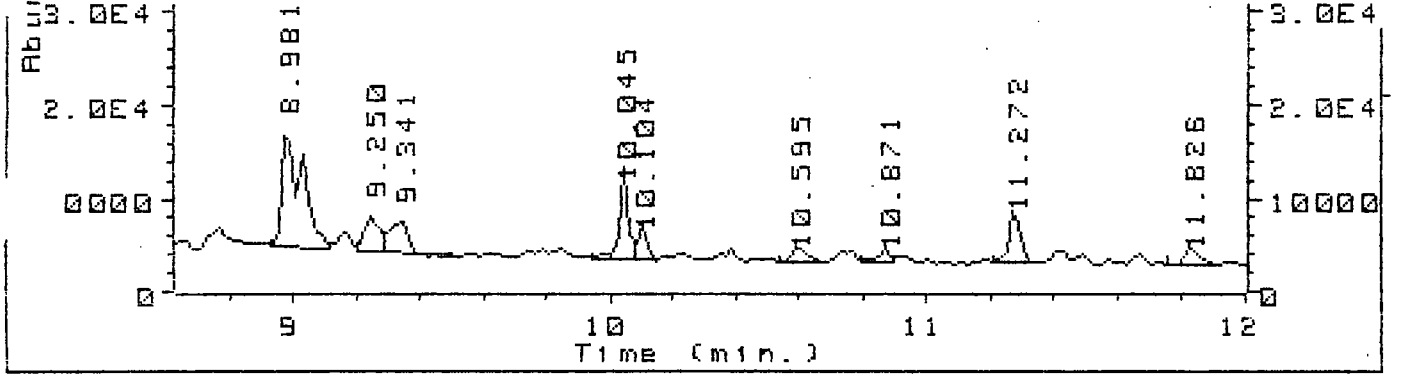
3.0E4
2.0E4
10000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10.104
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11.272
11.826
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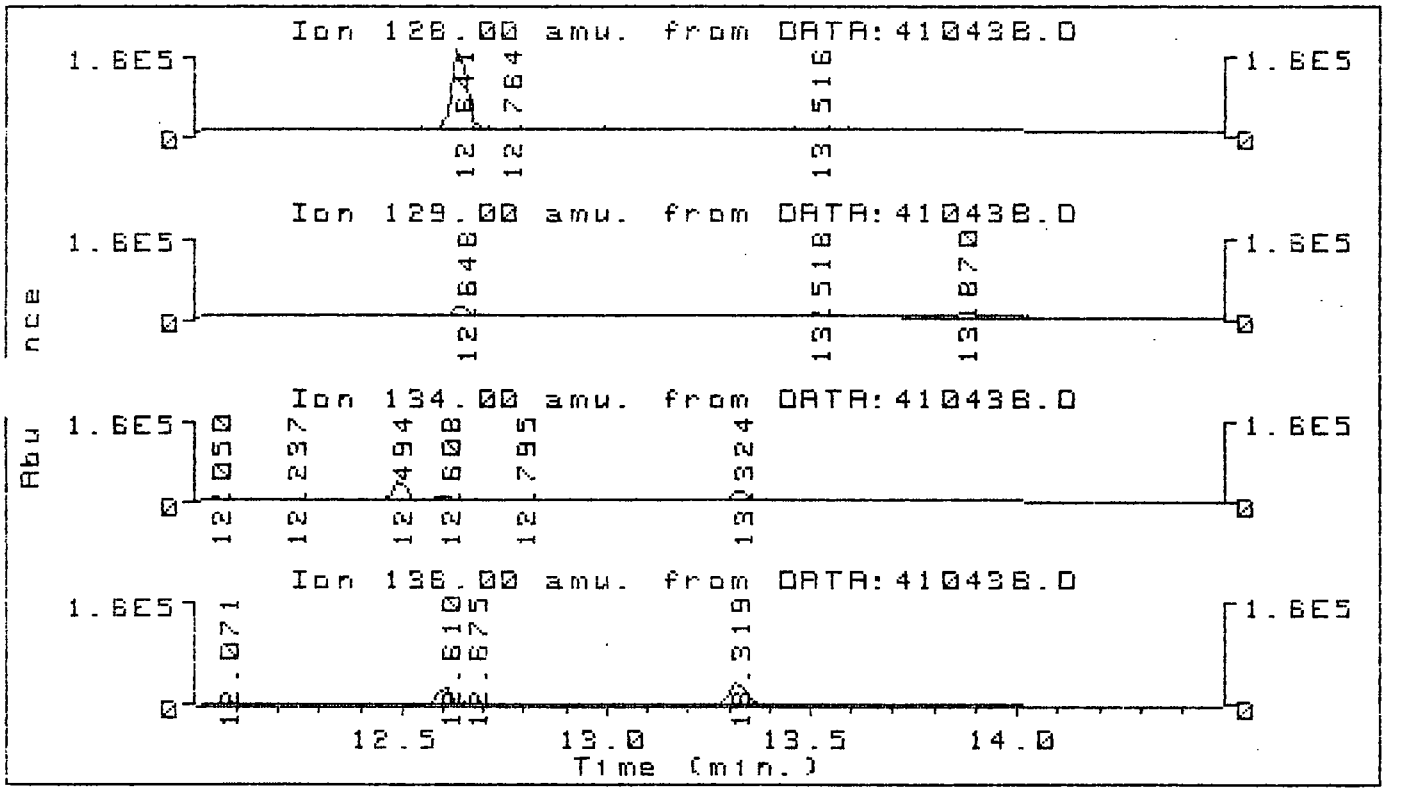
2.0E4
10000
0
9
10
11
12
Time (min.)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12.764
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12.648
13.518
13.870
Ion 134.00 amu. from DATA:41043B.D
12.050
12.237
12.494
12.608
12.795
13.324
Ion 136.00 amu. from DATA:41043B.D
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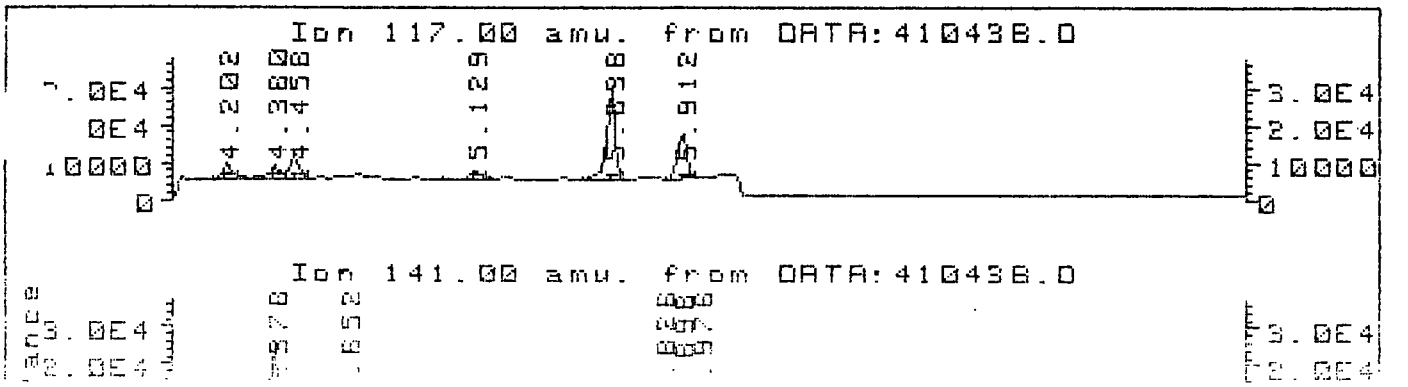
12.610
12.675
13.319
Abu
nce
12.5
13.0
13.5
14.0
Time (min.)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10000
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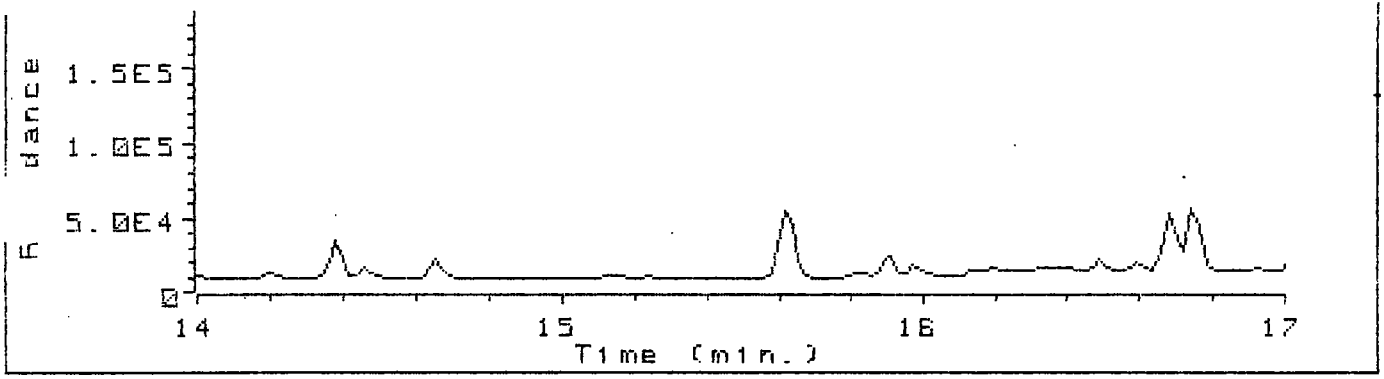
Ion 141.00 amu. from DATA:41043B.D
3.0E4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5.0E4
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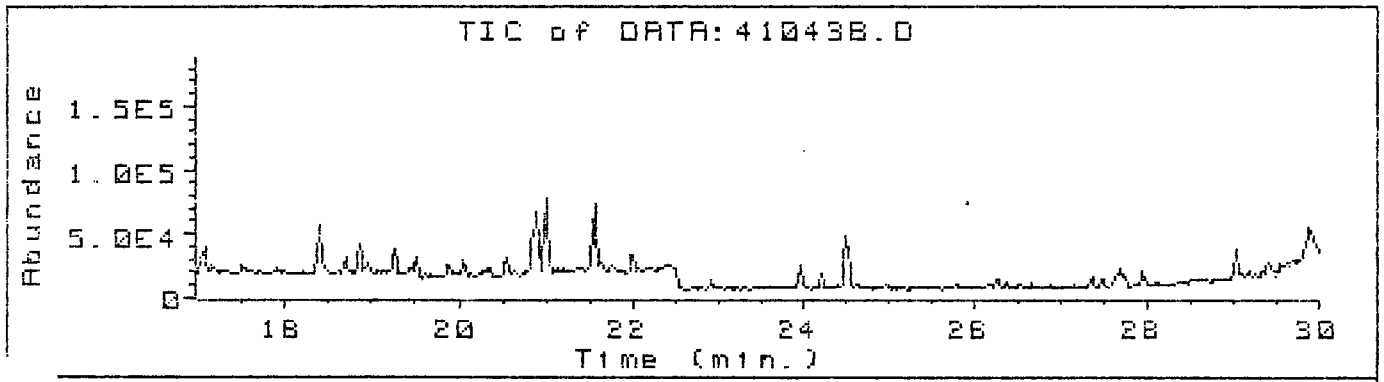
14
15
16
17
Time (min.)


TIC of DATA:41043B.D
Abundance
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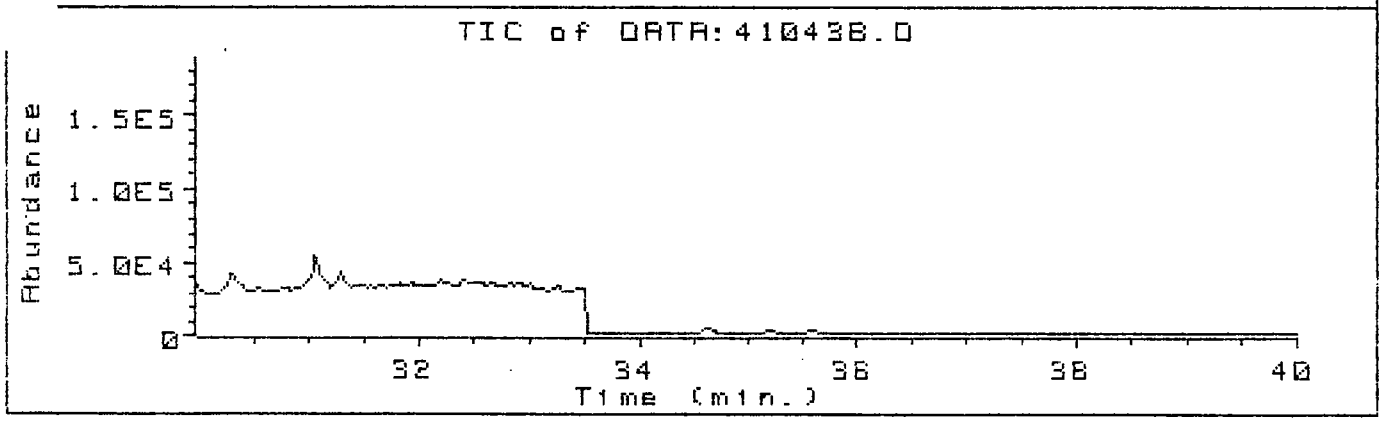
5.0E4
0
18
20
22
24
26
28
30
Time (min.)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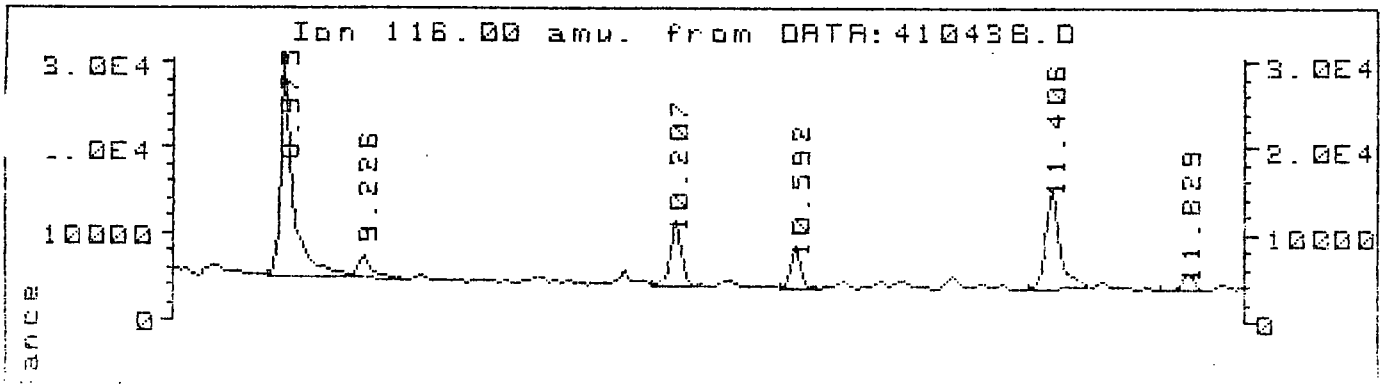
34
36
38
40
Time (min.)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10.207
10.592
11.406
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3.0E4
2.0E4
10000
0

NO

N

ERT #	: 41045	Extract Vol., ml		0.500
Field ID	: TD-10A	Sample Vol., L		4.000
GC/MS File #	: 41045A	Date Analyze:	01/29/87	

only 3 liter sample but sample was spiked with 4ml of Surr. Mix

DAP 2-3-87

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	50.000	17.101	366079
Phenanthrene-d10	50.000	20.870	645370
Benz(a)pyrene-d12	50.000	31.096	1095028

Group I	Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.319	0.000	1	0.000	0.000
dihydroinden	0.799	10.062	537106	11.476	0.588
indene	1.228	10.224	190176	2.645	0.598
Naphthalene-d8 (Surr.)	1.923	12.622	589027	5.229	0.738
Naphthalene	2.964	12.660	2294738	13.218	0.740
Benz(b)thio	1.736	12.818	119423	1.174	0.750
Quinoline	0.996	13.539	377329	6.470	0.792
Indole	1.508	14.397	149853	1.696	0.842
2-methyl	1.348	14.397	420536	5.324	0.842
1-methyl	1.323	14.670	270389	3.489	0.858
Biphenyl	2.558	15.634	655042	4.372	0.914
Acenaphthylene	1.736	16.706	2064135	20.300	0.977
Acenaphthene	1.221	17.173	602663	8.426	1.004
Dibenzofuran	1.485	17.593	662496	7.615	1.029
Group II					
Flourene-d10 (Surr.)	0.653	18.414	938844	13.915	0.882
Fluorene	1.110	18.470	753598	6.577	0.885
Dibenzothiophene	1.116	20.607	340028	2.952	0.987
Phenanthrene	1.916	20.915	4802285	24.270	1.002
Anthracene	1.176	21.033	3111671	25.629	1.008
Acridine	0.659	21.161	611728	8.991	1.014
Carbazole	0.824	21.534	1261813	14.824	1.032
Fluoranthene	1.361	24.000	4442449	31.603	1.150
Pyrene-d10 (Surr.)	0.851	24.533	991628	11.290	1.176
Pyrene	1.397	24.570	3412927	23.655	1.177
Group III					
Benz(a)anthracene	1.599	27.655	2241052	8.000	0.889
Chyrsene-d12 (Surr.)	1.008	27.701	385977	2.185	0.891
Chyrsene	1.704	27.760	2339486	7.838	0.893
Benzofluoranthenes	2.109	30.319	4459215	12.066	0.975
Benz(e)pyrene	1.856	31.024	2080018	6.398	0.998
Benz(a)pyrene	1.867	31.155	2437510	7.450	1.002
Perylene-d12 (Surr.)	1.005	31.322	361582	2.053	1.007
Perylene	1.634	31.383	968725	3.384	1.009
Indeno(123,cd)pyrene	2.072	34.676	1459347	4.020	1.115
Dibenz(ah)anthracene	1.732	34.726	522971	1.724	1.117
·o(ghi)perylene	2.107	35.653	1474660	3.995	1.147

ERT #: 41045

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	5.23	9.90	52.82	42-102	1.820	55.81%
Flourene-d10 (Surr.)	13.91	9.50	146.47	60-128	0.866	110.52%
Chyrsene-d12 (Surr.)	2.18	9.80	22.29	10-54	0.413	54.43%
Pyrene-d10 (Surr.)	11.29	10.05	112.33		0.757	126.23%
Perylene-d12 (Surr.)	2.05	9.40	21.84		0.887	24.75%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	6.47	6.47	6.47	1.90
BENZO (A) ANTHRACENE	2.80	8.00	8.00	8.00	4.40
CHYRSENE	2.80	7.84	7.84	7.84	4.40
BENZOFLUORANTHENES	6.20	12.07	12.07	12.07	9.70
BENZO (A) PYRENE	2.20	7.45	7.45	7.45	3.40
INDENO (1,2,3-CD) PYRENE	2.80	4.02	0.00	4.02	4.40
DIBENZO (A,H) ANTHRACENE	2.20	1.72	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	3.99	0.00	3.99	5.30
			41.82		

OTHER PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
2,3-BENZOFURAN	1.20	0.00	0.00	0.00	1.90
2,3-DIHYDROINDENE	2.20	11.48	11.48	11.48	3.40
INDENE	1.80	2.64	0.00	2.64	2.90
NAPHTHALENE	30.00	13.22	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	1.17	0.00	0.00	2.20
INDOLE	1.20	1.70	0.00	1.70	1.90
2-METHYLNAPHTHALENE	3.20	5.32	5.32	5.32	5.00
1-METHYLNAPHTHALENE	2.00	3.49	3.49	3.49	3.10
BIPHENYL	11.00	4.37	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	20.30	20.30	20.30	1.70
ACENAPHTHENE	0.83	8.43	8.43	8.43	1.30
DIBENZOFURAN	0.77	7.62	7.62	7.62	1.20
FLOURENE	0.56	6.58	6.58	6.58	0.88
DIBENZOTHIOPHENE	4.00	2.95	0.00	0.00	6.30
PHENANTHRENE	2.00	24.27	24.27	24.27	3.10
ANTHRACENE	2.20	25.63	25.63	25.63	3.40
ACRIDINE	1.60	8.99	8.99	8.99	2.50
CARBAZOLE	1.70	14.82	14.82	14.82	2.60
FLUORANTHENE	2.80	31.60	31.60	31.60	4.40
PYRENE	2.60	23.65	23.65	23.65	4.10
BENZO (E) PYRENE	0.96	6.40	6.40	6.40	1.50
YLENE	1.00	3.38	3.38	3.38	1.60
	TOTAL OTHER PAH		201.96		
	TOTAL PAH'S		243.79		

Non-Reference Peak Window: 1.00 % of Retention Time
Sample Amount: 0.000 Uncalibrated Peak RF: 1.000 Multiplier: 1.000 N Rep

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Peak Num	Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amount
1		1	-------	Mass	118.00	amu	2,3-BENZOFUR	*** Not Found ***	
		1VV	10.062	Mass	118.00	amu	2,3-DIHYDROI	537106	91.63 ng/mL
-		1VV	10.224	Mass	116.00	amu	INDENE	190176	30.41 ng/mL
4		1PV	12.622	Mass	136.00	amu	NAPHTHALENE,	589027	35.00 ng/mL
5		1VV	12.660	Mass	128.00	amu	NAPTHALENE	2294738	117.3 ng/mL
6		1PV	12.818	Mass	134.00	amu	BENZO(b)THIO	119423	12.62 ng/mL
7		1VV	13.539	Mass	129.00	amu	QUINOLINE	377329	52.43 ng/mL
8		1VV	14.397	Mass	117.00	amu	INDOLE	149853	15.55 ng/mL
9		1VV	14.397	Mass	141.00	amu	2-METHYLNAPT	420536	34.74 ng/mL
10		1PV	14.670	Mass	141.00	amu	1-METHYLNAPT	270389	21.90 ng/mL
11		1VV	15.634	Mass	154.00	amu	BIPHENYL	655042	
12		1VH	16.706	Mass	152.00	amu	ACENAPHTHYLE	2064135	215.0 ng/mL
13	+ISTD	1VV	17.101	Mass	164.00	amu	ACENAPTHTHEN	366079	53.00 ng/mL
14		1VV	17.173	Mass	154.00	amu	ACENAPHTHENE	602663	63.31 ng/mL
15		1VV	17.593	Mass	168.00	amu	DIBENZOFURAN	662496	35.14 ng/mL
16		2PV	18.414	Mass	176.00	amu	FLUORENE, d1	938844	203.5 ng/mL
17		2PV	18.470	Mass	166.00	amu	FLUORENE	753598	101.1 ng/mL
18		2PV	20.607	Mass	184.00	amu	DIBENZOTHIOP	340028	23.90 ng/mL
19	+ISTD	2PV	20.870	Mass	188.00	amu	PHENANTHRENE	645370	62.50 ng/mL
20		2PV	20.915	Mass	178.00	amu	PHENANTHRENE	4802285	412.4 ng/mL
21		2VV	21.033	Mass	178.00	amu	ANTHRACENE	3111671	379.1 ng/mL
22		2VV	21.161	Mass	179.00	amu	ACRIDINE	611728	125.2 ng/mL
23		1VV	21.534	Mass	167.00	amu	CARBAZOLE	1261813	100.8 ng/mL
24		1VV	24.000	Mass	202.00	amu	FLUORANTHENE	4442449	247.2 ng/mL
25		2VV	24.533	Mass	212.00	amu	PYRENE, d10	991628	114.9 ng/mL
26		2VV	24.570	Mass	202.00	amu	PYRENE	3412927	247.6 ng/mL
		3PV	27.655	Mass	228.00	amu	BENZ(a)ANTHR	2241052	79.72 ng/mL
		3VV	27.701	Mass	240.00	amu	CHYRSENE, d(	385977	35.80 ng/mL
29		3VV	27.760	Mass	228.00	amu	CHYRSENE	2339486	70.71 ng/mL
30		3VV	30.319	Mass	252.00	amu	BENZOFLUORAN	4459215	119.6 ng/mL
31		3	-------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
32		3VV	31.024	Mass	252.00	amu	BENZ(e)PYREN	2080018	50.52 ng/mL
33	+ISTD	3VV	31.096	Mass	264.00	amu	BENZ(a)PYREN	1095028	49.60 ng/mL
34		3VV	31.155	Mass	252.00	amu	BENZ(a)PYREN	2437510	94.71 ng/mL
35		3VV	31.322	Mass	264.00	amu	PERYLENE, d1	361582	12.46 ng/mL
36		3VV	31.383	Mass	252.00	amu	PERYLENE	968725	38.35 ng/mL
37		3VV	34.676	Mass	276.00	amu	INDENO(1,2,3	1459347	50.82 ng/mL
38		3PV	34.726	Mass	278.00	amu	DIBENZ(a,h)A	522971	22.97 ng/mL
39		3VV	35.653	Mass	276.00	amu	BENZO(g,h,i)	1474660	51.95 ng/mL
---------		BV	8.792	Mass	118.00		-Uncalibrated-	155850	155850 ng/mL
---------		VV	8.997	Mass	118.00		-Uncalibrated-	437129	437129 ng/mL
---------		PV	8.992	Mass	116.00		-Uncalibrated-	634685	634685 ng/mL
---------		VV	10.060	Mass	116.00		-Uncalibrated-	99588	99588 ng/mL
---------		VV	10.608	Mass	116.00		-Uncalibrated-	66289	66289 ng/mL
---------		VV	11.104	Mass	116.00		-Uncalibrated-	56379	56379 ng/mL
---------		PV	11.298	Mass	118.00		-Uncalibrated-	64223	64223 ng/mL
---------		PV	11.417	Mass	116.00		-Uncalibrated-	364135	364135 ng/mL
---------		PH	12.063	Mass	134.00		-Uncalibrated-	27970	27970 ng/mL
---------		PV	12.145	Mass	129.00		-Uncalibrated-	65696	65696 ng/mL
---------		VV	12.155	Mass	128.00		-Uncalibrated-	69371	69371 ng/mL
---------		PV	12.277	Mass	136.00		-Uncalibrated-	17406	17406 ng/mL
---------		VV	12.265	Mass	128.00		-Uncalibrated-	18082	18082 ng/mL
---------		PV	12.311	Mass	129.00		-Uncalibrated-	14084	14084 ng/mL
---------		PB	12.354	Mass	128.00		-Uncalibrated-	21013	21013 ng/mL
---------		PV	12.517	Mass	134.00		-Uncalibrated-	55111	55111 ng/mL
---------		VV	12.622	Mass	134.00		-Uncalibrated-	142229	142229 ng/mL
---------		VV	12.661	Mass	129.00		-Uncalibrated-	261937	261937 ng/mL
---------		VV	12.699	Mass	136.00		-Uncalibrated-	38568	38568 ng/mL
---------		VV	13.342	Mass	136.00		-Uncalibrated-	976118	976118 ng/mL

--------	VV	13.537	Mass	128.00	-Uncalibrated-	183799	183799	ng/mL
--------	VV	13.809	Mass	129.00	-Uncalibrated-	259069	259069	ng/mL
--------	VB	13.896	Mass	129.00	-Uncalibrated-	548956	548956	ng/mL
--------	VB	13.888	Mass	128.00	-Uncalibrated-	386054	386054	ng/mL
--------	PH	14.064	Mass	141.00	-Uncalibrated-	14023	14023	ng/mL
--------	VV	14.476	Mass	117.00	-Uncalibrated-	123037	123037	ng/mL
--------	VV	15.655	Mass	117.00	-Uncalibrated-	145071	145071	ng/mL
--------	VV	15.849	Mass	141.00	-Uncalibrated-	209216	209216	ng/mL
--------	VV	15.910	Mass	141.00	-Uncalibrated-	147043	147043	ng/mL
--------	BV	15.928	Mass	117.00	-Uncalibrated-	83996	83996	ng/mL
--------	VB	16.004	Mass	141.00	-Uncalibrated-	433900	433900	ng/mL
--------	BV	16.131	Mass	168.00	-Uncalibrated-	44155	44155	ng/mL
--------	BV	16.148	Mass	164.00	-Uncalibrated-	58710	58710	ng/mL
--------	BH	16.134	Mass	152.00	-Uncalibrated-	92370	92370	ng/mL
--------	VV	16.184	Mass	164.00	-Uncalibrated-	47468	47468	ng/mL
--------	VH	16.220	Mass	152.00	-Uncalibrated-	189609	189609	ng/mL
--------	VH	16.264	Mass	152.00	-Uncalibrated-	111089	111089	ng/mL
--------	VH	16.353	Mass	152.00	-Uncalibrated-	268076	268076	ng/mL
--------	VV	16.354	Mass	154.00	-Uncalibrated-	70803	70803	ng/mL
--------	VV	16.426	Mass	168.00	-Uncalibrated-	130925	130925	ng/mL
--------	VV	16.504	Mass	154.00	-Uncalibrated-	258910	258910	ng/mL
--------	VV	16.610	Mass	164.00	-Uncalibrated-	250525	250525	ng/mL
--------	VV	16.767	Mass	164.00	-Uncalibrated-	126849	126849	ng/mL
--------	BV	16.752	Mass	154.00	-Uncalibrated-	70117	70117	ng/mL
--------	PV	17.043	Mass	154.00	-Uncalibrated-	70237	70237	ng/mL
--------	VV	17.082	Mass	168.00	-Uncalibrated-	170495	170495	ng/mL
--------	VH	17.078	Mass	152.00	-Uncalibrated-	216412	216412	ng/mL
--------	VH	17.173	Mass	152.00	-Uncalibrated-	656981	656981	ng/mL
--------	VV	17.213	Mass	168.00	-Uncalibrated-	117450	117450	ng/mL
--------	VH	17.515	Mass	152.00	-Uncalibrated-	248342	248342	ng/mL
--------	PV	18.466	Mass	164.00	-Uncalibrated-	178673	178673	ng/mL
--------	VV	18.649	Mass	168.00	-Uncalibrated-	176071	176071	ng/mL
--------	VV	18.720	Mass	166.00	-Uncalibrated-	271600	271600	ng/mL
--------	VV	18.712	Mass	168.00	-Uncalibrated-	172003	172003	ng/mL
--------	VV	18.856	Mass	168.00	-Uncalibrated-	317802	317802	ng/mL
--------	VV	18.887	Mass	166.00	-Uncalibrated-	413357	413357	ng/mL
--------	VH	18.885	Mass	152.00	-Uncalibrated-	542988	542988	ng/mL
--------	VV	18.982	Mass	166.00	-Uncalibrated-	311846	311846	ng/mL
--------	VH	19.142	Mass	152.00	-Uncalibrated-	326475	326475	ng/mL
--------	VB	19.287	Mass	166.00	-Uncalibrated-	346233	346233	ng/mL
--------	VH	19.282	Mass	152.00	-Uncalibrated-	483547	483547	ng/mL
--------	VB	19.455	Mass	168.00	-Uncalibrated-	343246	343246	ng/mL
--------	VH	19.510	Mass	152.00	-Uncalibrated-	377212	377212	ng/mL
--------	PH	19.542	Mass	184.00	-Uncalibrated-	17042	17042	ng/mL
--------	PV	19.638	Mass	184.00	-Uncalibrated-	64223	64223	ng/mL
--------	VV	19.697	Mass	184.00	-Uncalibrated-	159008	159008	ng/mL
--------	PV	19.901	Mass	178.00	-Uncalibrated-	171948	171948	ng/mL
--------	VV	19.971	Mass	178.00	-Uncalibrated-	48613	48613	ng/mL
--------	PV	20.009	Mass	184.00	-Uncalibrated-	89871	89871	ng/mL
--------	PH	20.051	Mass	179.00	-Uncalibrated-	40337	40337	ng/mL
--------	VV	20.060	Mass	178.00	-Uncalibrated-	118202	118202	ng/mL
--------	VV	20.078	Mass	184.00	-Uncalibrated-	79142	79142	ng/mL
--------	VV	20.265	Mass	178.00	-Uncalibrated-	86513	86513	ng/mL
--------	VV	20.289	Mass	184.00	-Uncalibrated-	78453	78453	ng/mL
--------	VV	20.331	Mass	167.00	-Uncalibrated-	251630	251630	ng/mL
--------	PV	20.376	Mass	179.00	-Uncalibrated-	89448	89448	ng/mL
--------	VV	20.375	Mass	178.00	-Uncalibrated-	83210	83210	ng/mL
--------	VV	20.560	Mass	179.00	-Uncalibrated-	221485	221485	ng/mL
--------	PV	20.560	Mass	167.00	-Uncalibrated-	280988	280988	ng/mL
--------	PV	20.560	Mass	178.00	-Uncalibrated-	101119	101119	ng/mL
--------	VV	20.677	Mass	179.00	-Uncalibrated-	43370	43370	ng/mL
--------	VV	20.662	Mass	178.00	-Uncalibrated-	40650	40650	ng/mL
--------	VV	20.807	Mass	179.00	-Uncalibrated-	104250	104250	ng/mL
--------	PV	20.869	Mass	184.00	-Uncalibrated-	58045	58045	ng/mL
--------	VV	20.924	Mass	179.00	-Uncalibrated-	755732	755732	ng/mL

--------	VV	21.015	Mass	167.00	-Uncali rated-	[illegible]	[illegible]	ng/mL
--------	VV	21.161	Mass	178.00	-Uncalibrated-	204368	204368	ng/mL
--------	VV	21.298	Mass	179.00	-Uncalibrated-	131230	131230	ng/mL
--------	VV	21.436	Mass	179.00	-Uncalibrated-	622099	622099	ng/mL
--------	PV	21.431	Mass	178.00	-Uncalibrated-	137473	137473	ng/mL
--------	VV	21.582	Mass	179.00	-Uncalibrated-	1012745	1012745	ng/mL
------	VV	21.667	Mass	179.00	-Uncalibrated-	182453	182453	ng/mL
------	VV	21.665	Mass	167.00	-Uncalibrated-	125334	125334	ng/mL
--------	VV	21.830	Mass	179.00	-Uncalibrated-	255743	255743	ng/mL
--------	PV	22.202	Mass	179.00	-Uncalibrated-	41538	41538	ng/mL
--------	VV	22.279	Mass	179.00	-Uncalibrated-	21584	21584	ng/mL
--------	PBA	22.371	Mass	167.00	-Uncalibrated-	37760	37760	ng/mL
--------	PH	22.585	Mass	202.00	-Uncalibrated-	21236	21236	ng/mL
--------	VV	22.826	Mass	212.00	-Uncalibrated-	57739	57739	ng/mL
--------	VV	22.959	Mass	202.00	-Uncalibrated-	92103	92103	ng/mL
--------	VV	23.052	Mass	212.00	-Uncalibrated-	82719	82719	ng/mL
--------	VV	23.139	Mass	212.00	-Uncalibrated-	62283	62283	ng/mL
--------	PV	23.503	Mass	212.00	-Uncalibrated-	114098	114098	ng/mL
--------	PV	23.586	Mass	202.00	-Uncalibrated-	171290	171290	ng/mL
--------	VV	24.187	Mass	202.00	-Uncalibrated-	108174	108174	ng/mL
--------	VV	24.256	Mass	202.00	-Uncalibrated-	556172	556172	ng/mL
--------	PV	24.443	Mass	202.00	-Uncalibrated-	160534	160534	ng/mL
--------	VV	24.667	Mass	212.00	-Uncalibrated-	77717	77717	ng/mL
--------	BV	25.007	Mass	202.00	-Uncalibrated-	526494	526494	ng/mL
--------	PV	26.698	Mass	228.00	-Uncalibrated-	113733	113733	ng/mL
--------	PV	27.152	Mass	228.00	-Uncalibrated-	231536	231536	ng/mL
--------	VV	27.230	Mass	228.00	-Uncalibrated-	124907	124907	ng/mL
--------	VV	27.389	Mass	240.00	-Uncalibrated-	157450	157450	ng/mL
--------	PV	27.376	Mass	228.00	-Uncalibrated-	60961	60961	ng/mL
--------	VV	27.506	Mass	240.00	-Uncalibrated-	118480	118480	ng/mL
--------	VV	27.492	Mass	228.00	-Uncalibrated-	40973	40973	ng/mL
------	PV	27.963	Mass	240.00	-Uncalibrated-	62522	62522	ng/mL
------	VV	27.976	Mass	228.00	-Uncalibrated-	783205	783205	ng/mL
--------	VV	28.138	Mass	240.00	-Uncalibrated-	57136	57136	ng/mL
--------	VV	28.140	Mass	228.00	-Uncalibrated-	70921	70921	ng/mL
--------	VV	28.417	Mass	228.00	-Uncalibrated-	195818	195818	ng/mL
--------	PV	28.538	Mass	240.00	-Uncalibrated-	61639	61639	ng/mL
--------	VV	28.561	Mass	228.00	-Uncalibrated-	198298	198298	ng/mL
--------	VV	28.594	Mass	240.00	-Uncalibrated-	70703	70703	ng/mL
--------	VV	28.648	Mass	228.00	-Uncalibrated-	187948	187948	ng/mL
--------	VV	28.713	Mass	240.00	-Uncalibrated-	57249	57249	ng/mL
--------	VV	28.798	Mass	228.00	-Uncalibrated-	51567	51567	ng/mL
--------	VBA	28.873	Mass	228.00	-Uncalibrated-	95165	95165	ng/mL
--------	PV	29.638	Mass	252.00	-Uncalibrated-	37630	37630	ng/mL
--------	VV	29.699	Mass	252.00	-Uncalibrated-	104376	104376	ng/mL
--------	PV	29.717	Mass	264.00	-Uncalibrated-	87800	87800	ng/mL
--------	VV	29.898	Mass	264.00	-Uncalibrated-	22018	22018	ng/mL
--------	VV	29.897	Mass	252.00	-Uncalibrated-	195648	195648	ng/mL
--------	VV	29.960	Mass	252.00	-Uncalibrated-	126556	126556	ng/mL
--------	PV	30.012	Mass	264.00	-Uncalibrated-	46464	46464	ng/mL
--------	VV	30.039	Mass	252.00	-Uncalibrated-	116776	116776	ng/mL
--------	VV	30.198	Mass	252.00	-Uncalibrated-	344917	344917	ng/mL
--------	VV	30.580	Mass	252.00	-Uncalibrated-	1130945	1130945	ng/mL
--------	VV	30.718	Mass	264.00	-Uncalibrated-	51415	51415	ng/mL
--------	VV	30.856	Mass	252.00	-Uncalibrated-	531832	531832	ng/mL
--------	VV	30.950	Mass	264.00	-Uncalibrated-	130222	130222	ng/mL
------	VV	31.276	Mass	252.00	-Uncalibrated-	201100	201100	ng/mL
------	VV	31.487	Mass	264.00	-Uncalibrated-	90160	90160	ng/mL
--------	VV	31.538	Mass	264.00	-Uncalibrated-	17389	17389	ng/mL
--------	VV	31.614	Mass	264.00	-Uncalibrated-	58305	58305	ng/mL
--------	VV	31.698	Mass	264.00	-Uncalibrated-	69798	69798	ng/mL
--------	VV	31.860	Mass	264.00	-Uncalibrated-	218201	218201	ng/mL
--------	VV	31.933	Mass	264.00	-Uncalibrated-	195129	195129	ng/mL
--------	VV	32.052	Mass	264.00	-Uncalibrated-	87902	87902	ng/mL
--------	VV	32.151	Mass	264.00	-Uncalibrated-	64928	64928	ng/mL

--------	PBA	32.433	Mass	264.00	-Uncalibrated-	22260	22260	ng/mL
--------	BV	33.542	Mass	278.00	-Uncalibrated-	26493	26493	ng/mL
--------	VV	33.653	Mass	278.00	-Uncalibrated-	20282	20282	ng/mL
--------	VV	33.727	Mass	276.00	-Uncalibrated-	135305	135305	ng/mL
--------	BV	34.279	Mass	278.00	-Uncalibrated-	208866	208866	ng/mL
--------	VV	34.350	Mass	276.00	-Uncalibrated-	239014	239014	ng/mL
--------	VV	35.108	Mass	278.00	-Uncalibrated-	241200	241200	ng/mL
--------	VV	35.260	Mass	278.00	-Uncalibrated-	460400	460400	ng/mL
--------	VV	35.256	Mass	276.00	-Uncalibrated-	184896	184896	ng/mL
--------	VV	36.175	Mass	276.00	-Uncalibrated-	352376	352376	ng/mL

Error : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.400 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.361 +/- 0.152 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

Operator: LOUIE G. POUNDS 29 Jan 87 7:09 pm
Method File Name : PAH.M
Sample Info : ERT#41045A.D FIELD ID TD-10A
Misc Info: 1.0 ul INJECTION VOLUME
Integration File Name : DATA:41045A.I
Bottle Number : 0

Ret Time	Signal Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
8.792	Mass 118.00 amu	BV	155850	1815	100.00	13.05	100.00	29.02
8.997	Mass 118.00 amu	VV	437129	10445	40.78	36.60	68.87	81.39
8.992	Mass 116.00 amu	PV	634685	20427	59.22	44.97	100.00	100.00
10.062	Mass 118.00 amu	VV	537106	24137	84.36	44.97	100.00	100.00
10.060	Mass 116.00 amu	VV	99588	4364	15.64	7.06	18.54	15.69
10.224	Mass 116.00 amu	VV	190176	6052	100.00	13.48	100.00	29.96
10.608	Mass 116.00 amu	VV	66289	2462	100.00	4.70	100.00	10.44
11.104	Mass 116.00 amu	VV	56379	1856	100.00	3.99	100.00	8.88
11.298	Mass 118.00 amu	PV	64223	2597	100.00	5.38	100.00	11.96
11.417	Mass 116.00 amu	PV	364135	11995	100.00	25.80	100.00	57.37
12.063	Mass 134.00 amu	PH	27970	2034	100.00	2.46	100.00	3.53
12.145	Mass 129.00 amu	PV	65696	2088	48.64	4.30	94.70	11.97
12.155	Mass 128.00 amu	VV	69371	1251	51.36	2.33	100.00	3.02
12.277	Mass 136.00 amu	PV	17406	423	49.05	1.07	96.26	1.78
12.265	Mass 128.00 amu	VV	18082	583	50.95	0.61	100.00	0.79
.311	Mass 129.00 amu	PV	14084	500	100.00	0.92	100.00	2.57
12.354	Mass 128.00 amu	PB	21013	512	100.00	0.71	100.00	0.92
12.517	Mass 134.00 amu	PV	55111	2551	100.00	4.84	100.00	6.95
12.622	Mass 136.00 amu	PV	589027	23174	80.55	36.33	100.00	60.34
12.622	Mass 134.00 amu	VV	142229	5106	19.45	12.50	24.15	17.93

12.661	Mass	129.00	amu	VV	261937	10670	10.25	17.15	11.41	47.72
12.660	Mass	128.00	amu	VV	2294738	98316	89.75	77.18	100.00	100.00
12.699	Mass	136.00	amu	VV	38568	1776	100.00	2.38	100.00	3.95
[illegible] 818	Mass	134.00	amu	PV	119423	4695	100.00	10.50	100.00	15.06
[illegible].342	Mass	136.00	amu	VV	976118	33493	55.17	60.21	100.00	100.00
13.339	Mass	134.00	amu	VV	793080	28198	44.83	69.70	81.25	100.00
13.539	Mass	129.00	amu	VV	377329	10609	67.24	24.71	100.00	68.74
13.537	Mass	128.00	amu	VV	183799	3530	32.76	6.18	48.71	8.01
13.809	Mass	129.00	amu	VV	259069	4075	100.00	16.97	100.00	47.19
13.896	Mass	129.00	amu	VB	548956	9727	58.71	35.95	100.00	100.00
13.888	Mass	128.00	amu	VB	386054	4792	41.29	12.99	70.33	16.82
14.064	Mass	141.00	amu	PH	14023	541	100.00	0.94	100.00	3.23
14.397	Mass	141.00	amu	VV	420536	17286	73.73	28.13	100.00	96.92
14.397	Mass	117.00	amu	VV	149853	5133	26.27	29.85	35.63	100.00
14.476	Mass	117.00	amu	VV	123037	5225	100.00	24.51	100.00	82.10
14.670	Mass	141.00	amu	PV	270389	10622	100.00	18.08	100.00	62.32
15.634	Mass	154.00	amu	VV	655042	26191	100.00	37.91	100.00	100.00
15.655	Mass	117.00	amu	VV	145071	4329	100.00	28.90	100.00	96.81
849	Mass	141.00	amu	VV	209216	5549	100.00	13.99	100.00	48.22
15.910	Mass	141.00	amu	VV	147043	4403	100.00	9.83	100.00	33.89
15.928	Mass	117.00	amu	BV	83996	3797	100.00	16.73	100.00	56.05
16.004	Mass	141.00	amu	VB	433900	9208	100.00	29.02	100.00	100.00
16.131	Mass	168.00	amu	BV	44155	1692	22.62	2.07	47.80	6.66
16.148	Mass	164.00	amu	BV	58710	2078	30.07	5.71	63.56	16.04
16.134	Mass	152.00	amu	BH	92370	3181	47.31	1.66	100.00	4.47
16.184	Mass	164.00	amu	VV	47468	1980	100.00	4.62	100.00	12.97
16.220	Mass	152.00	amu	VH	189609	3974	100.00	3.40	100.00	9.19
16.264	Mass	152.00	amu	VH	111089	3819	100.00	1.99	100.00	5.38
16.353	Mass	152.00	amu	VH	268076	3867	79.11	4.81	100.00	12.99
16.354	Mass	154.00	amu	VV	70803	2203	20.89	4.10	26.41	10.81
16.426	Mass	168.00	amu	VV	130925	2352	100.00	6.13	100.00	19.76
16.504	Mass	154.00	amu	VV	258910	9006	100.00	14.99	100.00	39.53
.610	Mass	164.00	amu	VV	250525	5340	100.00	24.36	100.00	68.43
16.706	Mass	152.00	amu	VH	2064135	68562	100.00	37.01	100.00	100.00
16.767	Mass	164.00	amu	VV	126849	3106	64.40	12.34	100.00	34.65
16.752	Mass	154.00	amu	BV	70117	1825	35.60	4.06	55.28	10.70
17.043	Mass	154.00	amu	PV	70237	2883	100.00	4.07	100.00	10.72

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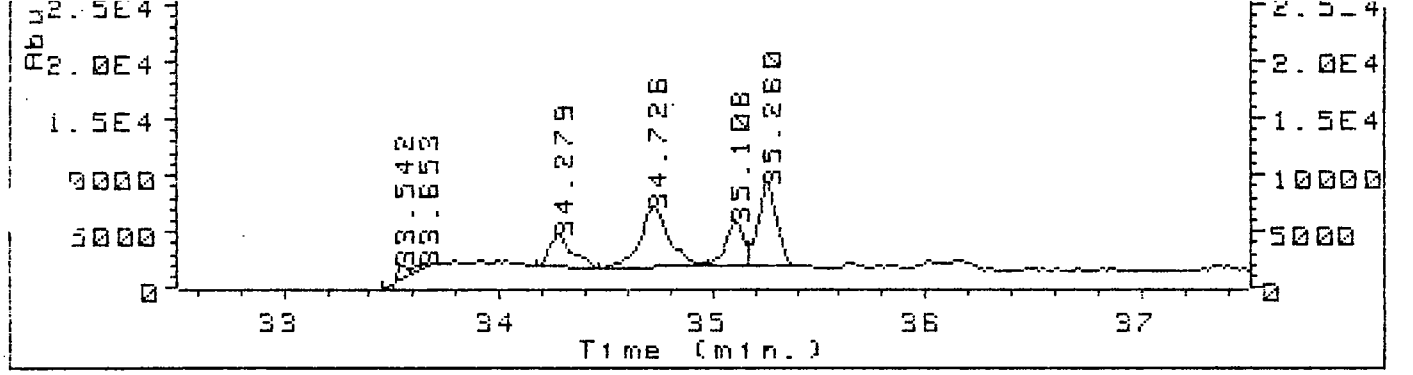
17.101	Mass	164.00	amu	VV	366079	13731	100.00	35.60	100.00	100.00
17.173	Mass	152.00	amu	VH	656981	15248	52.16	11.78	100.00	31.83
17.173	Mass	154.00	amu	VV	602663	22715	47.84	34.88	91.73	92.00
213	Mass	168.00	amu	VV	117450	3255	100.00	5.50	100.00	17.73
17.515	Mass	152.00	amu	VH	248342	4631	100.00	4.45	100.00	12.03
17.593	Mass	168.00	amu	VV	662496	15880	100.00	31.04	100.00	100.00
18.414	Mass	176.00	amu	PV	938844	29009	100.00	100.00	100.00	100.00
18.470	Mass	166.00	amu	PV	753598	20962	80.83	35.94	100.00	100.00
18.466	Mass	164.00	amu	PV	178673	4044	19.17	17.38	23.71	48.81
18.649	Mass	168.00	amu	VV	176071	3450	100.00	8.25	100.00	26.58
18.720	Mass	166.00	amu	VV	271600	5846	61.23	12.95	100.00	36.04
18.712	Mass	168.00	amu	VV	172003	4262	38.77	8.06	63.33	25.96
18.856	Mass	168.00	amu	VV	317802	4563	100.00	14.89	100.00	47.97
18.887	Mass	166.00	amu	VV	413357	14661	43.22	19.72	76.13	54.85
18.885	Mass	152.00	amu	VH	542988	12784	56.78	9.74	100.00	26.31
18.982	Mass	166.00	amu	VV	311846	7849	100.00	14.87	100.00	41.38
19.142	Mass	152.00	amu	VH	326475	6045	100.00	5.85	100.00	15.82
287	Mass	166.00	amu	VB	346233	12306	41.73	16.51	71.60	45.94
..282	Mass	152.00	amu	VH	483547	10417	58.27	8.67	100.00	23.43
19.455	Mass	168.00	amu	VB	343246	7373	100.00	16.08	100.00	51.81
19.510	Mass	152.00	amu	VH	377212	5530	100.00	6.76	100.00	18.27
19.542	Mass	184.00	amu	PH	17042	2006	100.00	1.92	100.00	5.01
19.638	Mass	184.00	amu	PV	64223	2237	100.00	7.25	100.00	18.89
19.697	Mass	184.00	amu	VV	159008	2378	100.00	17.95	100.00	46.76
19.901	Mass	178.00	amu	PV	171948	4365	100.00	1.93	100.00	3.58
19.971	Mass	178.00	amu	VV	48613	1520	100.00	0.55	100.00	1.01
20.009	Mass	184.00	amu	PV	89871	1739	100.00	10.15	100.00	26.43
20.051	Mass	179.00	amu	PH	40337	1730	25.44	0.58	34.13	1.44
20.060	Mass	178.00	amu	VV	118202	1998	74.56	1.33	100.00	2.46
20.078	Mass	184.00	amu	VV	79142	2582	100.00	8.93	100.00	23.28
20.265	Mass	178.00	amu	VV	86513	1966	100.00	0.97	100.00	1.80
.289	Mass	184.00	amu	VV	78453	2232	100.00	8.86	100.00	23.07
20.331	Mass	167.00	amu	VV	251630	4838	100.00	10.39	100.00	19.94
20.376	Mass	179.00	amu	PV	89448	3056	51.81	1.29	100.00	3.19
20.375	Mass	178.00	amu	VV	83210	2694	48.19	0.93	93.03	1.73
[illegible]	Mass	[illegible]	amu	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

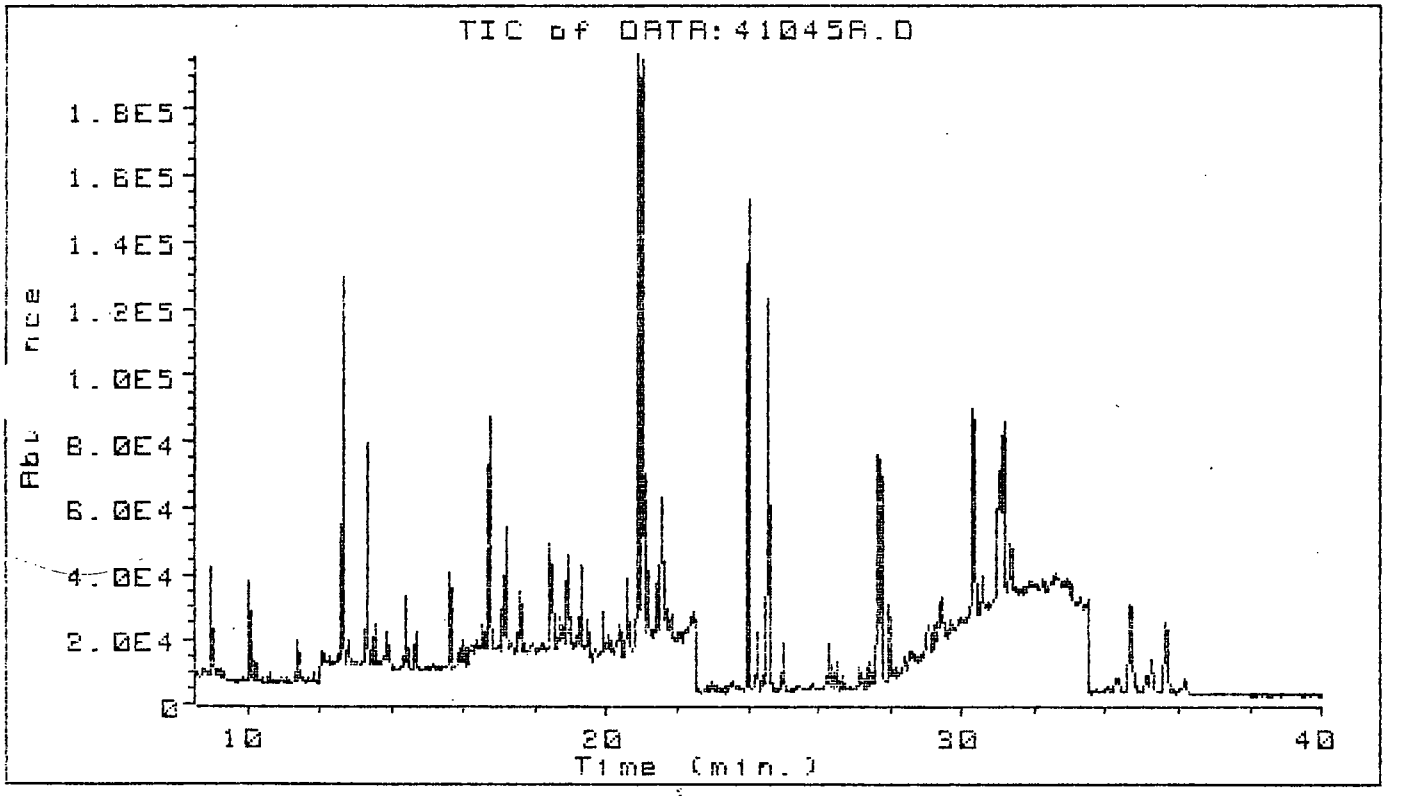
20.560	Mass	167.00	amu	PV	280988	8105	46.55	11.60	100.00	22.27
20.560	Mass	178.00	amu	PV	101119	3763	16.75	1.14	35.99	2.11
20.607	Mass	184.00	amu	PV	340028	9458	100.00	38.39	100.00	100.00
677	Mass	179.00	amu	VV	43370	1478	51.62	0.62	100.00	1.55
662	Mass	178.00	amu	VV	40650	1435	48.38	0.46	93.73	0.85
20.807	Mass	179.00	amu	VV	104250	2567	100.00	1.50	100.00	3.72
20.870	Mass	188.00	amu	PV	645370	23129	91.75	100.00	100.00	100.00
20.869	Mass	184.00	amu	PV	58045	2549	8.25	6.55	8.99	17.07
20.924	Mass	179.00	amu	VV	755732	24052	13.60	10.89	15.74	26.94
20.915	Mass	178.00	amu	PV	4802285	149154	86.40	53.92	100.00	100.00
21.016	Mass	179.00	amu	VV	2805674	91303	85.79	40.43	100.00	100.00
21.015	Mass	167.00	amu	VV	464604	7803	14.21	19.18	16.56	36.82
21.033	Mass	178.00	amu	VV	3111671	103653	100.00	34.94	100.00	64.80
21.161	Mass	179.00	amu	VV	611728	16867	74.96	8.82	100.00	21.80
21.161	Mass	178.00	amu	VV	204368	4897	25.04	2.29	33.41	4.26
21.298	Mass	179.00	amu	VV	131230	3318	100.00	1.89	100.00	4.68
21.436	Mass	179.00	amu	VV	622099	13159	81.90	8.96	100.00	22.17
21.431	Mass	178.00	amu	PV	137473	3793	18.10	1.54	22.10	2.86
21.534	Mass	167.00	amu	VV	1261813	28546	100.00	52.10	100.00	100.00
582	Mass	179.00	amu	VV	1012745	28680	100.00	14.59	100.00	36.10
21.667	Mass	179.00	amu	VV	182453	5446	59.28	2.63	100.00	6.50
21.665	Mass	167.00	amu	VV	125334	2267	40.72	5.17	68.69	9.93
21.830	Mass	179.00	amu	VV	255743	5616	100.00	3.69	100.00	9.12
22.202	Mass	179.00	amu	PV	41538	1622	100.00	0.60	100.00	1.48
22.279	Mass	179.00	amu	VV	21584	975	100.00	0.31	100.00	0.77
22.371	Mass	167.00	amu	PBA	37760	1023	100.00	1.56	100.00	2.99
22.585	Mass	202.00	amu	PH	21236	882	100.00	0.22	100.00	0.48
22.826	Mass	212.00	amu	VV	57739	1956	100.00	4.17	100.00	5.82
22.959	Mass	202.00	amu	VV	92103	2621	100.00	0.97	100.00	2.07
23.052	Mass	212.00	amu	VV	82719	2033	100.00	5.97	100.00	8.34
23.139	Mass	212.00	amu	VV	62283	2240	100.00	4.49	100.00	6.28
23.503	Mass	212.00	amu	PV	114098	2116	100.00	8.23	100.00	11.51
586	Mass	202.00	amu	PV	171290	2819	100.00	1.80	100.00	3.86
24.000	Mass	202.00	amu	VV	4442449	141662	100.00	46.81	100.00	100.00
24.187	Mass	202.00	amu	VV	108174	4111	100.00	1.14	100.00	2.44
24.256	Mass	202.00	amu	VV	556172	16781	100.00	5.86	100.00	12.52
24.443	Mass	202.00	amu	PV	160534	3874	100.00	1.69	100.00	3.61

24.533	Mass	212.00	amu	VV	991628	29837	100.00	71.54	100.00	100.00
24.570	Mass	202.00	amu	VV	3412927	107622	100.00	35.96	100.00	76.83
24.667	Mass	212.00	amu	VV	77717	2852	100.00	5.61	100.00	7.84
007	Mass	202.00	amu	BV	526494	14402	100.00	5.55	100.00	11.85
26.698	Mass	228.00	amu	PV	113733	3861	100.00	1.69	100.00	4.86
27.152	Mass	228.00	amu	PV	231536	5600	100.00	3.44	100.00	9.90
27.230	Mass	228.00	amu	VV	124907	4033	100.00	1.85	100.00	5.34
27.389	Mass	240.00	amu	VV	157450	5924	72.09	16.21	100.00	40.79
27.376	Mass	228.00	amu	PV	60961	2060	27.91	0.91	38.72	2.61
27.506	Mass	240.00	amu	VV	118480	3177	74.30	12.20	100.00	30.70
27.492	Mass	228.00	amu	VV	40973	1751	25.70	0.61	34.58	1.75
27.655	Mass	228.00	amu	PV	2241052	66805	100.00	33.27	100.00	95.79
27.701	Mass	240.00	amu	VV	385977	10925	100.00	39.74	100.00	100.00
27.760	Mass	228.00	amu	VV	2339486	66034	100.00	34.73	100.00	100.00
27.963	Mass	240.00	amu	PV	62522	2295	7.39	6.44	7.98	16.20
27.976	Mass	228.00	amu	VV	783205	20447	92.61	11.63	100.00	33.48
28.138	Mass	240.00	amu	VV	57136	2022	44.62	5.88	80.56	14.80
28.140	Mass	228.00	amu	VV	70921	1579	55.38	1.05	100.00	3.03
.417	Mass	228.00	amu	VV	195818	4104	100.00	2.91	100.00	8.37
28.538	Mass	240.00	amu	PV	61639	2396	100.00	6.35	100.00	15.97
28.561	Mass	228.00	amu	VV	198298	3723	100.00	2.94	100.00	8.48
28.594	Mass	240.00	amu	VV	70703	2192	100.00	7.28	100.00	18.32
28.648	Mass	228.00	amu	VV	187948	3774	100.00	2.79	100.00	8.03
28.713	Mass	240.00	amu	VV	57249	1490	100.00	5.89	100.00	14.83
28.798	Mass	228.00	amu	VV	51567	1791	100.00	0.77	100.00	2.20
28.873	Mass	228.00	amu	VBA	95165	2289	100.00	1.41	100.00	4.07
29.638	Mass	252.00	amu	PV	37630	1103	100.00	0.29	100.00	0.84
29.699	Mass	252.00	amu	VV	104376	3411	100.00	0.81	100.00	2.34
29.717	Mass	264.00	amu	PV	87800	2660	100.00	3.18	100.00	8.02
29.898	Mass	264.00	amu	VV	22018	655	10.12	0.80	11.25	2.01
29.897	Mass	252.00	amu	VV	195648	3550	89.88	1.51	100.00	4.39
.960	Mass	252.00	amu	VV	126556	3136	100.00	0.98	100.00	2.84
30.012	Mass	264.00	amu	PV	46464	1322	100.00	1.68	100.00	4.24
30.039	Mass	252.00	amu	VV	116776	3235	100.00	0.90	100.00	2.62
30.198	Mass	252.00	amu	VV	344917	5078	100.00	2.67	100.00	7.73

30.580	Mass	252.00	amu	VV	1130945	15714	100.00	8.75	100.00	25.36
30.718	Mass	264.00	amu	VV	51415	1868	100.00	1.86	100.00	4.70
30.856	Mass	252.00	amu	VV	531832	6223	100.00	4.12	100.00	11.93
.950	Mass	264.00	amu	VV	130222	3511	100.00	4.72	100.00	11.89
31.024	Mass	252.00	amu	VV	2080018	41850	100.00	16.10	100.00	46.65
31.096	Mass	264.00	amu	VV	1095028	25862	100.00	39.67	100.00	100.00
31.155	Mass	252.00	amu	VV	2437510	53454	100.00	18.87	100.00	54.66
31.276	Mass	252.00	amu	VV	201100	5548	100.00	1.56	100.00	4.51
31.322	Mass	264.00	amu	VV	361582	6645	100.00	13.10	100.00	33.02
31.383	Mass	252.00	amu	VV	968725	18461	100.00	7.50	100.00	21.72
31.487	Mass	264.00	amu	VV	90160	2124	100.00	3.27	100.00	8.23
31.538	Mass	264.00	amu	VV	17389	896	100.00	0.63	100.00	1.59
31.614	Mass	264.00	amu	VV	58305	1654	100.00	2.11	100.00	5.32
31.698	Mass	264.00	amu	VV	69798	1699	100.00	2.53	100.00	6.37
31.860	Mass	264.00	amu	VV	218201	3563	100.00	7.91	100.00	19.93
933	Mass	264.00	amu	VV	195129	3282	100.00	7.07	100.00	17.82
32.052	Mass	264.00	amu	VV	87902	2495	100.00	3.18	100.00	8.03
32.151	Mass	264.00	amu	VV	64928	1699	100.00	2.35	100.00	5.93
32.247	Mass	264.00	amu	VV	141668	2580	43.70	5.13	77.61	12.94
32.234	Mass	252.00	amu	VV	182533	2775	56.30	1.41	100.00	4.09
32.433	Mass	264.00	amu	PBA	22260	757	100.00	0.81	100.00	2.03
33.542	Mass	278.00	amu	BV	26493	1257	100.00	1.79	100.00	5.07
33.653	Mass	278.00	amu	VV	20282	263	100.00	1.37	100.00	3.88
33.727	Mass	276.00	amu	VV	135305	1312	100.00	3.52	100.00	9.18
34.279	Mass	278.00	amu	BV	208866	2883	100.00	14.11	100.00	39.94
34.350	Mass	276.00	amu	VV	239014	3185	100.00	6.22	100.00	16.21
34.676	Mass	276.00	amu	VV	1459347	23536	100.00	37.95	100.00	98.96
34.726	Mass	278.00	amu	PV	522971	5298	100.00	35.33	100.00	100.00
.108	Mass	278.00	amu	VV	241200	4075	100.00	16.29	100.00	46.12
35.260	Mass	278.00	amu	VV	460400	7378	71.35	31.10	100.00	88.04
35.256	Mass	276.00	amu	VV	184896	2627	28.65	4.81	40.16	12.54
35.653	Mass	276.00	amu	VV	1474660	21417	100.00	38.35	100.00	100.00
36.175	Mass	276.00	amu	VV	352376	4380	100.00	9.16	100.00	23.90



107



*** Internal Standard ***

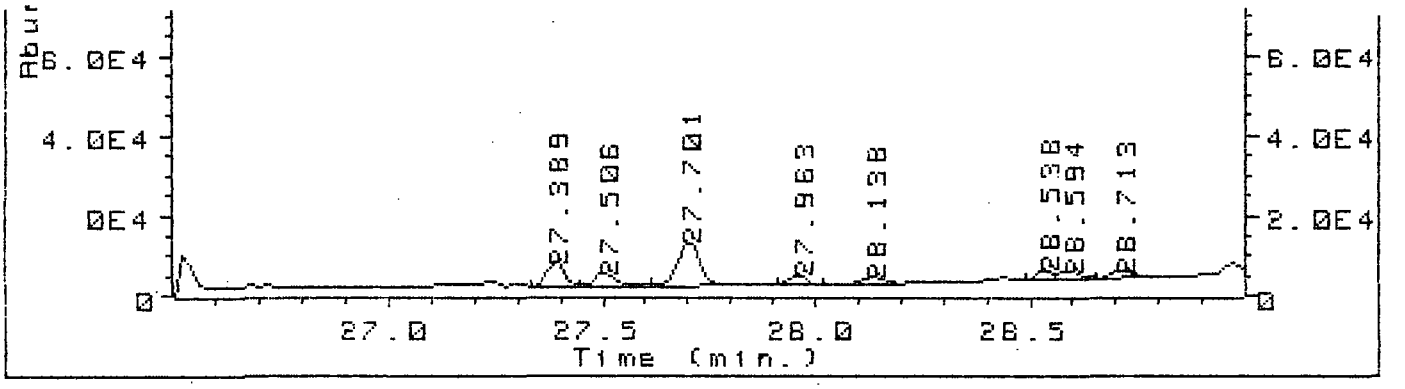
Operator: LOUIE G. POUNDS
Method File Name : PAH.M
Sample Info : ERT#41045A.D FIELD ID TD-10A
Misc Info: 1.0 ul INJECTION VOLUME
Integration File Name : DATA:41045A.I
Bottle Number : 0

ST. LOUIS PARK PPT PAH

Last Update: 12 Nov 86 7:13 pm

29 Jan 87 9:09 pm

Not Report
only 3 liter
Sample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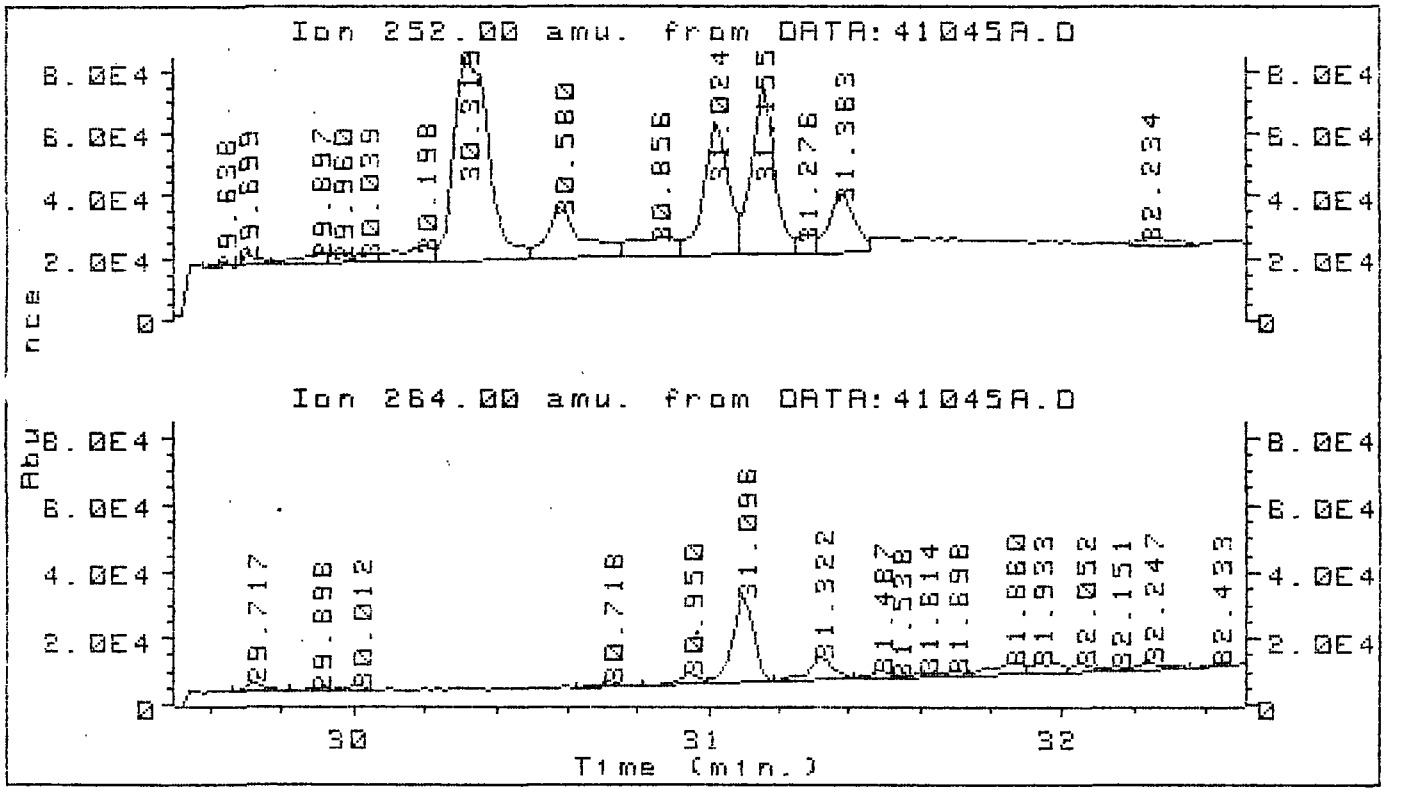
Time (min.)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31.276
31.383
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Abu
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30.718
30.950
31.096
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31.698
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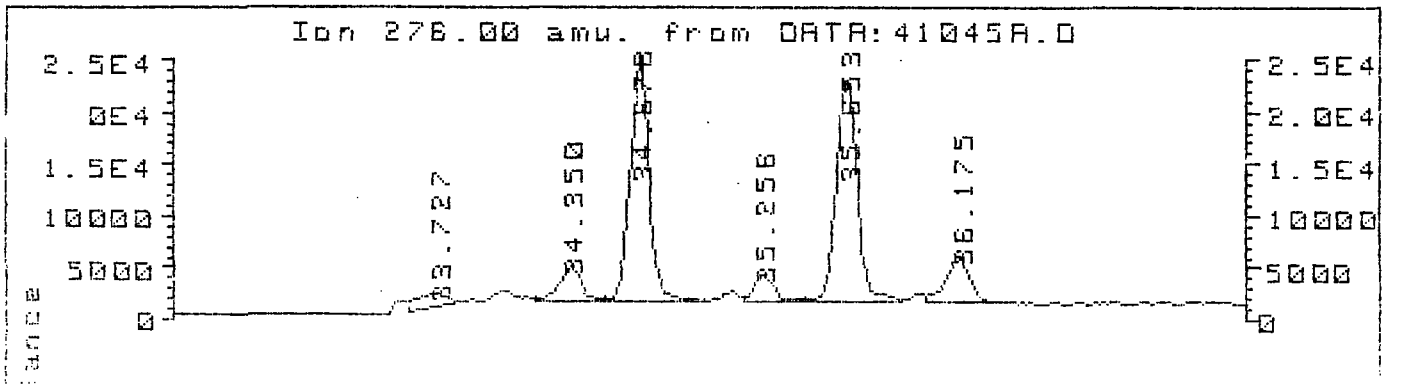
32.247
32.433
30
31
32
Time (min.)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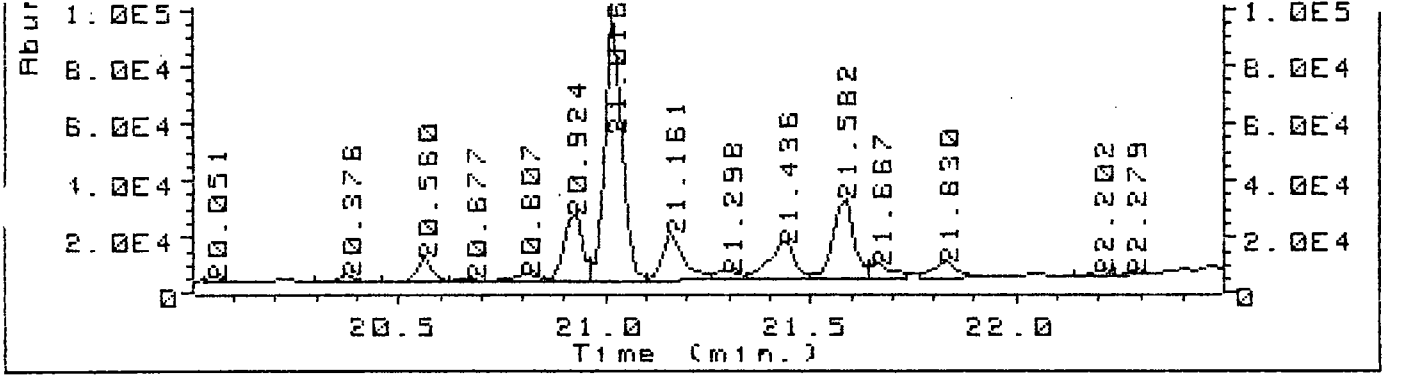
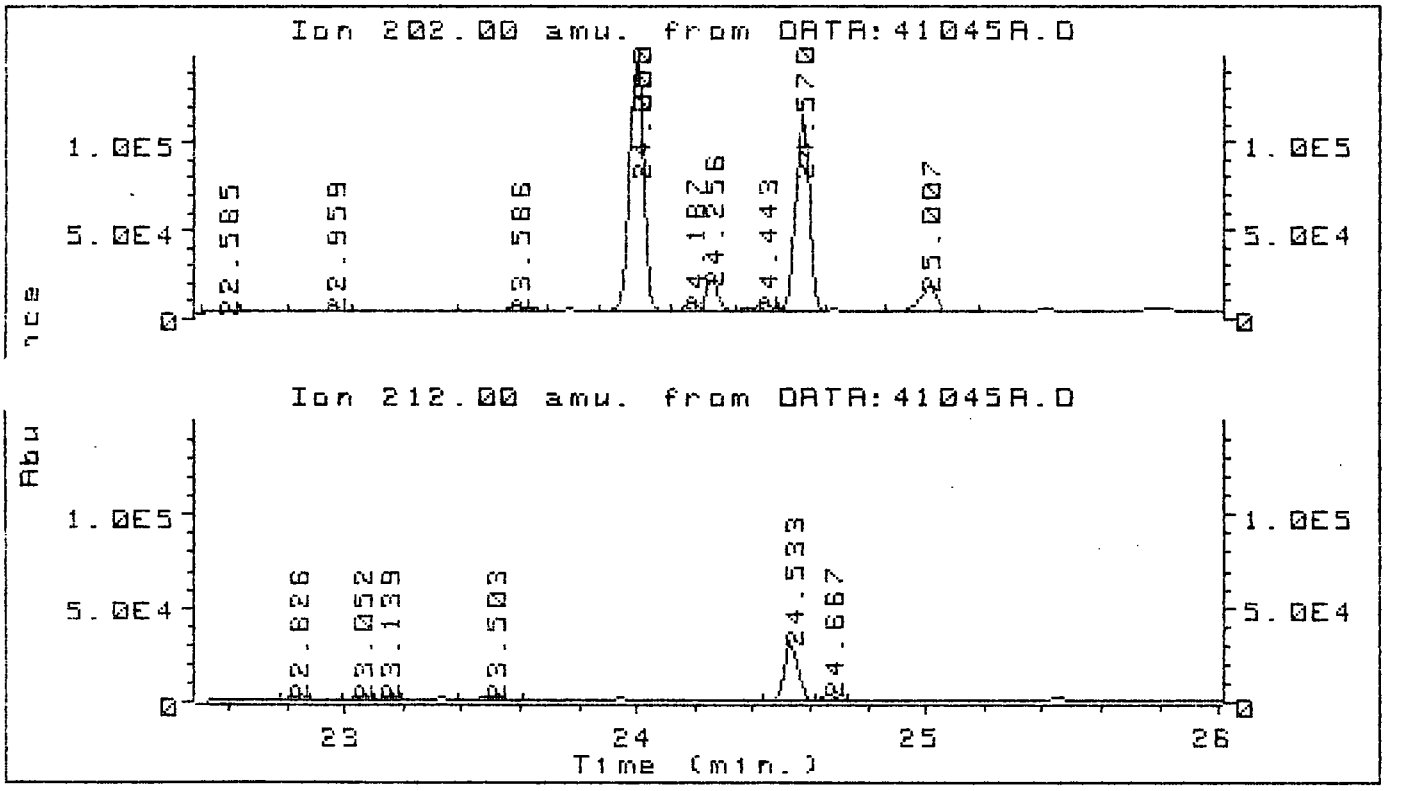
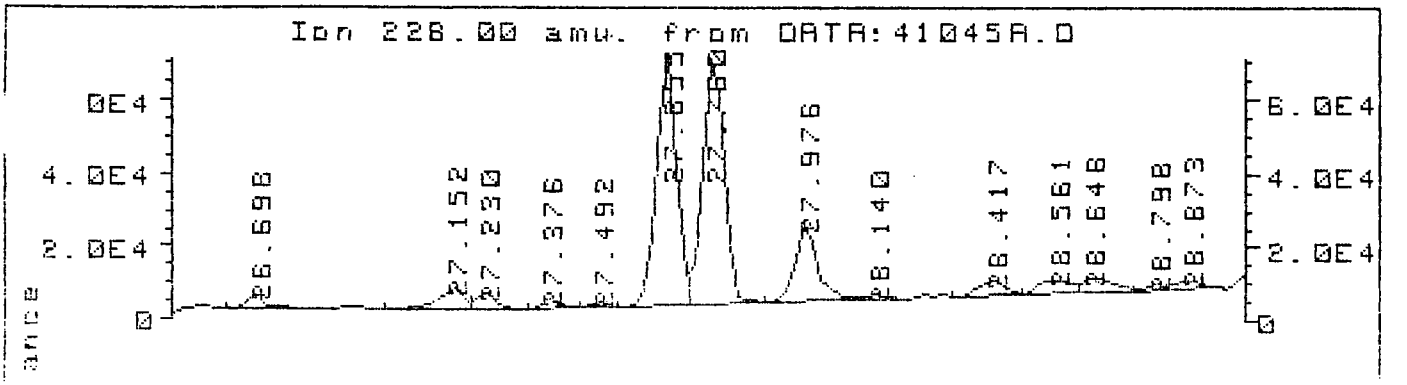
1.5E4
10000
5000
0
33.727
34.350
35.256
36.175


Abu
1.0E5
8.0E4
6.0E4
4.0E4
2.0E4
0
20.051
20.376
20.580
20.677
20.807
20.924
21.161
21.298
21.436
21.582
21.667
21.830
22.202
22.279
20.5
21.0
21.5
22.0
Time (min.)


Ion 202.00 amu. from DATA:41045A.D
1.0E5
5.0E4
0
22.585
22.959
23.586
24.187
24.256
24.443
25.007
Ion 212.00 amu. from DATA:41045A.D
Abu
1.0E5
5.0E4
0
22.826
23.052
23.139
23.503
24.533
24.667
23
24
25
26
Time (min.)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0E4
4.0E4
2.0E4
0
6.0E4
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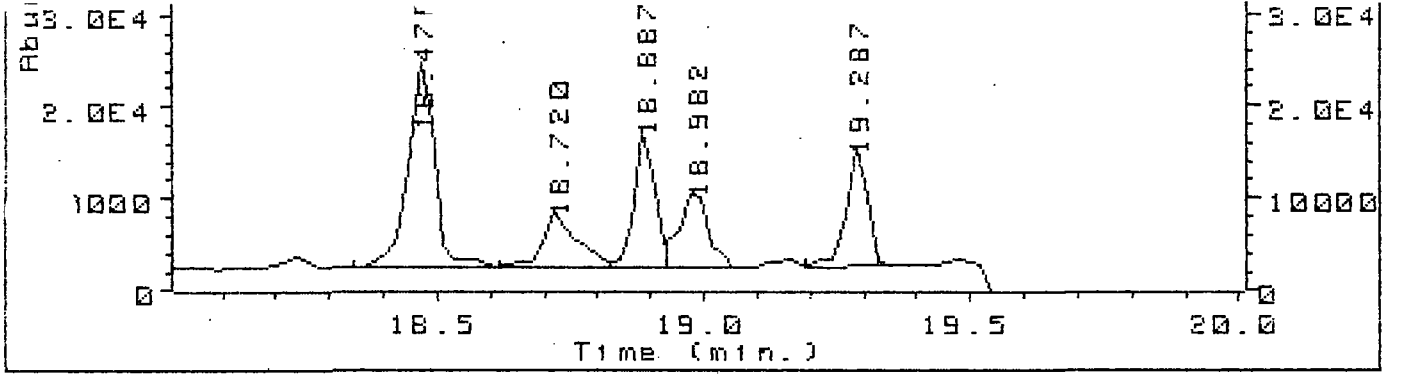
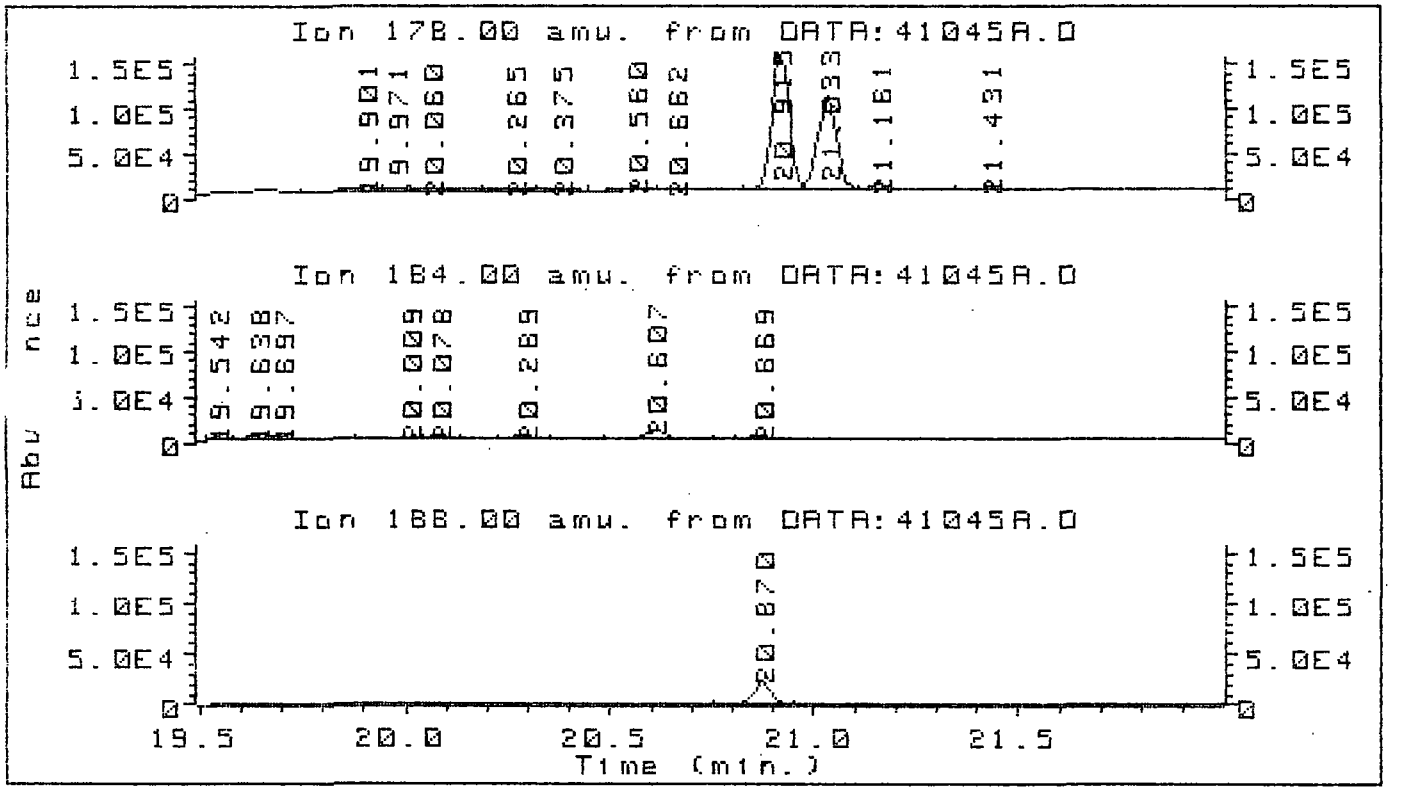
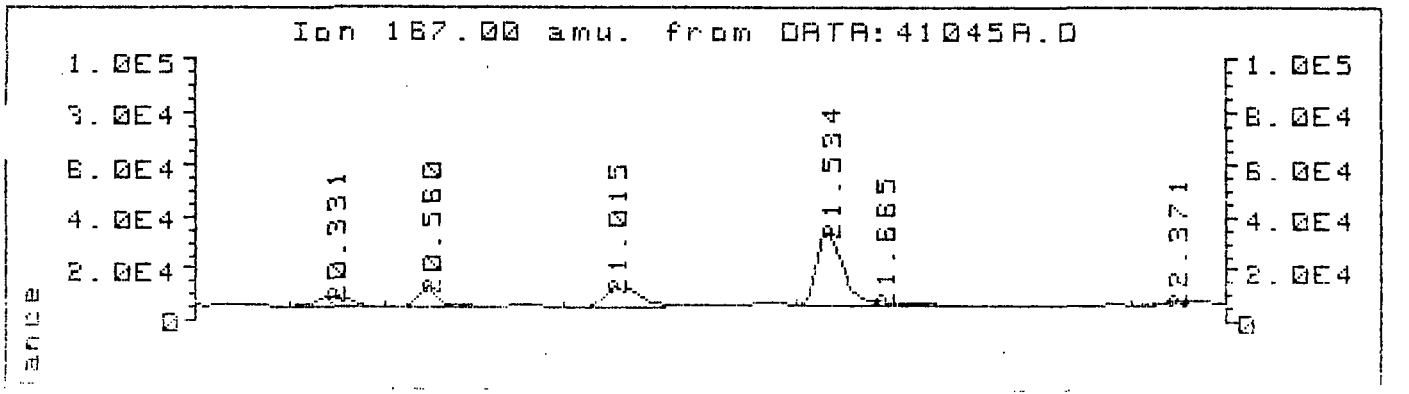
27.152
27.230
27.376
27.492
27.976
28.140
28.417
28.561
28.648
28.798
28.873


Abu
3.0E4
2.0E4
1000
0
18.720
18.887
18.982
19.287
18.5
19.0
19.5
20.0
Time (min.)
3.0E4
2.0E4
10000
0


Ion 178.00 amu. from DATA:41045A.D
1.5E5
1.0E5
5.0E4
0
Ion 184.00 amu. from DATA:41045A.D
Abu nce
Ion 188.00 amu. from DATA:41045A.D
20.870
19.5
20.0
20.5
21.0
21.5
Time (min.)


Ion 167.00 amu. from DATA:41045A.D
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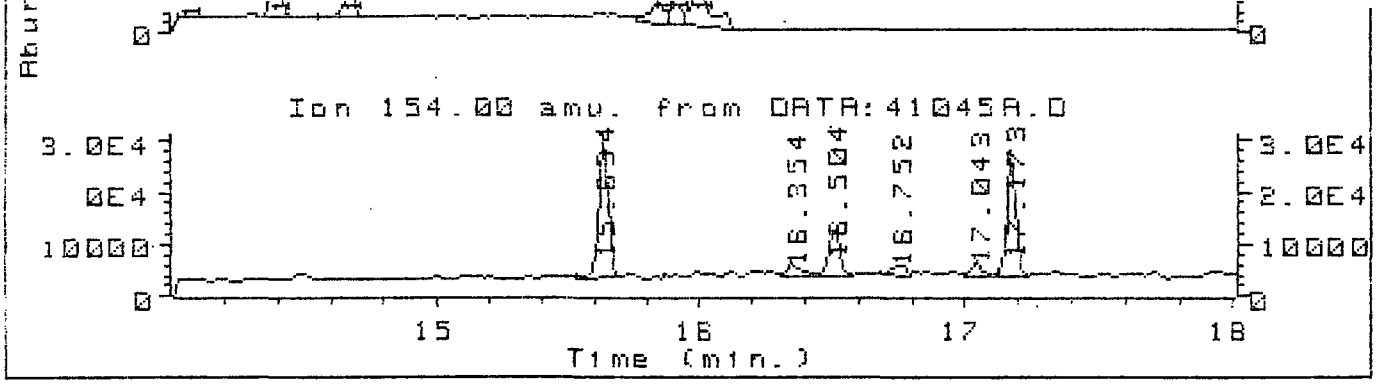
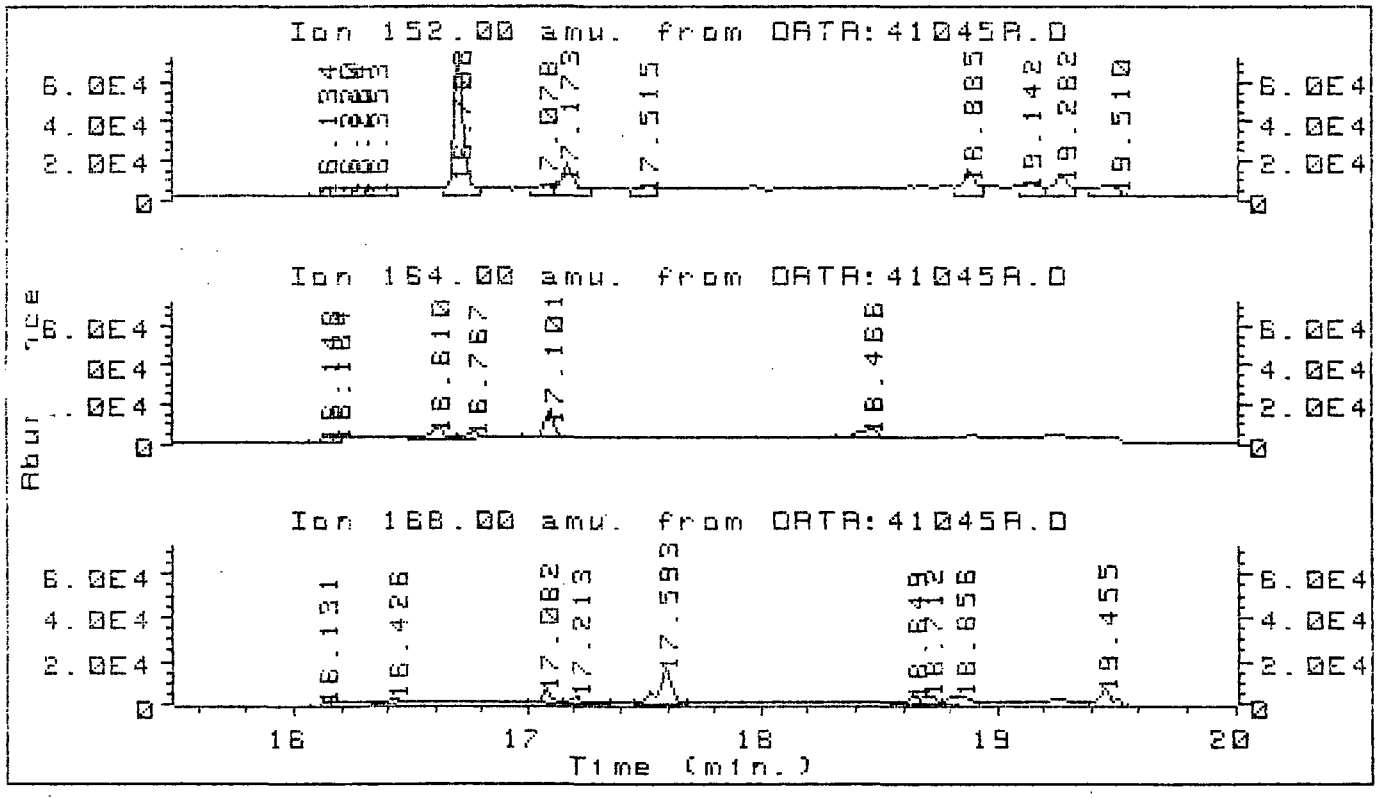
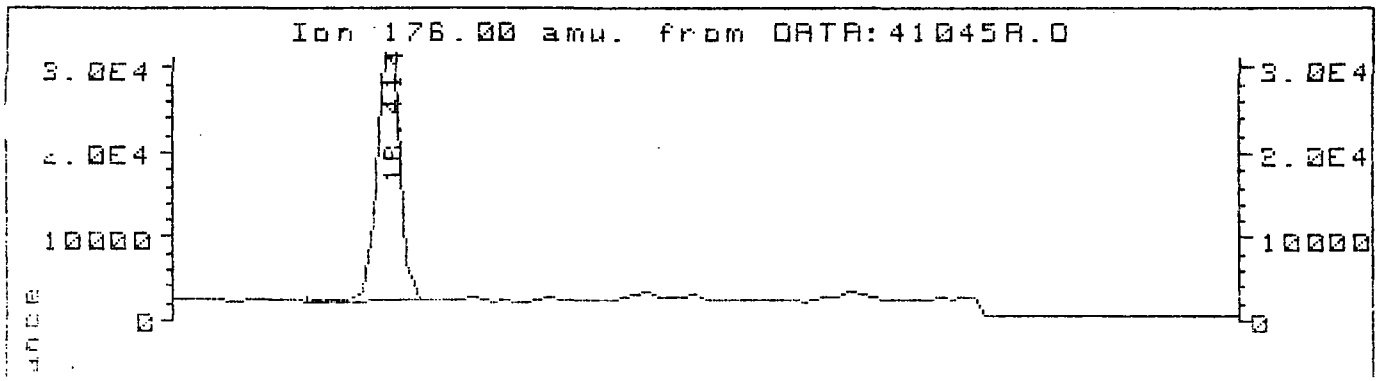
8.0E4
6.0E4
4.0E4
2.0E4
0
20.331
20.560
21.015
21.534
21.665
22.371
ance


Ion 154.00 amu. from DATA:41045A.D
3.0E4
0E4
10000
0
15
16
17
18
Time (min.)


Ion 152.00 amu. from DATA:41045A.D
6.0E4
4.0E4
2.0E4
0
Ion 154.00 amu. from DATA:41045A.D
Ion 168.00 amu. from DATA:41045A.D
16
17
18
19
20
Time (min.)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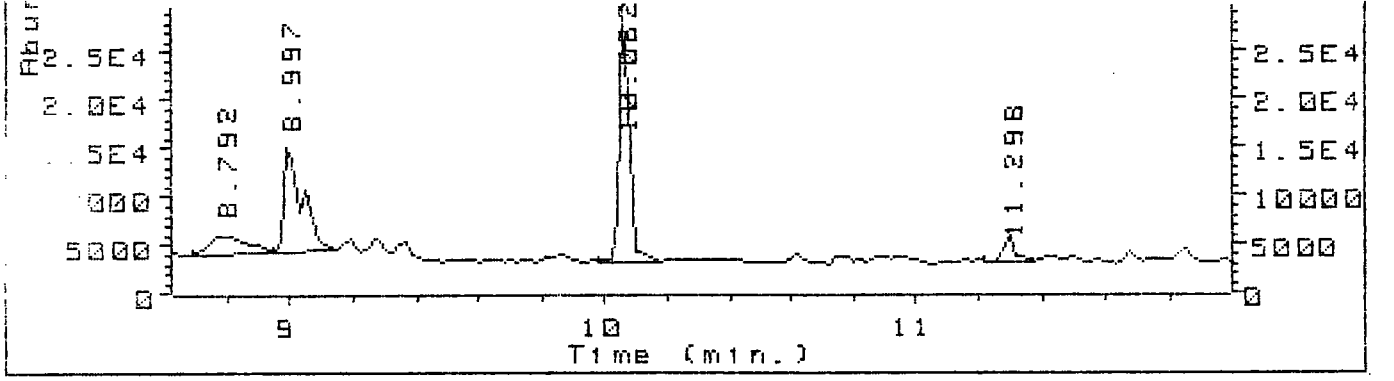
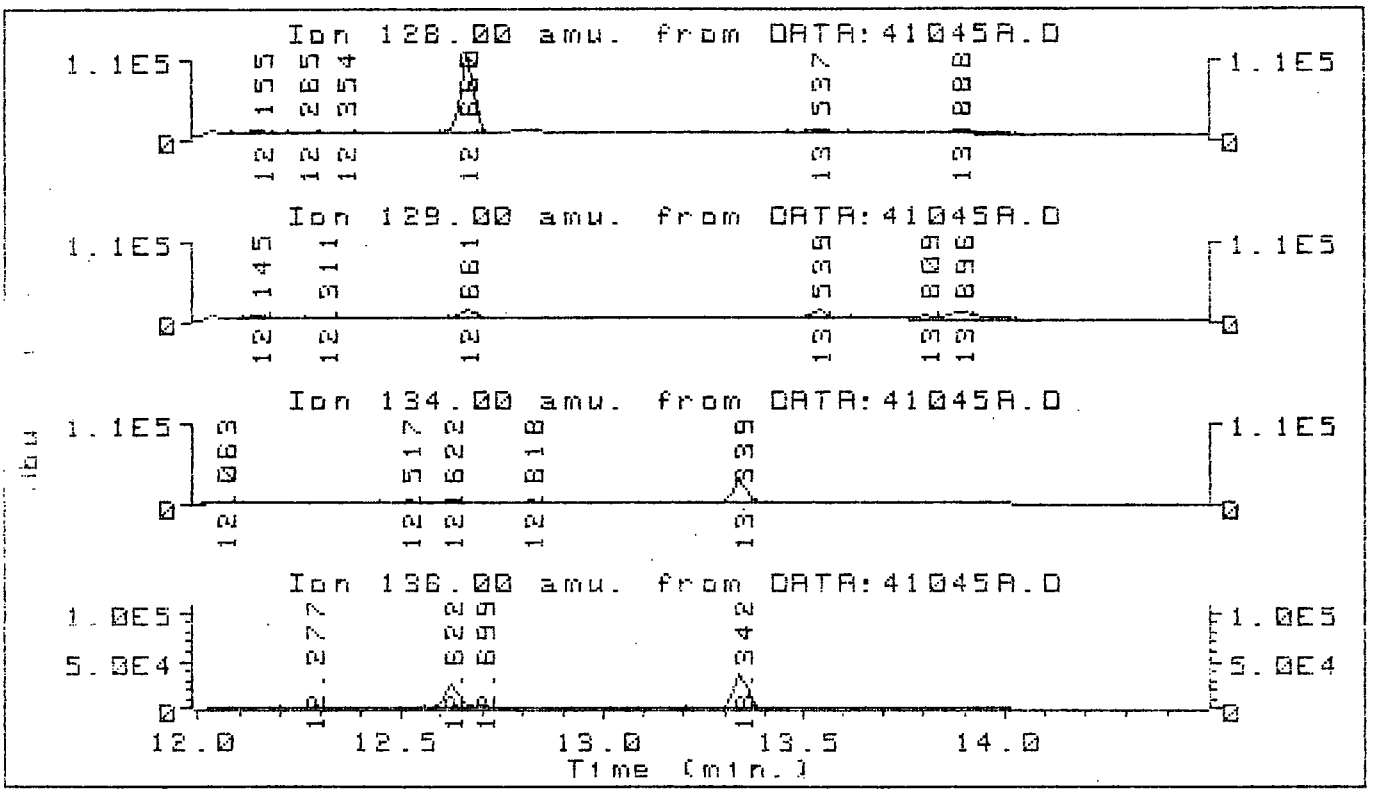
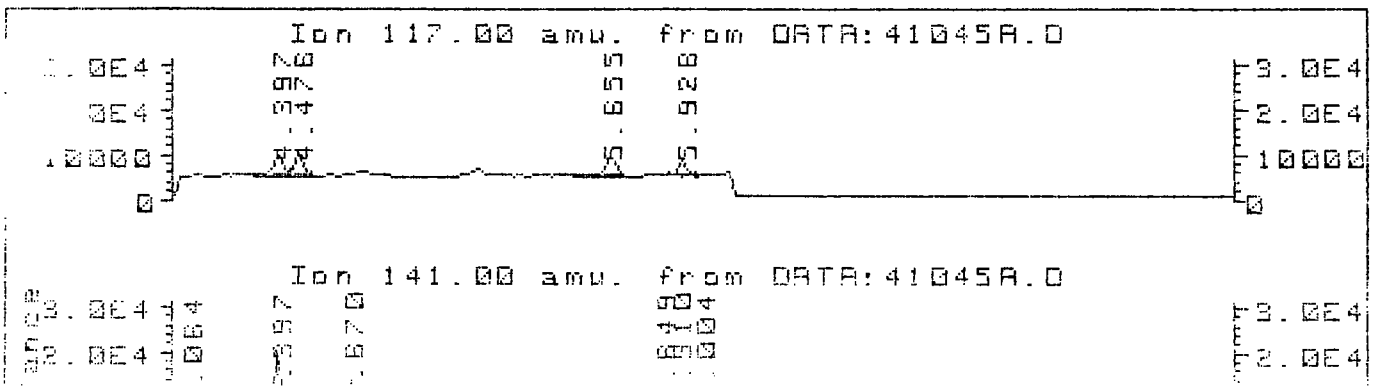
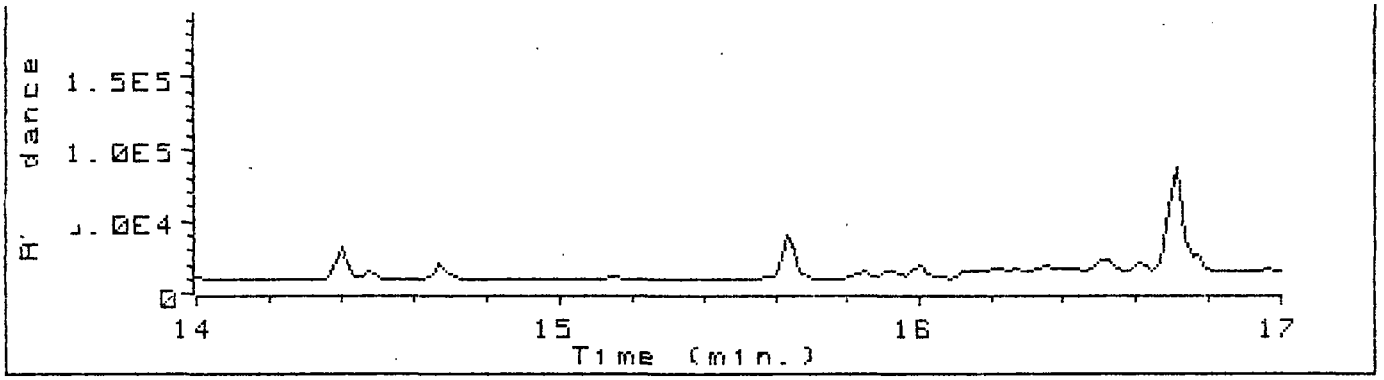
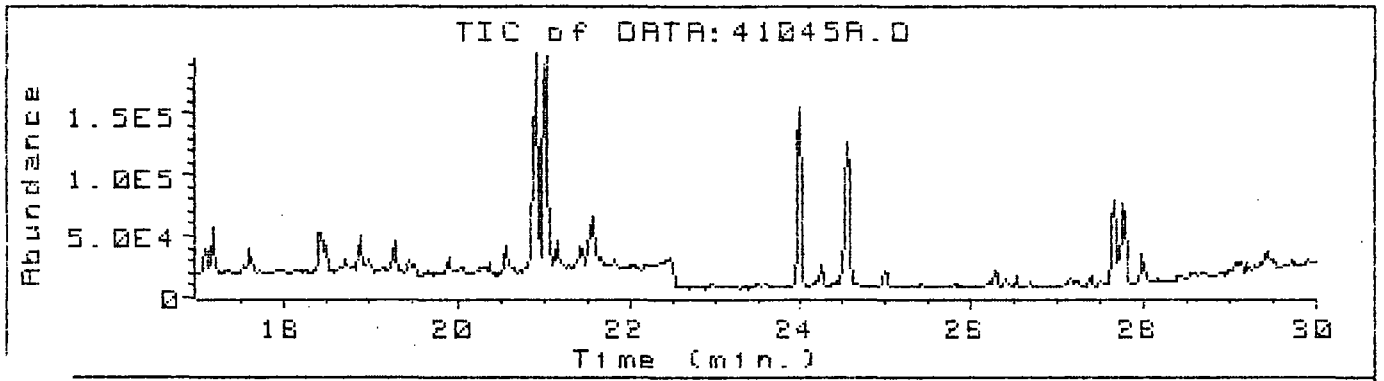
3.0E4
2.0E4
10000
0

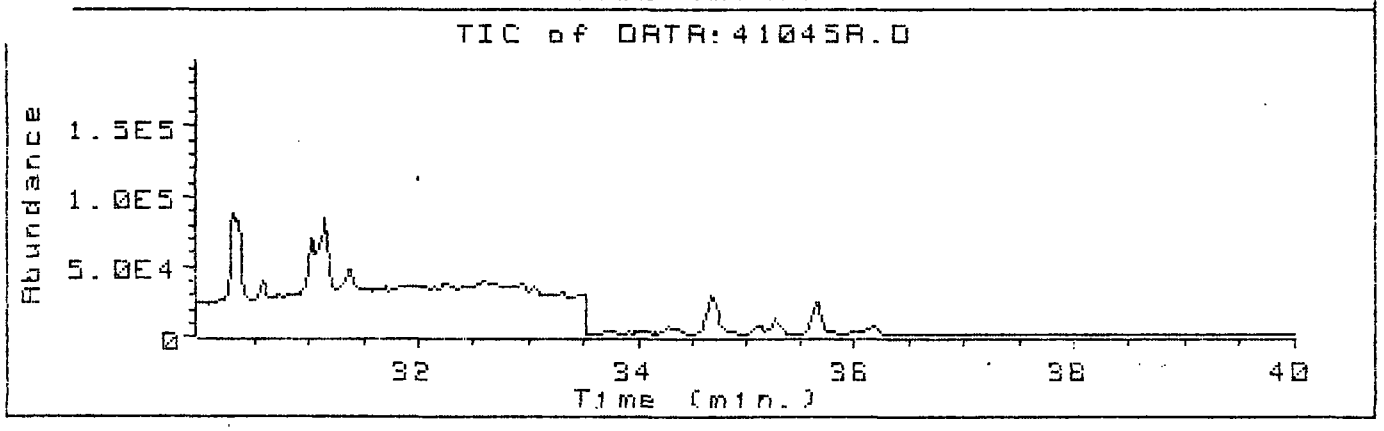

Abun
2.5E4
2.0E4
5000
8.792
8.997
11.298
9
10
11
Time (min.)

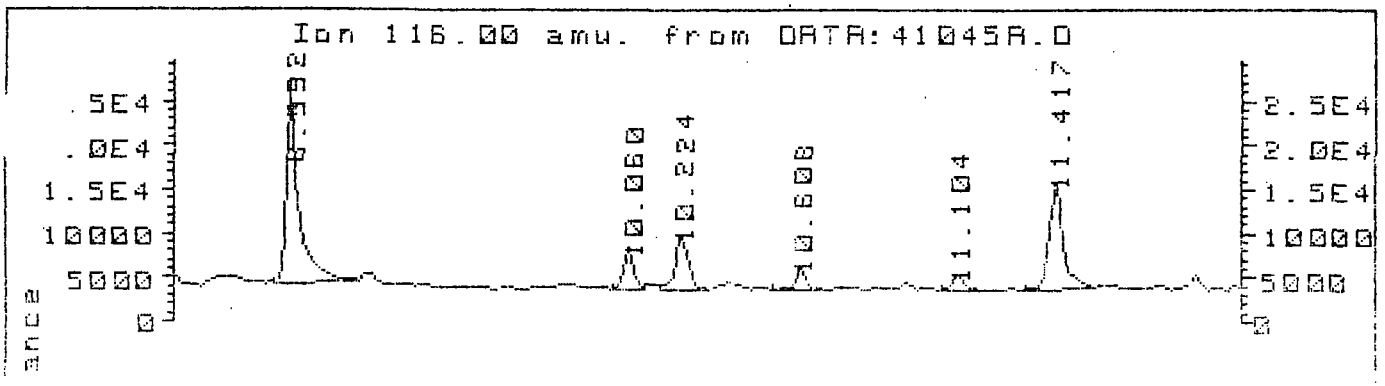

Ion 128.00 amu. from DATA:41045A.D
Ion 129.00 amu. from DATA:41045A.D
Ion 134.00 amu. from DATA:41045A.D
Ion 136.00 amu. from DATA:41045A.D
1.1E5
1.0E5
5.0E4
12.0
12.5
13.0
13.5
14.0
Time (min.)


Ion 117.00 amu. from DATA:41045A.D
Ion 141.00 amu. from DATA:41045A.D
3.0E4
2.0E4
10000


1.5E5
1.0E4
0
14
15
16
17
Time (min.)


TIC of DATA:41045A.D
Abundance
1.5E5
1.0E5
5.0E4
0
18
20
22
24
26
28
30
Time (min.)


TIC of DATA:41045A.D
Abundance
1.5E5
1.0E5
5.0E4
0
32
34
36
38
40
Time (min.)


Ion 116.00 amu. from DATA:41045A.D
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10.224
10.608
11.104
11.417
2.5E4
2.0E4
1.5E4
10000
5000
0

Solvent Blank

ERT #	: 41039	Extract Vol., ml	0.500
Field ID	: MB860953	Sample Vol., L	4.000
GC/MS File #	: 41039A	Date Analyze:	01/29/87

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Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	50.000	17.108	454123
Phenanthrene-d10	50.000	20.881	752288
Benz(a)pyrene-d12	50.000	31.096	673434

Group I	Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.319	0.000	1	0.000	0.000
dihydroinden	0.799	10.083	82664	1.424	0.589
indene	1.228	10.241	306392	3.435	0.599
Naphthalene-d8 (Surr.)	1.923	12.631	489666	3.504	0.738
Naphthalene	2.964	12.672	2104800	9.773	0.741
Benz(b)thio	1.736	0.000	1	0.000	0.000
Quinoline	0.996	13.549	231653	3.202	0.792
Indole	1.508	0.000	1	0.000	0.000
2-methyl	1.348	14.407	247689	2.528	0.842
1-methyl	1.323	14.684	135080	1.405	0.858
Biphenyl	2.558	15.646	1738692	9.354	0.915
Acenaphthylene	1.736	16.708	180436	1.430	0.977
Acenaphthene	1.221	0.000	1	0.000	0.000
Dibenzofuran	1.485	0.000	1	0.000	0.000
Group II					
rene-d10 (Surr.)	0.653	18.423	580770	7.384	0.882
Fluorene	1.110	18.483	70201	0.526	0.885
Dibenzothiophene	1.116	0.000	1	0.000	0.000
Phenanthrene	1.916	20.925	621142	2.693	1.002
Anthracene	1.176	21.046	106980	0.756	1.008
Acridine	0.659	0.000	1	0.000	0.000
Carbazole	0.824	21.541	78277	0.789	1.032
Fluoranthene	1.361	24.001	273653	1.670	1.149
Pyrene-d10 (Surr.)	0.851	24.536	804450	7.857	1.175
Pyrene	1.397	24.575	208930	1.242	1.177
Group III					
Benz(a)anthracene	1.599	27.666	94880	0.551	0.890
Chyrsene-d12 (Surr.)	1.008	27.712	269721	2.482	0.891
Chyrsene	1.704	27.769	90881	0.495	0.893
Benzofluoranthenes	2.109	30.407	287031	1.263	0.978
Benz(e)pyrene	1.856	31.028	1431995	7.162	0.998
Benz(a)pyrene	1.867	31.154	88622	0.440	1.002
Perylene-d12 (Surr.)	1.005	31.323	318880	2.944	1.007
Perylene	1.634	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	2.072	0.000	1	0.000	0.000
Dibenz(ah)anthracene	1.732	0.000	1	0.000	0.000
Benzo(ghi)perylene	2.107	35.632	1273644	5.610	1.146

Non-Reference Peak Window: [illegible] of Retention Time 0 ven

Sample Amount: 0.000 Uncalibrated Peak RF: 1.000 Multiplier: 1.000

41039 MB860953 1/30/87 RC

Peak Num	Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amount
1		1	--------	Mass	118.00	amu	2,3-BENZOFUR	*** Not Found ***	
		1VV	10.083	Mass	118.00	amu	2,3-DIHYDROI	82664	11.66 ng/mL
		1VB	10.241	Mass	116.00	amu	INDENE	306392	38.19 ng/mL
4		1PV	12.631	Mass	136.00	amu	NAPHTHALENE,	489666	21.86 ng/mL
5		1PV	12.672	Mass	128.00	amu	NAPTHALENE	2104800	81.44 ng/mL
6		1	--------	Mass	134.00	amu	BENZO(b)THIO	*** Not Found ***	
7		1VV	13.549	Mass	129.00	amu	QUINOLINE	231653	27.14 ng/mL
8		1	--------	Mass	117.00	amu	INDOLE	*** Not Found ***	
9		1VV	14.407	Mass	141.00	amu	2-METHYLNAPT	247689	13.94 ng/mL
10		1VV	14.684	Mass	141.00	amu	1-METHYLNAPT	135080	3.935 ng/mL
11		1BV	15.646	Mass	154.00	amu	BIPHENYL	1738692	
12		1VV	16.708	Mass	152.00	amu	ACENAPHTHYLE	180436	10.95 ng/mL
13	+ISTD	1VB	17.108	Mass	164.00	amu	ACENAPTHTHEN	454123	53.00 ng/mL
14		1	--------	Mass	154.00	amu	ACENAPHTHENE	*** Not Found ***	
15		1	--------	Mass	168.00	amu	DIBENZOFURAN	*** Not Found ***	
16		2PV	18.423	Mass	176.00	amu	FLUORENE, d1	580770	103.1 ng/mL
17		2VV	18.483	Mass	166.00	amu	FLUORENE	70201	1.816 ng/mL
18		2	--------	Mass	184.00	amu	DIBENZOTHIOP	*** Not Found ***	
19	+ISTD	2PV	20.881	Mass	188.00	amu	PHENANTHRENE	752288	62.50 ng/mL
20		2PV	20.925	Mass	178.00	amu	PHENANTHRENE	621142	
21		2VV	21.046	Mass	178.00	amu	ANTHRACENE	106980	
22		2	--------	Mass	179.00	amu	ACRIDINE	*** Not Found ***	
23		1PV	21.541	Mass	167.00	amu	CARBAZOLE	78277	
24		1PB	24.001	Mass	202.00	amu	FLUORANTHENE	273653	
25		2BV	24.536	Mass	212.00	amu	PYRENE, d10	804450	79.71 ng/mL
26		2BB	24.575	Mass	202.00	amu	PYRENE	208930	9.198 ng/mL
		3PV	27.666	Mass	228.00	amu	BENZ(a)ANTHR	94880	1.704 ng/mL
		3PV	27.712	Mass	240.00	amu	CHYRSENE, d(	269721	41.37 ng/mL
29		3VB	27.769	Mass	228.00	amu	CHYRSENE	90881	3.843 ng/mL
30		3VV	30.325	Mass	252.00	amu	BENZOFLUORAN	268539	7.038 ng/mL
31		3VV	30.488	Mass	252.00	amu	BENZOFLUORAN	18492	
32		3VV	31.028	Mass	252.00	amu	BENZ(e)PYREN	1431995	56.26 ng/mL
33	+ISTD	3VV	31.096	Mass	264.00	amu	BENZ(a)PYREN	673434	49.60 ng/mL
34		3VV	31.154	Mass	252.00	amu	BENZ(a)PYREN	88622	1.288 ng/mL
35		3PV	31.323	Mass	264.00	amu	PERYLENE, d1	318880	24.47 ng/mL
36		3	--------	Mass	252.00	amu	PERYLENE	*** Not Found ***	
37		3	--------	Mass	276.00	amu	INDENO(1,2,3	*** Not Found ***	
38		3	--------	Mass	278.00	amu	DIBENZ(a,h)A	*** Not Found ***	
39		3VV	35.632	Mass	276.00	amu	BENZO(g,h,i)	1273644	71.67 ng/mL
--------		VV	9.077	Mass	118.00		-Uncalibrated-	37329	37329 ng/mL
--------		VV	10.171	Mass	116.00		-Uncalibrated-	114368	114368 ng/mL
--------		PV	11.407	Mass	116.00		-Uncalibrated-	407438	407438 ng/mL
--------		VV	11.850	Mass	118.00		-Uncalibrated-	45156	45156 ng/mL
--------		PH	12.049	Mass	129.00		-Uncalibrated-	17524	17524 ng/mL
--------		PH	12.049	Mass	128.00		-Uncalibrated-	42025	42025 ng/mL
--------		PH	12.073	Mass	134.00		-Uncalibrated-	102242	102242 ng/mL
--------		VH	12.144	Mass	129.00		-Uncalibrated-	36587	36587 ng/mL
--------		PV	12.162	Mass	136.00		-Uncalibrated-	18239	18239 ng/mL
--------		VV	12.184	Mass	134.00		-Uncalibrated-	38953	38953 ng/mL
--------		VV	12.185	Mass	128.00		-Uncalibrated-	85313	85313 ng/mL
--------		VV	12.261	Mass	134.00		-Uncalibrated-	77616	77616 ng/mL
--------		VV	12.285	Mass	136.00		-Uncalibrated-	177124	177124 ng/mL
--------		VH	12.286	Mass	129.00		-Uncalibrated-	32595	32595 ng/mL
--------		VV	12.325	Mass	128.00		-Uncalibrated-	34733	34733 ng/mL
--------		VV	12.524	Mass	134.00		-Uncalibrated-	115530	115530 ng/mL
--------		VV	12.630	Mass	134.00		-Uncalibrated-	127588	127588 ng/mL
--------		BV	12.673	Mass	129.00		-Uncalibrated-	230455	230455 ng/mL
--------		VV	12.834	Mass	136.00		-Uncalibrated-	31570	31570 ng/mL
--------		VV	13.354	Mass	136.00		-Uncalibrated-	107517	107517 ng/mL

--------	VB	13.908	Mass	129.00	-Uncalibrated-	357512	357512	ng/mL
--------	VV	15.665	Mass	117.00	-Uncalibrated-	67285	67285	ng/mL
--------	VV	15.863	Mass	141.00	-Uncalibrated-	150006	150006	ng/mL
--------	VB	16.010	Mass	141.00	-Uncalibrated-	292594	292594	ng/mL
--------	BV	16.170	Mass	164.00	-Uncalibrated-	69283	69283	ng/mL
--------	BV	16.187	Mass	168.00	-Uncalibrated-	79706	79706	ng/mL
------	BV	16.232	Mass	152.00	-Uncalibrated-	168158	168158	ng/mL
------	VV	16.295	Mass	152.00	-Uncalibrated-	123478	123478	ng/mL
--------	VV	16.433	Mass	168.00	-Uncalibrated-	51989	51989	ng/mL
--------	VV	16.622	Mass	164.00	-Uncalibrated-	110319	110319	ng/mL
--------	VV	16.770	Mass	164.00	-Uncalibrated-	108184	108184	ng/mL
--------	VV	18.895	Mass	166.00	-Uncalibrated-	125469	125469	ng/mL
--------	PV	18.892	Mass	152.00	-Uncalibrated-	69343	69343	ng/mL
--------	VV	18.996	Mass	166.00	-Uncalibrated-	88185	88185	ng/mL
--------	VV	19.286	Mass	152.00	-Uncalibrated-	67561	67561	ng/mL
--------	VV	19.302	Mass	166.00	-Uncalibrated-	119692	119692	ng/mL
--------	VB	19.473	Mass	168.00	-Uncalibrated-	149346	149346	ng/mL
--------	VV	19.647	Mass	184.00	-Uncalibrated-	184867	184867	ng/mL
--------	PV	19.902	Mass	178.00	-Uncalibrated-	44617	44617	ng/mL
--------	PV	20.002	Mass	184.00	-Uncalibrated-	42174	42174	ng/mL
--------	VB	20.086	Mass	184.00	-Uncalibrated-	107994	107994	ng/mL
--------	VV	20.082	Mass	178.00	-Uncalibrated-	38844	38844	ng/mL
--------	PV	20.335	Mass	167.00	-Uncalibrated-	93708	93708	ng/mL
--------	VV	20.562	Mass	179.00	-Uncalibrated-	79141	79141	ng/mL
--------	PB	20.562	Mass	167.00	-Uncalibrated-	63709	63709	ng/mL
--------	PV	20.879	Mass	184.00	-Uncalibrated-	118585	118585	ng/mL
--------	VV	20.932	Mass	179.00	-Uncalibrated-	115792	115792	ng/mL
--------	VV	21.598	Mass	179.00	-Uncalibrated-	298463	298463	ng/mL
--------	PV	29.896	Mass	252.00	-Uncalibrated-	51479	51479	ng/mL
--------	VV	29.996	Mass	252.00	-Uncalibrated-	29127	29127	ng/mL
--------	VV	30.107	Mass	252.00	-Uncalibrated-	53587	53587	ng/mL
------	VV	30.526	Mass	252.00	-Uncalibrated-	17718	17718	ng/mL
------	VV	30.588	Mass	252.00	-Uncalibrated-	61465	61465	ng/mL
--------	VV	30.672	Mass	252.00	-Uncalibrated-	31167	31167	ng/mL
--------	VV	30.753	Mass	252.00	-Uncalibrated-	24121	24121	ng/mL

```
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #1's Description at 9.404 +/- 0.047 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #6's Description at 12.831 +/- 0.064 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #8's Description at 14.378 +/- 0.072 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #14's Description at 17.190 +/- 0.086 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #15's Description at 17.609 +/- 0.088 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #18's Description at 20.622 +/- 0.103 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #22's Description at 21.170 +/- 0.106 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #36's Description at 31.382 +/- 0.157 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #37's Description at 34.676 +/- 0.173 min.
Error : Could not find Calibration Peak
     No Peak of Calibration Peak #38's Description at 34.734 +/- 0.174 min.
Error: Could not find all Calibration Peaks
```

*** Area Percent ***

Report by Retention Time

==========

Operator: LOUIE G. POUNDS 29 Jan 87 11:17 pm
Method File Name : PAH.M
Sample Info : ERT #41039, FLD ID MB860953

Integration File Name : DATA:41039A.I

Bottle Number : 0

Ret Time	Signal Descr		Type	Area	Height	% Pk	% Sg	% LPk	% LSg
9.077	Mass	118.00 amu	VV	37329	1854	100.00	22.60	100.00	45.16
9.083	Mass	118.00 amu	VV	82664	2598	100.00	50.05	100.00	100.00
10.171	Mass	116.00 amu	VV	114368	2059	100.00	13.81	100.00	28.07
10.241	Mass	116.00 amu	VB	306392	10212	100.00	37.00	100.00	75.20
11.407	Mass	116.00 amu	PV	407438	15287	100.00	49.20	100.00	100.00
11.850	Mass	118.00 amu	VV	45156	1841	100.00	27.34	100.00	54.63
12.049	Mass	129.00 amu	PH	17524	1082	29.43	1.93	41.70	4.90
12.049	Mass	128.00 amu	PH	42025	1398	70.57	1.85	100.00	2.00
12.073	Mass	134.00 amu	PH	102242	3964	100.00	18.60	100.00	80.13
12.144	Mass	129.00 amu	VH	36587	724	100.00	4.04	100.00	10.23
12.162	Mass	136.00 amu	PV	18239	406	100.00	2.21	100.00	3.72
12.184	Mass	134.00 amu	VV	38953	1117	31.35	7.09	45.66	30.53
12.185	Mass	128.00 amu	VV	85313	1245	68.65	3.76	100.00	4.05
12.261	Mass	134.00 amu	VV	77616	1309	100.00	14.12	100.00	60.83
285	Mass	136.00 amu	VV	177124	6089	84.46	21.49	100.00	36.17
.286	Mass	129.00 amu	VH	32595	499	15.54	3.60	18.40	9.12
12.325	Mass	128.00 amu	VV	34733	574	100.00	1.53	100.00	1.65
12.524	Mass	134.00 amu	VV	115530	2300	100.00	21.02	100.00	90.55
12.631	Mass	136.00 amu	PV	489666	17795	79.33	59.42	100.00	100.00
12.630	Mass	134.00 amu	VV	127588	3918	20.67	23.21	26.06	100.00
12.673	Mass	129.00 amu	BV	230455	9328	9.87	25.43	10.95	64.46
12.672	Mass	128.00 amu	PV	2104800	84656	90.13	92.85	100.00	100.00
12.834	Mass	136.00 amu	VV	31570	1151	100.00	3.83	100.00	6.45
13.354	Mass	136.00 amu	VV	107517	3403	55.07	13.05	100.00	21.96
13.351	Mass	134.00 amu	VV	87728	2615	44.93	15.96	81.59	68.76
13.549	Mass	129.00 amu	VV	231653	5087	100.00	25.56	100.00	64.80
13.908	Mass	129.00 amu	VB	357512	5351	100.00	39.45	100.00	100.00
14.407	Mass	141.00 amu	VV	247689	8829	100.00	30.01	100.00	84.65
14.684	Mass	141.00 amu	VV	135080	4991	100.00	16.37	100.00	46.17
.646	Mass	154.00 amu	BV	1738692	70078	100.00	100.00	100.00	100.00
15.665	Mass	117.00 amu	VV	67285	1920	100.00	100.00	100.00	100.00
15.863	Mass	141.00 amu	VV	150006	2682	100.00	18.17	100.00	51.27
16.010	Mass	141.00 amu	VB	292594	5720	100.00	35.45	100.00	100.00

16.187	Mass	168.00	amu BV	79706	1297	100.00	28.36	100.00	53.57
16.232	Mass	152.00	amu BV	168158	2121	100.00	27.61	100.00	93.20
16.295	Mass	152.00	amu VV	123478	1804	100.00	20.28	100.00	68.43
.433	Mass	168.00	amu VV	51989	1257	100.00	18.50	100.00	34.81
16.622	Mass	164.00	amu VV	110319	2522	100.00	14.87	100.00	24.29
16.708	Mass	152.00	amu VV	180436	4192	100.00	29.63	100.00	100.00
16.770	Mass	164.00	amu VV	108184	2616	100.00	14.58	100.00	23.82
17.108	Mass	164.00	amu VB	454123	15742	100.00	61.21	100.00	100.00
18.423	Mass	176.00	amu PV	580770	19335	100.00	100.00	100.00	100.00
18.483	Mass	166.00	amu VV	70201	1843	100.00	17.40	100.00	55.95
18.895	Mass	166.00	amu VV	125469	4403	64.41	31.09	100.00	100.00
18.892	Mass	152.00	amu PV	69343	2755	35.59	11.39	55.27	38.43
18.996	Mass	166.00	amu VV	88185	3011	100.00	21.85	100.00	70.28
19.286	Mass	152.00	amu VV	67561	1855	100.00	11.09	100.00	37.44
19.302	Mass	166.00	amu VV	119692	4353	100.00	29.66	100.00	95.40
19.473	Mass	168.00	amu VB	149346	3311	100.00	53.14	100.00	100.00
.647	Mass	184.00	amu VV	184867	5294	100.00	40.75	100.00	100.00
19.902	Mass	178.00	amu PV	44617	1195	100.00	5.50	100.00	7.18
20.002	Mass	184.00	amu PV	42174	1125	100.00	9.30	100.00	22.81
20.086	Mass	184.00	amu VB	107994	3895	73.55	23.81	100.00	58.42
20.082	Mass	178.00	amu VV	38844	1197	26.45	4.79	35.97	6.25
20.335	Mass	167.00	amu PV	93708	2071	100.00	39.76	100.00	100.00
20.562	Mass	179.00	amu VV	79141	2183	55.40	16.04	100.00	26.52
20.562	Mass	167.00	amu PB	63709	1746	44.60	27.03	80.50	67.99
20.881	Mass	188.00	amu PV	752288	26720	86.38	100.00	100.00	100.00
20.879	Mass	184.00	amu PV	118585	4114	13.62	26.14	15.76	64.15
20.932	Mass	179.00	amu VV	115792	3013	15.71	23.47	18.64	38.80
20.925	Mass	178.00	amu PV	621142	17898	84.29	76.53	100.00	100.00
21.046	Mass	178.00	amu VV	106980	3293	100.00	13.18	100.00	17.22
21.541	Mass	167.00	amu PV	78277	1848	100.00	33.21	100.00	83.53
.598	Mass	179.00	amu VV	298463	4724	100.00	60.49	100.00	100.00
24.001	Mass	202.00	amu PB	273653	8234	100.00	56.71	100.00	100.00
24.536	Mass	212.00	amu BV	804450	24894	100.00	100.00	100.00	100.00
24.575	Mass	202.00	amu BB	208930	6209	100.00	43.29	100.00	76.35
27.666	Mass	228.00	amu PV	94880	2515	100.00	51.03	100.00	100.00

27.712	Mass	240.00	amu	PV	269721	8145	100.00	100.00	100.00	100.00
27.769	Mass	228.00	amu	VB	90881	2697	100.00	48.92	100.00	95.79
29.896	Mass	252.00	amu	PV	51479	927	100.00	2.48	100.00	3.59
996	Mass	252.00	amu	VV	29127	707	100.00	1.40	100.00	2.03
30.107	Mass	252.00	amu	VV	53587	870	100.00	2.58	100.00	3.74
30.325	Mass	252.00	amu	VV	268539	3196	100.00	12.93	100.00	18.75
30.488	Mass	252.00	amu	VV	18492	854	100.00	0.89	100.00	1.29
30.526	Mass	252.00	amu	VV	17718	817	100.00	0.85	100.00	1.24
30.588	Mass	252.00	amu	VV	61465	1551	100.00	2.96	100.00	4.29
30.672	Mass	252.00	amu	VV	31167	968	100.00	1.50	100.00	2.18
30.753	Mass	252.00	amu	VV	24121	895	100.00	1.16	100.00	1.68
31.028	Mass	252.00	amu	VV	1431995	35082	100.00	68.97	100.00	100.00
31.096	Mass	264.00	amu	VV	673434	16350	100.00	67.87	100.00	100.00
31.154	Mass	252.00	amu	VV	88622	2455	100.00	4.27	100.00	6.19
31.323	Mass	264.00	amu	PV	318880	7175	100.00	32.13	100.00	47.35
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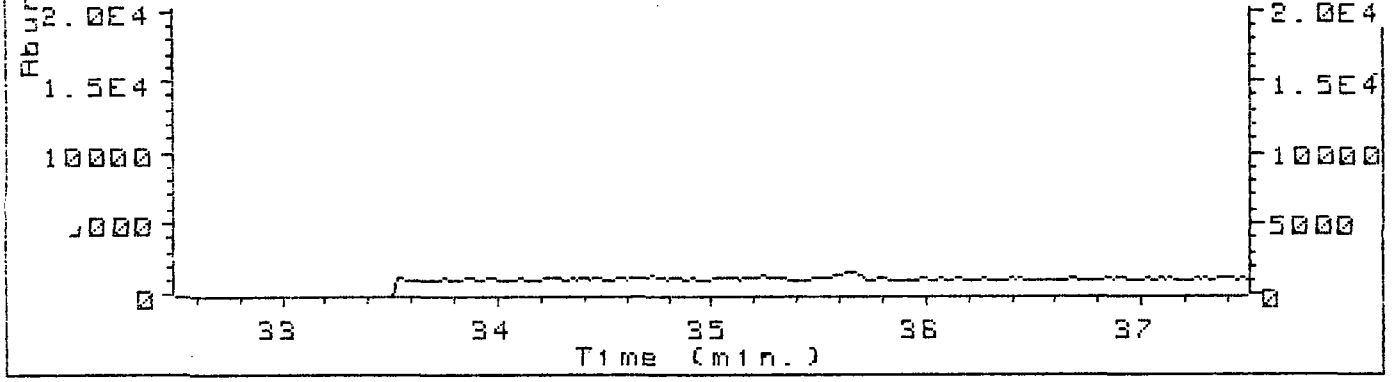
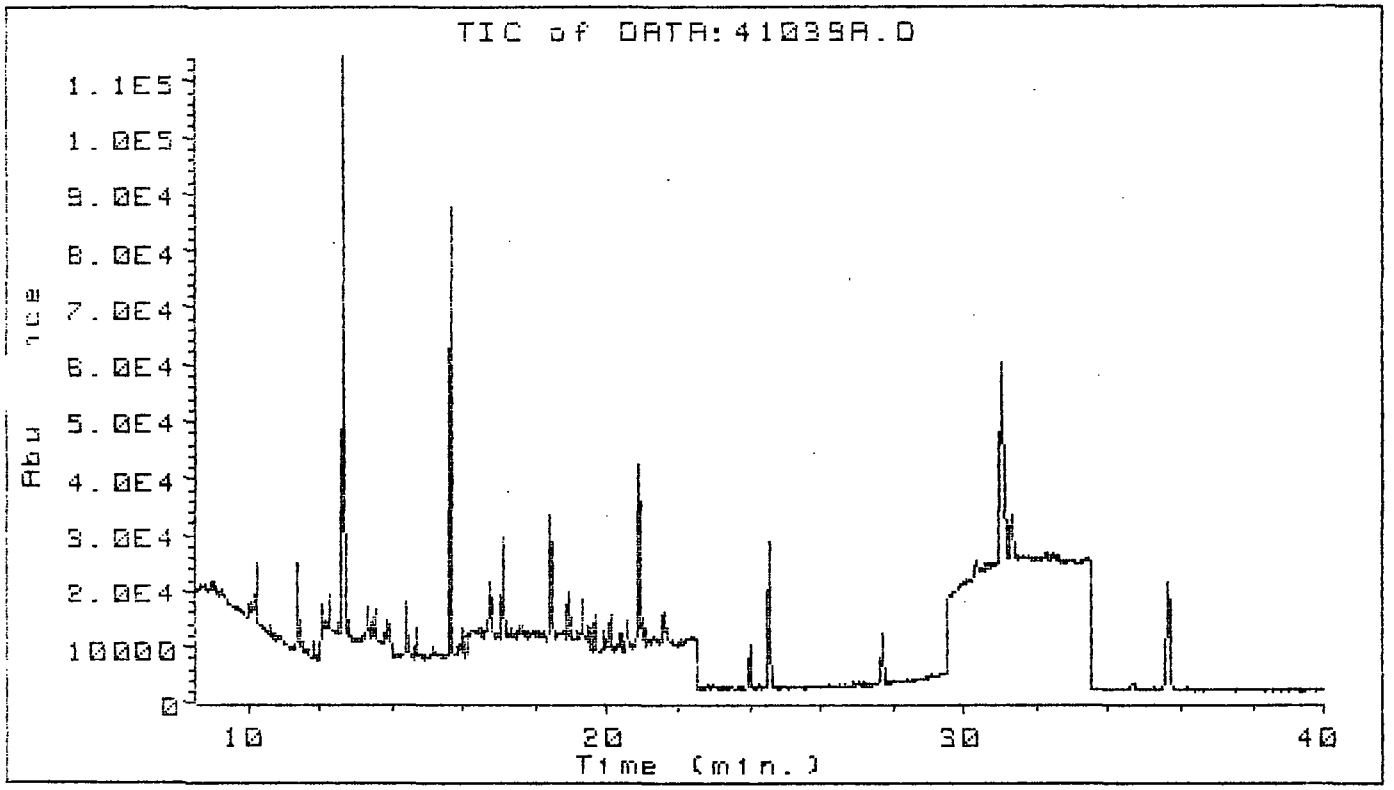




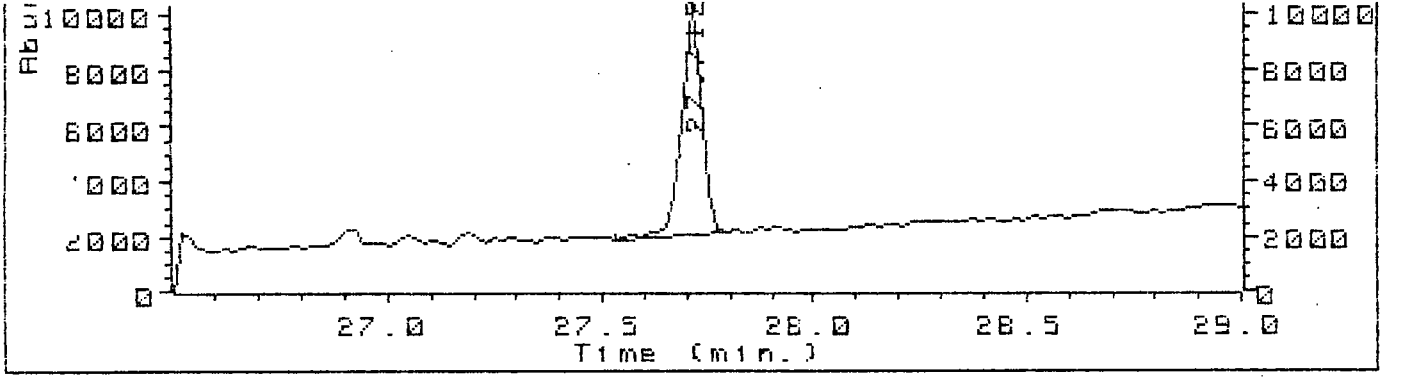
*** Internal Standard ***

Operator: LOUIE G. POUNDS 29 Jan 87 11:17 pm
hod File Name : PAH.M
ple Info : ERT #41039, FLD ID MB860953
Misc Info: 1.0 UL INJ VOL
Integration File Name : DATA:41039A.I
Bottle Number : 0

1/30/87 SC

ST. LOUIS PARK PPT PAH

Last Update: 12 Nov 86 7:13 pm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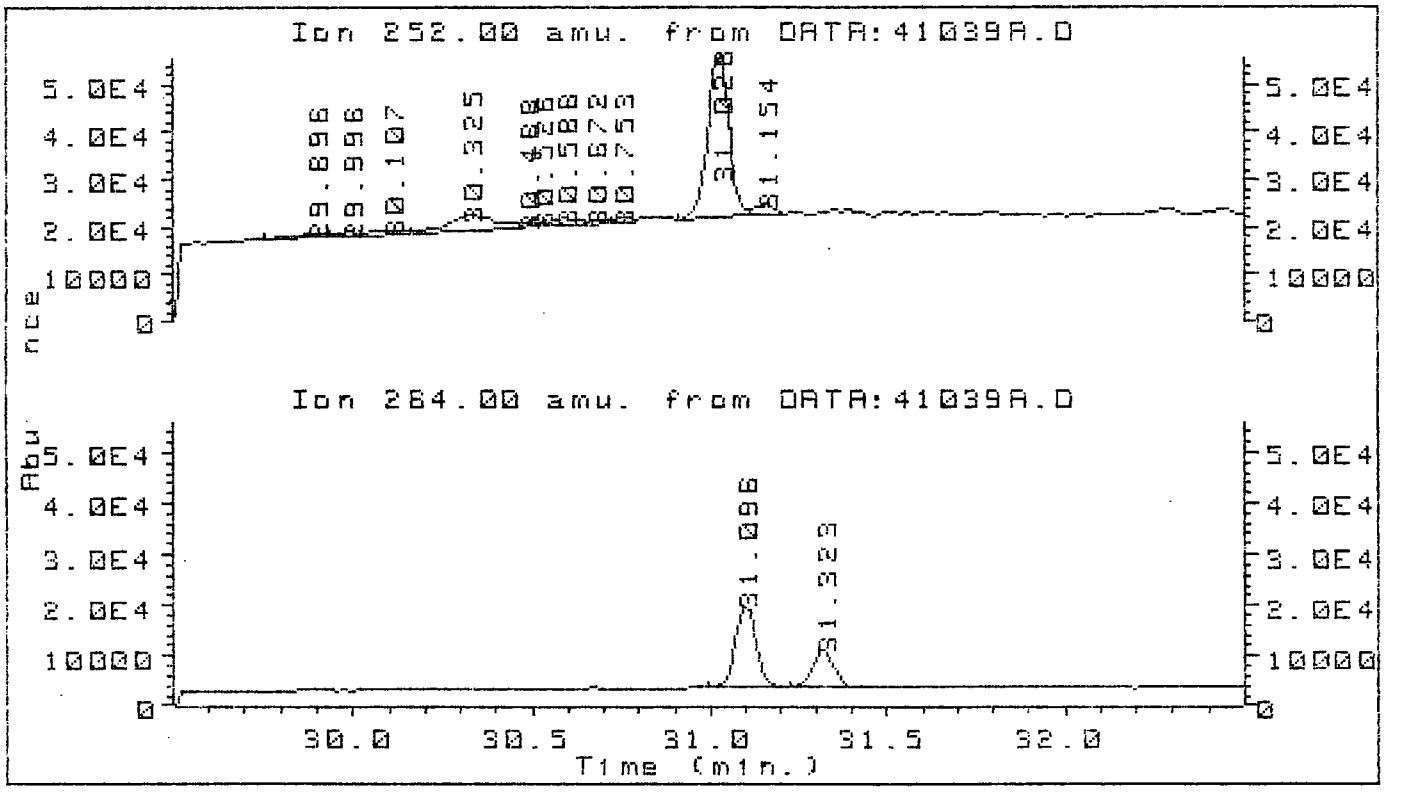
Time (min.)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9.896
9.996
10.107
30.325
31.154
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Abu
31.096
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30.0
30.5
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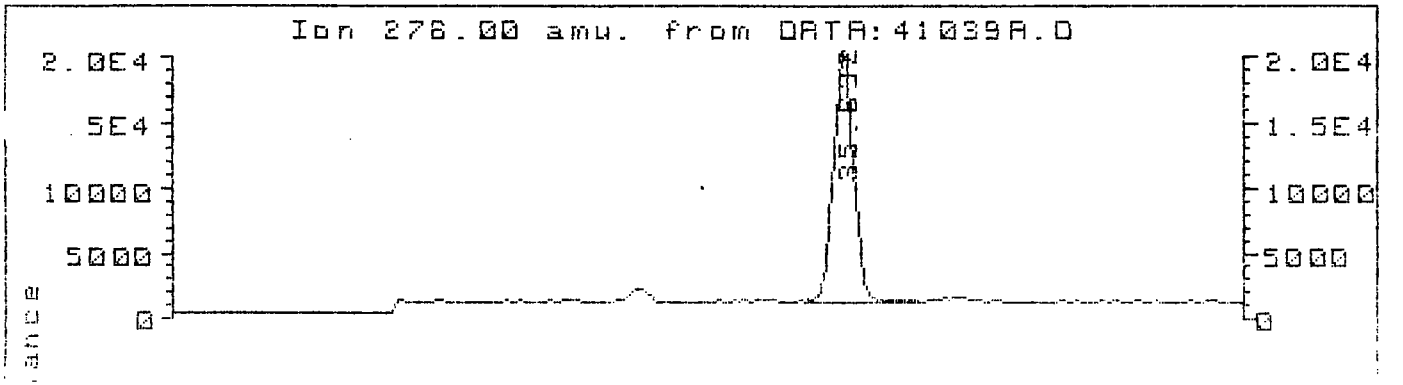
32.0
Time (min.)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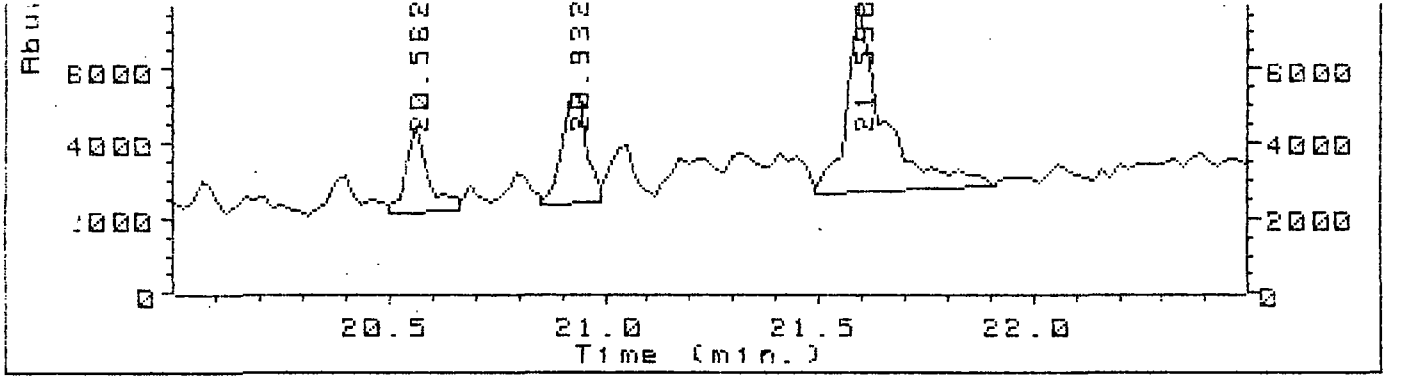
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4000
2000
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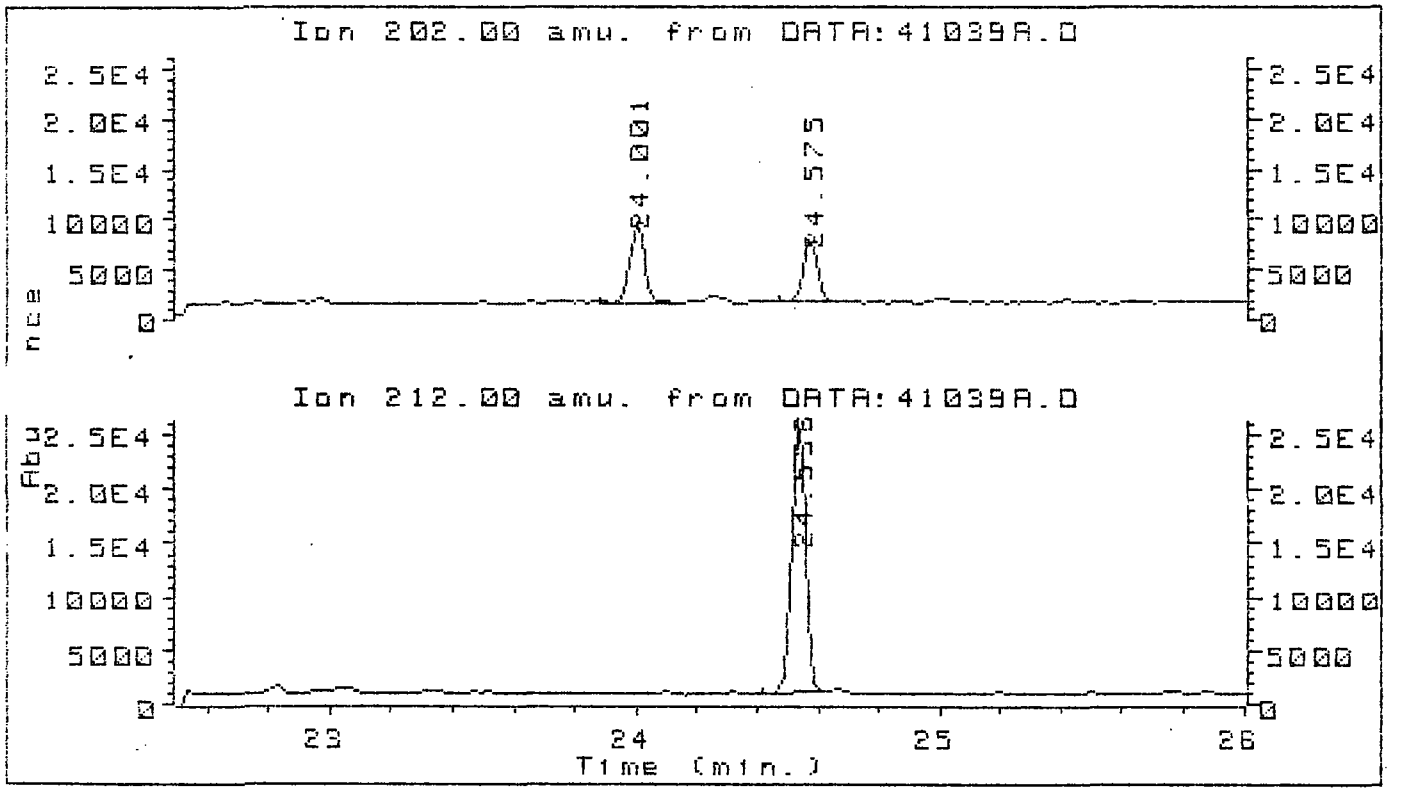
20.562
21.932
21.598
20.5
21.0
21.5
22.0
Time (min.)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2.0E4
1.5E4
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5000
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24.001
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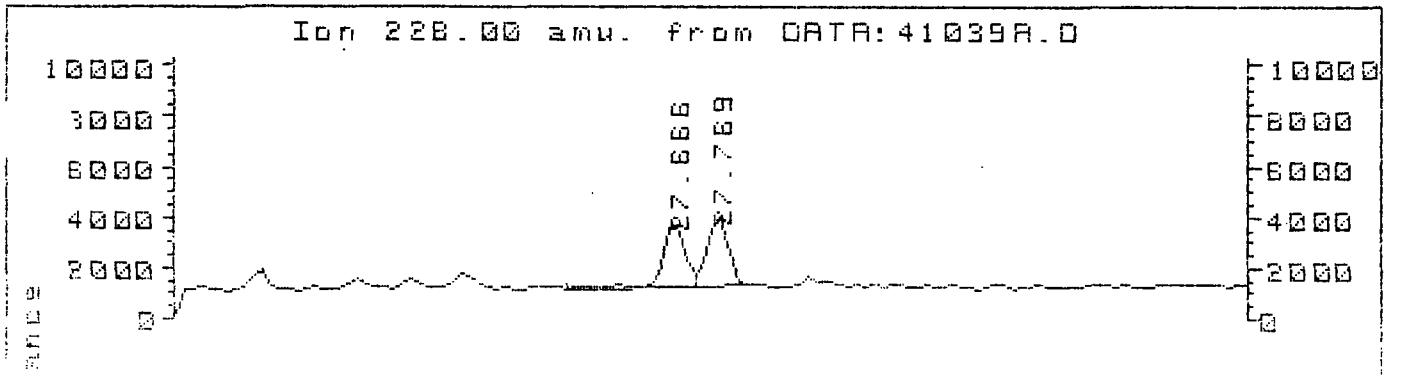
Abu
23
24
25
26
Time (min.)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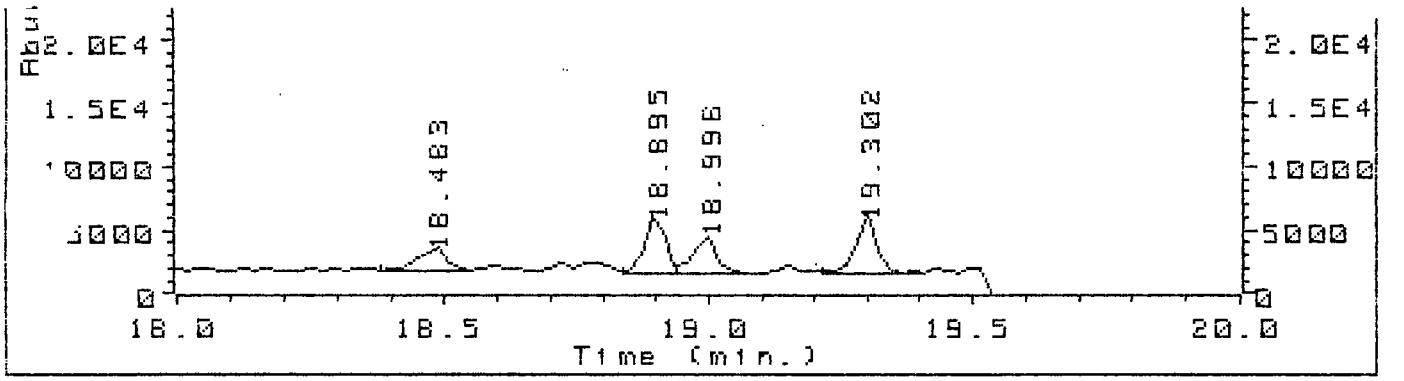
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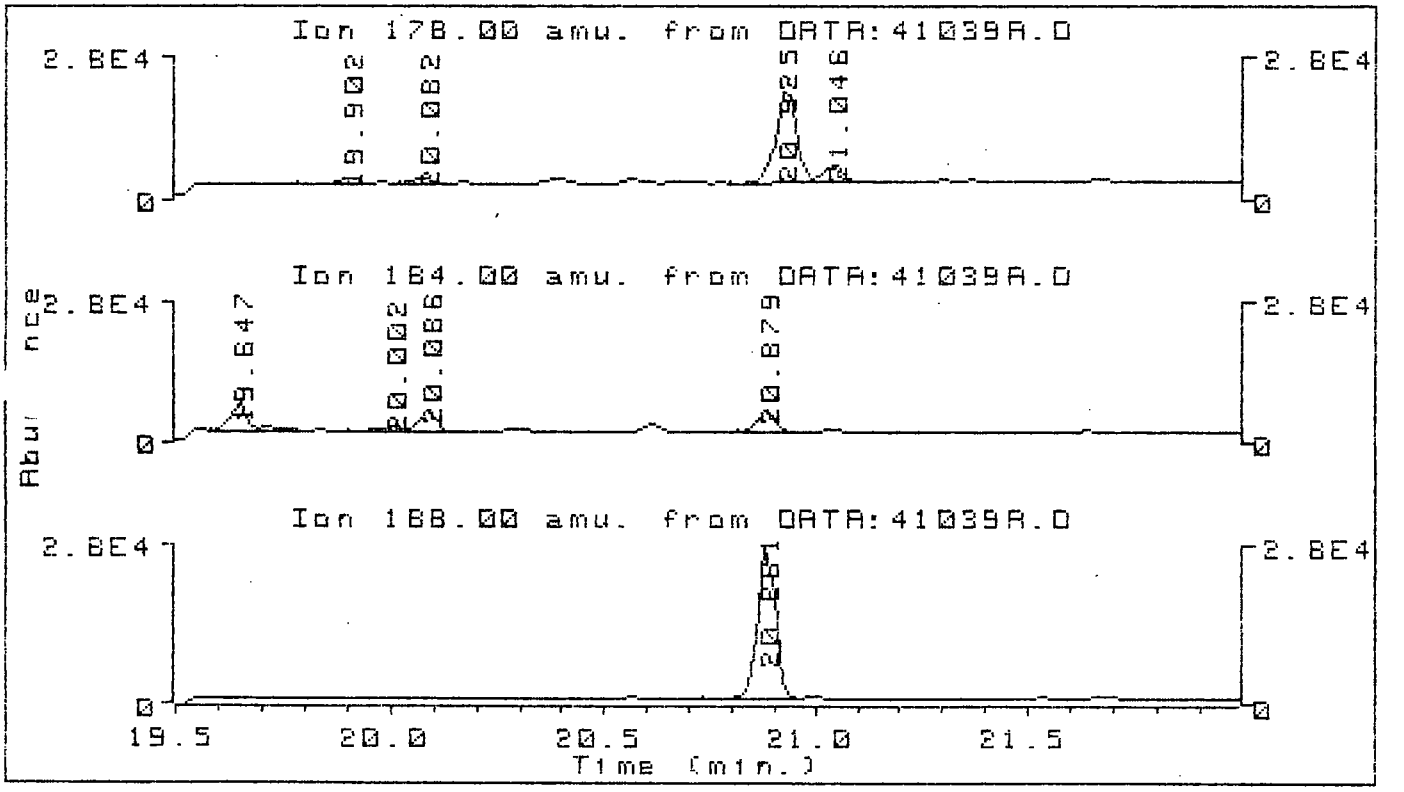
19.5
20.0
Time (min.)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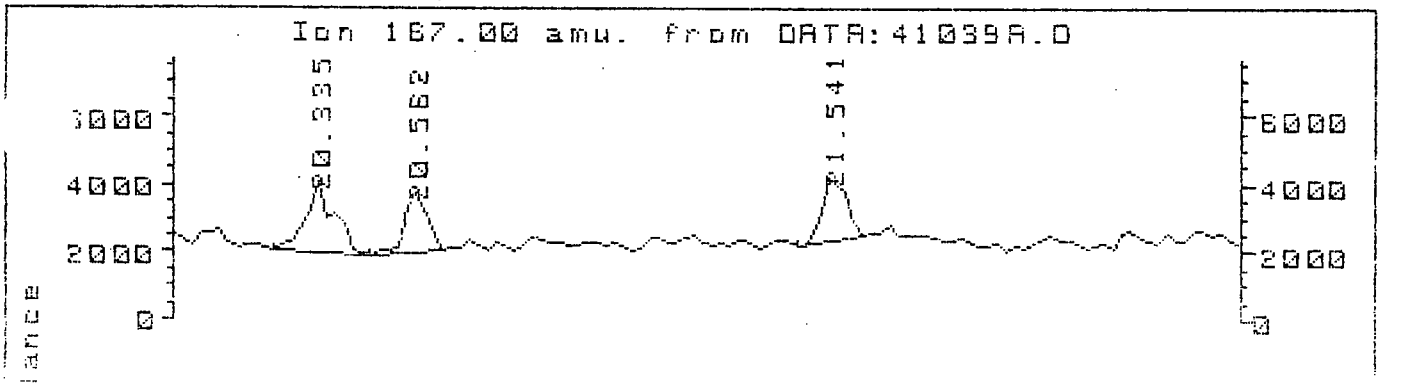
20.0
20.5
21.0
21.5
Time (min.)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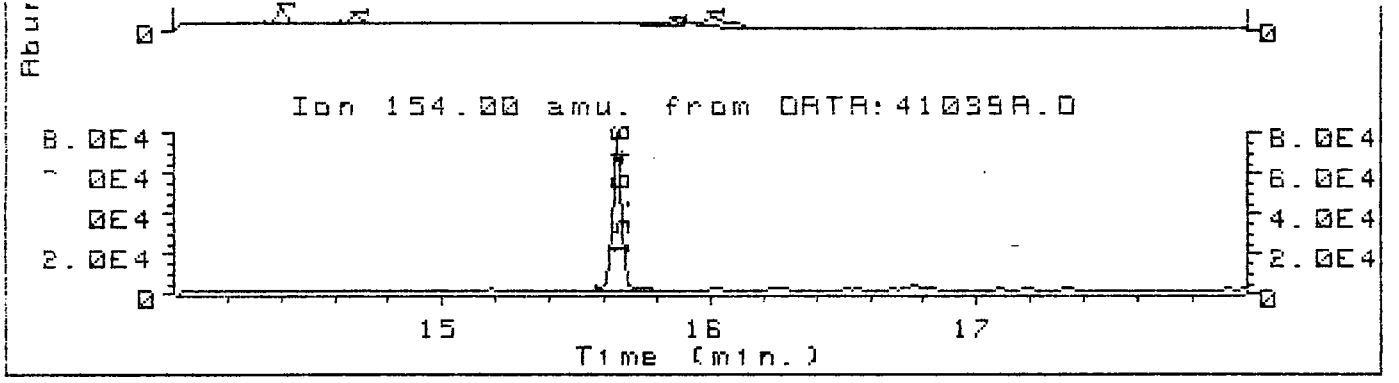
21.541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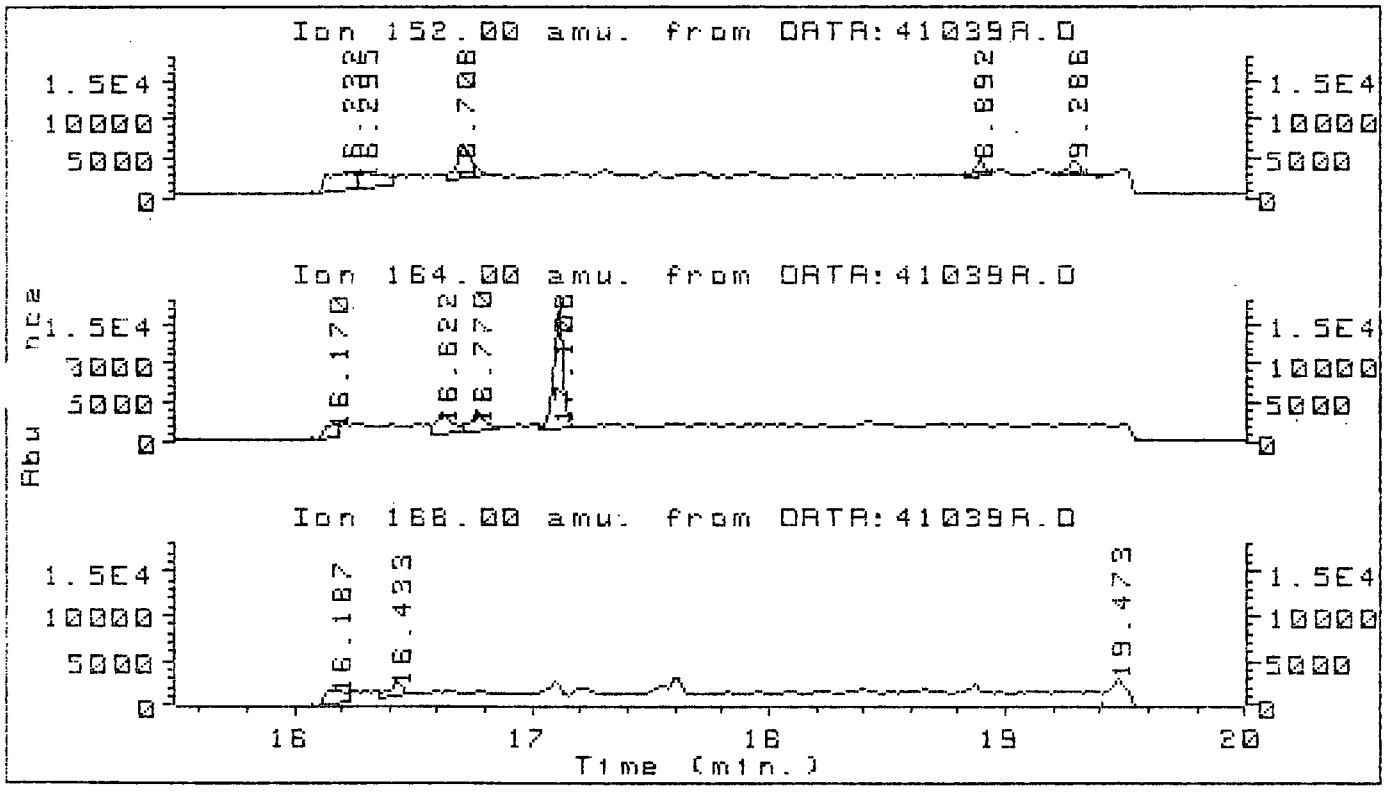
4.0E4
2.0E4
0
15
16
17
Time (min.)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10000
5000
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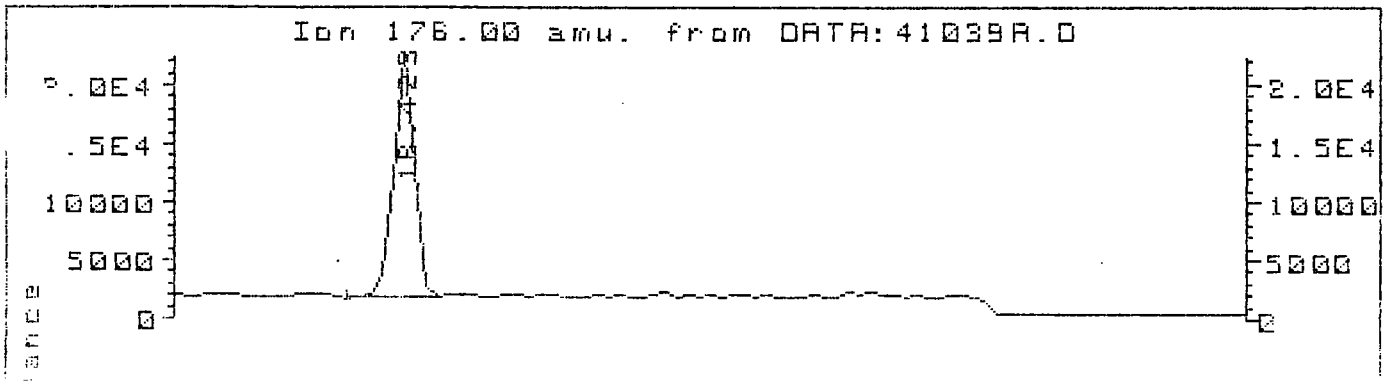
16.187
16.433
19.473
16
17
18
19
20
Time (min.)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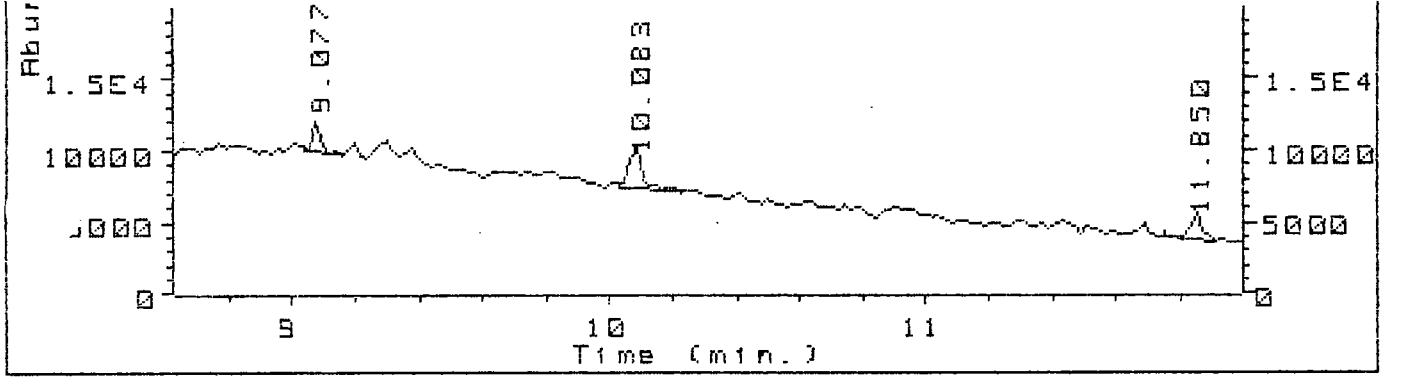
0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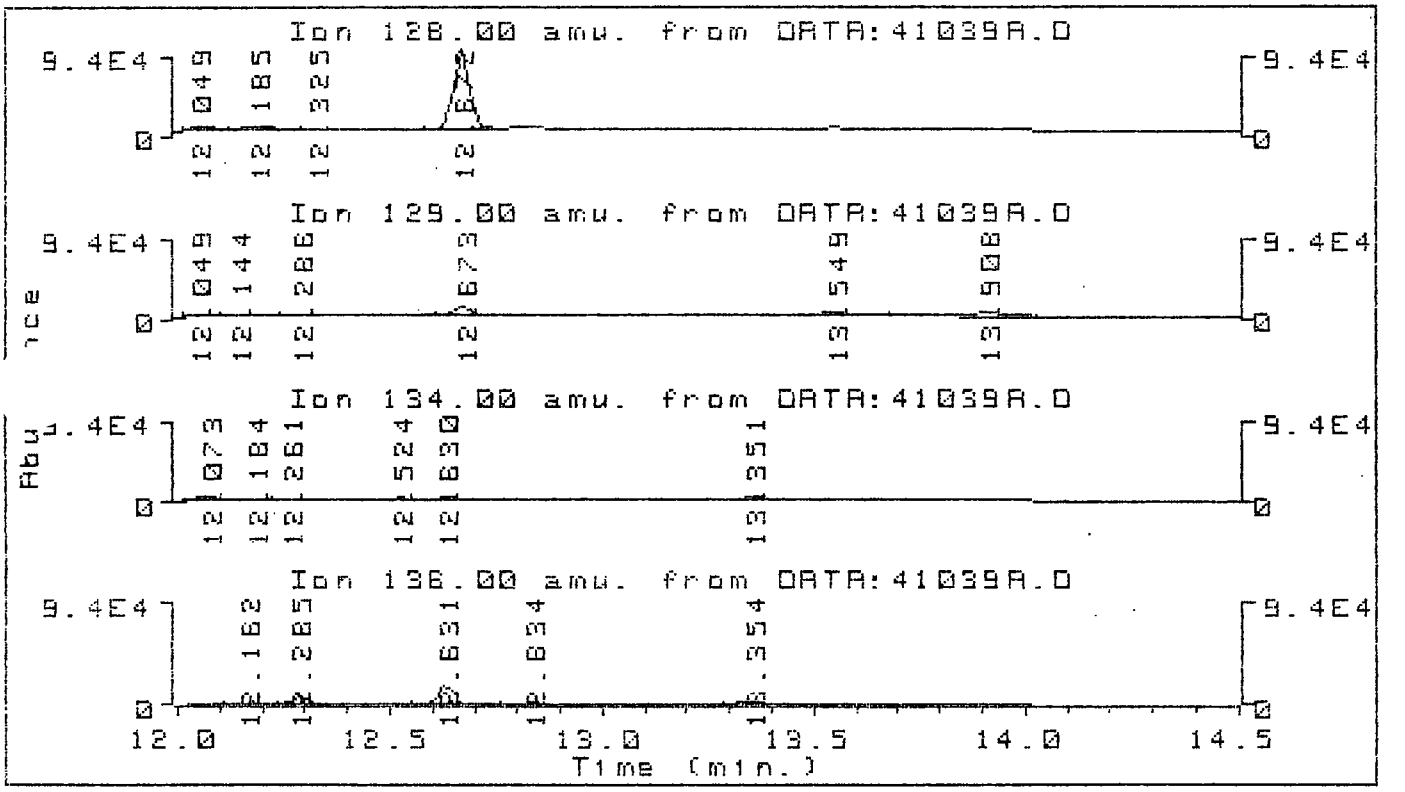
10.083
11.850
9
10
11
Time (min.)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9.4E4
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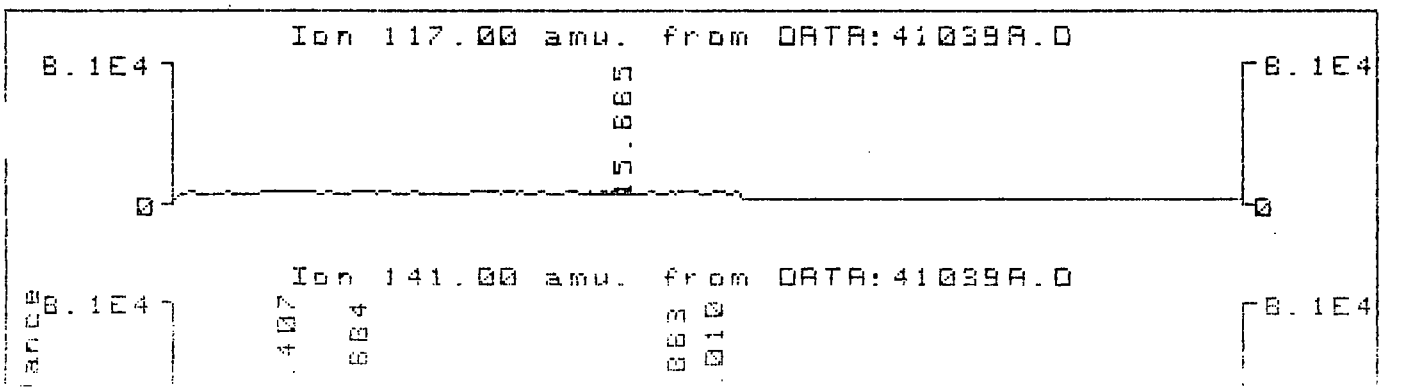
12.0
12.5
13.0
13.5
14.0
14.5
Time (min.)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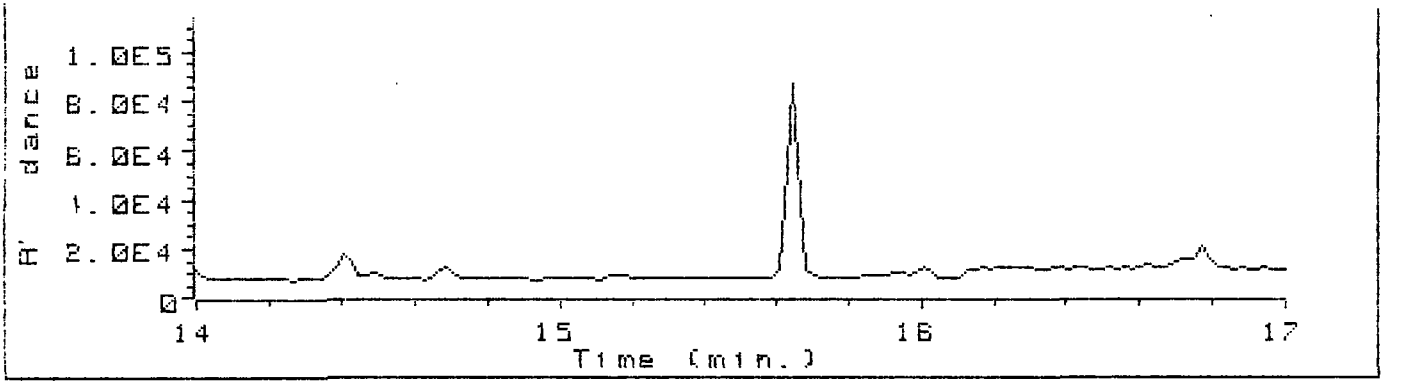
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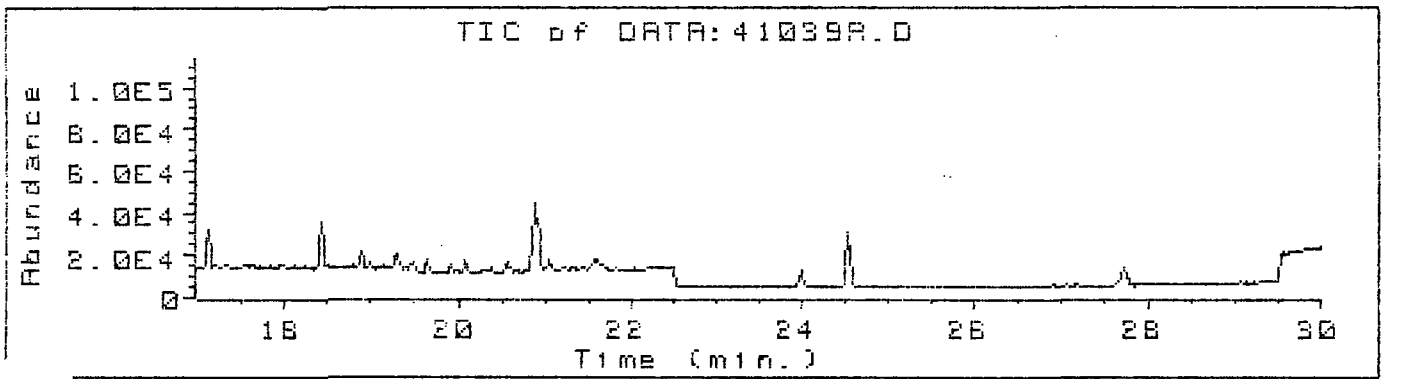
6.0E4
4.0E4
2.0E4
0
14
15
16
17
Time (min.)


TIC of DATA:41039A.D
Abundance
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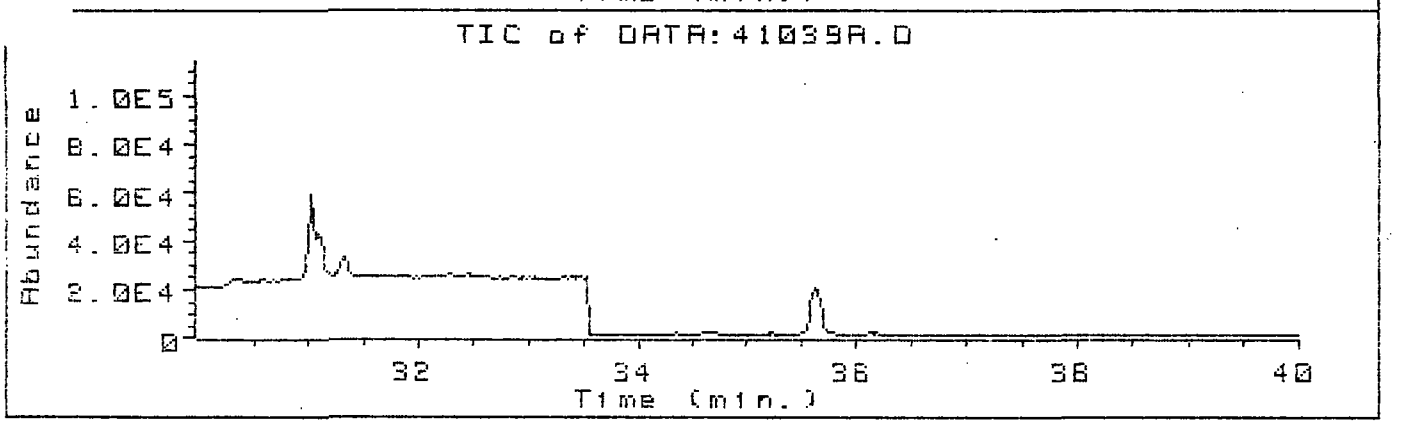
6.0E4
4.0E4
2.0E4
0
18
20
22
24
26
28
30
Time (min.)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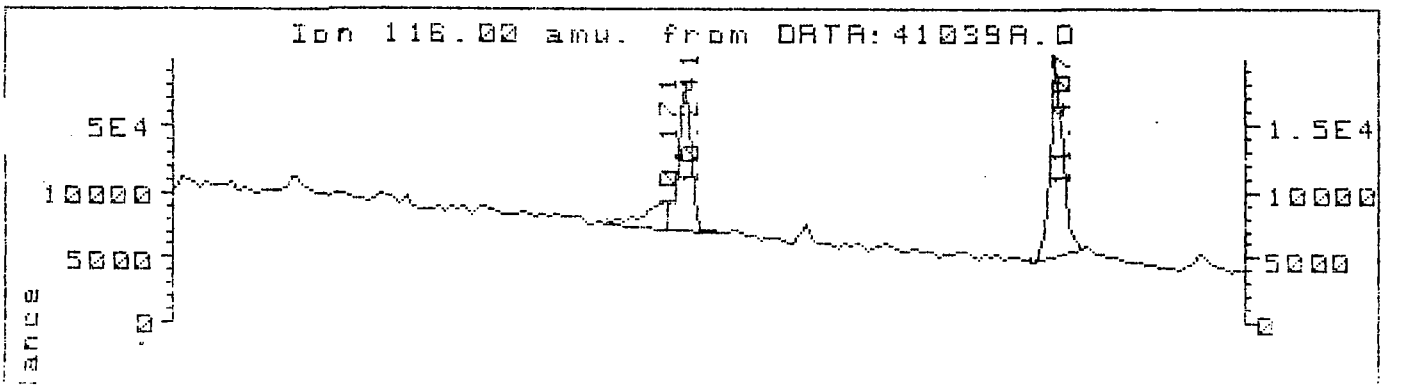
4.0E4
2.0E4
0
32
34
36
38
40
Time (min.)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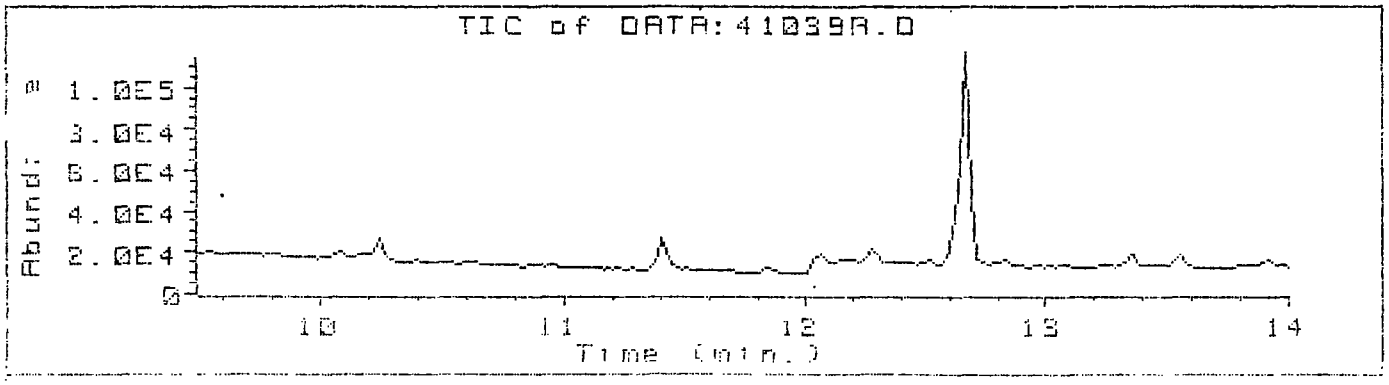
10000
5000
0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Abund:
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3.0E4
6.0E4
4.0E4
2.0E4
0
10
11
12
13
14
Time (min.)

Out-of-Control Event Form

Date 2-3-87 Time 3:30 pm Analyst Louie Pounds

Method ERT ppt PAH Matrix WATER

Initials of individual initially notified

Suspect lab numbers

Out-of-control lab numbers ① 41040, ② 41041, ③ 41043

Indication of out-of-control event ① Naphthalene-d8 less than 95% Confidence interval of 42-102 % / ② & ③ Fluorene-d10 greater than 95% confidence interval 60 – 128 %

Cause determined

No Conclusive insight or explanation of these recoveries

Action taken Review of calculations examination of internal standards & surrogates solutions for degradations and contamination

Date and time QAC notified

Date and time control resumed

Precision criteria met Accuracy criteria met

Reanalysis of data completed 1/29/87

ERT

ERT ANALYTICAL LABORATORY
PPT ANALYSIS OF PAH in WATER
METHOD DETECTION LIMITS

CARCINOGENIC PAH'S

PARAMETERS	MDL	0.64 MDL
QUINOLINE	1.90	1.20
BENZO (A) ANTHRACENE	4.40	2.80
CHRYSENE	4.40	2.80
BENZOFLUORANTHENES	9.70	6.20
BENZO (A) PYRENE	3.40	2.20
INDENO (1,2,3-CD) PYRENE	4.40	2.80
DIBENZO (A,H) ANTHRACENE	3.40	2.20
DIBENZO (G,H,I) PERYLENE	5.30	3.40

OTHER PAH'S

PARAMETERS	MDL	0.64 MDL
2,3-BENZOFURAN	1.90	1.20
2,3-DIHYDROINDENE	3.40	2.20
INDENE	2.90	1.80
NAPHTHALENE	47.00	30.00
BENZO (B) THIOPHENE	2.20	1.40
INDOLE	1.90	1.20
2-METHYLNAPHTHALENE	5.00	3.20
1-METHYLNAPHTHALENE	3.10	2.00
BIPHENYL	17.00	11.00
ACENAPHTHYLENE	1.70	1.10
ACENAPHTHENE	1.30	0.83
DIBENZOFURAN	1.20	0.77
FLOURENE	0.88	0.56
DIBENZOTHIOPHENE	6.30	4.00
PHENANTHRENE	3.10	2.00
ANTHRACENE	3.40	2.20
ACRIDINE	2.50	1.60
CARBAZOLE	2.60	1.70
FLUORANTHENE	4.40	2.80
PYRENE	4.10	2.60
BENZO (E) PYRENE	1.50	0.96
PERYLENE	1.60	1.00

0.64 MDL = LOWER CONTROL LIMIT OF 95% CONFIDENCE INTERVAL OF MDL