US EPA RECORDS CENTER REGION 5
514110

N.

PPT PAH ANALYSIS
City of St. Louis Park, MN
Sampling of 11-13-86

Sampling Group #9

TABLE OF CONTENTS

		Page No.
SECTION I		
A.	Copy of Report	i
SECTION II		
A.	Quality Assurance Data Approval Form	1
B.	Initial Page	3
C.	Chain-of-Custody Records	4
SECTION III		
A.	Daily Log: Sample Preparation	6
B.	Standard Preparation Forms	7
C.	Sample Extraction Forms	14
D.	Surrogate Recovery Forms	15
E.	Laboratory Fortification Forms	19
SECTION IV		
A.	Daily Log: Sample Analysis	20
B.	Initial GC/MS Calibration	23
C.	Continuing Calibration Check	30
D.	GC/MS Data	33
E.	Out of Control Event Form	168
F.	Report Work Sheets	169
G.	Method Detection Limits	185

SECTION I

ANALYSIS OF TRACE PAH IN WATER SAMPLES FROM THE CITY OF ST. LOUIS PARK, MN GAC TREATMENT PLANT SAMPLE SET NO. 9

ERT PROJECT NO. D209-143
December, 1986
Revised March, 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, 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 (sample set No. 9) received by the ERT Analytical Chemistry Laboratory on November 14, 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 smaples 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) sample 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/1 (ppt). The following critieria, 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 mehtod spike recovery samples 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 42% within the 20% - 150% target range.

A review of the surrogate recoveries indicated that one of the submitted samples below the lower 95% confidence limit as stated in the QA plan. Naphthalene-d8 surrogate recoveries are calculated from the reanalysis data generated on October 25, 1986. Quantitation of naphthalene-d8 was performed using the summation of Masses 136, 135, and 134 which correspond respectively to Naphthalene-d8, -d7, and -d6. This change methodology is necessary because ERT suspects that naphthalene-d8 undergoes degradation by replacing one or two deuterium atoms with hydrogen atoms.

ERT ANALYTICAL LABORATORY

SAMPLING REPORT

CITY OF ST. LOUIS PARK, MN

ppt PAH ANALYSIS IN WATER

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	T-09
2.	ERT SAMPLE NUMBER:	40145
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	11/13/86
5.	DATE RECEIVED:	11/14/86
6.	DATE EXTRACTED:	11/18/86
7.	DATE ANALYZED:	11/25/86
8.	GC/MS FILE #:	40145AD
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP33
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 40147
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 40148
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 40206
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 51

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	TD-09
2.	ERT SAMPLE NUMBER:	40146
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	11/13/86
5.	DATE RECEIVED:	11/14/86
6.	DATE EXTRACTED:	11/18/86
7.	DATE ANALYZED:	11/25/86
8.	GC/MS FILE #:	40146AD
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP33
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 40147
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 40148
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 40206
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 51

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	MS(TD-09A)
2.	ERT SAMPLE NUMBER:	40147
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	11/13/86
5.	DATE RECEIVED:	11/14/86
6.	DATE EXTRACTED:	11/18/86
7.	DATE ANALYZED:	11/25/86
8.	GC/MS FILE #:	40147AD
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP33
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 40147
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 40148
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 40206
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 51

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	METHOD BLANK
2.	ERT SAMPLE NUMBER:	40148
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	NA
5.	DATE RECEIVED:	NA
6.	DATE EXTRACTED:	11/18/86
7.	DATE ANALYZED:	11/25/86
8.	GC/MS FILE #:	40148AD
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP33
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 40147
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 40148
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 40206
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 51

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1.	FIELD INDENTIFICATION:	SHIPPING BLANK
2.	ERT SAMPLE NUMBER:	40149
3.	FIELD LOGBOOK/PAGE NUMBER	NA
4.	SAMPLING DATE:	11/10/86
5.	DATE RECEIVED:	11/14/86
6.	DATE EXTRACTED:	11/18/86
7.	DATE ANALYZED:	11/25/86
8.	GC/MS FILE #:	40149AD
9.	GC/MS TAPE #:	MSD1
10.	CORRESPONDING DFTPP FILE #:	DFTPP33
11.	CORRESPONDING MATRIX SPIKE SAMPLE:	ERT# 40147
12.	CORRESPONDING METHOD BLANK SAMPLE:	ERT# 40148
13.	CORRESPONDING SOLVENT BLANK SAMPLE:	ERT# 40206
14.	CORRESPONDING GC/MS CALIBRATION FILE #:	STD 51

15. COMMENTS: NA = NOT AVAILABLE

ERT ANALYTICAL LABORATORY

ANALYTICAL RESULTS REPORT

CITY OF ST. LOUIS PARK, MN

ppt PAH ANALYSIS IN WATER

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: T-09 ERT NO.: 40145

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
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	< 3.4
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	< 1.3
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	ND
TOTAL PAH'S	ND

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-09 ERT NO.: 40146

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	2.3
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	2.3

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	9.8
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	2.5
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	12
TOTAL PAH'S	14

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MS(TD-09A) ERT NO.: 40147

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	11
BENZO (A) ANTHRACENE	ND
CHRYSENE	8.2
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	5.4
TOTAL CARCINOGENIC PAH	25

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	13
INDENE	6.8
NAPHTHALENE	< 47
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	14
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	1.9
ACENAPHTHENE	3.5
DIBENZOFURAN	1.5
FLOURENE	13
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	7.8
PERYLENE	ND
TOTAL OTHER PAH	48
TOTAL PAH'S	73

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MB860879 ERT NO.: 40148

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
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	< 3.4
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	< 5.0
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	2.3
ACENAPHTHENE	ND
DIBENZOFURAN	4.2
FLOURENE	1.8
DIBENZOTHIOPHENE	ND
PHENANTHRENE	9.8
ANTHRACENE	ND
ACRIDINE	3.1
CARBAZOLE	ND
FLUORANTHENE	4.4
PYRENE	< 4.1
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	26
TOTAL PAH'S	26

ND = Concentration < 95% Confidence Interval of MDL

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: SHIPPING BLANK

ERT NO.: 40149

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	< 1.9
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	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	ND
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	< 1.3
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	ND
TOTAL PAH'S	ND

ND = Concentration < 95% Confidence Interval of MDL

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-09 ERT NO.: 40145

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	52	42-102
FLUORENE - D10	9.5	83	60-128
CHRYSENE - D12	9.8	34	10-54

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

FIELD ID: TD-09 ERT NO.: 40146

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	61	42-102
FLUORENE - D10	9.5	104	60-128
CHRYSENE - D12	9.8	66	10-54

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

FIELD ID: MATRIX SPIKE ERT NO.: 40147

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	92	42-102
FLUORENE - D10	9.5	82	60-128
CHRYSENE - D12	9.8	34	10-54

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

FIELD ID: METHOD BLANK ERT NO.: 40148

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	76	42-102
FLUORENE - D10	9.5	124	60-128
CHRYSENE - D12	9.8	86	10-54

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

FIELD ID: SHIPPING BLANK ERT NO.: 40149

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	88	42-102
FLUORENE - D10	9.5	105	60-128
CHRYSENE - D12	9.8	42	10-54

ERT ANALYTICAL LABORATORY

METHOD 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(TD-09A) ERT NO.: 40147

PARAMETERS	SPIKE LEVEL(NG/L)	OBS. LEVEL(NG/L)	% RECOVERY
NAPHTHALENE	110	42	38
FLUORENE	21	13	62
CHRYSENE	24	8.2	34
BENZO (G,H,I) PERYLENE	22	5.4	25
INDENE	25	6.8	27
QUINOLINE	24	11	46
BENZO (E) PYRENE	20	7.8	39
2-METHYLNAPHTHALENE	21	14	67
			==========
AVERAGE % RECOVERY			42

AVERAGE % RECOVERY TARGET RANGE = 20% - 150%

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 November 14, 1986

CHAIN OF RECORD

Client/Project Name	Project Location
City of St Louis Park	St Louis Park MN.
Project No.	**Field Logbook No.**
Sampler: (Signature)	**Chain of Custody Tape No.**
Michael L. Kiggins	101926 & 101777

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	PPL PAH					Residual	REMARKS
T-09	11-13-86	1311	40145	4X1L Amber	X					4	
TD-09	11-13-86	1320	40146	4X1L Amber	X					4	
TD-09A	11-13-86	1325	40147	3X1L Amber	X					3	1 BROKEN WHEN RECEIVED
MS-09	11-13-86	1331	40148	4X1L Amber	X					2	
Shipping Blank	11/10/86		40149							3	FIELD BLANKS NOT TRANSFERED

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Michael L. Kiggins	11-13-86	1400			
Relinquished by: (Signature)	**Date**	**Time**	**Received by: (Signature)**	**Date**	**Time**
Relinquished by: (Signature)	**Date**	**Time**	**Received for Laboratory: (Signature)**	**Date**	**Time**
			Michael J. Ly	11/14/86	09:30
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
City of St Louis Park Water Dept.
5005 Minnetonka Blvd.
St Louis Park MN. 55416

ERT

№ 7285

174-3-84

ERT

SAMPLE RECEIPT CHECK LIST

Client: City of St. Louis Park, MN ~~[illegible]~~ - D209-143

COC Record #(s): 7285

Matrix	Container	ERT #(s)
Water PAH ppt	4X1l. Amber	40145-40149

1. Were samples shipped or hand-delivered? Shipped

   Notes: Airbill # 302536754

2. Was COC record present upon receipt of samples? Yes ☑ No ☐

   Notes:

3. Was COC tape present/unbroken on outer package? Yes ☑ No ☐

   Notes: 101926- 101777

4. Were samples received ambient or chilled? Ambient

   Notes: No Evidence of Ice

5. Were any samples received broken/leaking (improperly sealed)? Yes ☑ No ☐

   Notes: 40148 Rec'd 2 broken.
   40149 Rec'd 1 broken.

6. Were samples properly preserved? Yes ☐ No ☒

   Notes: Should have been Cool

7. Were COC types present/unbroken on samples? Yes ☐ No ☑

   Notes: Samples sealed w/white Plastic tape

8. Any discrepancies between sample labels and COC records? Yes ☐ No ☑

   Notes:

9. Were samples received within holding times? Yes ☑ No ☐

   Notes:

Additional Comments:
Stored in Cooler in Log-in Room
40147 only 3 l. sampled - use 1l. from 40148 to complete 40147 Discard the other 1l. of 40148
40148 used for Method Blank

Samples inspected and logged in by Michael J Fry Date: 11/14/86

2013/2-86

SECTION II

ERT
A COMSAT COMPANY
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

NO. 1

QUALITY ASSURANCE FORM

SUBJECT: DATA APPROVAL

CLIENT: CITY OF ST. LOUIS PARK MN PROJECT NO: 0209-143

ANALYSIS PARAMETER(S): PPT PAH AND 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) extraction sheet (4) surrogate (5-6) LF (7) dilution sheet (8-9)

ROUTING			SIGNATURE	
TITLE	NAME	DATE	APPROVAL	DISAPPROVAL (SEE SIDE 2)
INITIATOR	Martha E. Kreiger	6 NOV 86		
	[illegible]	24 NOV 86	N	
	Louis G. Pounds	11/28/86		
	[illegible]	12/10/86		
	M. DeVine	12/12/86	Reports Generated	
		12/19/86	Filed.	
Q.A. UNIT	M. A. Beck	12/19/86	Comments	

(OVER)

CL020/11-84

ERT

2

SUBJECT: DATA APPROVAL

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

12/11/86 ~~the~~ Were the samples blank corrected? If so, was the method blank used? Yes, Method BLANK ERT # 40148 used. LJP 12/~~28~~ 23/86

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

Page: 1

INITIAL PAGE

3

SIGNATURE	INITIALS
Martha R. Krempp	MK
Michael Shipp	MS
[illegible]	KP
A. Pandice	P
Louise G. Pounds	LGP
Jim Grain	JG
M. DeVine	MCD
M. O. Beck	MAB

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
City of St Louis Park	St Louis Park MN.
Project No.	Field Logbook No.
Sampler: (Signature) Michael P. Higgins	Chain of Custody Tape No. 101926 & 101777

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	PPT	PAH				Residual	REMARKS
T-09	11-13-86	1311	40145	4X1L Amber	X					4	
TD-09	11-13-86	1320	40146	4X1L Amber	X					4	
TD-09A	11-13-86	1325	40147	3X1L Amber	X					4	1 BROKEN WHEN RECEIVED
MS-09	11-13-86	1331	40148	4X1L Amber	X					4	
Shipping Blank	11/6/86		40149							3	FIELD BLANKS NOT TRANSFERED

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Michael P. Higgins	11-13-86	1400			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature) Michael J Hy	Date 11/14/86	Time 09:30
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
City of St Louis Park Water Dept.
5005 Minnetonka Blvd.
St Louis Park MN. 55416

ERT

№ 7285

1974-3-84

ERT

5

SAMPLE RECEIPT CHECK LIST

Client: City of St. Louis Park, MN ~~0005~~ D209-143

COC Record #(s): 7285

Matrix	Container	ERT #(s)
Water PAH ppt	4X1l. Amber	40145-40149

1. Were samples shipped or hand-delivered? Shipped

   Notes: Airbill # 302536754

2. Was COC record present upon receipt of samples? Yes ☑ No ☐

   Notes:

3. Was COC tape present/unbroken on outer package? Yes ☑ No ☐

   Notes: 101926-101777

4. Were samples received ambient or chilled? Ambient

   Notes: No Evidence of Ice

5. Were any samples received broken/leaking (improperly sealed)? Yes ☑ No ☐

   Notes: 40148 Rec'd 2 broken
   40149 Rec'd 1 broken

6. Were samples properly preserved? Yes ☐ No ☑

   Notes: Should have been Cool

7. Were COC types present/unbroken on samples? Yes ☐ No ☑

   Notes: Samples sealed w/white Plastic tape

8. Any discrepancies between sample labels and COC records? Yes ☐ No ☑

   Notes:

9. Were samples received within holding times? Yes ☑ No ☐

   Notes:

Additional Comments:
Stored in Cooler in Log-in Room
40147 only 3l. sampled - use 1l. from 40148 to complete 40147 Discard the other 1l. of 40148
40148 used for Method Blank

Samples inspected and logged in by Michael J Ly Date: 11/14/86

2013/2-86

SECTION III

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY

18 NOV 86 SAMPLES 40145, 46, 47, 48, 49, and 40206 were extracted with $MeCl_2$ (B&J lot A01675) according to SOP 020-6 modified. All samples were spiked with ~~8.0~~ 4.0 ml MS860352 except 40206 which served as a solvent blank. 40147 was spiked with ~~8.0~~ 4.0 ml MS860164. Due to breakage of samples during shipping, 1 l of 40148 was used for sample 40147 and the ERT # 40148 served as a method blank #. Also, due to breakage only 3 l of sample was available for 40149 (see C.O.C.). During extraction, 80 ml of 40146 was disregarded due to inefficient space for shaking in the sep funnel. All samples were stored in R4. RC RP

11-19-86 Samples 40145, 40146, 40147, 40148, 40149 and 40206 were KD'd and blown down under a nitrogen stream to a final volume of 0.5 ml in Benzene. ~~A standards check was done~~ MS860164 and MS860352 were prepared for a standards check by adding 2.0 ml twice to 2.0 ml microvessels, ~~to~~ and blowing them down under a nitrogen stream to a final volume of 0.5 ml in benzene. All microvessels were marked at the 0.5 ml level, measured with ~~a~~ 0.5 ml pipette. All samples were stored in R1. RP

ERT

M9860164

DATE: _____

ANALYSIS: 7

PREPARATION OF SERIAL DILUTION STANDARDS

Client: Reilly Tar Sample Matrix: _____ Project No: _____

Analysis: ppt PAH Storage Requirements: refrigerate

Dilutions By: SM Date: 5/29/86 Approved By: M.A Bieber

Conc. of Stock Used for Dilution: see below Date Stock was Prepared: 5/27/86 & 5/27/86

(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 B+J	Final Concentration ng/ml	Disposition of Standards and/or Storage Location
Benzo(ghi)perylene 1386 1:100 (2344 ng/ml)	1ml	100ml	AN402 acetone	23.4	
Quinoline 1240 1:500 (2346 ng/ml)				23.5	
Indene 1387 1:1000 (2464 ng/ml)				24.6	
Naphthalene 1396 1:100 (11036 ng/ml)				110.4	
2-methylnaphthalene 1391 1:100 (2124 ng/ml)				21.2	
Fluorene 1392 1:1000 (2109 ng/ml)				21.1	
Benzo(e)pyrene 1388 1:100 (2044 ng/ml)				20.4	
Chrysene 1393 1:100 (2420 ng/ml)				24.2	

Stock #1 Stock #2

CL028/03-85

ERT

MS860352

DATE: _____

ANALYSIS: _____

PREPARATION OF SERIAL DILUTION STANDARDS

8

Client: _____ Sample Matrix: Water Project No: _____

Analysis: ppt PAH's Storage Requirements: freeze

Dilutions By: LRJ Date: 11-6-86 Approved By: DL 11/6/86

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 ng/ml	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	100ml	Lot# AN 402	9.87	
SS 1381 Perylene D_{12} 940.0	1.0			9.40	
SS 1383 Chrysene D_{12} 978.8	1.0			9.79	

replaces MS860260

CL028 03-85

ERT

MS860256

DATE: 8/12/86

ANALYSIS:

PREPARATION OF SERIAL DILUTION STANDARDS

9

Client: Sample Matrix: Project No:

Analysis: Storage Requirements:

Dilutions By Lucia Van Der Fleet Date: 8/12/86 Approved By: MAB

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

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

ID#	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
577	ACENAPHTHENE d_{10}	17 µl	25 ml	benzene	.991 µg/µl	
	Conc: 1458 µg/ml			A0096		
				bt3/2mrd		
578	PHENANTHRENE-d_{10}	19 µl	"	"	1.004 µg/µl	
	Conc: 1321 µg/ml					
579	BENZO(A) PYRENE-d_{12}	40.5 µl	"	"	1.000 µg/µl	
	Conc: 617 µg/ml					

CL028/03-85

ERT MS860247

DATE: 8/7/86

ANALYSIS: 10.

PREPARATION OF SERIAL DILUTION STANDARDS

Client: _____ Sample Matrix: _____ Project No: _____

Analysis: _____ Storage Requirements: _____

Dilutions By: Lucia Van Ostfleur Date: 8/7/86 Approved By: LAP 8/7/86

Conc. of Stock Used for Dilution: _____ 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
MS860245	1ml	25 ml	benzene	40 mg/ml	
MS860246	"	"	40 096		
MS860247	"	"	btJ/pard		

CL028 03-85

ERT HS860247

DATE: 8/6/86

ANALYSIS:

PREPARATION OF SERIAL DILUTION STANDARDS

11

Client: _____ Sample Matrix: _____ Project No: _____

Analysis: _____ Storage Requirements: _____

Dilutions By: Lucia Van Der Geer Date: 8/7/86 Approved By: [illegible] 8/7/86

Conc. of Stock Used for Dilution: _____ 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
NAPTHALENE-d_8	13.0 µl	25 ml	~~1000 µg/ml~~ 100 µg/ml	1000 ng/ml	
SS861857			BENZENE		
			RO 096		
			hi Pond.		
PYRENE-d_{10}	13.0 µl	"		"	
SS861859					
CRYSENE-d_{12}	14.9 µl	"		"	
SS861861					
PERYLENE-d_{12}	19.8 µl	"		"	
SS861863					
FLUORENE-d_{10}	19.9 µl	"		"	
SS861867					

CL028/03-85

ERT

MS860246

DATE: 8/6/86

ANALYSIS:

PREPARATION OF SERIAL DILUTION STANDARDS

12.

Client: _____ Sample Matrix: _____ Project No: _____

Analysis: _____ Storage Requirements: _____

Dilutions By: Lucia Van Ostrand Date: 8/7/86 Approved By: LP 8/7/86

Conc. of Stock Used for Dilution: .1 mg 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
NAPTHALENE	1 ml	100 ml	Benzene	1000 mg/ml	
ACENAPHTHYLENE			A0096		
ACENAPHTENE			BTS Board		
FLUORENE					
PHENANTHRENE					
ANTHRACENE					
FLUORANTHENE					
PYRENE					
BENZ (a) ANTHRACENE					
CHRYSENE					
BENZO(B) FLUORANTHENE					
BENZO(K) FLUORANTHENE					
BENZ (a) PYRENE					
INDENO(1,2,3-cd) PYRENE					
DIBENZ(a,h) ANTHRACENE					
BENZO(g,h,i) PERYLENE					

1 ml to 100 ml 1:100 dilution SSF 1366

ERT HS860024S

DATE: 8/6/86

ANALYSIS:

3/2/8 GSG

PREPARATION OF SERIAL DILUTION STANDARDS ~~12~~ 13

Client: _____ Sample Matrix: _____ Project No: _____

Analysis: _____ Storage Requirements: _____

Dilutions By: Lucia Van Ostrander Date: 8/7/86 Approved By: [illegible] 8/7/86

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

(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
INDENE SS861553	14.2 µl	25 ml	BENZENE A0096 GC/grad	1000 µg/ml	1760 µg/ml
INDOLE SS861556	15.5 µl	"		"	1608 µg/ml
2 METHYLNAPTHALENE SS861558	21.8 µl	"	"	"	1146 µg/ml
BIPHENYL SS861560	21.6 µl	"	"	"	1159 µg/ml
DIBENZOFURAN SS861562	17.3 µl	"	"	"	1441 µg/ml
DIBENZOTHIOPENE SS86 1208	16.2 µl	"	"	"	1539 µg/ml
2,3 BENZOFURAN SS86 1211	21.6 µl	"	"	"	1157 µg/ml
ACRIDINE SS861565	18.6 µl	"	"	"	1347 µg/ml
2,3 dihydroINDENE SS86 1215	24.2	"	"	"	1032 µg/ml
BENZO (a) PYRENE SS861566	20.4 µl	"	"	"	1224 µg/ml
BENZO (b) THIOPHENE SS86 1216	15.2	"	"	"	1645 µg/ml
QUINOLINE SS86 1210	21.3	"	"	"	1173 µg/ml
1 METHYLNAPTHALENE SS861568	24.8 µl	"	"	"	1008 µg/ml
CARBAZOLE SS861569	22.3 µl	"	"	"	1120 µg/ml
PERYLENE SS861576	20.7 µl	"	"	"	1210 µg/ml

CI029 03 85

ERT

Method: SOP 820-6 MODIFIED

Client: CITY OF ST. LOUIS PARK MN

Project No. D209-143

EXTRACTION OF WATER SAMPLES

Date: 18 NOV 8

Analysis: PPL PAH & HETEROCYCLES

Notebook/Page: 4

ERT No.	Sample ID	Date Sampled	Volume Extracted (ml)	Date Extracted/By (MC)	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 KP	Volume Final Extract (ml) *
40145	T-09	11-13-86	4000	18NOV86	✓	$MeCl_2$	NA	NA	✓	6(80)	N	NA	11-19-86	0.5
40146	TD-09	↓	3920	↓	↓	B & J BRAND	↓	↓	↓	↓	N	↓	↓	↓
40147	TD-09A LF860819 ERT # 40205	↓	4000	↓	↓	LOT A0675	↓	↓	↓	↓	N	↓	↓	↓
40148	MB860879	↓	↓	↓	↓	↓	↓	↓	↓	↓	N	↓	↓	↓
40149	SHIPPING BLANK	11/10/86	3000	↓	↓	↓	↓	↓	↓	↓	N	↓	↓	↓
40206	MB860880 Solvent BLANK	NA	~~480~~ NA	↓	NA	↓	↓	↓	↓	↓	N	↓	↓	↓

Comments:

* In Benzene, B+J lot A0096

Checked By: [illegible]

985/6-84

ERT

SURROGATE FORTIFICATION AND RECOVERY

Method: SOP 020-6 Modified

Date: 18 NOV 86

Client: CITY OF ST. LOUIS PARK MN

Analysis: PPT PAH ; HETEROCYCLES

Project: D209-143

Notebook/Page: 5

ERT No.	Sample ID	Surrogate Spike Name/Log No.	A Concentration of Spike mg/ml	B Volume of Spike	C Volume of Sample	D Expected Concentration ng/ml	E Observed Concentration	F % Recovery
40145	T-09	Fluorene D10	9.52	4.0ml	4000 ml	38.08	31.4 ~~39.8~~	~~105~~ 83
		Pyrene D10	10.1	↓	↓	40.4		
		Naphthalene	9.87			39.48	9.08 ~~42.5~~	~~108~~ 23
		Perylene D12	9.40			37.6		
		Chrysene D12	9.79	↓	↓	39.16	13.2 ~~16.3~~	~~42~~ 34
40146	TD-09	Fluorene D10	9.52	4.0ml	3920ml ~~4000ml~~	38.08	39.5	104
		Pyrene D10	10.1	↓	↓	40.4		
		Naphthalene	9.87			39.48	23.7	60
		Perylene D12	9.40			37.6		
		Chrysene D12	9.79	↓	↓	39.16	26.0	66
40147	TD09A	Fluorene D10	9.52	4.0ml	4000ml	38.08	31.2	82
	LFS600519	Pyrene D10	10.1	↓	↓	40.4		
	40205	Naphthalene	9.87			39.48	27.2	69
		Perylene D12	9.40			37.6		
		Chrysene D12	9.79	↓	↓	39.16	13.5	34

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

Comments:

Checked By: AP

982/6-84

ERT

SURROGATE FORTIFICATION AND RECOVERY

Method: SOP 020-6 Modified

Date: 18 NOV 86

Client: CITY OF ST. LOUIS PARK MN

Analysis: PPT PAH : HETEROCYCLES

Project: D209-143

Notebook/Page: 6

ERT No.	Sample ID	Surrogate Spike Name/Log No.	A Concentration of Spike ng/ml	B Volume of Spike	C Volume of Sample	D Expected Concentration ng/ml	E Observed Concentration	F % Recovery
40148	~~MS-09~~	Fluorene D10	9.52	4.0ml	4000 ml	38.08	46.9	123
	MS 860879	Pyrene D10	10.1			40.4		
		Naphthalene	9.87			39.48	31.3	79
		Perylene D12	9.40			37.6		
		Chrysene D12	9.79			39.16	33.9	86
40149	Shipping Blank	Fluorene D10	9.52	4.0ml	~~4000ml~~ 3000 ml	38.08	39.8	105
		Pyrene D10	10.1			40.4		
		Naphthalene	9.87			39.48	42.5	108
		Perylene D12	9.40			37.6		
		Chrysene D12	9.79			39.16	16.3	42
		Fluorene D10	9.52	4.0ml	4000ml	38.08		
		Pyrene D10	10.1			40.4		
		Naphthalene	9.87			39.48		
		Perylene D12	9.40			37.6		
		Chrysene D12	9.79			39.16		

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

nments: * Corrected for daily check standard, Naphthalene d8 corrected for recovery of surrogate check

Checked By: N

6-84

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

QUALITY ASSURANCE FORM

LF 8600819 40205

SUBJECT: ANALYTICAL RESULTS OF QA/QC FORTIFIED SAMPLES

Client: CITY OF ST LOUIS PARK MN Sample Matrix: WATER

Project No.: D209-143 Analyte: PPT PAH HETEROCYCLES

ERT Sample No.	Spiked By/Date (MC)	Volume (ml) Weight (g) Sample Spiked	Conc. of Standard Used (date mfg.) MS8600164 ng/ml	Volume (ml) Spiked	Expected Concentration Blind Sample ng/ml	Analytical Result Exp ng/l	Analytical Result Obs	Analytical Result %	Comments
40205	18NOV86	4000	22.4	4.0 ml	89.6	22.4	5.47 ~~11.0~~	24.4	Benzo(ghi) perylene
(40147)	LF8600819		23.5		94.0	23.5	11.0	46.8	Quinoline
			24.6		98.4	24.6	7.47	30.4	Indene
			110.4		441.6	110.4	43.0	38.9	Naphthalene
			21.2		84.8	21.2	7.98	37.6	2-methyl naphthalene
			21.1		84.4	21.1	13.15	62.3	Flourene
			20.4		81.6	20.4	8.71	42.7	Benzo(e) pyrene
			24.2		96.8	24.2	8.17	33.8	Chrysene
						O.G. 12/10/86			

CL015/11-84

ERT

SURROGATE FORTIFICATION AND RECOVERY

Method: SOP 020-6 Modified

Date: 11-19-86

Client: City of St. Louis Pk

Analysis: PPT PAH notebook

Project: D 204-143

Notebook/Page: 10

ERT No.	Sample ID	Surrogate Spike Name/Log No.	A Concentration of Spike mg/ml	B Volume of Spike ml	C Volume of Sample	D Expected Concentration ng	E Observed Concentration exp mg/L	E Observed Concentration obs mg/L	F % Recovery
~~40228~~	LF860927	Fluorene D10	9.52	4.0	na	38.08	9.52 ~~22.9~~	5.03 ~~5.0~~	53
40229		Pyrene D10	10.1			40.40	10.1		
12-10-86 KB		Naphthalene D8	9.87			39.48	9.87	4.50	45
		Perylene D12	9.40			37.60	9.40		
		Chrysene D12	9.79			39.16	9.79	7.15	73

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

Comments: MS 860164

Checked By: N

1982/6-84

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

QUALITY ASSURANCE FORM

MS 860 352 CF 8600928

SUBJECT: ANALYTICAL RESULTS OF QA/QC FORTIFIED SAMPLES

Client: City of St Louis Pk Sample Matrix: na

Project No.: D201-143 Analyte: PPT PAH Heterocycles

ERT Sample No.	Spiked By/Date	Volume (ml) Weight (g) Sample Spiked	Conc. of Standard Used ng/mg (date mfg.)	Volume (ml) Spiked	Expected Concentration Blind Sample ng	Analytical Result exp. mg/l	Analytical Result obs. mg/l	Comments	% Rec
~~40224~~	na	na	22.4	4.0	89.6	22.4	21.3	Benzo(ghi)perylene	95
40228			23.5		94.0	23.5	17.3	Quinoline	74
12-11-86 KD			24.6		98.4	24.6	13.7	Indene	56
			110.4		441.6	110.4	61.2	Naphthalene	55
			21.2		84.8	21.2	11.7	2-Methyl Naphthalene	55
			21.1		84.4	21.1	13.9	Fluorene	66
			20.4		81.6	20.4	23.4	Benzo (e) pyrene	115
			24.2		96.8	24.2	17.6	Chrysene	73

SECTION IV

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

PAGE: ____

QUALITY ASSURANCE FORM -

SLP ppt PAH - set #9

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY

11/25/86 Daily DFTPP was shot file DFTPP33.D
All St Louis Park samples ERT # 40145 - 40149, and 40228
40229, 40206, & daily std were all spiked with
internal standard at 25µl in 0.5ml of MS860256
Sample Order of Runs on MSD

STD 51.D	40ppt PAH	MS860249	1.0ul injection
40228A.D	Matrix Check		" "
40229A.D	Surrogate check		" "
40147A.D	LAB Fort		" "
40206A.D	Solvent Blank		" "
40148A.D	Method Blank		" "
40149A.D	Shipping Blanks		" "
40146A.D	TD-09		" "
40145.A.D	T-09		" "
Repeat Injection of BNR Sample 39821			"
39821B.D	Room		" "

Louis LRounds 11/25/86

12/10/86 Data transcribed to report sheets.
Napthalene-d_8 surrogate recovery O.G. 12/10/86
based on GC-MS of surrogate solution
(File 40229AD), which exhibits a recovery
of ~~4.5~~ 45.5%.

CL016/11-84

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

PAGE: ____

QUALITY ASSURANCE FORM -

21

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY Louie L. Pounds (LLP)

12/16/86 Run the following samples over to check the recoveries for Naphthalene-d8. Used the same MID run as on 10/25/86 - SLP #8

Masses scan 128 - 136 1 sec per scan

ORDER: DFTPP check out okay - DFTPP35 file name

MID 40 STD - 40ppt Daily check Std - MS860249 + 25ml IS MS860256

MID 40229 ~~40ppt~~ Surrogate Mix : MS860352 (samples were spiked with Standard)

MID 40147 MS-09 lab Fort

MID 40146 TD-09

* MID 40145 T-09

MID 40148 MB860879 method Blank

* MID 40149 Shipping Blank

*Retention problem - repeat injection 12/18/86 (LLP) (LLP)

12/18/86 Repeat the two samples

MID 40145 T-09

MID 40149 Shipping Blank

Compare the recoveries of all the samples using Standard = ERT# 40229 Surrogate Mix

Naphthalene-d8 recoveries ranged 42 - 73 % conc

52 - 92 % Recovery

(LLP)

L016/11-84

ERT
ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.

PAGE: _____

QUALITY ASSURANCE FORM -

22

SUBJECT: DAILY LOG DATE AND SIGN EACH ENTRY

2 27

To

is the

an 11 A

CAL CURVE :						Cal Curve		
STD. CONC. :	20ng/ml	40ng/ml	100ng/ml	160ng/ml	200ng/ml	11/18/86		
GC/MS File # :	STD46	STD45	STD44	STD43	STD42	cc861118		

Internal Std.	Area	Area	Area	Area	Area	AVG	SD	% RSD
Acenaphthene-d10	803643	795752	747233	755921	568928	734295	85519	11.646
Phenanthrene-d10	1281848	1334632	1321820	1061742	922719	1184552	163995	13.844
Benz(a)pyrene-d12	713011	903372	909016	761073	722236	801742	86816	10.828

Group I	RF	RF	RF	RF	RF	AVG	SD	% RSD
benzofuran	1.324	1.226	1.272	1.115	1.577	1.303	0.153	11.764
dihydroinden	0.833	0.737	0.778	0.674	0.895	0.783	0.076	9.750
indene	1.312	1.257	1.297	1.139	1.546	1.310	0.133	10.129
Naphthalene-d8 (Surr.)	2.404	2.091	1.931	1.641	2.025	2.018	0.247	12.216
Naphthalene	3.460	2.817	2.669	2.123	2.690	2.752	0.427	15.521
Benz(b)thio	2.011	1.927	1.603	1.430	1.723	1.739	0.212	12.170
Quinoline	1.002	0.937	1.061	0.871	1.076	0.989	0.077	7.744
Indole	1.417	1.398	1.458	1.530	1.623	1.485	0.082	5.550
2-methyl	1.073	1.161	1.123	0.742	0.998	1.019	0.149	14.596
1-methyl	1.469	1.514	1.532	1.237	1.543	1.459	0.114	7.813
Biphenyl	6.628	3.891	2.439	1.920	2.095	3.395	1.760	51.830
Acenaphthylene	1.597	1.456	1.623	1.570	1.453	1.540	0.072	4.653
Acenaphthene	1.333	1.290	1.309	1.105	1.304	1.268	0.083	6.531
Dibenzofuran	1.914	1.616	1.610	1.343	1.612	1.619	0.181	11.152
Group II								
rene-d10 (Surr.)	0.814	0.749	0.760	0.758	0.770	0.770	0.023	2.974
orene	1.081	1.021	1.005	1.025	1.038	1.034	0.026	2.509
Dibenzothiophene	1.312	1.272	1.111	1.095	1.077	1.173	0.098	8.388
Phenanthrene	3.021	2.588	1.803	1.791	1.568	2.154	0.555	25.753
Anthracene	1.270	1.258	1.200	1.178	1.200	1.221	0.036	2.954
Acridine	0.897	0.826	0.761	0.713	0.681	0.776	0.078	10.046
Carbazole	1.005	1.010	1.007	1.046	1.060	1.026	0.023	2.238
Fluoranthene	1.496	1.476	1.422	1.440	1.405	1.448	0.034	2.333
Pyrene-d10 (Surr.)	0.892	0.898	0.936	0.936	0.939	0.920	0.021	2.258
Pyrene	1.505	1.555	1.510	1.513	1.540	1.525	0.020	1.283
Group III								
Benz(a)anthracene	1.709	1.455	1.465	1.487	1.348	1.493	0.118	7.910
Chrysene-d12 (Surr.)	0.559	0.446	0.432	0.434	0.386	0.451	0.057	12.721
Chrysene	1.758	1.457	1.509	1.485	1.356	1.513	0.133	8.799
Benzofluoranthenes	3.967	2.438	2.057	1.776	1.704	2.388	0.830	34.758
Benz(e)pyrene	2.750	2.067	1.576	1.452	1.362	1.841	0.516	27.999
Benz(a)pyrene	1.976	1.529	1.340	1.224	1.188	1.451	0.288	19.849
Perylene-d12 (Surr.)	1.214	1.254	(5.686)	0.950	0.879	1.997 (1.074)	1.850	92.678 (15.128)
Perylene	1.505	1.450	1.348	1.131	1.147	1.316	0.153	11.640
Indeno(123,cd)pyrene	1.397	1.264	1.243	1.431	1.226	1.312	0.085	6.457
Dibenz(ah)anthracene	0.883	0.905	0.859	1.004	0.862	0.903	0.054	5.937
Dibenzo(ghi)perylene	1.444	1.309	1.252	1.424	1.254	1.336	0.082	6.145

CAL CURVE :						Cal Curve		
STD. CONC. :	20ng/ml	40ng/ml	100ng/ml	160ng/ml	200ng/ml	11/18/86		
GC/MS File # :	STD46	STD45	STD44	STD43	STD42	cc861118		
Internal Std.	Area	Area	Area	Area	Area	AVG	SD	% RSD
Acenaphthene-d10	803643	795752	747233	755921	568928	734295	85519	11.646
Phenanthrene-d10	1281848	1334632	1321820	1061742	922719	1184552	163995	13.844
Benz(a)pyrene-d12	713011	903372	909016	761073	722236	801742	86816	10.828
Group I	RF	RF	RF	RF	RF	AVG	SD	% RSD
benzofuran	1.324	1.226	1.272	1.115	1.577	1.303	0.153	11.764
dihydroinden	0.833	0.737	0.778	0.674	0.895	0.783	0.076	9.750
indene	1.312	1.257	1.297	1.139	1.546	1.310	0.133	10.129
Naphthalene-d8 (Surr.)	2.404	2.091	1.931	1.641	2.025	2.018	0.247	12.216
Naphthalene	3.460	2.817	2.669	2.123	2.690	2.752	0.427	15.521
Benz(b)thio	2.011	1.927	1.603	1.430	1.723	1.739	0.212	12.170
Quinoline	1.002	0.937	1.061	0.871	1.076	0.989	0.077	7.744
Indole	1.417	1.398	1.458	1.530	1.623	1.485	0.082	5.550
2-methyl	1.073	1.161	1.123	0.742	0.998	1.019	0.149	14.596
1-methyl	1.469	1.514	1.532	1.237	1.543	1.459	0.114	7.813
Biphenyl	6.628	3.891	2.439	1.920	2.095	3.395	1.760	51.830
Acenaphthylene	1.597	1.456	1.623	1.570	1.453	1.540	0.072	4.653
Acenaphthene	1.333	1.290	1.309	1.105	1.304	1.268	0.083	6.531
Dibenzofuran	1.914	1.616	1.610	1.343	1.612	1.619	0.181	11.152
Group II								
ırene-d10 (Surr.)	0.814	0.749	0.760	0.758	0.770	0.770	0.023	2.974
.orene	1.081	1.021	1.005	1.025	1.038	1.034	0.026	2.509
Dibenzothiophene	1.312	1.272	1.111	1.095	1.077	1.173	0.098	8.388
Phenanthrene	3.021	2.588	1.803	1.791	1.568	2.154	0.555	25.753
Anthracene	1.270	1.258	1.200	1.178	1.200	1.221	0.036	2.954
Acridine	0.897	0.826	0.761	0.713	0.681	0.776	0.078	10.046
Carbazole	1.005	1.010	1.007	1.046	1.060	1.026	0.023	2.238
Fluoranthene	1.496	1.476	1.422	1.440	1.405	1.448	0.034	2.333
Pyrene-d10 (Surr.)	0.892	0.898	0.936	0.936	0.939	0.920	0.021	2.258
Pyrene	1.505	1.555	1.510	1.513	1.540	1.525	0.020	1.283
Group III								
Benz(a)anthracene	1.709	1.455	1.465	1.487	1.348	1.493	0.118	7.910
Chrysene-d12 (Surr.)	0.559	0.446	0.432	0.434	0.386	0.451	0.057	12.721
Chrysene	1.758	1.457	1.509	1.485	1.356	1.513	0.133	8.799
Benzofluoranthenes	3.967	2.438	2.057	1.776	1.704	2.388	0.830	34.758
Benz(e)pyrene	2.750	2.067	1.576	1.452	1.362	1.841	0.516	27.999
Benz(a)pyrene	1.976	1.529	1.340	1.224	1.188	1.451	0.288	19.849
Perylene-d12 (Surr.)	1.214	1.254		0.950	0.879	1.074	0.163	15.128
Perylene	1.505	1.450	1.348	1.131	1.147	1.316	0.153	11.640
Indeno(123,cd)pyrene	1.397	1.264	1.243	1.431	1.226	1.312	0.085	6.457
Dibenz(ah)anthracene	0.883	0.905	0.859	1.004	0.862	0.903	0.054	5.937
Dibenzo(ghi)perylene	1.444	1.309	1.252	1.424	1.254	1.336	0.082	6.145

CAL CURVE	:						Cal Curve		
STD. CONC.	:	20ng/ml	40ng/ml	100ng/ml	160ng/ml	200ng/ml	11/18/86		
GC/MS File #	:	STD46	STD45	STD44	STD43	STD42	cc861118		
Internal Std.		RT	RT	RT	RT	RT	AVG	SD	% RSD
Acenaphthene-d10		17.155	17.158	17.154	17.154	17.154	17.155	0.002	0.009
Phenanthrene-d10		20.932	20.929	20.934	20.934	20.926	20.931	0.003	0.015
Benz(a)pyrene-d12		31.164	31.162	31.161	31.163	31.162	31.162	0.001	0.003
Group I		RT	RT	RT	RT	RT	AVG	SD	% RSD
benzofuran		9.416	9.413	9.408	9.415	9.423	9.415	0.005	0.052
dihydroinden		10.105	10.101	10.103	10.103	10.112	10.105	0.004	0.038
indene		10.267	10.266	10.265	10.264	10.275	10.267	0.004	0.038
Naphthalene-d8 (Surr.)		12.678	12.671	12.671	12.674	12.669	12.673	0.003	0.025
Naphthalene		12.711	12.711	12.710	12.701	12.714	12.709	0.004	0.035
Benz(b)thio		12.872	12.868	12.862	12.864	12.872	12.868	0.004	0.032
Quinoline		13.587	13.585	13.580	13.583	13.588	13.585	0.003	0.021
Indole		14.433	14.442	14.432	14.433	14.439	14.436	0.004	0.028
2-methyl		14.453	14.458	14.451	14.451	14.456	14.454	0.003	0.019
1-methyl		14.729	14.731	14.725	14.725	14.728	14.728	0.002	0.016
Biphenyl		15.693	15.691	15.692	15.690	15.693	15.692	0.001	0.007
Acenaphthylene		16.730	16.782	16.756	16.748	16.730	16.749	0.019	0.115
Acenaphthene		17.240	17.230	17.230	17.232	17.232	17.233	0.004	0.022
Dibenzofuran		17.653	17.652	17.646	17.655	17.654	17.652	0.003	0.018
Group II									
urene-d10 (Surr.)		18.466	18.460	18.462	18.466	18.464	18.464	0.002	0.013
rene		18.531	18.535	18.527	18.531	18.528	18.530	0.003	0.015
ibenzothiophene		20.664	20.668	20.662	20.663	20.668	20.665	0.003	0.012
Phenanthrene		20.983	20.985	20.979	20.978	20.983	20.982	0.003	0.013
Anthracene		21.091	21.093	21.098	21.096	21.090	21.094	0.003	0.014
Acridine		21.221	21.221	21.220	21.220	21.223	21.221	0.001	0.005
Carbazole		21.571	21.570	21.571	21.569	21.572	21.571	0.001	0.005
Fluoranthene		24.053	24.060	24.055	24.057	24.056	24.056	0.002	0.010
Pyrene-d10 (Surr.)		24.594	24.588	24.586	24.589	24.588	24.589	0.003	0.011
Pyrene		24.633	24.628	24.625	24.627	24.627	24.628	0.003	0.011
Group III									
Benz(a)anthracene		27.716	27.709	27.711	27.712	27.715	27.713	0.003	0.009
Chrysene-d12 (Surr.)		27.765	27.768	27.768	27.765	27.761	27.765	0.003	0.009
Chrysene		27.822	27.822	27.815	27.823	27.818	27.820	0.003	0.011
Benzofluoranthenes		30.402	30.366	30.367	30.370	30.371	30.375	0.014	0.045
Benz(e)pyrene		31.086	31.085	31.083	31.086	31.087	31.085	0.001	0.004
Benz(a)pyrene		31.223	31.219	31.218	31.222	31.215	31.219	0.003	0.009
Perylene-d12 (Surr.)		31.387	31.385	31.383	31.384	31.387	31.385	0.002	0.005
Perylene		31.453	31.447	31.444	31.446	31.447	31.447	0.003	0.010
Indeno(123,cd)pyrene		34.762	34.752	34.750	34.752	34.753	34.754	0.004	0.012
Dibenz(ah)anthracene		34.821	34.810	34.807	34.810	34.810	34.812	0.005	0.014
Dibenzo(ghi)perylene		35.744	35.737	35.730	35.737	35.735	35.737	0.004	0.013

CAL CURVE	:						Cal Curve
STD. CONC.	:	20ng/ml	40ng/ml	100ng/ml	160ng/ml	200ng/ml	11/18/86
GC/MS File #	:	STD46	STD45	STD44	STD43	STD42	cc861118

Internal Std.

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

Group I	RRT	RRT	RRT	RRT	RRT	AVG	SD	% RSD
benzofuran	0.549	0.549	0.548	0.549	0.549	0.549	0.000	0.054
dihydroinden	0.589	0.589	0.589	0.589	0.589	0.589	0.000	0.043
indene	0.598	0.598	0.598	0.598	0.599	0.599	0.000	0.041
Naphthalene-d8 (Surr.)	0.739	0.738	0.739	0.739	0.739	0.739	0.000	0.027
Naphthalene	0.741	0.741	0.741	0.740	0.741	0.741	0.000	0.034
Benz(b)thio	0.750	0.750	0.750	0.750	0.750	0.750	0.000	0.031
Quinoline	0.792	0.792	0.792	0.792	0.792	0.792	0.000	0.021
Indole	0.841	0.842	0.841	0.841	0.842	0.841	0.000	0.022
2-methyl	0.842	0.843	0.842	0.842	0.843	0.843	0.000	0.014
1-methyl	0.859	0.859	0.858	0.858	0.859	0.859	0.000	0.010
Biphenyl	0.915	0.915	0.915	0.915	0.915	0.915	0.000	0.013
Acenaphthylene	0.975	0.978	0.977	0.976	0.975	0.976	0.001	0.109
Acenaphthene	1.005	1.004	1.004	1.005	1.005	1.005	0.000	0.024
Dibenzofuran	1.029	1.029	1.029	1.029	1.029	1.029	0.000	0.020
Group II								
urene-d10 (Surr.)	0.882	0.882	0.882	0.882	0.882	0.882	0.000	0.017
orene	0.885	0.886	0.885	0.885	0.885	0.885	0.000	0.022
Dibenzothiophene	0.987	0.988	0.987	0.987	0.988	0.987	0.000	0.027
Phenanthrene	1.002	1.003	1.002	1.002	1.003	1.002	0.000	0.026
Anthracene	1.008	1.008	1.008	1.008	1.008	1.008	0.000	0.009
Acridine	1.014	1.014	1.014	1.014	1.014	1.014	0.000	0.020
Carbazole	1.031	1.031	1.030	1.030	1.031	1.031	0.000	0.018
Fluoranthene	1.149	1.150	1.149	1.149	1.150	1.149	0.000	0.020
Pyrene-d10 (Surr.)	1.175	1.175	1.174	1.175	1.175	1.175	0.000	0.018
Pyrene	1.177	1.177	1.176	1.176	1.177	1.177	0.000	0.019
Group III								
Benz(a)anthracene	0.889	0.889	0.889	0.889	0.889	0.889	0.000	0.008
Chrysene-d12 (Surr.)	0.891	0.891	0.891	0.891	0.891	0.891	0.000	0.011
Chrysene	0.893	0.893	0.893	0.893	0.893	0.893	0.000	0.009
Benzofluoranthenes	0.976	0.974	0.975	0.975	0.975	0.975	0.000	0.042
Benz(e)pyrene	0.997	0.998	0.997	0.998	0.998	0.998	0.000	0.004
Benz(a)pyrene	1.002	1.002	1.002	1.002	1.002	1.002	0.000	0.007
Perylene-d12 (Surr.)	1.007	1.007	1.007	1.007	1.007	1.007	0.000	0.004
Perylene	1.009	1.009	1.009	1.009	1.009	1.009	0.000	0.007
Indeno(123,cd)pyrene	1.115	1.115	1.115	1.115	1.115	1.115	0.000	0.009
Dibenz(ah)anthracene	1.117	1.117	1.117	1.117	1.117	1.117	0.000	0.011
Dibenzo(ghi)perylene	1.147	1.147	1.147	1.147	1.147	1.147	0.000	0.010

CAL CURVE :								Cal Curve	
STD. CONC. :	20 ng/ml	40 ng/ml	100 ng/ml	160ng/ml	200ng/ml	40 ng/ml		08/05/86	
GC/MS File # :	STD02	STD01	STD04	STD05	STD03	STD06		cc080586	

Internal Std.	Area	Area	Area	Area	Area	Area	AVG	SD	% RSD
Acenaphthene-d10	534245	506420	529964	521454	614701	575822	547101	36892	6.743
Phenanthrene-d10	1635788	1424011	1440108	1471483	1600781	1590584	1527126	84222	5.515
Benz(a)pyrene-d12	944023	1025374	829436	1121300	939414	885377	957487	94471	9.867
Group I	RF	RF	RF	RF	RF	RF	AVG	SD	% RSD
benzofuran	1.708	1.702	1.708	1.481	1.426	1.566	1.598	0.115	7.184
dihydroinden	1.073	0.966	0.965	0.832	0.815	0.894	0.924	0.088	9.574
indene	1.235	1.207	1.186	1.043	1.387	1.133	1.198	0.104	8.716
Naphthalene-d8 (Surr.)	2.552	2.507	2.677	2.269	2.221	2.423	2.442	0.158	6.491
Naphthalene	5.016	3.572	3.218	2.994	2.498	3.789	3.515	0.788	22.418
Benz(b)thio	2.154	1.946	2.234	1.939	1.861	2.029	2.027	0.129	6.387
Quinoline	1.144	0.877	1.047	1.012	0.856	0.922	0.976	0.101	10.383
Indole	1.300	1.092	1.218	1.045	1.024	1.130	1.135	0.097	8.539
2-methyl	2.282	1.767	1.862	1.619	1.551	1.912	1.832	0.238	12.970
1-methyl	2.406	1.757	1.839	1.655	1.489	1.803	1.825	0.284	15.582
Biphenyl		16.566	15.500	5.224	7.955	20.293	18.290	5.622	42.888
Acenaphthylene	1.568	1.802	1.561	1.483	1.435	1.620	1.578	0.117	7.402
Acenaphthene	1.502	1.381	1.475	1.373	1.262	1.511	1.417	0.088	6.225
Dibenzofuran	2.589	2.364	2.400	2.360	2.186	2.370	2.378	0.117	4.926
Group II									
Flourene-d10 (Surr.)	0.610	0.556	0.507	0.470	0.473	0.485	0.517	0.051	9.832
[illegible]rene	0.969	0.749	0.743	0.688	0.710	0.723	0.764	0.094	12.296
Dibenzothiophene	1.232	1.233	0.956	0.932	0.930	1.246	1.088	0.149	13.710
Phenanthrene		2.022	1.325	1.292	1.525	1.817	1.596	0.283	17.736
Anthracene	1.309	0.885	0.809	0.842	0.820	0.912	0.929	0.173	18.667
Acridine	0.596	0.406	0.433	0.488	0.426	0.400	0.458	0.068	14.837
Carbazole	0.782	0.701	0.707	0.779	0.692	0.694	0.726	0.039	5.367
Fluoranthene	1.413	1.111	1.060	1.318	1.073	1.105	1.180	0.135	11.465
Pyrene-d10 (Surr.)	0.774	0.798	0.766	0.962	0.745	0.763	0.801	0.074	9.183
Pyrene	1.436	1.142	1.125	1.679	1.134	1.124	1.273	0.213	16.725
Group III									
Benz(a)anthracene	1.223	1.498	1.188	1.325	1.134	1.208	1.263	0.120	9.471
Chrysene-d12 (Surr.)	0.500	0.531	0.454	0.469	0.432	0.450	0.473	0.033	7.030
Chrysene	1.407	1.651	1.455	1.490	1.466	1.441	1.485	0.079	5.290
Benzofluoranthenes	1.891	1.752	1.627	1.584	1.481	1.595	1.655	0.132	7.985
Benz(e)pyrene	2.011	1.806	1.807	1.637	1.688	1.830	1.796	0.119	6.598
Benz(a)pyrene	1.328	1.173	1.216	1.131	1.104	1.245	1.200	0.075	6.215
Perylene-d12 (Surr.)	0.788	0.679	0.728	0.727	0.681	0.658	0.710	0.043	6.093
Perylene	1.437	1.102	1.216	1.407	1.159	1.211	1.255	0.124	9.899
Indeno(123,cd)pyrene	1.410	2.074	1.498	1.018	1.633	1.241	1.479	0.330	22.285
Dibenz(ah)anthracene	0.994		1.086	0.742	1.150	0.857	0.966	0.149	15.408
Dibenzo(ghi)perylene	1.728	1.568	1.534	1.039	1.481	1.334	1.447	0.217	14.971

CAL CURVE :							Cal Curve		
STD. CONC. :	20 ng/ml	40 ng/ml	100 ng/ml	160ng/ml	200ng/ml	40 ng/ml	08/05/86		
GC/MS File # :	STD02	STD01	STD04	STD05	STD03	STD06	cc080586		

Internal Std.	RT	RT	RT	RT	RT	RT	AVG	SD	% RSD
Acenaphthene-d10	18.026	18.024	18.029	18.030	18.028	18.034	18.029	0.003	0.017
Phenanthrene-d10	21.580	21.847	21.852	21.855	21.850	21.859	21.807	0.102	0.466
Benz(a)pyrene-d12	32.532	32.524	32.531	32.531	32.533	32.540	32.532	0.005	0.014
Group I	RT	RT	RT	RT	RT	RT	AVG	SD	% RSD
benzofuran	10.156	10.160	10.166	10.160	10.162	10.171	10.163	0.005	0.047
dihydroinden	10.885	10.886	10.897	10.894	10.890	10.900	10.892	0.006	0.051
indene	11.039	11.040	11.053	11.043	11.042	11.056	11.046	0.007	0.059
Naphthalene-d8 (Surr.)	13.476	13.476	13.481	13.481	13.480	13.486	13.480	0.003	0.025
Naphthalene	13.516	13.516	13.521	13.521	13.520	13.527	13.520	0.004	0.027
Benz(b)thio	13.671	13.671	13.675	13.676	13.674	13.680	13.675	0.003	0.023
Quinoline	14.380	14.379	14.383	14.384	14.382	14.390	14.383	0.004	0.025
Indole	15.156	15.157	15.167	15.167	15.165	15.172	15.164	0.006	0.038
2-methyl	15.285	15.284	15.287	15.289	15.286	15.292	15.287	0.003	0.017
1-methyl	15.559	15.557	15.572	15.573	15.571	15.578	15.568	0.008	0.049
Biphenyl	16.523	16.521	16.525	16.527	16.524	16.530	16.525	0.003	0.017
Acenaphthylene	17.618	17.616	17.621	17.619	17.619	17.626	17.620	0.003	0.018
Acenaphthene	18.107	18.105	18.108	18.111	18.108	18.114	18.109	0.003	0.016
Dibenzofuran	18.521	18.520	18.523	18.524	18.522	18.528	18.523	0.003	0.014
Group II									
Flourene-d10 (Surr.)	19.343	19.341	19.346	19.348	19.345	19.351	19.346	0.003	0.017
ne	19.419	19.416	19.421	19.425	19.420	19.428	19.422	0.004	0.020
zothiophene	21.581	21.578	21.585	21.582	21.587	21.586	21.583	0.003	0.015
Phenanthrene	21.857	21.893	21.900	21.900	21.899	21.904	21.892	0.016	0.073
Anthracene	22.015	22.014	22.019	22.019	22.018	22.023	22.018	0.003	0.013
Acridine	22.135	22.126	22.134	22.135	22.134	22.138	22.134	0.004	0.017
Carbazole	22.441	22.439	22.442	22.444	22.442	22.448	22.443	0.003	0.013
Fluoranthene	25.018	25.013	25.021	25.017	25.021	25.021	25.019	0.003	0.012
Pyrene-d10 (Surr.)	25.559	25.557	25.560	25.562	25.560	25.566	25.561	0.003	0.011
Pyrene	25.598	25.596	25.600	25.601	25.600	25.606	25.600	0.003	0.012
Group III									
Benz(a)anthracene	28.711	28.708	28.712	28.715	28.712	28.722	28.713	0.004	0.015
Chrysene-d12 (Surr.)	28.765	28.761	28.763	28.759	28.765	28.764	28.763	0.002	0.008
Chrysene	28.821	28.818	28.822	28.817	28.284	28.823	28.731	0.200	0.696
Benzofluoranthenes	31.601	31.626	31.730	31.629	31.632	31.639	31.643	0.041	0.129
Benz(e)pyrene	32.444	32.439	32.445	32.448	32.446	32.456	32.446	0.005	0.016
Benz(a)pyrene	32.603	32.599	32.604	32.606	32.607	32.613	32.605	0.004	0.013
Perylene-d12 (Surr.)	32.796	32.790	32.797	32.800	32.797	32.808	32.798	0.005	0.016
Perylene	32.873	32.865	32.873	32.865	32.875	32.884	32.873	0.006	0.020
Indeno(123,cd)pyrene	34.566	36.949	36.954	36.958	36.961	36.967	36.559	0.891	2.438
Dibenz(ah)anthracene	34.629	37.009	37.028	37.028	37.028	37.038	36.627	0.893	2.439
Dibenzo(ghi)perylene	35.524	38.169	38.180	38.186	38.185	38.186	37.738	0.990	2.624

CAL CURVE	:							Cal Curve
STD. CONC.	:	20 ng/ml	40 ng/ml	100 ng/ml	160ng/ml	200ng/ml	40 ng/ml	08/05/86
GC/MS File #	:	STD02	STD01	STD04	STD05	STD03	STD06	cc080586

Internal Std.

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

Group I	RRT	RRT	RRT	RRT	RRT	RRT	AVG	SD	% RSD
benzofuran	0.563	0.564	0.564	0.564	0.564	0.564	0.564	0.000	0.035
dihydroinden	0.604	0.604	0.604	0.604	0.604	0.604	0.604	0.000	0.035
indene	0.612	0.613	0.613	0.612	0.612	0.613	0.613	0.000	0.046
Naphthalene-d8 (Surr.)	0.748	0.748	0.748	0.748	0.748	0.748	0.748	0.000	0.009
Naphthalene	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.000	0.011
Benz(b)thio	0.758	0.758	0.759	0.759	0.758	0.759	0.758	0.000	0.006
Quinoline	0.798	0.798	0.798	0.798	0.798	0.798	0.798	0.000	0.008
Indole	0.841	0.841	0.841	0.841	0.841	0.841	0.841	0.000	0.022
2-methyl	0.848	0.848	0.848	0.848	0.848	0.848	0.848	0.000	0.003
1-methyl	0.863	0.863	0.864	0.864	0.864	0.864	0.864	0.000	0.033
Biphenyl	0.917	0.917	0.917	0.917	0.917	0.917	0.917	0.000	0.002
Acenaphthylene	0.977	0.977	0.977	0.977	0.977	0.977	0.977	0.000	0.006
Acenaphthene	1.004	1.004	1.004	1.004	1.004	1.004	1.004	0.000	0.004
Dibenzofuran	1.027	1.028	1.027	1.027	1.027	1.027	1.027	0.000	0.005
Group II									
Fluorene-d10 (Surr.)	0.896	0.885	0.885	0.885	0.885	0.885	0.887	0.004	0.464
Fluorene	0.900	0.889	0.889	0.889	0.889	0.889	0.891	0.004	0.464
Dibenzothiophene	1.000	0.988	0.988	0.988	0.988	0.988	0.990	0.005	0.466
Phenanthrene	1.013	1.002	1.002	1.002	1.002	1.002	1.004	0.004	0.397
Anthracene	1.020	1.008	1.008	1.008	1.008	1.008	1.010	0.005	0.464
Acridine	1.026	1.013	1.013	1.013	1.013	1.013	1.015	0.005	0.473
Carbazole	1.040	1.027	1.027	1.027	1.027	1.027	1.029	0.005	0.466
Fluoranthene	1.159	1.145	1.145	1.145	1.145	1.145	1.147	0.005	0.469
Pyrene-d10 (Surr.)	1.184	1.170	1.170	1.170	1.170	1.170	1.172	0.005	0.467
Pyrene	1.186	1.172	1.172	1.171	1.172	1.171	1.174	0.005	0.466
Group III									
Benz(a)anthracene	0.883	0.883	0.883	0.883	0.883	0.883	0.883	0.000	0.007
Chrysene-d12 (Surr.)	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.000	0.013
Chrysene	0.886	0.886	0.886	0.886	0.869	0.886	0.883	0.006	0.697
Benzofluoranthenes	0.971	0.972	0.975	0.972	0.972	0.972	0.973	0.001	0.129
Benz(e)pyrene	0.997	0.997	0.997	0.997	0.997	0.997	0.997	0.000	0.005
Benz(a)pyrene	1.002	1.002	1.002	1.002	1.002	1.002	1.002	0.000	0.004
Perylene-d12 (Surr.)	1.008	1.008	1.008	1.008	1.008	1.008	1.008	0.000	0.006
Perylene	1.010	1.010	1.011	1.010	1.011	1.011	1.010	0.000	0.010
Indeno(123,cd)pyrene	1.063	1.136	1.136	1.136	1.136	1.136	1.124	0.027	2.438
Dibenz(ah)anthracene	1.064	1.138	1.138	1.138	1.138	1.138	1.126	0.027	2.439
Dibenzo(ghi)perylene	1.092	1.174	1.174	1.174	1.174	1.174	1.160	0.030	2.624

Cont. Calib. Check

STD # : MS860249 w/ IS MS860256 Extract Vol., ml 1.000
STD CONC. : DAILY STD 40 ppt PAH Sample Vol., L 1.000
GC/MS File # : STD51 Date Analyze : 11/25/86

30

Internal Std.	Conc. ng/ml	RT (min)	Area	AVG. Area	Delta %
Acenaphthene-d10	53.0	17.127	1207221	734295	64.4%
Phenanthrene-d10	62.5	20.897	1677718	1184552	41.6%
Benz(a)pyrene-d12	49.6	31.115	818603	801742	2.1%

Group I	Conc. ng/ml	AVG. RRT	RRT Delta %	RT (min)	Area	RF	NEW Cal. RF's	Delta %
benzofuran	40.0	0.549	-0.05%	9.395	1338385	1.469	1.303	12.8%
dihydroinden	40.0	0.589	-0.04%	10.084	831976	0.913	0.783	16.6%
indene	40.0	0.599	-0.04%	10.247	1306239	1.434	1.310	9.4%
Naphthalene-d8 (Surr.)	40.0	0.739	-0.03%	12.648	1658104	1.820	2.018	-9.8%
Naphthalene	40.0	0.741	-0.05%	12.682	3235255	3.551	2.752	29.0%
Benz(b)thio	40.0	0.750	-0.10%	12.834	1618251	1.776	1.739	2.1%
Quinoline	40.0	0.792	-0.05%	13.555	1222473	1.342	0.989	35.6% *
Indole	40.0	0.841	-0.10%	14.398	1336256	1.467	1.485	-1.3%
2-methyl	40.0	0.843	-0.08%	14.419	1322480	1.452	1.019	42.4% *
1-methyl	40.0	0.859	-0.02%	14.700	1521530	1.670	1.459	14.5%
Biphenyl	40.0	0.915	-0.03%	15.661	2672347	2.933	3.395	-13.6%
Acenaphthylene	40.0	0.976	0.05%	16.730	1455192	1.597	1.540	3.7%
Acenaphthene	40.0	1.005	-0.03%	17.200	1218769	1.338	1.268	5.5%
Dibenzofuran	40.0	1.029	-0.02%	17.620	1688463	1.853	1.619	14.5%
Group II								
rene-d10 (Surr.)	40.0	0.882	-0.01%	18.432	929631	0.866	0.770	12.4%
rene	40.0	0.885	-0.02%	18.497	1273985	1.186	1.034	14.7%
Dibenzothiophene	40.0	0.987	0.02%	20.635	1198664	1.116	1.173	-4.9%
Phenanthrene	40.0	1.002	-0.02%	20.944	1757786	1.637	2.154	-24.0%
Anthracene	40.0	1.008	0.02%	21.063	1344146	1.252	1.221	2.5%
Acridine	40.0	1.014	-0.00%	21.186	716591	0.667	0.776	-14.0%
Carbazole	40.0	1.031	0.05%	21.546	1059626	0.987	1.026	-3.8%
Fluoranthene	40.0	1.149	0.02%	24.023	1268602	1.181	1.448	-18.4%
Pyrene-d10 (Surr.)	40.0	1.175	0.00%	24.550	813209	0.757	0.920	-17.7%
Pyrene	40.0	1.177	0.01%	24.590	1350589	1.258	1.525	-17.5%
Group III								
Benz(a)anthracene	40.0	0.889	0.03%	27.678	838970	1.271	1.493	-14.9%
Chrysene-d12 (Surr.)	40.0	0.891	0.01%	27.726	272804	0.413	0.451	-8.5%
Chrysene	40.0	0.893	0.02%	27.783	917174	1.389	1.513	-8.2%
Benzofluoranthenes	80.0	0.975	-0.01%	30.327	1834622	1.390	2.388	-41.8% *
Benz(e)pyrene	40.0	0.998	-0.00%	31.038	824836	1.249	1.841	-32.1%
Benz(a)pyrene	40.0	1.002	0.00%	31.172	784675	1.189	1.451	-18.1%
Perylene-d12 (Surr.)	40.0	1.007	0.00%	31.338	585425	0.887	1.074	-17.4%
Perylene	40.0	1.009	-0.00%	31.399	677032	1.026	1.316	-22.1%
Indeno(123,cd)pyrene	40.0	1.115	-0.05%	34.684	822419	1.246	1.312	-5.1%
Dibenz(ah)anthracene	40.0	1.117	-0.05%	34.741	549977	0.833	0.903	-7.7%
Benzo(ghi)perylene	40.0	1.147	-0.07%	35.658	920431	1.394	1.336	4.3%

CALIBRATION RF's from : 18-Nov-86 USED THE AVERAGE RRT and INT.STD. Areas TO COMPUTE DELTA %

Cont. Calib Check

31

ERT # : 40 Extract Vol., ml 1.000
Field ID : 40 ppt PAH Daily Check Sample Vol., L 1.000
GC/MS File # : STD51.D Date Analyze : 11/~~24~~/86 25 PAP 2/25/87

Internal Std.	Conc. ng/ml	RT (min)	Area
Acenaphthene-d10	53.0	17.127	1207221
Phenanthrene-d10	62.5	20.897	1677718
Benz(a)pyrene-d12	49.6	31.115	818603

Group I	Conc. ng/ml	RT (min)	Area	RF	OLD Cal. RF's	Delta %	RRT	
benzofuran	40.0	9.395	1338385	1.469	1.598	-8.1%	0.549	
dihydroinden	40.0	10.084	831976	0.913	0.924	-1.2%	0.589	
indene	40.0	10.247	1306239	1.434	1.199	19.6%	0.598	
Naphthalene-d8 (Surr.)	40.0	12.648	1658104	1.820	2.442	-25.5%	0.738	
Naphthalene	40.0	12.682	3235255	3.551	3.515	1.0%	0.740	
Benz(b)thio	40.0	12.834	1618251	1.776	2.025	-12.3%	0.749	
Quinoline	40.0	13.555	1222473	1.342	0.976	37.5%	0.791	*
Indole	40.0	14.398	1336256	1.467	1.135	29.2%	0.841	
2-methyl	40.0	14.419	1322480	1.452	1.832	-20.8%	0.842	
1-methyl	40.0	14.700	1521530	1.670	1.825	-8.5%	0.858	
Biphenyl	40.0	15.661	2672347	2.933	18.290	-84.0%	0.914	*
enaphthylene	40.0	16.730	1455192	1.597	1.578	1.2%	0.977	
enaphthene	40.0	17.200	1218769	1.338	1.417	-5.6%	1.004	
Dibenzofuran	40.0	17.620	1688463	1.853	2.378	-22.1%	1.029	

Group II	Conc. ng/ml	RT (min)	Area	RF	Cal. RF's	Delta %	RRT	
Flourene-d10 (Surr.)	40.0	18.432	929631	0.866	0.517	67.5%	0.882	*
Fluorene	40.0	18.497	1273985	1.186	0.764	55.3%	0.885	*
Dibenzothiophene	40.0	20.635	1198664	1.116	1.088	2.6%	0.987	
Phenanthrene	40.0	20.944	1757786	1.637	1.593	2.8%	1.002	
Anthracene	40.0	21.063	1344146	1.252	0.930	34.6%	1.008	*
Acridine	40.0	21.186	716591	0.667	0.458	45.7%	1.014	*
Carbazole	40.0	21.546	1059626	0.987	0.726	35.9%	1.031	*
Fluoranthene	40.0	24.023	1268602	1.181	1.180	0.1%	1.150	
Pyrene-d10 (Surr.)	40.0	24.550	813209	0.757	0.801	-5.4%	1.175	
Pyrene	40.0	24.590	1350589	1.258	1.273	-1.2%	1.177	

Group III	Conc. ng/ml	RT (min)	Area	RF	Cal. RF's	Delta %	RRT
Benz(a)anthracene	40.0	27.678	838970	1.271	1.263	0.6%	0.890
Chyrsene-d12 (Surr.)	40.0	27.726	272804	0.413	0.473	-12.6%	0.891
Chyrsene	40.0	27.783	917174	1.389	1.485	-6.4%	0.893
Benzofluoranthenes	80.0	30.327	1834622	1.390	1.655	-16.0%	0.975
Benz(e)pyrene	40.0	31.038	824836	1.249	1.654	-24.5%	0.998
Benz(a)pyrene	40.0	31.172	784675	1.189	1.181	0.6%	1.002
Perylene-d12 (Surr.)	40.0	31.338	585425	0.887	0.710	24.9%	1.007
Perylene	40.0	31.399	677032	1.026	1.219	-15.9%	1.009
Indeno(123,cd)pyrene	40.0	34.684	822419	1.246	1.479	-15.8%	1.115
Dibenz(ah)anthracene	40.0	34.741	549977	0.833	0.966	-13.8%	1.117
Benzo(ghi)perylene	40.0	35.658	920431	1.394	1.447	:3.6%	1.146

*** Internal Standard ***

Operator: LOUIE PO NDS 25 Nov 86 9:53

Method File Nam : PAH.M

Sample Info : 4 p t PAH DAILY CHECK STD.: TUE. 25 NOV. 86

Misc Info: 1.0 OF STD#249

tegration File ame : DATA:STD51.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	9.395	Mass	118.00	amu	2,3-BENZOFUR	1338385	38.21 ng/mL
2		1PV	10.084	Mass	118.00	amu	2,3-DIHYDROI	831976	43.22 ng/mL
3		1PV	10.247	Mass	116.00	amu	INDENE	1306239	58.60 ng/mL
4		1PV	12.648	Mass	136.00	amu	NAPHTHALENE,	1658104	29.17 ng/mL
5		1BV	12.682	Mass	128.00	amu	NAPTHALENE	3235255	38.54 ng/mL
6		1VV	12.834	Mass	134.00	amu	BENZO(b)THIO	1618251	29.24 ng/mL
7		1VH	13.555	Mass	129.00	amu	QUINOLINE	1222473	51.55 ng/mL
8		1PV	14.398	Mass	117.00	amu	INDOLE	1336256	43.48 ng/mL
9		1PV	14.419	Mass	141.00	amu	2-METHYLNAPT	1322480	32.90 ng/mL
10		1VV	14.700	Mass	141.00	amu	1-METHYLNAPT	1521530	43.16 ng/mL
11		1PV	15.661	Mass	154.00	amu	BIPHENYL	2672347	
12		1VV	16.730	Mass	152.00	amu	ACENAPHTHYLE	1455192	42.41 ng/mL
13	+ISTD	1BV	17.127	Mass	164.00	amu	ACENAPTHTHEN	1207221	53.00 ng/mL
		1PV	17.200	Mass	154.00	amu	ACENAPHTHENE	1218769	36.76 ng/mL
		1PV	17.620	Mass	168.00	amu	DIBENZOFURAN	1688463	27.03 ng/mL
16		2PV	18.432	Mass	176.00	amu	FLUORENE, d1	929631	71.01 ng/mL
17		2BB	18.497	Mass	166.00	amu	FLUORENE	1273985	63.39 ng/mL
18		2PV	20.635	Mass	184.00	amu	DIBENZOTHIOP	1198664	32.04 ng/mL
19	+ISTD	2BV	20.897	Mass	188.00	amu	PHENANTHRENE	1677718	62.50 ng/mL
20		2BV	20.944	Mass	178.00	amu	PHENANTHRENE	1757786	
21		2VV	21.063	Mass	178.00	amu	ANTHRACENE	1344146	48.73 ng/mL
22		2VV	21.186	Mass	179.00	amu	ACRIDINE	716591	50.08 ng/mL
23		1VV	21.546	Mass	167.00	amu	CARBAZOLE	1059626	21.25 ng/mL
24		1BB	24.023	Mass	202.00	amu	FLUORANTHENE	1268602	2.162 ng/mL
25		2BV	24.550	Mass	212.00	amu	PYRENE, d10	813209	35.66 ng/mL
26		2BV	24.590	Mass	202.00	amu	PYRENE	1350589	34.28 ng/mL
27		3BV	27.678	Mass	228.00	amu	BENZ(a)ANTHR	838970	37.89 ng/mL
28		3BB	27.726	Mass	240.00	amu	CHYRSENE, d(	272804	33.57 ng/mL
29		3VB	27.783	Mass	228.00	amu	CHYRSENE	917174	36.77 ng/mL
30		3PV	30.327	Mass	252.00	amu	BENZOFLUORAN	1834622	63.47 ng/mL
31		3	--------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
32		3BV	31.038	Mass	252.00	amu	BENZ(e)PYREN	824836	27.96 ng/mL
33	+ISTD	3PV	31.115	Mass	264.00	amu	BENZ(a)PYREN	818603	49.60 ng/mL
34		3VV	31.172	Mass	252.00	amu	BENZ(a)PYREN	784675	38.18 ng/mL
35		3VV	31.338	Mass	264.00	amu	PERYLENE, d1	585425	44.72 ng/mL
36		3VV	31.399	Mass	252.00	amu	PERYLENE	677032	35.73 ng/mL
37		3BV	34.684	Mass	276.00	amu	INDENO(1,2,3	822419	39.98 ng/mL
38		3BV	34.741	Mass	278.00	amu	DIBENZ(a,h)A	549977	32.21 ng/mL
		3BV	35.658	Mass	276.00	amu	BENZO(g,h,i)	920431	43.90 ng/mL
--------		BV	10.075	Mass	116.00		-Uncalibrated-	160205	160205 ng/mL
--------		PV	11.341	Mass	116.00		-Uncalibrated-	77555	77555 ng/mL
--------		PH	12.095	Mass	129.00		-Uncalibrated-	132288	132288 ng/mL
--------		PH	12.177	Mass	134.00		-Uncalibrated-	22344	22344 ng/mL
--------		VH	12.186	Mass	129.00		-Uncalibrated-	122310	122310 ng/mL
--------		VV	12.642	Mass	[illegible]				

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: T-09 ERT NO.: 40145

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
DIBENZ (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	<3.4
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	<1.3
DIBENZOFURAN	ND
FLUORENE	ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	~~1.3~~ ND
TOTAL PAH'S	~~1.3~~ ND

ND = Concentration < 95% Confidence Interval of MDL

ERT #	: 40145	Extract Vol., ml	0.500
Field ID	: T-09	Sample Vol., L	4.000
GC/MS File #	: 40145A	Date Analyze: 11/25/86	34

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.0	17.127	815158
Phenanthrene-d10	62.5	20.899	1239366
Benz(a)pyrene-d12	49.6	31.114	1152771

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.303	0.000	0.000	1	0.000
dihydroinden	0.783	0.589	10.081	297878	3.091
indene	1.310	0.598	10.246	66921	0.415
Naphthalene-d8 (Surr.)	2.018	0.738	12.641	228208	0.919
Naphthalene	2.752	0.740	12.680	1535035	4.533
Benz(b)thio	1.739	0.750	12.840	65123	0.304
Quinoline	0.989	0.000	0.000	1	0.000
Indole	1.485	0.839	14.368	71575	0.392
2-methyl	1.019	0.842	14.423	231397	1.845
1-methyl	1.459	0.858	14.699	144805	0.807
Biphenyl	3.395	0.915	15.663	1178161	2.821
Acenaphthylene	1.540	0.977	16.731	141842	0.749
Acenaphthene	1.268	1.004	17.195	184647	1.183
Dibenzofuran	1.619	1.029	17.620	125922	0.632
Group II					
Flourene-d10 (Surr.)	0.770	0.882	18.439	1079943	8.839
Fluorene	1.034	0.885	18.502	214526	1.308
Dibenzothiophene	1.173	0.987	20.633	117408	0.631
Phenanthrene	2.154	1.002	20.942	1209322	3.539
Anthracene	1.221	1.008	21.059	154261	0.796
Acridine	0.776	1.017	21.255	162620	1.321
Carbazole	1.026	1.033	21.595	160105	0.984
Fluoranthene	1.448	1.150	24.024	315175	1.372
Pyrene-d10 (Surr.)	0.920	1.181	24.677	334240	2.289
Pyrene	1.525	1.177	24.595	256628	1.061
Group III					
Benz(a)anthracene	1.493	0.893	27.783	72987	0.263
Chrysene-d12 (Surr.)	0.451	0.891	27.725	253811	3.024
Chrysene	1.513	0.000	0.000	1	0.000
Benzofluoranthenes	2.388	0.000	0.000	1	0.000
Benz(e)pyrene	1.841	0.000	0.000	1	0.000
Benz(a)pyrene	1.451	0.000	0.000	1	0.000
Perylene-d12 (Surr.)	1.074	1.007	31.336	455479	2.281
Perylene	1.316	0.000	0.000	1	0.000
Indeno(123,cd)pyrene	1.312	0.000	0.000	1	0.000
Dibenz(ah)anthracene	0.903	0.000	0.000	1	0.000
Benzo(ghi)perylene	1.336	0.000	0.000	1	0.000

CALIBRATION RF's from : 18-Nov-86

ERT #: 40145
T-09 11/25/86

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 11/25/86	CORRECTED %35 Recovery
aphthalene-d8 (Surr.)	0.92	9.90	9.28	42-102	1.820	10.29%
flourene-d10 (Surr.)	8.84	9.50	93.04	60-128	0.866	82.75%
Chrysene-d12 (Surr.)	3.02	9.80	30.85	10-54	0.413	33.73%
Pyrene-d10 (Surr.)	2.29	10.05	22.78		0.757	27.69%
Perylene-d12 (Surr.)	2.28	9.40	24.26		0.887	29.38%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	0.00	ND
BENZO (A) ANTHRACENE	2.80	4.40	0.26	ND
CHRYSENE	2.80	4.40	0.00	ND
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	0.00	ND
TOTAL CARCINOGENIC PAH				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	3.09	< 3.4
INDENE	1.80	2.90	0.42	ND
NAPHTHALENE	30.00	47.00	4.53	ND
BENZO (B) THIOPHENE	1.40	2.20	0.30	ND
INDOLE	1.20	1.90	0.39	ND
2-METHYLNAPHTHALENE	3.20	5.00	1.84	ND
1-METHYLNAPHTHALENE	2.00	3.10	0.81	ND
BIPHENYL	11.00	17.00	2.82	ND
ACENAPHTHYLENE	1.10	1.70	0.75	ND
ACENAPHTHENE	0.83	1.30	1.18	< 1.3
DIBENZOFURAN	0.77	1.20	0.63	ND
FLOURENE	0.56	0.88	1.31 -1.76	~~1.3~~ ND
DIBENZOTHIOPHENE	4.00	6.30	0.63	ND
PHENANTHRENE	2.00	3.10	3.54 -9.8	~~3.5~~ ND
ANTHRACENE	2.20	3.40	0.80	ND
ACRIDINE	1.60	2.50	1.32	ND
CARBAZOLE	1.70	2.60	0.98	ND
FLUORANTHENE	2.80	4.40	1.37	ND
PYRENE	2.60	4.10	1.06	ND
BENZO (E) PYRENE	0.96	1.50	0.00	ND
PERYLENE	1.00	1.60	0.00	ND
TOTAL OTHER PAH				~~4.8~~ ND
TOTAL PAH'S				~~4.8~~ ND

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: T-09 ERT NO.: 40145

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
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	< 3.4
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	< 1.3
DIBENZOFURAN	ND
FLOURENE	1.3
DIBENZOTHIOPHENE	ND
PHENANTHRENE	3.5
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	4.8
TOTAL PAH'S	4.8

ND = Concentration < 95% Confidence Interval of MDL

ERT #: 40145 T-09

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/24/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	0.93	9.90	9.44	42-102	~~1.985~~ 1.82	~~9.44%~~ ~~10.3~~ 22.7
Flourene-d10 (Surr.)	8.85	9.50	93.20	60-128	~~0.769~~ 0.866	~~93.22%~~ 82.8
Chyrsene-d12 (Surr.)	3.05	9.80	31.16	10-54	~~0.447~~ 0.413	~~31.15%~~ 33.7
Pyrene-d10 (Surr.)	2.29	10.05	22.74		0.922	22.75%
Perylene-d12 (Surr.)	2.32	9.40	24.72		1.054	24.72%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	0.00	0.00	0.00	1.90
BENZO (A) ANTHRACENE	2.80	0.26	0.00	0.00	4.40
CHYRSENE	2.80	0.00	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.00	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			0.00		

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	2.62	0.00	2.62	3.40
INDENE	1.80	0.45	0.00	0.00	2.90
NAPHTHALENE	30.00	4.61	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.26	0.00	0.00	2.20
INDOLE	1.20	0.51	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	1.03	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	0.64	0.00	0.00	3.10
BIPHENYL	11.00	0.52	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	0.73	0.00	0.00	1.70
ACENAPHTHENE	0.83	1.25	0.00	1.25	1.30
DIBENZOFURAN	0.77	0.43	0.00	0.00	1.20
FLOURENE	0.56	1.31	1.31	1.31	0.88
DIBENZOTHIOPHENE	4.00	0.68	0.00	0.00	6.30
PHENANTHRENE	2.00	3.57	3.57	3.57	3.10
ANTHRACENE	2.20	0.81	0.00	0.00	3.40
ACRIDINE	1.60	2.24	0.00	2.24	2.50
CARBAZOLE	1.70	1.39	0.00	0.00	2.60
FLUORANTHENE	2.80	1.37	0.00	0.00	4.40
PYRENE	2.60	1.06	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.00	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	4.89		
		TOTAL PAH'S	4.89		

ERT #	: 40145		Extract Vol., ml	0.500
Field ID	: ~~MATRIX CHECK~~ T-09		Sample Vol., L	4.000
GC/MS File #	: 40145A		Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.127	815158
Phenanthrene-d10	62.500	20.899	1239366
Benz(a)pyrene-d12	49.600	31.114	1152771

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.081	297878	2.620	0.589
indene	1.199	10.246	66921	0.454	0.598
Naphthalene-d8 (Surr.)	1.985	12.641	228208	0.935	0.738
Naphthalene	2.708	12.680	1535035	4.608	0.740
Benz(b)thio	2.025	12.840	65123	0.261	0.750
Quinoline	0.976	0.000	1	0.000	0.000
Indole	1.135	14.368	71575	0.513	0.839
2-methyl	1.832	14.423	231397	1.027	0.842
1-methyl	1.825	14.699	144805	0.645	0.858
Biphenyl	18.290	15.663	1178161	0.524	0.915
Acenaphthylene	1.578	16.731	141842	0.731	0.977
Acenaphthene	1.202	17.195	184647	1.248	1.004
Dibenzofuran	2.378	17.620	125922	0.430	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.439	1079943	8.854	0.882
Fluorene	1.030	18.502	214526	1.313	0.885
Dibenzothiophene	1.088	20.633	117408	0.680	0.987
Phenanthrene	2.133	20.942	1209322	3.574	1.002
Anthracene	1.197	21.059	154261	0.812	1.008
Acridine	0.458	21.255	162620	2.238	1.017
Carbazole	0.726	21.595	160105	1.390	1.033
Fluoranthene	1.445	24.024	315175	1.375	1.150
Pyrene-d10 (Surr.)	0.922	24.677	334240	2.286	1.181
Pyrene	1.527	24.595	256628	1.059	1.177
Group III					
Benz(a)anthracene	1.487	27.783	72987	0.264	0.893
Chyrsene-d12 (Surr.)	0.447	27.725	253811	3.053	0.891
Chyrsene	1.518	0.000	1	0.000	0.000
Benzofluoranthenes	2.065	0.000	1	0.000	0.000
Benz(e)pyrene	1.654	0.000	1	0.000	0.000
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	31.336	455479	2.324	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

ERT #	:	40145	Extract Vol., ml	0.500
Field ID	: T-09		Sample Vol., L	4.000
GC/MS File #	:	40145A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.127	815158
Phenanthrene-d10	62.500	20.899	1239366
Benz(a)pyrene-d12	49.600	31.114	1152771

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.081	297878	2.620	0.589
indene	1.199	10.246	66921	0.454	0.598
Naphthalene-d8 (Surr.)	1.985	12.641	228208	0.935	0.738
Naphthalene	2.708	12.680	1535035	4.608	0.740
Benz(b)thio	2.025	12.840	65123	0.261	0.750
Quinoline	0.976	0.000	1	0.000	0.000
Indole	1.135	14.368	71575	0.513	0.839
2-methyl	1.832	14.423	231397	1.027	0.842
1-methyl	1.825	14.699	144805	0.645	0.858
Biphenyl	18.290	15.663	1178161	0.524	0.915
Acenaphthylene	1.578	16.731	141842	0.731	0.977
Acenaphthene	1.202	17.195	184647	1.248	1.004
Dibenzofuran	2.378	17.620	125922	0.430	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.439	1079943	8.854	0.882
Fluorene	1.030	18.502	214526	1.313	0.885
Dibenzothiophene	1.088	20.633	117408	0.680	0.987
Phenanthrene	2.133	20.942	1209322	3.574	1.002
Anthracene	1.197	21.059	154261	0.812	1.008
Acridine	0.458	21.255	162620	2.238	1.017
Carbazole	0.726	21.595	160105	1.390	1.033
Fluoranthene	1.445	24.024	315175	1.375	1.150
Pyrene-d10 (Surr.)	0.922	24.677	334240	2.286	1.181
Pyrene	1.527	24.595	256628	1.059	1.177
Group III					
Benz(a)anthracene	1.487	27.783	72987	0.264	0.893
Chyrsene-d12 (Surr.)	0.447	27.725	253811	3.053	0.891
Chyrsene	1.518	0.000	1	0.000	0.000
Benzofluoranthenes	2.065	0.000	1	0.000	0.000
Benz(e)pyrene	1.654	0.000	1	0.000	0.000
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	31.336	455479	2.324	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

ERT #: 40145

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	0.93	9.90	9.44	42-102	1.820	10.29%
Flourene-d10 (Surr.)	8.85	9.50	93.20	60-128	0.866	82.75%
Chyrsene-d12 (Surr.)	3.05	9.80	31.16	10-54	0.413	33.73%
Pyrene-d10 (Surr.)	2.29	10.05	22.74		0.757	27.69%
Perylene-d12 (Surr.)	2.32	9.40	24.72		0.887	29.38%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	0.00	0.00	0.00	1.90
BENZO (A) ANTHRACENE	2.80	0.26	0.00	0.00	4.40
CHYRSENE	2.80	0.00	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.00	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			0.00		

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	2.62	0.00	2.62	3.40
INDENE	1.80	0.45	0.00	0.00	2.90
NAPHTHALENE	30.00	4.61	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.26	0.00	0.00	2.20
INDOLE	1.20	0.51	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	1.03	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	0.64	0.00	0.00	3.10
BIPHENYL	11.00	0.52	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	0.73	0.00	0.00	1.70
ACENAPHTHENE	0.83	1.25	0.00	1.25	1.30
DIBENZOFURAN	0.77	0.43	0.00	0.00	1.20
FLOURENE	0.56	1.31	1.31	1.31	0.88
DIBENZOTHIOPHENE	4.00	0.68	0.00	0.00	6.30
PHENANTHRENE	2.00	3.57	3.57	3.57	3.10
ANTHRACENE	2.20	0.81	0.00	0.00	3.40
ACRIDINE	1.60	2.24	0.00	2.24	2.50
CARBAZOLE	1.70	1.39	0.00	0.00	2.60
FLUORANTHENE	2.80	1.37	0.00	0.00	4.40
PYRENE	2.60	1.06	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.00	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	4.89		
		TOTAL PAH'S	4.89		

*** Internal Standard ***

Operator: LOUIE POUNDS 25 Nov 86 8:56 pm
Method File Name : PAH.M
Sample Info : SLP T-09 ERT#40145 : TUE. 25 NOV. 86
Info: 1.0 UL OF SAMPLE
gration File Name : DATA:40145A.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		1	-------	Mass	118.00	amu	2,3-BENZOFUR	*** Not Found ***	
2		1VV	10.081	Mass	118.00	amu	2,3-DIHYDROI	297878	23.08 ng/mL
3		1VV	10.246	Mass	116.00	amu	INDENE	66921	8.502 ng/mL
4		1PV	12.641	Mass	136.00	amu	NAPHTHALENE,	228208	2.101 ng/mL
5		1PV	12.680	Mass	128.00	amu	NAPTHALENE	1535035	21.06 ng/mL
6		1PV	12.840	Mass	134.00	amu	BENZO(b)THIO	65123	8.585 ng/mL
7		1	-------	Mass	129.00	amu	QUINOLINE	*** Not Found ***	
8		1PV	14.368	Mass	117.00	amu	INDOLE	71575	2.671 ng/mL
9		1VV	14.423	Mass	141.00	amu	2-METHYLNAPT	231397	4.917 ng/mL
10		1VV	14.699	Mass	141.00	amu	1-METHYLNAPT	144805	
11		1PV	15.663	Mass	154.00	amu	BIPHENYL	1178161	
12		1VV	16.731	Mass	152.00	amu	ACENAPHTHYLE	141842	2.258 ng/mL
13	+ISTD	1PV	17.127	Mass	164.00	amu	ACENAPTHTHEN	815158	53.00 ng/mL
		1VV	17.195	Mass	154.00	amu	ACENAPHTHENE	184647	4.105 ng/mL
15		1VV	17.620	Mass	168.00	amu	DIBENZOFURAN	125922	2.476 ng/mL
16		2VV	18.439	Mass	176.00	amu	FLUORENE, d1	1079943	117.7 ng/mL
17		2VV	18.502	Mass	166.00	amu	FLUORENE	214526	9.192 ng/mL
18		2BV	20.633	Mass	184.00	amu	DIBENZOTHIOP	117408	5.152 ng/mL
19	+ISTD	2BV	20.899	Mass	188.00	amu	PHENANTHRENE	1239366	62.50 ng/mL
20		2PV	20.942	Mass	178.00	amu	PHENANTHRENE	1209322	
21		2VV	21.059	Mass	178.00	amu	ANTHRACENE	154260	
22		2VV	21.255	Mass	179.00	amu	ACRIDINE	162620	7.364 ng/mL
23		1PV	21.595	Mass	167.00	amu	CARBAZOLE	160105	0.1539 ng/mL
24		1BB	24.024	Mass	202.00	amu	FLUORANTHENE	315175	
25		2VV	24.677	Mass	212.00	amu	PYRENE, d10	334240	19.46 ng/mL
26		2BV	24.595	Mass	202.00	amu	PYRENE	256628	5.836 ng/mL
27		3VV	27.783	Mass	228.00	amu	BENZ(a)ANTHR	72987	
28		3PV	27.725	Mass	240.00	amu	CHYRSENE, d(	253811	20.45 ng/mL
29		3	-------	Mass	228.00	amu	CHYRSENE	*** Not Found ***	
30		3	-------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
31		3	-------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
32		3	-------	Mass	252.00	amu	BENZ(e)PYREN	*** Not Found ***	
33	+ISTD	3VV	31.114	Mass	264.00	amu	BENZ(a)PYREN	1152771	49.60 ng/mL
34		3	-------	Mass	252.00	amu	BENZ(a)PYREN	*** Not Found ***	
35		3VV	31.336	Mass	264.00	amu	PERYLENE, d1	455479	17.90 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 ***	
		3	-------	Mass	276.00	amu	BENZO(g,h,i)	*** Not Found ***	
--------		PV	8.993	Mass	116.00		-Uncalibrated-	33727	33727 ng/mL
--------		VV	9.073	Mass	118.00		-Uncalibrated-	51440	51440 ng/mL
--------		BV	10.069	Mass	116.00		-Uncalibrated-	62741	62741 ng/mL
--------		VV	11.353	Mass	116.00		-Uncalibrated-	141888	141888 ng/mL
--------		PV	12.180	Mass	134.00		-Uncalibrated-	54404	54404 ng/mL
--------		VV	12.537	Mass	134.00		-Uncalibrated-	548706	548706 ng/mL

--------	VV	12.682	Mass	129.00	-Uncalibrated-	222142	222142	ng/mL
--------	PV	12.813	Mass	128.00	-Uncalibrated-	133723	133723	ng/mL
--------	VV	13.353	Mass	136.00	-Uncalibrated-	439133	439133	ng/mL
--------	PV	13.365	Mass	134.00	-Uncalibrated-	172210	172210	ng/mL
--------	VV	13.736	Mass	129.00	-Uncalibrated-	721392	721392	ng/mL
--------	PV	13.763	Mass	136.00	-Uncalibrated-	78017	78017	ng/mL
------	VB	13.912	Mass	129.00	-Uncalibrated-	332651	332651	ng/mL
-----	BV	14.211	Mass	117.00	-Uncalibrated-	112339	112339	ng/mL
--------	PV	14.307	Mass	141.00	-Uncalibrated-	25940	25940	ng/mL
--------	BV	15.169	Mass	117.00	-Uncalibrated-	171300	171300	ng/mL
--------	PV	15.686	Mass	117.00	-Uncalibrated-	1541236	1541236	ng/mL
--------	BV	15.903	Mass	141.00	-Uncalibrated-	295740	295740	ng/mL
--------	PV	15.962	Mass	117.00	-Uncalibrated-	818071	818071	ng/mL
--------	VB	16.025	Mass	141.00	-Uncalibrated-	298853	298853	ng/mL
--------	BV	16.145	Mass	152.00	-Uncalibrated-	39797	39797	ng/mL
--------	VV	16.248	Mass	152.00	-Uncalibrated-	74841	74841	ng/mL
--------	VV	16.456	Mass	168.00	-Uncalibrated-	243801	243801	ng/mL
--------	BV	16.633	Mass	164.00	-Uncalibrated-	224456	224456	ng/mL
--------	VV	16.782	Mass	164.00	-Uncalibrated-	113337	113337	ng/mL
--------	BV	16.777	Mass	154.00	-Uncalibrated-	48782	48782	ng/mL
--------	VV	17.069	Mass	168.00	-Uncalibrated-	101125	101125	ng/mL
--------	PV	17.067	Mass	154.00	-Uncalibrated-	184726	184726	ng/mL
--------	VV	17.103	Mass	168.00	-Uncalibrated-	77606	77606	ng/mL
--------	VV	17.194	Mass	152.00	-Uncalibrated-	113806	113806	ng/mL
--------	VV	17.282	Mass	154.00	-Uncalibrated-	89792	89792	ng/mL
--------	VV	17.324	Mass	152.00	-Uncalibrated-	121186	121186	ng/mL
--------	VV	17.549	Mass	168.00	-Uncalibrated-	124190	124190	ng/mL
--------	BV	18.334	Mass	168.00	-Uncalibrated-	227658	227658	ng/mL
--------	VV	18.740	Mass	166.00	-Uncalibrated-	111330	111330	ng/mL
--------	PV	18.881	Mass	168.00	-Uncalibrated-	103855	103855	ng/mL
--------	VV	18.920	Mass	166.00	-Uncalibrated-	218113	218113	ng/mL
--------	PV	18.914	Mass	152.00	-Uncalibrated-	103536	103536	ng/mL
-----	VV	19.011	Mass	166.00	-Uncalibrated-	119383	119383	ng/mL
------	BV	19.307	Mass	152.00	-Uncalibrated-	86469	86469	ng/mL
--------	VV	19.322	Mass	166.00	-Uncalibrated-	209837	209837	ng/mL
--------	PV	19.451	Mass	152.00	-Uncalibrated-	35490	35490	ng/mL
--------	PH	19.560	Mass	184.00	-Uncalibrated-	131984	131984	ng/mL
--------	PH	19.579	Mass	178.00	-Uncalibrated-	21167	21167	ng/mL
--------	PH	19.684	Mass	178.00	-Uncalibrated-	13008	13008	ng/mL
--------	VV	19.725	Mass	184.00	-Uncalibrated-	98503	98503	ng/mL
--------	VV	19.785	Mass	184.00	-Uncalibrated-	57395	57395	ng/mL
--------	BV	19.928	Mass	178.00	-Uncalibrated-	89626	89626	ng/mL
--------	PV	20.014	Mass	184.00	-Uncalibrated-	76761	76761	ng/mL
--------	VV	20.092	Mass	184.00	-Uncalibrated-	203627	203627	ng/mL
--------	VB	20.090	Mass	178.00	-Uncalibrated-	46265	46265	ng/mL
--------	VV	20.356	Mass	167.00	-Uncalibrated-	196311	196311	ng/mL
--------	PV	20.404	Mass	179.00	-Uncalibrated-	60941	60941	ng/mL
--------	PV	20.402	Mass	178.00	-Uncalibrated-	50850	50850	ng/mL
--------	PV	20.589	Mass	167.00	-Uncalibrated-	174039	174039	ng/mL
--------	PV	20.898	Mass	184.00	-Uncalibrated-	175064	175064	ng/mL
--------	VV	20.949	Mass	179.00	-Uncalibrated-	241261	241261	ng/mL
--------	VV	21.042	Mass	179.00	-Uncalibrated-	244094	244094	ng/mL
--------	VV	21.334	Mass	179.00	-Uncalibrated-	105634	105634	ng/mL
--------	VV	21.421	Mass	179.00	-Uncalibrated-	105786	105786	ng/mL
--------	VV	21.607	Mass	179.00	-Uncalibrated-	491268	491268	ng/mL
--------	VV	22.851	Mass	212.00	-Uncalibrated-	69701	69701	ng/mL
--------	VV	23.075	Mass	212.00	-Uncalibrated-	117992	117992	ng/mL
------	VV	23.353	Mass	212.00	-Uncalibrated-	73074	73074	ng/mL
------	PH	26.541	Mass	240.00	-Uncalibrated-	183833	183833	ng/mL
--------	PV	26.716	Mass	228.00	-Uncalibrated-	52717	52717	ng/mL
--------	PV	29.724	Mass	264.00	-Uncalibrated-	94286	94286	ng/mL
--------	PV	29.711	Mass	252.00	-Uncalibrated-	102068	102068	ng/mL
--------	PV	29.853	Mass	252.00	-Uncalibrated-	14966	14966	ng/mL
--------	PB	30.069	Mass	252.00	-Uncalibrated-	25744	25744	ng/mL

Error : Could not find Calibration Peak

Error : Could not find Calibration Peak
No Peak of Calibration Peak #7's Description at 13.573 +/- 0.068 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #29's Description at 27.781 +/- 0.139 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #30's Description at 30.328 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.379 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #32's Description at 31.042 +/- 0.155 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #34's Description at 31.171 +/- 0.156 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #36's Description at 31.399 +/- 0.157 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.693 +/- 0.173 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #38's Description at 34.751 +/- 0.174 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #39's Description at 35.678 +/- 0.178 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

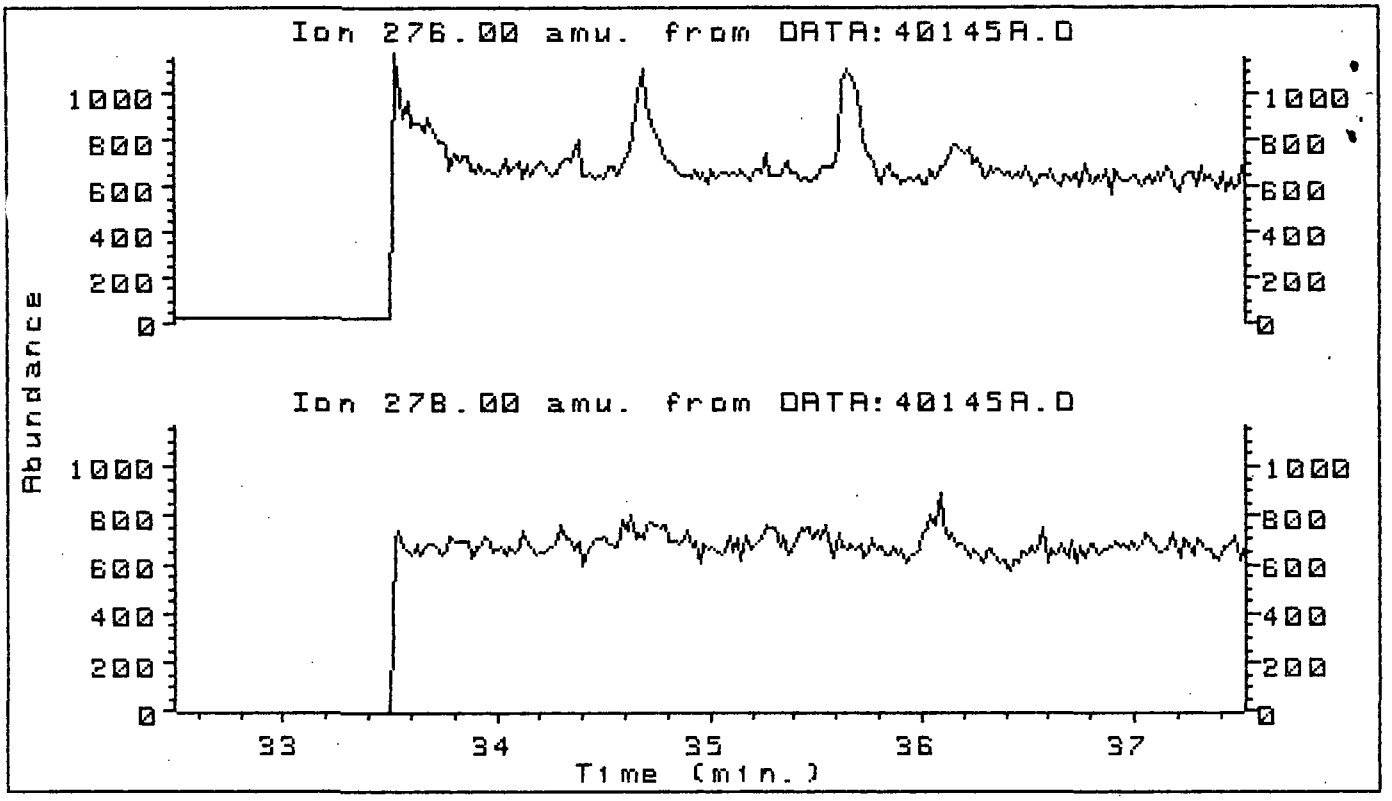
Operator: LOUIE POUNDS 25 Nov 86 8:56 pm
Method File Name : PAH.M
Sample Info : SLP T-09 ERT#40145 : TUE. 25 NOV. 86
Misc Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40145A.I
Bottle Number : 0

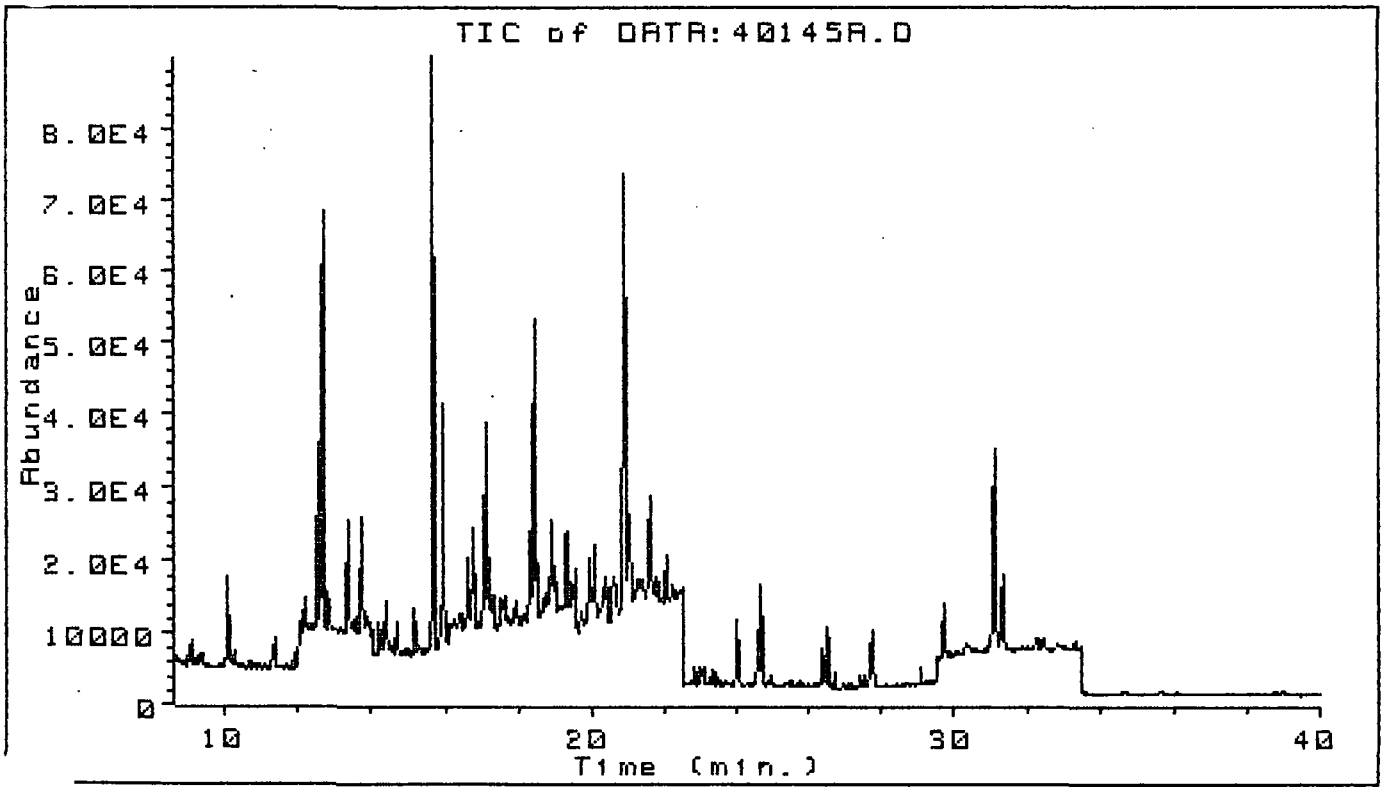
Ret Time	Signal	Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
8.993	Mass	116.00 amu	PV	33727	1575	100.00	11.05	100.00	23.77
9.073	Mass	118.00 amu	VV	51440	2484	100.00	14.73	100.00	17.27
10.081	Mass	118.00 amu	VV	297878	10762	82.60	85.27	100.00	100.00
10.069	Mass	116.00 amu	BV	62741	2442	17.40	20.55	21.06	44.22
10.246	Mass	116.00 amu	VV	66921	1886	100.00	21.92	100.00	47.16
11.353	Mass	116.00 amu	VV	141888	4120	100.00	46.48	100.00	100.00
12.180	Mass	134.00 amu	PV	54404	2478	100.00	5.77	100.00	9.91
12.537	Mass	134.00 amu	VV	548706	24013	100.00	58.19	100.00	100.00
12.641	Mass	136.00 amu	PV	228208	7973	68.99	30.62	100.00	51.97
12.639	Mass	134.00 amu	VV	102586	3479	31.01	10.88	44.95	18.70
12.682	Mass	129.00 amu	VV	222142	5775	12.64	17.41	14.47	30.79
12.680	Mass	128.00 amu	PV	1535035	49683	87.36	91.99	100.00	100.00
813	Mass	128.00 amu	PV	133723	3907	100.00	8.01	100.00	8.71
12.840	Mass	134.00 amu	PV	65123	1794	100.00	6.91	100.00	11.87
13.353	Mass	136.00 amu	VV	439133	9400	71.83	58.92	100.00	100.00
13.365	Mass	134.00 amu	PV	172210	5578	28.17	18.26	39.22	31.38
13.736	Mass	129.00 amu	VV	721392	15348	100.00	56.53	100.00	100.00

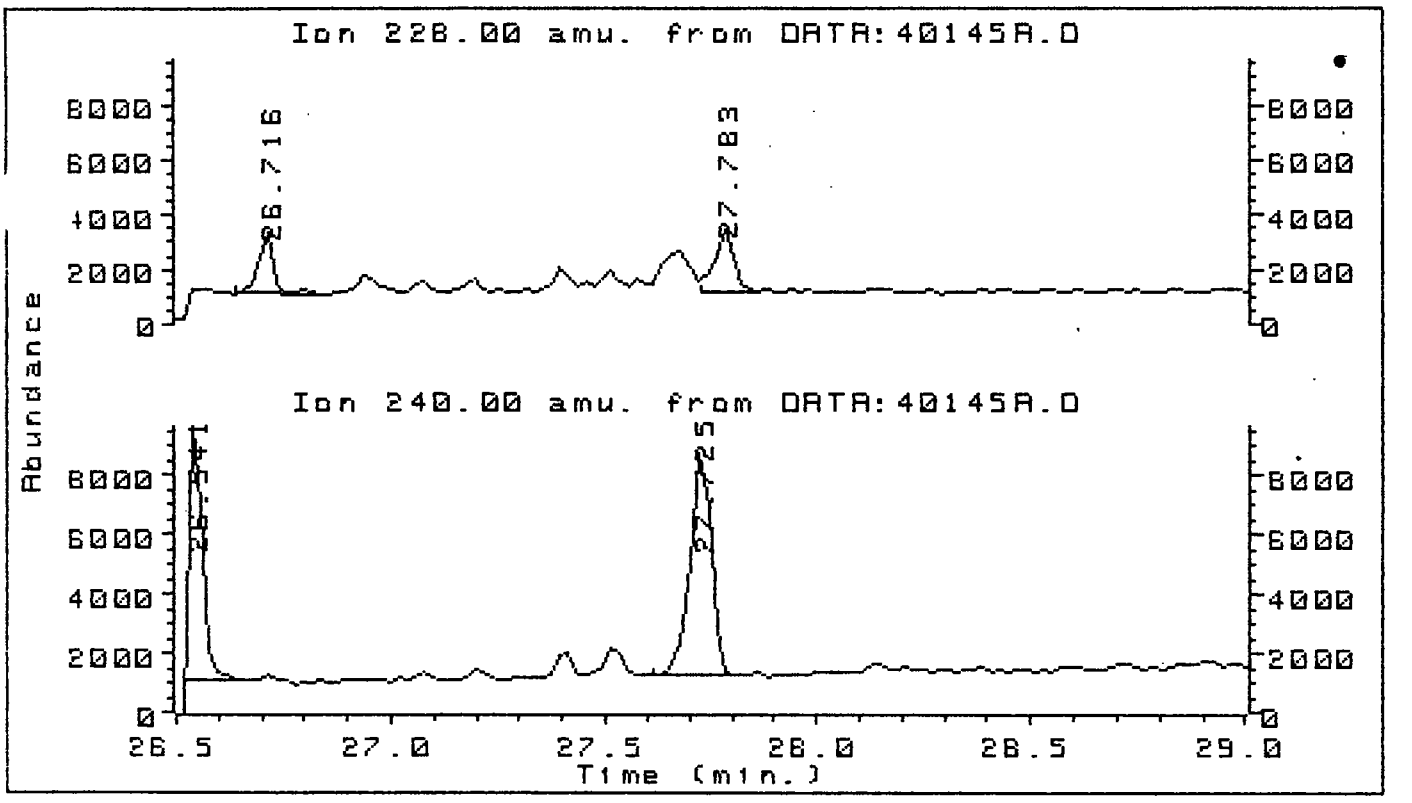
13.763	Mass	136.00	amu	PV	78017	2182	100.00	10.47	100.00	17.77
13.912	Mass	129.00	amu	VB	332651	4092	100.00	26.07	100.00	46.11
14.211	Mass	117.00	amu	BV	112339	3636	100.00	4.14	100.00	7.29
.307	Mass	141.00	amu	PV	25940	508	100.00	2.60	100.00	8.68
.368	Mass	117.00	amu	PV	71575	2559	100.00	2.64	100.00	4.64
14.423	Mass	141.00	amu	VV	231397	6238	100.00	23.22	100.00	77.43
14.699	Mass	141.00	amu	VV	144805	3943	100.00	14.53	100.00	48.45
15.169	Mass	117.00	amu	BV	171300	5552	100.00	6.31	100.00	11.11
15.663	Mass	154.00	amu	PV	1178161	45552	100.00	69.87	100.00	100.00
15.686	Mass	117.00	amu	PV	1541236	63541	100.00	56.78	100.00	100.00
15.903	Mass	141.00	amu	BV	295740	6093	100.00	29.67	100.00	98.96
15.962	Mass	117.00	amu	PV	818071	33297	100.00	30.14	100.00	53.08
16.025	Mass	141.00	amu	VB	298853	4310	100.00	29.98	100.00	100.00
16.145	Mass	152.00	amu	BV	39797	1491	100.00	5.55	100.00	28.06
16.248	Mass	152.00	amu	VV	74841	1316	100.00	10.44	100.00	52.76
16.456	Mass	168.00	amu	VV	243801	2447	100.00	24.28	100.00	100.00
633	Mass	164.00	amu	BV	224456	7068	100.00	19.47	100.00	27.54
16.731	Mass	152.00	amu	VV	141842	3162	100.00	19.78	100.00	100.00
16.782	Mass	164.00	amu	VV	113337	3380	69.91	9.83	100.00	13.90
16.777	Mass	154.00	amu	BV	48782	1769	30.09	2.89	43.04	4.14
17.069	Mass	168.00	amu	VV	101125	4428	35.38	10.07	54.74	41.48
17.067	Mass	154.00	amu	PV	184726	7293	64.62	10.96	100.00	15.68
17.103	Mass	168.00	amu	VV	77606	3357	100.00	7.73	100.00	31.83
17.127	Mass	164.00	amu	PV	815158	26979	100.00	70.70	100.00	100.00
17.194	Mass	152.00	amu	VV	113806	3470	38.13	15.87	61.63	80.23
17.195	Mass	154.00	amu	VV	184647	5193	61.87	10.95	100.00	15.67
17.282	Mass	154.00	amu	VV	89792	2859	100.00	5.33	100.00	7.62
17.324	Mass	152.00	amu	VV	121186	3813	100.00	16.90	100.00	85.44
17.549	Mass	168.00	amu	VV	124190	3239	100.00	12.37	100.00	50.94
17.620	Mass	168.00	amu	VV	125922	3700	100.00	12.54	100.00	51.65
334	Mass	168.00	amu	BV	227658	7222	100.00	22.67	100.00	93.38
18.439	Mass	176.00	amu	VV	1079943	35660	100.00	100.00	100.00	100.00
18.502	Mass	166.00	amu	VV	214526	5373	100.00	24.57	100.00	98.36
18.740	Mass	166.00	amu	VV	111330	2382	100.00	12.75	100.00	51.04

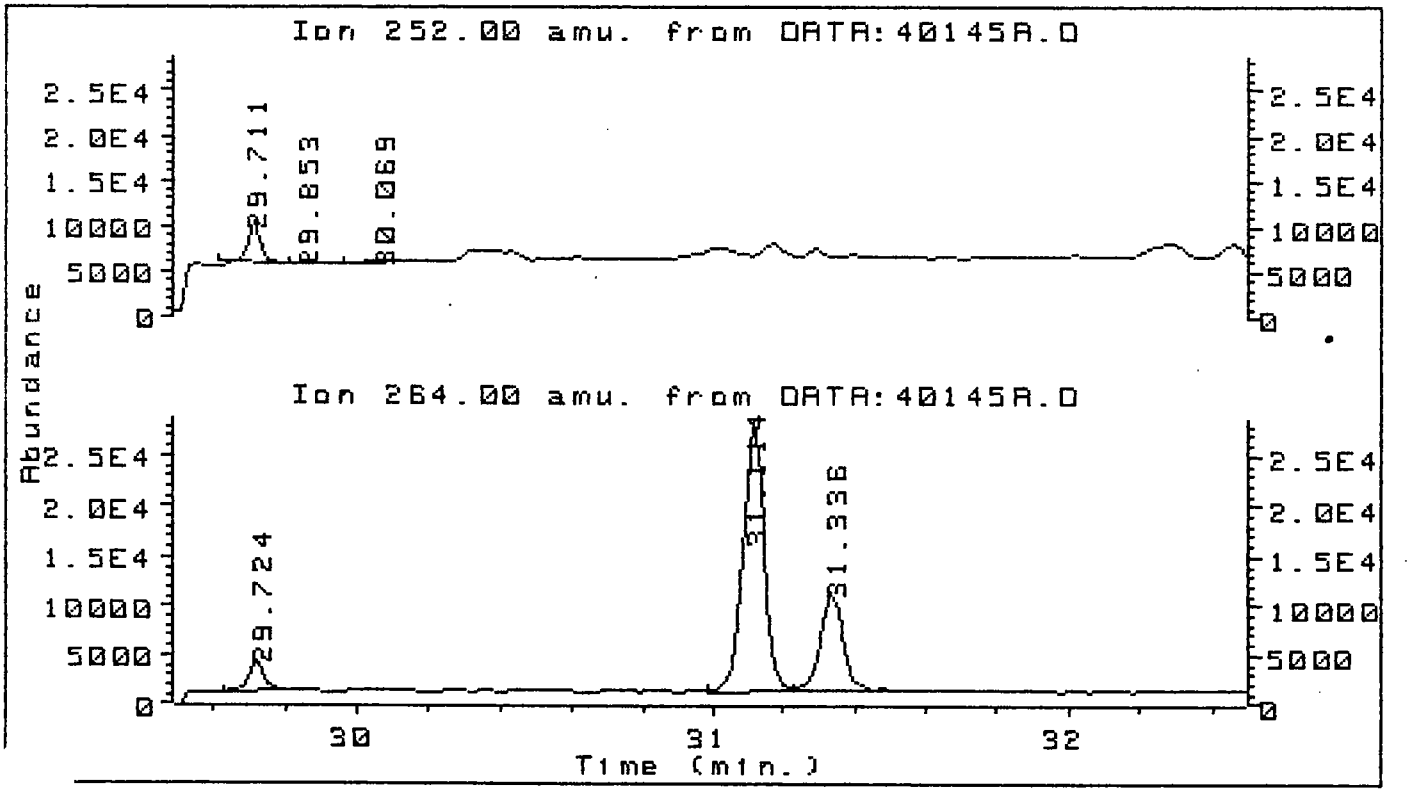
18.920	Mass	166.00	amu	VV	218113	7046	67.81	24.98	100.00	100.00
18.914	Mass	152.00	amu	PV	103536	2990	32.19	14.44	47.47	[illegible].99
19.011	Mass	166.00	amu	VV	119383	4259	100.00	13.67	100.00	54.73
[illegible]307	Mass	152.00	amu	BV	86469	2825	100.00	12.06	100.00	60.96
[illegible].322	Mass	166.00	amu	VV	209837	6479	100.00	24.03	100.00	96.21
19.451	Mass	152.00	amu	PV	35490	1471	100.00	4.95	100.00	25.02
19.560	Mass	184.00	amu	PH	131984	7142	100.00	15.33	100.00	64.82
19.579	Mass	178.00	amu	PH	21167	1912	100.00	1.34	100.00	1.75
19.684	Mass	178.00	amu	PH	13008	478	100.00	0.82	100.00	1.08
19.725	Mass	184.00	amu	VV	98503	1684	100.00	11.44	100.00	48.37
19.785	Mass	184.00	amu	VV	57395	1254	100.00	6.67	100.00	28.19
19.928	Mass	178.00	amu	BV	89626	2218	100.00	5.66	100.00	7.41
20.014	Mass	184.00	amu	PV	76761	2187	100.00	8.92	100.00	37.70
20.092	Mass	184.00	amu	VV	203627	5563	81.49	23.66	100.00	100.00
20.090	Mass	178.00	amu	VB	46265	1691	18.51	2.92	22.72	3.83
20.356	Mass	167.00	amu	VV	196311	3910	100.00	37.01	100.00	100.00
[illegible]0.404	Mass	179.00	amu	PV	60941	1977	54.51	4.32	100.00	12.40
402	Mass	178.00	amu	PV	50850	1748	45.49	3.21	83.44	4.20
20.589	Mass	167.00	amu	PV	174039	3061	100.00	32.81	100.00	88.65
20.633	Mass	184.00	amu	BV	117408	3162	100.00	13.64	100.00	57.66
20.899	Mass	188.00	amu	BV	1239366	41534	87.62	100.00	100.00	100.00
20.898	Mass	184.00	amu	PV	175064	5790	12.38	20.34	14.13	85.97
20.949	Mass	179.00	amu	VV	241261	5357	16.63	17.09	19.95	49.11
20.942	Mass	178.00	amu	PV	1209322	31871	83.37	76.32	100.00	100.00
21.042	Mass	179.00	amu	VV	244094	7615	100.00	17.29	100.00	49.69
21.059	Mass	178.00	amu	VV	154260	4318	100.00	9.74	100.00	12.76
21.255	Mass	179.00	amu	VV	162620	2493	100.00	11.52	100.00	33.10
21.334	Mass	179.00	amu	VV	105634	2244	100.00	7.48	100.00	21.50
21.421	Mass	179.00	amu	VV	105786	2330	100.00	7.49	100.00	21.53
21.607	Mass	179.00	amu	VV	491268	8096	75.42	34.80	100.00	100.00
21.595	Mass	167.00	amu	PV	160105	4339	24.58	30.18	32.59	81.56
851	Mass	212.00	amu	VV	69701	2228	100.00	11.71	100.00	20.85
23.075	Mass	212.00	amu	VV	117992	2622	100.00	19.83	100.00	35.30
23.353	Mass	212.00	amu	VV	73074	2174	100.00	12.28	100.00	21.86
24.024	Mass	202.00	amu	BB	315175	8516	100.00	55.12	100.00	100.00

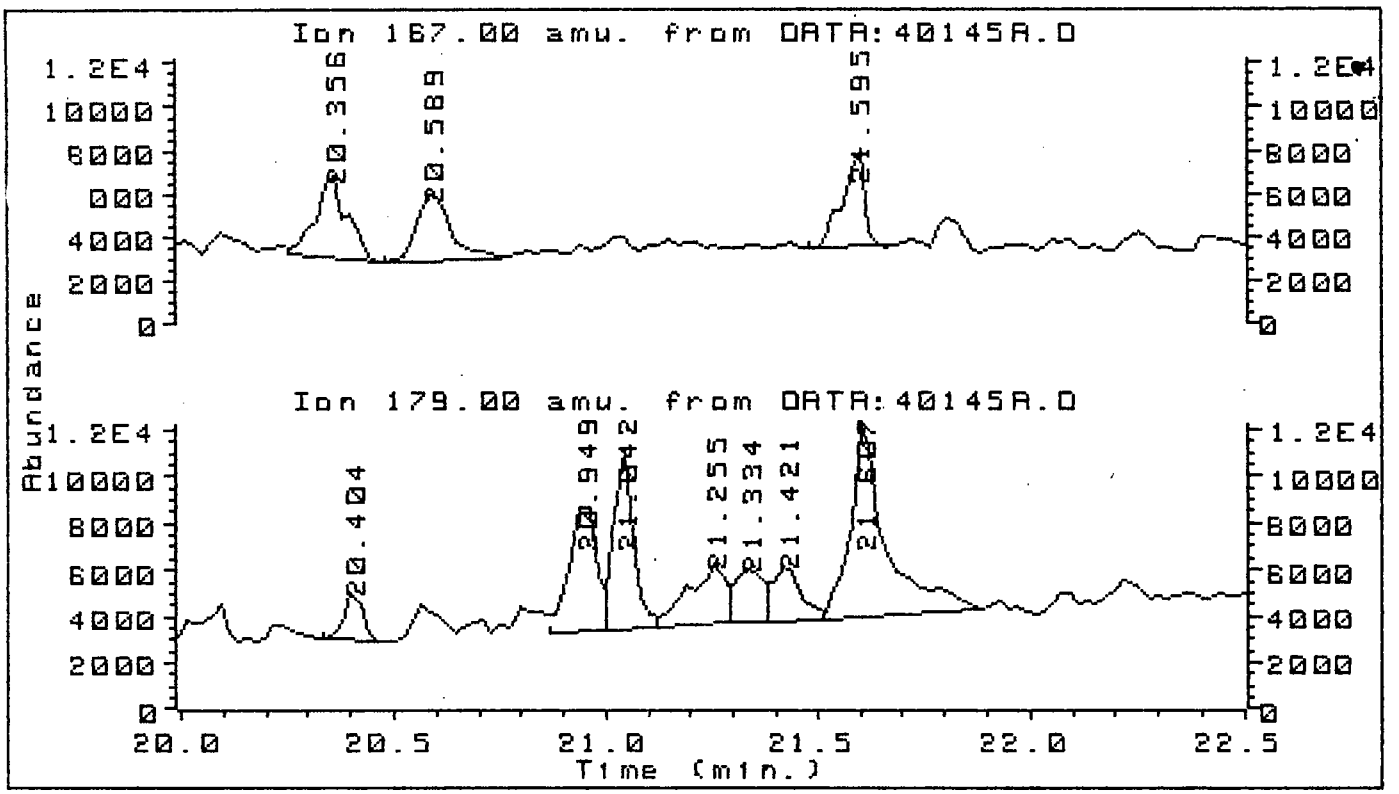
24.677	Mass	212.00	amu	VV	334240	13197	100.00	56.17	100.00	100.00
26.541	Mass	240.00	amu	PH	183833	8881	100.00	42.01	100.00	72.43
26.716	Mass	228.00	amu	PV	52717	2135	100.00	41.94	100.00	72.23
725	Mass	240.00	amu	PV	253811	7497	100.00	57.99	100.00	100.00
27.783	Mass	228.00	amu	VV	72987	2252	100.00	58.06	100.00	100.00
29.724	Mass	264.00	amu	PV	94286	3087	48.02	5.54	92.38	8.18
29.711	Mass	252.00	amu	PV	102068	4559	51.98	71.49	100.00	100.00
29.853	Mass	252.00	amu	PV	14966	484	100.00	10.48	100.00	14.66
30.069	Mass	252.00	amu	PB	25744	344	100.00	18.03	100.00	25.22
31.114	Mass	264.00	amu	VV	1152771	27162	100.00	67.71	100.00	100.00
31.336	Mass	264.00	amu	VV	455479	9884	100.00	26.75	100.00	39.51

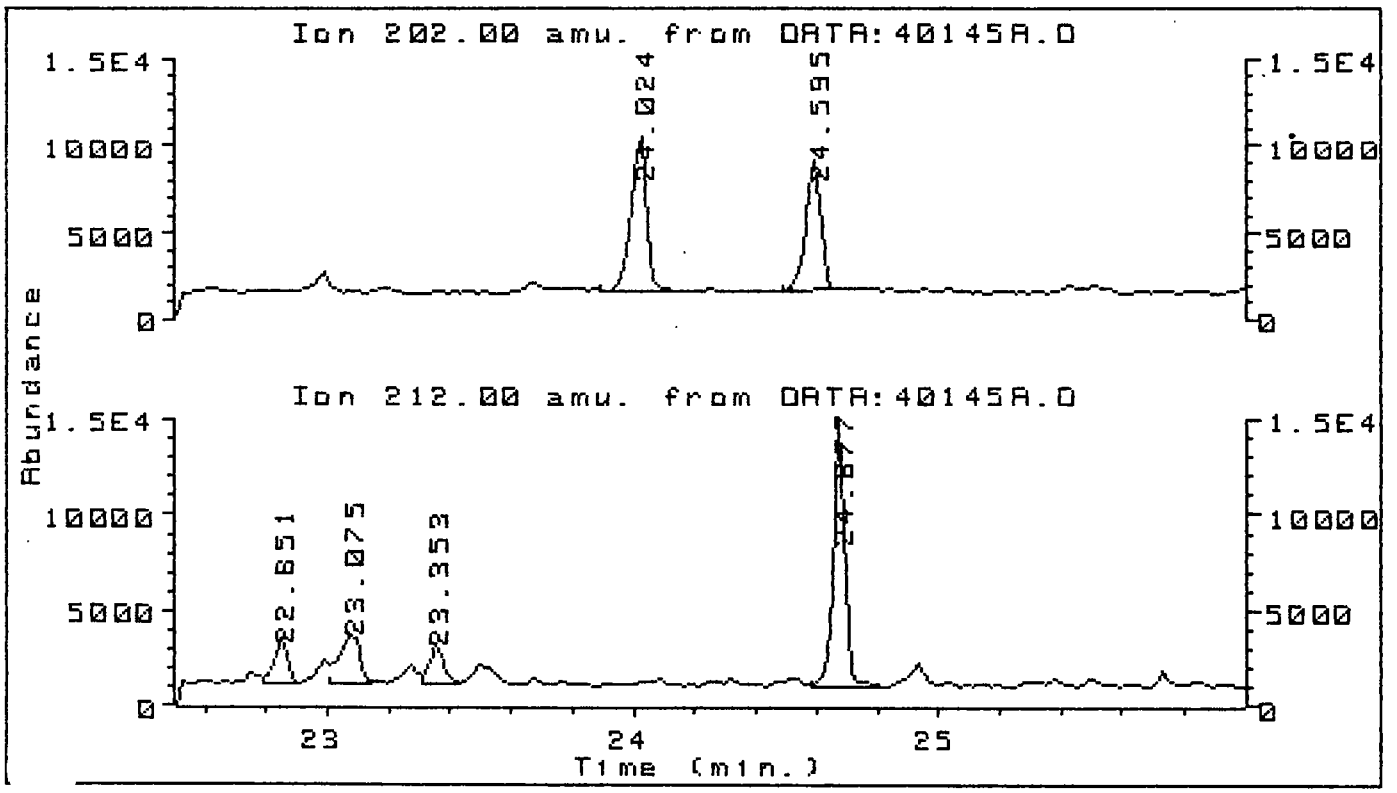

Ion 276.00 amu. from DATA:40145A.D
Ion 278.00 amu. from DATA:40145A.D
Abundance
1000
800
600
400
200
0
33
34
35
36
37
Time (min.)

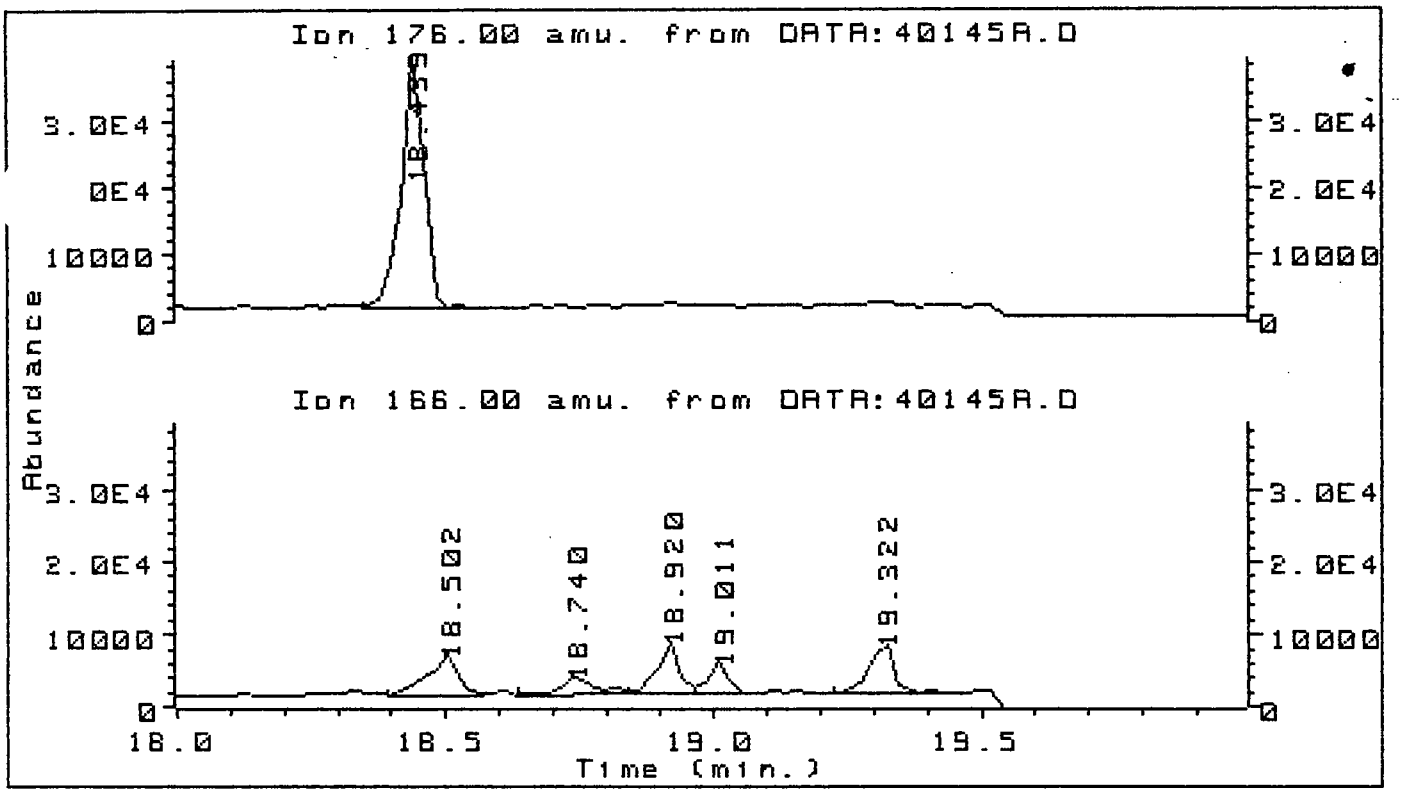

TIC of DATA:40145A.D
Abundance
8.0E4
7.0E4
6.0E4
5.0E4
4.0E4
3.0E4
2.0E4
10000
0
10
20
30
40
Time (min.)

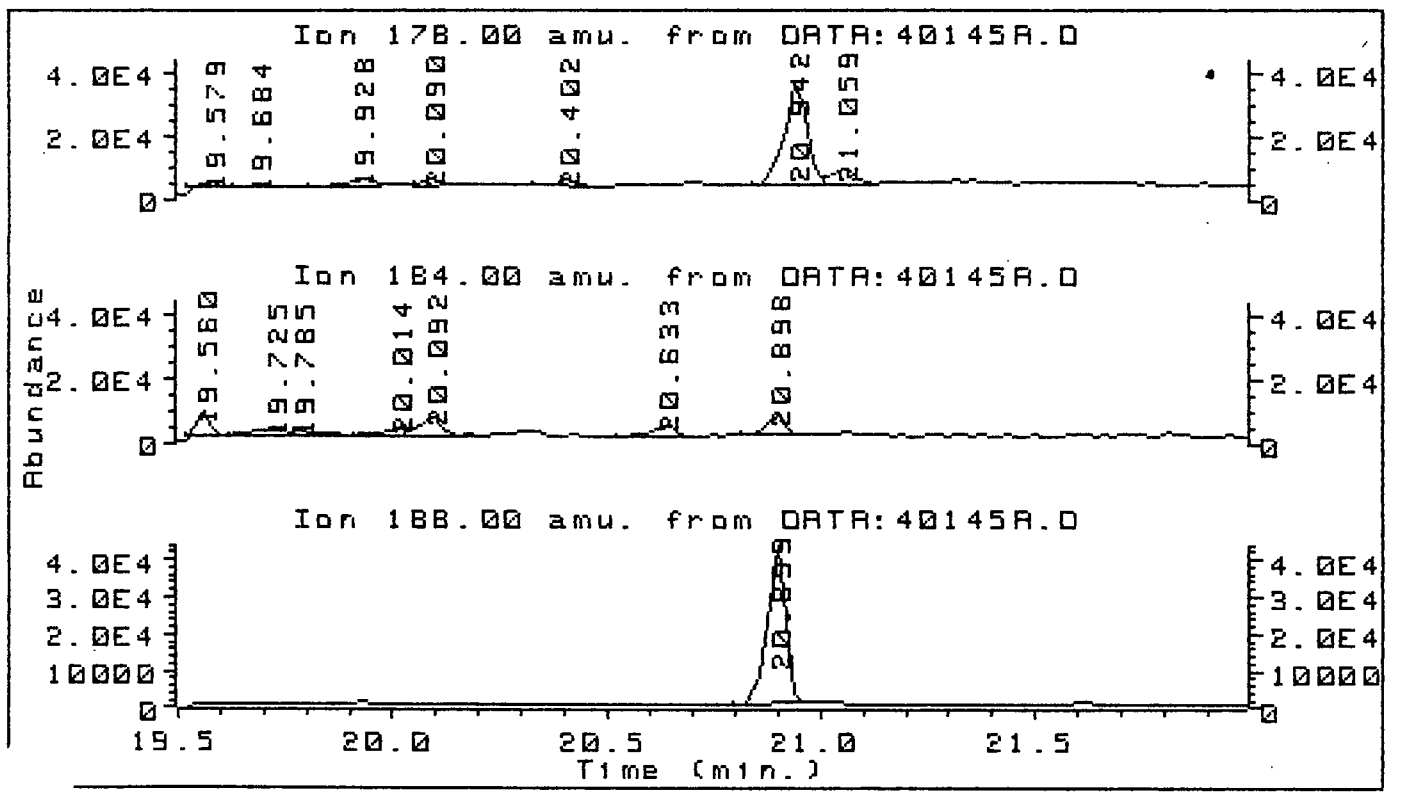

Ion 228.00 amu. from DATA:40145A.D
26.716
27.783
Ion 240.00 amu. from DATA:40145A.D
Abundance
8000
6000
4000
2000
0
26.5
27.0
27.5
28.0
28.5
29.0
Time (min.)

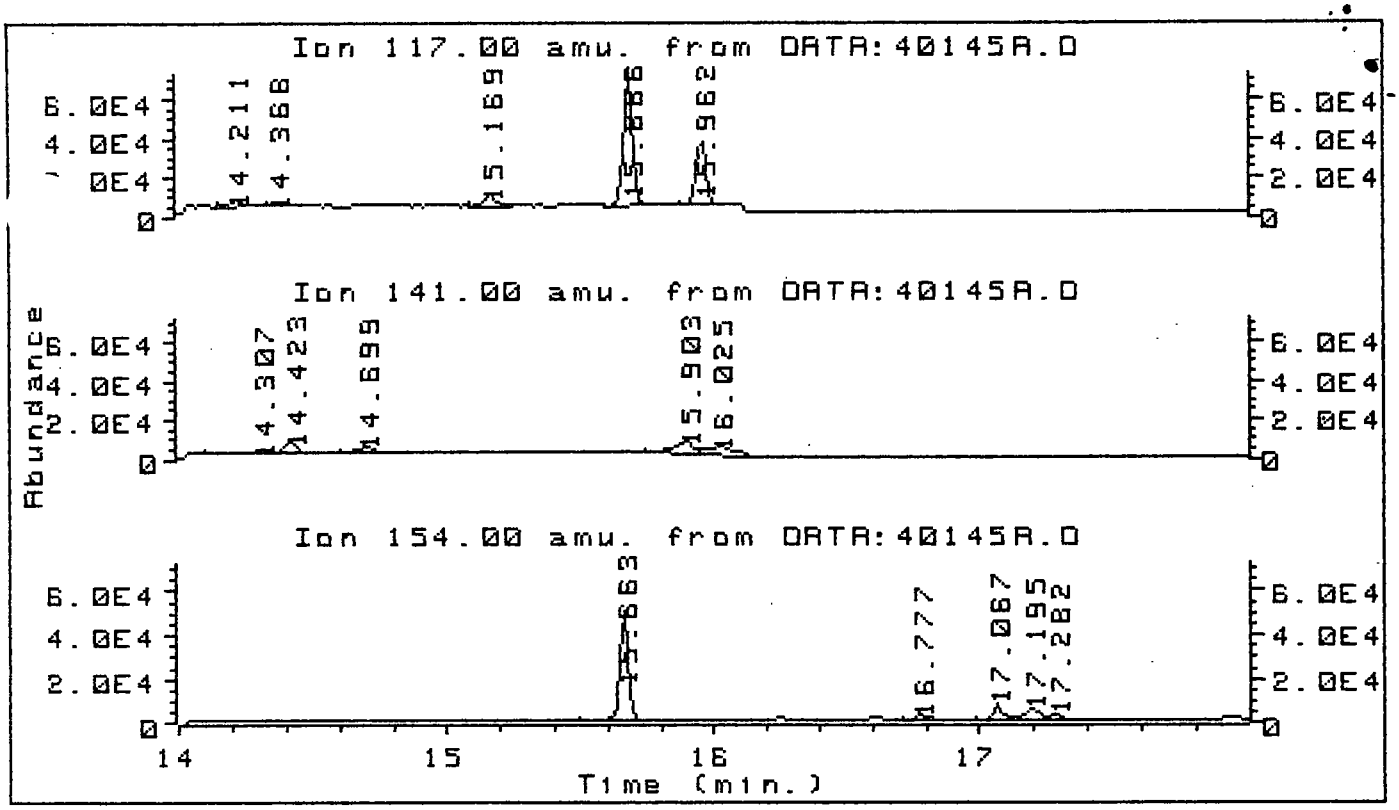

Ion 252.00 amu. from DATA:40145A.D
29.711
29.853
30.069
Ion 264.00 amu. from DATA:40145A.D
29.724
31.336
Abundance
2.5E4
2.0E4
1.5E4
10000
5000
0
30
31
32
Time (min.)

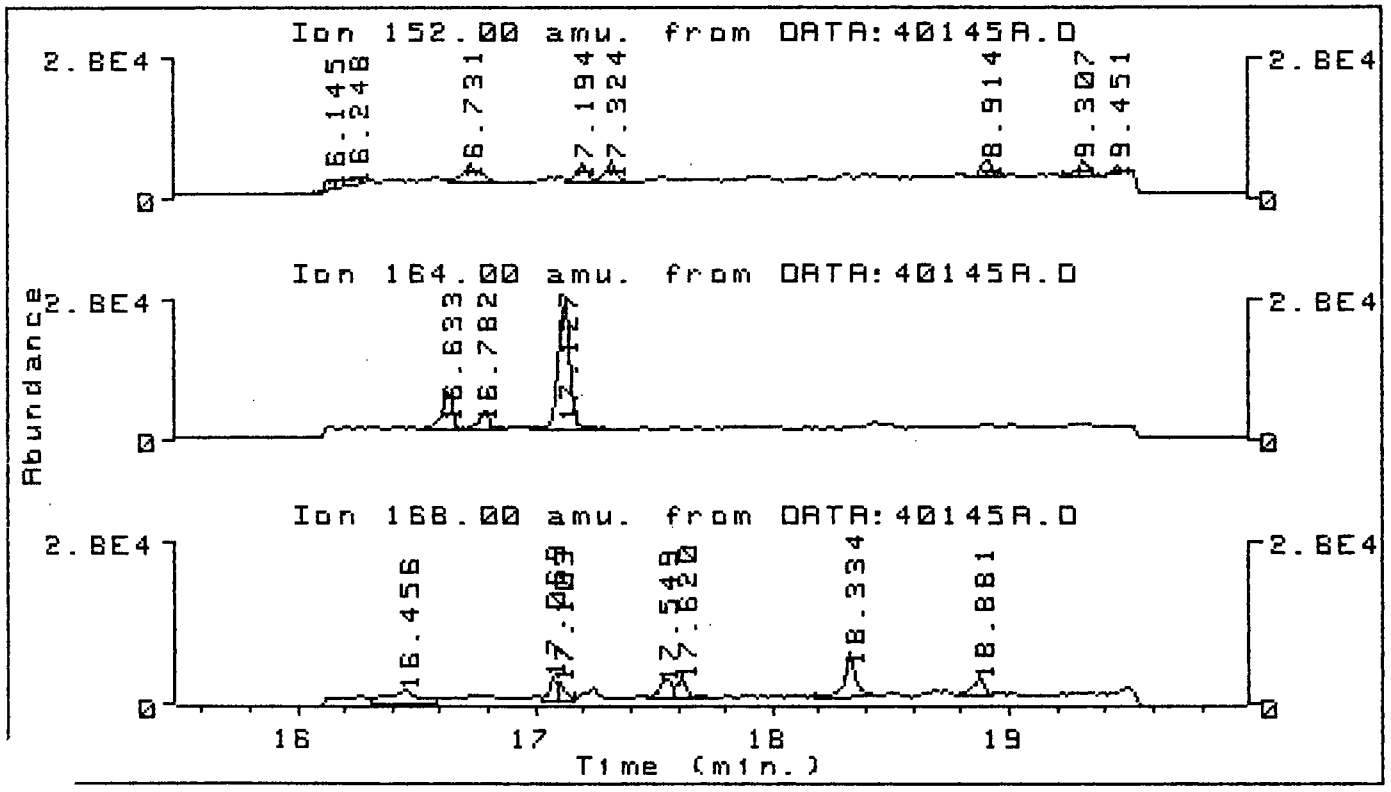

Ion 167.00 amu. from DATA:40145A.D
20.356
20.589
24.595
Ion 179.00 amu. from DATA:40145A.D
20.404
20.949
21.255
21.334
21.421
Abundance
Time (min.)

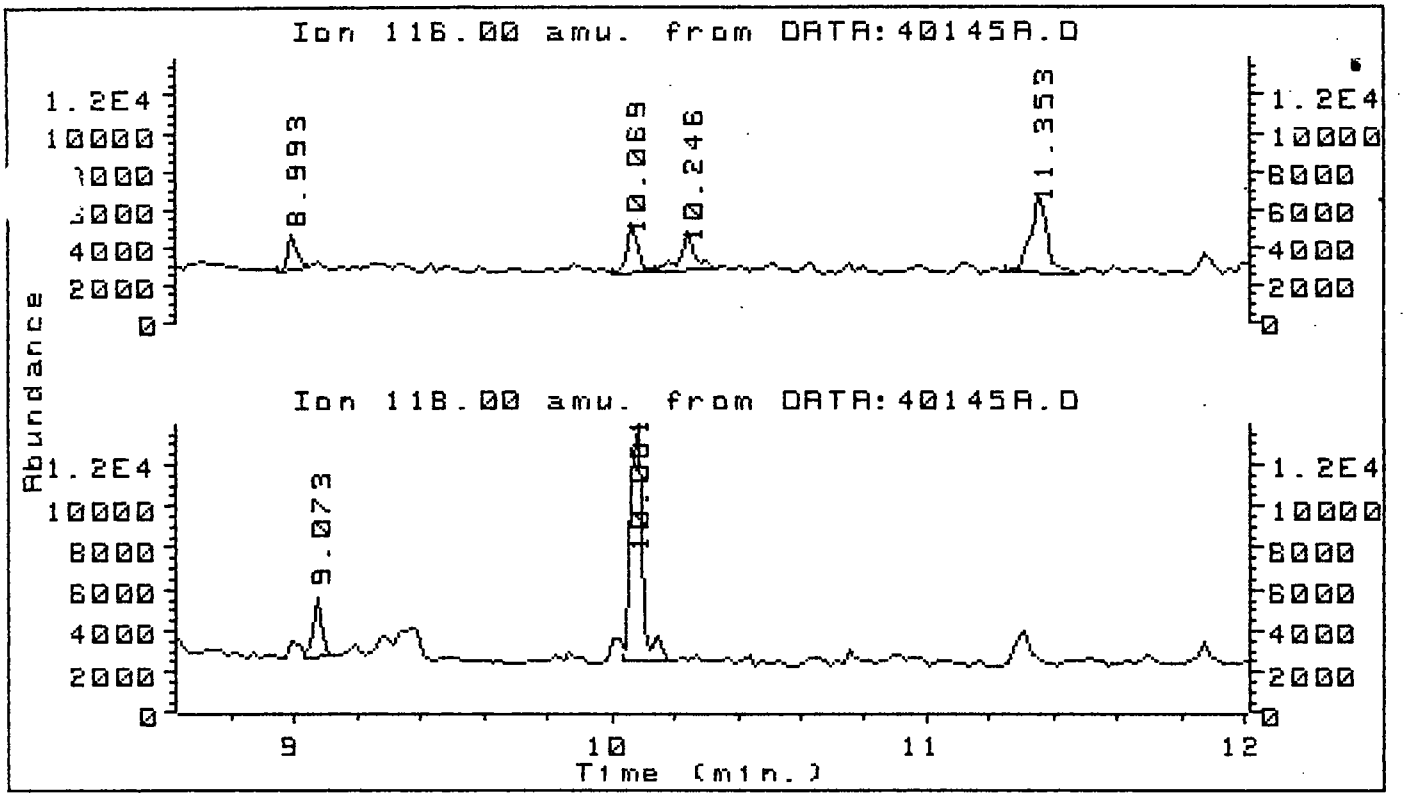

Ion 202.00 amu. from DATA:40145A.D
24.024
24.595
Ion 212.00 amu. from DATA:40145A.D
22.851
23.075
23.353
Abundance
Time (min.)

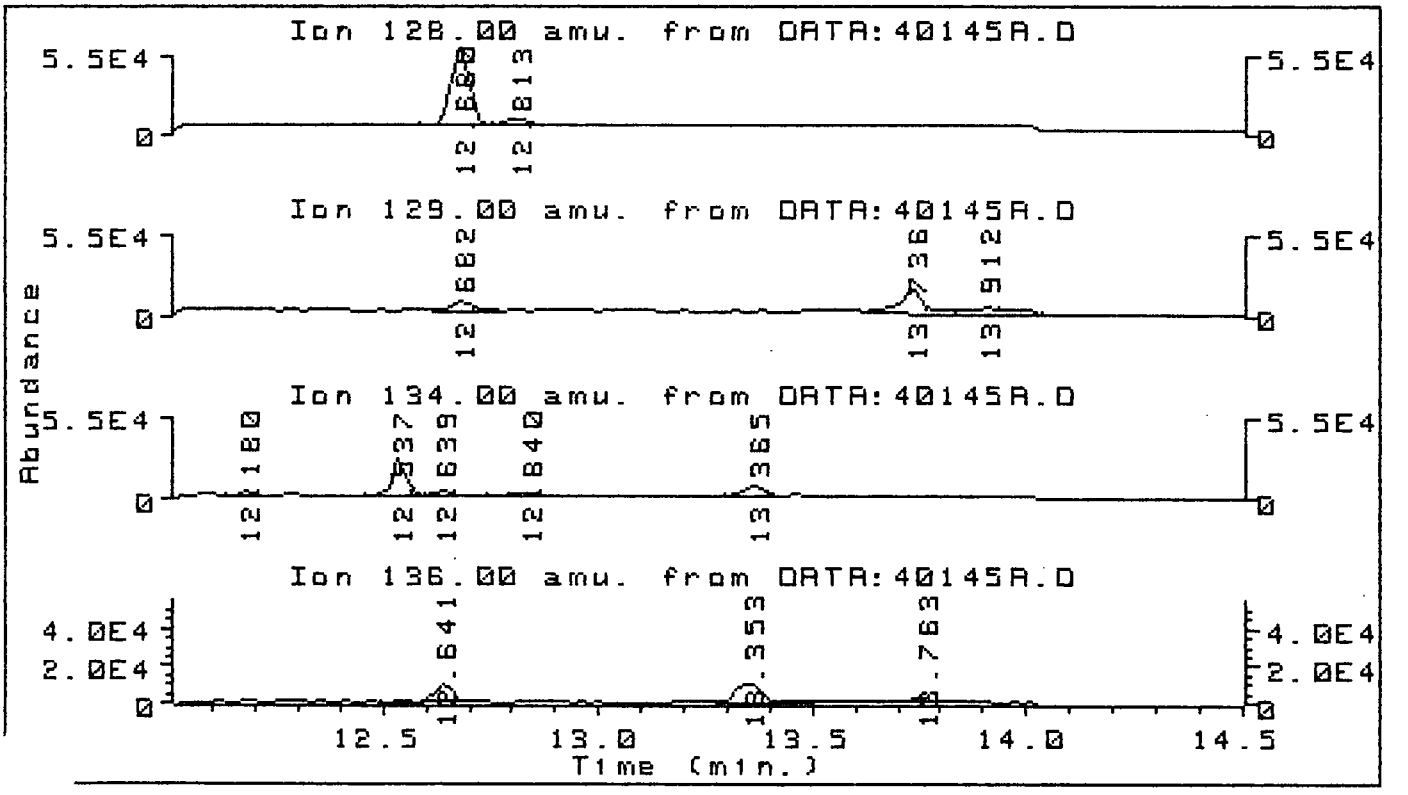

Ion 176.00 amu. from DATA:40145A.D
Ion 166.00 amu. from DATA:40145A.D
Abundance
18.502
18.740
18.920
19.011
19.322
18.0
18.5
19.0
19.5
Time (min.)

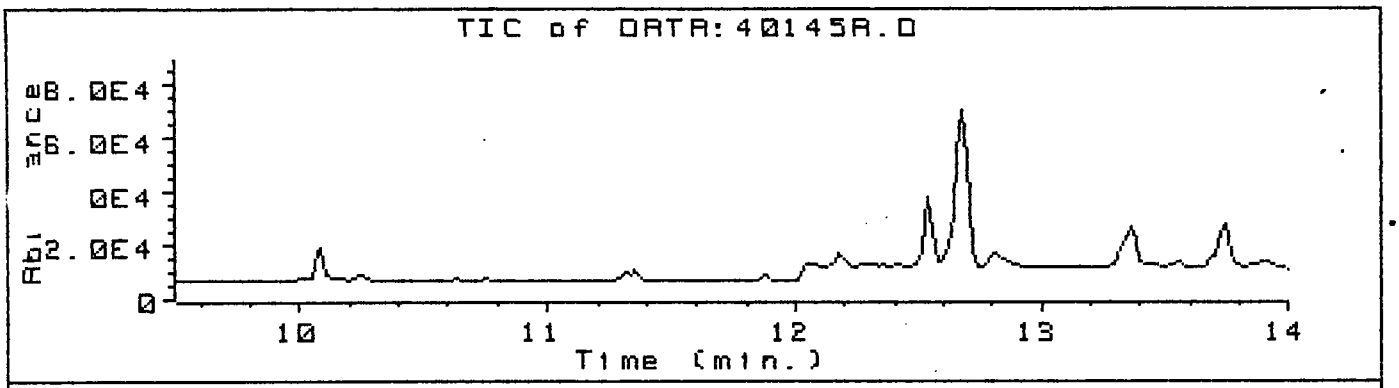

Ion 178.00 amu. from DATA:40145A.D
Ion 184.00 amu. from DATA:40145A.D
Ion 188.00 amu. from DATA:40145A.D
Abundance
19.579
19.684
19.928
20.090
20.402
21.059
19.560
19.725
19.785
20.014
20.092
20.633
20.898
19.5
20.0
20.5
21.0
21.5
Time (min.)

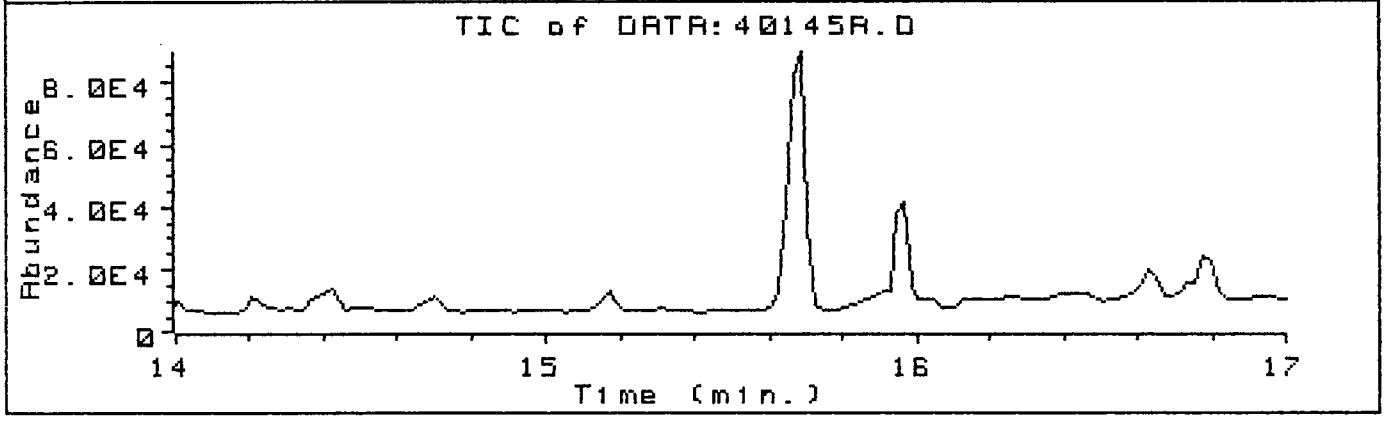

Ion 117.00 amu. from DATA:40145A.D
Ion 141.00 amu. from DATA:40145A.D
Ion 154.00 amu. from DATA:40145A.D
Abundance
Time (min.)

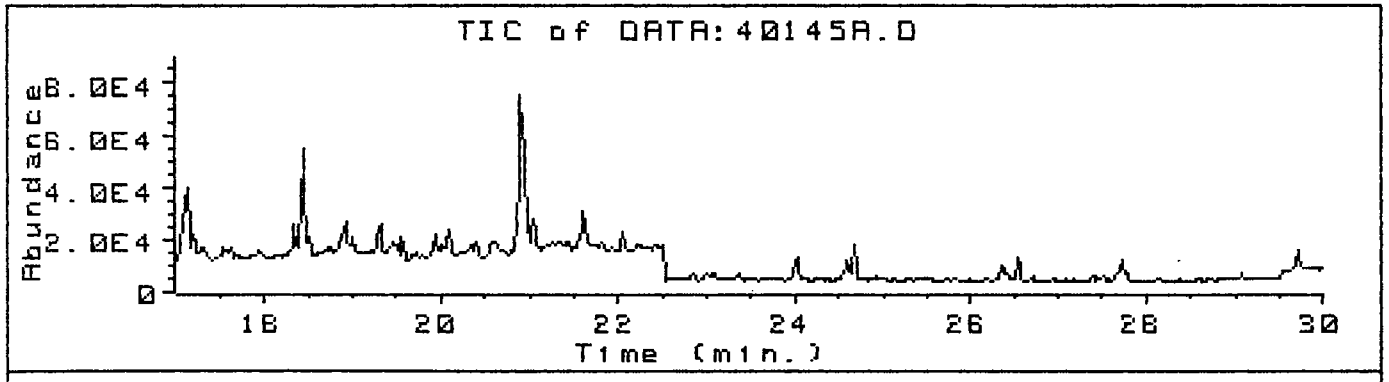

Ion 152.00 amu. from DATA:40145A.D
Ion 164.00 amu. from DATA:40145A.D
Ion 168.00 amu. from DATA:40145A.D
Abundance
Time (min.)

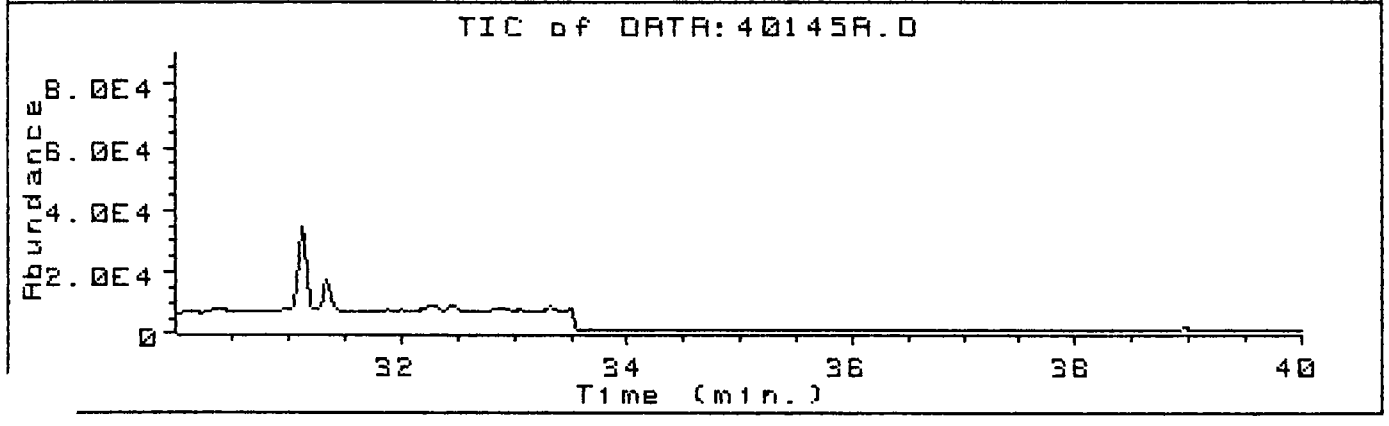

Ion 116.00 amu. from DATA:40145A.D
Ion 118.00 amu. from DATA:40145A.D
Abundance
Time (min.)


Ion 128.00 amu. from DATA:40145A.D
Ion 129.00 amu. from DATA:40145A.D
Ion 134.00 amu. from DATA:40145A.D
Ion 136.00 amu. from DATA:40145A.D
Abundance
Time (min.)


TIC of DATA:40145A.D
Abundance
8.0E4
6.0E4
0E4
2.0E4
0
10
11
12
13
14
Time (min.)


TIC of DATA:40145A.D
Abundance
8.0E4
6.0E4
4.0E4
2.0E4
0
14
15
16
17
Time (min.)


TIC of DATA:40145A.D
Abundance
8.0E4
6.0E4
4.0E4
2.0E4
0
18
20
22
24
26
28
30
Time (min.)


TIC of DATA:40145A.D
Abundance
8.0E4
6.0E4
4.0E4
2.0E4
0
32
34
36
38
40
Time (min.)

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-09 ERT NO.: 40146

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	~~2.4~~ 2.3
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZ (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	~~2.4~~ 2.3

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	~~8.3~~ 9.8
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	~~2.7~~ 2.5
DIBENZOFURAN	ND
FLUORENE	ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	~~11~~ 12
TOTAL PAH'S	~~13~~ 14

ND = Concentration < 95% Confidence Interval of MDL

ERT #	: 40146	Extract Vol., ml	0.500
Field ID	: TD-09	Sample Vol., L	4.000
GC/MS File #	: 40146A	Date Analyze: 11/25/86	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.0	17.132	935137
Phenanthrene-d10	62.5	20.908	1457470
Benz(a)pyrene-d12	49.6	31.123	1145288

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.303	0.000	0.000	1	0.000
dihydroinden	0.783	0.588	10.081	1086725	9.828
indene	1.310	0.598	10.242	146635	0.793
Naphthalene-d8 (Surr.)	2.018	0.738	12.645	686537	2.410
Naphthalene	2.752	0.740	12.684	4771290	12.283
Benz(b)thio	1.739	0.750	12.843	193920	0.790
Quinoline	0.989	0.792	13.560	324376	2.323
Indole	1.485	0.840	14.398	136495	0.651
2-methyl	1.019	0.842	14.426	570117	3.962
1-methyl	1.459	0.858	14.699	341866	1.660
Biphenyl	3.395	0.914	15.664	1653632	3.451
Acenaphthylene	1.540	0.977	16.731	569805	2.622
Acenaphthene	1.268	1.004	17.208	449841	2.512
Dibenzofuran	1.619	1.029	17.627	219845	0.962
Group II					
Flourene-d10 (Surr.)	0.770	0.882	18.445	1595650	11.105
Fluorene	1.034	0.885	18.504	384401	1.993
Dibenzothiophene	1.173	0.987	20.639	160864	0.735
Phenanthrene	2.154	1.002	20.953	1499236	3.730
Anthracene	1.221	1.007	21.057	246236	1.081
Acridine	0.776	1.014	21.205	64335	0.444
Carbazole	1.026	1.031	21.553	70476	0.368
Fluoranthene	1.448	1.149	24.026	417399	1.545
Pyrene-d10 (Surr.)	0.920	1.180	24.680	868555	5.059
Pyrene	1.525	1.176	24.597	363060	1.276
Group III					
Benz(a)anthracene	1.493	0.889	27.654	87423	0.317
Chrysene-d12 (Surr.)	0.451	0.891	27.733	496051	5.948
Chrysene	1.513	0.893	27.788	89619	0.321
Benzofluoranthenes	2.388	0.000	0.000	1	0.000
Benz(e)pyrene	1.841	0.000	0.000	1	0.000
Benz(a)pyrene	1.451	0.000	0.000	1	0.000
Perylene-d12 (Surr.)	1.074	1.007	31.345	690163	3.478
Perylene	1.316	0.000	0.000	1	0.000
Indeno(123,cd)pyrene	1.312	0.000	0.000	1	0.000
Dibenz(ah)anthracene	0.903	0.000	0.000	1	0.000
Benzo(ghi)perylene	1.336	0.000	0.000	1	0.000

CALIBRATION RF's from : 18-Nov-86

ERT #: 40146
TD-09 11/25/86

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	2.41	9.90	24.34	42-102	1.820	26.99%
Flourene-d10 (Surr.)	11.11	9.50	116.90	60-128	0.866	103.96%
Chrysene-d12 (Surr.)	5.95	9.80	60.70	10-54	0.413	66.35%
Pyrene-d10 (Surr.)	5.06	10.05	50.33		0.757	61.20%
Perylene-d12 (Surr.)	3.48	9.40	37.00		0.887	44.81%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.		ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	2.32	-0.96 = 1.4	~~2.3~~ <2.3
BENZO (A) ANTHRACENE	2.80	4.40	0.32		ND
CHRYSENE	2.80	4.40	0.32		ND
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	0.00		ND
TOTAL CARCINOGENIC PAH					~~2.32~~ 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	9.83		9.8
INDENE	1.80	2.90	0.79		ND
NAPHTHALENE	30.00	47.00	12.28		ND
BENZO (B) THIOPHENE	1.40	2.20	0.79		ND
INDOLE	1.20	1.90	0.65		ND
2-METHYLNAPHTHALENE	3.20	5.00	3.96	-4.94	~~<5.0~~ ND
1-METHYLNAPHTHALENE	2.00	3.10	1.66		ND
BIPHENYL	11.00	17.00	3.45		ND
ACENAPHTHYLENE	1.10	1.70	2.62	-2.3	~~2.6~~ ND
ACENAPHTHENE	0.83	1.30	2.51		2.5
DIBENZOFURAN	0.77	1.20	0.96	-4.2	~~<1.2~~ ND
FLOURENE	0.56	0.88	1.99	-1.76	~~2.0~~ ND
DIBENZOTHIOPHENE	4.00	6.30	0.73		ND
PHENANTHRENE	2.00	3.10	~~3.73~~	-9.8	~~3.7~~ ND
ANTHRACENE	2.20	3.40	1.08		ND
ACRIDINE	1.60	2.50	0.44		ND
CARBAZOLE	1.70	2.60	0.37		ND
FLUORANTHENE	2.80	4.40	1.55		ND
PYRENE	2.60	4.10	1.28		ND
BENZO (E) PYRENE	0.96	1.50	0.00		ND
PERYLENE	1.00	1.60	0.00		ND
TOTAL OTHER PAH					~~20.7~~
TOTAL PAH'S					~~23.0~~

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-09 ERT NO.: 40146

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	2.3
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	2.3

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	9.8
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	< 5.0
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	2.6
ACENAPHTHENE	2.5
DIBENZOFURAN	< 1.2
FLOURENE	2
DIBENZOTHIOPHENE	ND
PHENANTHRENE	3.7
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	21
TOTAL PAH'S	23

ND = Concentration < 95% Confidence Interval of MDL

TD-09

ERT #: 40146

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/24/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	2.45	9.90	24.75	42-102	~~1.985~~ 1.82	~~24.76%~~ 27.0 59.4
Flourene-d10 (Surr.)	11.12	9.50	117.10	60-128	~~0.769~~ 0.866	~~117.12%~~ 104.0
Chyrsene-d12 (Surr.)	6.01	9.80	61.29	10-54	~~0.447~~ 0.415	~~61.28%~~ 66.3
Pyrene-d10 (Surr.)	5.05	10.05	50.25		0.922	50.26%
Perylene-d12 (Surr.)	3.54	9.40	37.71		1.054	37.70%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	2.35	2.35	2.35	1.90
BENZO (A) ANTHRACENE	2.80	0.32	0.00	0.00	4.40
CHYRSENE	2.80	0.32	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.00	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			2.35		

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	8.33	8.33	8.33	3.40
INDENE	1.80	0.87	0.00	0.00	2.90
NAPHTHALENE	30.00	12.48	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.68	0.00	0.00	2.20
INDOLE	1.20	0.85	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	2.20	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	1.33	0.00	0.00	3.10
BIPHENYL	11.00	0.64	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	2.56	2.56	2.56	1.70
ACENAPHTHENE	0.83	2.65	2.65	2.65	1.30
DIBENZOFURAN	0.77	0.65	0.00	0.00	1.20
FLOURENE	0.56	2.00	2.00	2.00	0.88
DIBENZOTHIOPHENE	4.00	0.79	0.00	0.00	6.30
PHENANTHRENE	2.00	3.77	3.77	3.77	3.10
ANTHRACENE	2.20	1.10	0.00	0.00	3.40
ACRIDINE	1.60	0.75	0.00	0.00	2.50
CARBAZOLE	1.70	0.52	0.00	0.00	2.60
FLUORANTHENE	2.80	1.55	0.00	0.00	4.40
PYRENE	2.60	1.27	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.00	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	19.31		
		TOTAL PAH'S	21.66		

TD-09

ERT #	: 40146	Extract Vol., ml	0.500
Field ID	: MATRIX CHECK	Sample Vol., L	4.000
GC/MS File #	: 40146A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.132	935137
Phenanthrene-d10	62.500	20.908	1457470
Benz(a)pyrene-d12	49.600	31.123	1145288

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.081	1086725	8.332	0.588
indene	1.199	10.242	146635	0.866	0.598
Naphthalene-d8 (Surr.)	1.985	12.645	686537	2.451	0.738
Naphthalene	2.708	12.684	4771290	12.484	0.740
Benz(b)thio	2.025	12.843	193920	0.678	0.750
Quinoline	0.976	13.560	324376	2.355	0.792
Indole	1.135	14.398	136495	0.852	0.840
2-methyl	1.832	14.426	570117	2.205	0.842
1-methyl	1.825	14.699	341866	1.327	0.858
Biphenyl	18.290	15.664	1653632	0.641	0.914
Acenaphthylene	1.578	16.731	569805	2.558	0.977
Acenaphthene	1.202	17.208	449841	2.651	1.004
Dibenzofuran	2.378	17.627	219845	0.655	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.445	1595650	11.124	0.882
Fluorene	1.030	18.504	384401	2.000	0.885
Dibenzothiophene	1.088	20.639	160864	0.793	0.987
Phenanthrene	2.133	20.953	1499236	3.768	1.002
Anthracene	1.197	21.057	246236	1.102	1.007
Acridine	0.458	21.205	64335	0.753	1.014
Carbazole	0.726	21.553	70476	0.520	1.031
Fluoranthene	1.445	24.026	417399	1.548	1.149
Pyrene-d10 (Surr.)	0.922	24.680	868555	5.051	1.180
Pyrene	1.527	24.597	363060	1.274	1.176
Group III					
Benz(a)anthracene	1.487	27.654	87423	0.318	0.889
Chyrsene-d12 (Surr.)	0.447	27.733	496051	6.006	0.891
Chyrsene	1.518	27.788	89619	0.319	0.893
Benzofluoranthenes	2.065	0.000	1	0.000	0.000
Benz(e)pyrene	1.654	0.000	1	0.000	0.000
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	31.345	690163	3.544	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

MAB 10/11

ERT #	:	40146	Extract Vol., ml	0.500
Field ID	:	TD-09	Sample Vol., L	4.000
GC/MS File #	:	40146A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.132	935137
Phenanthrene-d10	62.500	20.908	1457470
Benz(a)pyrene-d12	49.600	31.123	1145288

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.081	1086725	8.332	0.588
indene	1.199	10.242	146635	0.866	0.598
Naphthalene-d8 (Surr.)	1.985	12.645	686537	2.451	0.738
Naphthalene	2.708	12.684	4771290	12.484	0.740
Benz(b)thio	2.025	12.843	193920	0.678	0.750
Quinoline	0.976	13.560	324376	2.355	0.792
Indole	1.135	14.398	136495	0.852	0.840
2-methyl	1.832	14.426	570117	2.205	0.842
1-methyl	1.825	14.699	341866	1.327	0.858
Biphenyl	18.290	15.664	1653632	0.641	0.914
Acenaphthylene	1.578	16.731	569805	2.558	0.977
Acenaphthene	1.202	17.208	449841	2.651	1.004
Dibenzofuran	2.378	17.627	219845	0.655	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.445	1595650	11.124	0.882
Fluorene	1.030	18.504	384401	2.000	0.885
Dibenzothiophene	1.088	20.639	160864	0.793	0.987
Phenanthrene	2.133	20.953	1499236	3.768	1.002
Anthracene	1.197	21.057	246236	1.102	1.007
Acridine	0.458	21.205	64335	0.753	1.014
Carbazole	0.726	21.553	70476	0.520	1.031
Fluoranthene	1.445	24.026	417399	1.548	1.149
Pyrene-d10 (Surr.)	0.922	24.680	868555	5.051	1.180
Pyrene	1.527	24.597	363060	1.274	1.176
Group III					
Benz(a)anthracene	1.487	27.654	87423	0.318	0.889
Chyrsene-d12 (Surr.)	0.447	27.733	496051	6.006	0.891
Chyrsene	1.518	27.788	89619	0.319	0.893
Benzofluoranthenes	2.065	0.000	1	0.000	0.000
Benz(e)pyrene	1.654	0.000	1	0.000	0.000
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	31.345	690163	3.544	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

ERT #: 40146

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	2.45	9.90	24.75	42-102	1.820	26.99%
Flourene-d10 (Surr.)	11.12	9.50	117.10	60-128	0.866	103.96%
Chyrsene-d12 (Surr.)	6.01	9.80	61.29	10-54	0.413	66.35%
Pyrene-d10 (Surr.)	5.05	10.05	50.25		0.757	61.20%
Perylene-d12 (Surr.)	3.54	9.40	37.71		0.887	44.81%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	2.35	2.35	2.35	1.90
BENZO (A) ANTHRACENE	2.80	0.32	0.00	0.00	4.40
CHYRSENE	2.80	0.32	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.00	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			2.35		

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	8.33	8.33	8.33	3.40
INDENE	1.80	0.87	0.00	0.00	2.90
NAPHTHALENE	30.00	12.48	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.68	0.00	0.00	2.20
INDOLE	1.20	0.85	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	2.20	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	1.33	0.00	0.00	3.10
BIPHENYL	11.00	0.64	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	2.56	2.56	2.56	1.70
ACENAPHTHENE	0.83	2.65	2.65	2.65	1.30
DIBENZOFURAN	0.77	0.65	0.00	0.00	1.20
FLOURENE	0.56	2.00	2.00	2.00	0.88
DIBENZOTHIOPHENE	4.00	0.79	0.00	0.00	6.30
PHENANTHRENE	2.00	3.77	3.77	3.77	3.10
ANTHRACENE	2.20	1.10	0.00	0.00	3.40
ACRIDINE	1.60	0.75	0.00	0.00	2.50
CARBAZOLE	1.70	0.52	0.00	0.00	2.60
FLUORANTHENE	2.80	1.55	0.00	0.00	4.40
PYRENE	2.60	1.27	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.00	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	19.31		
		TOTAL PAH'S	21.66		

*** Internal Standard ***

Operator: LOUIE POUNDS 25 Nov 86 7:46 pm
Method File Name : PAH.M
Sample Info : SLP TD-09 ERT#40146 : TUE. 25 NOV. 86
M c Info: 1.0 UL OF SAMPLE
gration File Name : DATA:40146A.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	Peak Type	Int Type	Ret Time	Signal Description			Compound Name	Area	Amount
1		1	-------	Mass	118.00	amu	2,3-BENZOFUR	*** Not Found ***	
2		1VV	10.081	Mass	118.00	amu	2,3-DIHYDROI	1086725	72.65 ng/mL
3		1VV	10.242	Mass	116.00	amu	INDENE	146635	12.24 ng/mL
4		1VV	12.645	Mass	136.00	amu	NAPHTHALENE,	686537	13.34 ng/mL
5		1PV	12.684	Mass	128.00	amu	NAPTHALENE	4771290	91.69 ng/mL
6		1PV	12.843	Mass	134.00	amu	BENZO(b)THIO	193920	10.67 ng/mL
7		1VH	13.560	Mass	129.00	amu	QUINOLINE	324376	19.22 ng/mL
8		1VV	14.398	Mass	117.00	amu	INDOLE	136495	4.999 ng/mL
9		1VV	14.426	Mass	141.00	amu	2-METHYLNAPT	570117	16.15 ng/mL
10		1VV	14.699	Mass	141.00	amu	1-METHYLNAPT	341866	6.710 ng/mL
11		1PV	15.664	Mass	154.00	amu	BIPHENYL	1653632	
12		1VV	16.731	Mass	152.00	amu	ACENAPHTHYLE	569805	19.21 ng/mL
13	+ISTD	1VV	17.132	Mass	164.00	amu	ACENAPTHTHEN	935137	53.00 ng/mL
		1VV	17.208	Mass	154.00	amu	ACENAPHTHENE	449841	14.72 ng/mL
		1VV	17.627	Mass	168.00	amu	DIBENZOFURAN	219845	4.067 ng/mL
16		2VV	18.445	Mass	176.00	amu	FLUORENE, d1	1595650	~~150.6 ng/mL~~
17		2VV	18.504	Mass	166.00	amu	FLUORENE	384401	17.57 ng/mL
18		2BV	20.639	Mass	184.00	amu	DIBENZOTHIOP	160864	5.831 ng/mL
19	+ISTD	2PV	20.908	Mass	188.00	amu	PHENANTHRENE	1457470	62.50 ng/mL
20		2VV	20.953	Mass	178.00	amu	PHENANTHRENE	1499236	
21		2VV	21.057	Mass	178.00	amu	ANTHRACENE	246236	
22		2VV	21.205	Mass	179.00	amu	ACRIDINE	64335	
23		1VV	21.553	Mass	167.00	amu	CARBAZOLE	70476	
24		1PV	24.026	Mass	202.00	amu	FLUORANTHENE	417399	
25		2VV	24.680	Mass	212.00	amu	PYRENE, d10	868555	44.04 ng/mL
26		2BV	~~24.597~~	Mass	202.00	amu	PYRENE	363060	7.836 ng/mL
27		3VV	27.654	Mass	228.00	amu	BENZ(a)ANTHR	87423	
28		3PV	27.733	Mass	240.00	amu	CHYRSENE, d(	496051	45.15 ng/mL
29		3VV	27.788	Mass	228.00	amu	CHYRSENE	89619	1.949 ng/mL
30		3	-------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
31		3	-------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
32		3	-------	Mass	252.00	amu	BENZ(e)PYREN	*** Not Found ***	
33	+ISTD	3BV	31.123	Mass	264.00	amu	BENZ(a)PYREN	1145288	49.60 ng/mL
34		3	-------	Mass	252.00	amu	BENZ(a)PYREN	*** Not Found ***	
35		3VV	31.345	Mass	264.00	amu	PERYLENE, d1	690163	35.29 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 ***	
		3	-------	Mass	276.00	amu	BENZO(g,h,i)	*** Not Found ***	
--------		PV	8.994	Mass	116.00		-Uncalibrated-	88437	88437 ng/mL
--------		VV	9.071	Mass	118.00		-Uncalibrated-	113399	113399 ng/mL
--------		VV	9.285	Mass	118.00		-Uncalibrated-	90016	90016 ng/mL
--------		VV	9.362	Mass	118.00		-Uncalibrated-	225142	225142 ng/mL
--------		PV	10.069	Mass	116.00		-Uncalibrated-	192348	192348 ng/mL
--------		VV	10.628	Mass	116.00		-Uncalibrated-	67278	67278 ng/mL

--------	VV	11.362	Mass	116.00	-Uncalibrated-	178386	178386	ng/mL
--------	BBA	11.875	Mass	118.00	-Uncalibrated-	65995	65995	ng/mL
--------	VV	11.876	Mass	116.00	-Uncalibrated-	73213	73213	ng/mL
--------	PH	12.064	Mass	129.00	-Uncalibrated-	169664	169664	ng/mL
--------	PH	12.083	Mass	134.00	-Uncalibrated-	66746	66746	ng/mL
--------	VH	12.178	Mass	129.00	-Uncalibrated-	483228	483228	ng/mL
------	PV	12.168	Mass	128.00	-Uncalibrated-	14868	14868	ng/mL
-----	PV	12.185	Mass	136.00	-Uncalibrated-	15006	15006	ng/mL
------	VV	12.185	Mass	134.00	-Uncalibrated-	81224	81224	ng/mL
--------	PV	12.293	Mass	136.00	-Uncalibrated-	35395	35395	ng/mL
--------	VV	12.281	Mass	134.00	-Uncalibrated-	46114	46114	ng/mL
--------	VV	12.364	Mass	134.00	-Uncalibrated-	30215	30215	ng/mL
--------	VV	12.414	Mass	128.00	-Uncalibrated-	15378	15378	ng/mL
--------	VV	12.542	Mass	134.00	-Uncalibrated-	1718851	1718851	ng/mL
--------	PV	12.569	Mass	128.00	-Uncalibrated-	22326	22326	ng/mL
--------	VH	12.605	Mass	129.00	-Uncalibrated-	206207	206207	ng/mL
--------	VV	12.644	Mass	134.00	-Uncalibrated-	218371	218371	ng/mL
--------	VH	12.685	Mass	129.00	-Uncalibrated-	826726	826726	ng/mL
--------	VV	12.721	Mass	136.00	-Uncalibrated-	50534	50534	ng/mL
--------	PV	12.810	Mass	128.00	-Uncalibrated-	180818	180818	ng/mL
--------	VV	13.342	Mass	136.00	-Uncalibrated-	1060659	1060659	ng/mL
--------	PV	13.375	Mass	134.00	-Uncalibrated-	340240	340240	ng/mL
--------	VH	13.748	Mass	129.00	-Uncalibrated-	962422	962422	ng/mL
--------	VV	13.792	Mass	136.00	-Uncalibrated-	163215	163215	ng/mL
--------	VH	13.915	Mass	129.00	-Uncalibrated-	410994	410994	ng/mL
--------	PH	14.037	Mass	117.00	-Uncalibrated-	23885	23885	ng/mL
--------	PV	14.207	Mass	141.00	-Uncalibrated-	14739	14739	ng/mL
--------	PV	14.224	Mass	154.00	-Uncalibrated-	18851	18851	ng/mL
--------	BV	14.249	Mass	117.00	-Uncalibrated-	557786	557786	ng/mL
--------	VV	14.307	Mass	141.00	-Uncalibrated-	39588	39588	ng/mL
--------	VV	14.507	Mass	117.00	-Uncalibrated-	203060	203060	ng/mL
--------	VV	15.170	Mass	117.00	-Uncalibrated-	488755	488755	ng/mL
------	VV	15.505	Mass	117.00	-Uncalibrated-	55604	55604	ng/mL
------	PV	15.688	Mass	117.00	-Uncalibrated-	4475830	4475830	ng/mL
--------	VV	15.851	Mass	117.00	-Uncalibrated-	100665	100665	ng/mL
--------	VV	15.909	Mass	141.00	-Uncalibrated-	558412	558412	ng/mL
--------	VV	15.960	Mass	117.00	-Uncalibrated-	1698644	1698644	ng/mL
--------	VV	15.980	Mass	141.00	-Uncalibrated-	120347	120347	ng/mL
--------	VB	16.035	Mass	141.00	-Uncalibrated-	316757	316757	ng/mL
--------	BV	16.155	Mass	152.00	-Uncalibrated-	70000	70000	ng/mL
--------	BV	16.174	Mass	168.00	-Uncalibrated-	55390	55390	ng/mL
--------	BV	16.200	Mass	164.00	-Uncalibrated-	45047	45047	ng/mL
--------	VV	16.200	Mass	152.00	-Uncalibrated-	55432	55432	ng/mL
--------	VV	16.252	Mass	152.00	-Uncalibrated-	209844	209844	ng/mL
--------	VV	16.408	Mass	168.00	-Uncalibrated-	128460	128460	ng/mL
--------	VV	16.452	Mass	168.00	-Uncalibrated-	86261	86261	ng/mL
--------	VV	16.597	Mass	152.00	-Uncalibrated-	290125	290125	ng/mL
--------	BH	16.638	Mass	164.00	-Uncalibrated-	343429	343429	ng/mL
--------	PV	16.786	Mass	164.00	-Uncalibrated-	299775	299775	ng/mL
--------	PV	16.785	Mass	154.00	-Uncalibrated-	163929	163929	ng/mL
--------	VV	17.059	Mass	152.00	-Uncalibrated-	210220	210220	ng/mL
--------	VV	17.077	Mass	168.00	-Uncalibrated-	317682	317682	ng/mL
--------	PV	17.076	Mass	154.00	-Uncalibrated-	444494	444494	ng/mL
--------	VV	17.207	Mass	152.00	-Uncalibrated-	386674	386674	ng/mL
--------	VV	17.246	Mass	168.00	-Uncalibrated-	90893	90893	ng/mL
--------	VV	17.291	Mass	154.00	-Uncalibrated-	49125	49125	ng/mL
--------	VV	17.332	Mass	152.00	-Uncalibrated-	291013	291013	ng/mL
------	VV	17.564	Mass	168.00	-Uncalibrated-	144849	144849	ng/mL
------	VV	18.339	Mass	168.00	-Uncalibrated-	191957	191957	ng/mL
--------	PV	18.445	Mass	164.00	-Uncalibrated-	20140	20140	ng/mL
--------	VV	18.693	Mass	168.00	-Uncalibrated-	217782	217782	ng/mL
--------	VV	18.745	Mass	166.00	-Uncalibrated-	188338	188338	ng/mL
--------	VV	18.883	Mass	168.00	-Uncalibrated-	1381364	1381364	ng/mL
--------	VV	18.922	Mass	166.00	-Uncalibrated-	423805	423805	ng/mL
--------	VV	18.921	Mass	152.00	-Uncalibrated-	206526	206526	ng/mL

--------	VV	19.324	Mass	166.00	-Uncalibrated-	267159	267159	ng/mL
--------	VV	19.315	Mass	152.00	-Uncalibrated-	147533	147533	ng/mL
--------	PV	19.452	Mass	152.00	-Uncalibrated-	49430	49430	ng/mL
--------	VB	19.497	Mass	168.00	-Uncalibrated-	235773	235773	ng/mL
--------	PH	19.563	Mass	184.00	-Uncalibrated-	440329	440329	ng/mL
--------	PH	19.580	Mass	178.00	-Uncalibrated-	17003	17003	ng/mL
------	PV	19.663	Mass	178.00	-Uncalibrated-	12771	12771	ng/mL
-----	VV	19.682	Mass	184.00	-Uncalibrated-	47473	47473	ng/mL
--------	VV	19.727	Mass	184.00	-Uncalibrated-	71093	71093	ng/mL
--------	VV	19.712	Mass	178.00	-Uncalibrated-	18899	18899	ng/mL
--------	VV	19.784	Mass	184.00	-Uncalibrated-	54504	54504	ng/mL
--------	VV	19.886	Mass	178.00	-Uncalibrated-	43922	43922	ng/mL
--------	VV	19.930	Mass	178.00	-Uncalibrated-	97847	97847	ng/mL
--------	PV	20.008	Mass	184.00	-Uncalibrated-	75868	75868	ng/mL
--------	PH	20.052	Mass	179.00	-Uncalibrated-	90579	90579	ng/mL
--------	VV	20.050	Mass	184.00	-Uncalibrated-	59723	59723	ng/mL
--------	VV	20.049	Mass	178.00	-Uncalibrated-	165869	165869	ng/mL
--------	VV	20.105	Mass	184.00	-Uncalibrated-	94314	94314	ng/mL
--------	PV	20.330	Mass	184.00	-Uncalibrated-	81507	81507	ng/mL
--------	VV	20.356	Mass	167.00	-Uncalibrated-	194683	194683	ng/mL
--------	PV	20.416	Mass	179.00	-Uncalibrated-	71295	71295	ng/mL
--------	VV	20.411	Mass	178.00	-Uncalibrated-	75825	75825	ng/mL
--------	PV	20.600	Mass	167.00	-Uncalibrated-	178085	178085	ng/mL
--------	PV	20.897	Mass	184.00	-Uncalibrated-	240501	240501	ng/mL
--------	VV	20.956	Mass	179.00	-Uncalibrated-	291062	291062	ng/mL
--------	VV	21.042	Mass	179.00	-Uncalibrated-	547524	547524	ng/mL
--------	PV	21.039	Mass	167.00	-Uncalibrated-	74125	74125	ng/mL
--------	VV	21.261	Mass	179.00	-Uncalibrated-	85048	85048	ng/mL
--------	VV	21.360	Mass	179.00	-Uncalibrated-	122157	122157	ng/mL
--------	VV	21.426	Mass	179.00	-Uncalibrated-	95442	95442	ng/mL
--------	VV	21.593	Mass	167.00	-Uncalibrated-	167395	167395	ng/mL
------	VV	21.610	Mass	179.00	-Uncalibrated-	598176	598176	ng/mL
-----	VV	21.817	Mass	184.00	-Uncalibrated-	112298	112298	ng/mL
------	PV	22.229	Mass	179.00	-Uncalibrated-	61900	61900	ng/mL
--------	VV	22.855	Mass	212.00	-Uncalibrated-	107282	107282	ng/mL
--------	VV	22.997	Mass	212.00	-Uncalibrated-	61325	61325	ng/mL
--------	VV	22.994	Mass	202.00	-Uncalibrated-	46554	46554	ng/mL
--------	VV	23.082	Mass	212.00	-Uncalibrated-	162815	162815	ng/mL
--------	VV	23.362	Mass	212.00	-Uncalibrated-	105911	105911	ng/mL
--------	BV	24.051	Mass	212.00	-Uncalibrated-	94895	94895	ng/mL
--------	PV	25.741	Mass	212.00	-Uncalibrated-	63159	63159	ng/mL
--------	VV	25.844	Mass	212.00	-Uncalibrated-	75403	75403	ng/mL
--------	PH	26.552	Mass	240.00	-Uncalibrated-	490120	490120	ng/mL
--------	VV	26.713	Mass	228.00	-Uncalibrated-	132673	132673	ng/mL
--------	VV	26.950	Mass	228.00	-Uncalibrated-	47059	47059	ng/mL
--------	VV	27.404	Mass	228.00	-Uncalibrated-	42626	42626	ng/mL
--------	PV	27.524	Mass	240.00	-Uncalibrated-	94158	94158	ng/mL
--------	PV	29.729	Mass	264.00	-Uncalibrated-	117098	117098	ng/mL
--------	PV	29.716	Mass	252.00	-Uncalibrated-	128499	128499	ng/mL
--------	BV	32.248	Mass	252.00	-Uncalibrated-	76048	76048	ng/mL

Error : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.417 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #30's Description at 30.337 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.388 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #32's Description at 31.051 +/- 0.155 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #34's Description at 31.180 +/- 0.156 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #36's Description at 31.409 +/- 0.157 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.705 +/- 0.174 min.
Error : Could not find Calibration Peak

Error : Could not find Calibration Peak
No Peak of Calibration Peak #39's Description at 35.691 +/- 0.178 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

Operator: LOUIE POUNDS 25 Nov 86 7:46 pm
Method File Name : PAH.M
Sample Info : SLP TD-09 ERT#40146 : TUE. 25 NOV. 86
Misc Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40146A.I
Bottle Number : 0

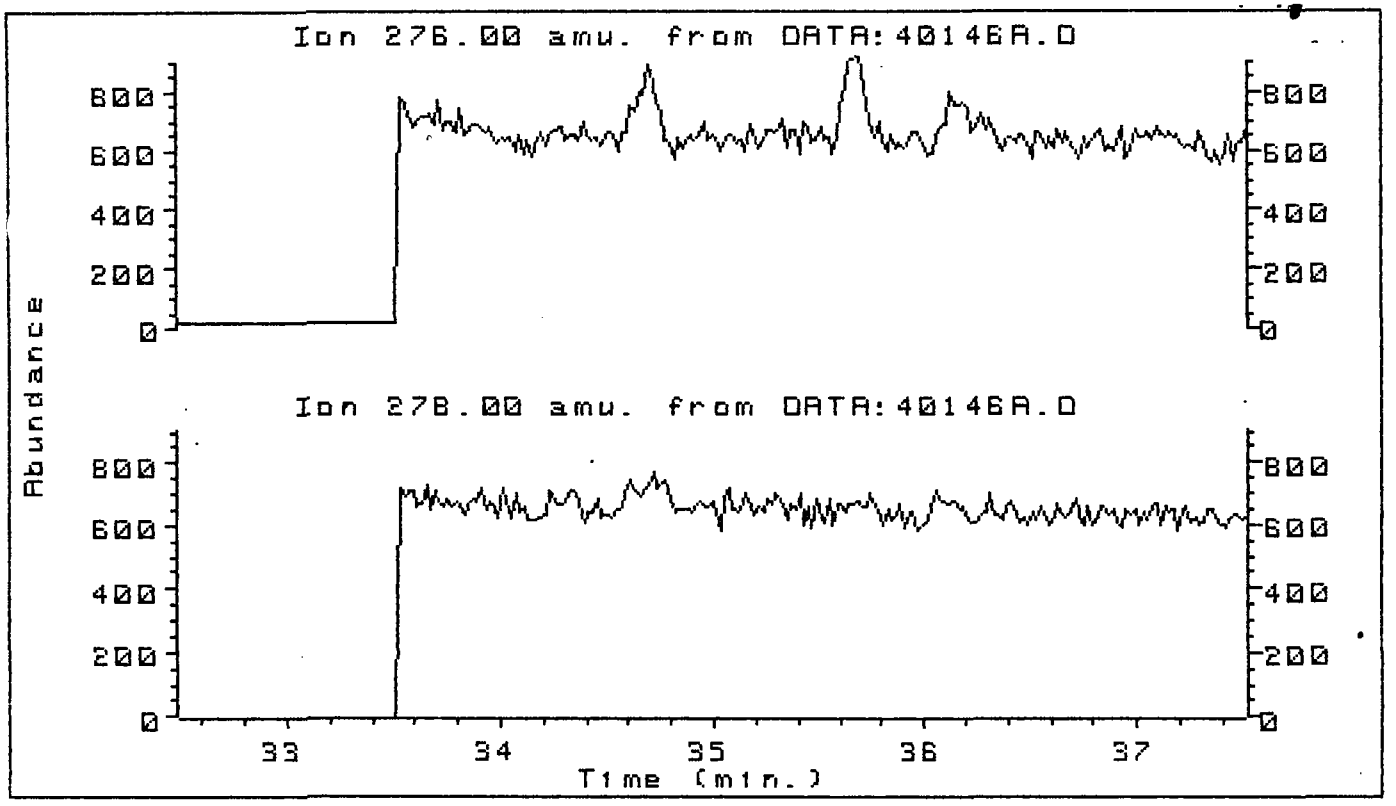
Ret Time	Signal Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
8.994	Mass 116.00 amu	PV	88437	2425	100.00	11.85	100.00	45.98
9.071	Mass 118.00 amu	VV	113399	4877	100.00	6.73	100.00	10.43
9.285	Mass 118.00 amu	VV	90016	3037	100.00	5.34	100.00	8.28
9.362	Mass 118.00 amu	VV	225142	5290	100.00	13.36	100.00	20.72
10.081	Mass 118.00 amu	VV	1086725	43047	84.96	64.50	100.00	100.00
10.069	Mass 116.00 amu	PV	192348	7015	15.04	25.77	17.70	100.00
10.242	Mass 116.00 amu	VV	146635	4988	100.00	19.65	100.00	76.23
10.628	Mass 116.00 amu	VV	67278	2089	100.00	9.01	100.00	34.98
.288	Mass 118.00 amu	VV	103624	2599	100.00	6.15	100.00	9.54
11.362	Mass 116.00 amu	VV	178386	4551	100.00	23.90	100.00	92.74
11.875	Mass 118.00 amu	BBA	65995	2278	47.41	3.92	90.14	6.07
11.876	Mass 116.00 amu	VV	73213	1998	52.59	9.81	100.00	38.06
12.064	Mass 129.00 amu	PH	169664	4388	100.00	5.01	100.00	17.63
12.083	Mass 134.00 amu	PH	66746	2637	100.00	2.48	100.00	3.88
12.178	Mass 129.00 amu	VH	483228	5234	97.02	14.28	100.00	50.21
12.168	Mass 128.00 amu	PV	14868	669	2.98	0.30	3.08	0.31
12.185	Mass 136.00 amu	PV	15006	839	15.59	0.75	18.48	1.41
12.185	Mass 134.00 amu	VV	81224	4094	84.41	3.01	100.00	4.73
12.293	Mass 136.00 amu	PV	35395	584	43.42	1.76	76.76	3.34
12.281	Mass 134.00 amu	VV	46114	1758	56.58	1.71	100.00	2.68
12.364	Mass 134.00 amu	VV	30215	1225	100.00	1.12	100.00	1.76
12.414	Mass 128.00 amu	VV	15378	367	100.00	0.31	100.00	0.32
.542	Mass 134.00 amu	VV	1718851	77734	100.00	63.76	100.00	100.00
12.569	Mass 128.00 amu	PV	22326	667	100.00	0.45	100.00	0.47
12.605	Mass 129.00 amu	VH	206207	3481	100.00	6.09	100.00	21.43
12.645	Mass 136.00 amu	VV	686537	20981	75.87	34.13	100.00	64.73
12.644	Mass 134.00 amu	VV	218371	7031	24.13	8.10	31.81	12.70

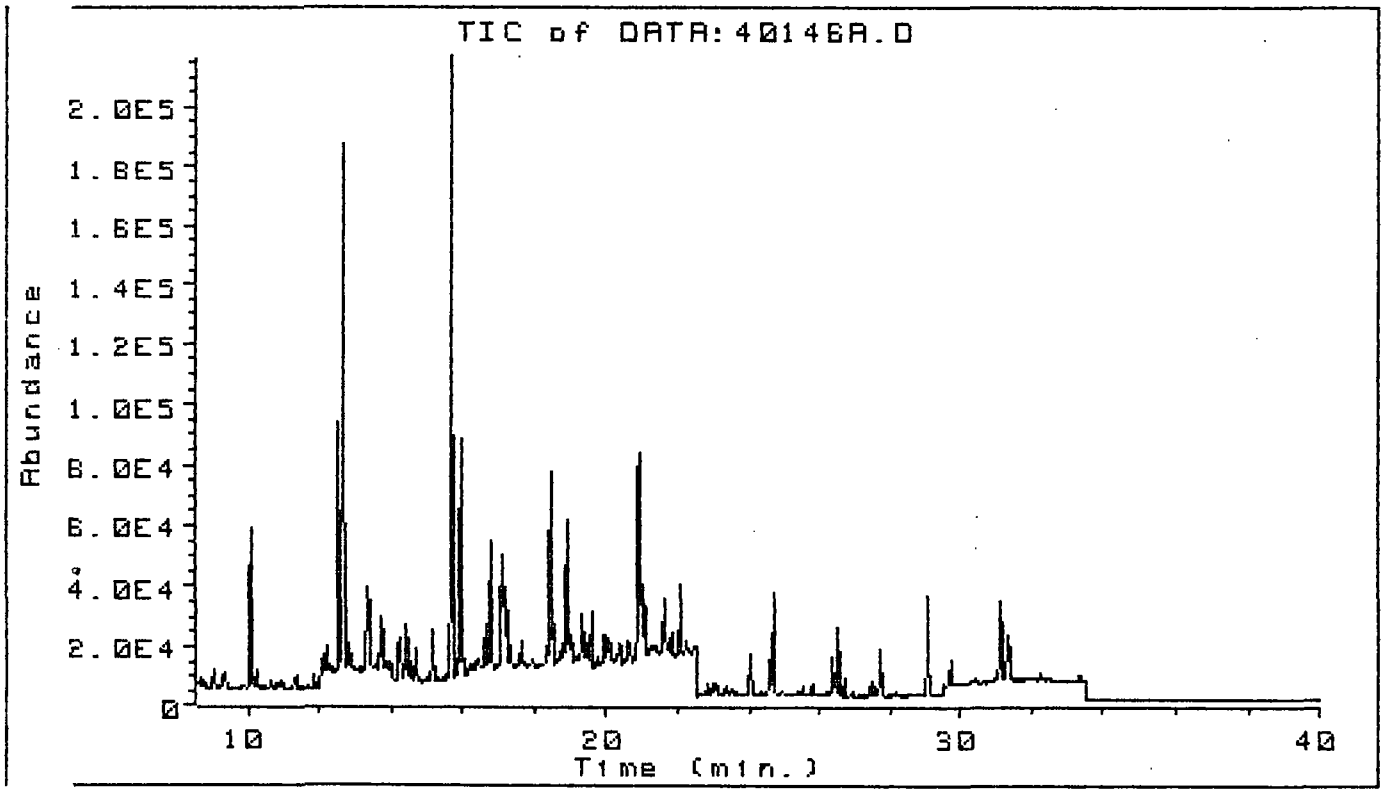
12.685	Mass	129.00	amu	VH	826726	18860	14.77	24.43	17.33	85.50
12.684	Mass	128.00	amu	PV	4771290	150561	85.23	95.34	100.00	100.00
12.721	Mass	136.00	amu	VV	50534	2294	100.00	2.51	100.00	4.76
12.810	Mass	128.00	amu	PV	180818	5421	100.00	3.61	100.00	3.79
343	Mass	134.00	amu	PV	193920	4922	100.00	7.19	100.00	11.28
13.342	Mass	136.00	amu	VV	1060659	22646	100.00	52.73	100.00	100.00
13.375	Mass	134.00	amu	PV	340240	10292	100.00	12.62	100.00	19.79
13.560	Mass	129.00	amu	VH	324376	4585	100.00	9.59	100.00	33.70
13.748	Mass	129.00	amu	VH	962422	19527	100.00	28.44	100.00	100.00
13.792	Mass	136.00	amu	VV	163215	3001	100.00	8.11	100.00	15.39
13.915	Mass	129.00	amu	VH	410994	5178	100.00	12.15	100.00	42.70
14.037	Mass	117.00	amu	PH	23885	2735	100.00	0.31	100.00	0.53
14.207	Mass	141.00	amu	PV	14739	487	100.00	0.75	100.00	2.59
14.224	Mass	154.00	amu	PV	18851	813	100.00	0.68	100.00	1.14
14.249	Mass	117.00	amu	BV	557786	13093	100.00	7.21	100.00	12.46
14.307	Mass	141.00	amu	VV	39588	850	100.00	2.02	100.00	6.94
14.398	Mass	117.00	amu	VV	136495	3019	100.00	1.76	100.00	3.05
.426	Mass	141.00	amu	VV	570117	16225	100.00	29.06	100.00	100.00
14.507	Mass	117.00	amu	VV	203060	7139	100.00	2.62	100.00	4.54
14.699	Mass	141.00	amu	VV	341866	9852	100.00	17.43	100.00	59.96
15.170	Mass	117.00	amu	VV	488755	15422	100.00	6.31	100.00	10.92
15.505	Mass	117.00	amu	VV	55604	1948	100.00	0.72	100.00	1.24
15.664	Mass	154.00	amu	PV	1653632	63133	100.00	59.49	100.00	100.00
15.688	Mass	117.00	amu	PV	4475830	169256	100.00	57.82	100.00	100.00
15.851	Mass	117.00	amu	VV	100665	3450	100.00	1.30	100.00	2.25
15.909	Mass	141.00	amu	VV	558412	8137	100.00	28.46	100.00	97.95
15.960	Mass	117.00	amu	VV	1698644	74763	100.00	21.94	100.00	37.95
15.980	Mass	141.00	amu	VV	120347	5349	100.00	6.13	100.00	21.11
16.035	Mass	141.00	amu	VB	316757	6910	100.00	16.15	100.00	55.56
155	Mass	152.00	amu	BV	70000	2424	100.00	2.82	100.00	12.28
16.174	Mass	168.00	amu	BV	55390	1435	100.00	1.80	100.00	4.01
16.200	Mass	164.00	amu	BV	45047	742	44.83	2.74	81.27	4.82
16.200	Mass	152.00	amu	VV	55432	2505	55.17	2.23	100.00	9.73
16.252	Mass	152.00	amu	VV	209844	3163	100.00	8.44	100.00	36.83

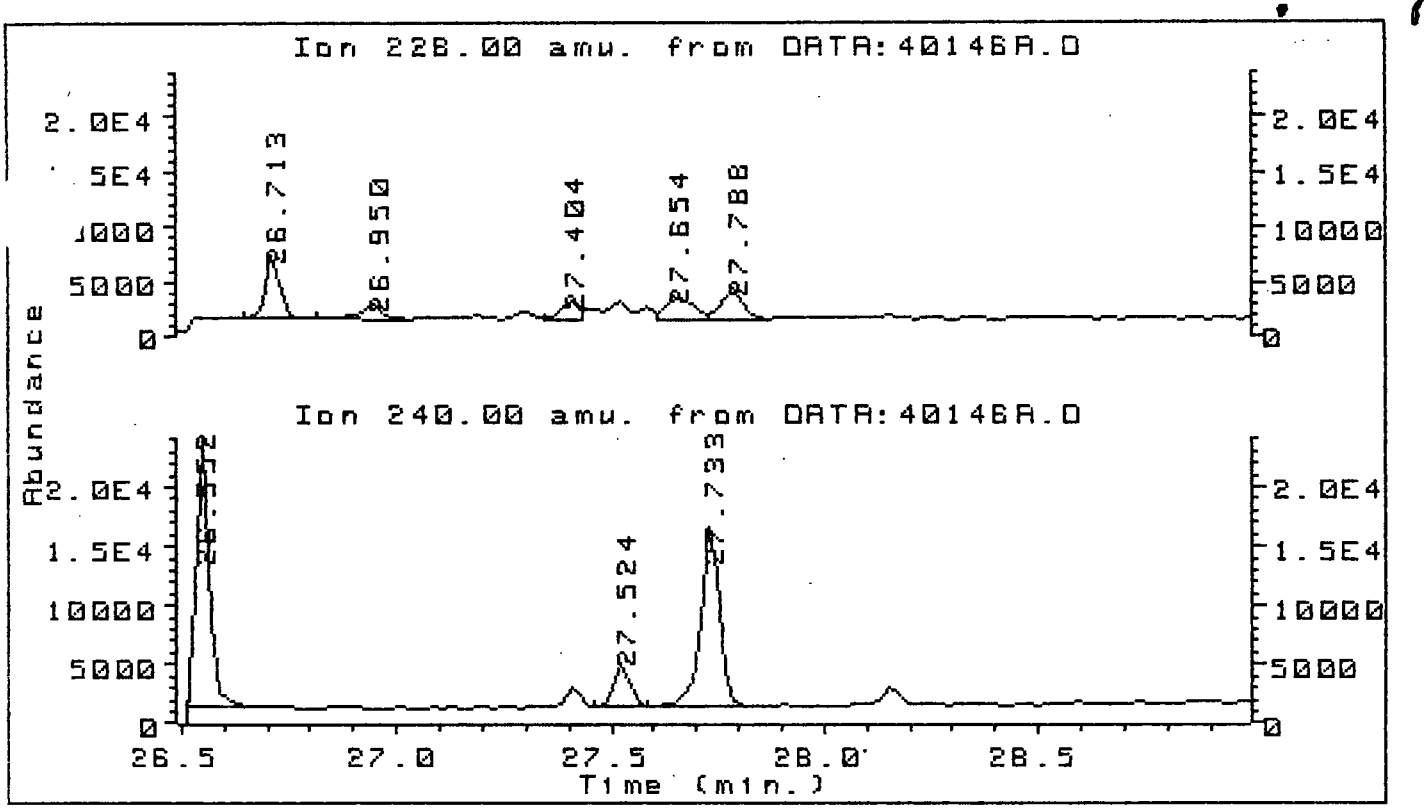
16.408	Mass	168.00	amu	VV	128460	2133	100.00	4.18	100.00	8.70
16.452	Mass	168.00	amu	VV	86261	2579	100.00	2.81	100.00	6.24
16.597	Mass	152.00	amu	VV	290125	3010	100.00	11.67	100.00	50.92
.638	Mass	164.00	amu	BH	343429	12130	100.00	20.90	100.00	36.72
16.731	Mass	152.00	amu	VV	569805	8720	100.00	22.92	100.00	100.00
16.786	Mass	164.00	amu	PV	299775	10336	64.65	18.24	100.00	32.06
16.785	Mass	154.00	amu	PV	163929	4972	35.35	5.90	54.68	9.91
17.059	Mass	152.00	amu	VV	210220	3802	100.00	8.45	100.00	36.89
17.077	Mass	168.00	amu	VV	317682	11056	41.68	10.35	71.47	23.00
17.076	Mass	154.00	amu	PV	444494	16857	58.32	15.99	100.00	26.88
17.132	Mass	164.00	amu	VV	935137	26032	100.00	56.90	100.00	100.00
17.207	Mass	152.00	amu	VV	386674	10299	46.22	15.55	85.96	67.86
17.208	Mass	154.00	amu	VV	449841	15513	53.78	16.18	100.00	27.20
17.246	Mass	168.00	amu	VV	90893	2282	100.00	2.96	100.00	6.58
17.291	Mass	154.00	amu	VV	49125	1981	100.00	1.77	100.00	2.97
17.332	Mass	152.00	amu	VV	291013	7683	100.00	11.70	100.00	51.07
17.564	Mass	168.00	amu	VV	144849	3925	100.00	4.72	100.00	10.49
17.627	Mass	168.00	amu	VV	219845	6719	100.00	7.16	100.00	15.92
.339	Mass	168.00	amu	VV	191957	4289	100.00	6.25	100.00	13.90
18.445	Mass	176.00	amu	VV	1595650	52863	98.75	100.00	100.00	100.00
18.445	Mass	164.00	amu	PV	20140	1302	1.25	1.23	1.26	2.15
18.504	Mass	166.00	amu	VV	384401	10124	100.00	26.97	100.00	90.70
18.693	Mass	168.00	amu	VV	217782	2449	100.00	7.09	100.00	15.77
18.745	Mass	166.00	amu	VV	188338	4860	100.00	13.22	100.00	44.44
18.883	Mass	168.00	amu	VV	1381364	37807	100.00	44.99	100.00	100.00
18.922	Mass	166.00	amu	VV	423805	9603	67.24	29.74	100.00	100.00
18.921	Mass	152.00	amu	VV	206526	5303	32.76	8.31	48.73	36.25
19.014	Mass	166.00	amu	VV	161389	5511	100.00	11.32	100.00	38.08
19.324	Mass	166.00	amu	VV	267159	8629	64.42	18.75	100.00	63.04
19.315	Mass	152.00	amu	VV	147533	3260	35.58	5.93	55.22	25.89
19.452	Mass	152.00	amu	PV	49430	2163	100.00	1.99	100.00	8.67
19.497	Mass	168.00	amu	VB	235773	3552	100.00	7.68	100.00	17.07
.563	Mass	184.00	amu	PH	440329	18556	100.00	30.61	100.00	100.00
19.580	Mass	178.00	amu	PH	17003	1791	100.00	0.78	100.00	1.13
19.663	Mass	178.00	amu	PV	12771	598	100.00	0.59	100.00	0.85
19.682	Mass	184.00	amu	VV	47473	1610	100.00	3.30	100.00	10.78

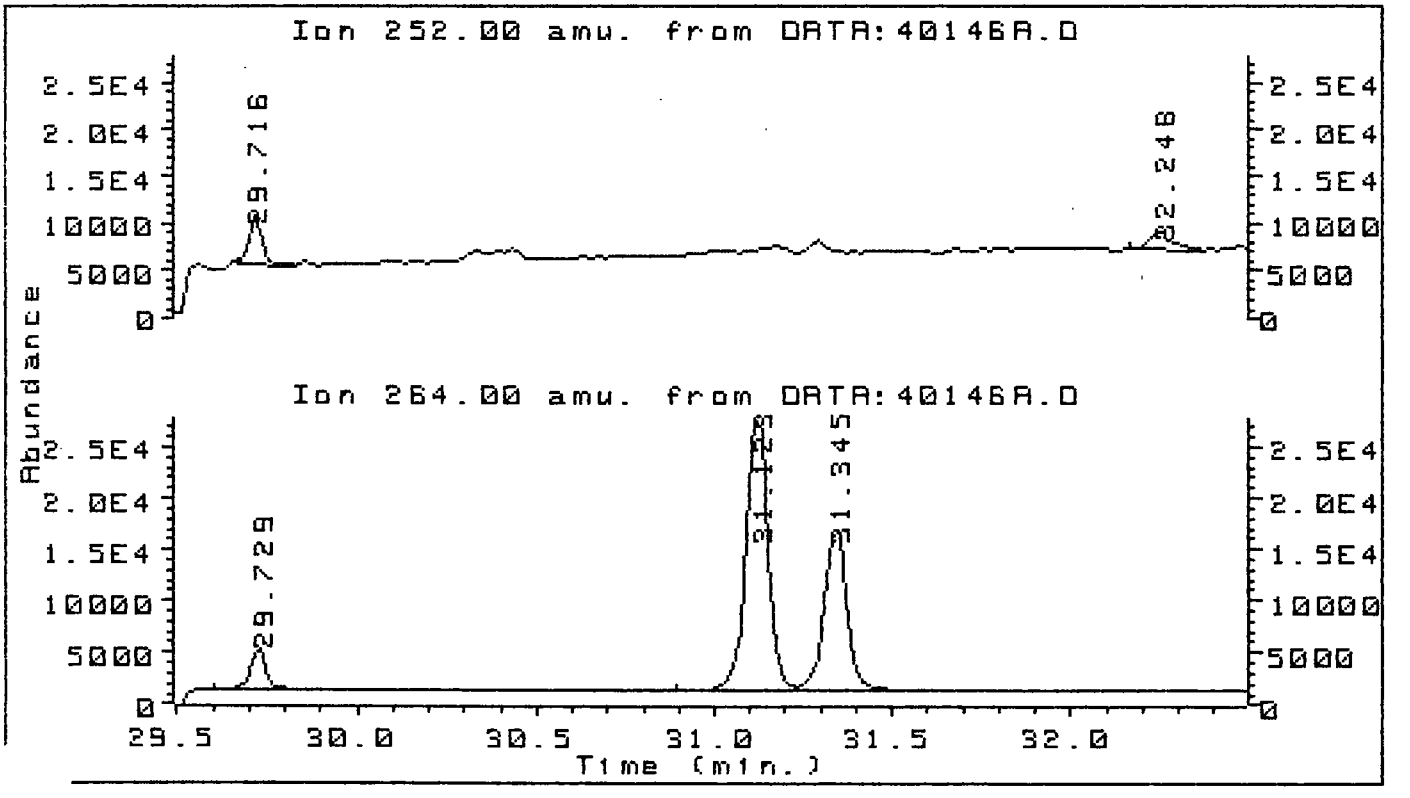
19.727	Mass	184.00	amu	VV	71093	2285	79.00	4.94	100.00	16.15
19.712	Mass	178.00	amu	VV	18899	552	21.00	0.87	26.58	1.26
19.784	Mass	184.00	amu	VV	54504	1382	100.00	3.79	100.00	12.38
19.886	Mass	178.00	amu	VV	43922	1434	100.00	2.02	100.00	2.93
930	Mass	178.00	amu	VV	97847	2987	100.00	4.49	100.00	6.53
20.008	Mass	184.00	amu	PV	75868	2521	100.00	5.27	100.00	17.23
20.052	Mass	179.00	amu	PH	90579	2329	28.65	4.47	54.61	15.14
20.050	Mass	184.00	amu	VV	59723	2767	18.89	4.15	36.01	13.56
20.049	Mass	178.00	amu	VV	165869	3201	52.46	7.62	100.00	11.06
20.105	Mass	184.00	amu	VV	94314	3123	100.00	6.56	100.00	21.42
20.330	Mass	184.00	amu	PV	81507	1674	100.00	5.67	100.00	18.51
20.356	Mass	167.00	amu	VV	194683	5021	100.00	28.43	100.00	100.00
20.416	Mass	179.00	amu	PV	71295	2240	48.46	3.52	94.03	11.92
20.411	Mass	178.00	amu	VV	75825	1953	51.54	3.48	100.00	5.06
20.600	Mass	167.00	amu	PV	178085	3548	100.00	26.01	100.00	91.47
20.639	Mass	184.00	amu	BV	160864	4633	100.00	11.18	100.00	36.53
20.908	Mass	188.00	amu	PV	1457470	46102	85.84	100.00	100.00	100.00
20.897	Mass	184.00	amu	PV	240501	6677	14.16	16.72	16.50	54.62
20.956	Mass	179.00	amu	VV	291062	6703	16.26	14.36	19.41	48.66
953	Mass	178.00	amu	VV	1499236	40921	83.74	68.85	100.00	100.00
21.042	Mass	179.00	amu	VV	547524	17023	88.08	27.00	100.00	91.53
21.039	Mass	167.00	amu	PV	74125	1676	11.92	10.82	13.54	38.07
21.057	Mass	178.00	amu	VV	246236	6539	100.00	11.31	100.00	16.42
21.205	Mass	179.00	amu	VV	64335	2130	100.00	3.17	100.00	10.76
21.261	Mass	179.00	amu	VV	85048	2448	100.00	4.19	100.00	14.22
21.360	Mass	179.00	amu	VV	122157	2468	100.00	6.02	100.00	20.42
21.426	Mass	179.00	amu	VV	95442	2514	100.00	4.71	100.00	15.96
21.553	Mass	167.00	amu	VV	70476	3372	100.00	10.29	100.00	36.20
21.593	Mass	167.00	amu	VV	167395	6428	100.00	24.45	100.00	85.98
21.610	Mass	179.00	amu	VV	598176	12477	100.00	29.50	100.00	100.00
21.817	Mass	184.00	amu	VV	112298	5195	100.00	7.81	100.00	25.50
22.229	Mass	179.00	amu	PV	61900	1596	100.00	3.05	100.00	10.35
855	Mass	212.00	amu	VV	107282	3689	100.00	6.97	100.00	12.35
22.997	Mass	212.00	amu	VV	61325	1897	56.85	3.98	100.00	7.06
22.994	Mass	202.00	amu	VV	46554	1421	43.15	5.63	75.91	11.15
23.082	Mass	212.00	amu	VV	162815	3635	100.00	10.58	100.00	18.75
23.362	Mass	212.00	amu	VV	105911	2983	100.00	6.88	100.00	12.19

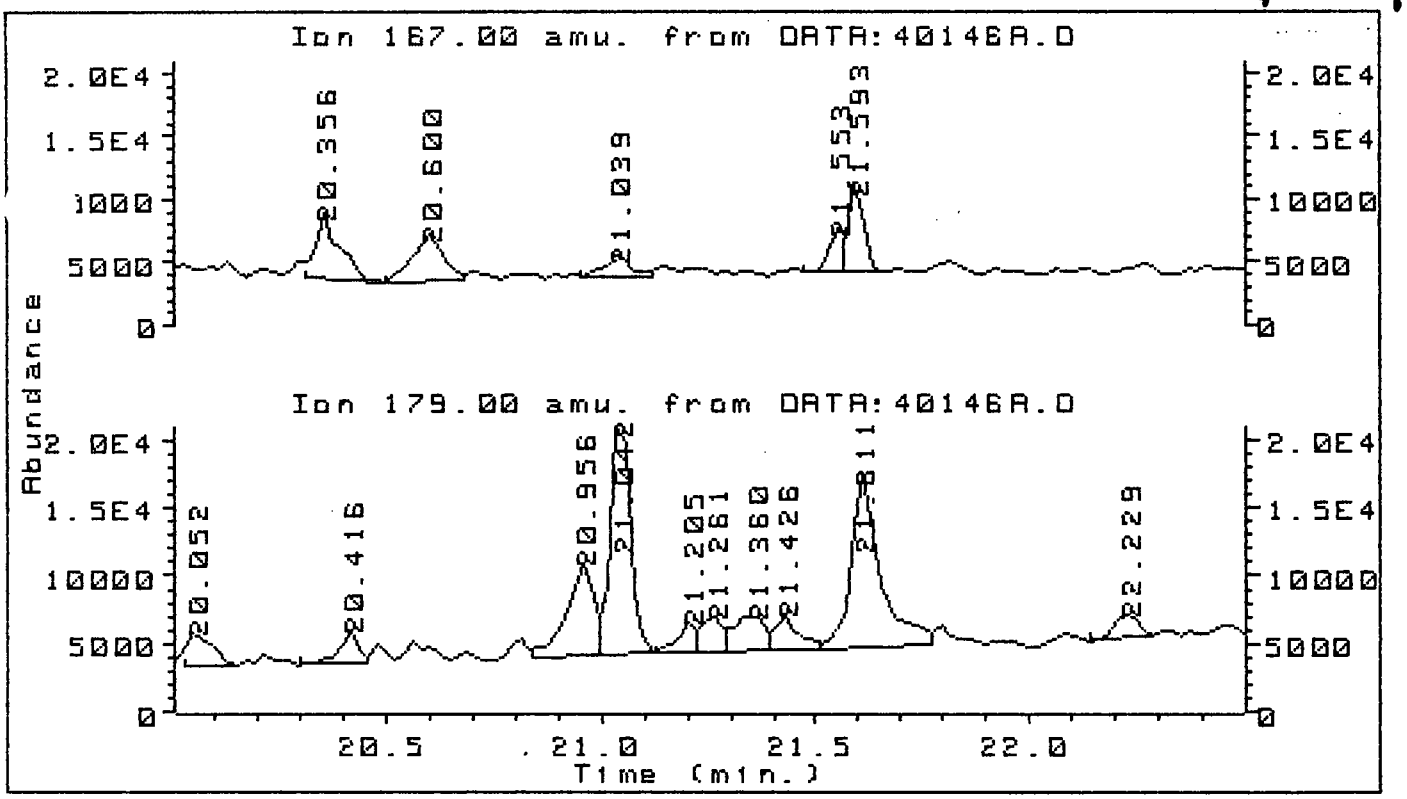
24.026	Mass	202.00	amu	PV	417399	12075	100.00	50.47	100.00	100.00
24.051	Mass	212.00	amu	BV	94895	2486	100.00	6.16	100.00	10.93
24.597	Mass	202.00	amu	BV	363060	10495	100.00	43.90	100.00	86.98
[illegible].680	Mass	212.00	amu	VV	868555	31735	100.00	56.42	100.00	100.00
[illegible].741	Mass	212.00	amu	PV	63159	2439	100.00	4.10	100.00	7.27
25.844	Mass	212.00	amu	VV	75403	3038	100.00	4.90	100.00	8.68
26.552	Mass	240.00	amu	PH	490120	22589	100.00	45.37	100.00	98.80
26.713	Mass	228.00	amu	VV	132673	5691	100.00	33.22	100.00	100.00
26.950	Mass	228.00	amu	VV	47059	1344	100.00	11.78	100.00	35.47
27.404	Mass	228.00	amu	VV	42626	1604	100.00	10.67	100.00	32.13
27.524	Mass	240.00	amu	PV	94158	3612	100.00	8.72	100.00	18.98
27.654	Mass	228.00	amu	VV	87423	2023	100.00	21.89	100.00	65.89
27.733	Mass	240.00	amu	PV	496051	14987	100.00	45.92	100.00	100.00
27.788	Mass	228.00	amu	VV	89619	2643	100.00	22.44	100.00	67.55
29.729	Mass	264.00	amu	PV	117098	4184	47.68	6.00	91.13	10.22
29.716	Mass	252.00	amu	PV	128499	5054	52.32	62.82	100.00	100.00
[illegible].123	Mass	264.00	amu	BV	1145288	26155	100.00	58.66	100.00	100.00
[illegible].345	Mass	264.00	amu	VV	690163	15529	100.00	35.35	100.00	60.26
32.248	Mass	252.00	amu	BV	76048	1738	100.00	37.18	100.00	59.18

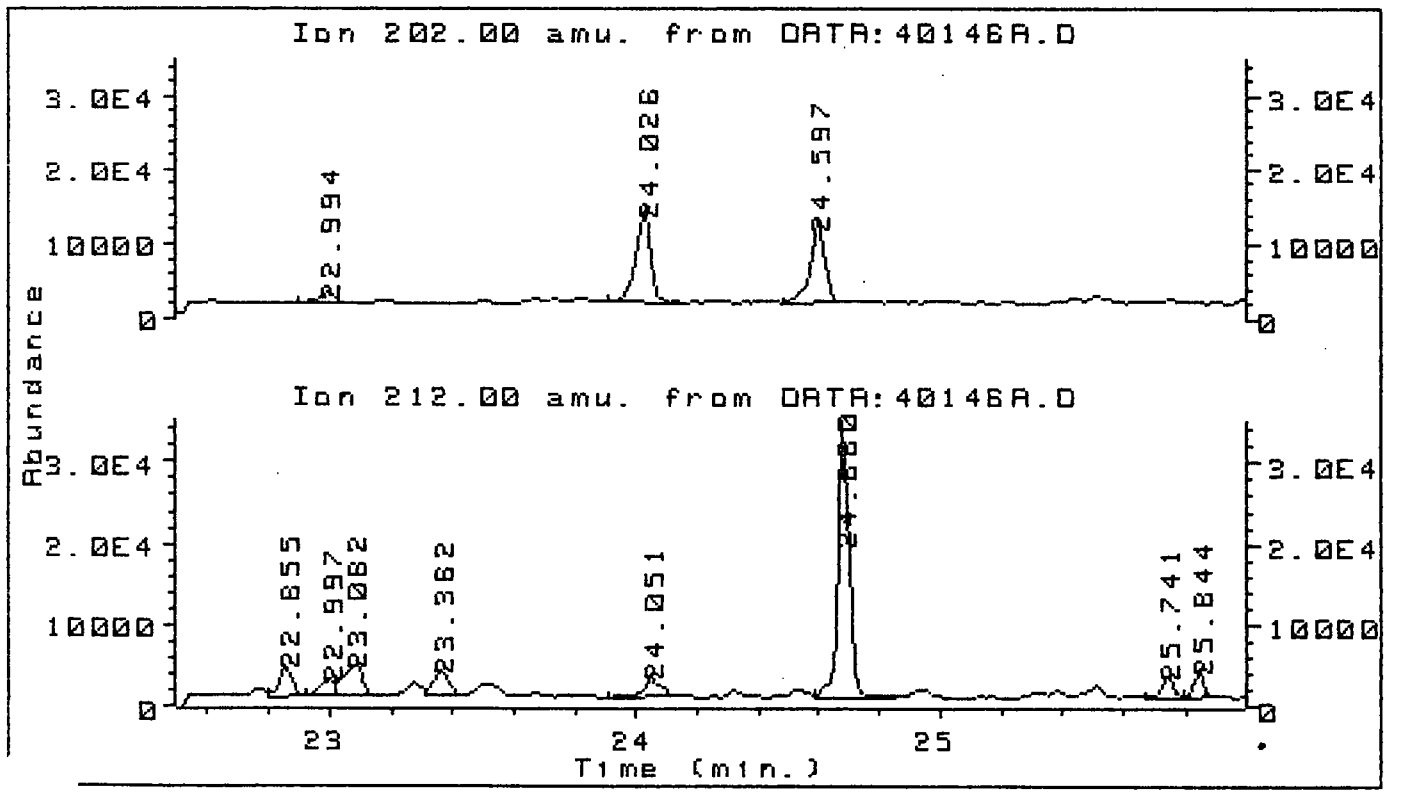

Ion 276.00 amu. from DATA:40146A.D
800
600
400
200
0
Abundance
Ion 278.00 amu. from DATA:40146A.D
800
600
400
200
0
33
34
35
36
37
Time (min.)

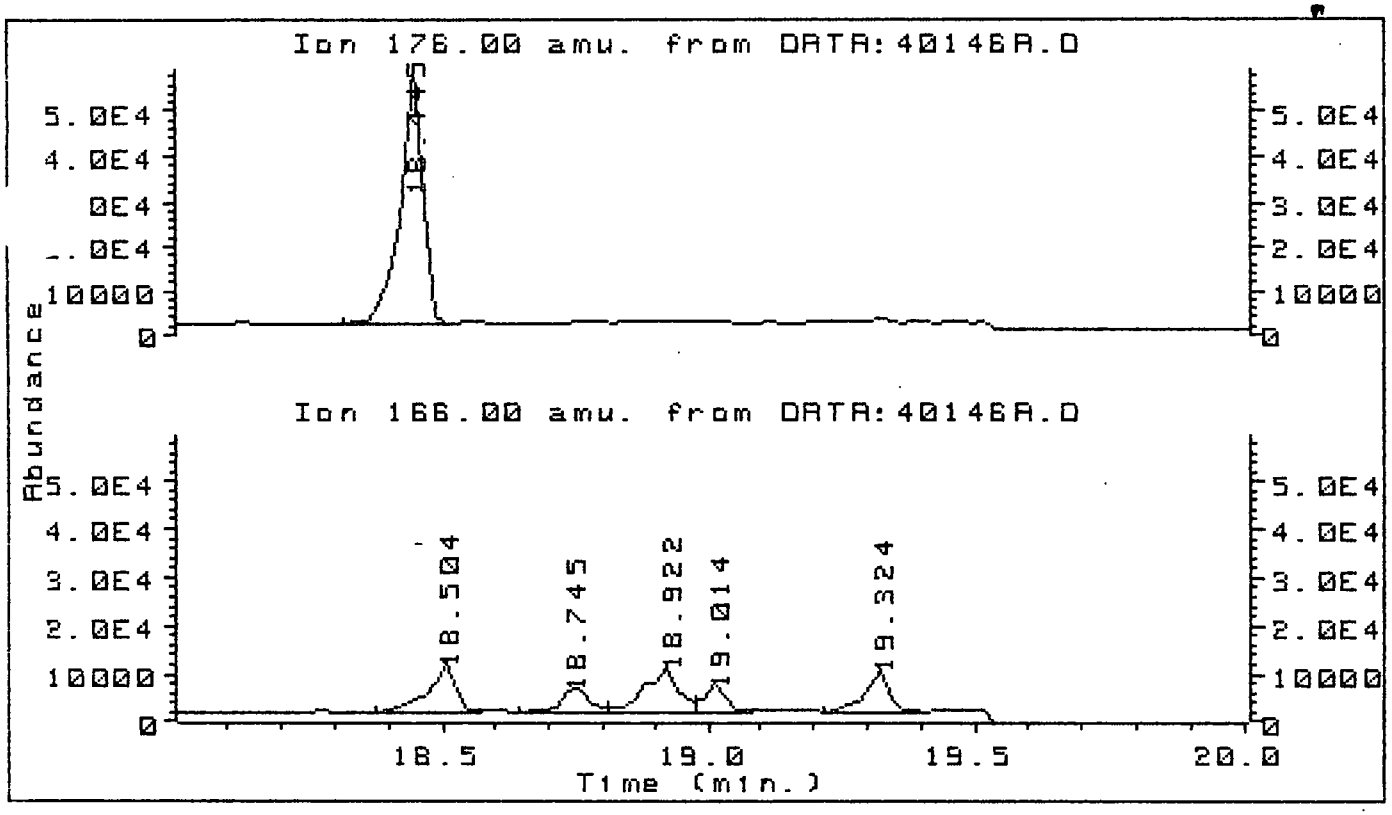

TIC of DATA:40146A.D
2.0E5
1.8E5
1.6E5
1.4E5
1.2E5
1.0E5
8.0E4
6.0E4
4.0E4
2.0E4
0
Abundance
10
20
30
40
Time (min.)

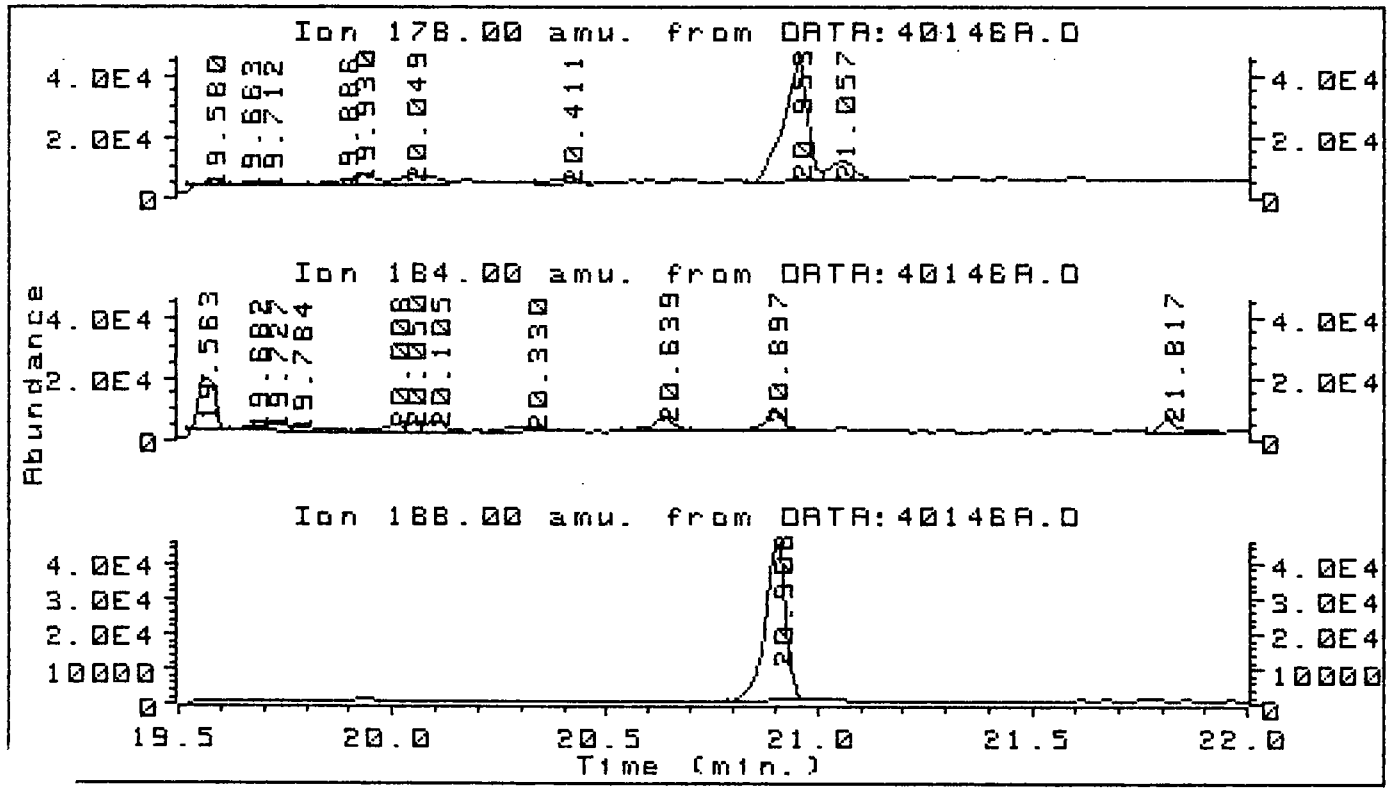

Ion 228.00 amu. from DATA:40146A.D
26.713
26.950
27.404
27.654
27.788
Ion 240.00 amu. from DATA:40146A.D
27.524
27.733
Abundance
Time (min.)

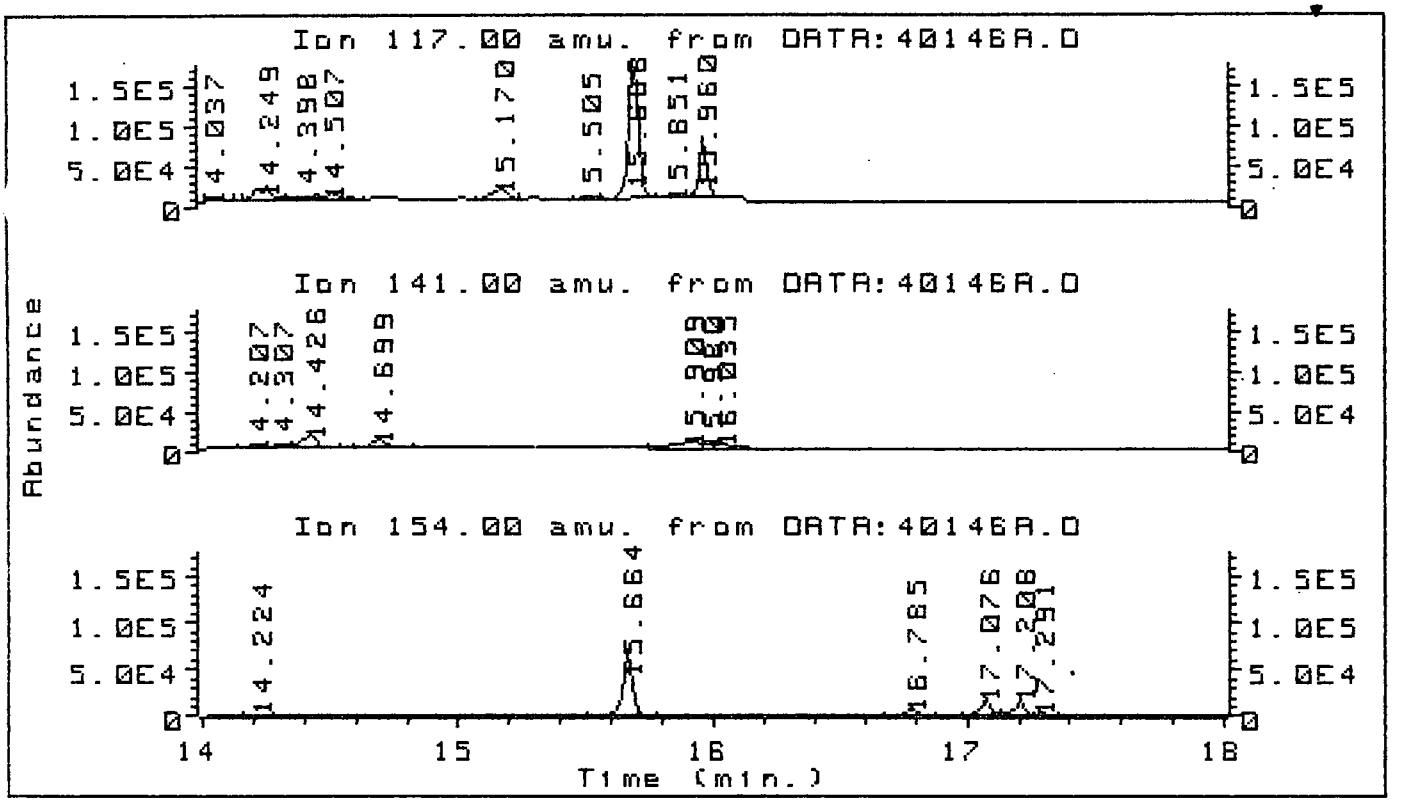

Ion 252.00 amu. from DATA:40146A.D
29.716
32.248
Ion 264.00 amu. from DATA:40146A.D
29.729
31.345
Abundance
Time (min.)

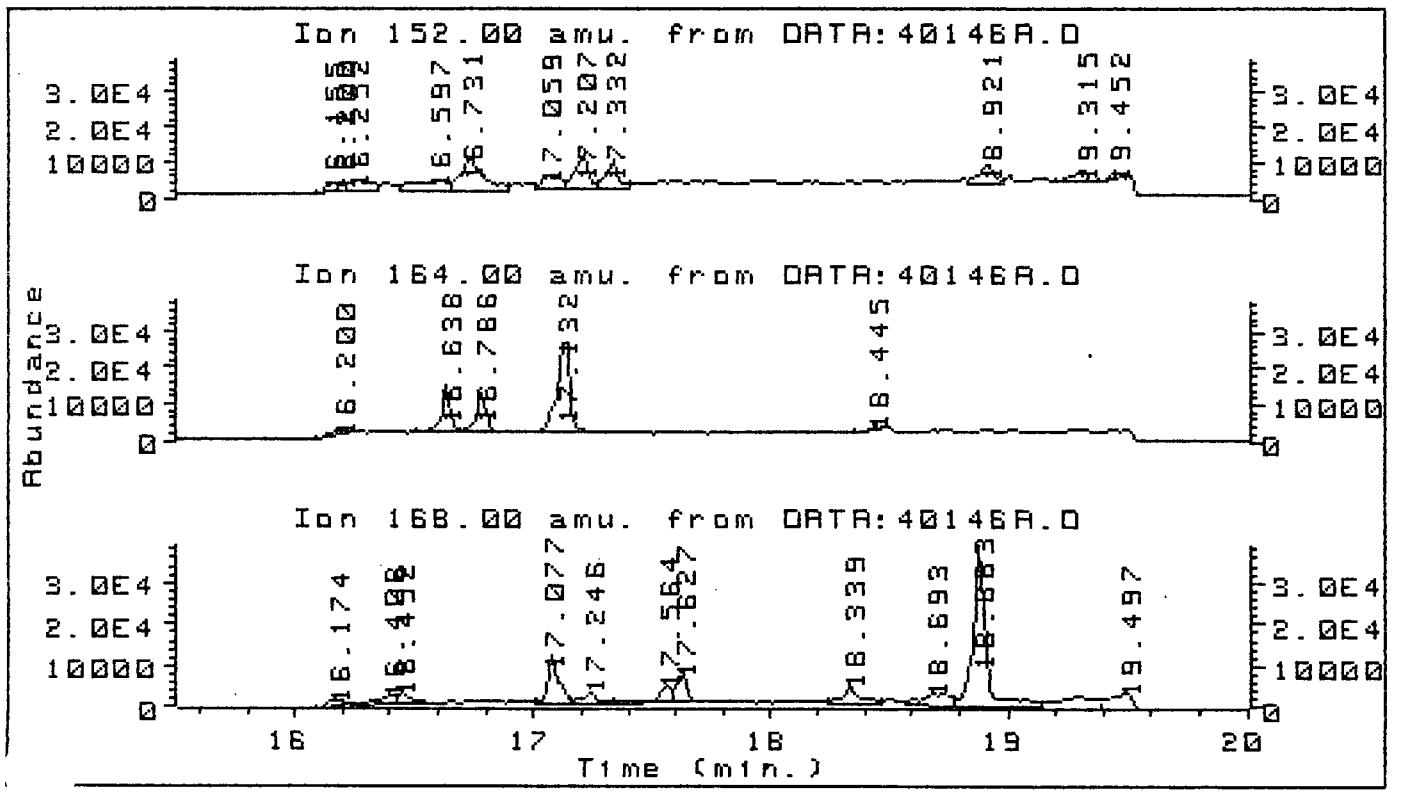

Ion 167.00 amu. from DATA:40146A.D
Ion 179.00 amu. from DATA:40146A.D
Abundance
Time (min.)
20.5
21.0
21.5
22.0
20.052
20.416
20.956
21.205
21.261
21.360
21.426
22.229

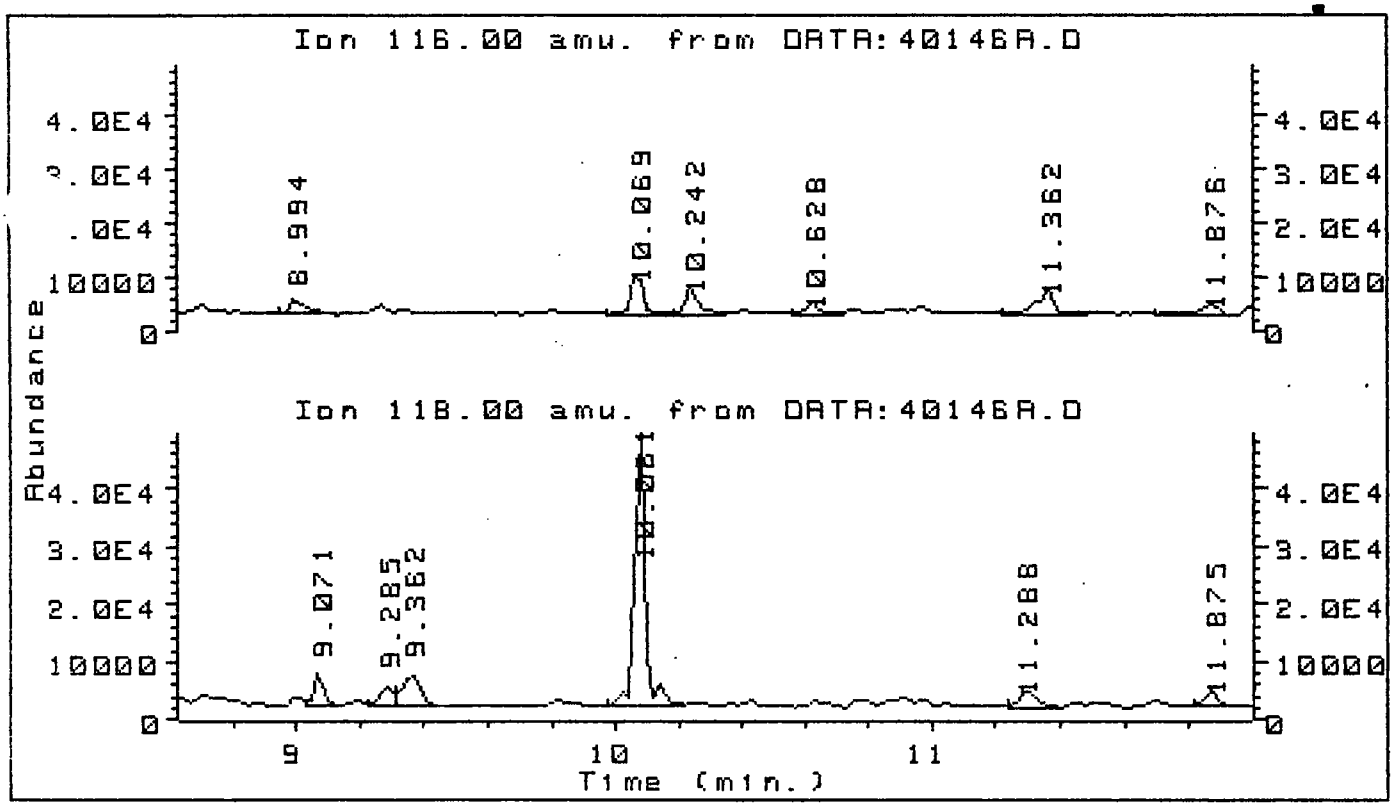

Ion 202.00 amu. from DATA:40146A.D
Ion 212.00 amu. from DATA:40146A.D
Abundance
Time (min.)
23
24
25
22.994
24.026
24.597
22.855
22.997
23.062
23.362
24.051
25.741
25.844

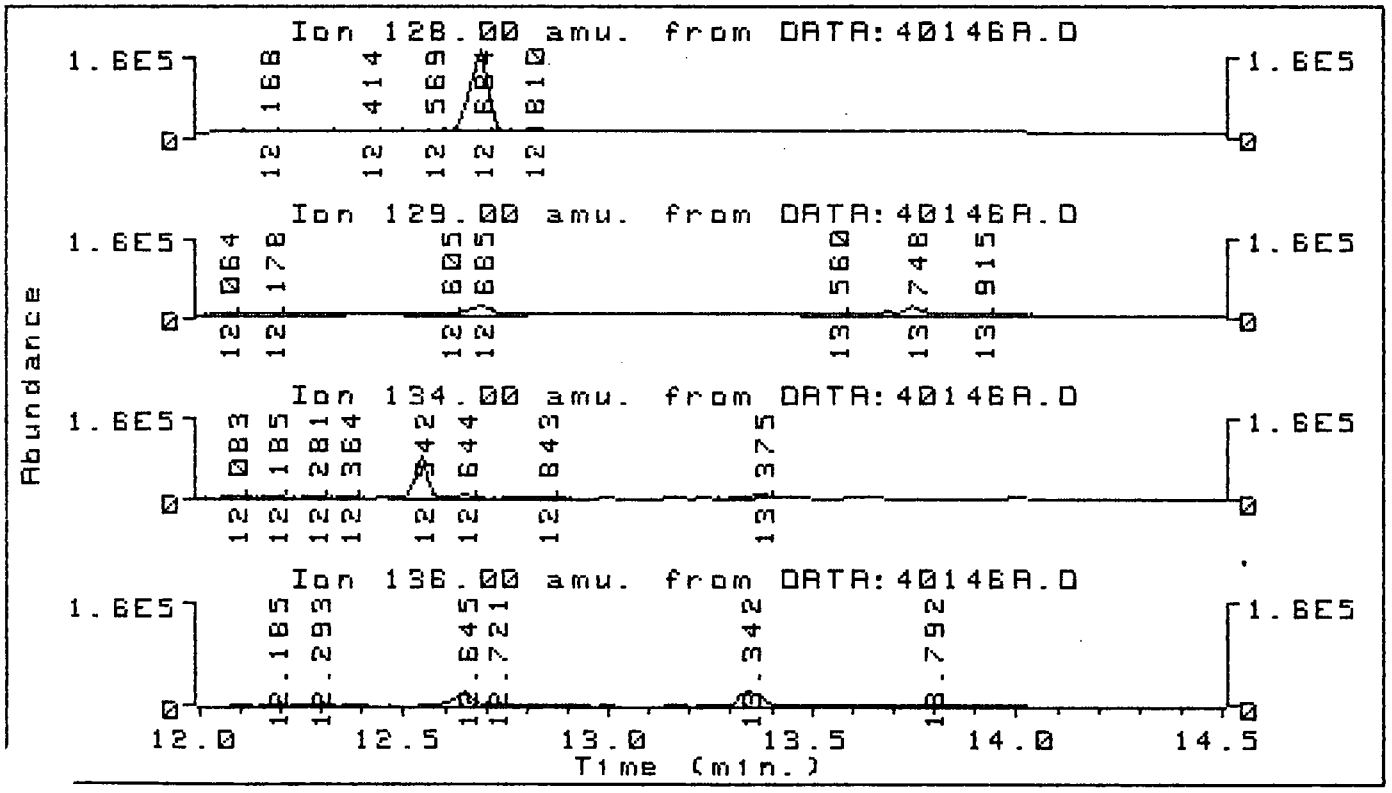

Ion 176.00 amu. from DATA:40146A.D
Ion 166.00 amu. from DATA:40146A.D
Abundance
18.504
18.745
18.922
19.014
19.324
18.5
19.0
19.5
20.0
Time (min.)

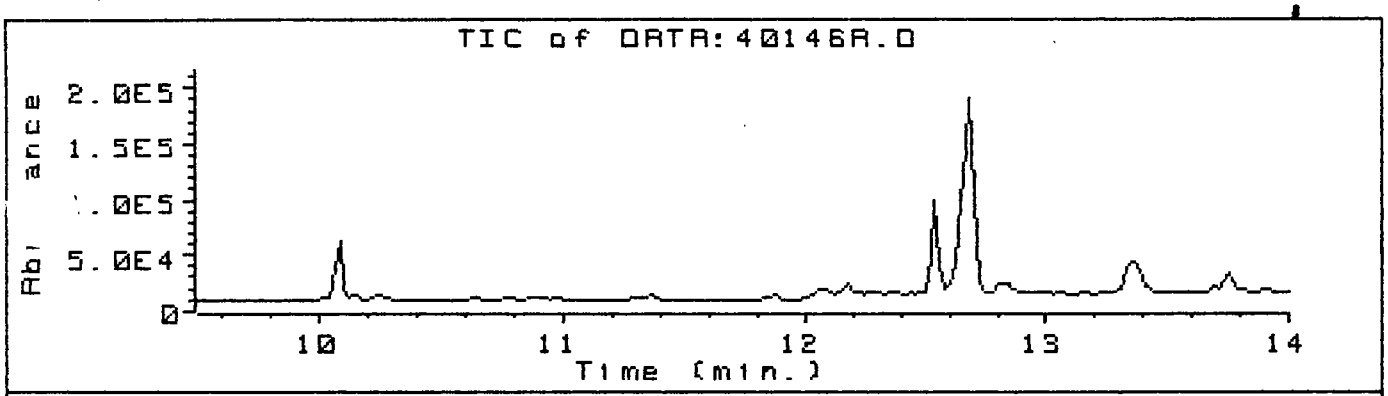

Ion 178.00 amu. from DATA:40146A.D
Ion 184.00 amu. from DATA:40146A.D
Ion 188.00 amu. from DATA:40146A.D
Abundance
20.330
20.639
20.897
21.817
19.5
20.0
20.5
21.0
21.5
22.0
Time (min.)

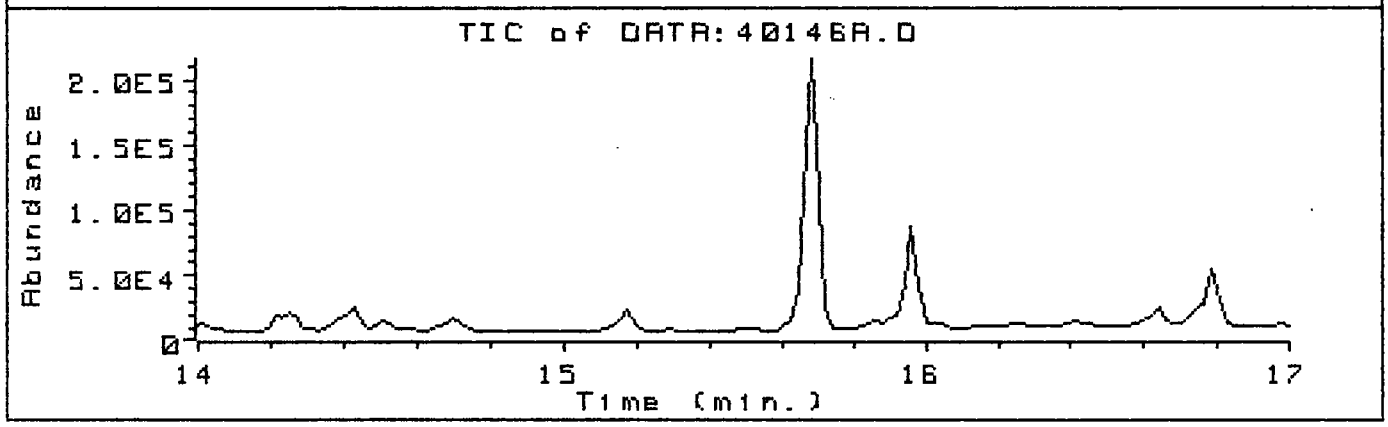

Ion 117.00 amu. from DATA:40146A.D
Ion 141.00 amu. from DATA:40146A.D
Ion 154.00 amu. from DATA:40146A.D
Abundance
1.5E5
1.0E5
5.0E4
0
14
15
16
17
18
Time (min.)

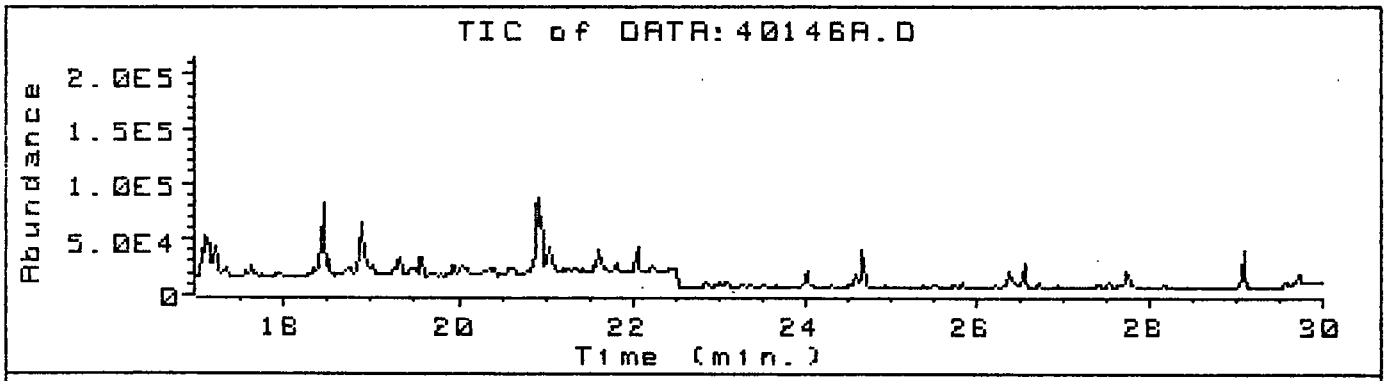

Ion 152.00 amu. from DATA:40146A.D
Ion 164.00 amu. from DATA:40146A.D
Ion 168.00 amu. from DATA:40146A.D
Abundance
3.0E4
2.0E4
10000
0
16
17
18
19
20
Time (min.)

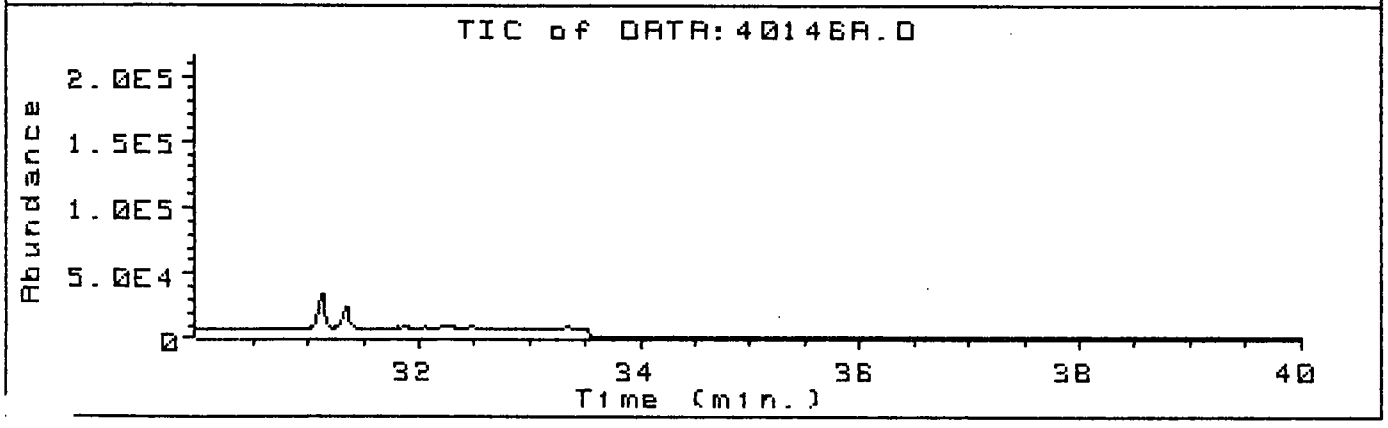

Ion 116.00 amu. from DATA:40146A.D
Ion 118.00 amu. from DATA:40146A.D
Abundance
Time (min.)


Ion 128.00 amu. from DATA:40146A.D
Ion 129.00 amu. from DATA:40146A.D
Ion 134.00 amu. from DATA:40146A.D
Ion 136.00 amu. from DATA:40146A.D
Abundance
Time (min.)


TIC of DATA:40146A.D
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
10
11
12
13
14
Time (min.)


TIC of DATA:40146A.D
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
14
15
16
17
Time (min.)


TIC of DATA:40146A.D
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
18
20
22
24
26
28
30
Time (min.)


TIC of DATA:40146A.D
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
32
34
36
38
40
Time (min.)

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MATRIX SPIKE ERT NO.: 40147

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	11
BENZO (A) ANTHRACENE	ND
CHRYSENE	8.2
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZ (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	~~5.5~~ 5.4
TOTAL CARCINOGENIC PAH	~~25~~

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	~~11~~ 13
INDENE	~~7.5~~ 6.8
NAPHTHALENE	<47
BENZO (B) THIOPHENE	ND
INDOLE	~~11.9~~ ND
2-METHYLNAPHTHALENE	~~8.0~~ 14
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	~~ND~~ 1.9
ACENAPHTHENE	~~3.7~~ 3.5
DIBENZOFURAN	~~ND~~ 1.5
FLUORENE	13
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	~~8.7~~ 7.8
PERYLENE	ND
TOTAL OTHER PAH	~~52~~
TOTAL PAH'S	~~77~~

ND = Concentration < 95% Confidence Interval of MDL

ERT #	: 40147	Extract Vol., ml	0.500
Field ID	: MS(TD-09A)	Sample Vol., L	4.000
GC/MS File #	: 40147A	Date Analyze: 11/25/86	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.0	17.126	603722
Phenanthrene-d10	62.5	20.901	961717
Benz(a)pyrene-d12	49.6	31.117	1960572

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.303	0.000	0.000	1	0.000
dihydroinden	0.783	0.589	10.079	942846	13.208
indene	1.310	0.598	10.245	816082	6.835
Naphthalene-d8 (Surr.)	2.018	0.738	12.642	507330	2.758
Naphthalene	2.752	0.740	12.681	10616338	42.334
Benz(b)thio	1.739	0.750	12.838	156854	0.990
Quinoline	0.989	0.791	13.553	974553	10.809
Indole	1.485	0.839	14.371	126097	0.932
2-methyl	1.019	0.842	14.426	1332292	14.342
1-methyl	1.459	0.858	14.698	223293	1.680
Biphenyl	3.395	0.914	15.660	831246	2.687
Acenaphthylene	1.540	0.977	16.730	265768	1.894
Acenaphthene	1.268	1.004	17.199	405437	3.507
Dibenzofuran	1.619	1.029	17.620	220833	1.497
Group II					
Flourene-d10 (Surr.)	0.770	0.882	18.437	832936	8.785
Fluorene	1.034	0.885	18.497	16679556	131.029 99
Dibenzothiophene	1.173	0.987	20.633	162796	1.127
Phenanthrene	2.154	1.002	20.945	1562374	5.891
Anthracene	1.221	1.007	21.057	188094	1.251
Acridine	0.776	1.016	21.244	138374	1.449
Carbazole	1.026	1.031	21.546	136431	1.081
Fluoranthene	1.448	1.149	24.020	537490	3.016
Pyrene-d10 (Surr.)	0.920	0.000	0.000	1	0.000
Pyrene	1.525	1.176	24.588	447530	2.384
Group III					
Benz(a)anthracene	1.493	0.890	27.680	83237	0.176
Chrysene-d12 (Surr.)	0.451	0.891	27.727	440475	3.085
Chrysene	1.513	0.893	27.783	3923404	8.202
Benzofluoranthenes	2.388	0.975	30.334	260361	0.345
Benz(e)pyrene	1.841	0.998	31.041	4555629	7.824
Benz(a)pyrene	1.451	1.002	31.164	95065	0.207
Perylene-d12 (Surr.)	1.074	1.007	31.337	1095596	3.225
Perylene	1.316	0.000	0.000	1	0.000
Indeno(123,cd)pyrene	1.312	0.000	0.000	1	0.000
Dibenz(ah)anthracene	0.903	0.000	0.000	1	0.000
Benzo(ghi)perylene	1.336	1.146	35.657	2299647	5.441

CALIBRATION RF's from : 18-Nov-86

ERT #: 40147
MS(TD-09A 11/25/86

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	2.76	9.90	27.86	42-102	1.820	30.90%
Flourene-d10 (Surr.)	8.79	9.50	92.48	60-128	0.866	82.25%
Chrysene-d12 (Surr.)	3.09	9.80	31.48	10-54	0.413	34.42%
Pyrene-d10 (Surr.)	0.00	10.05	0.00		0.757	0.00%
Perylene-d12 (Surr.)	3.23	9.40	34.31		0.887	41.55%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc..	ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	10.81	10.8
BENZO (A) ANTHRACENE	2.80	4.40	0.18	ND
CHRYSENE	2.80	4.40	8.20	8.2
BENZOFLUORANTHENES	6.20	9.70	0.34	ND
BENZO (A) PYRENE	2.20	3.40	0.21	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	5.44	5.4
		TOTAL CARCINOGENIC PAH		24.45

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	13.21	13.2
INDENE	1.80	2.90	6.83	6.8
NAPHTHALENE	30.00	47.00	42.33	< 47
BENZO (B) THIOPHENE	1.40	2.20	0.99	ND
INDOLE	1.20	1.90	0.93	ND
2-METHYLNAPHTHALENE	3.20	5.00	14.34	14.3
1-METHYLNAPHTHALENE	2.00	3.10	1.68	ND
BIPHENYL	11.00	17.00	2.69	ND
ACENAPHTHYLENE	1.10	1.70	1.89	1.9
ACENAPHTHENE	0.83	1.30	3.51	3.5
DIBENZOFURAN	0.77	1.20	1.50	1.5
FLOURENE	0.56	0.88	131.03	131.0
DIBENZOTHIOPHENE	4.00	6.30	1.13	ND
PHENANTHRENE	2.00	3.10	5.89	5.9
ANTHRACENE	2.20	3.40	1.25	ND
ACRIDINE	1.60	2.50	1.45	ND
CARBAZOLE	1.70	2.60	1.08	ND
FLUORANTHENE	2.80	4.40	3.02	< 4.4
PYRENE	2.60	4.10	2.38	ND
BENZO (E) PYRENE	0.96	1.50	7.82	7.8
PERYLENE	1.00	1.60	0.00	ND
		TOTAL OTHER PAH		186.0
		TOTAL PAH'S		210.5

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MS(TD-09A) ERT NO.: 40147

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	11
BENZO (A) ANTHRACENE	ND
CHRYSENE	8.2
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZO (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	5.4
TOTAL CARCINOGENIC PAH	24

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	13
INDENE	6.8
NAPHTHALENE	< 47
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	14
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	1.9
ACENAPHTHENE	3.5
DIBENZOFURAN	1.5
FLOURENE	130
DIBENZOTHIOPHENE	ND
PHENANTHRENE	5.9
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	< 4.4
PYRENE	ND
BENZO (E) PYRENE	7.8
PERYLENE	ND
TOTAL OTHER PAH	190
TOTAL PAH'S	210

ND = Concentration < 95% Confidence Interval of MDL

Lab Fort

ERT #: 40147

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/24/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	2.81	9.90	28.33	42-102	~~1.985~~ 1.82	~~28.34%~~ ~~31.0~~ 68.2
Flourene-d10 (Surr.)	8.80	9.50	92.64	60-128	~~0.769~~ 0.846	~~92.65%~~ 82.3
Chyrsene-d12 (Surr.)	3.12	9.80	31.79	10-54	~~0.447~~ 0.413	~~31.78%~~ 34.4
Pyrene-d10 (Surr.)	0.00	10.05	0.00		0.922	0.00%
Perylene-d12 (Surr.)	3.29	9.40	34.96		1.054	34.96%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	10.96	10.96	10.96	1.90
BENZO (A) ANTHRACENE	2.80	0.18	0.00	0.00	4.40
CHYRSENE	2.80	8.17	8.17	8.17	4.40
BENZOFLUORANTHENES	6.20	0.40	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.23	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	5.47	5.47	5.47	5.30
			24.60		

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	11.20	11.20	11.20	3.40
INDENE	1.80	7.47	7.47	7.47	2.90
NAPHTHALENE	30.00	43.03	0.00	43.03	47.00
BENZO (B) THIOPHENE	1.40	0.85	0.00	0.00	2.20
INDOLE	1.20	1.22	0.00	1.22	1.90
2-METHYLNAPHTHALENE	3.20	7.98	7.98	7.98	5.00
1-METHYLNAPHTHALENE	2.00	1.34	0.00	0.00	3.10
BIPHENYL	11.00	0.50	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	1.85	1.85	1.85	1.70
ACENAPHTHENE	0.83	3.70	3.70	3.70	1.30
DIBENZOFURAN	0.77	1.02	0.00	1.02	1.20
FLOURENE	0.56	~~131.52~~ 13.15	~~131.52~~ 0.00	~~131.52~~ 13.15	0.88
DIBENZOTHIOPHENE	4.00	1.22	0.00	0.00	6.30
PHENANTHRENE	2.00	5.95	5.95	5.95	3.10
ANTHRACENE	2.20	1.28	0.00	0.00	3.40
ACRIDINE	1.60	2.45	0.00	2.45	2.50
CARBAZOLE	1.70	1.53	0.00	0.00	2.60
FLUORANTHENE	2.80	3.02	0.00	3.02	4.40
PYRENE	2.60	2.38	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	8.71	8.71	8.71	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	178.38		
		TOTAL PAH'S	202.98		

Lab Fort

ERT #	: 40147	Extract Vol., ml	0.500
Field ID	~~1-MATRIX CHECK~~	Sample Vol., L	4.000
GC/MS File #	: 40147A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.126	603722
Phenanthrene-d10	62.500	20.901	961717
Benz(a)pyrene-d12	49.600	31.117	1960572

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.079	942846	11.197	0.589
indene	1.199	10.245	816082	7.469	0.598
Naphthalene-d8 (Surr.)	1.985	12.642	507330	2.805	0.738
Naphthalene	2.708	12.681	10616338	43.026	0.740
Benz(b)thio	2.025	12.838	156854	0.850	0.750
Quinoline	0.976	13.553	974553	10.957	0.791
Indole	1.135	14.371	126097	1.219	0.839
2-methyl	1.832	14.426	1332292	7.980	0.842
1-methyl	1.825	14.698	223293	1.343	0.858
Biphenyl	18.290	15.660	831246	0.499	0.914
Acenaphthylene	1.578	16.730	265768	1.848	0.977
Acenaphthene	1.202	17.199	405437	3.701	1.004
Dibenzofuran	2.378	17.620	220833	1.019	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.437	832936	8.800	0.882
Fluorene	1.030	18.497	~~16679556~~	~~131.523~~ 13.15	0.885 1667956 0.5
Dibenzothiophene	1.088	20.633	162796	1.216	0.987
Phenanthrene	2.133	20.945	1562374	5.951	1.002
Anthracene	1.197	21.057	188094	1.276	1.007
Acridine	0.458	21.244	138374	2.454	1.016
Carbazole	0.726	21.546	136431	1.527	1.031
Fluoranthene	1.445	24.020	537490	3.022	1.149
Pyrene-d10 (Surr.)	0.922	0.000	1	0.000	0.000
Pyrene	1.527	24.588	447530	2.381	1.176
Group III					
Benz(a)anthracene	1.487	27.680	83237	0.177	0.890
Chyrsene-d12 (Surr.)	0.447	27.727	440475	3.116	0.891
Chyrsene	1.518	27.783	3923404	8.171	0.893
Benzofluoranthenes	2.065	30.334	260361	0.399	0.975
Benz(e)pyrene	1.654	31.041	4555629	8.710	0.998
Benz(a)pyrene	1.303	31.164	95065	0.231	1.002
Perylene-d12 (Surr.)	1.054	31.337	1095596	3.287	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	35.657	2299647	5.468	1.146

MAB 12/11

ERT #	: 40147	Extract Vol., ml	0.500
Field ID	: MATRIX CHECK(TD-09A)	Sample Vol., L	4.000
GC/MS File #	: 40147A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.126	603722
Phenanthrene-d10	62.500	20.901	961717
Benz(a)pyrene-d12	49.600	31.117	1960572

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.079	942846	11.197	0.589
indene	1.199	10.245	816082	7.469	0.598
Naphthalene-d8 (Surr.)	1.985	12.642	507330	2.805	0.738
Naphthalene	2.708	12.681	10616338	43.026	0.740
Benz(b)thio	2.025	12.838	156854	0.850	0.750
Quinoline	0.976	13.553	974553	10.957	0.791
Indole	1.135	14.371	126097	1.219	0.839
2-methyl	1.832	14.426	1332292	7.980	0.842
1-methyl	1.825	14.698	223293	1.343	0.858
Biphenyl	18.290	15.660	831246	0.499	0.914
Acenaphthylene	1.578	16.730	265768	1.848	0.977
Acenaphthene	1.202	17.199	405437	3.701	1.004
Dibenzofuran	2.378	17.620	220833	1.019	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.437	832936	8.800	0.882
Fluorene	1.030	18.497	1667956	13.152	0.885
Dibenzothiophene	1.088	20.633	162796	1.216	0.987
Phenanthrene	2.133	20.945	1562374	5.951	1.002
Anthracene	1.197	21.057	188094	1.276	1.007
Acridine	0.458	21.244	138374	2.454	1.016
Carbazole	0.726	21.546	136431	1.527	1.031
Fluoranthene	1.445	24.020	537490	3.022	1.149
Pyrene-d10 (Surr.)	0.922	0.000	1	0.000	0.000
Pyrene	1.527	24.588	447530	2.381	1.176
Group III					
Benz(a)anthracene	1.487	27.680	83237	0.177	0.890
Chyrsene-d12 (Surr.)	0.447	27.727	440475	3.116	0.891
Chyrsene	1.518	27.783	3923404	8.171	0.893
Benzofluoranthenes	2.065	30.334	260361	0.399	0.975
Benz(e)pyrene	1.654	31.041	4555629	8.710	0.998
Benz(a)pyrene	1.303	31.164	95065	0.231	1.002
Perylene-d12 (Surr.)	1.054	31.337	1095596	3.287	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	35.657	2299647	5.468	1.146

ERT #: 40147

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	2.81	9.90	28.33	42-102	1.820	30.90%
Flourene-d10 (Surr.)	8.80	9.50	92.64	60-128	0.866	82.25%
Chyrsene-d12 (Surr.)	3.12	9.80	31.79	10-54	0.413	34.42%
Pyrene-d10 (Surr.)	0.00	10.05	0.00		0.757	0.00%
Perylene-d12 (Surr.)	3.29	9.40	34.96		0.887	41.55%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	10.96	10.96	10.96	1.90
BENZO (A) ANTHRACENE	2.80	0.18	0.00	0.00	4.40
CHYRSENE	2.80	8.17	8.17	8.17	4.40
BENZOFLUORANTHENES	6.20	0.40	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.23	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	5.47	5.47	5.47	5.30
			24.60		

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	11.20	11.20	11.20	3.40
INDENE	1.80	7.47	7.47	7.47	2.90
NAPHTHALENE	30.00	43.03	0.00	43.03	47.00
BENZO (B) THIOPHENE	1.40	0.85	0.00	0.00	2.20
INDOLE	1.20	1.22	0.00	1.22	1.90
2-METHYLNAPHTHALENE	3.20	7.98	7.98	7.98	5.00
1-METHYLNAPHTHALENE	2.00	1.34	0.00	0.00	3.10
BIPHENYL	11.00	0.50	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	1.85	1.85	1.85	1.70
ACENAPHTHENE	0.83	3.70	3.70	3.70	1.30
DIBENZOFURAN	0.77	1.02	0.00	1.02	1.20
FLOURENE	0.56	13.15	13.15	13.15	0.88
DIBENZOTHIOPHENE	4.00	1.22	0.00	0.00	6.30
PHENANTHRENE	2.00	5.95	5.95	5.95	3.10
ANTHRACENE	2.20	1.28	0.00	0.00	3.40
ACRIDINE	1.60	2.45	0.00	2.45	2.50
CARBAZOLE	1.70	1.53	0.00	0.00	2.60
FLUORANTHENE	2.80	3.02	0.00	3.02	4.40
PYRENE	2.60	2.38	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	8.71	8.71	8.71	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	60.01		
		TOTAL PAH'S	84.61		

*** Internal Standard ***

Operator: LOUIE POUNDS 25 Nov 86 2:24 pm
Method File Name : PAH.M
Sample Info : SLP LAB FORT ERT#40147 : TUE. 25 NOV. 86
M·-c Info: 1.0 UL OF SAMPLE
gration File Name : DATA:40147A.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	Peak Type	Int Type	Ret Time	Signal Description		Compound Name	Area	Amount
1		1	-------	Mass	118.00 amu	2,3-BENZOFUR	*** Not Found ***	
2		1PV	10.079	Mass	118.00 amu	2,3-DIHYDROI	942846	97.52 ng/mL
3		1PV	10.245	Mass	116.00 amu	INDENE	816082	72.11 ng/mL
4		1BV	12.642	Mass	136.00 amu	NAPHTHALENE,	507330	15.97 ng/mL
5		1VV	12.681	Mass	128.00 amu	NAPTHALENE	10616338	365.6 ng/mL
6		1VV	12.838	Mass	134.00 amu	BENZO(b)THIO	156854	11.53 ng/mL
7		1VV	13.553	Mass	129.00 amu	QUINOLINE	974553	80.77 ng/mL
8		1BV	14.371	Mass	117.00 amu	INDOLE	126097	7.518 ng/mL
9		1VV	14.426	Mass	141.00 amu	2-METHYLNAPT	1332292	71.23 ng/mL
10		1VV	14.698	Mass	141.00 amu	1-METHYLNAPT	223293	6.884 ng/mL
11		1PV	15.660	Mass	154.00 amu	BIPHENYL	831246	
12		1VV	16.730	Mass	152.00 amu	ACENAPHTHYLE	265768	12.62 ng/mL
13	+ISTD	1VV	17.126	Mass	164.00 amu	ACENAPTHTHEN	603722	53.00 ng/mL
		1VV	17.199	Mass	154.00 amu	ACENAPHTHENE	405437	22.66 ng/mL
		1VV	17.620	Mass	168.00 amu	DIBENZOFURAN	220833	6.647 ng/mL
16		2PV	18.437	Mass	176.00 amu	FLUORENE, d1	832936	116.9 ng/mL
17		2VV	18.497	Mass	166.00 amu	FLUORENE	1667956	153.5 ng/mL
18		2BV	20.633	Mass	184.00 amu	DIBENZOTHIOP	162796	8.386 ng/mL
19	+ISTD	2PV	20.901	Mass	188.00 amu	PHENANTHRENE	981717	62.50 ng/mL
20		2PV	20.945	Mass	178.00 amu	PHENANTHRENE	1562374	0.6210 ng/mL
21		2VV	21.057	Mass	178.00 amu	ANTHRACENE	188094	
22		2VV	21.244	Mass	179.00 amu	ACRIDINE	138374	9.193 ng/mL
23		1PV	21.546	Mass	167.00 amu	CARBAZOLE	136431	1.069 ng/mL
24		1BV	24.020	Mass	202.00 amu	FLUORANTHENE	537490	
25		2	-------	Mass	212.00 amu	PYRENE, d10	*** Not Found ***	
26		2PV	24.588	Mass	202.00 amu	PYRENE	447530	18.12 ng/mL
27		3BV	27.680	Mass	228.00 amu	BENZ(a)ANTHR	83237	
28		3VV	27.727	Mass	240.00 amu	CHYRSENE, d(	440475	20.98 ng/mL
29		3VV	27.783	Mass	228.00 amu	CHYRSENE	3923404	66.19 ng/mL
30		3VV	30.334	Mass	252.00 amu	BENZOFLUORAN	260361	
31		3	-------	Mass	252.00 amu	BENZOFLUORAN	*** Not Found ***	
32		3PV	31.041	Mass	252.00 amu	BENZ(e)PYREN	4555629	61.25 ng/mL
33	+ISTD	3PV	31.117	Mass	264.00 amu	BENZ(a)PYREN	1960572	49.60 ng/mL
34		3VV	31.164	Mass	252.00 amu	BENZ(a)PYREN	95065	
35		3VB	31.337	Mass	264.00 amu	PERYLENE, d1	1095596	31.62 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 ***	
		3BB	35.657	Mass	276.00 amu	BENZO(g,h,i)	2299647	45.65 ng/mL
--------		PV	9.006	Mass	118.00	-Uncalibrated-	42914	42914 ng/mL
--------		VV	8.995	Mass	116.00	-Uncalibrated-	92033	92033 ng/mL
--------		VV	9.070	Mass	118.00	-Uncalibrated-	69196	69196 ng/mL
--------		VV	10.075	Mass	116.00	-Uncalibrated-	172752	172752 ng/mL
--------		PV	11.308	Mass	118.00	-Uncalibrated-	64320	64320 ng/mL
--------		PV	11.357	Mass	116.00	-Uncalibrated-	109942	109942 ng/mL

--------	PH	12.064	Mass	129.00	- nca i ra e -	[illegible]	[illegible]	ng m
--------	PH	12.063	Mass	128.00	-Uncalibrated-	40373	40373	ng/mL
--------	PH	12.085	Mass	134.00	-Uncalibrated-	18651	18651	ng/mL
--------	VH	12.182	Mass	136.00	-Uncalibrated-	20495	20495	ng/mL
--------	VV	12.183	Mass	134.00	-Uncalibrated-	74562	74562	ng/mL
--------	VV	12.171	Mass	129.00	-Uncalibrated-	113684	113684	ng/mL
--------	VV	12.175	Mass	128.00	-Uncalibrated-	111476	111476	ng/mL
------	VH	12.300	Mass	136.00	-Uncalibrated-	41557	41557	ng/mL
------	VV	12.336	Mass	128.00	-Uncalibrated-	68711	68711	ng/mL
--------	VV	12.417	Mass	128.00	-Uncalibrated-	56525	56525	ng/mL
--------	VV	12.538	Mass	134.00	-Uncalibrated-	47971	47971	ng/mL
--------	PV	12.641	Mass	134.00	-Uncalibrated-	156390	156390	ng/mL
--------	VV	12.683	Mass	129.00	-Uncalibrated-	1128289	1128289	ng/mL
--------	VV	12.817	Mass	128.00	-Uncalibrated-	118667	118667	ng/mL
--------	VV	13.365	Mass	136.00	-Uncalibrated-	365545	365545	ng/mL
--------	PV	13.362	Mass	134.00	-Uncalibrated-	253375	253375	ng/mL
--------	VV	13.550	Mass	128.00	-Uncalibrated-	217994	217994	ng/mL
--------	VV	13.736	Mass	129.00	-Uncalibrated-	713150	713150	ng/mL
--------	VB	13.912	Mass	129.00	-Uncalibrated-	372287	372287	ng/mL
--------	VH	14.216	Mass	117.00	-Uncalibrated-	25827	25827	ng/mL
--------	PV	14.310	Mass	141.00	-Uncalibrated-	47185	47185	ng/mL
--------	PV	15.168	Mass	117.00	-Uncalibrated-	163958	163958	ng/mL
--------	PV	15.683	Mass	117.00	-Uncalibrated-	335456	335456	ng/mL
--------	VV	15.897	Mass	141.00	-Uncalibrated-	485758	485758	ng/mL
--------	PV	15.954	Mass	117.00	-Uncalibrated-	213169	213169	ng/mL
--------	VB	16.026	Mass	141.00	-Uncalibrated-	307848	307848	ng/mL
--------	BV	16.231	Mass	164.00	-Uncalibrated-	151178	151178	ng/mL
--------	BV	16.246	Mass	152.00	-Uncalibrated-	240661	240661	ng/mL
--------	VV	16.357	Mass	152.00	-Uncalibrated-	66059	66059	ng/mL
--------	VV	16.580	Mass	152.00	-Uncalibrated-	126522	126522	ng/mL
--------	VV	16.607	Mass	154.00	-Uncalibrated-	50040	50040	ng/mL
--------	VV	16.629	Mass	164.00	-Uncalibrated-	266649	266649	ng/mL
------	VV	16.782	Mass	164.00	-Uncalibrated-	201968	201968	ng/mL
------	VV	16.775	Mass	154.00	-Uncalibrated-	78666	78666	ng/mL
--------	VV	17.063	Mass	154.00	-Uncalibrated-	125445	125445	ng/mL
--------	PV	17.100	Mass	168.00	-Uncalibrated-	118192	118192	ng/mL
--------	VV	17.197	Mass	152.00	-Uncalibrated-	254135	254135	ng/mL
--------	VV	17.232	Mass	168.00	-Uncalibrated-	80966	80966	ng/mL
--------	VV	17.330	Mass	152.00	-Uncalibrated-	106759	106759	ng/mL
--------	VV	17.548	Mass	168.00	-Uncalibrated-	90092	90092	ng/mL
--------	VV	18.333	Mass	168.00	-Uncalibrated-	95987	95987	ng/mL
--------	BV	18.495	Mass	164.00	-Uncalibrated-	309120	309120	ng/mL
--------	VV	18.872	Mass	168.00	-Uncalibrated-	135653	135653	ng/mL
--------	VV	18.916	Mass	166.00	-Uncalibrated-	262995	262995	ng/mL
--------	VV	18.913	Mass	152.00	-Uncalibrated-	226206	226206	ng/mL
--------	VV	19.006	Mass	166.00	-Uncalibrated-	144637	144637	ng/mL
--------	VV	19.312	Mass	166.00	-Uncalibrated-	237864	237864	ng/mL
--------	VV	19.310	Mass	152.00	-Uncalibrated-	339850	339850	ng/mL
--------	VB	19.448	Mass	152.00	-Uncalibrated-	315333	315333	ng/mL
--------	BV	19.580	Mass	178.00	-Uncalibrated-	47951	47951	ng/mL
--------	BV	19.713	Mass	184.00	-Uncalibrated-	177307	177307	ng/mL
--------	VV	19.926	Mass	178.00	-Uncalibrated-	114362	114362	ng/mL
--------	VV	20.030	Mass	184.00	-Uncalibrated-	124563	124563	ng/mL
--------	VV	20.090	Mass	184.00	-Uncalibrated-	64033	64033	ng/mL
--------	VV	20.311	Mass	184.00	-Uncalibrated-	76078	76078	ng/mL
--------	VV	20.353	Mass	167.00	-Uncalibrated-	203143	203143	ng/mL
--------	PV	20.411	Mass	179.00	-Uncalibrated-	78535	78535	ng/mL
------	VV	20.579	Mass	179.00	-Uncalibrated-	83258	83258	ng/mL
------	PV	20.597	Mass	167.00	-Uncalibrated-	196034	196034	ng/mL
--------	VV	20.820	Mass	179.00	-Uncalibrated-	65377	65377	ng/mL
--------	VV	20.891	Mass	184.00	-Uncalibrated-	155942	155942	ng/mL
--------	VV	20.948	Mass	179.00	-Uncalibrated-	279435	279435	ng/mL
--------	VV	21.047	Mass	179.00	-Uncalibrated-	167528	167528	ng/mL
--------	VV	21.320	Mass	179.00	-Uncalibrated-	103758	103758	ng/mL
--------	VV	21.418	Mass	179.00	-Uncalibrated-	103531	103531	ng/mL

--------	PV	22.261	Mass	167.00	-Uncalibrated-	72436	72436	ng/mL
--------	PV	22.850	Mass	212.00	-Uncalibrated-	50636	50636	ng/mL
--------	VV	23.074	Mass	212.00	-Uncalibrated-	92364	92364	ng/mL
--------	VV	24.681	Mass	212.00	-Uncalibrated-	872675	872675	ng/mL
--------	VV	24.938	Mass	212.00	-Uncalibrated-	90267	90267	ng/mL
--------	PH	26.549	Mass	240.00	-Uncalibrated-	620896	620896	ng/mL
--------	BV	26.710	Mass	228.00	-Uncalibrated-	404976	404976	ng/mL
------	BV	27.402	Mass	240.00	-Uncalibrated-	55312	55312	ng/mL
------	BV	27.398	Mass	228.00	-Uncalibrated-	40126	40126	ng/mL
--------	VV	27.523	Mass	240.00	-Uncalibrated-	62651	62651	ng/mL
--------	PH	29.717	Mass	264.00	-Uncalibrated-	185449	185449	ng/mL
--------	PV	29.713	Mass	252.00	-Uncalibrated-	220562	220562	ng/mL
--------	VV	29.853	Mass	252.00	-Uncalibrated-	15888	15888	ng/mL
--------	PV	30.091	Mass	252.00	-Uncalibrated-	12013	12013	ng/mL
--------	PV	32.238	Mass	252.00	-Uncalibrated-	27023	27023	ng/mL

Error : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.414 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #25's Description at 24.553 +/- 0.123 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.382 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #36's Description at 31.403 +/- 0.157 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.700 +/- 0.173 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #38's Description at 34.758 +/- 0.174 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

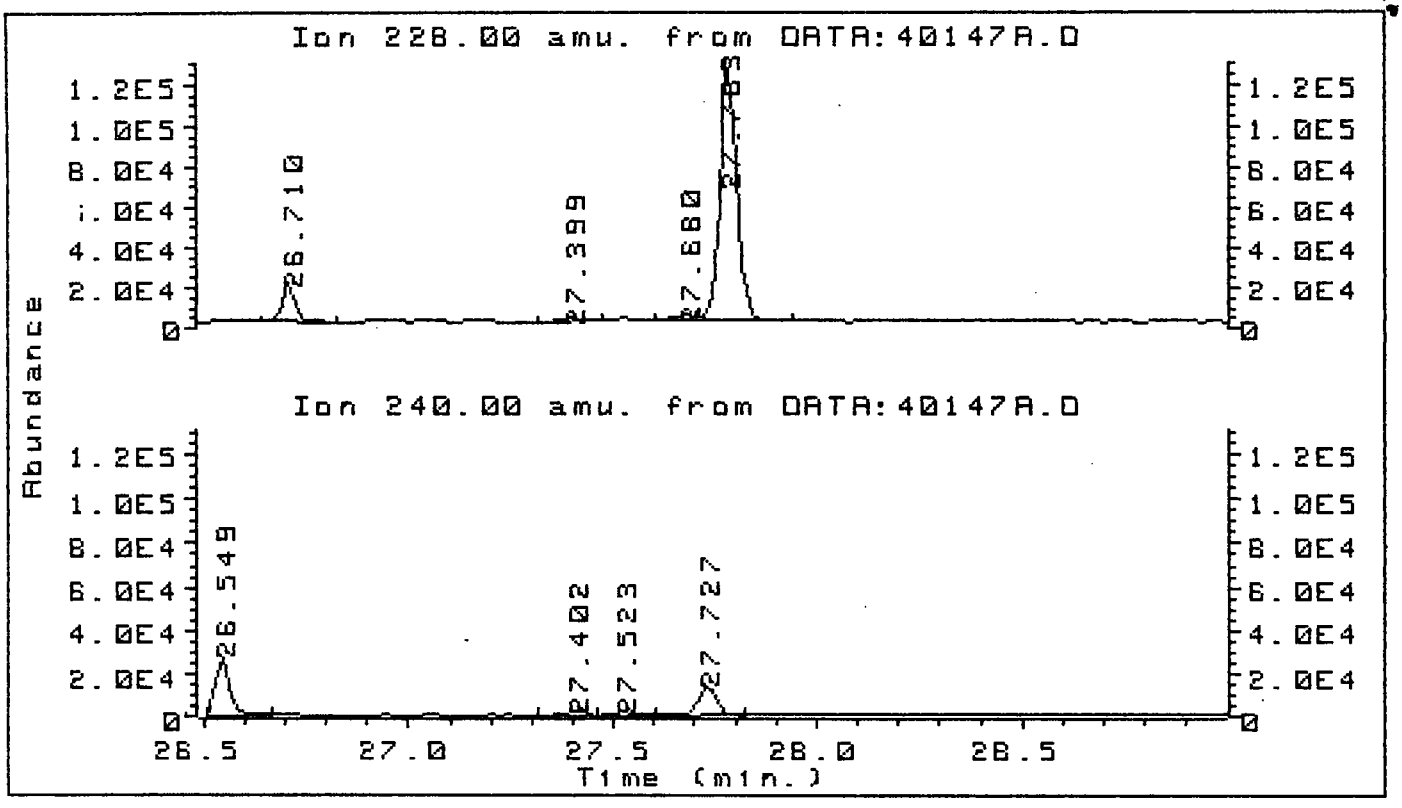
Operator: LOUIE POUNDS 25 Nov 86 2:24 pm
Method File Name : PAH.M
Sample Info : SLP LAB FORT ERT#40147 : TUE. 25 NOV. 86
Misc Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40147A.I
Bottle Number : 0

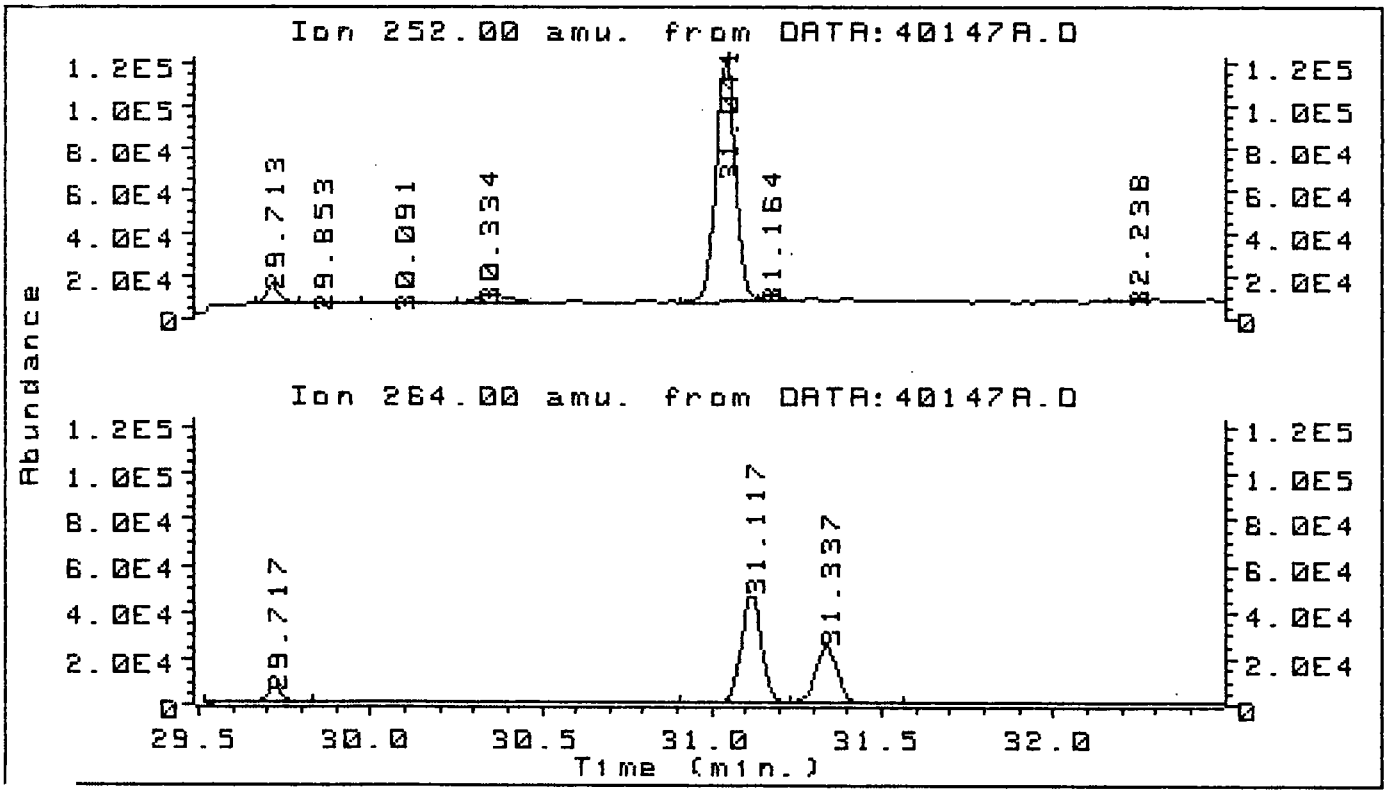
Ret Time	Signal	Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
9.006	Mass	118.00 amu	PV	42914	1824	31.80	3.33	46.63	4.55
8.995	Mass	116.00 amu	VV	92033	3128	68.20	7.73	100.00	11.28
9.070	Mass	118.00 amu	VV	69196	3011	100.00	5.37	100.00	7.34
10.079	Mass	118.00 amu	PV	942846	39142	84.51	73.17	100.00	100.00
10.075	Mass	116.00 amu	VV	172752	8054	15.49	14.51	18.32	21.17
10.245	Mass	116.00 amu	PV	816082	32872	100.00	68.53	100.00	100.00
11.308	Mass	118.00 amu	PV	64320	2424	100.00	4.99	100.00	6.82
11.357	Mass	116.00 amu	PV	109942	3097	100.00	9.23	100.00	13.47
.694	Mass	118.00 amu	BV	169344	5752	100.00	13.14	100.00	17.96
12.064	Mass	129.00 amu	PH	27150	2013	40.21	0.82	67.25	2.41
12.063	Mass	128.00 amu	PH	40373	2053	59.79	0.36	100.00	0.38
12.085	Mass	134.00 amu	PH	18651	1612	100.00	2.63	100.00	7.36
12.182	Mass	136.00 amu	VH	20495	742	6.40	2.19	18.03	4.04

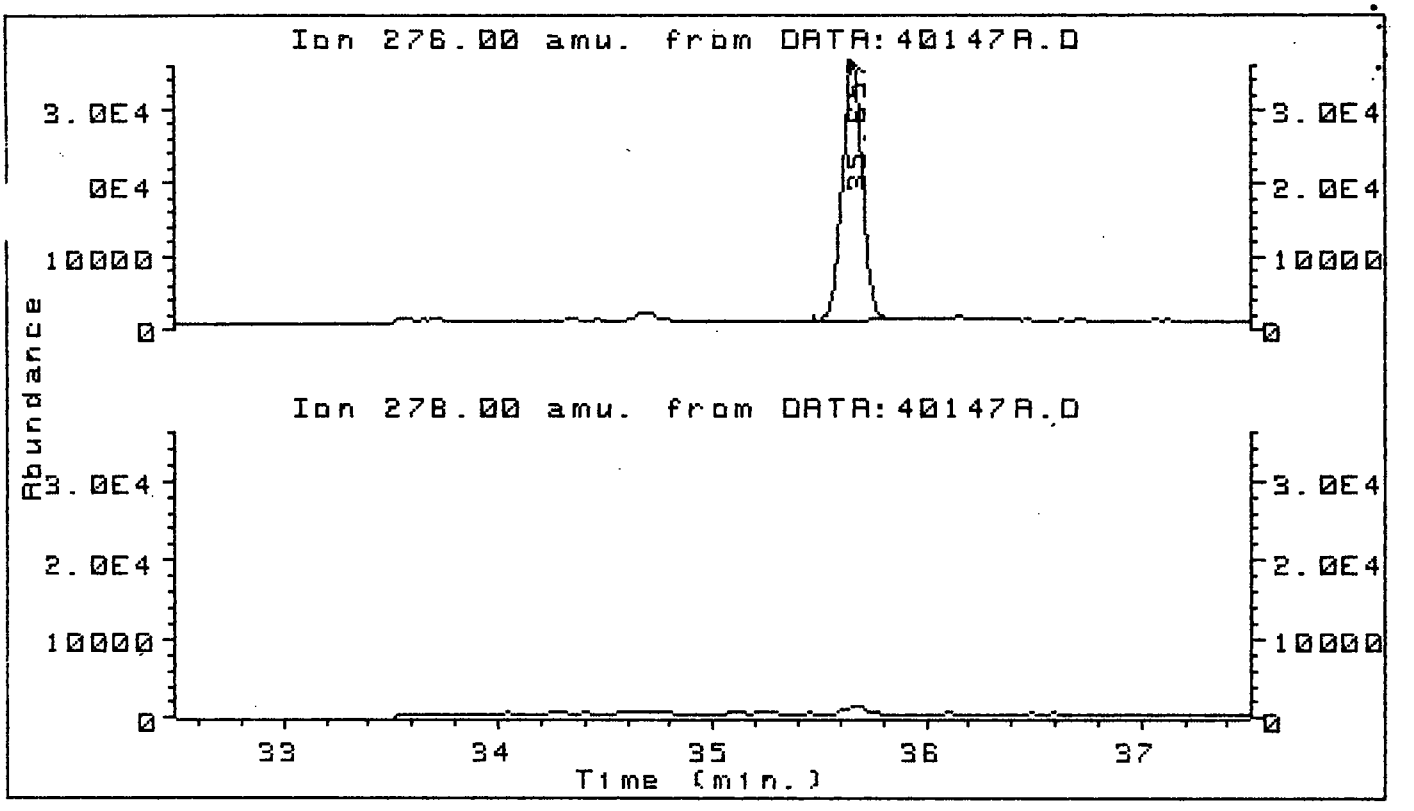
12.171	ass	[illegible]	amu			[illegible]	[illegible]	[illegible]	[illegible]	
12.175	Mass	128.00	amu	VV	111476	2011	34.81	0.99	98.06	[illegible]05
12.300	Mass	136.00	amu	VH	41557	614	100.00	4.44	100.00	8.19
12.336	Mass	128.00	amu	VV	68711	1101	100.00	0.61	100.00	0.65
417	Mass	128.00	amu	VV	56525	1005	100.00	0.50	100.00	0.53
12.538	Mass	134.00	amu	VV	47971	2021	100.00	6.78	100.00	18.93
12.642	Mass	136.00	amu	BV	507330	20691	76.44	54.26	100.00	100.00
12.641	Mass	134.00	amu	PV	156390	5362	23.56	22.10	30.83	61.72
12.683	Mass	129.00	amu	VV	1128289	42488	9.61	33.89	10.63	100.00
12.681	Mass	128.00	amu	VV	10616338	415161	90.39	94.53	100.00	100.00
12.817	Mass	128.00	amu	VV	118667	2535	100.00	1.06	100.00	1.12
12.838	Mass	134.00	amu	VV	156854	5354	100.00	22.16	100.00	61.91
13.365	Mass	136.00	amu	VV	365545	11577	59.06	39.10	100.00	72.05
13.362	Mass	134.00	amu	PV	253375	8834	40.94	35.80	69.31	100.00
13.553	Mass	129.00	amu	VV	974553	31846	81.72	29.27	100.00	86.37
13.550	Mass	128.00	amu	VV	217994	7326	18.28	1.94	22.37	2.05
13.736	Mass	129.00	amu	VV	713150	20474	100.00	21.42	100.00	63.21
13.912	Mass	129.00	amu	VB	372287	5507	100.00	11.18	100.00	33.00
14.216	Mass	117.00	amu	VH	25827	589	100.00	2.99	100.00	7.70
310	Mass	141.00	amu	PV	47185	753	100.00	1.97	100.00	3.54
14.371	Mass	117.00	amu	BV	126097	3415	100.00	14.59	100.00	37.59
14.426	Mass	141.00	amu	VV	1332292	47938	100.00	55.60	100.00	100.00
14.698	Mass	141.00	amu	VV	223293	7405	100.00	9.32	100.00	16.76
15.168	Mass	117.00	amu	PV	163958	5238	100.00	18.97	100.00	48.88
15.660	Mass	154.00	amu	PV	831246	31743	100.00	55.76	100.00	100.00
15.683	Mass	117.00	amu	PV	335456	13151	100.00	38.80	100.00	100.00
15.897	Mass	141.00	amu	VV	485758	7775	100.00	20.27	100.00	36.46
15.954	Mass	117.00	amu	PV	213169	9365	100.00	24.66	100.00	63.55
16.026	Mass	141.00	amu	VB	307848	5582	100.00	12.85	100.00	23.11
16.231	Mass	164.00	amu	BV	151178	1546	38.58	9.86	62.82	25.04
16.246	Mass	152.00	amu	BV	240661	2429	61.42	12.40	100.00	70.81
16.357	Mass	152.00	amu	VV	66059	1351	100.00	3.40	100.00	19.44
580	Mass	152.00	amu	VV	126522	1289	100.00	6.52	100.00	37.23
16.607	Mass	154.00	amu	VV	50040	1835	100.00	3.36	100.00	6.02
16.629	Mass	164.00	amu	VV	266649	7250	100.00	17.40	100.00	44.17
16.730	Mass	152.00	amu	VV	265768	7358	100.00	13.69	100.00	78.20

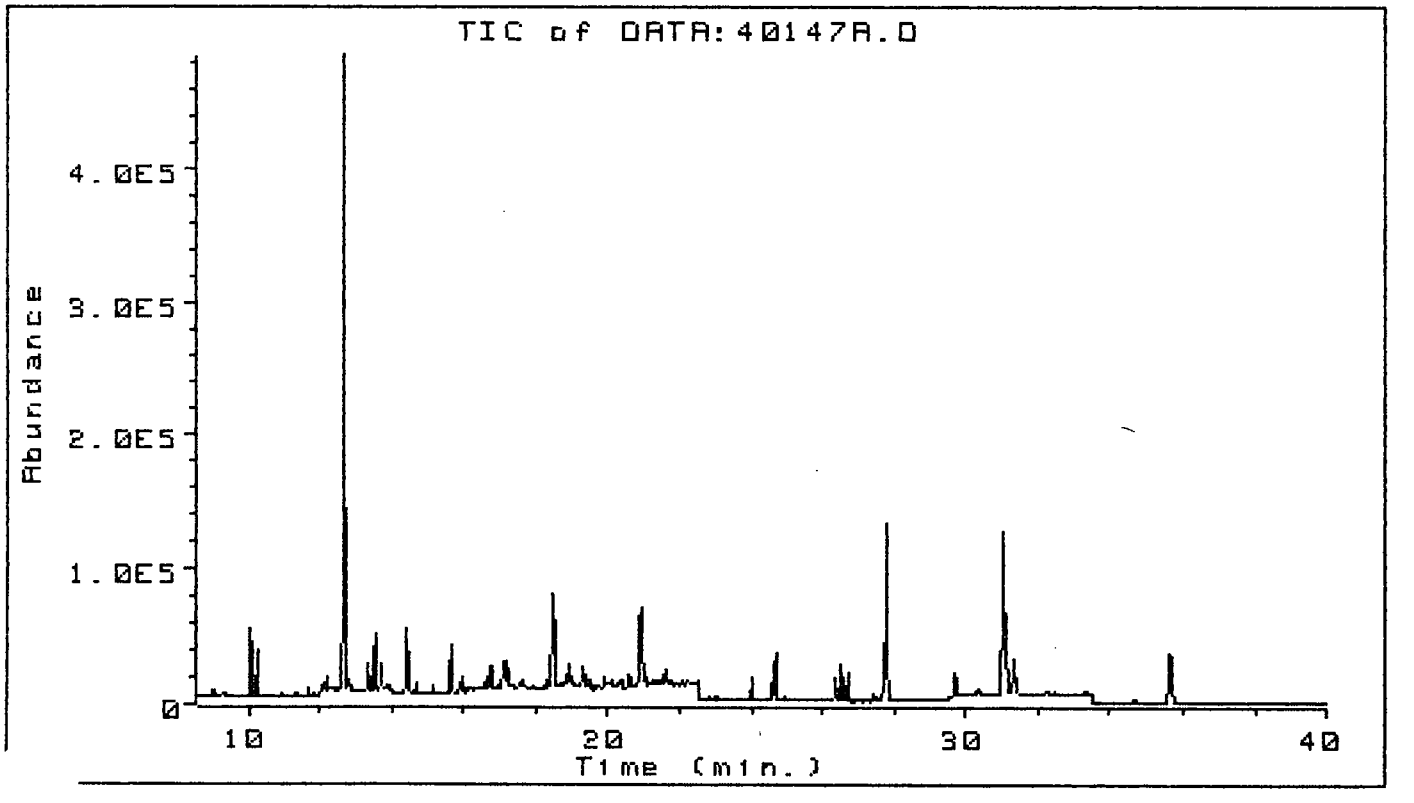
16.782	ass	.00	amu							
16.775	Mass	154.00	amu	VV	78666	2111	28.03	5.28	38.95	46
17.063	Mass	154.00	amu	VV	125445	4187	100.00	8.41	100.00	15.09
17.100	Mass	168.00	amu	PV	118192	3274	100.00	15.93	100.00	53.52
126	Mass	164.00	amu	VV	603722	17849	100.00	39.39	100.00	100.00
17.197	Mass	152.00	amu	VV	254135	7808	38.53	13.09	62.68	74.78
17.199	Mass	154.00	amu	VV	405437	12496	61.47	27.20	100.00	48.77
17.232	Mass	168.00	amu	VV	80966	2056	100.00	10.92	100.00	36.66
17.330	Mass	152.00	amu	VV	106759	2374	100.00	5.50	100.00	31.41
17.548	Mass	168.00	amu	VV	90092	3088	100.00	12.15	100.00	40.80
17.620	Mass	168.00	amu	VV	220833	6296	100.00	29.77	100.00	100.00
18.333	Mass	168.00	amu	VV	95987	3512	100.00	12.94	100.00	43.47
18.437	Mass	176.00	amu	PV	832936	27458	100.00	100.00	100.00	100.00
18.497	Mass	166.00	amu	VV	1667956	54441	84.36	72.10	100.00	100.00
18.495	Mass	164.00	amu	BV	309120	9653	15.64	20.17	18.53	51.20
18.872	Mass	168.00	amu	VV	135653	3214	100.00	18.29	100.00	61.43
18.916	Mass	166.00	amu	VV	262995	8075	53.76	11.37	100.00	15.77
18.913	Mass	152.00	amu	VV	226206	5303	46.24	11.65	86.01	66.56
006	Mass	166.00	amu	VV	144637	4381	100.00	6.25	100.00	8.67
19.312	Mass	166.00	amu	VV	237864	7366	41.17	10.28	69.99	14.26
19.310	Mass	152.00	amu	VV	339850	5875	58.83	17.51	100.00	100.00
19.448	Mass	152.00	amu	VB	315333	4822	100.00	16.24	100.00	92.79
19.580	Mass	178.00	amu	BV	47951	1628	100.00	2.51	100.00	3.07
19.713	Mass	184.00	amu	BV	177307	2275	100.00	23.31	100.00	100.00
19.926	Mass	178.00	amu	VV	114362	2438	100.00	5.98	100.00	7.32
20.030	Mass	184.00	amu	VV	124563	2550	100.00	16.37	100.00	70.25
20.090	Mass	184.00	amu	VV	64033	2246	100.00	8.42	100.00	36.11
20.311	Mass	184.00	amu	VV	76078	2043	100.00	10.00	100.00	42.91
20.353	Mass	167.00	amu	VV	203143	4320	100.00	33.41	100.00	100.00
20.411	Mass	179.00	amu	PV	78535	1980	100.00	6.15	100.00	28.10
20.579	Mass	179.00	amu	VV	83258	2652	100.00	6.52	100.00	29.80
597	Mass	167.00	amu	PV	196034	4058	100.00	32.24	100.00	96.50
20.633	Mass	184.00	amu	BV	162796	4476	100.00	21.40	100.00	91.82
20.820	Mass	179.00	amu	VV	65377	1563	100.00	5.12	100.00	23.40
20.901	Mass	188.00	amu	PV	961717	30987	86.05	100.00	100.00	100.00
20.891	Mass	184.00	amu	VV	155942	4599	13.95	20.50	16.21	87.95

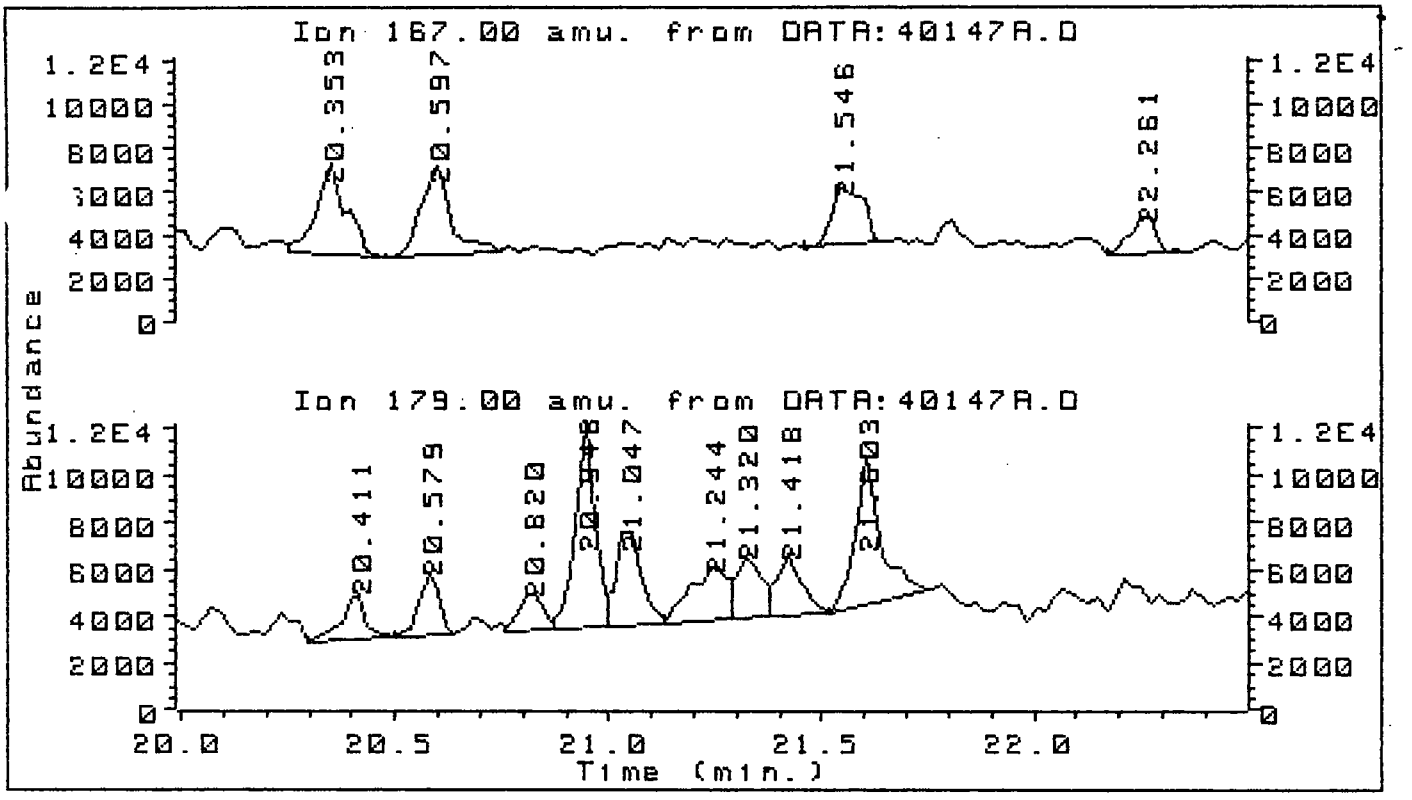
20.945	Mass	178.00	amu	PV	1562374	49211	84.83	81.68	100.00	100.
21.047	Mass	179.00	amu	VV	167528	3996	47.11	13.13	89.07	59.95
21.057	Mass	178.00	amu	VV	188094	5254	52.89	9.83	100.00	12.04
21.244	Mass	179.00	amu	VV	138374	2140	100.00	10.84	100.00	49.52
.320	Mass	179.00	amu	VV	103758	2550	100.00	8.13	100.00	37.13
21.418	Mass	179.00	amu	VV	103531	2491	100.00	8.11	100.00	37.05
21.546	Mass	167.00	amu	PV	136431	2634	100.00	22.44	100.00	67.16
21.603	Mass	179.00	amu	PV	256548	5842	100.00	20.10	100.00	91.81
22.261	Mass	167.00	amu	PV	72436	1722	100.00	11.91	100.00	35.66
22.850	Mass	212.00	amu	PV	50636	1679	100.00	4.58	100.00	5.80
23.074	Mass	212.00	amu	VV	92364	2010	100.00	8.35	100.00	10.58
24.020	Mass	202.00	amu	BV	537490	16296	100.00	54.57	100.00	100.00
24.588	Mass	202.00	amu	PV	447530	13166	100.00	45.43	100.00	83.26
24.681	Mass	212.00	amu	VV	872675	33857	100.00	78.91	100.00	100.00
24.938	Mass	212.00	amu	VV	90267	2276	100.00	8.16	100.00	10.34
26.549	Mass	240.00	amu	PH	620896	27119	100.00	52.65	100.00	100.00
.710	Mass	228.00	amu	BV	404976	19982	100.00	9.10	100.00	10.32
27.402	Mass	240.00	amu	BV	55312	1976	57.96	4.69	100.00	8.91
27.398	Mass	228.00	amu	BV	40126	1674	42.04	0.90	72.55	1.02
27.523	Mass	240.00	amu	VV	62651	2173	100.00	5.31	100.00	10.09
27.680	Mass	228.00	amu	BV	83237	2492	100.00	1.87	100.00	2.12
27.727	Mass	240.00	amu	VV	440475	13412	100.00	37.35	100.00	70.94
27.783	Mass	228.00	amu	VV	3923404	125488	100.00	88.13	100.00	100.00
29.717	Mass	264.00	amu	PH	185449	6486	45.68	5.72	84.08	9.46
29.713	Mass	252.00	amu	PV	220562	9334	54.32	4.25	100.00	4.84
29.853	Mass	252.00	amu	VV	15888	311	100.00	0.31	100.00	0.35
30.091	Mass	252.00	amu	PV	12013	212	100.00	0.23	100.00	0.26
30.334	Mass	252.00	amu	VV	260361	3640	100.00	5.02	100.00	5.72
31.041	Mass	252.00	amu	PV	4555629	116655	100.00	87.84	100.00	100.00
31.117	Mass	264.00	amu	PV	1960572	47298	100.00	60.48	100.00	100.00
164	Mass	252.00	amu	VV	95065	2795	100.00	1.83	100.00	2.09
31.337	Mass	264.00	amu	VB	1095596	25539	100.00	33.80	100.00	55.88
32.238	Mass	252.00	amu	PV	27023	1219	100.00	0.52	100.00	0.59
35.657	Mass	276.00	amu	BB	2299647	34849	100.00	100.00	100.00	100.00

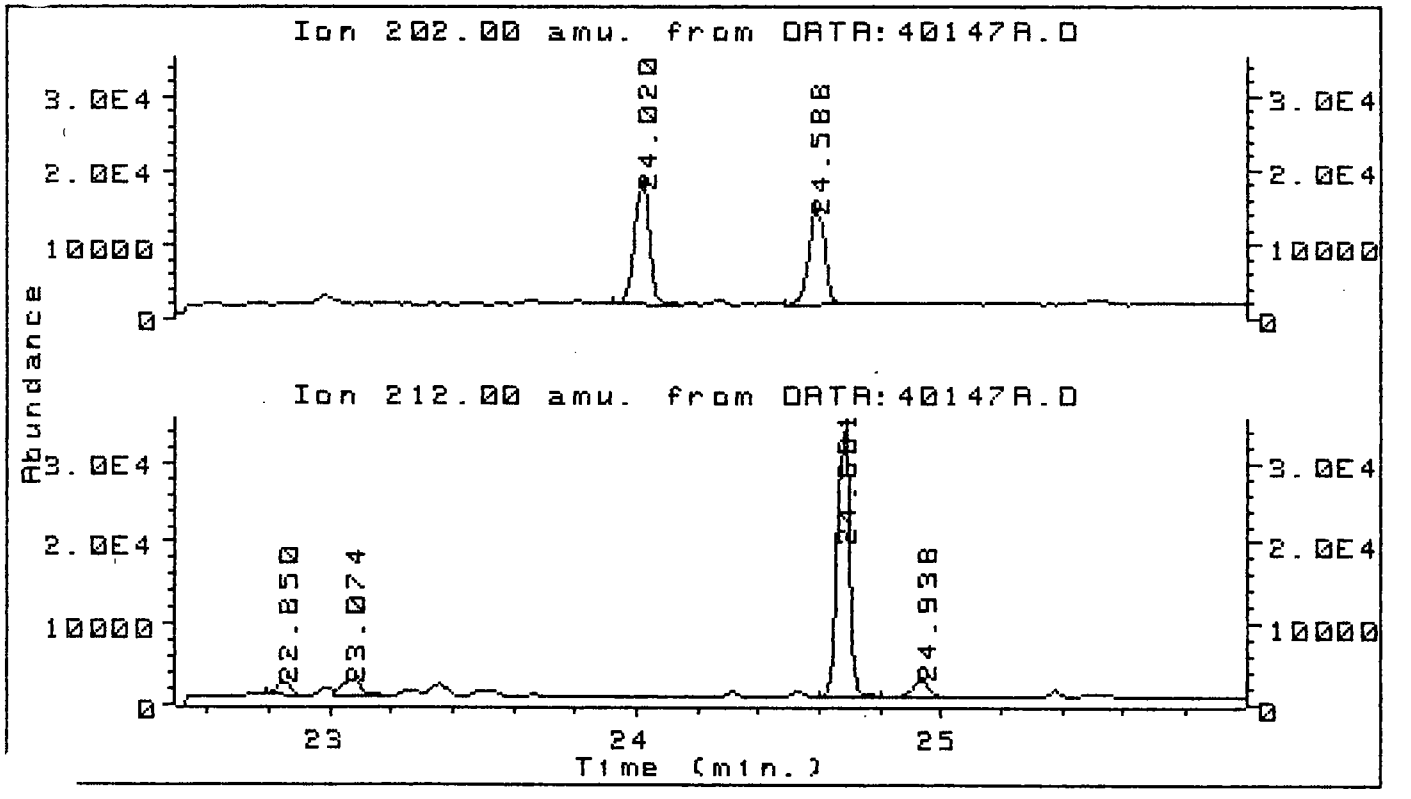

Ion 228.00 amu. from DATA:40147A.D
Abundance
1.2E5
1.0E5
8.0E4
6.0E4
4.0E4
2.0E4
0
26.710
27.399
27.680
Ion 240.00 amu. from DATA:40147A.D
26.549
27.402
27.523
27.727
26.5
27.0
27.5
28.0
28.5
Time (min.)

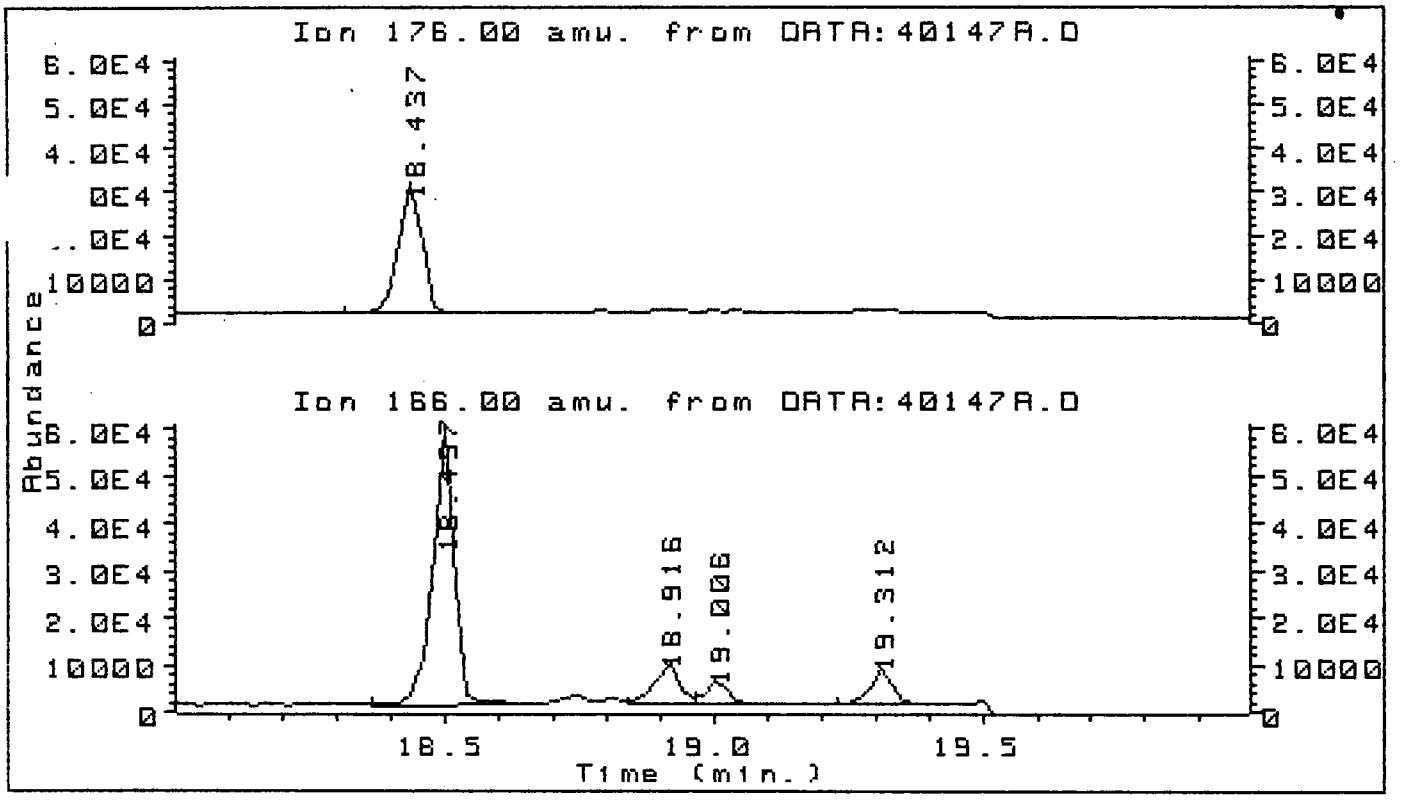

Ion 252.00 amu. from DATA:40147A.D
Abundance
1.2E5
1.0E5
8.0E4
6.0E4
4.0E4
2.0E4
0
29.713
29.853
30.091
30.334
31.164
32.238
Ion 264.00 amu. from DATA:40147A.D
29.717
31.117
31.337
29.5
30.0
30.5
31.0
31.5
32.0
Time (min.)

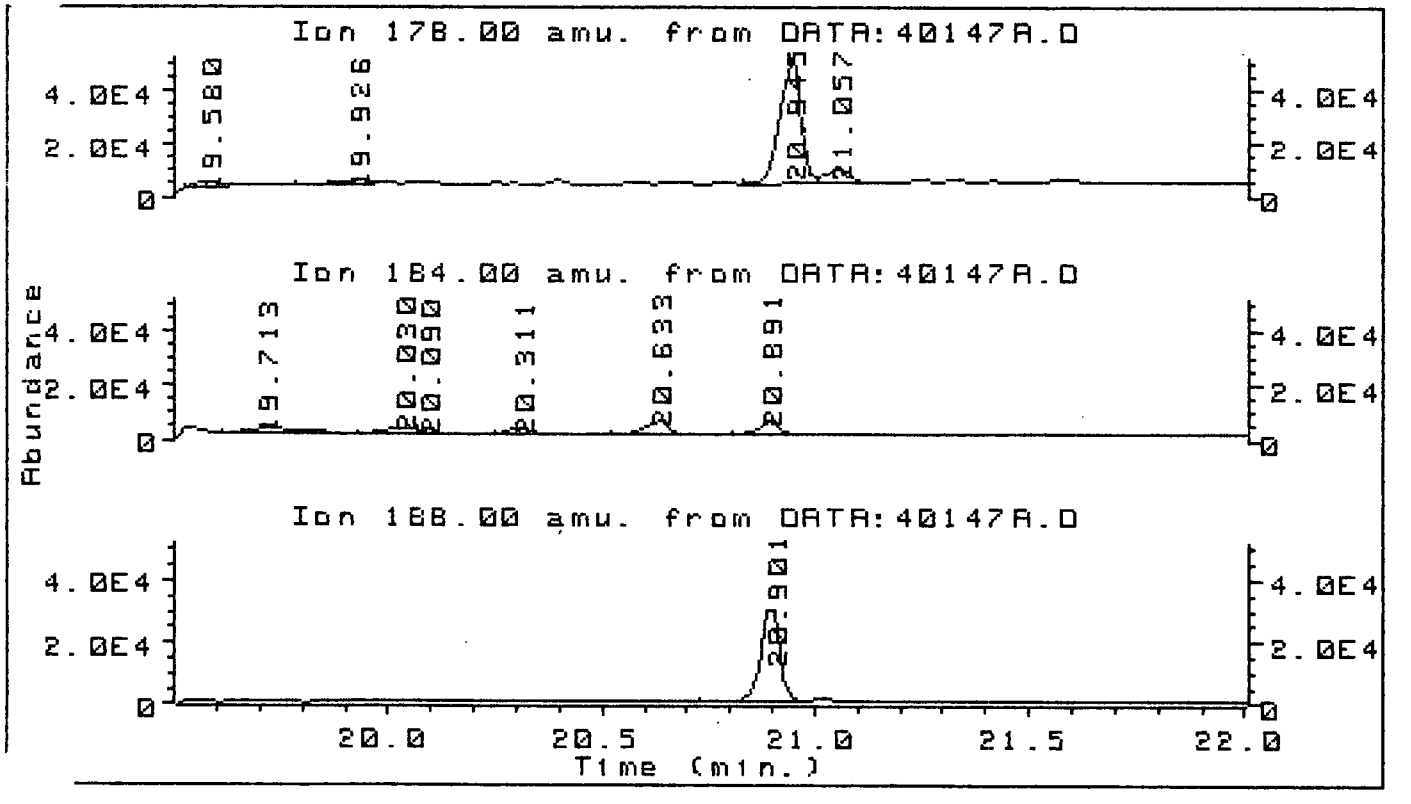

Ion 276.00 amu. from DATA:40147A.D
3.0E4
0E4
10000
0
3.0E4
2.0E4
10000
0
Abundance
Ion 278.00 amu. from DATA:40147A.D
3.0E4
2.0E4
10000
0
3.0E4
2.0E4
10000
0
33
34
35
36
37
Time (min.)

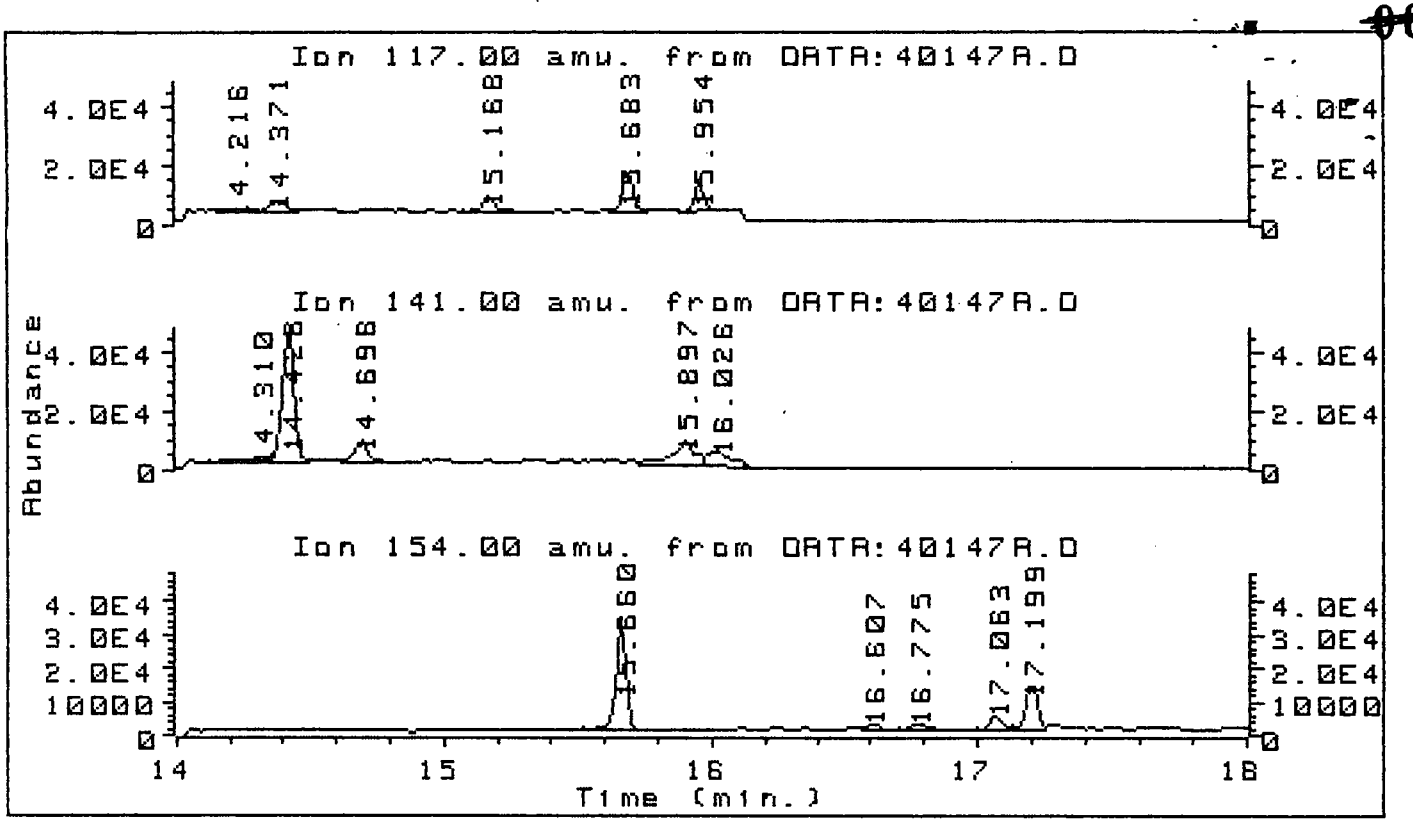

TIC of DATA:40147A.D
4.0E5
3.0E5
2.0E5
1.0E5
0
Abundance
10
20
30
40
Time (min.)

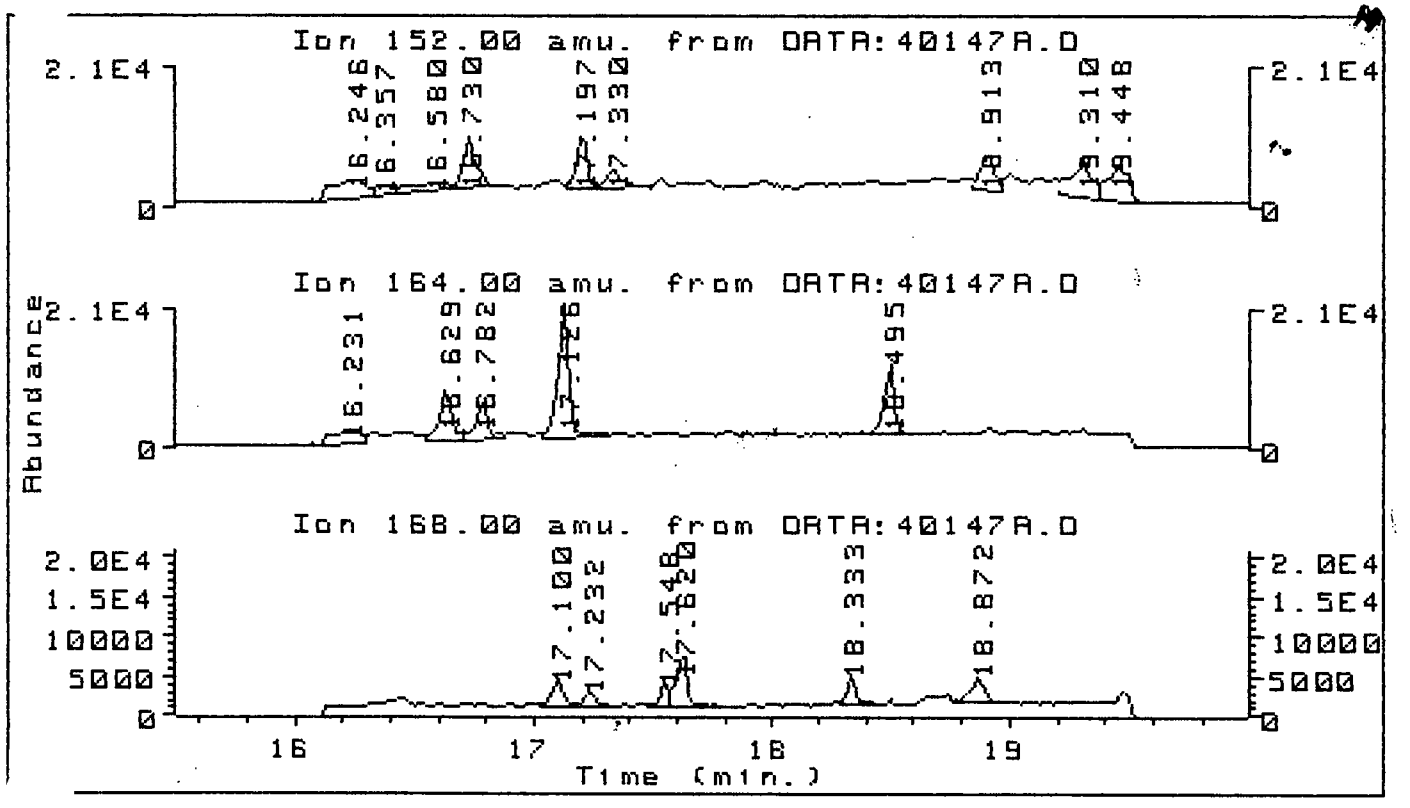

Ion 167.00 amu. from DATA:40147A.D
20.353
20.597
21.546
22.261
Ion 179.00 amu. from DATA:40147A.D
20.411
20.579
20.820
21.047
21.244
21.320
21.418
Abundance
1.2E4
10000
8000
6000
4000
2000
0
20.0
20.5
21.0
21.5
22.0
Time (min.)

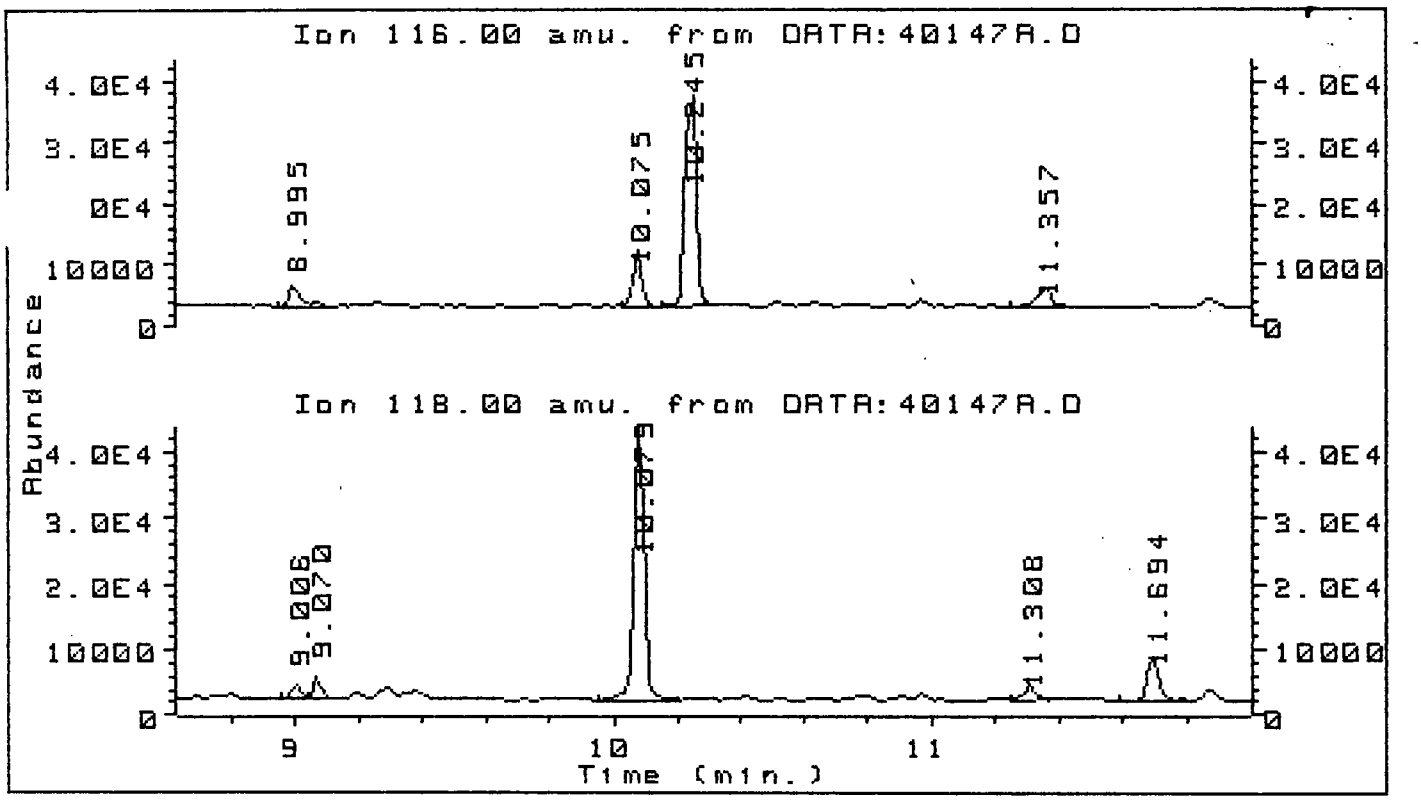

Ion 202.00 amu. from DATA:40147A.D
24.020
24.588
Ion 212.00 amu. from DATA:40147A.D
22.850
23.074
24.938
Abundance
3.0E4
2.0E4
10000
0
23
24
25
Time (min.)

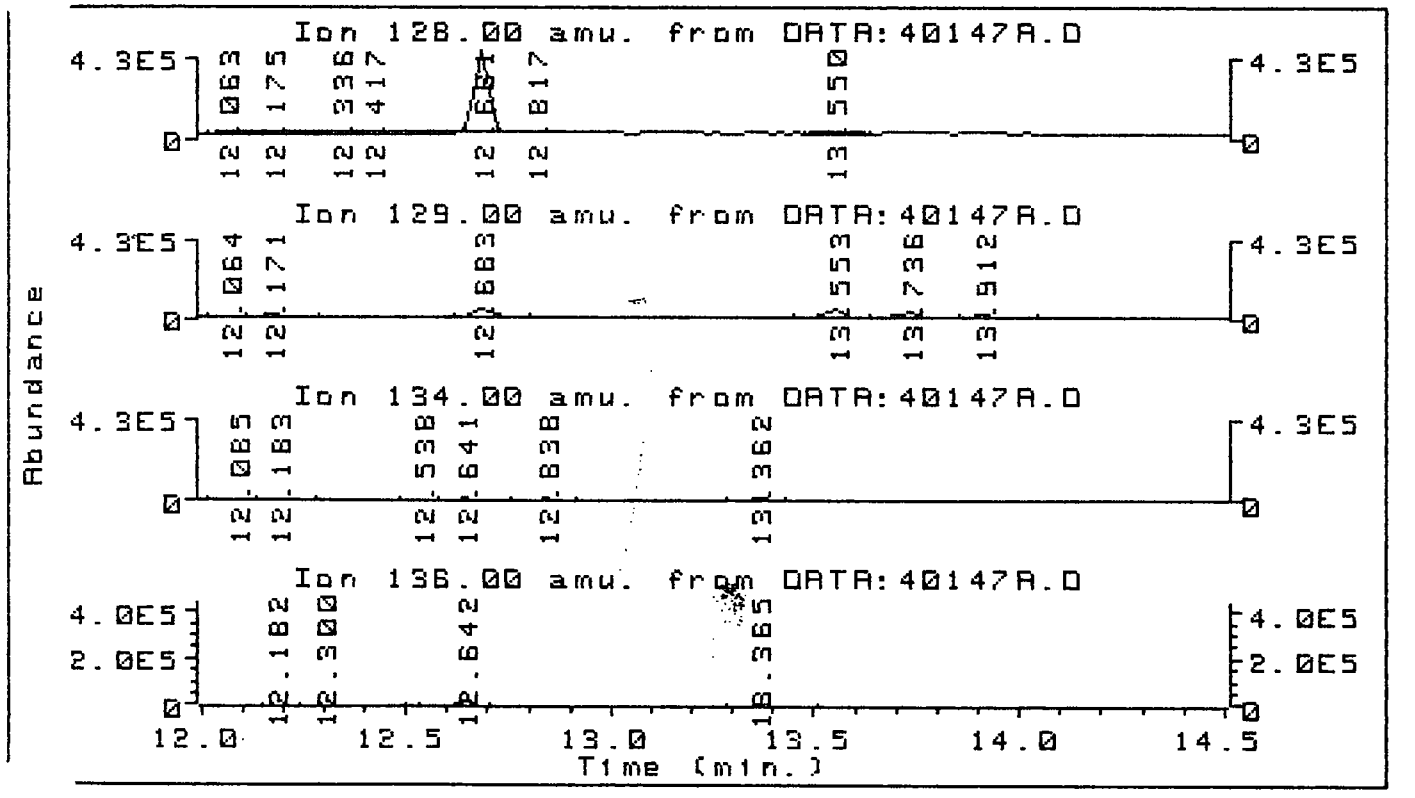

Ion 176.00 amu. from DATA:40147A.D
18.437
Ion 166.00 amu. from DATA:40147A.D
18.437
18.916
19.006
19.312
Abundance
Time (min.)

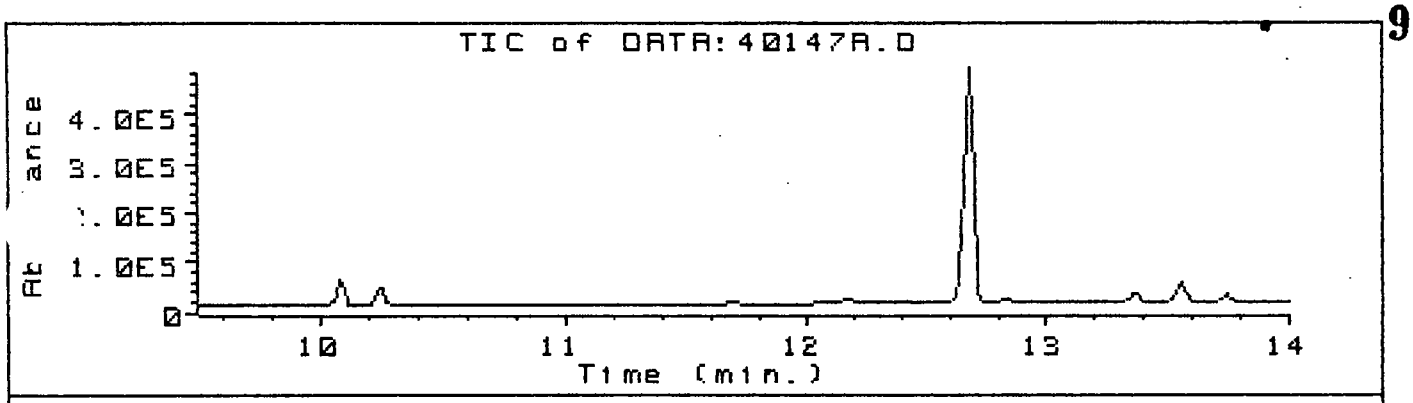

Ion 178.00 amu. from DATA:40147A.D
19.580
19.926
21.057
Ion 184.00 amu. from DATA:40147A.D
19.713
20.311
20.633
20.891
Ion 188.00 amu. from DATA:40147A.D
20.901
Abundance
Time (min.)

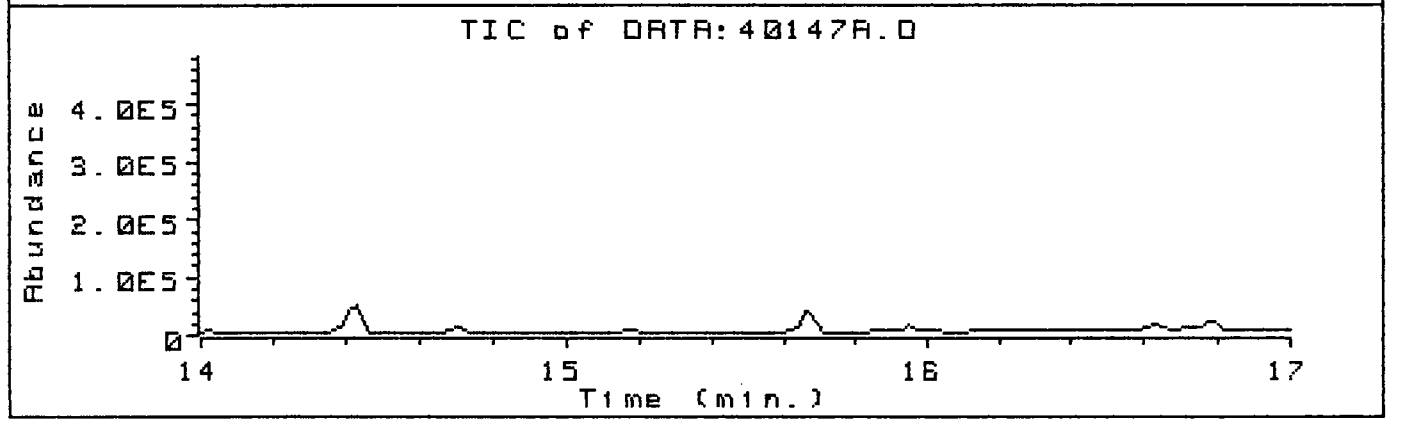

Ion 117.00 amu. from DATA:40147A.D
Ion 141.00 amu. from DATA:40147A.D
Ion 154.00 amu. from DATA:40147A.D
Abundance
Time (min.)

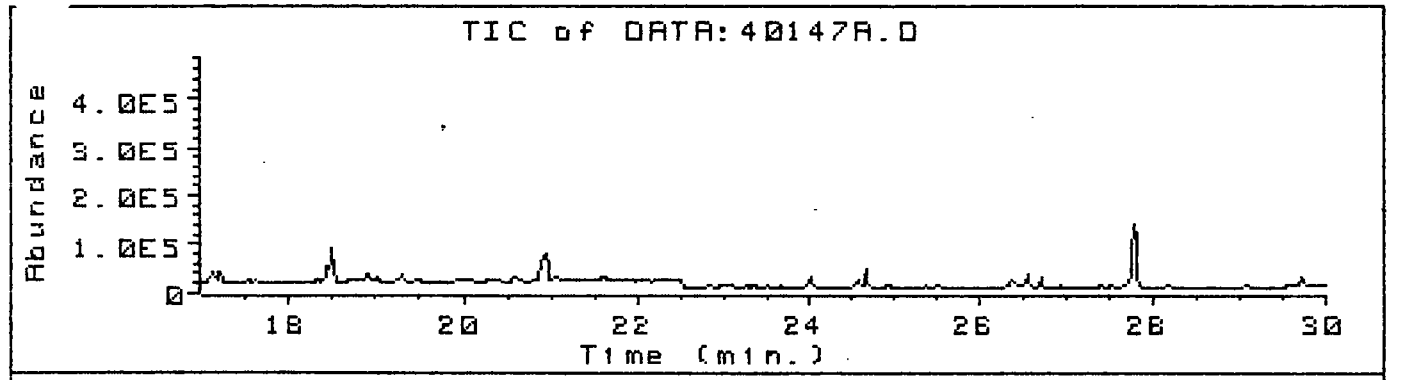

Ion 152.00 amu. from DATA:40147A.D
Ion 164.00 amu. from DATA:40147A.D
Ion 168.00 amu. from DATA:40147A.D
Abundance
Time (min.)

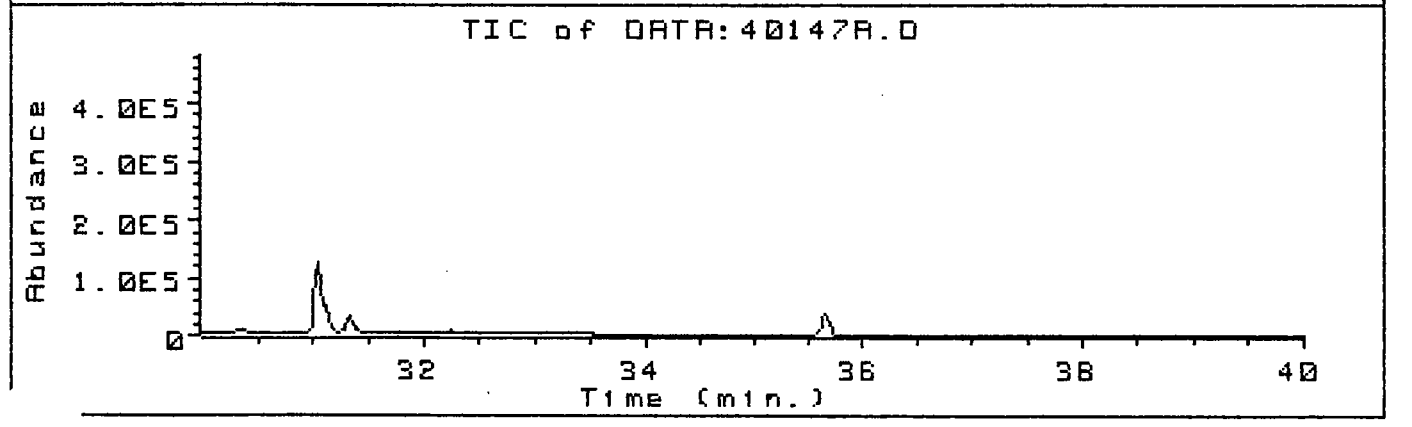

Ion 116.00 amu. from DATA:40147A.D
Ion 118.00 amu. from DATA:40147A.D
Abundance
Time (min.)


Ion 128.00 amu. from DATA:40147A.D
Ion 129.00 amu. from DATA:40147A.D
Ion 134.00 amu. from DATA:40147A.D
Ion 136.00 amu. from DATA:40147A.D
Abundance
Time (min.)


TIC of DATA:40147A.D
Abundance
4.0E5
3.0E5
2.0E5
1.0E5
0
10
11
12
13
14
Time (min.)


TIC of DATA:40147A.D
Abundance
4.0E5
3.0E5
2.0E5
1.0E5
0
14
15
16
17
Time (min.)


TIC of DATA:40147A.D
Abundance
4.0E5
3.0E5
2.0E5
1.0E5
0
18
20
22
24
26
28
30
Time (min.)


TIC of DATA:40147A.D
Abundance
4.0E5
3.0E5
2.0E5
1.0E5
0
32
34
36
38
40
Time (min.)

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: METHOD BLANK ERT NO.: 40148

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
DIBENZ (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	~~ND~~ <3.4
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	~~ND~~ <5.0
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	2.3
ACENAPHTHENE	ND
DIBENZOFURAN	~~2.9~~ 4.2
FLUORENE	1.8
DIBENZOTHIOPHENE	ND
PHENANTHRENE	~~9.9~~ 9.8
ANTHRACENE	ND
ACRIDINE	~~5.2~~ 3.1
CARBAZOLE	~~13.6~~ ND
FLUORANTHENE	4.4
PYRENE	<4.1
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	~~27~~ 25.5
TOTAL PAH'S	~~27~~ 25.5

ND = Concentration < 95% Confidence Interval of MDL

ERT #	: 40148	Extract Vol., ml	0.500
Field ID	: MB860879	Sample Vol., L	4.000
GC/MS File #	: 40148A	Date Analyze: 11/25/86	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.0	17.121	755472
Phenanthrene-d10	62.5	20.896	1306997
Benz(a)pyrene-d12	49.6	31.113	1140673

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.303	0.000	0.000	1	0.000
dihydroinden	0.783	0.589	10.078	197650	2.213
indene	1.310	0.598	10.237	84170	0.563
Naphthalene-d8 (Surr.)	2.018	0.738	12.638	731612	3.179
Naphthalene	2.752	0.740	12.674	4342605	13.838
Benz(b)thio	1.739	0.000	0.000	1	0.000
Quinoline	0.989	0.791	13.546	107819	0.956
Indole	1.485	0.839	14.364	109612	0.647
2-methyl	1.019	0.842	14.420	573956	4.937
1-methyl	1.459	0.858	14.693	298677	1.795
Biphenyl	3.395	0.914	15.656	952122	2.459
Acenaphthylene	1.540	0.977	16.730	406029	2.312
Acenaphthene	1.268	0.000	0.000	1	0.000
Dibenzofuran	1.619	1.029	17.615	776826	4.208
Group II					
Flourene-d10 (Surr.)	0.770	0.882	18.438	1700481	13.197
Fluorene	1.034	0.885	18.494	304349	1.759
Dibenzothiophene	1.173	0.987	20.629	313847	1.599
Phenanthrene	2.154	1.002	20.939	3518078	9.761
Anthracene	1.221	1.007	21.041	258742	1.266
Acridine	0.776	1.017	21.248	398685	3.072
Carbazole	1.026	1.033	21.590	278227	1.622
Fluoranthene	1.448	1.149	24.017	1067222	4.406
Pyrene-d10 (Surr.)	0.920	1.181	24.673	597118	3.878
Pyrene	1.525	1.177	24.586	778072	3.050
Group III					
Benz(a)anthracene	1.493	0.889	27.675	211961	0.772
Chrysene-d12 (Surr.)	0.451	0.891	27.726	643402	7.746
Chrysene	1.513	0.893	27.777	321415	1.155
Benzofluoranthenes	2.388	0.975	30.328	267501	0.609
Benz(e)pyrene	1.841	0.998	31.037	115571	0.341
Benz(a)pyrene	1.451	1.002	31.163	89089	0.334
Perylene-d12 (Surr.)	1.074	1.007	31.333	1193005	6.037
Perylene	1.316	1.005	31.279	38302	0.158
Indeno(123,cd)pyrene	1.312	0.000	0.000	1	0.000
Dibenz(ah)anthracene	0.903	0.000	0.000	1	0.000
Benzo(ghi)perylene	1.336	0.000	0.000	1	0.000

CALIBRATION RF's from : 18-Nov-86

ERT #: 40148
MB860879 11/25/86

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	3.18	9.90	32.11	42-102	1.820	35.61%
Flourene-d10 (Surr.)	13.20	9.50	138.92	60-128	0.866	123.55%
Chrysene-d12 (Surr.)	7.75	9.80	79.04	10-54	0.413	86.40%
Pyrene-d10 (Surr.)	3.88	10.05	38.59		0.757	46.92%
Perylene-d12 (Surr.)	6.04	9.40	64.22		0.887	77.77%

Blank

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	0.96	ND
BENZO (A) ANTHRACENE	2.80	4.40	0.77	ND
CHRYSENE	2.80	4.40	1.15	ND
BENZOFLUORANTHENES	6.20	9.70	0.61	ND
BENZO (A) PYRENE	2.20	3.40	0.33	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				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	2.21	< 3.4
INDENE	1.80	2.90	0.56	ND
NAPHTHALENE	30.00	47.00	13.84	ND
BENZO (B) THIOPHENE	1.40	2.20	0.00	ND
INDOLE	1.20	1.90	0.65	ND
2-METHYLNAPHTHALENE	3.20	5.00	4.94	< 5.0
1-METHYLNAPHTHALENE	2.00	3.10	1.80	ND
BIPHENYL	11.00	17.00	2.46	ND
ACENAPHTHYLENE	1.10	1.70	2.31	2.3
ACENAPHTHENE	0.83	1.30	0.00	ND
DIBENZOFURAN	0.77	1.20	4.21	4.2
FLOURENE	0.56	0.88	1.76	1.8
DIBENZOTHIOPHENE	4.00	6.30	1.60	ND
PHENANTHRENE	2.00	3.10	9.76	9.8
ANTHRACENE	2.20	3.40	1.27	ND
ACRIDINE	1.60	2.50	3.07	3.1
CARBAZOLE	1.70	2.60	1.62	ND
FLUORANTHENE	2.80	4.40	4.41	4.4
PYRENE	2.60	4.10	3.05	< 4.1
BENZO (E) PYRENE	0.96	1.50	0.34	ND
PERYLENE	1.00	1.60	0.16	ND
TOTAL OTHER PAH				25.5
TOTAL PAH'S				25.5

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MB860879 ERT NO.: 40148

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
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	< 3.4
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	< 5.0
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	2.3
ACENAPHTHENE	ND
DIBENZOFURAN	4.2
FLOURENE	1.8
DIBENZOTHIOPHENE	ND
PHENANTHRENE	9.8
ANTHRACENE	ND
ACRIDINE	3.1
CARBAZOLE	ND
FLUORANTHENE	4.4
PYRENE	< 4.1
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	26
TOTAL PAH'S	26

ND = Concentration < 95% Confidence Interval of MDL

Method Blank

ERT #: 40148

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/24/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	3.23	9.90	32.65	42-102	~~1.985~~ 1.82	~~32.66%~~ 35.6 78.3
Flourene-d10 (Surr.)	13.22	9.50	139.16	60-128	~~0.769~~ 0.866	~~139.19%~~ 123.6
Chyrsene-d12 (Surr.)	7.82	9.80	79.82	10-54	~~0.447~~ 0.413	~~79.80%~~ 86.4
Pyrene-d10 (Surr.)	3.87	10.05	38.53		0.922	38.53%
Perylene-d12 (Surr.)	6.15	9.40	65.44		1.054	65.43%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	0.97	0.00	0.00	1.90
BENZO (A) ANTHRACENE	2.80	0.77	0.00	0.00	4.40
CHYRSENE	2.80	1.15	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.70	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.37	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			0.00		

/FID

TETRA-CHLORO-ETHENE	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	1.88	0.00	0.00	3.40
	INDENE BDL 6	1.80	0.62	0.00	0.00	2.90
	NAPHTHALENE BDL	30.00	14.06	0.00	0.00	47.00
	BENZO (B) THIOPHENE BDL	1.40	0.00	0.00	0.00	2.20
	INDOLE BDL	1.20	0.85	0.00	0.00	1.90
	2-METHYLNAPHTHALENE BDL	3.20	2.75	0.00	0.00	5.00
	1-METHYLNAPHTHALENE BDL	2.00	1.44	0.00	0.00	3.10
	BIPHENYL BDL	11.00	0.46	0.00	0.00	17.00
	ACENAPHTHYLENE BDL	1.10	2.26	2.26	2.26	1.70
	ACENAPHTHENE	0.83	0.00	0.00	0.00	1.30
	DIBENZOFURAN	0.77	2.86	2.86	2.86	1.20
	FLOURENE	0.56	1.77	1.77	1.77	0.88
	DIBENZOTHIOPHENE	4.00	1.72	0.00	0.00	6.30
	PHENANTHRENE	2.00	9.86	9.86	9.86	3.10
	ANTHRACENE	2.20	1.29	0.00	0.00	3.40
	ACRIDINE	1.60	5.20	5.20	5.20	2.50
	CARBAZOLE	1.70	2.29	0.00	2.29	2.60
	FLUORANTHENE	2.80	4.41	4.41	4.41	4.40
	PYRENE	2.60	3.05	0.00	3.05	4.10
	BENZO (E) PYRENE	0.96	0.38	0.00	0.00	1.50
	PERYLENE	1.00	0.17	0.00	0.00	1.60

TOTAL OTHER PAH 26.36

TOTAL PAH'S 26.36

Method

ERT #	: 40148	Extract Vol., ml	0.500
Field ID	: ~~MATRIX CHECK~~	Sample Vol., L	4.000
GC/MS File #	: 40148A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.121	755472
Phenanthrene-d10	62.500	20.896	1306997
Benz(a)pyrene-d12	49.600	31.113	1140673

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.078	197650	1.876	0.589
indene	1.199	10.237	84170	0.616	0.598
Naphthalene-d8 (Surr.)	1.985	12.638	731612	3.233	0.738
Naphthalene	2.708	12.674	4342605	14.064	0.740
Benz(b)thio	2.025	0.000	1	0.000	0.000
Quinoline	0.976	13.546	107819	0.969	0.791
Indole	1.135	14.364	109612	0.847	0.839
2-methyl	1.832	14.420	573956	2.747	0.842
1-methyl	1.825	14.693	298677	1.435	0.858
Biphenyl	18.290	15.656	952122	0.457	0.914
Acenaphthylene	1.578	16.730	406029	2.256	0.977
Acenaphthene	1.202	0.000	1	0.000	0.000
Dibenzofuran	2.378	17.615	776826	2.865	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.438	1700481	13.220	0.882
Fluorene	1.030	18.494	304349	1.766	0.885
Dibenzothiophene	1.088	20.629	313847	1.724	0.987
Phenanthrene	2.133	20.939	3518078	9.860	1.002
Anthracene	1.197	21.041	258742	1.292	1.007
Acridine	0.458	21.248	398685	5.203	1.017
Carbazole	0.726	21.590	278227	2.291	1.033
Fluoranthene	1.445	24.017	1067222	4.415	1.149
Pyrene-d10 (Surr.)	0.922	24.673	597118	3.872	1.181
Pyrene	1.527	24.586	778072	3.045	1.177
Group III					
Benz(a)anthracene	1.487	27.675	211961	0.775	0.889
Chyrsene-d12 (Surr.)	0.447	27.726	643402	7.822	0.891
Chyrsene	1.518	27.777	321415	1.150	0.893
Benzofluoranthenes	2.065	30.328	267501	0.704	0.975
Benz(e)pyrene	1.654	31.037	115571	0.380	0.998
Benz(a)pyrene	1.303	31.163	89089	0.372	1.002
Perylene-d12 (Surr.)	1.054	31.333	1193005	6.151	1.007
Perylene	1.208	31.279	38302	0.172	1.005
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

ERT #	: 40148	Extract Vol., ml	0.500
Field ID	: METHOD BLANK	Sample Vol., L	4.000
GC/MS File #	: 40148A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.121	755472
Phenanthrene-d10	62.500	20.896	1306997
Benz(a)pyrene-d12	49.600	31.113	1140673

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.078	197650	1.876	0.589
indene	1.199	10.237	84170	0.616	0.598
Naphthalene-d8 (Surr.)	1.985	12.638	731612	3.233	0.738
Naphthalene	2.708	12.674	4342605	14.064	0.740
Benz(b)thio	2.025	0.000	1	0.000	0.000
Quinoline	0.976	13.546	107819	0.969	0.791
Indole	1.135	14.364	109612	0.847	0.839
2-methyl	1.832	14.420	573956	2.747	0.842
1-methyl	1.825	14.693	298677	1.435	0.858
Biphenyl	18.290	15.656	952122	0.457	0.914
Acenaphthylene	1.578	16.730	406029	2.256	0.977
Acenaphthene	1.202	0.000	1	0.000	0.000
Dibenzofuran	2.378	17.615	776826	2.865	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.438	1700481	13.220	0.882
Fluorene	1.030	18.494	304349	1.766	0.885
Dibenzothiophene	1.088	20.629	313847	1.724	0.987
Phenanthrene	2.133	20.939	3518078	9.860	1.002
Anthracene	1.197	21.041	258742	1.292	1.007
Acridine	0.458	21.248	398685	5.203	1.017
Carbazole	0.726	21.590	278227	2.291	1.033
Fluoranthene	1.445	24.017	1067222	4.415	1.149
Pyrene-d10 (Surr.)	0.922	24.673	597118	3.872	1.181
Pyrene	1.527	24.586	778072	3.045	1.177
Group III					
Benz(a)anthracene	1.487	27.675	211961	0.775	0.889
Chyrsene-d12 (Surr.)	0.447	27.726	643402	7.822	0.891
Chyrsene	1.518	27.777	321415	1.150	0.893
Benzofluoranthenes	2.065	30.328	267501	0.704	0.975
Benz(e)pyrene	1.654	31.037	115571	0.380	0.998
Benz(a)pyrene	1.303	31.163	89089	0.372	1.002
Perylene-d12 (Surr.)	1.054	31.333	1193005	6.151	1.007
Perylene	1.208	31.279	38302	0.172	1.005
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

ERT #: 40148

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	3.23	9.90	32.65	42-102	1.820	35.61%
Flourene-d10 (Surr.)	13.22	9.50	139.16	60-128	0.866	123.55%
Chyrsene-d12 (Surr.)	7.82	9.80	79.82	10-54	0.413	86.40%
Pyrene-d10 (Surr.)	3.87	10.05	38.53		0.757	46.92%
Perylene-d12 (Surr.)	6.15	9.40	65.44		0.887	77.77%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	0.97	0.00	0.00	1.90
BENZO (A) ANTHRACENE	2.80	0.77	0.00	0.00	4.40
CHYRSENE	2.80	1.15	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.70	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.37	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			0.00		

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	1.88	0.00	0.00	3.40
INDENE	1.80	0.62	0.00	0.00	2.90
NAPHTHALENE	30.00	14.06	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.00	0.00	0.00	2.20
INDOLE	1.20	0.85	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	2.75	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	1.44	0.00	0.00	3.10
BIPHENYL	11.00	0.46	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	2.26	2.26	2.26	1.70
ACENAPHTHENE	0.83	0.00	0.00	0.00	1.30
DIBENZOFURAN	0.77	2.86	2.86	2.86	1.20
FLOURENE	0.56	1.77	1.77	1.77	0.88
DIBENZOTHIOPHENE	4.00	1.72	0.00	0.00	6.30
PHENANTHRENE	2.00	9.86	9.86	9.86	3.10
ANTHRACENE	2.20	1.29	0.00	0.00	3.40
ACRIDINE	1.60	5.20	5.20	5.20	2.50
CARBAZOLE	1.70	2.29	0.00	2.29	2.60
FLUORANTHENE	2.80	4.41	4.41	4.41	4.40
PYRENE	2.60	3.05	0.00	3.05	4.10
BENZO (E) PYRENE	0.96	0.38	0.00	0.00	1.50
PERYLENE	1.00	0.17	0.00	0.00	1.60
		TOTAL OTHER PAH	26.36		
		TOTAL PAH'S	26.36		

*** Internal Standard ***

106

Operator: LOUIE POUNDS 25 Nov 86 5:24 pm
Method File Name : PAH.M
Sample Info : SLP METHOD BLANK ERT#40148 : TUE. 25 NOV. 86
Misc Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40148A.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		1	-------	Mass	118.00 amu	2,3-BENZOFUR	*** Not Found ***	
2		1VV	10.078	Mass	118.00 amu	2,3-DIHYDROI	197650	16.62 ng/mL
3		1PV	10.237	Mass	116.00 amu	INDENE	84170	9.971 ng/mL
4		1PV	12.638	Mass	136.00 amu	NAPHTHALENE,	731612	19.14 ng/mL
5		1VV	12.674	Mass	128.00 amu	NAPTHALENE	4342605	105.9 ng/mL
6		1	-------	Mass	134.00 amu	BENZO(b)THIO	*** Not Found ***	
7		1VV	13.546	Mass	129.00 amu	QUINOLINE	107819	9.301 ng/mL
8		1VV	14.364	Mass	117.00 amu	INDOLE	109612	4.965 ng/mL
9		1VB	14.420	Mass	141.00 amu	2-METHYLNAPT	573956	21.33 ng/mL
10		1BV	14.693	Mass	141.00 amu	1-METHYLNAPT	298677	7.923 ng/mL
11		1VV	15.656	Mass	154.00 amu	BIPHENYL	952122	
12		1VH	16.730	Mass	152.00 amu	ACENAPHTHYLE	406029	16.41 ng/mL
13	+ISTD	1VV	17.121	Mass	164.00 amu	ACENAPTHTHEN	755472	53.00 ng/mL
[illegible]		1	-------	Mass	154.00 amu	ACENAPHTHENE	*** Not Found ***	
		1VH	17.615	Mass	168.00 amu	DIBENZOFURAN	776826	19.72 ng/mL
[illegible]		2VV	18.438	Mass	176.00 amu	FLUORENE, d1	1700481	180.9 ng/mL
17		2VV	18.494	Mass	166.00 amu	FLUORENE	304349	14.72 ng/mL
18		2VV	20.629	Mass	184.00 amu	DIBENZOTHIOP	313847	11.46 ng/mL
19	+ISTD	2VV	20.896	Mass	188.00 amu	PHENANTHRENE	1306997	62.50 ng/mL
20		2VV	20.939	Mass	178.00 amu	PHENANTHRENE	3518078	76.17 ng/mL
21		2VV	21.041	Mass	178.00 amu	ANTHRACENE	258742	
22		2VV	21.248	Mass	179.00 amu	ACRIDINE	398685	32.45 ng/mL
23		1PV	21.590	Mass	167.00 amu	CARBAZOLE	278227	5.475 ng/mL
24		1VV	24.017	Mass	202.00 amu	FLUORANTHENE	1067222	10.16 ng/mL
25		2VV	24.673	Mass	212.00 amu	PYRENE, d10	597118	33.56 ng/mL
26		2PV	24.586	Mass	202.00 amu	PYRENE	778072	24.31 ng/mL
27		3VV	27.675	Mass	228.00 amu	BENZ(a)ANTHR	211961	3.543 ng/mL
28		3PV	27.726	Mass	240.00 amu	CHYRSENE, d(	643402	60.33 ng/mL
29		3VV	27.777	Mass	228.00 amu	CHYRSENE	321415	8.749 ng/mL
30		3BV	30.328	Mass	252.00 amu	BENZOFLUORAN	267501	2.008 ng/mL
31		3	-------	Mass	252.00 amu	BENZOFLUORAN	*** Not Found ***	
32		3PV	31.037	Mass	252.00 amu	BENZ(e)PYREN	115571	5.036 ng/mL
33	+ISTD	3PV	31.113	Mass	264.00 amu	BENZ(a)PYREN	1140673	49.60 ng/mL
34		3VV	31.163	Mass	252.00 amu	BENZ(a)PYREN	89089	
35		3VB	31.333	Mass	264.00 amu	PERYLENE, d1	1193005	72.44 ng/mL
36		3PB	31.279	Mass	252.00 amu	PERYLENE	38302	
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 ***	
------		VB	9.071	Mass	118.00	-Uncalibrated-	100206	100206 ng/mL
--------		BV	9.287	Mass	118.00	-Uncalibrated-	41813	41813 ng/mL
--------		VV	11.351	Mass	116.00	-Uncalibrated-	122782	122782 ng/mL
--------		PH	12.056	Mass	129.00	-Uncalibrated-	26484	26484 ng/mL
--------		PH	12.053	Mass	128.00	-Uncalibrated-	53446	53446 ng/mL
--------		PH	12.080	Mass	134.00	-Uncalibrated-	225213	225213 ng/mL
--------		PV	12.179	Mass	134.00	-Uncalibrated-	47735	47735 ng/mL

--------	VV	12.529	Mass	134.00	-Uncalibrated-	55411	55411	ng/mL
--------	VV	12.630	Mass	134.00	-Uncalibrated-	394879	394879	ng/mL
--------	VV	12.679	Mass	129.00	-Uncalibrated-	469709	469709	ng/mL
--------	VV	12.809	Mass	128.00	-Uncalibrated-	86190	86190	ng/mL
--------	VV	13.361	Mass	136.00	-Uncalibrated-	516871	516871	ng/mL
--------	VV	13.358	Mass	134.00	-Uncalibrated-	407374	407374	ng/mL
------	VV	13.729	Mass	129.00	-Uncalibrated-	943729	943729	ng/mL
-----	VB	13.907	Mass	129.00	-Uncalibrated-	349118	349118	ng/mL
--------	VV	14.170	Mass	141.00	-Uncalibrated-	13259	13259	ng/mL
--------	VV	14.207	Mass	117.00	-Uncalibrated-	24413	24413	ng/mL
--------	PV	14.322	Mass	141.00	-Uncalibrated-	25748	25748	ng/mL
--------	VV	14.483	Mass	117.00	-Uncalibrated-	62771	62771	ng/mL
--------	VV	15.169	Mass	117.00	-Uncalibrated-	243777	243777	ng/mL
--------	PV	15.679	Mass	117.00	-Uncalibrated-	313625	313625	ng/mL
--------	VV	15.888	Mass	141.00	-Uncalibrated-	624501	624501	ng/mL
--------	PV	15.949	Mass	117.00	-Uncalibrated-	211484	211484	ng/mL
--------	VB	16.025	Mass	141.00	-Uncalibrated-	528073	528073	ng/mL
--------	BV	16.166	Mass	164.00	-Uncalibrated-	20129	20129	ng/mL
--------	BH	16.237	Mass	152.00	-Uncalibrated-	417382	417382	ng/mL
--------	VH	16.416	Mass	152.00	-Uncalibrated-	69451	69451	ng/mL
--------	VH	16.451	Mass	168.00	-Uncalibrated-	398194	398194	ng/mL
--------	VH	16.578	Mass	152.00	-Uncalibrated-	337405	337405	ng/mL
--------	BV	16.627	Mass	164.00	-Uncalibrated-	160522	160522	ng/mL
--------	VV	16.777	Mass	164.00	-Uncalibrated-	116922	116922	ng/mL
--------	PV	16.772	Mass	154.00	-Uncalibrated-	85052	85052	ng/mL
--------	VH	17.101	Mass	168.00	-Uncalibrated-	312485	312485	ng/mL
--------	VH	17.099	Mass	152.00	-Uncalibrated-	261256	261256	ng/mL
--------	VH	17.195	Mass	152.00	-Uncalibrated-	208780	208780	ng/mL
--------	VH	17.231	Mass	168.00	-Uncalibrated-	246851	246851	ng/mL
--------	VH	17.317	Mass	152.00	-Uncalibrated-	378688	378688	ng/mL
--------	VH	17.736	Mass	152.00	-Uncalibrated-	188880	188880	ng/mL
--------	VH	18.335	Mass	168.00	-Uncalibrated-	220703	220703	ng/mL
-----	VV	18.439	Mass	164.00	-Uncalibrated-	81729	81729	ng/mL
------	VH	18.690	Mass	168.00	-Uncalibrated-	357491	357491	ng/mL
--------	VV	18.774	Mass	166.00	-Uncalibrated-	158920	158920	ng/mL
--------	VH	18.876	Mass	168.00	-Uncalibrated-	450780	450780	ng/mL
--------	VH	18.900	Mass	152.00	-Uncalibrated-	856714	856714	ng/mL
--------	VV	18.918	Mass	166.00	-Uncalibrated-	682139	682139	ng/mL
--------	VV	19.006	Mass	166.00	-Uncalibrated-	389913	389913	ng/mL
--------	VH	19.003	Mass	152.00	-Uncalibrated-	391648	391648	ng/mL
--------	VV	19.264	Mass	164.00	-Uncalibrated-	94003	94003	ng/mL
--------	VH	19.302	Mass	152.00	-Uncalibrated-	740021	740021	ng/mL
--------	VV	19.317	Mass	166.00	-Uncalibrated-	694382	694382	ng/mL
--------	BV	19.318	Mass	176.00	-Uncalibrated-	81874	81874	ng/mL
--------	VH	19.445	Mass	152.00	-Uncalibrated-	567429	567429	ng/mL
--------	VH	19.486	Mass	168.00	-Uncalibrated-	303535	303535	ng/mL
--------	BV	19.730	Mass	184.00	-Uncalibrated-	221862	221862	ng/mL
--------	VV	19.775	Mass	184.00	-Uncalibrated-	118412	118412	ng/mL
--------	PV	19.919	Mass	178.00	-Uncalibrated-	283310	283310	ng/mL
--------	PV	19.999	Mass	184.00	-Uncalibrated-	153881	153881	ng/mL
--------	VV	20.013	Mass	178.00	-Uncalibrated-	63209	63209	ng/mL
--------	BV	20.080	Mass	179.00	-Uncalibrated-	63653	63653	ng/mL
--------	VB	20.086	Mass	184.00	-Uncalibrated-	332221	332221	ng/mL
--------	VV	20.080	Mass	178.00	-Uncalibrated-	122663	122663	ng/mL
--------	VV	20.222	Mass	179.00	-Uncalibrated-	38745	38745	ng/mL
--------	BV	20.316	Mass	184.00	-Uncalibrated-	171618	171618	ng/mL
--------	VV	20.345	Mass	167.00	-Uncalibrated-	459876	459876	ng/mL
------	VV	20.403	Mass	179.00	-Uncalibrated-	202257	202257	ng/mL
------	VV	20.400	Mass	167.00	-Uncalibrated-	124722	124722	ng/mL
--------	BV	20.401	Mass	178.00	-Uncalibrated-	209388	209388	ng/mL
--------	PV	20.561	Mass	179.00	-Uncalibrated-	152483	152483	ng/mL
--------	PV	20.559	Mass	178.00	-Uncalibrated-	60475	60475	ng/mL
--------	PV	20.587	Mass	167.00	-Uncalibrated-	379952	379952	ng/mL
--------	VV	20.689	Mass	179.00	-Uncalibrated-	57774	57774	ng/mL
--------	VV	20.695	Mass	178.00	-Uncalibrated-	114274	114274	ng/mL

--------	VV	20.794	Mass	178.00	-Uncalibrated-	67733	67733	ng/mL
--------	VV	20.895	Mass	184.00	-Uncalibrated-	239014	239014	ng/mL
--------	VV	20.941	Mass	179.00	-Uncalibrated-	640113	640113	ng/mL
--------	VV	21.016	Mass	188.00	-Uncalibrated-	74680	74680	ng/mL
--------	VV	21.039	Mass	179.00	-Uncalibrated-	302326	302326	ng/mL
--------	VV	21.041	Mass	184.00	-Uncalibrated-	118160	118160	ng/mL
------	VV	21.146	Mass	167.00	-Uncalibrated-	107503	107503	ng/mL
------	VV	21.343	Mass	179.00	-Uncalibrated-	293843	293843	ng/mL
-------	VV	21.415	Mass	179.00	-Uncalibrated-	230891	230891	ng/mL
--------	VV	21.552	Mass	178.00	-Uncalibrated-	109526	109526	ng/mL
--------	VV	21.600	Mass	179.00	-Uncalibrated-	871188	871188	ng/mL
--------	VV	21.733	Mass	179.00	-Uncalibrated-	250344	250344	ng/mL
--------	PV	22.075	Mass	179.00	-Uncalibrated-	88870	88870	ng/mL
--------	VV	22.212	Mass	179.00	-Uncalibrated-	50398	50398	ng/mL
--------	PH	22.754	Mass	212.00	-Uncalibrated-	44004	44004	ng/mL
--------	VV	22.846	Mass	212.00	-Uncalibrated-	153261	153261	ng/mL
--------	PV	22.980	Mass	202.00	-Uncalibrated-	90570	90570	ng/mL
--------	VV	23.072	Mass	212.00	-Uncalibrated-	274643	274643	ng/mL
--------	PV	23.262	Mass	212.00	-Uncalibrated-	53945	53945	ng/mL
--------	VV	23.352	Mass	212.00	-Uncalibrated-	76664	76664	ng/mL
--------	BB	25.221	Mass	202.00	-Uncalibrated-	42113	42113	ng/mL
--------	PH	26.538	Mass	240.00	-Uncalibrated-	473951	473951	ng/mL
--------	PV	26.712	Mass	228.00	-Uncalibrated-	81642	81642	ng/mL
--------	PV	26.930	Mass	240.00	-Uncalibrated-	93628	93628	ng/mL
--------	PV	26.937	Mass	228.00	-Uncalibrated-	57915	57915	ng/mL
--------	VV	27.067	Mass	228.00	-Uncalibrated-	36356	36356	ng/mL
--------	PV	27.402	Mass	240.00	-Uncalibrated-	156254	156254	ng/mL
--------	BV	27.395	Mass	228.00	-Uncalibrated-	136972	136972	ng/mL
--------	VV	27.513	Mass	240.00	-Uncalibrated-	132994	132994	ng/mL
--------	VV	27.506	Mass	228.00	-Uncalibrated-	129096	129096	ng/mL
--------	BV	29.706	Mass	252.00	-Uncalibrated-	123099	123099	ng/mL
--------	VV	29.721	Mass	264.00	-Uncalibrated-	79043	79043	ng/mL
------	BV	32.238	Mass	252.00	-Uncalibrated-	66940	66940	ng/mL
------	VV	32.290	Mass	252.00	-Uncalibrated-	164851	164851	ng/mL

Error : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.411 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #6's Description at 12.840 +/- 0.064 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #14's Description at 17.203 +/- 0.086 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.378 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.692 +/- 0.173 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #38's Description at 34.750 +/- 0.174 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #39's Description at 35.677 +/- 0.178 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

Operator: LOUIE POUNDS 25 Nov 86 5:24 pm
Method File Name : PAH.M
le Info : SLP METHOD BLANK ERT#40148 : TUE. 25 NOV. 86
. Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40148A.I
Bottle Number : 0

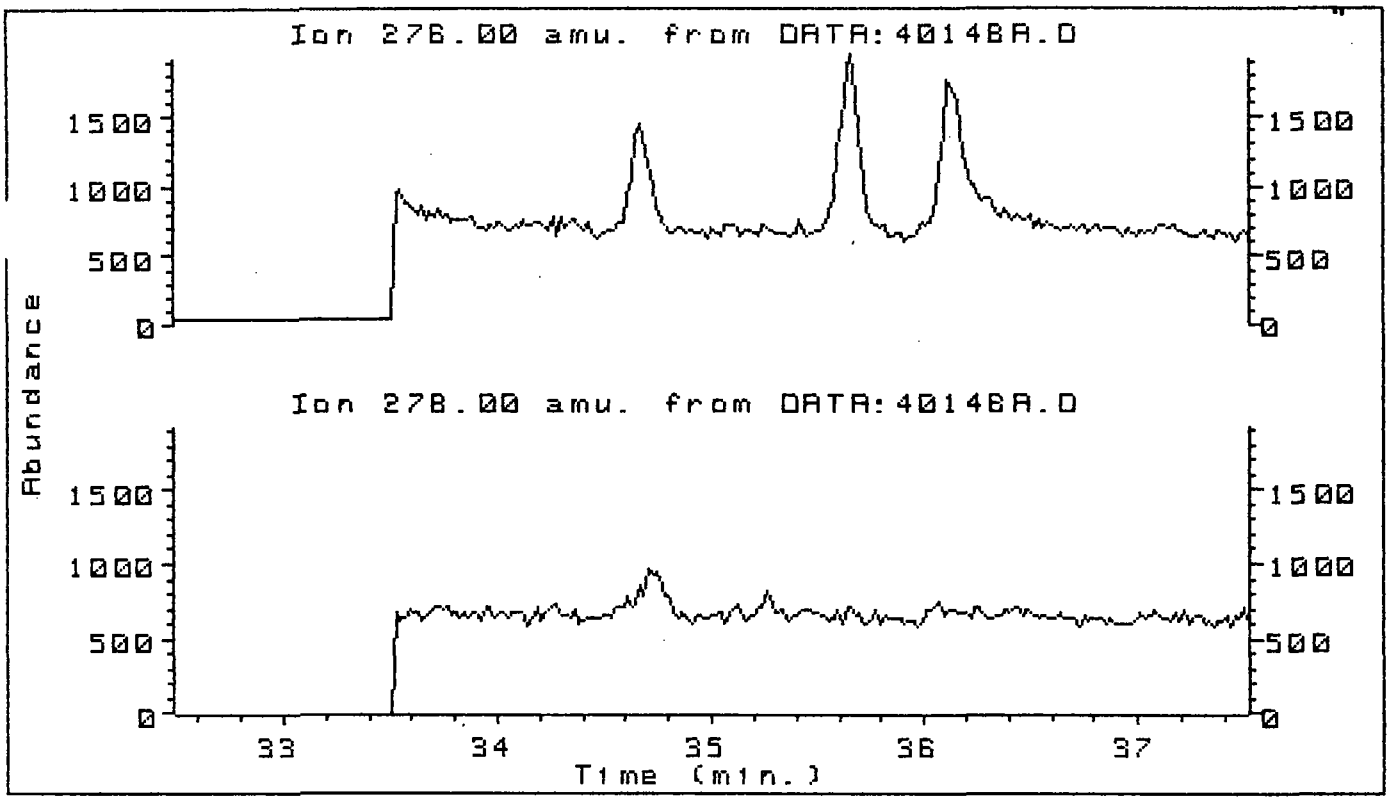
Ret Time	Signal Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
9.071	Mass 119.00 amu	VB	100206	4185	100.00	29.50	100.00	50.70

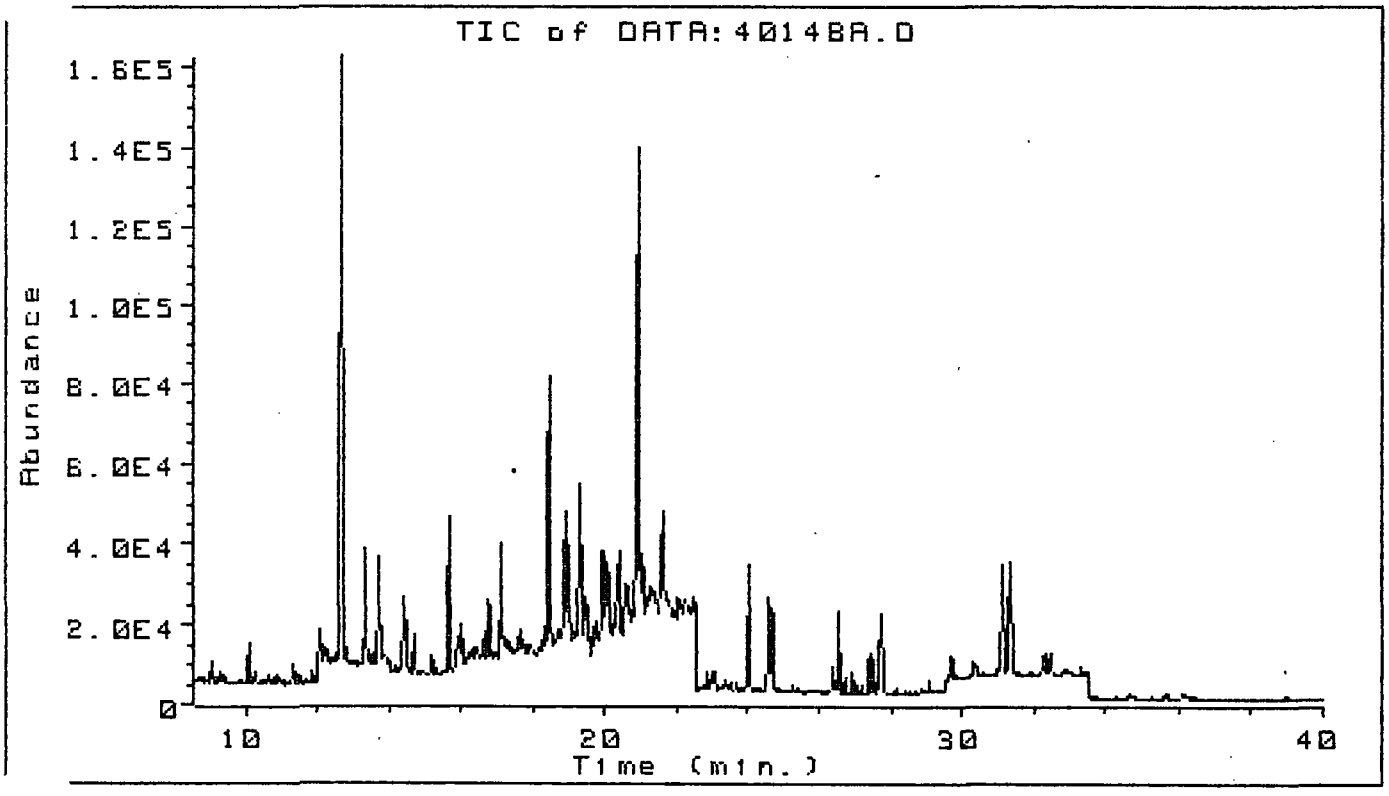
9.287	Mass	118.00	amu	BV	41813	1633	100.00	12.31	100.00	109.15
10.078	Mass	118.00	amu	VV	197650	8174	100.00	58.19	100.00	100.00
10.237	Mass	116.00	amu	PV	84170	2675	100.00	40.67	100.00	68.55
351	Mass	116.00	amu	VV	122782	4245	100.00	59.33	100.00	100.00
12.056	Mass	129.00	amu	PH	26484	966	33.13	1.40	49.55	2.81
12.053	Mass	128.00	amu	PH	53446	1353	66.87	1.19	100.00	1.23
12.080	Mass	134.00	amu	PH	225213	7307	100.00	18.65	100.00	55.28
12.179	Mass	134.00	amu	PV	47735	1875	100.00	3.95	100.00	11.72
12.268	Mass	134.00	amu	VV	76773	2079	100.00	6.36	100.00	18.85
12.529	Mass	134.00	amu	VV	55411	2097	100.00	4.59	100.00	13.60
12.638	Mass	136.00	amu	PV	731612	20715	64.95	58.60	100.00	100.00
12.630	Mass	134.00	amu	VV	394879	12483	35.05	32.71	53.97	96.93
12.679	Mass	129.00	amu	VV	469709	13846	9.76	24.76	10.82	49.77
12.674	Mass	128.00	amu	VV	4342605	127537	90.24	96.88	100.00	100.00
12.809	Mass	128.00	amu	VV	86190	2349	100.00	1.92	100.00	1.98
13.361	Mass	136.00	amu	VV	516871	16589	55.92	41.40	100.00	70.65
13.358	Mass	134.00	amu	VV	407374	11785	44.08	33.74	78.82	100.00
13.546	Mass	129.00	amu	VV	107819	2462	100.00	5.68	100.00	11.42
729	Mass	129.00	amu	VV	943729	25570	100.00	49.75	100.00	100.00
13.907	Mass	129.00	amu	VB	349118	3838	100.00	18.41	100.00	36.99
14.170	Mass	141.00	amu	VV	13259	427	100.00	0.64	100.00	2.12
14.207	Mass	117.00	amu	VV	24413	864	100.00	2.53	100.00	7.78
14.322	Mass	141.00	amu	PV	25748	687	100.00	1.25	100.00	4.12
14.364	Mass	117.00	amu	VV	109612	3117	100.00	11.35	100.00	34.95
14.420	Mass	141.00	amu	VB	573956	17110	100.00	27.81	100.00	91.91
14.483	Mass	117.00	amu	VV	62771	1447	100.00	6.50	100.00	20.01
14.693	Mass	141.00	amu	BV	298677	9158	100.00	14.47	100.00	47.83
15.169	Mass	117.00	amu	VV	243777	4457	100.00	25.24	100.00	77.73
15.656	Mass	154.00	amu	VV	952122	34908	100.00	91.80	100.00	100.00
15.679	Mass	117.00	amu	PV	313625	11175	100.00	32.48	100.00	100.00
[illegible].888	Mass	141.00	amu	VV	624501	9080	100.00	30.25	100.00	100.00
[illegible].949	Mass	117.00	amu	PV	211484	9084	100.00	21.90	100.00	67.43
16.025	Mass	141.00	amu	VB	528073	8940	100.00	25.58	100.00	84.56
16.166	Mass	164.00	amu	BV	20129	592	100.00	1.64	100.00	2.66
16.237	Mass	152.00	amu	BH	417332	3363	100.00	8.65	100.00	48.72

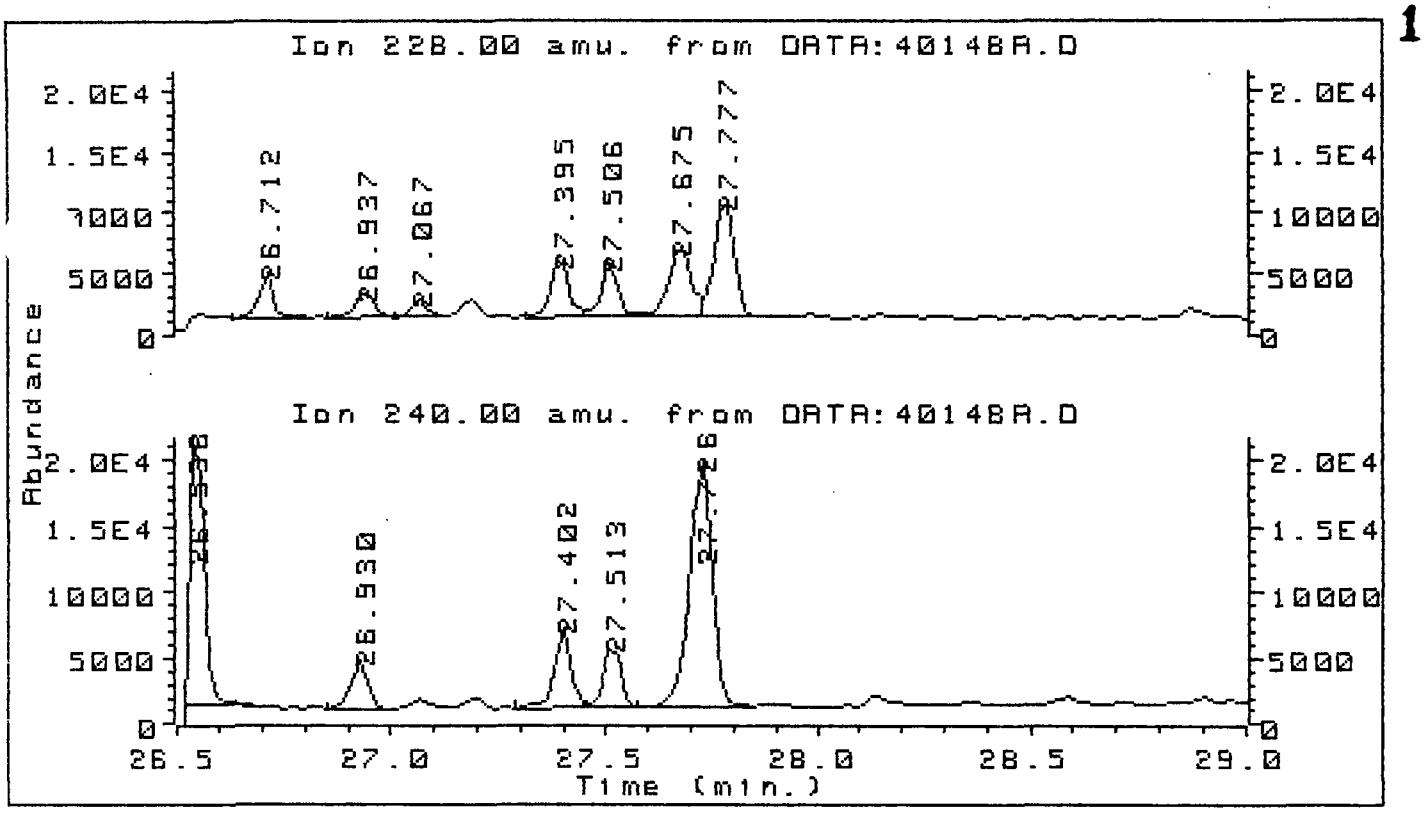
16.416	Mass	152.00	amu	VH	69451	2224	100.00	1.44	100.00	18.[illegible]
16.451	Mass	168.00	amu	VH	398194	4002	100.00	12.98	100.00	51.26
16.578	Mass	152.00	amu	VH	337405	3282	100.00	6.99	100.00	39.38
.627	Mass	164.00	amu	BV	160522	5135	100.00	13.06	100.00	21.25
16.730	Mass	152.00	amu	VH	406029	4059	100.00	8.42	100.00	47.39
16.777	Mass	164.00	amu	VV	116922	3514	57.89	9.52	100.00	15.48
16.772	Mass	154.00	amu	PV	85052	1861	42.11	8.20	72.74	8.93
17.101	Mass	168.00	amu	VH	312485	6488	54.46	10.19	100.00	40.23
17.099	Mass	152.00	amu	VH	261256	3569	45.54	5.42	83.61	30.50
17.121	Mass	164.00	amu	VV	755472	24843	100.00	61.48	100.00	100.00
17.195	Mass	152.00	amu	VH	208780	3708	100.00	4.33	100.00	24.37
17.231	Mass	168.00	amu	VH	246851	4249	100.00	8.05	100.00	31.78
17.317	Mass	152.00	amu	VH	378688	5124	100.00	7.85	100.00	44.20
17.615	Mass	168.00	amu	VH	776826	6630	100.00	25.33	100.00	100.00
17.736	Mass	152.00	amu	VH	188880	4485	100.00	3.92	100.00	22.05
18.335	Mass	168.00	amu	VH	220703	5838	100.00	7.20	100.00	28.41
18.438	Mass	176.00	amu	VV	1700481	56893	95.41	95.41	100.00	100.00
18.439	Mass	164.00	amu	VV	81729	1991	4.59	6.65	4.81	10.82
.494	Mass	166.00	amu	VV	304349	5016	100.00	13.65	100.00	43.83
18.690	Mass	168.00	amu	VH	357491	3983	100.00	11.66	100.00	46.02
18.774	Mass	166.00	amu	VV	158920	2028	100.00	7.13	100.00	22.89
18.876	Mass	168.00	amu	VH	450780	6830	100.00	14.70	100.00	58.03
18.900	Mass	152.00	amu	VH	856714	14542	100.00	17.76	100.00	100.00
18.918	Mass	166.00	amu	VV	682139	18891	100.00	30.59	100.00	98.24
19.006	Mass	166.00	amu	VV	389913	13543	49.89	17.49	99.56	56.15
19.003	Mass	152.00	amu	VH	391648	7883	50.11	8.12	100.00	45.72
19.264	Mass	164.00	amu	VV	94003	1706	100.00	7.65	100.00	12.44
19.302	Mass	152.00	amu	VH	740021	13661	100.00	15.34	100.00	86.38
19.317	Mass	166.00	amu	VV	694382	22772	89.45	31.14	100.00	100.00
19.318	Mass	176.00	amu	BV	81874	2033	10.55	4.59	11.79	4.81
19.445	Mass	152.00	amu	VH	567429	8324	100.00	11.76	100.00	66.23
.486	Mass	168.00	amu	VH	303535	4721	100.00	9.90	100.00	39.07
19.730	Mass	184.00	amu	BV	221862	4457	100.00	13.29	100.00	66.78
19.775	Mass	184.00	amu	VV	118412	2884	100.00	7.09	100.00	35.64
19.919	Mass	178.00	amu	PV	283310	6801	100.00	5.89	100.00	8.05

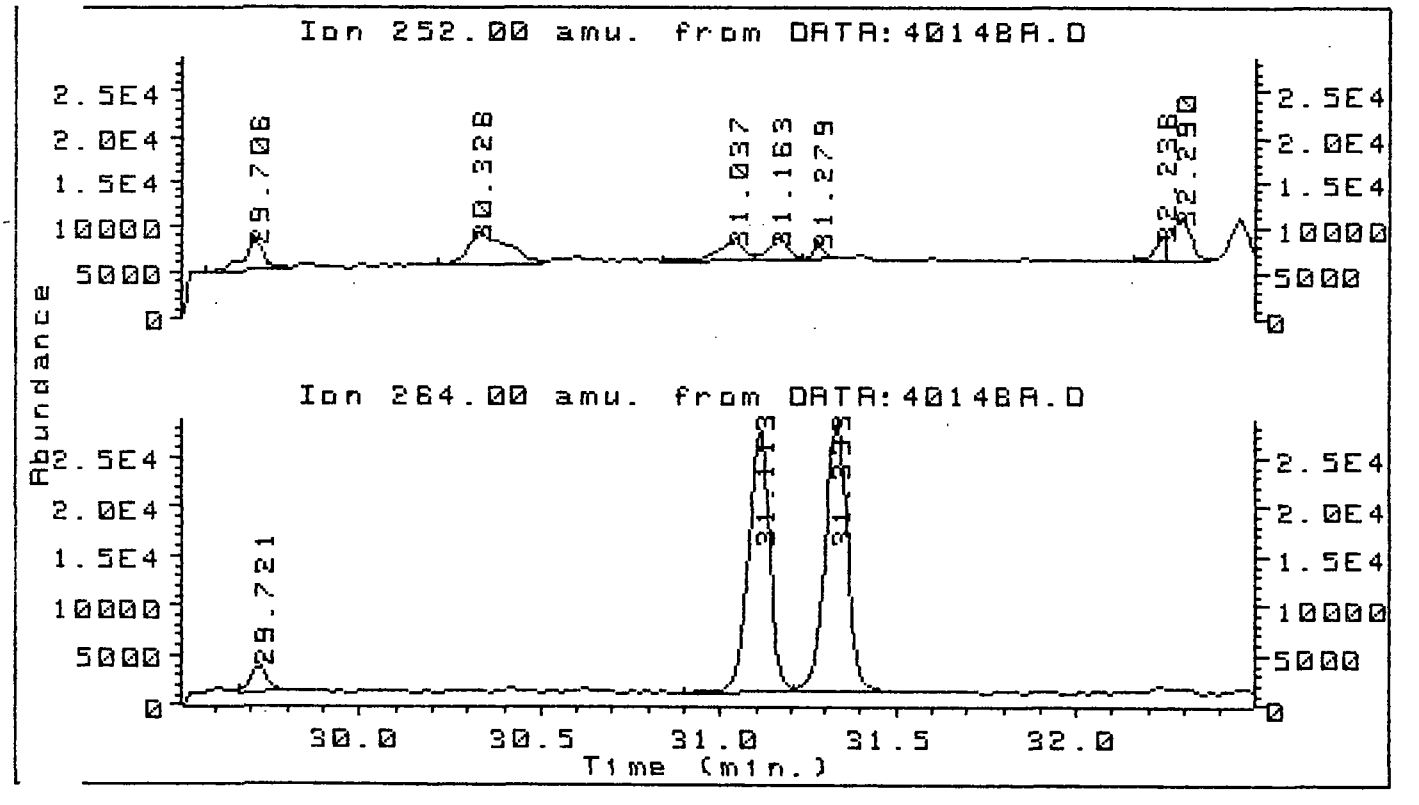
20.013	Mass	178.00	amu	VV	63209	1923	29.12	1.31	41.08	1.80
20.080	Mass	179.00	amu	BV	63653	2650	12.28	1.67	19.16	7.31
20.086	Mass	184.00	amu	VB	332221	8095	64.07	19.91	100.00	100.00
20.080	Mass	178.00	amu	VV	122663	3977	23.66	2.55	36.92	3.49
222	Mass	179.00	amu	VV	38745	1759	100.00	1.02	100.00	4.45
20.316	Mass	184.00	amu	BV	171618	3516	100.00	10.28	100.00	51.66
20.345	Mass	167.00	amu	VV	459876	12973	100.00	34.06	100.00	100.00
20.403	Mass	179.00	amu	VV	202257	7321	37.71	5.31	96.59	23.22
20.400	Mass	167.00	amu	VV	124722	6396	23.25	9.24	59.57	27.12
20.401	Mass	178.00	amu	BV	209388	6976	39.04	4.36	100.00	5.95
20.561	Mass	179.00	amu	PV	152483	4002	71.60	4.01	100.00	17.50
20.559	Mass	178.00	amu	PV	60475	1665	28.40	1.26	39.66	1.72
20.587	Mass	167.00	amu	PV	379952	6349	100.00	28.14	100.00	82.62
20.629	Mass	184.00	amu	VV	313847	8129	100.00	18.80	100.00	94.47
20.689	Mass	179.00	amu	VV	57774	1634	33.58	1.52	50.56	6.63
20.695	Mass	178.00	amu	VV	114274	2807	66.42	2.38	100.00	3.25
20.799	Mass	179.00	amu	VV	164891	4156	70.88	4.33	100.00	18.93
20.794	Mass	178.00	amu	VV	67733	2934	29.12	1.41	41.08	1.93
20.896	Mass	188.00	amu	VV	1306997	41959	84.54	94.59	100.00	100.00
20.895	Mass	184.00	amu	VV	239014	6333	15.46	14.32	18.29	71.94
941	Mass	179.00	amu	VV	640113	16078	15.39	16.82	18.19	73.48
.939	Mass	178.00	amu	VV	3518078	98680	84.61	73.18	100.00	100.00
21.016	Mass	188.00	amu	VV	74680	2022	100.00	5.41	100.00	5.71
21.039	Mass	179.00	amu	VV	302326	7433	44.51	7.94	100.00	34.70
21.041	Mass	184.00	amu	VV	118160	2825	17.40	7.08	39.08	35.57
21.041	Mass	178.00	amu	VV	258742	6117	38.09	5.38	85.58	7.35
21.146	Mass	167.00	amu	VV	107503	2189	100.00	7.96	100.00	23.38
21.248	Mass	179.00	amu	VV	398685	6207	100.00	10.47	100.00	45.76
21.343	Mass	179.00	amu	VV	293843	5571	100.00	7.72	100.00	33.73
21.415	Mass	179.00	amu	VV	230891	5249	100.00	6.07	100.00	26.50
21.552	Mass	178.00	amu	VV	109526	1869	100.00	2.28	100.00	3.11
21.600	Mass	179.00	amu	VV	871188	15535	75.79	22.89	100.00	100.00
21.590	Mass	167.00	amu	PV	278227	7645	24.21	20.61	31.94	60.50
21.733	Mass	179.00	amu	VV	250344	4704	100.00	6.58	100.00	28.74
22.075	Mass	179.00	amu	PV	88870	1867	100.00	2.33	100.00	10.20
.212	Mass	179.00	amu	VV	50398	1335	100.00	1.32	100.00	5.78
22.754	Mass	212.00	amu	PH	44004	1061	100.00	3.67	100.00	7.37
22.846	Mass	212.00	amu	VV	153261	4291	100.00	12.78	100.00	25.67
22.980	Mass	202.00	amu	PV	90570	2524	100.00	4.58	100.00	8.49

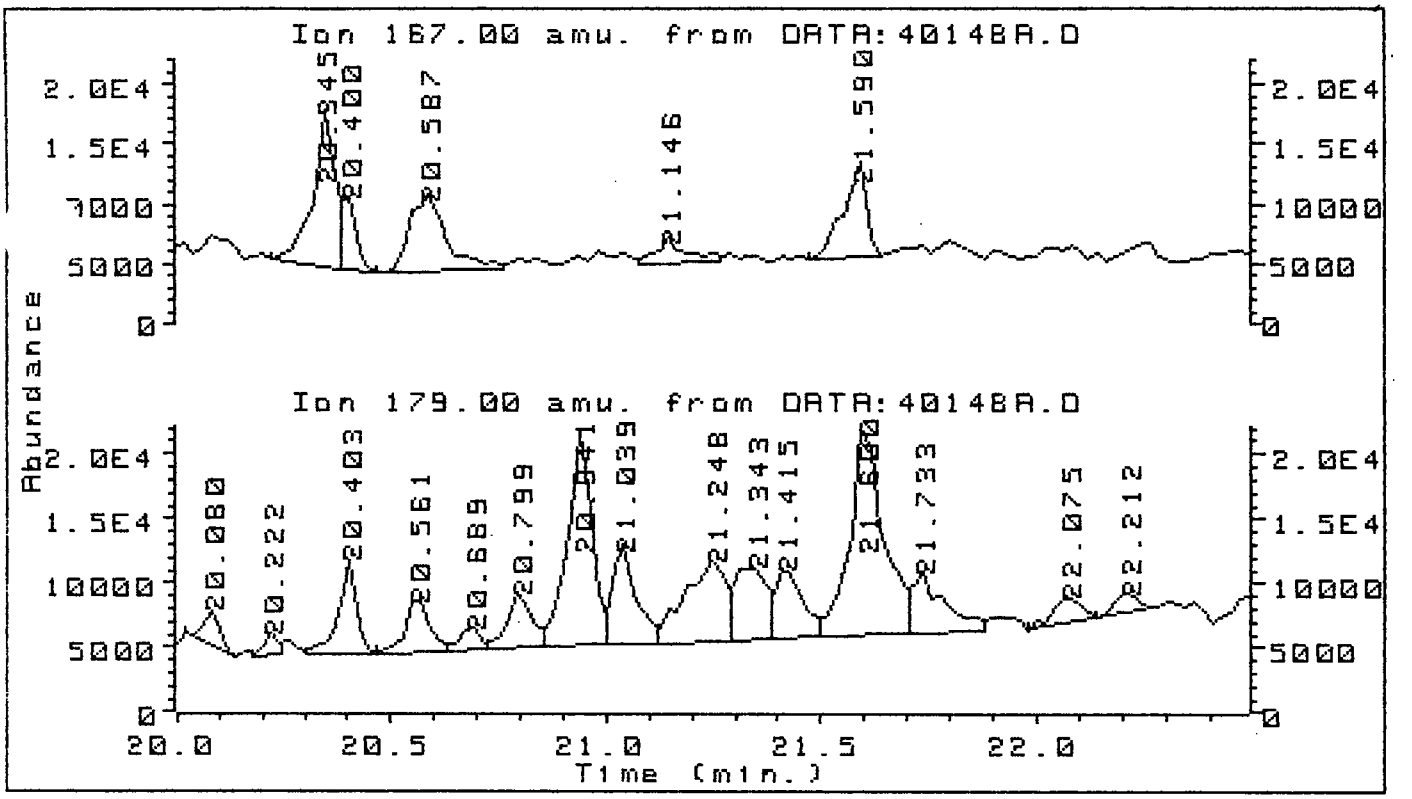
23.072	Mass	212.00	amu	VV	274643	4329	100.00	22.89	100.00	[illegible]
23.262	Mass	212.00	amu	PV	53945	1323	100.00	4.50	100.00	9.03
23.352	Mass	212.00	amu	VV	76664	2200	100.00	6.39	100.00	12.84
[illegible].017	Mass	202.00	amu	VV	1067222	30528	100.00	53.96	100.00	100.00
[illegible].586	Mass	202.00	amu	PV	778072	22342	100.00	39.34	100.00	72.91
24.673	Mass	212.00	amu	VV	597118	20281	100.00	49.77	100.00	100.00
25.221	Mass	202.00	amu	BB	42113	1711	100.00	2.13	100.00	3.95
26.538	Mass	240.00	amu	PH	473951	21397	100.00	31.59	100.00	73.66
26.712	Mass	228.00	amu	PV	81642	3659	100.00	8.37	100.00	25.40
26.930	Mass	240.00	amu	PV	93628	3345	61.78	6.24	100.00	14.55
26.937	Mass	228.00	amu	PV	57915	1833	38.22	5.94	61.86	18.02
27.067	Mass	228.00	amu	VV	36356	1351	100.00	3.73	100.00	11.31
27.402	Mass	240.00	amu	PV	156254	5794	53.29	10.42	100.00	24.29
27.395	Mass	228.00	amu	BV	136972	4521	46.71	14.04	87.66	42.62
27.513	Mass	240.00	amu	VV	132994	4328	50.74	8.86	100.00	20.67
27.506	Mass	228.00	amu	VV	129096	4254	49.26	13.24	97.07	40.16
27.675	Mass	228.00	amu	VV	211961	5581	100.00	21.73	100.00	65.95
27.726	Mass	240.00	amu	PV	643402	18210	100.00	42.89	100.00	100.00
[illegible].777	Mass	228.00	amu	VV	321415	9165	100.00	32.95	100.00	100.00
29.706	Mass	252.00	amu	BV	123099	3509	100.00	14.23	100.00	46.02
29.721	Mass	264.00	amu	VV	79043	2726	100.00	3.28	100.00	6.63
30.328	Mass	252.00	amu	BV	267501	3521	100.00	30.91	100.00	100.00
31.037	Mass	252.00	amu	PV	115571	2287	100.00	13.36	100.00	43.20
31.113	Mass	264.00	amu	PV	1140673	26643	100.00	47.28	100.00	95.61
31.163	Mass	252.00	amu	VV	89089	2246	100.00	10.30	100.00	33.30
31.279	Mass	252.00	amu	PB	38302	1690	100.00	4.43	100.00	14.32
31.333	Mass	264.00	amu	VB	1193005	27095	100.00	49.45	100.00	100.00
32.238	Mass	252.00	amu	BV	66940	2799	100.00	7.74	100.00	25.02
32.290	Mass	252.00	amu	VV	164851	4536	100.00	19.05	100.00	61.63

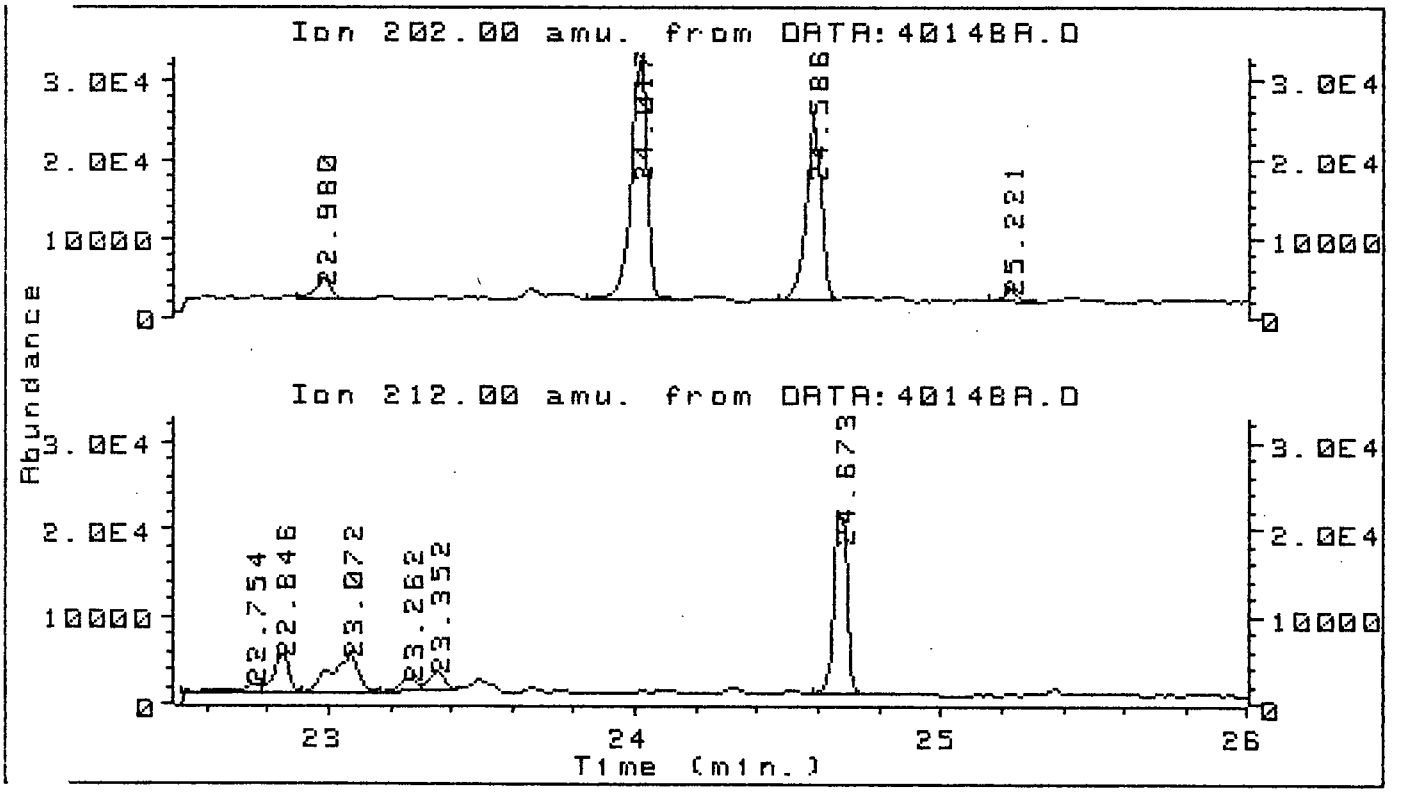

Ion 278.00 amu. from DATA:4014BA.D
1500
1000
500
0
Abundance
Ion 278.00 amu. from DATA:4014BA.D
1500
1000
500
0
33
34
35
36
37
Time (min.)

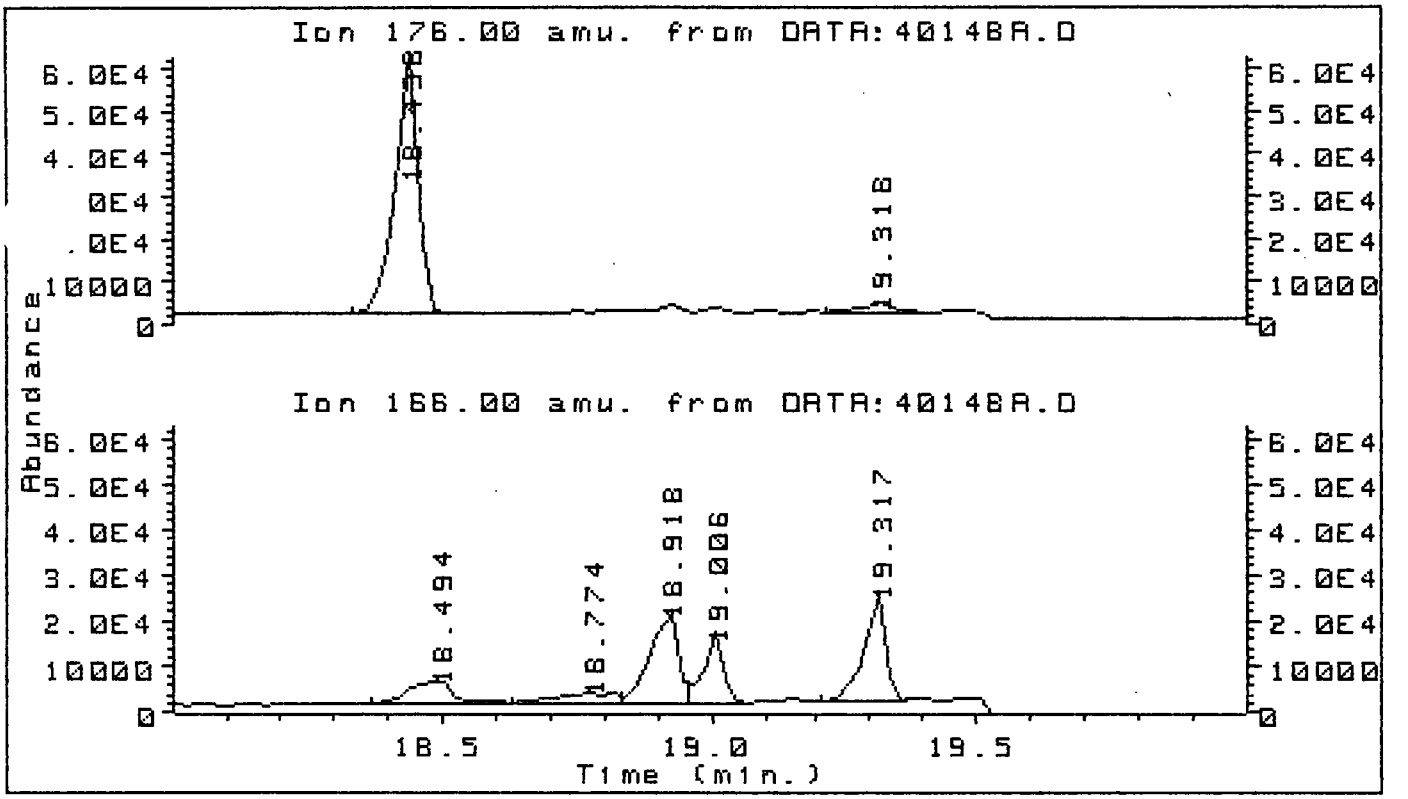

TIC of DATA:4014BA.D
1.6E5
1.4E5
1.2E5
1.0E5
8.0E4
6.0E4
4.0E4
2.0E4
0
Abundance
10
20
30
40
Time (min.)

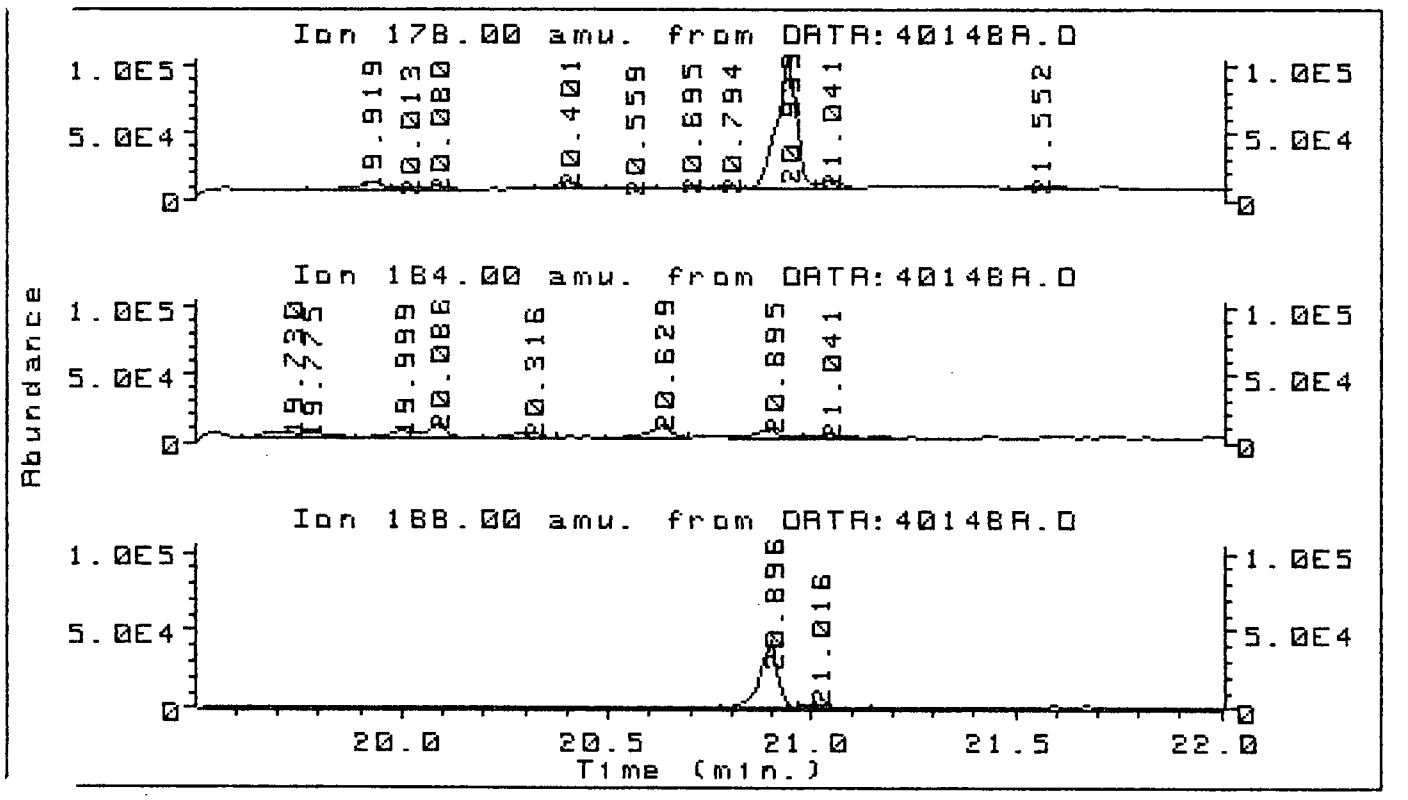

Ion 228.00 amu. from DATA:4014BA.D
26.712
26.937
27.067
27.395
27.506
27.675
27.777
Ion 240.00 amu. from DATA:4014BA.D
26.930
27.402
27.513
Abundance
Time (min.)

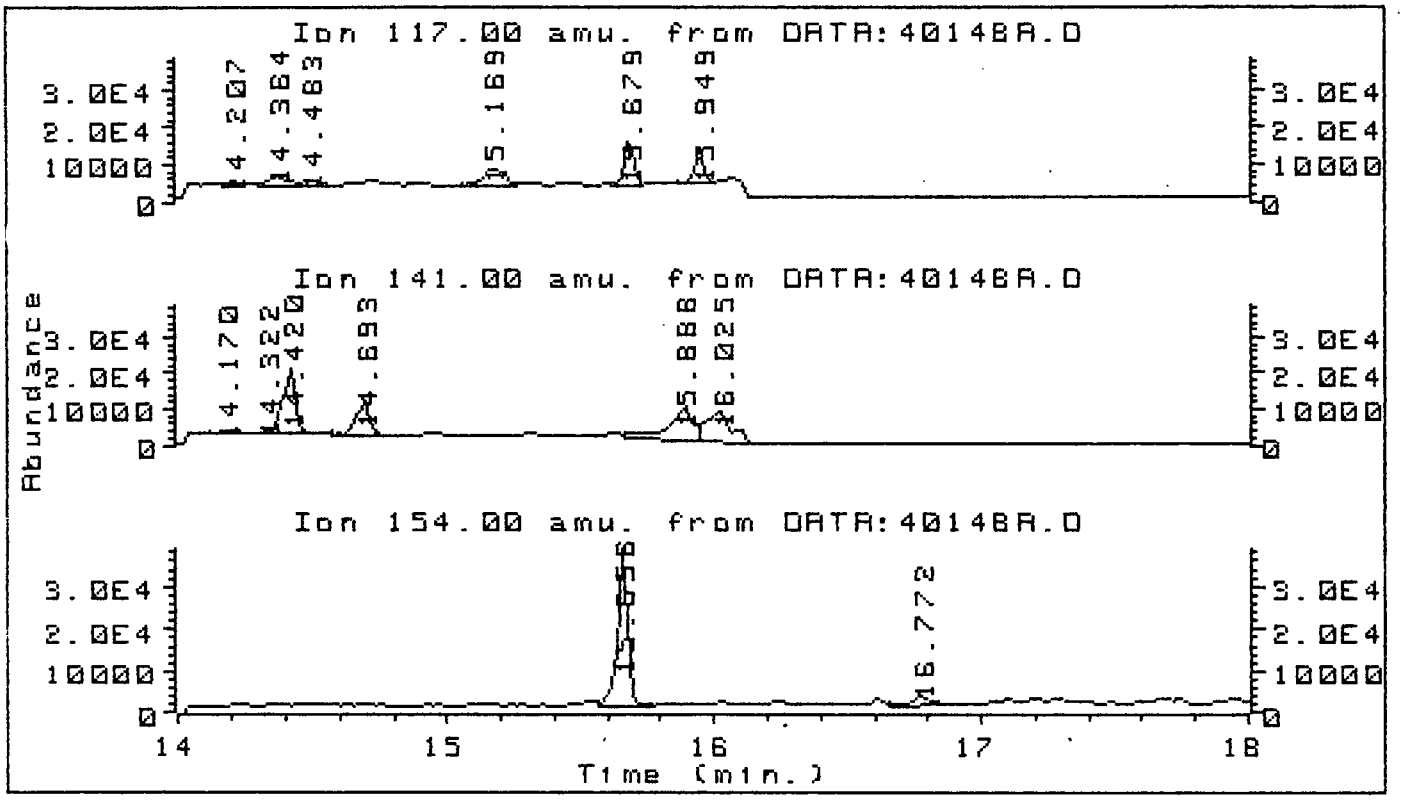

Ion 252.00 amu. from DATA:4014BA.D
29.706
30.328
31.037
31.163
31.279
Ion 284.00 amu. from DATA:4014BA.D
29.721
Abundance
Time (min.)

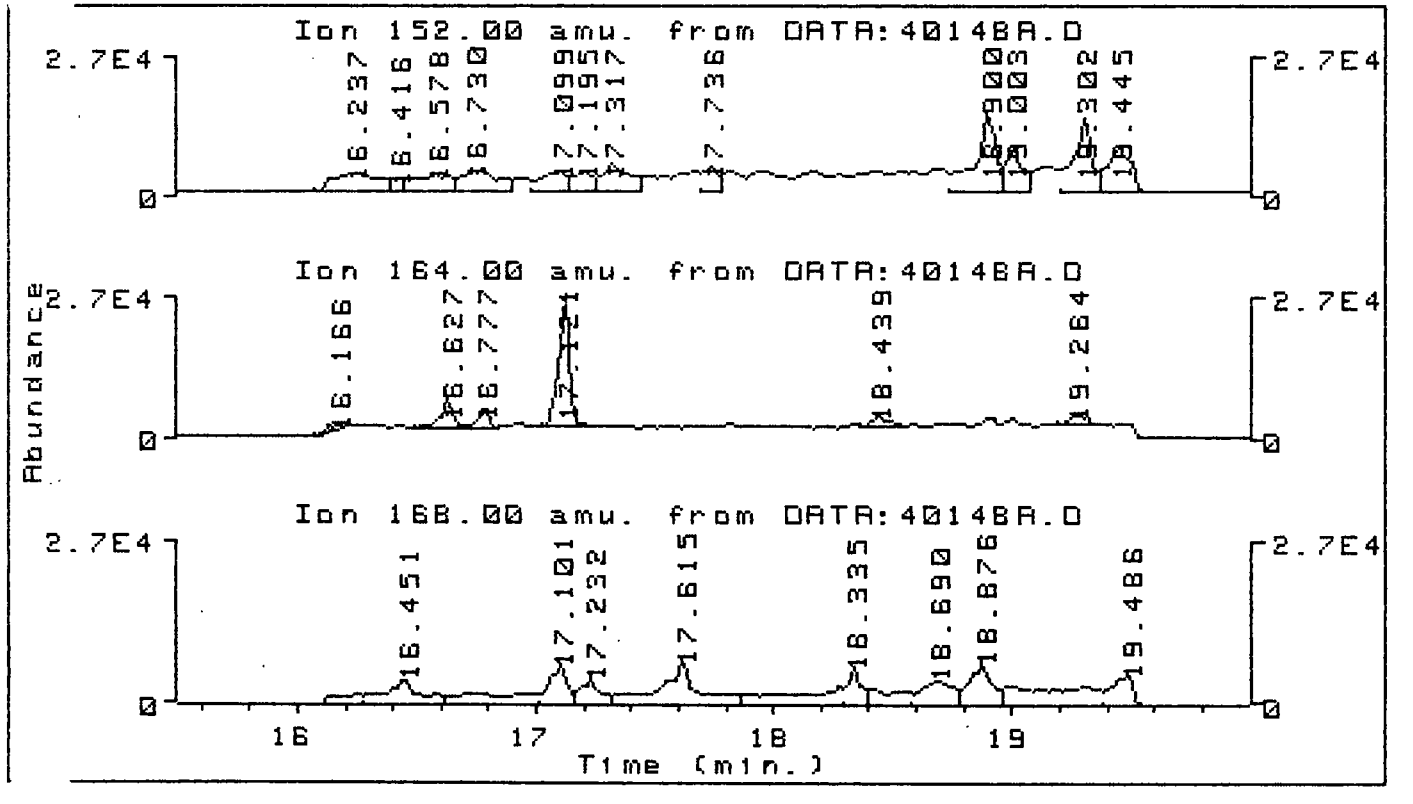

Ion 167.00 amu. from DATA:4014BA.D
Ion 179.00 amu. from DATA:4014BA.D
Abundance
Time (min.)
20.0
20.5
21.0
21.5
22.0

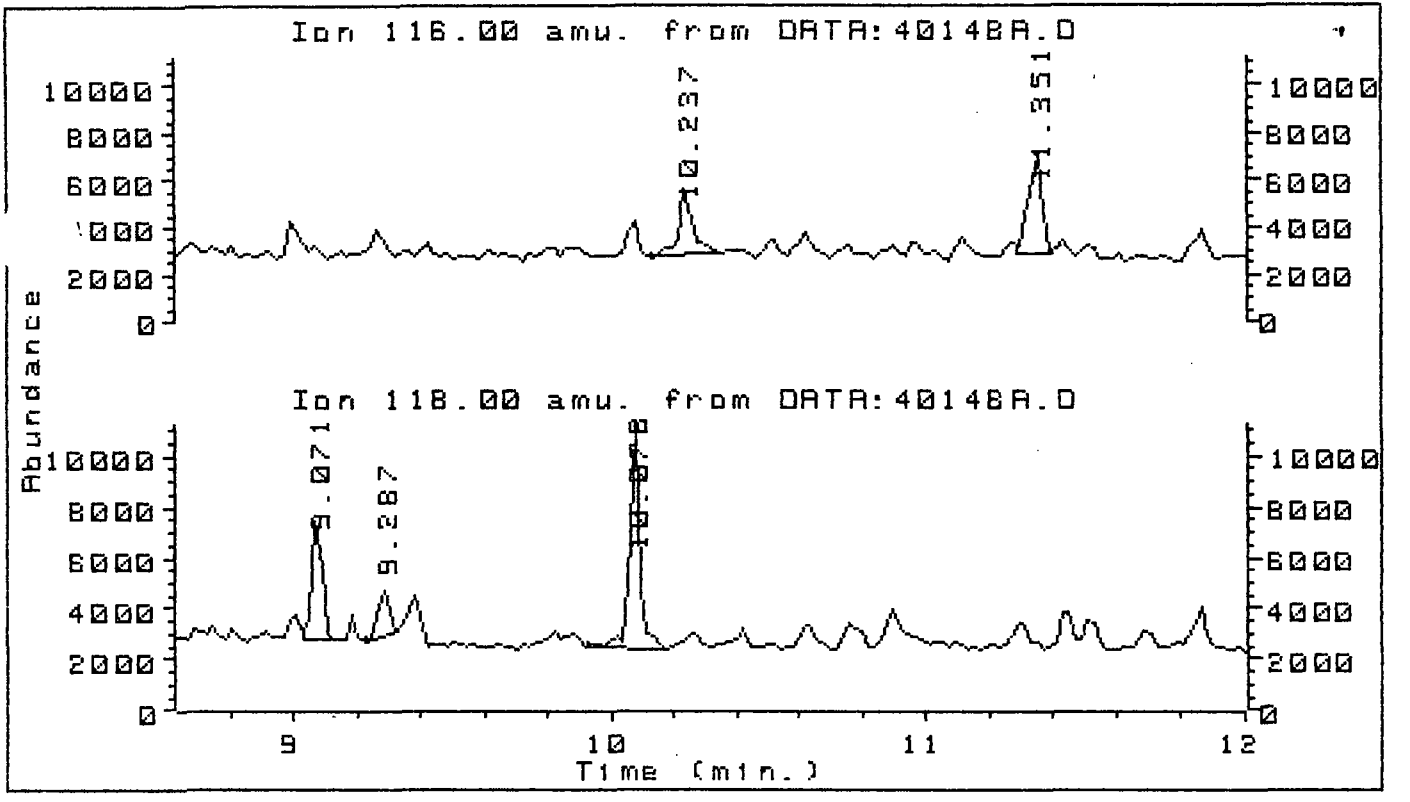

Ion 202.00 amu. from DATA:4014BA.D
Ion 212.00 amu. from DATA:4014BA.D
Abundance
Time (min.)
23
24
25
26

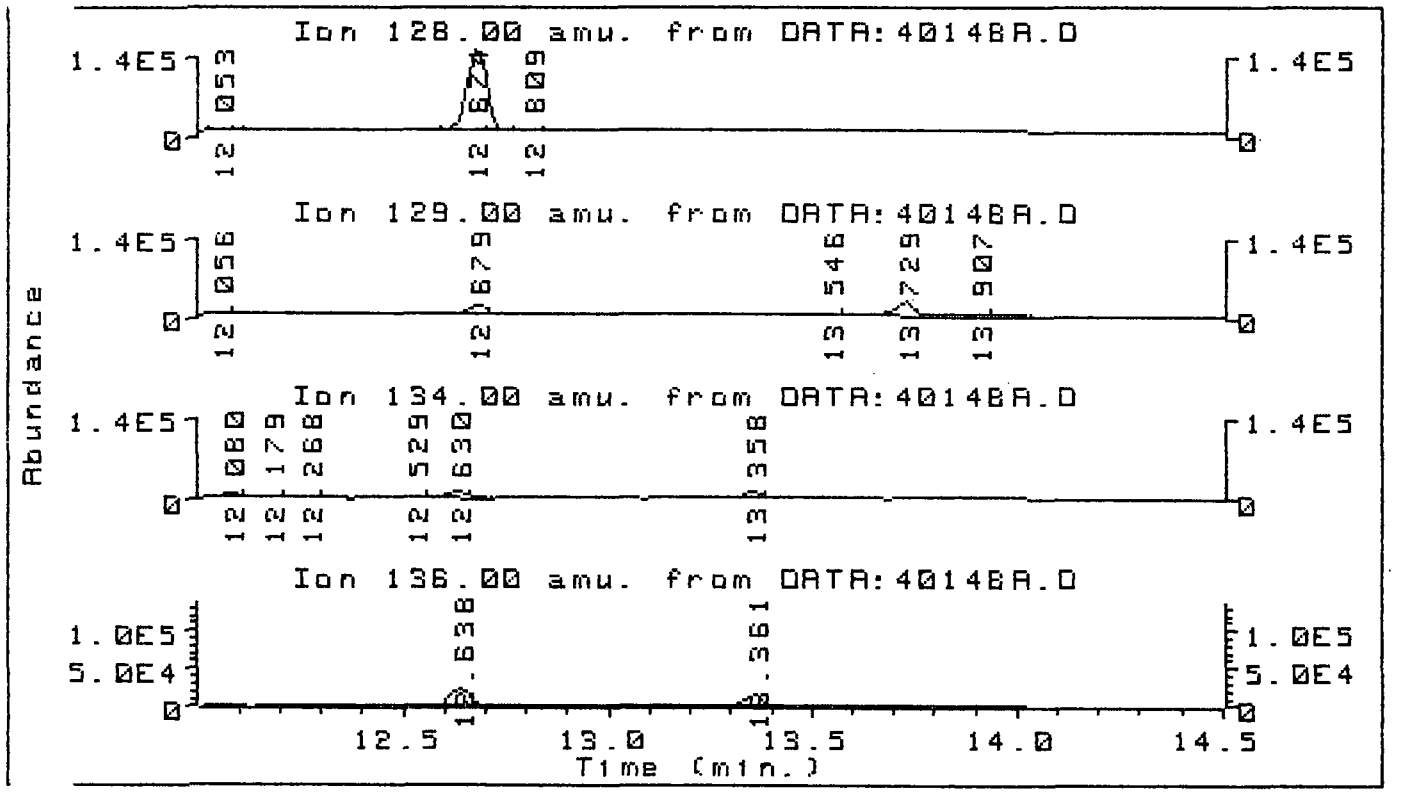

Ion 176.00 amu. from DATA:4014BA.D
Ion 166.00 amu. from DATA:4014BA.D
Abundance
18.494
18.774
18.918
19.006
19.317
18.5
19.0
19.5
Time (min.)


Ion 178.00 amu. from DATA:4014BA.D
Ion 184.00 amu. from DATA:4014BA.D
Ion 188.00 amu. from DATA:4014BA.D
Abundance
19.999
20.316
20.629
20.895
21.041
20.896
21.016
20.0
20.5
21.0
21.5
22.0
Time (min.)

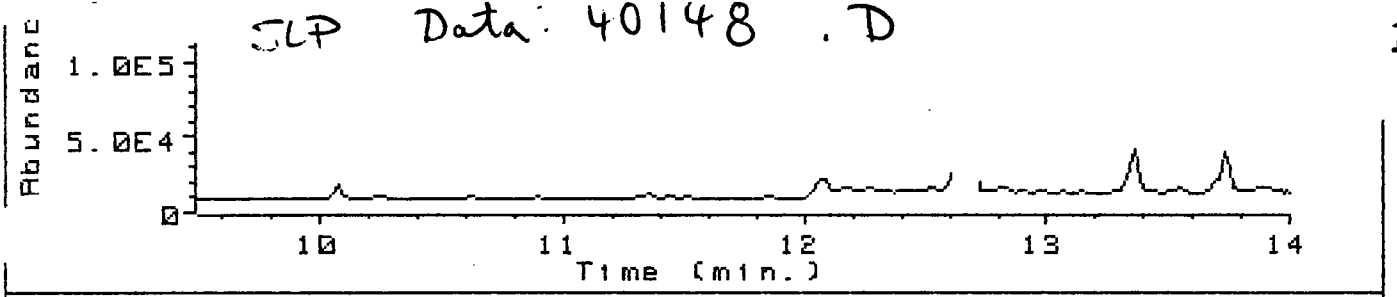

Ion 117.00 amu. from DATA:4014BA.D
Ion 141.00 amu. from DATA:4014BA.D
Ion 154.00 amu. from DATA:4014BA.D
Abundance
3.0E4
2.0E4
10000
0
4.207
4.364
4.483
5.169
5.679
5.949
4.170
4.322
4.420
4.693
5.888
6.025
16.772
14
15
16
17
18
Time (min.)

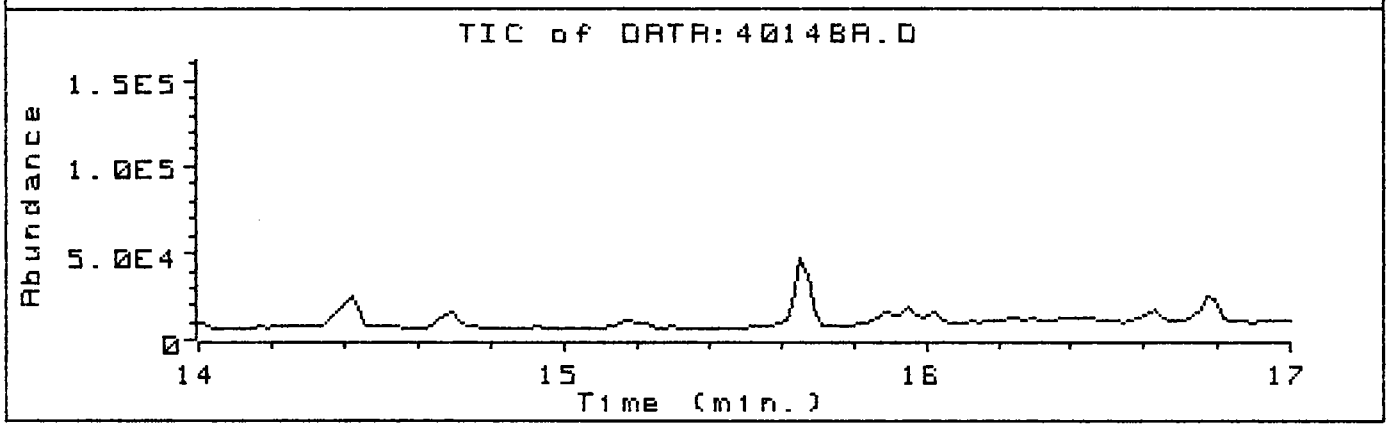

Ion 152.00 amu. from DATA:4014BA.D
Ion 164.00 amu. from DATA:4014BA.D
Ion 168.00 amu. from DATA:4014BA.D
Abundance
2.7E4
0
6.237
6.416
6.578
6.730
7.736
9.302
9.445
6.166
6.827
6.777
8.439
9.264
16.451
17.101
17.232
17.615
18.335
18.690
18.876
19.486
16
17
18
19
Time (min.)

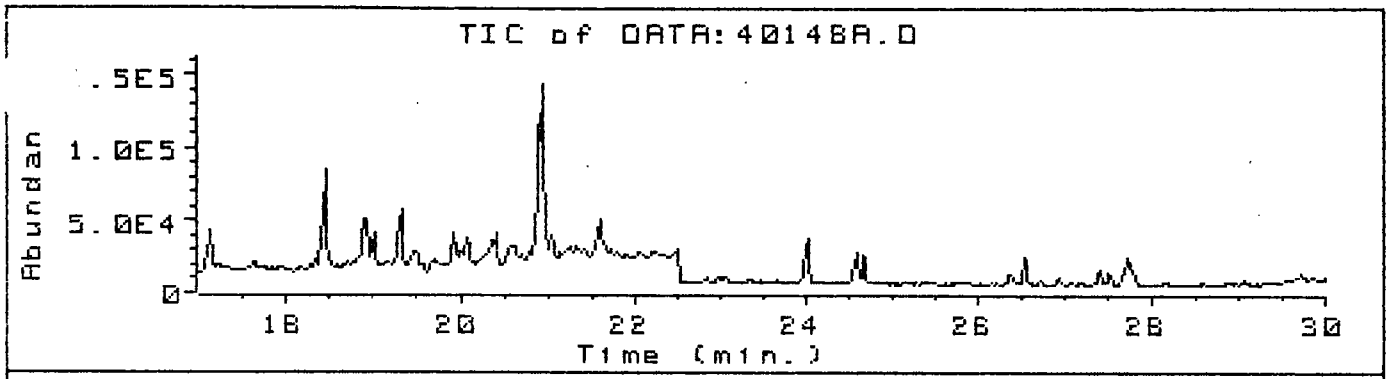

Ion 116.00 amu. from DATA:4014BA.D
10.237
11.351
Ion 118.00 amu. from DATA:4014BA.D
9.071
9.287
Abundance
Time (min.)

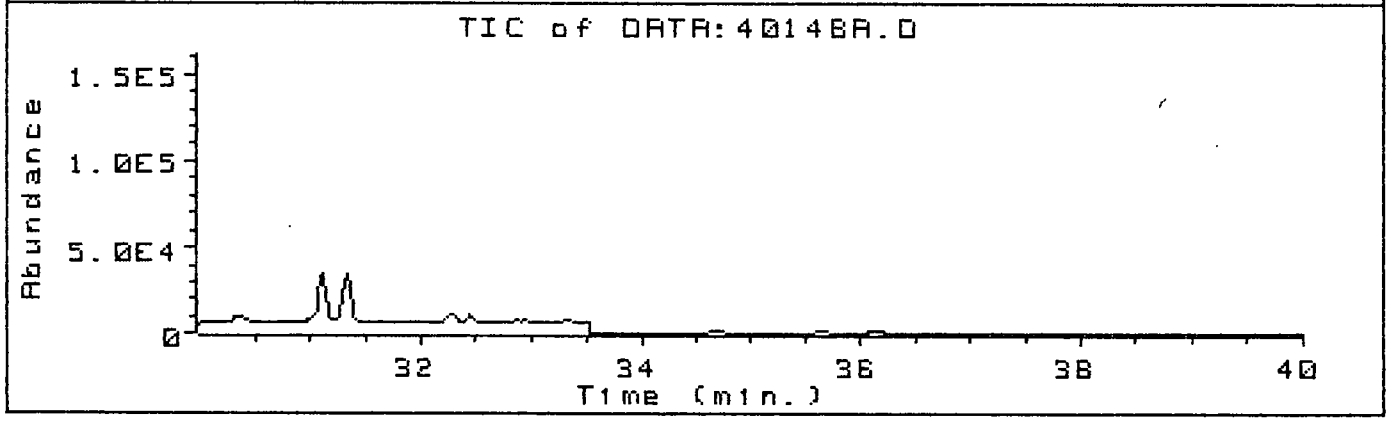

Ion 128.00 amu. from DATA:4014BA.D
Ion 129.00 amu. from DATA:4014BA.D
Ion 134.00 amu. from DATA:4014BA.D
Ion 136.00 amu. from DATA:4014BA.D
Abundance
Time (min.)

ILP Data: 40148 .D









ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: SHIPPING BLANK ERT NO.: 40149

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	<1.9
BENZO (A) ANTHRACENE	ND
CHRYSENE	ND
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	ND
INDENO (1,2,3-CD) PYRENE	ND
DIBENZ (A,H) ANTHRACENE	ND
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	ND
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	~~ND~~ <1.3
DIBENZOFURAN	ND
FLUORENE	ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	ND
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	ND
TOTAL PAH'S	ND

ND = Concentration < 95% Confidence Interval of MDL

ERT #	: 40149	Extract Vol., ml	0.500
Field ID	: SHIPPING BLANK	Sample Vol., L	3.000
GC/MS File #	: 40149A	Date Analyze: 11/25/86	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.0	17.137	1103760
Phenanthrene-d10	62.5	20.907	1883545
Benz(a)pyrene-d12	49.6	31.132	2320945

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.303	0.548	9.384	80688	0.496
dihydroinden	0.783	0.589	10.087	248131	2.535
indene	1.310	0.598	10.256	119046	0.727
Naphthalene-d8 (Surr.)	2.018	0.738	12.654	1449786	5.749
Naphthalene	2.752	0.741	12.694	5365623	15.604
Benz(b)thio	1.739	0.000	0.000	1	0.000
Quinoline	0.989	0.792	13.569	232917	1.884
Indole	1.485	0.840	14.390	133607	0.720
2-methyl	1.019	0.842	14.431	790811	6.208
1-methyl	1.459	0.858	14.706	422768	2.319
Biphenyl	3.395	0.914	15.671	738674	1.741
Acenaphthylene	1.540	0.979	16.783	205196	1.066
Acenaphthene	1.268	1.004	17.210	201394	1.271
Dibenzofuran	1.619	1.029	17.629	472036	2.334
Group II					
Flourene-d10 (Surr.)	0.770	0.883	18.454	2078766	14.926
Fluorene	1.034	0.885	18.512	249907	1.337
Dibenzothiophene	1.173	0.988	20.647	197575	0.931
Phenanthrene	2.154	1.002	20.959	2191041	5.625
Anthracene	1.221	1.008	21.077	124106	0.562
Acridine	0.776	1.015	21.211	54344	0.387
Carbazole	1.026	1.033	21.600	270298	1.458
Fluoranthene	1.448	1.149	24.030	401893	1.535
Pyrene-d10 (Surr.)	0.920	0.000	0.000	1	0.000
Pyrene	1.525	1.177	24.606	317909	1.153
Group III					
Benz(a)anthracene	1.493	0.000	0.000	1	0.000
Chrysene-d12 (Surr.)	0.451	0.891	27.741	631061	4.979
Chrysene	1.513	0.000	0.000	1	0.000
Benzofluoranthenes	2.388	0.000	0.000	1	0.000
Benz(e)pyrene	1.841	1.001	31.178	65784	0.127
Benz(a)pyrene	1.451	0.000	0.000	1	0.000
Perylene-d12 (Surr.)	1.074	1.007	31.352	1672054	5.544
Perylene	1.316	0.000	0.000	1	0.000
Indeno(123,cd)pyrene	1.312	0.000	0.000	1	0.000
Dibenz(ah)anthracene	0.903	0.000	0.000	1	0.000
Benzo(ghi)perylene	1.336	0.000	0.000	1	0.000

CALIBRATION RF's from : 18-Nov-86

ERT #: 40149
SHIPPING 11/25/86

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	5.75	9.90	58.07	42-102	1.820	64.39%
Flourene-d10 (Surr.)	14.93	9.50	157.12	60-128	0.866	139.74%
Chrysene-d12 (Surr.)	4.98	9.80	50.80	10-54	0.413	55.53%
Pyrene-d10 (Surr.)	0.00	10.05	0.00		0.757	0.00%
Perylene-d12 (Surr.)	5.54	9.40	58.98		0.887	71.43%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	1.88	< 1.9
BENZO (A) ANTHRACENE	2.80	4.40	0.00	ND
CHRYSENE	2.80	4.40	0.00	ND
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	0.00	ND
TOTAL CARCINOGENIC PAH				ND

OTHER PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	ANALYTICAL RESULT (NG/L)
2,3-BENZOFURAN	1.20	1.90	0.50	ND
2,3-DIHYDROINDENE	2.20	3.40	2.54 - 2.2	~~< 3.4~~ ND
INDENE	1.80	2.90	0.73	ND
NAPHTHALENE	30.00	47.00	15.60	ND
BENZO (B) THIOPHENE	1.40	2.20	0.00	ND
INDOLE	1.20	1.90	0.72	ND
2-METHYLNAPHTHALENE	3.20	5.00	6.21 - 4.44	~~6.2~~ ND
1-METHYLNAPHTHALENE	2.00	3.10	2.32 - 1.80	~~< 3.1~~ ND
BIPHENYL	11.00	17.00	1.74	ND
ACENAPHTHYLENE	1.10	1.70	1.07	ND
ACENAPHTHENE	0.83	1.30	1.27	< 1.3
DIBENZOFURAN	0.77	1.20	2.33 - 4.21	~~2.3~~ ND
FLOURENE	0.56	0.88	1.34 - 1.8	~~1.3~~ ND
DIBENZOTHIOPHENE	4.00	6.30	0.93	ND
PHENANTHRENE	2.00	3.10	5.62 - 9.8	~~5.6~~ ND
ANTHRACENE	2.20	3.40	0.56	ND
ACRIDINE	1.60	2.50	0.39	ND
CARBAZOLE	1.70	2.60	1.46	ND
FLUORANTHENE	2.80	4.40	1.54	ND
PYRENE	2.60	4.10	1.15	ND
BENZO (E) PYRENE	0.96	1.50	0.13	ND
PERYLENE	1.00	1.60	0.00	ND
TOTAL OTHER PAH				~~15.5~~ ND
TOTAL PAH'S				~~15.5~~ ND

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: SHIPPING BLANK

ERT NO.: 40149

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	< 1.9
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	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	< 3.4
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	6.2
1-METHYLNAPHTHALENE	< 3.1
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	< 1.3
DIBENZOFURAN	2.3
FLOURENE	1.3
DIBENZOTHIOPHENE	ND
PHENANTHRENE	5.6
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	16
TOTAL PAH'S	16

ND = Concentration < 95% Confidence Interval of MDL

volatiles in the sand would extract into the water

ERT #: 40149 Shipping Blank

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/24/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	4.38	9.90	44.29	42-102	~~1.985~~ 1.82	~~44.29%~~ ~~48.3~~ 106.3
Flourene-d10 (Surr.)	11.21	9.50	118.05	60-128	~~0.769~~ 0.866	~~118.07%~~ 104.8
Chyrsene-d12 (Surr.)	3.77	9.80	38.47	10-54	~~0.447~~ 0.413	~~38.47%~~ 41.6
Pyrene-d10 (Surr.)	0.00	10.05	0.00		0.922	0.00%
Perylene-d12 (Surr.)	4.24	9.40	45.08		1.054	45.07%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	1.43	0.00	1.43	1.90
BENZO (A) ANTHRACENE	2.80	0.00	0.00	0.00	4.40
CHYRSENE	2.80	0.00	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.00	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			0.00		

OTHER PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
2,3-BENZOFURAN	1.20	0.30	0.00	0.00	1.90
2,3-DIHYDROINDENE	2.20	1.61	0.00	0.00	3.40
INDENE	1.80	0.60	0.00	0.00	2.90
NAPHTHALENE	30.00	11.89	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.00	0.00	0.00	2.20
INDOLE	1.20	0.71	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	2.59	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	1.39	0.00	0.00	3.10
BIPHENYL	11.00	0.24	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	0.78	0.00	0.00	1.70
ACENAPHTHENE	0.83	1.01	0.00	1.01	1.30
DIBENZOFURAN	0.77	1.19	0.00	1.19	1.20
FLOURENE	0.56	1.01	1.01	1.01	0.88
DIBENZOTHIOPHENE	4.00	0.75	0.00	0.00	6.30
PHENANTHRENE	2.00	4.26	4.26	4.26	3.10
ANTHRACENE	2.20	0.43	0.00	0.00	3.40
ACRIDINE	1.60	0.49	0.00	0.00	2.50
CARBAZOLE	1.70	1.54	0.00	0.00	2.60
FLUORANTHENE	2.80	1.15	0.00	0.00	4.40
PYRENE	2.60	0.86	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.11	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	5.27		
		TOTAL PAH'S	5.27		

Shipping Blank

ERT # : 40149 Extract Vol., ml 0.500
Field ID : ~~MATRIX CHECK~~ Sample Vol., L 4.000
GC/MS File # : 40149A Date Analyze: 11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.137	1103760
Phenanthrene-d10	62.500	20.907	1883545
Benz(a)pyrene-d12	49.600	31.132	2320945

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	9.384	80688	0.303	0.548
dihydroinden	0.924	10.087	248131	1.612	0.589
indene	1.199	10.256	119046	0.596	0.598
Naphthalene-d8 (Surr.)	1.985	12.654	1449786	4.385	0.738
Naphthalene	2.708	12.694	5365623	11.894	0.741
Benz(b)thio	2.025	0.000	1	0.000	0.000
Quinoline	0.976	13.569	232917	1.432	0.792
Indole	1.135	14.390	133607	0.707	0.840
2-methyl	1.832	14.431	790811	2.591	0.842
1-methyl	1.825	14.706	422768	1.390	0.858
Biphenyl	18.290	15.671	738674	0.242	0.914
Acenaphthylene	1.578	16.783	205196	0.781	0.979
Acenaphthene	1.202	17.210	201394	1.005	1.004
Dibenzofuran	2.378	17.629	472036	1.191	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.454	2078766	11.214	0.883
Fluorene	1.030	18.512	249907	1.006	0.885
Dibenzothiophene	1.088	20.647	197575	0.753	0.988
Phenanthrene	2.133	20.959	2191041	4.261	1.002
Anthracene	1.197	21.077	124106	0.430	1.008
Acridine	0.458	21.211	54344	0.492	1.015
Carbazole	0.726	21.600	270298	1.544	1.033
Fluoranthene	1.445	24.030	401893	1.154	1.149
Pyrene-d10 (Surr.)	0.922	0.000	1	0.000	0.000
Pyrene	1.527	24.606	317909	0.863	1.177
Group III					
Benz(a)anthracene	1.487	0.000	1	0.000	0.000
Chyrsene-d12 (Surr.)	0.447	27.741	631061	3.770	0.891
Chyrsene	1.518	0.000	1	0.000	0.000
Benzofluoranthenes	2.065	0.000	1	0.000	0.000
Benz(e)pyrene	1.654	31.178	65784	0.106	1.001
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	31.352	1672054	4.237	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

10/11

ERT #	: 40149	Extract Vol., ml	0.500
Field ID	: SHIPPING BLANK	Sample Vol., L	4.000
GC/MS File #	: 40149A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.137	1103760
Phenanthrene-d10	62.500	20.907	1883545
Benz(a)pyrene-d12	49.600	31.132	2320945

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	9.384	80688	0.303	0.548
dihydroinden	0.924	10.087	248131	1.612	0.589
indene	1.199	10.256	119046	0.596	0.598
Naphthalene-d8 (Surr.)	1.985	12.654	1449786	4.385	0.738
Naphthalene	2.708	12.694	5365623	11.894	0.741
Benz(b)thio	2.025	0.000	1	0.000	0.000
Quinoline	0.976	13.569	232917	1.432	0.792
Indole	1.135	14.390	133607	0.707	0.840
2-methyl	1.832	14.431	790811	2.591	0.842
1-methyl	1.825	14.706	422768	1.390	0.858
Biphenyl	18.290	15.671	738674	0.242	0.914
Acenaphthylene	1.578	16.783	205196	0.781	0.979
Acenaphthene	1.202	17.210	201394	1.005	1.004
Dibenzofuran	2.378	17.629	472036	1.191	1.029
Group II					
Flourene-d10 (Surr.)	0.769	18.454	2078766	11.214	0.883
Fluorene	1.030	18.512	249907	1.006	0.885
Dibenzothiophene	1.088	20.647	197575	0.753	0.988
Phenanthrene	2.133	20.959	2191041	4.261	1.002
Anthracene	1.197	21.077	124106	0.430	1.008
Acridine	0.458	21.211	54344	0.492	1.015
Carbazole	0.726	21.600	270298	1.544	1.033
Fluoranthene	1.445	24.030	401893	1.154	1.149
Pyrene-d10 (Surr.)	0.922	0.000	1	0.000	0.000
Pyrene	1.527	24.606	317909	0.863	1.177
Group III					
Benz(a)anthracene	1.487	0.000	1	0.000	0.000
Chyrsene-d12 (Surr.)	0.447	27.741	631061	3.770	0.891
Chyrsene	1.518	0.000	1	0.000	0.000
Benzofluoranthenes	2.065	0.000	1	0.000	0.000
Benz(e)pyrene	1.654	31.178	65784	0.106	1.001
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	31.352	1672054	4.237	1.007
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	0.000	1	0.000	0.000

ERT #: 40149

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	4.38	9.90	44.29	42-102	1.820	48.30%
Flourene-d10 (Surr.)	11.21	9.50	118.05	60-128	0.866	104.80%
Chyrsene-d12 (Surr.)	3.77	9.80	38.47	10-54	0.413	41.65%
Pyrene-d10 (Surr.)	0.00	10.05	0.00		0.757	0.00%
Perylene-d12 (Surr.)	4.24	9.40	45.08		0.887	53.57%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	1.43	0.00	1.43	1.90
BENZO (A) ANTHRACENE	2.80	0.00	0.00	0.00	4.40
CHYRSENE	2.80	0.00	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.00	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.00	0.00	0.00	5.30
			0.00		

OTHER PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
2,3-BENZOFURAN	1.20	0.30	0.00	0.00	1.90
2,3-DIHYDROINDENE	2.20	1.61	0.00	0.00	3.40
INDENE	1.80	0.60	0.00	0.00	2.90
NAPHTHALENE	30.00	11.89	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.00	0.00	0.00	2.20
INDOLE	1.20	0.71	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	2.59	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	1.39	0.00	0.00	3.10
BIPHENYL	11.00	0.24	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	0.78	0.00	0.00	1.70
ACENAPHTHENE	0.83	1.01	0.00	1.01	1.30
DIBENZOFURAN	0.77	1.19	0.00	1.19	1.20
FLOURENE	0.56	1.01	1.01	1.01	0.88
DIBENZOTHIOPHENE	4.00	0.75	0.00	0.00	6.30
PHENANTHRENE	2.00	4.26	4.26	4.26	3.10
ANTHRACENE	2.20	0.43	0.00	0.00	3.40
ACRIDINE	1.60	0.49	0.00	0.00	2.50
CARBAZOLE	1.70	1.54	0.00	0.00	2.60
FLUORANTHENE	2.80	1.15	0.00	0.00	4.40
PYRENE	2.60	0.86	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.11	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	5.27		
		TOTAL PAH'S	5.27		

*** Internal Standard ***

Operator: LOUIE POUNDS 25 Nov 86 6:34 pm
Method File Name : PAH.M
Sample Info : SLP SHIPPING BLANK ERT#40149 : TUE. 25 NOV. 86
' - Info: 1.0 UL OF SAMPLE
gration File Name : DATA:40149A.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		1VB	9.384	Mass	118.00	amu	2,3-BENZOFUR	80688	6.018 ng/mL
2		1PV	10.087	Mass	118.00	amu	2,3-DIHYDROI	248131	14.33 ng/mL
3		1VV	10.256	Mass	116.00	amu	INDENE	119046	9.793 ng/mL
4		1PV	12.654	Mass	136.00	amu	NAPHTHALENE,	1449786	27.68 ng/mL
5		1BV	12.694	Mass	128.00	amu	NAPTHALENE	5365623	86.40 ng/mL
6		1	--------	Mass	134.00	amu	BENZO(b)THIO	*** Not Found ***	
7		1VV	13.569	Mass	129.00	amu	QUINOLINE	232917	12.62 ng/mL
8		1VV	14.390	Mass	117.00	amu	INDOLE	133607	4.002 ng/mL
9		1VV	14.431	Mass	141.00	amu	2-METHYLNAPT	790811	19.83 ng/mL
10		1VV	14.706	Mass	141.00	amu	1-METHYLNAPT	422768	7.421 ng/mL
11		1VV	15.671	Mass	154.00	amu	BIPHENYL	738674	
12		1VV	16.783	Mass	152.00	amu	ACENAPHTHYLE	205196	2.721 ng/mL
13	+ISTD	1VV	17.137	Mass	164.00	amu	ACENAPTHTHEN	1103760	53.00 ng/mL
		1VV	17.210	Mass	154.00	amu	ACENAPHTHENE	201394	2.267 ng/mL
		1PV	17.629	Mass	168.00	amu	DIBENZOFURAN	472036	7.868 ng/mL
16		2VV	18.454	Mass	176.00	amu	FLUORENE, d1	2078766	151.9 ng/mL
17		2VV	18.512	Mass	166.00	amu	FLUORENE	249907	5.455 ng/mL
18		2VV	20.647	Mass	184.00	amu	DIBENZOTHIOP	197575	5.593 ng/mL
19	+ISTD	2BV	20.907	Mass	188.00	amu	PHENANTHRENE	1883545	62.50 ng/mL
20		2PV	20.959	Mass	178.00	amu	PHENANTHRENE	2191041	
21		2VB	21.077	Mass	178.00	amu	ANTHRACENE	124106	
22		2VV	21.211	Mass	179.00	amu	ACRIDINE	54344	
23		1VV	21.600	Mass	167.00	amu	CARBAZOLE	270298	1.655 ng/mL
24		1PV	24.030	Mass	202.00	amu	FLUORANTHENE	401893	
25		2	--------	Mass	212.00	amu	PYRENE, d10	*** Not Found ***	
26		2PV	24.606	Mass	202.00	amu	PYRENE	317909	4.015 ng/mL
27		3	--------	Mass	228.00	amu	BENZ(a)ANTHR	*** Not Found ***	
28		3PV	27.741	Mass	240.00	amu	CHYRSENE, d(	631061	26.45 ng/mL
29		3	--------	Mass	228.00	amu	CHYRSENE	*** Not Found ***	
30		3	--------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
31		3	--------	Mass	252.00	amu	BENZOFLUORAN	*** Not Found ***	
32		3VV	31.178	Mass	252.00	amu	BENZ(e)PYREN	65784	3.190 ng/mL
33	+ISTD	3PV	31.132	Mass	264.00	amu	BENZ(a)PYREN	2320945	49.60 ng/mL
34		3	--------	Mass	252.00	amu	BENZ(a)PYREN	*** Not Found ***	
35		3VV	31.352	Mass	264.00	amu	PERYLENE, d1	1672054	45.16 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 ***	
		3	--------	Mass	276.00	amu	BENZO(g,h,i)	*** Not Found ***	
--------		VV	9.086	Mass	118.00		-Uncalibrated-	100820	100820 ng/mL
--------		PV	9.294	Mass	118.00		-Uncalibrated-	96744	96744 ng/mL
--------		PV	10.080	Mass	116.00		-Uncalibrated-	42291	42291 ng/mL
--------		VV	10.640	Mass	116.00		-Uncalibrated-	78651	78651 ng/mL
--------		VV	10.919	Mass	118.00		-Uncalibrated-	88247	88247 ng/mL
--------		PV	11.375	Mass	116.00		-Uncalibrated-	204526	204526 ng/mL

--------	VBA	11.873	Mass	118.00	-Uncalibrated-	85799	85799	ng/mL
--------	BBA	11.882	Mass	116.00	-Uncalibrated-	56747	56747	ng/mL
--------	PH	12.074	Mass	129.00	-Uncalibrated-	25070	25070	ng/mL
--------	PH	12.095	Mass	134.00	-Uncalibrated-	300973	300973	ng/mL
--------	VV	12.194	Mass	136.00	-Uncalibrated-	17485	17485	ng/mL
--------	PV	12.196	Mass	134.00	-Uncalibrated-	43099	43099	ng/mL
------	VV	12.188	Mass	129.00	-Uncalibrated-	91923	91923	ng/mL
-----	VV	12.293	Mass	134.00	-Uncalibrated-	68667	68667	ng/mL
------	PV	12.300	Mass	128.00	-Uncalibrated-	15355	15355	ng/mL
--------	PV	12.495	Mass	134.00	-Uncalibrated-	62707	62707	ng/mL
--------	VV	12.551	Mass	134.00	-Uncalibrated-	63122	63122	ng/mL
--------	VV	12.651	Mass	134.00	-Uncalibrated-	450196	450196	ng/mL
--------	PV	12.695	Mass	129.00	-Uncalibrated-	623249	623249	ng/mL
--------	VV	12.824	Mass	128.00	-Uncalibrated-	84836	84836	ng/mL
--------	VV	13.375	Mass	136.00	-Uncalibrated-	327424	327424	ng/mL
--------	PV	13.374	Mass	134.00	-Uncalibrated-	246127	246127	ng/mL
--------	VV	13.755	Mass	129.00	-Uncalibrated-	1583850	1583850	ng/mL
--------	PV	13.776	Mass	136.00	-Uncalibrated-	43509	43509	ng/mL
--------	VB	13.922	Mass	129.00	-Uncalibrated-	399331	399331	ng/mL
--------	VV	15.179	Mass	117.00	-Uncalibrated-	524324	524324	ng/mL
--------	VV	15.698	Mass	117.00	-Uncalibrated-	397155	397155	ng/mL
--------	BV	15.905	Mass	141.00	-Uncalibrated-	480262	480262	ng/mL
--------	VV	15.962	Mass	117.00	-Uncalibrated-	806245	806245	ng/mL
--------	VB	16.040	Mass	141.00	-Uncalibrated-	523715	523715	ng/mL
--------	VB	16.079	Mass	117.00	-Uncalibrated-	487359	487359	ng/mL
--------	BV	16.160	Mass	152.00	-Uncalibrated-	64021	64021	ng/mL
--------	BV	16.223	Mass	164.00	-Uncalibrated-	34452	34452	ng/mL
--------	VV	16.261	Mass	152.00	-Uncalibrated-	235751	235751	ng/mL
--------	BV	16.464	Mass	168.00	-Uncalibrated-	135012	135012	ng/mL
--------	VV	16.618	Mass	154.00	-Uncalibrated-	51347	51347	ng/mL
--------	BV	16.643	Mass	164.00	-Uncalibrated-	299638	299638	ng/mL
--------	VV	16.796	Mass	164.00	-Uncalibrated-	131448	131448	ng/mL
-----	VV	16.786	Mass	154.00	-Uncalibrated-	104814	104814	ng/mL
------	VV	17.077	Mass	154.00	-Uncalibrated-	164174	164174	ng/mL
--------	PV	17.117	Mass	168.00	-Uncalibrated-	172560	172560	ng/mL
--------	VV	17.116	Mass	152.00	-Uncalibrated-	113904	113904	ng/mL
--------	VV	17.210	Mass	152.00	-Uncalibrated-	171402	171402	ng/mL
--------	VB	17.248	Mass	168.00	-Uncalibrated-	89817	89817	ng/mL
--------	VV	17.291	Mass	154.00	-Uncalibrated-	108943	108943	ng/mL
--------	VV	17.334	Mass	152.00	-Uncalibrated-	146027	146027	ng/mL
--------	VV	17.754	Mass	152.00	-Uncalibrated-	164606	164606	ng/mL
--------	PV	18.351	Mass	168.00	-Uncalibrated-	200469	200469	ng/mL
--------	PV	18.455	Mass	164.00	-Uncalibrated-	88824	88824	ng/mL
--------	VV	18.791	Mass	166.00	-Uncalibrated-	159045	159045	ng/mL
--------	VV	18.894	Mass	168.00	-Uncalibrated-	144486	144486	ng/mL
--------	VV	18.922	Mass	166.00	-Uncalibrated-	400119	400119	ng/mL
--------	VV	18.918	Mass	152.00	-Uncalibrated-	231054	231054	ng/mL
--------	VV	19.022	Mass	166.00	-Uncalibrated-	223291	223291	ng/mL
--------	VV	19.016	Mass	152.00	-Uncalibrated-	57290	57290	ng/mL
--------	PV	19.325	Mass	166.00	-Uncalibrated-	372205	372205	ng/mL
--------	BV	19.319	Mass	152.00	-Uncalibrated-	262255	262255	ng/mL
--------	VB	19.458	Mass	152.00	-Uncalibrated-	291418	291418	ng/mL
--------	BV	19.735	Mass	184.00	-Uncalibrated-	130518	130518	ng/mL
--------	BV	19.936	Mass	178.00	-Uncalibrated-	162275	162275	ng/mL
--------	PV	20.018	Mass	184.00	-Uncalibrated-	86957	86957	ng/mL
--------	VV	20.061	Mass	184.00	-Uncalibrated-	64435	64435	ng/mL
--------	VV	20.101	Mass	184.00	-Uncalibrated-	102269	102269	ng/mL
------	VV	20.099	Mass	178.00	-Uncalibrated-	66258	66258	ng/mL
-----	VV	20.333	Mass	184.00	-Uncalibrated-	93356	93356	ng/mL
--------	BV	20.365	Mass	167.00	-Uncalibrated-	313994	313994	ng/mL
--------	PV	20.424	Mass	179.00	-Uncalibrated-	136934	136934	ng/mL
--------	VV	20.411	Mass	178.00	-Uncalibrated-	221958	221958	ng/mL
--------	PV	20.608	Mass	167.00	-Uncalibrated-	197769	197769	ng/mL
--------	VV	20.903	Mass	184.00	-Uncalibrated-	266637	266637	ng/mL
--------	VV	20.962	Mass	179.00	-Uncalibrated-	341344	341344	ng/mL

--------	VV	21.269	Mass	179.00	-Uncalibrated-	86175	86175	ng/mL
--------	VV	21.335	Mass	179.00	-Uncalibrated-	119942	119942	ng/mL
--------	VV	21.435	Mass	179.00	-Uncalibrated-	90687	90687	ng/mL
--------	PV	21.616	Mass	179.00	-Uncalibrated-	710669	710669	ng/mL
--------	PV	22.863	Mass	212.00	-Uncalibrated-	49836	49836	ng/mL
--------	BV	24.690	Mass	212.00	-Uncalibrated-	515827	515827	ng/mL
-------	PH	26.550	Mass	240.00	-Uncalibrated-	258346	258346	ng/mL
------	BV	26.724	Mass	228.00	-Uncalibrated-	71694	71694	ng/mL
------	PV	26.943	Mass	240.00	-Uncalibrated-	60975	60975	ng/mL
--------	PV	27.415	Mass	240.00	-Uncalibrated-	59053	59053	ng/mL
--------	BV	27.409	Mass	228.00	-Uncalibrated-	36693	36693	ng/mL
--------	VV	27.533	Mass	240.00	-Uncalibrated-	54405	54405	ng/mL
--------	BV	29.724	Mass	264.00	-Uncalibrated-	63849	63849	ng/mL
--------	BV	29.722	Mass	252.00	-Uncalibrated-	88494	88494	ng/mL

Error : Could not find Calibration Peak
No Peak of Calibration Peak #6's Description at 12.852 +/- 0.064 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #25's Description at 24.566 +/- 0.123 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #27's Description at 27.690 +/- 0.138 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #29's Description at 27.794 +/- 0.139 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #30's Description at 30.346 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.397 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #34's Description at 31.189 +/- 0.156 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #36's Description at 31.418 +/- 0.157 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.715 +/- 0.174 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #38's Description at 34.774 +/- 0.174 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #39's Description at 35.702 +/- 0.179 min.
Error: Could not find all Calibration Peaks

*** Area Percent ***

Report by Retention Time

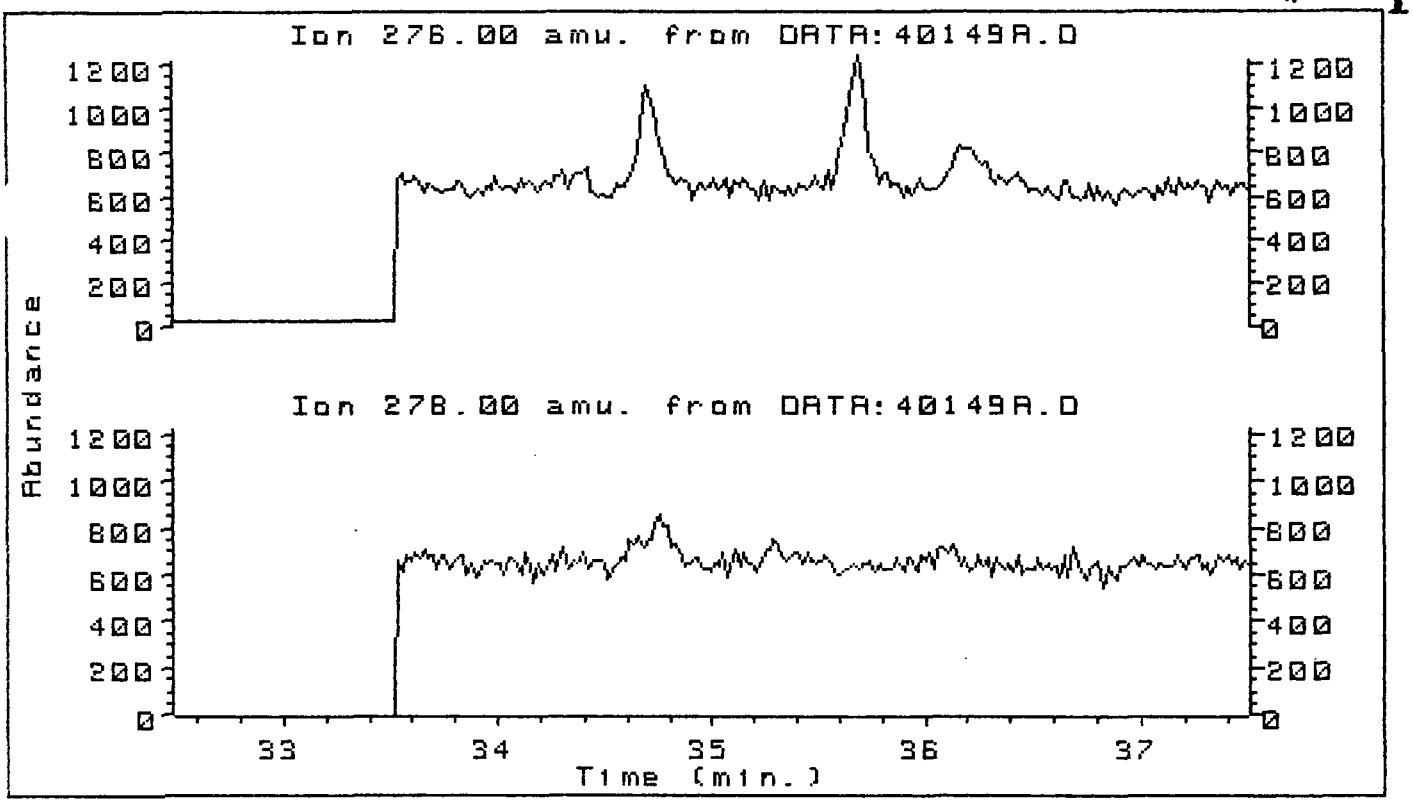
Operator: LOUIE POUNDS 25 Nov 86 6:34 pm
Method File Name : PAH.M
Sample Info : SLP SHIPPING BLANK ERT#40149 : TUE. 25 NOV. 86
Misc Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40149A.I
Bottle Number : 0

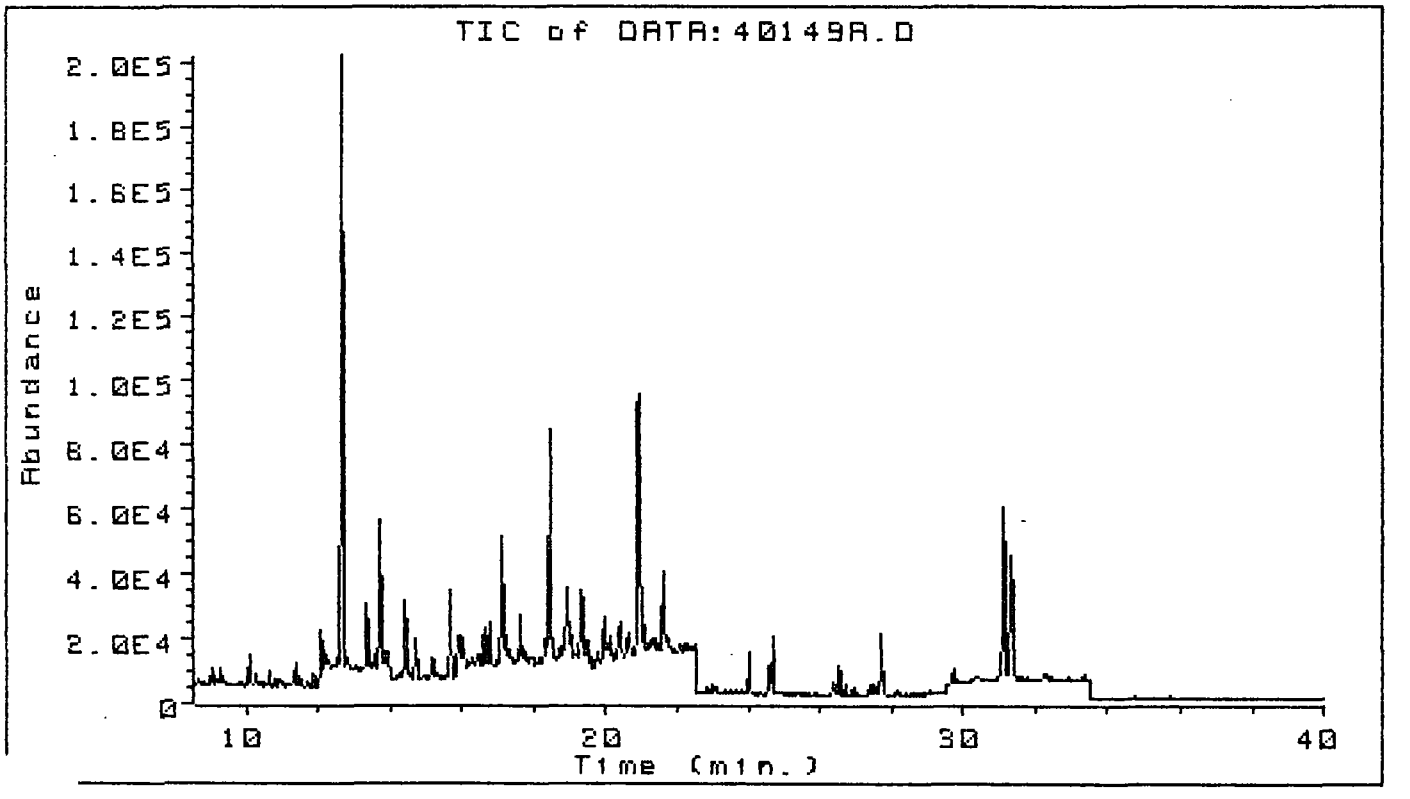
Ret Time	Signal Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
9.086	Mass 118.00 amu	VV	100820	4435	100.00	13.52	100.00	40.63
9.294	Mass 118.00 amu	PV	96744	3213	100.00	12.97	100.00	38.99
9.384	Mass 118.00 amu	VB	80688	2201	100.00	10.82	100.00	32.52
087	Mass 118.00 amu	PV	248131	7962	85.44	33.28	100.00	100.00
10.080	Mass 116.00 amu	PV	42291	1862	14.56	8.44	17.04	20.68
10.256	Mass 116.00 amu	VV	119046	3213	100.00	23.75	100.00	58.21
10.640	Mass 116.00 amu	VV	78651	2672	100.00	15.69	100.00	38.46

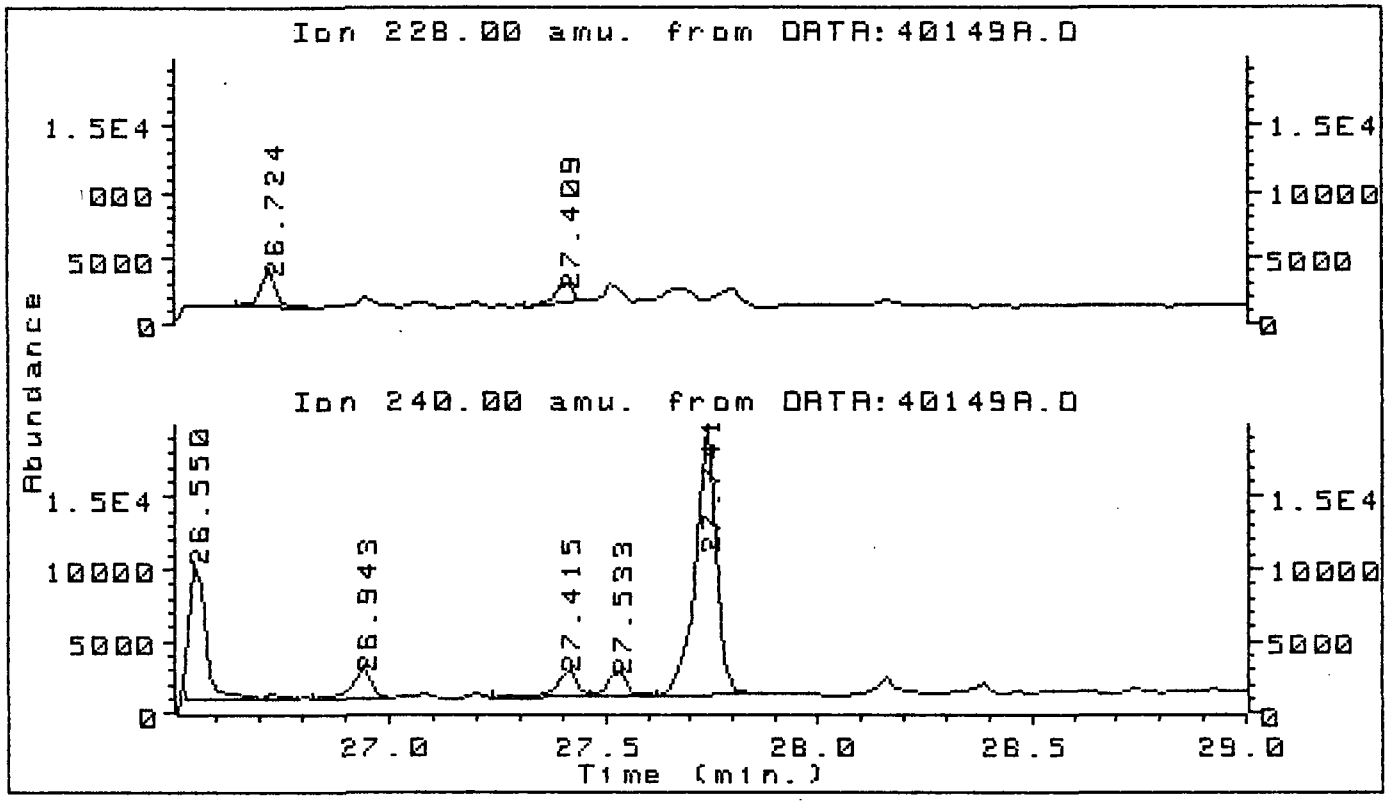
11.375	Mass	116.00	amu	PV	204526	6490	100.00	40.80	100.00
11.458	Mass	118.00	amu	PV	45257	1746	100.00	6.07	100.00
11.873	Mass	118.00	amu	VBA	85799	2708	60.19	11.51	100.00
11.882	Mass	116.00	amu	BBA	56747	1638	39.81	11.32	66.14
.074	Mass	129.00	amu	PH	25070	1105	100.00	0.85	100.00
12.095	Mass	134.00	amu	PH	300973	10222	100.00	24.37	100.00
12.194	Mass	136.00	amu	VV	17485	726	11.46	0.95	19.02
12.196	Mass	134.00	amu	PV	43099	1969	28.26	3.49	46.89
12.188	Mass	129.00	amu	VV	91923	1258	60.27	3.11	100.00
12.293	Mass	134.00	amu	VV	68667	1688	81.73	5.56	100.00
12.300	Mass	128.00	amu	PV	15355	419	18.27	0.28	22.36
12.495	Mass	134.00	amu	PV	62707	1360	100.00	5.08	100.00
12.551	Mass	134.00	amu	VV	63122	2313	100.00	5.11	100.00
12.654	Mass	136.00	amu	PV	1449786	44022	76.31	78.87	100.00
12.651	Mass	134.00	amu	VV	450196	12689	23.69	36.46	31.05
12.695	Mass	129.00	amu	PV	623249	17605	10.41	21.08	11.62
12.694	Mass	128.00	amu	BV	5365623	166986	89.59	98.17	100.00
12.824	Mass	128.00	amu	VV	84836	2141	100.00	1.55	100.00
13.375	Mass	136.00	amu	VV	327424	10468	57.09	17.81	100.00
374	Mass	134.00	amu	PV	246127	8151	42.91	19.93	75.17
13.569	Mass	129.00	amu	VV	232917	4429	100.00	7.88	100.00
13.755	Mass	129.00	amu	VV	1583850	45242	100.00	53.57	100.00
13.776	Mass	136.00	amu	PV	43509	1495	100.00	2.37	100.00
13.922	Mass	129.00	amu	VB	399331	6260	100.00	13.51	100.00
14.390	Mass	117.00	amu	VV	133607	2840	100.00	5.69	100.00
14.431	Mass	141.00	amu	VV	790811	21796	100.00	35.66	100.00
14.706	Mass	141.00	amu	VV	422768	11572	100.00	19.06	100.00
15.179	Mass	117.00	amu	VV	524324	8260	100.00	22.32	100.00
15.671	Mass	154.00	amu	VV	738674	24693	100.00	53.94	100.00
15.698	Mass	117.00	amu	VV	397155	9586	100.00	16.91	100.00
15.905	Mass	141.00	amu	BV	480262	9965	100.00	21.66	100.00
15.962	Mass	117.00	amu	VV	806245	12453	100.00	34.33	100.00
040	Mass	141.00	amu	VB	523715	10251	100.00	23.62	100.00
16.079	Mass	117.00	amu	VB	487359	9829	100.00	20.75	100.00
16.160	Mass	152.00	amu	BV	64021	2256	100.00	3.30	100.00
16.223	Mass	164.00	amu	BV	34452	284	100.00	2.08	100.00

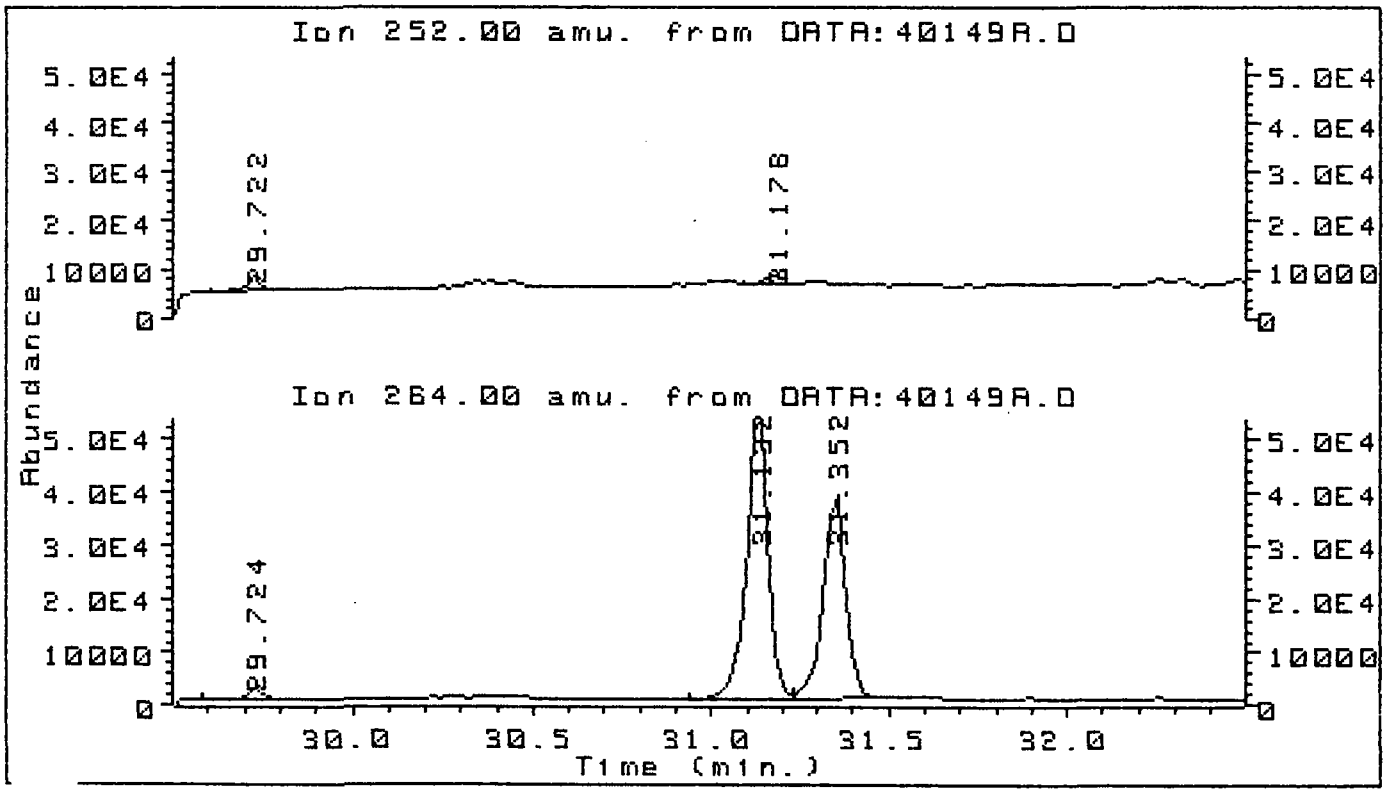
16.261	Mass	152.00	amu	VV	235751	3578	100.00	12.13	100.00	80.19
16.464	Mass	168.00	amu	BV	135012	3166	100.00	11.12	100.00	28.60
16.618	Mass	154.00	amu	VV	51347	1898	100.00	3.75	100.00	6.95
16.643	Mass	164.00	amu	BV	299638	8779	100.00	18.07	100.00	27.15
.796	Mass	164.00	amu	VV	131448	3650	29.78	7.93	64.06	11.91
16.783	Mass	152.00	amu	VV	205196	2830	46.48	10.56	100.00	70.41
16.786	Mass	154.00	amu	VV	104814	2266	23.74	7.65	51.08	14.19
17.077	Mass	154.00	amu	VV	164174	4891	100.00	11.99	100.00	22.23
17.117	Mass	168.00	amu	PV	172560	5360	60.24	14.21	100.00	36.56
17.116	Mass	152.00	amu	VV	113904	2386	39.76	5.86	66.01	39.09
17.137	Mass	164.00	amu	VV	1103760	36156	100.00	66.57	100.00	100.00
17.210	Mass	152.00	amu	VV	171402	4041	45.98	8.82	85.11	58.82
17.210	Mass	154.00	amu	VV	201394	5562	54.02	14.71	100.00	27.26
17.248	Mass	168.00	amu	VB	89817	2594	100.00	7.40	100.00	19.03
17.291	Mass	154.00	amu	VV	108943	2744	100.00	7.96	100.00	14.75
17.334	Mass	152.00	amu	VV	146027	3574	100.00	7.52	100.00	50.11
17.629	Mass	168.00	amu	PV	472036	13200	100.00	38.87	100.00	100.00
17.754	Mass	152.00	amu	VV	164606	2742	100.00	8.47	100.00	56.48
.351	Mass	168.00	amu	PV	200469	5955	100.00	16.51	100.00	42.47
18.454	Mass	176.00	amu	VV	2078766	63769	95.90	100.00	100.00	100.00
18.455	Mass	164.00	amu	PV	88824	1715	4.10	5.36	4.27	8.05
18.512	Mass	166.00	amu	VV	249907	5427	100.00	17.79	100.00	62.46
18.791	Mass	166.00	amu	VV	159045	2157	100.00	11.32	100.00	39.75
18.894	Mass	168.00	amu	VV	144486	3635	100.00	11.90	100.00	30.61
18.922	Mass	166.00	amu	VV	400119	10454	63.39	28.49	100.00	100.00
18.918	Mass	152.00	amu	VV	231054	6699	36.61	11.89	57.75	79.29
19.022	Mass	166.00	amu	VV	223291	7436	79.58	15.90	100.00	55.81
19.016	Mass	152.00	amu	VV	57290	1856	20.42	2.95	25.66	19.66
19.325	Mass	166.00	amu	PV	372205	10722	58.66	26.50	100.00	93.02
19.319	Mass	152.00	amu	BV	262255	6758	41.34	13.50	70.46	89.99
19.458	Mass	152.00	amu	VB	291418	4909	100.00	15.00	100.00	100.00
19.735	Mass	184.00	amu	BV	130518	2692	100.00	13.86	100.00	48.95
19.936	Mass	178.00	amu	BV	162275	3935	100.00	5.87	100.00	7.41
018	Mass	184.00	amu	PV	86957	2325	100.00	9.23	100.00	32.61
20.061	Mass	184.00	amu	VV	64435	2893	100.00	6.84	100.00	24.17
20.101	Mass	184.00	amu	VV	102269	3533	60.68	10.86	100.00	38.36
20.099	Mass	178.00	amu	VV	66258	1959	39.32	2.40	64.79	3.02

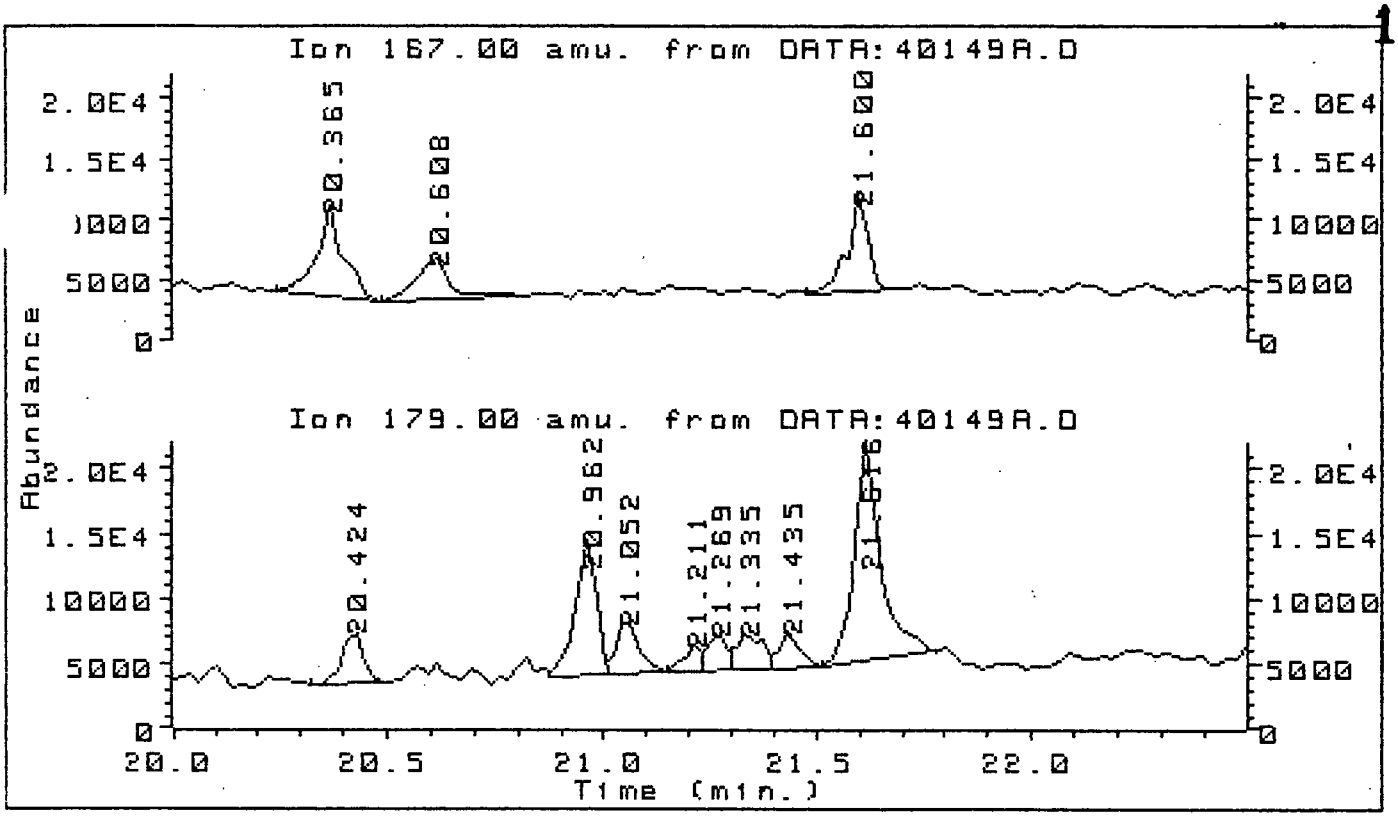
20.365	Mass	167.00	amu	BV	313994	7532	100.00	40.15	100.00	100.00
20.424	Mass	179.00	amu	PV	136934	4029	38.15	8.10	61.69	19.27
20.411	Mass	178.00	amu	VV	221958	5292	61.85	8.03	100.00	10.13
[illegible].608	Mass	167.00	amu	PV	197769	3428	100.00	25.29	100.00	62.99
[illegible].647	Mass	184.00	amu	VV	197575	5609	100.00	20.98	100.00	74.10
20.907	Mass	188.00	amu	BV	1883545	53043	87.60	100.00	100.00	100.00
20.903	Mass	184.00	amu	VV	266637	8152	12.40	28.31	14.16	100.00
20.962	Mass	179.00	amu	VV	341344	9845	13.48	20.19	15.58	48.03
20.959	Mass	178.00	amu	PV	2191041	66832	86.52	79.22	100.00	100.00
21.052	Mass	179.00	amu	VV	150159	3951	100.00	8.88	100.00	21.13
21.077	Mass	178.00	amu	VB	124106	3220	100.00	4.49	100.00	5.66
21.211	Mass	179.00	amu	VV	54344	1935	100.00	3.22	100.00	7.65
21.269	Mass	179.00	amu	VV	86175	2699	100.00	5.10	100.00	12.13
21.335	Mass	179.00	amu	VV	119942	2669	100.00	7.10	100.00	16.88
21.435	Mass	179.00	amu	VV	90687	2704	100.00	5.37	100.00	12.76
21.600	Mass	167.00	amu	VV	270298	7718	100.00	34.56	100.00	86.08
21.616	Mass	179.00	amu	PV	710669	16220	100.00	42.05	100.00	100.00
863	Mass	212.00	amu	PV	49836	1817	100.00	8.81	100.00	9.66
24.030	Mass	202.00	amu	PV	401893	11794	100.00	55.83	100.00	100.00
24.606	Mass	202.00	amu	PV	317909	8418	100.00	44.17	100.00	79.10
24.690	Mass	212.00	amu	BV	515827	18130	100.00	91.19	100.00	100.00
26.550	Mass	240.00	amu	PH	258346	9483	100.00	24.28	100.00	40.94
26.724	Mass	228.00	amu	BV	71694	2920	100.00	66.15	100.00	100.00
26.943	Mass	240.00	amu	PV	60975	2011	100.00	5.73	100.00	9.66
27.415	Mass	240.00	amu	PV	59053	1895	61.68	5.55	100.00	9.36
27.409	Mass	228.00	amu	BV	36693	1425	38.32	33.85	62.14	51.18
27.533	Mass	240.00	amu	VV	54405	1690	100.00	5.11	100.00	8.62
27.741	Mass	240.00	amu	PV	631061	17915	100.00	59.32	100.00	100.00
29.724	Mass	264.00	amu	BV	63849	2033	41.91	1.57	72.15	2.75
29.722	Mass	252.00	amu	BV	88494	2902	58.09	57.36	100.00	100.00
31.132	Mass	264.00	amu	PV	2320945	53101	100.00	57.21	100.00	100.00
178	Mass	252.00	amu	VV	65784	1498	100.00	42.64	100.00	74.34
31.352	Mass	264.00	amu	VV	1672054	37939	100.00	41.22	100.00	72.04

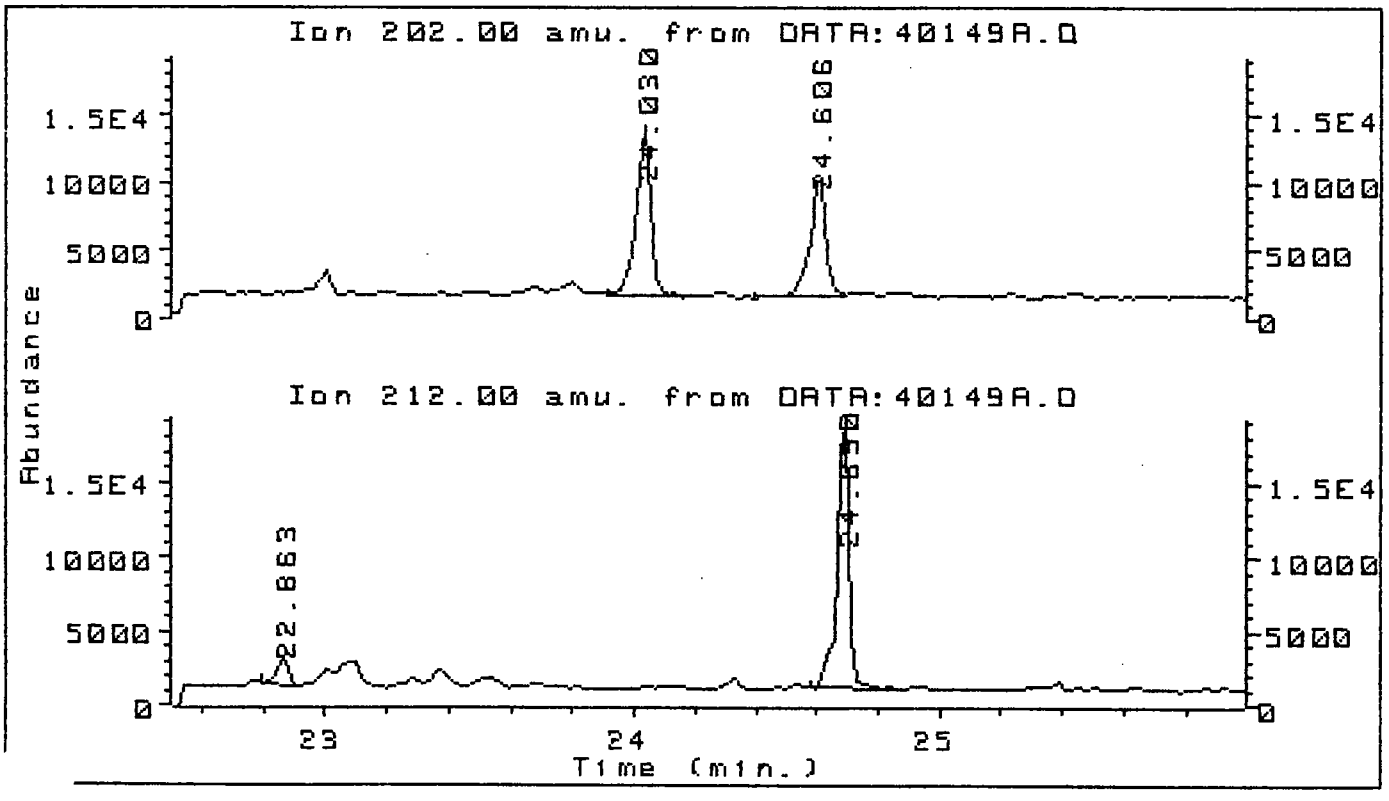

Ion 276.00 amu. from DATA:40149A.D
Ion 278.00 amu. from DATA:40149A.D
Abundance
1200
1000
800
600
400
200
0
33
34
35
36
37
Time (min.)

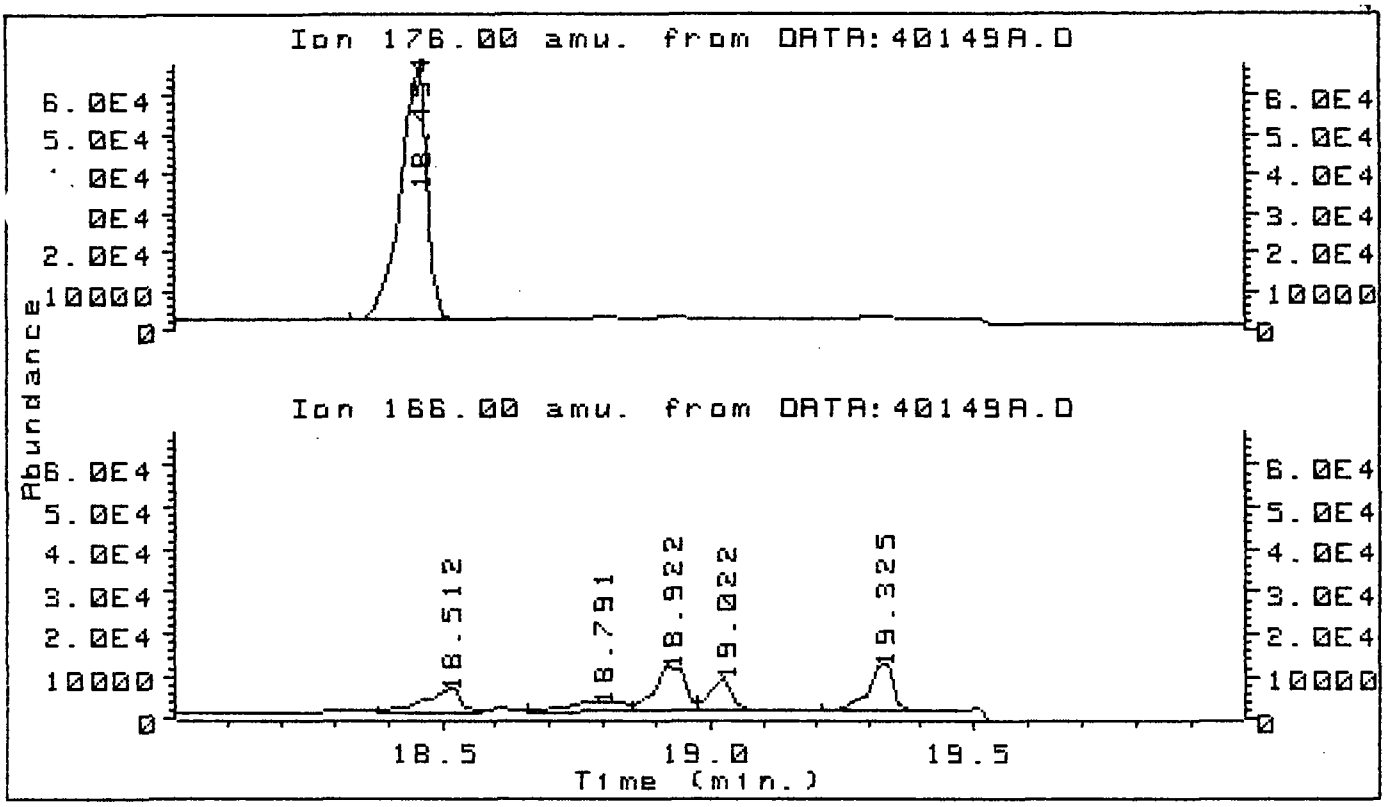

TIC of DATA:40149A.D
Abundance
2.0E5
1.8E5
1.6E5
1.4E5
1.2E5
1.0E5
8.0E4
6.0E4
4.0E4
2.0E4
0
10
20
30
40
Time (min.)

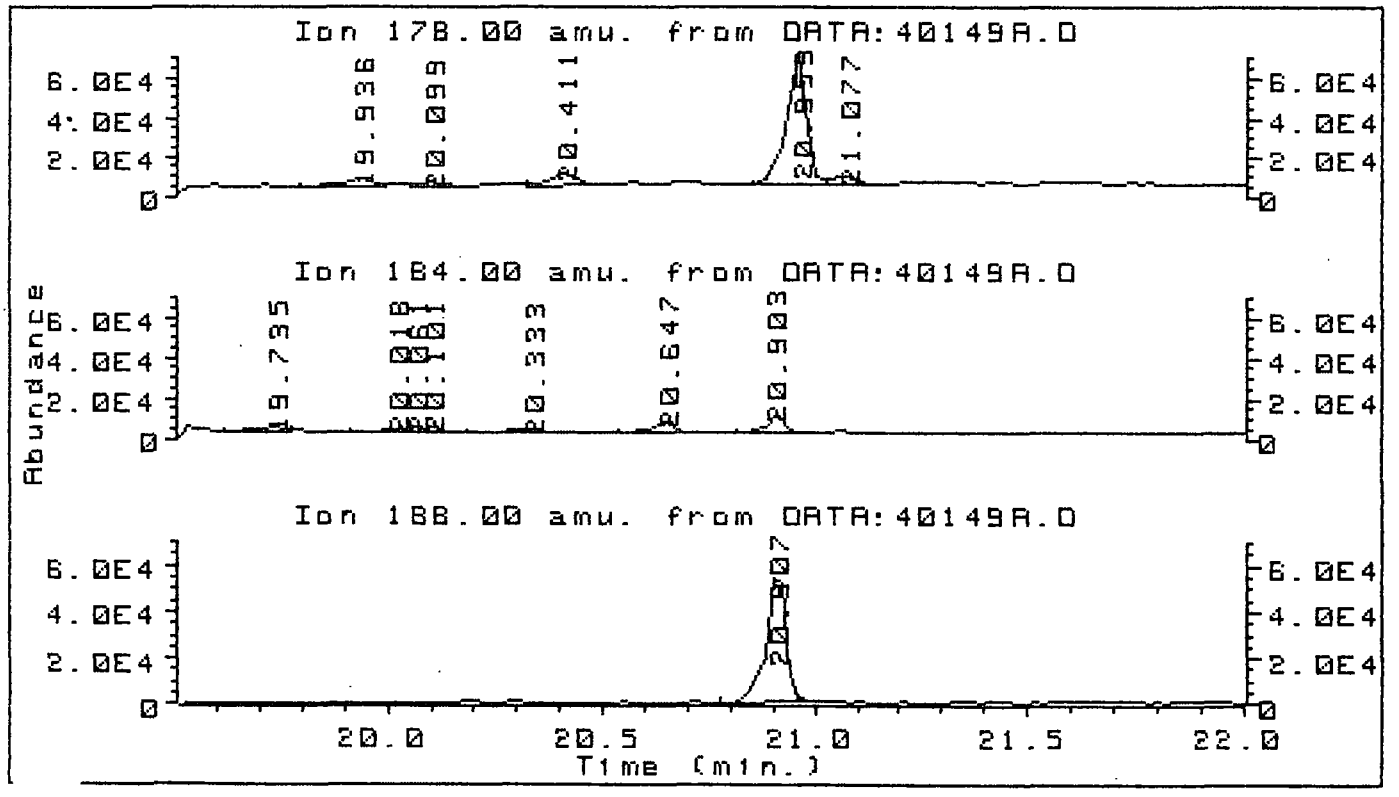

Ion 228.00 amu. from DATA:40149A.D
1.5E4
1000
5000
0
26.724
27.409
Ion 240.00 amu. from DATA:40149A.D
Abundance
26.550
26.943
27.415
27.533
1.5E4
10000
5000
0
27.0
27.5
28.0
28.5
29.0
Time (min.)

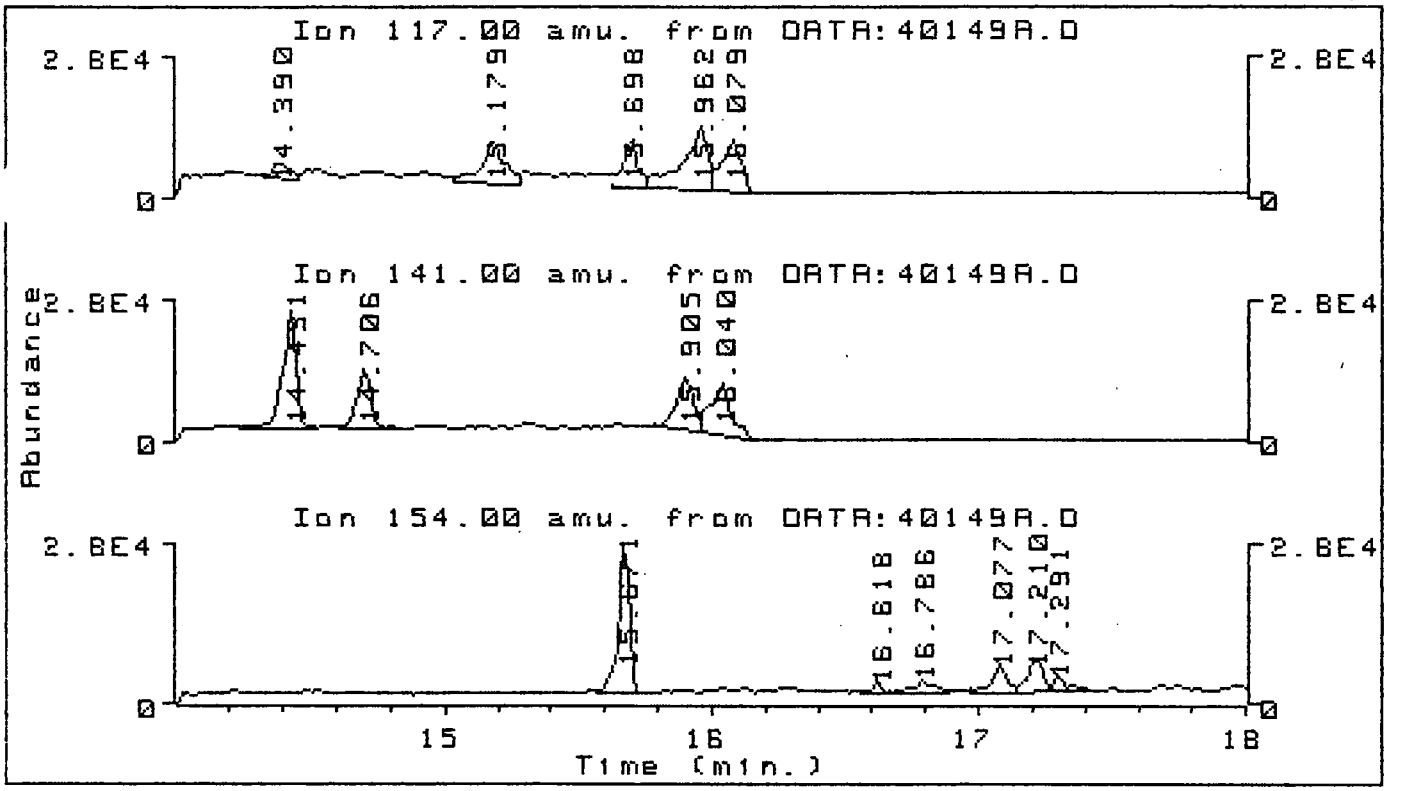

Ion 252.00 amu. from DATA:40149A.D
5.0E4
4.0E4
3.0E4
2.0E4
10000
0
29.722
31.178
Ion 264.00 amu. from DATA:40149A.D
Abundance
29.724
31.352
30.0
30.5
31.0
31.5
32.0
Time (min.)

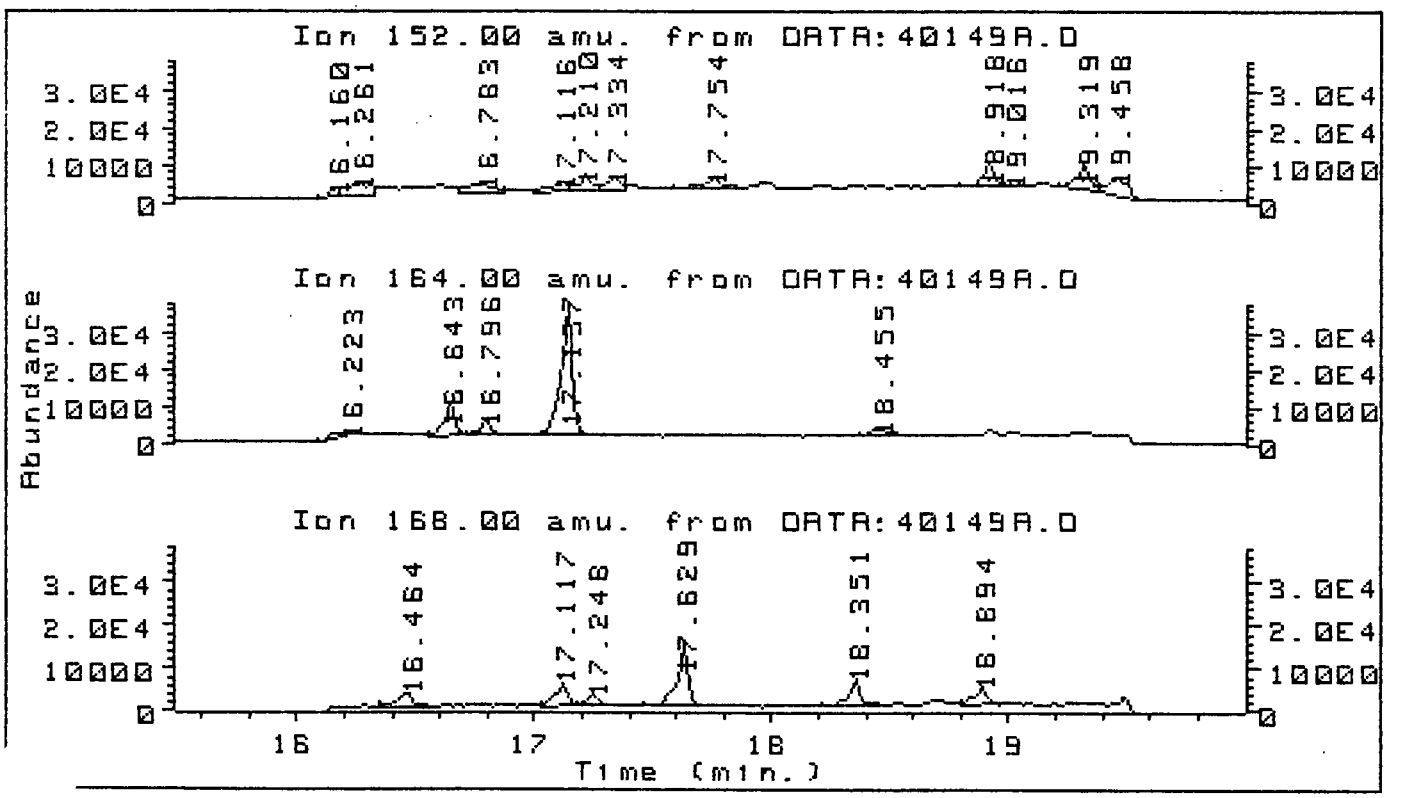

Ion 167.00 amu. from DATA:40149A.D
20.365
20.608
21.600
Ion 179.00 amu. from DATA:40149A.D
20.424
20.962
21.052
21.211
21.269
21.335
21.435
Abundance
2.0E4
1.5E4
10000
5000
0
20.0
20.5
21.0
21.5
22.0
Time (min.)

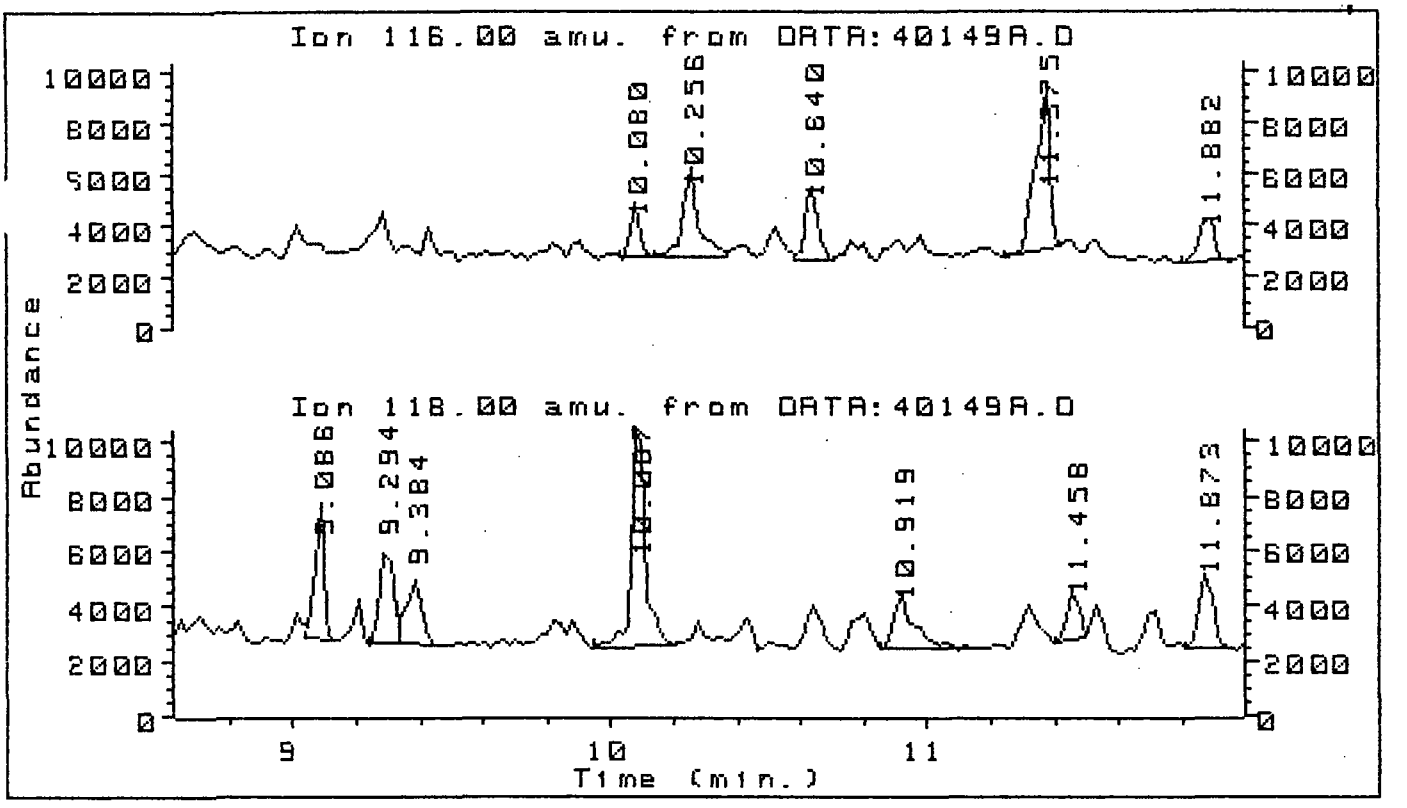

Ion 202.00 amu. from DATA:40149A.D
24.030
24.606
Ion 212.00 amu. from DATA:40149A.D
22.863
Abundance
1.5E4
10000
5000
0
23
24
25
Time (min.)

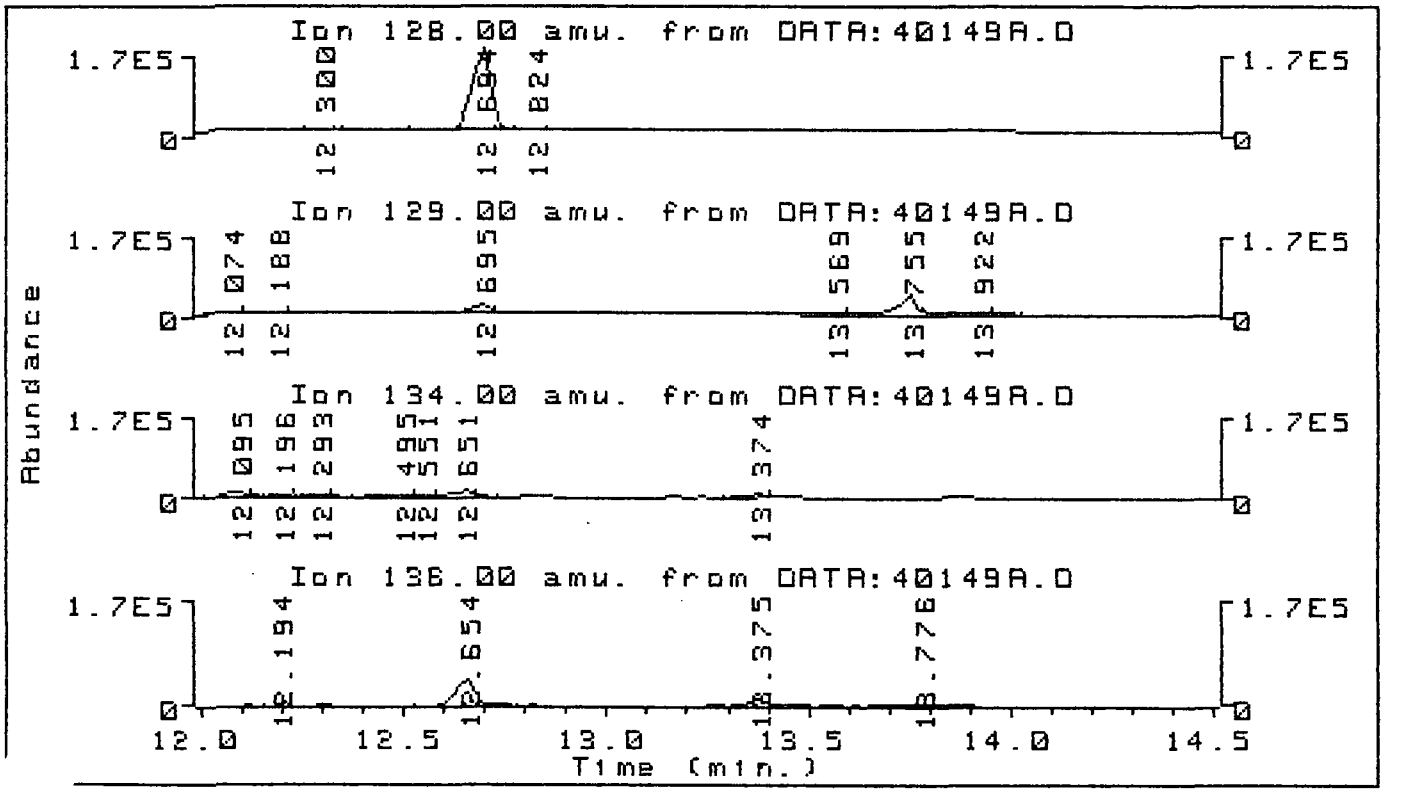

Ion 176.00 amu. from DATA:40149A.D
Ion 166.00 amu. from DATA:40149A.D
Abundance
18.512
18.791
18.922
19.022
19.325
18.5
19.0
19.5
Time (min.)

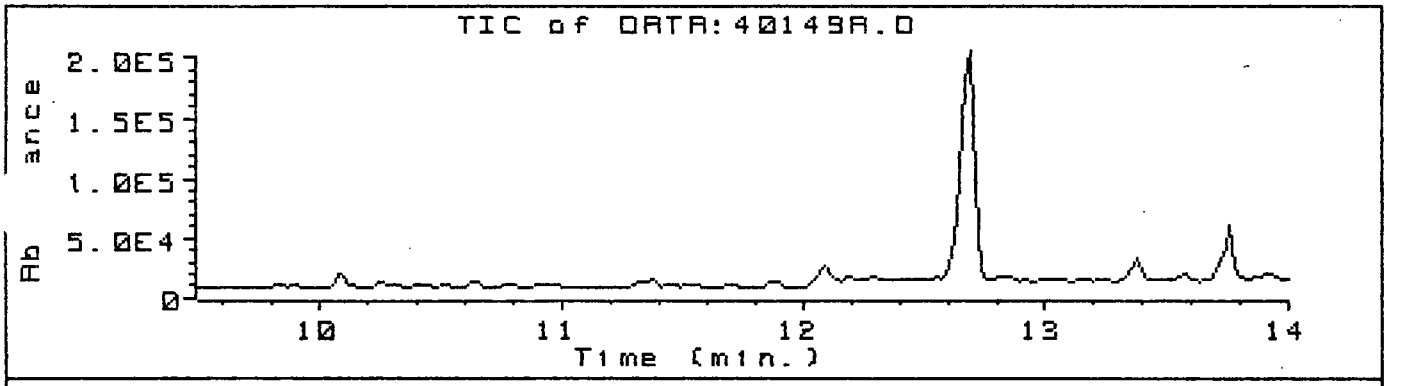

Ion 178.00 amu. from DATA:40149A.D
Ion 184.00 amu. from DATA:40149A.D
Ion 188.00 amu. from DATA:40149A.D
Abundance
19.936
20.099
20.411
21.077
19.735
20.333
20.647
20.903
20.0
20.5
21.0
21.5
22.0
Time (min.)

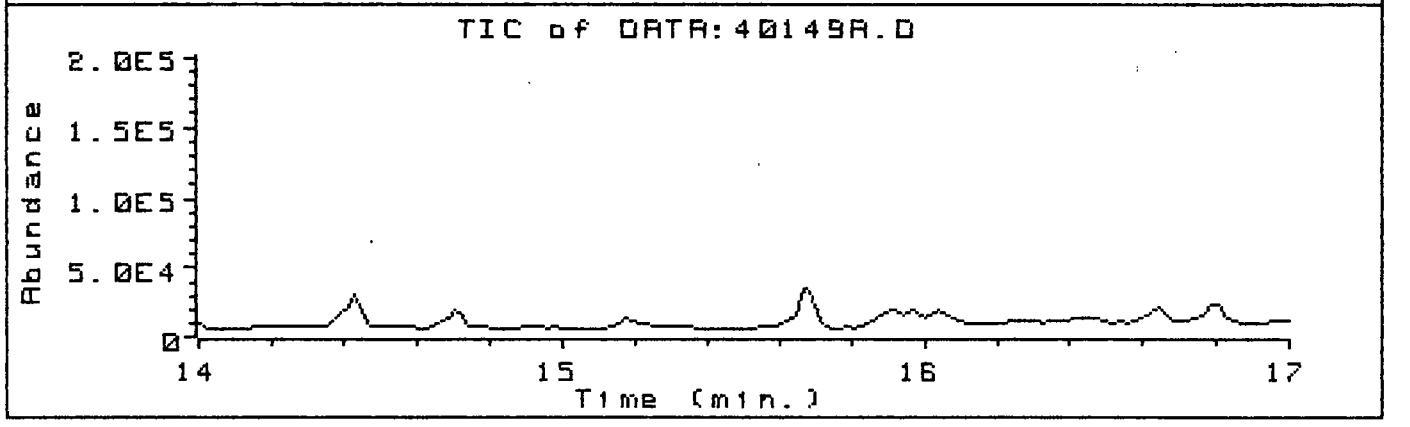

Ion 117.00 amu. from DATA:40149A.D
Ion 141.00 amu. from DATA:40149A.D
Ion 154.00 amu. from DATA:40149A.D
2.8E4
0
Abundance
15
16
17
18
Time (min.)

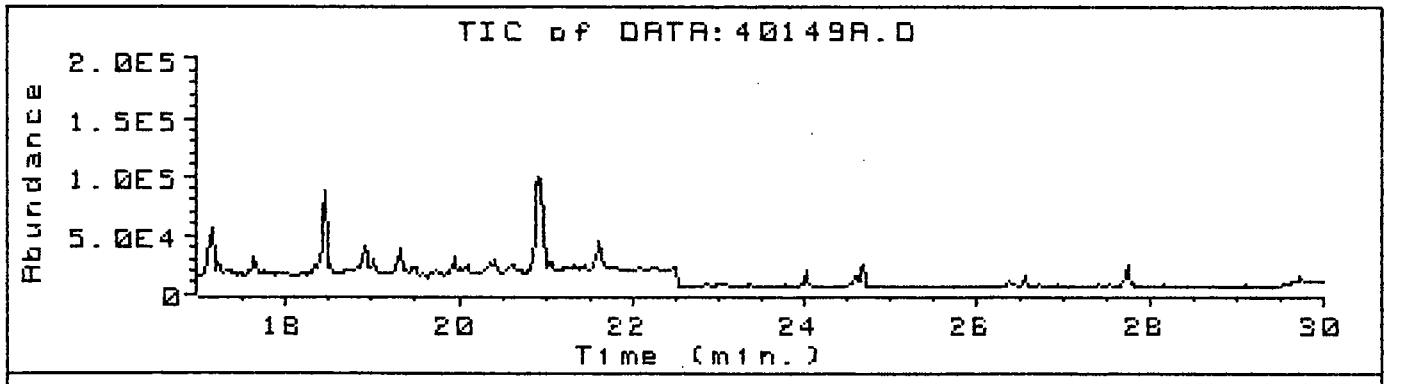

Ion 152.00 amu. from DATA:40149A.D
Ion 164.00 amu. from DATA:40149A.D
Ion 168.00 amu. from DATA:40149A.D
3.0E4
2.0E4
10000
0
Abundance
16
17
18
19
Time (min.)

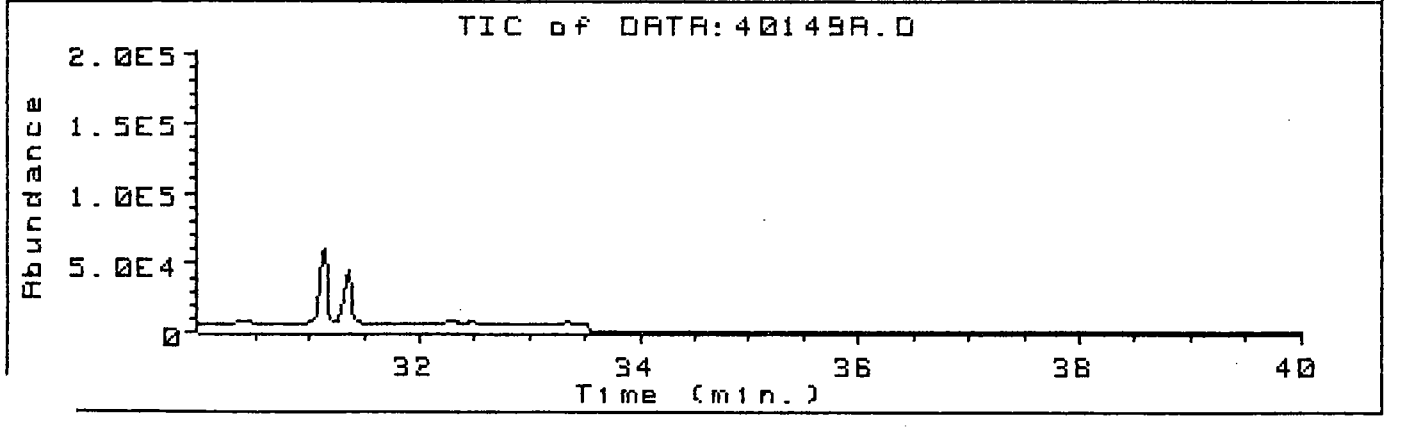

Ion 116.00 amu. from DATA:40149A.D
Ion 118.00 amu. from DATA:40149A.D
Abundance
Time (min.)


Ion 128.00 amu. from DATA:40149A.D
Ion 129.00 amu. from DATA:40149A.D
Ion 134.00 amu. from DATA:40149A.D
Ion 136.00 amu. from DATA:40149A.D
Abundance
Time (min.)


TIC of DATA:40149A.D
Ab ance
2.0E5
1.5E5
1.0E5
5.0E4
0
10
11
12
13
14
Time (min.)


TIC of DATA:40149A.D
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
14
15
16
17
Time (min.)


TIC of DATA:40149A.D
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
18
20
22
24
26
28
30
Time (min.)


TIC of DATA:40149A.D
Abundance
2.0E5
1.5E5
1.0E5
5.0E4
0
32
34
36
38
40
Time (min.)

ERT #	: 40206	Extract Vol., ml	0.500
Field ID	: MB860880s	Sample Vol., L	3.000
GC/MS File #	: 40206A	Date Analyze: 11/25/86	

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.0	17.128	644089
Phenanthrene-d10	62.5	20.899	1254244
Benz(a)pyrene-d12	49.6	31.117	1399089

Group I	Cal. RF's	RRT	RT (min)		Conc ng/l
benzofuran	1.303	0.000	0.000	1	0.000
dihydroinden	0.783	0.589	10.080	48657	0.852
indene	1.310	0.000	0.000	1	0.000
Naphthalene-d8 (Surr.)	2.018	0.000	0.000	1	0.000
Naphthalene	2.752	0.741	12.684	886779	4.419
Benz(b)thio	1.739	0.000	0.000	1	0.000
Quinoline	0.989	0.000	0.000	1	0.000
Indole	1.485	0.839	14.373	47294	0.437
2-methyl	1.019	0.842	14.421	165951	2.233
1-methyl	1.459	0.858	14.701	99228	0.933
Biphenyl	3.395	0.915	15.664	512377	2.070
Acenaphthylene	1.540	0.000	0.000	1	0.000
Acenaphthene	1.268	0.000	0.000	1	0.000
Dibenzofuran	1.619	0.000	0.000	1	0.000
Group II					
Flourene-d10 (Surr.)	0.770	0.883	18.446	427711	4.612
Fluorene	1.034	0.885	18.491	85654	0.688
Dibenzothiophene	1.173	0.987	20.631	87666	0.621
Phenanthrene	2.154	1.002	20.941	942142	3.632
Anthracene	1.221	1.007	21.049	95358	0.648
Acridine	0.776	1.017	21.249	93740	1.003
Carbazole	1.026	1.033	21.593	89420	0.724
Fluoranthene	1.448	1.149	24.019	209062	1.199
Pyrene-d10 (Surr.)	0.920	1.181	24.677	141340	1.275
Pyrene	1.525	1.177	24.592	160567	0.875
Group III					
Benz(a)anthracene	1.493	0.893	27.783	63826	0.253
Chrysene-d12 (Surr.)	0.451	0.000	0.000	1	0.000
Chrysene	1.513	0.000	0.000	1	0.000
Benzofluoranthenes	2.388	0.975	30.338	11357	0.028
Benz(e)pyrene	1.841	0.997	31.039	91197	0.293
Benz(a)pyrene	1.451	0.000	0.000	1	0.000
Perylene-d12 (Surr.)	1.074	0.000	0.000	1	0.000
Perylene	1.316	0.000	0.000	1	0.000
Indeno(123,cd)pyrene	1.312	0.000	0.000	1	0.000
Dibenz(ah)anthracene	0.903	0.000	0.000	1	0.000
Benzo(ghi)perylene	1.336	1.146	35.661	148404	0.656

CALIBRATION RF's from : 18-Nov-86

ERT #: 40206
MB860880s 11/25/86

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENCE LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	0.00	9.90	0.00	42-102	1.820	0.00%
Flourene-d10 (Surr.)	4.61	9.50	48.55	60-128	0.866	43.18%
Chrysene-d12 (Surr.)	0.00	9.80	0.00	10-54	0.413	0.00%
Pyrene-d10 (Surr.)	1.28	10.05	12.69		0.757	15.43%
Perylene-d12 (Surr.)	0.00	9.40	0.00		0.887	0.00%

CARCINOGENIC PAH'S	Lower Control Limit	MDL Limit	Obs. Conc.	ANALYTICAL RESULT (NG/L)
QUINOLINE	1.20	1.90	0.00	ND
BENZO (A) ANTHRACENE	2.80	4.40	0.25	ND
CHRYSENE	2.80	4.40	0.00	ND
BENZOFLUORANTHENES	6.20	9.70	0.03	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	0.66	ND
		TOTAL CARCINOGENIC PAH		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	0.85	ND
INDENE	1.80	2.90	0.00	ND
NAPHTHALENE	30.00	47.00	4.42	ND
BENZO (B) THIOPHENE	1.40	2.20	0.00	ND
INDOLE	1.20	1.90	0.44	ND
2-METHYLNAPHTHALENE	3.20	5.00	2.23	ND
1-METHYLNAPHTHALENE	2.00	3.10	0.93	ND
BIPHENYL	11.00	17.00	2.07	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	0.69	< .88
DIBENZOTHIOPHENE	4.00	6.30	0.62	ND
PHENANTHRENE	2.00	3.10	3.63	3.6
ANTHRACENE	2.20	3.40	0.65	ND
ACRIDINE	1.60	2.50	1.00	ND
CARBAZOLE	1.70	2.60	0.72	ND
FLUORANTHENE	2.80	4.40	1.20	ND
PYRENE	2.60	4.10	0.87	ND
BENZO (E) PYRENE	0.96	1.50	0.29	ND
PERYLENE	1.00	1.60	0.00	ND
		TOTAL OTHER PAH		3.6
		TOTAL PAH'S		3.6

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: MB860880s

ERT NO.: 40206

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
BENZO (G,H,I) PERYLENE	ND
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	ND
INDENE	ND
NAPHTHALENE	ND
BENZO (B) THIOPHENE	ND
INDOLE	ND
2-METHYLNAPHTHALENE	ND
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	ND
ACENAPHTHENE	ND
DIBENZOFURAN	ND
FLOURENE	< .88
DIBENZOTHIOPHENE	ND
PHENANTHRENE	3.6
ANTHRACENE	ND
ACRIDINE	ND
CARBAZOLE	ND
FLUORANTHENE	ND
PYRENE	ND
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	3.6
TOTAL PAH'S	3.6

ND = Concentration < 95% Confidence Interval of MDL

Solvent Blanks

ERT #: 40206

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/24/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	0.00	9.90	0.00	42-102	1.985	0.00%
Flourene-d10 (Surr.)	3.47	9.50	36.47	60-128	0.769	36.48%
Chyrsene-d12 (Surr.)	0.00	9.80	0.00	10-54	0.447	0.00%
Pyrene-d10 (Surr.)	0.96	10.05	9.50		0.922	9.50%
Perylene-d12 (Surr.)	0.00	9.40	0.00		1.054	0.00%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL > C' Limit	
QUINNOLINE	1.20	0.00	0.00	0.00	1.90
BENZO (A) ANTHRACENE	2.80	0.19	0.00	0.00	4.40
CHYRSENE	2.80	0.00	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.02	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.49	0.00	0.00	5.30
			0.00		

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	0.54	0.00	0.00	3.40
INDENE	1.80	0.00	0.00	0.00	2.90
NAPHTHALENE	30.00	3.37	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.00	0.00	0.00	2.20
INDOLE	1.20	0.43	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	0.93	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	0.56	0.00	0.00	3.10
BIPHENYL	11.00	0.29	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	0.00	0.00	0.00	1.70
ACENAPHTHENE	0.83	0.00	0.00	0.00	1.30
DIBENZOFURAN	0.77	0.00	0.00	0.00	1.20
FLOURENE	0.56	0.52	0.00	0.00	0.88
DIBENZOTHIOPHENE	4.00	0.50	0.00	0.00	6.30
PHENANTHRENE	2.00	2.75	0.00	2.75	3.10
ANTHRACENE	2.20	0.50	0.00	0.00	3.40
ACRIDINE	1.60	1.27	0.00	0.00	2.50
CARBAZOLE	1.70	0.77	0.00	0.00	2.60
FLUORANTHENE	2.80	0.90	0.00	0.00	4.40
PYRENE	2.60	0.65	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.24	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	0.00		
		TOTAL PAH'S	0.00		

Solvent Blank

ERT # : 40206 Extract Vol., ml 0.500
Field ID : ~~MATRIX CHECK~~ Solvent Blank Sample Vol., L 4.000
GC/MS File # : 40206A Date Analyze: 11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.128	644089
Phenanthrene-d10	62.500	20.899	1254244
Benz(a)pyrene-d12	49.600	31.117	1399089

Group I	BOTH NEW/OLD Cal. RF's	RT (min)	Conc ng/l		RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.080	48657	0.542	0.589
indene	1.199	0.000	1	0.000	0.000
Naphthalene-d8 (Surr.)	1.985	0.000	1	0.000	0.000
Naphthalene	2.708	12.684	886779	3.369	0.741
Benz(b)thio	2.025	0.000	1	0.000	0.000
Quinoline	0.976	0.000	1	0.000	0.000
Indole	1.135	14.373	47294	0.429	0.839
2-methyl	1.832	14.421	165951	0.932	0.842
1-methyl	1.825	14.701	99228	0.559	0.858
Biphenyl	18.290	15.664	512377	0.288	0.915
Acenaphthylene	1.578	0.000	1	0.000	0.000
Acenaphthene	1.202	0.000	1	0.000	0.000
Dibenzofuran	2.378	0.000	1	0.000	0.000
Group II					
Flourene-d10 (Surr.)	0.769	18.446	427711	3.465	0.883
Fluorene	1.030	18.491	85654	0.518	0.885
Dibenzothiophene	1.088	20.631	87666	0.502	0.987
Phenanthrene	2.133	20.941	942142	2.751	1.002
Anthracene	1.197	21.049	95358	0.496	1.007
Acridine	0.458	21.249	93740	1.275	1.017
Carbazole	0.726	21.593	89420	0.767	1.033
Fluoranthene	1.445	24.019	209062	0.901	1.149
Pyrene-d10 (Surr.)	0.922	24.677	141340	0.955	1.181
Pyrene	1.527	24.592	160567	0.655	1.177
Group III					
Benz(a)anthracene	1.487	27.783	63826	0.190	0.893
Chyrsene-d12 (Surr.)	0.447	0.000	1	0.000	0.000
Chyrsene	1.518	0.000	1	0.000	0.000
Benzofluoranthenes	2.065	30.338	11357	0.024	0.975
Benz(e)pyrene	1.654	31.039	91197	0.244	0.997
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	0.000	1	0.000	0.000
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	35.661	148404	0.495	1.146

12/11

ERT #	: 40206	Extract Vol., ml	0.500
Field ID	: SOLVENT BLANK	Sample Vol., L	4.000
GC/MS File #	: 40206A	Date Analyze:	11/25/86

Internal Std.	Conc. ng/mL	RT (min)	Area
Acenaphthene-d10	53.000	17.128	644089
Phenanthrene-d10	62.500	20.899	1254244
Benz(a)pyrene-d12	49.600	31.117	1399089

Group I	BOTH NEW/OLD Cal. RF's	RT (min)		Conc ng/l	RRT
benzofuran	1.598	0.000	1	0.000	0.000
dihydroinden	0.924	10.080	48657	0.542	0.589
indene	1.199	0.000	1	0.000	0.000
Naphthalene-d8 (Surr.)	1.985	0.000	1	0.000	0.000
Naphthalene	2.708	12.684	886779	3.369	0.741
Benz(b)thio	2.025	0.000	1	0.000	0.000
Quinoline	0.976	0.000	1	0.000	0.000
Indole	1.135	14.373	47294	0.429	0.839
2-methyl	1.832	14.421	165951	0.932	0.842
1-methyl	1.825	14.701	99228	0.559	0.858
Biphenyl	18.290	15.664	512377	0.288	0.915
Acenaphthylene	1.578	0.000	1	0.000	0.000
Acenaphthene	1.202	0.000	1	0.000	0.000
Dibenzofuran	2.378	0.000	1	0.000	0.000
Group II					
Flourene-d10 (Surr.)	0.769	18.446	427711	3.465	0.883
Fluorene	1.030	18.491	85654	0.518	0.885
Dibenzothiophene	1.088	20.631	87666	0.502	0.987
Phenanthrene	2.133	20.941	942142	2.751	1.002
Anthracene	1.197	21.049	95358	0.496	1.007
Acridine	0.458	21.249	93740	1.275	1.017
Carbazole	0.726	21.593	89420	0.767	1.033
Fluoranthene	1.445	24.019	209062	0.901	1.149
Pyrene-d10 (Surr.)	0.922	24.677	141340	0.955	1.181
Pyrene	1.527	24.592	160567	0.655	1.177
Group III					
Benz(a)anthracene	1.487	27.783	63826	0.190	0.893
Chyrsene-d12 (Surr.)	0.447	0.000	1	0.000	0.000
Chyrsene	1.518	0.000	1	0.000	0.000
Benzofluoranthenes	2.065	30.338	11357	0.024	0.975
Benz(e)pyrene	1.654	31.039	91197	0.244	0.997
Benz(a)pyrene	1.303	0.000	1	0.000	0.000
Perylene-d12 (Surr.)	1.054	0.000	1	0.000	0.000
Perylene	1.208	0.000	1	0.000	0.000
Indeno(123,cd)pyrene	1.309	0.000	1	0.000	0.000
Dibenz(ah)anthracene	0.912	0.000	1	0.000	0.000
Benzo(ghi)perylene	1.330	35.661	148404	0.495	1.146

ERT #: 40206

	Obs. Conc.	True Conc.	% Recovery	95 % CONFIDENC LIMITS	DAILY STD RF 11/25/86	CORRECTED % Recovery
Naphthalene-d8 (Surr.)	0.00	9.90	0.00	42-102	1.820	0.00%
Flourene-d10 (Surr.)	3.47	9.50	36.47	60-128	0.866	32.38%
Chyrsene-d12 (Surr.)	0.00	9.80	0.00	10-54	0.413	0.00%
Pyrene-d10 (Surr.)	0.96	10.05	9.50		0.757	11.57%
Perylene-d12 (Surr.)	0.00	9.40	0.00		0.887	0.00%

CARCINOGENIC PAH'S	Lower Control Limit	Obs. Conc.	Greater than MDL	Less than MDL	> C' Limit
QUINNOLINE	1.20	0.00	0.00	0.00	1.90
BENZO (A) ANTHRACENE	2.80	0.19	0.00	0.00	4.40
CHYRSENE	2.80	0.00	0.00	0.00	4.40
BENZOFLUORANTHENES	6.20	0.02	0.00	0.00	9.70
BENZO (A) PYRENE	2.20	0.00	0.00	0.00	3.40
INDENO (1,2,3-CD) PYRENE	2.80	0.00	0.00	0.00	4.40
DIBENZO (A,H) ANTHRACENE	2.20	0.00	0.00	0.00	3.40
BENZO (G,H,I) PERYLENE	3.40	0.49	0.00	0.00	5.30
			0.00		

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	0.54	0.00	0.00	3.40
INDENE	1.80	0.00	0.00	0.00	2.90
NAPHTHALENE	30.00	3.37	0.00	0.00	47.00
BENZO (B) THIOPHENE	1.40	0.00	0.00	0.00	2.20
INDOLE	1.20	0.43	0.00	0.00	1.90
2-METHYLNAPHTHALENE	3.20	0.93	0.00	0.00	5.00
1-METHYLNAPHTHALENE	2.00	0.56	0.00	0.00	3.10
BIPHENYL	11.00	0.29	0.00	0.00	17.00
ACENAPHTHYLENE	1.10	0.00	0.00	0.00	1.70
ACENAPHTHENE	0.83	0.00	0.00	0.00	1.30
DIBENZOFURAN	0.77	0.00	0.00	0.00	1.20
FLOURENE	0.56	0.52	0.00	0.00	0.88
DIBENZOTHIOPHENE	4.00	0.50	0.00	0.00	6.30
PHENANTHRENE	2.00	2.75	0.00	2.75	3.10
ANTHRACENE	2.20	0.50	0.00	0.00	3.40
ACRIDINE	1.60	1.27	0.00	0.00	2.50
CARBAZOLE	1.70	0.77	0.00	0.00	2.60
FLUORANTHENE	2.80	0.90	0.00	0.00	4.40
PYRENE	2.60	0.65	0.00	0.00	4.10
BENZO (E) PYRENE	0.96	0.24	0.00	0.00	1.50
PERYLENE	1.00	0.00	0.00	0.00	1.60
		TOTAL OTHER PAH	0.00		
		TOTAL PAH'S	0.00		

*** Internal Standard ***

Operator: LOUIE POUNDS 25 Nov 86 3:39 pm
Method File Name : PAH.M
Sample Info : SLP SOLVENT BLANK ERT#40206 : TUE. 25 NOV. 86
Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40206A.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	Peak Type	Int Type	Ret Time	Signal Description		Compound Name	Area	Amount
1		1	-------	Mass	118.00 amu	2,3-BENZOFUR	*** Not Found ***	
2		1VV	10.080	Mass	118.00 amu	2,3-DIHYDROI	48657	5.037 ng/mL
3		1	-------	Mass	116.00 amu	INDENE	*** Not Found ***	
4		1	16.684	Mass	136.00 amu	NAPHTHALENE,	*** Not Found ***	
5		1PV	12.684	Mass	128.00 amu	NAPTHALENE	886779	9.952 ng/mL
6		1	-------	Mass	134.00 amu	BENZO(b)THIO	*** Not Found ***	
7		1	-------	Mass	129.00 amu	QUINOLINE	*** Not Found ***	
8		1PV	14.373	Mass	117.00 amu	INDOLE	47294	2.095 ng/mL
9		1VV	14.421	Mass	141.00 amu	2-METHYLNAPT	165951	4.013 ng/mL
10		1VV	14.701	Mass	141.00 amu	1-METHYLNAPT	99228	
11		1PV	15.664	Mass	154.00 amu	BIPHENYL	512377	
12		1	-------	Mass	152.00 amu	ACENAPHTHYLE	*** Not Found ***	
	+ISTD	1PV	17.128	Mass	164.00 amu	ACENAPTHTHEN	644089	53.00 ng/mL
		1	-------	Mass	154.00 amu	ACENAPHTHENE	*** Not Found ***	
15		1	-------	Mass	168.00 amu	DIBENZOFURAN	*** Not Found ***	
16		2VV	18.446	Mass	176.00 amu	FLUORENE, d1	427711	39.66 ng/mL
17		2BV	18.491	Mass	166.00 amu	FLUORENE	85654	
18		2PV	20.631	Mass	184.00 amu	DIBENZOTHIOP	87666	4.075 ng/mL
19	+ISTD	2PV	20.899	Mass	188.00 amu	PHENANTHRENE	1254244	62.50 ng/mL
20		2PV	20.941	Mass	178.00 amu	PHENANTHRENE	942142	
21		2VV	21.049	Mass	178.00 amu	ANTHRACENE	95358	
22		2PV	21.249	Mass	179.00 amu	ACRIDINE	93740	
23		1PV	21.593	Mass	167.00 amu	CARBAZOLE	89420	
24		1PV	24.019	Mass	202.00 amu	FLUORANTHENE	209062	
25		2PV	24.677	Mass	212.00 amu	PYRENE, d10	141340	7.627 ng/mL
26		2BB	24.592	Mass	202.00 amu	PYRENE	160567	2.075 ng/mL
27		3VV	27.783	Mass	228.00 amu	BENZ(a)ANTHR	63826	
28		3	-------	Mass	240.00 amu	CHYRSENE, d(	*** Not Found ***	
29		3	-------	Mass	228.00 amu	CHYRSENE	*** Not Found ***	
30		3PV	30.338	Mass	252.00 amu	BENZOFLUORAN	11357	
31		3	-------	Mass	252.00 amu	BENZOFLUORAN-	*** Not Found ***	
32		3BV	31.039	Mass	252.00 amu	BENZ(e)PYREN	91197	4.122 ng/mL
33	+ISTD	3BV	31.117	Mass	264.00 amu	BENZ(a)PYREN	1399089	49.60 ng/mL
34		3	-------	Mass	252.00 amu	BENZ(a)PYREN	*** Not Found ***	
35		3	-------	Mass	264.00 amu	PERYLENE, d1	*** Not Found ***	
36		3	-------	Mass	252.00 amu	PERYLENE	*** Not Found ***	
37		3	-------	Mass	276.00 amu	INDENO(1,2,3	*** Not Found ***	
		3	-------	Mass	278.00 amu	DIBENZ(a,h)A	*** Not Found ***	
		3BB	35.661	Mass	276.00 amu	BENZO(g,h,i)	148404	7.020 ng/mL
---------		BV	10.638	Mass	118.00	-Uncalibrated-	95480	95480 ng/mL
---------		VV	10.632	Mass	116.00	-Uncalibrated-	254861	254861 ng/mL
---------		PV	10.756	Mass	118.00	-Uncalibrated-	79798	79798 ng/mL
---------		PV	10.742	Mass	116.00	-Uncalibrated-	47154	47154 ng/mL
---------		BV	11.349	Mass	116.00	-Uncalibrated-	93019	93019 ng/mL

--------		[illegible]	Mass	[illegible]	-Uncalibrated-	[illegible]	[illegible]	ng/m[illegible]
--------	PV	12.684	Mass	129.00	-Uncalibrated-	98772	98772	ng/mL
--------	PV	13.365	Mass	136.00	-Uncalibrated-	184201	184201	ng/mL
--------	PV	13.363	Mass	134.00	-Uncalibrated-	144549	144549	ng/mL
--------	PV	13.723	Mass	129.00	-Uncalibrated-	308650	308650	ng/mL
--------	VV	15.899	Mass	141.00	-Uncalibrated-	280278	280278	ng/mL
--------	VB	16.003	Mass	141.00	-Uncalibrated-	292319	292319	ng/mL
------	BV	16.253	Mass	152.00	-Uncalibrated-	132669	132669	ng/mL
------	BV	16.635	Mass	164.00	-Uncalibrated-	58598	58598	ng/mL
--------	PV	18.341	Mass	168.00	-Uncalibrated-	98140	98140	ng/mL
--------	PV	18.883	Mass	168.00	-Uncalibrated-	164181	164181	ng/mL
--------	VV	18.913	Mass	166.00	-Uncalibrated-	179097	179097	ng/mL
--------	VV	18.908	Mass	152.00	-Uncalibrated-	102755	102755	ng/mL
--------	VV	19.011	Mass	166.00	-Uncalibrated-	104217	104217	ng/mL
--------	BH	19.321	Mass	166.00	-Uncalibrated-	141462	141462	ng/mL
--------	VV	19.309	Mass	152.00	-Uncalibrated-	89566	89566	ng/mL
--------	PH	19.539	Mass	184.00	-Uncalibrated-	12654	12654	ng/mL
--------	PV	19.680	Mass	178.00	-Uncalibrated-	20297	20297	ng/mL
--------	PV	19.699	Mass	184.00	-Uncalibrated-	36148	36148	ng/mL
--------	VV	19.737	Mass	184.00	-Uncalibrated-	75971	75971	ng/mL
--------	VV	19.922	Mass	178.00	-Uncalibrated-	68950	68950	ng/mL
--------	PV	20.039	Mass	184.00	-Uncalibrated-	154552	154552	ng/mL
--------	PV	20.310	Mass	184.00	-Uncalibrated-	74563	74563	ng/mL
--------	BV	20.350	Mass	167.00	-Uncalibrated-	134624	134624	ng/mL
--------	VV	20.573	Mass	179.00	-Uncalibrated-	67747	67747	ng/mL
--------	PV	20.590	Mass	167.00	-Uncalibrated-	180742	180742	ng/mL
--------	BV	20.898	Mass	184.00	-Uncalibrated-	193931	193931	ng/mL
--------	VV	20.946	Mass	179.00	-Uncalibrated-	182959	182959	ng/mL
--------	VV	21.045	Mass	179.00	-Uncalibrated-	116086	116086	ng/mL
--------	VV	21.327	Mass	179.00	-Uncalibrated-	66116	66116	ng/mL
--------	PV	21.610	Mass	179.00	-Uncalibrated-	73984	73984	ng/mL
--------	PH	26.547	Mass	240.00	-Uncalibrated-	70330	70330	ng/mL
------	PV	29.715	Mass	252.00	-Uncalibrated-	16128	16128	ng/mL

r : Could not find Calibration Peak
No Peak of Calibration Peak #1's Description at 9.415 +/- 0.047 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #3's Description at 10.265 +/- 0.051 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #4's Description at 12.659 +/- 0.063 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #6's Description at 12.845 +/- 0.064 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #7's Description at 13.574 +/- 0.068 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #12's Description at 16.729 +/- 0.084 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #14's Description at 17.210 +/- 0.086 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #15's Description at 17.629 +/- 0.088 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #28's Description at 27.725 +/- 0.139 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #29's Description at 27.783 +/- 0.139 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #31's Description at 30.382 +/- 0.152 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #34's Description at 31.174 +/- 0.156 min.
r : Could not find Calibration Peak
No Peak of Calibration Peak #35's Description at 31.342 +/- 0.157 min.
or : Could not find Calibration Peak
No Peak of Calibration Peak #36's Description at 31.403 +/- 0.157 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #37's Description at 34.697 +/- 0.173 min.
Error : Could not find Calibration Peak
No Peak of Calibration Peak #38's Description at 34.755 +/- 0.174 min.

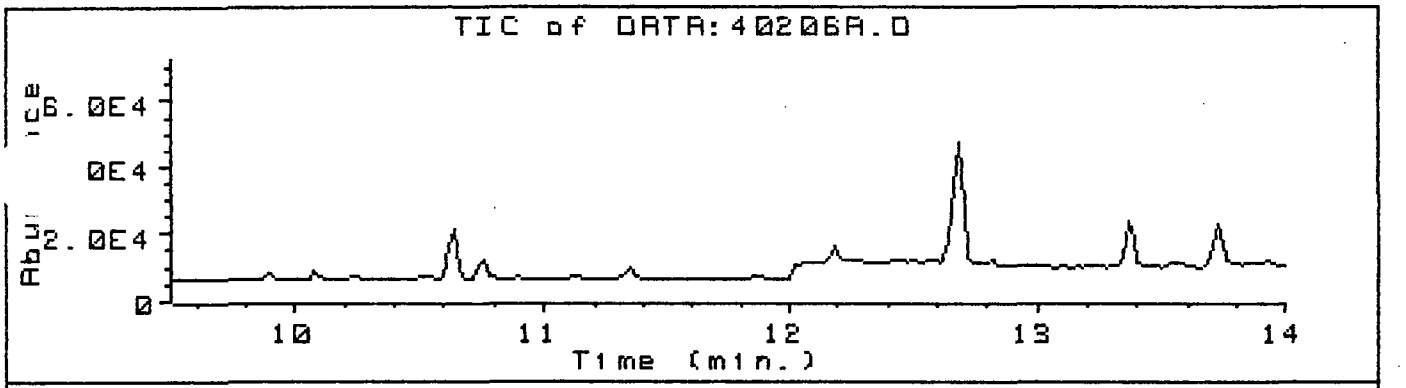
*** Area Percent ***

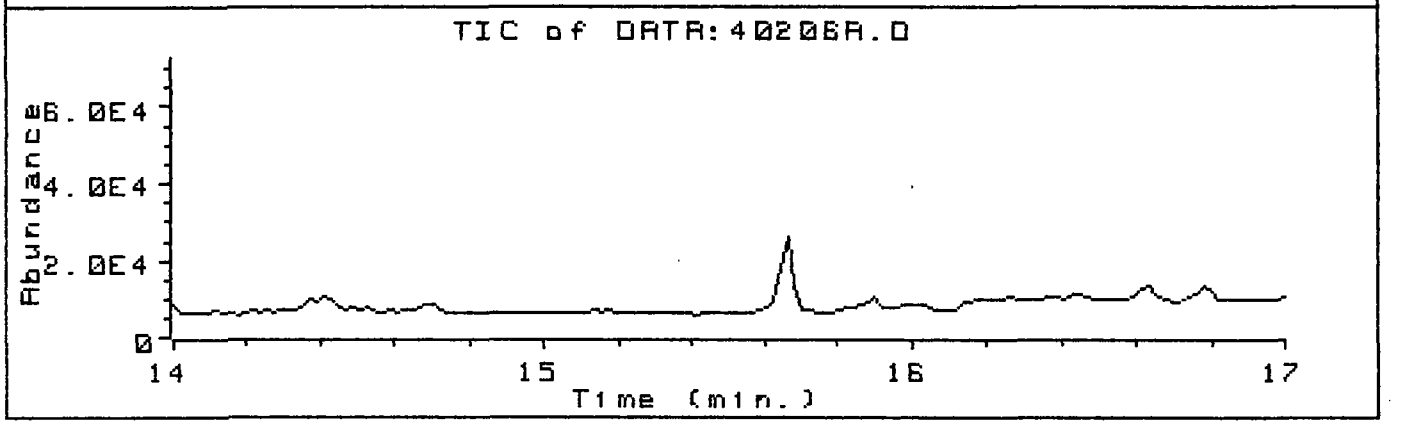
Report by Retention Time

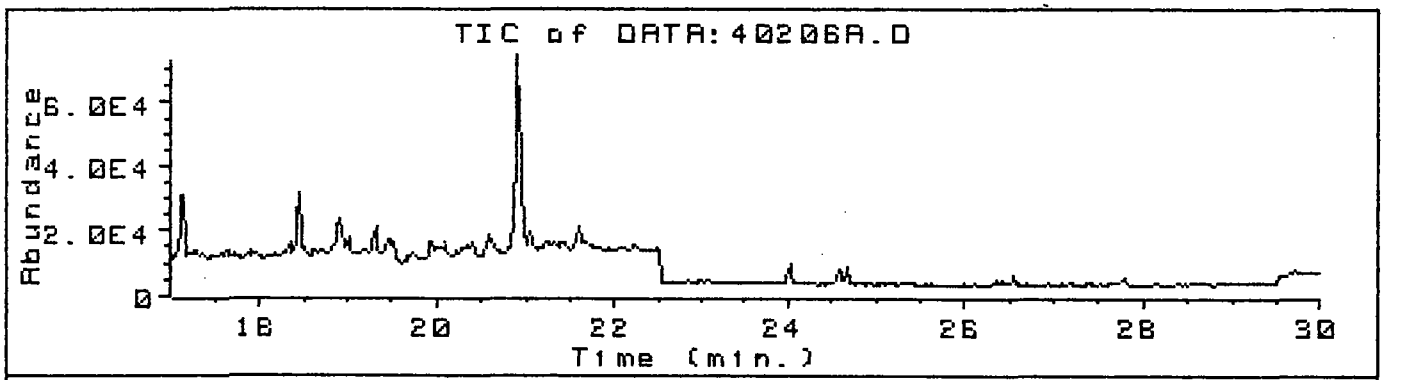
r ~ator: LOUIE POUNDS 25 Nov 86 3:39 pm
od File Name : PAH.M
le Info : SLP SOLVENT BLANK ERT#40206 : TUE. 25 NOV. 86
Misc Info: 1.0 UL OF SAMPLE
Integration File Name : DATA:40206A.I
Bottle Number : 0

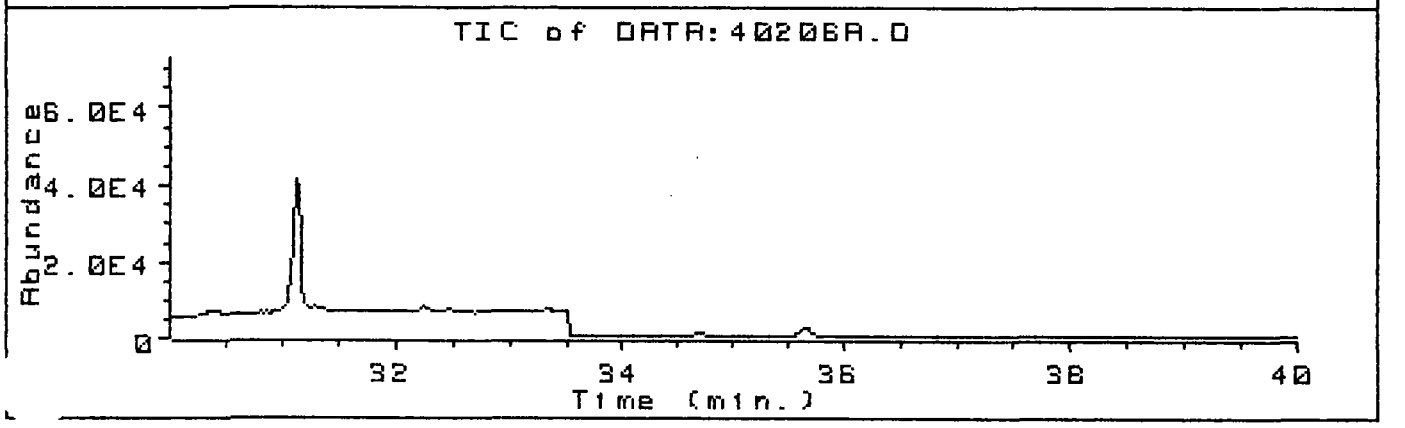
Ret Time	Signal	Descr	Type	Area	Height	% Pk	% Sg	% LPk	% LSg
10.080	Mass	118.00 amu	VV	48657	1787	100.00	21.73	100.00	50.96
10.638	Mass	118.00 amu	BV	95480	3861	27.25	42.64	37.46	100.00
10.632	Mass	116.00 amu	VV	254861	9809	72.75	64.52	100.00	100.00
10.756	Mass	118.00 amu	PV	79798	3779	62.86	35.63	100.00	83.58
10.742	Mass	116.00 amu	PV	47154	2054	37.14	11.94	59.09	18.50
11.349	Mass	116.00 amu	BV	93019	3159	100.00	23.55	100.00	36.50
12.086	Mass	134.00 amu	PH	26513	647	100.00	10.32	100.00	18.34
12.186	Mass	134.00 amu	VV	85846	3768	100.00	33.42	100.00	59.39
12.684	Mass	129.00 amu	PV	98772	3370	10.02	24.24	11.14	32.00
12.684	Mass	128.00 amu	PV	886779	31486	89.98	100.00	100.00	100.00
365	Mass	136.00 amu	PV	184201	7004	56.03	100.00	100.00	100.00
.363	Mass	134.00 amu	PV	144549	5633	43.97	56.26	78.47	100.00
13.723	Mass	129.00 amu	PV	308650	11020	100.00	75.76	100.00	100.00
14.373	Mass	117.00 amu	PV	47294	2031	100.00	100.00	100.00	100.00
14.421	Mass	141.00 amu	VV	165951	3813	100.00	19.81	100.00	56.77
14.701	Mass	141.00 amu	VV	99228	1977	100.00	11.84	100.00	33.94
15.664	Mass	154.00 amu	PV	512377	18129	100.00	100.00	100.00	100.00
15.899	Mass	141.00 amu	VV	280278	4568	100.00	33.46	100.00	95.88
16.003	Mass	141.00 amu	VB	292319	3679	100.00	34.89	100.00	100.00
16.253	Mass	152.00 amu	BV	132669	1303	100.00	40.82	100.00	100.00
16.635	Mass	164.00 amu	BV	58598	2161	100.00	8.34	100.00	9.10
17.128	Mass	164.00 amu	PV	644089	18190	100.00	91.66	100.00	100.00
18.341	Mass	168.00 amu	PV	98140	2882	100.00	37.41	100.00	59.78
.446	Mass	176.00 amu	VV	427711	15506	100.00	100.00	100.00	100.00
18.491	Mass	166.00 amu	BV	85654	1680	100.00	16.78	100.00	47.83
18.883	Mass	168.00 amu	PV	164181	4959	100.00	62.59	100.00	100.00
18.913	Mass	166.00 amu	VV	179097	4937	63.54	35.09	100.00	100.00
18.908	Mass	152.00 amu	VV	102755	3042	36.46	31.62	57.37	77.45

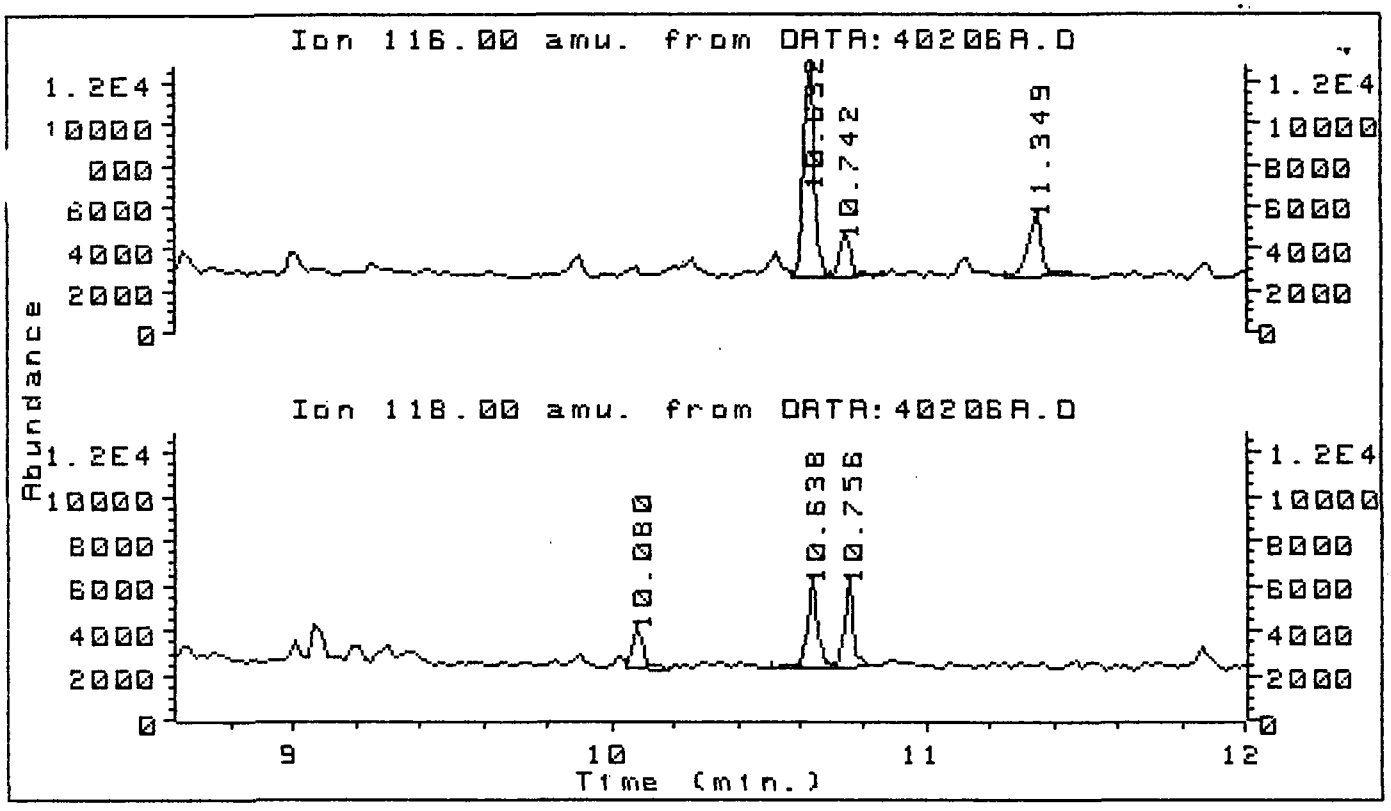
19.011	Mass	166.00	amu	VV	104217	3444	100.00	20.42	100.00	58.19
19.321	Mass	166.00	amu	BH	141462	4448	61.23	27.71	100.00	78.99
19.309	Mass	152.00	amu	VV	89566	2333	38.77	27.56	63.31	67.51
19.539	Mass	184.00	amu	PH	12654	1329	100.00	1.99	100.00	6.53
680	Mass	178.00	amu	PV	20297	380	100.00	1.80	100.00	2.15
19.699	Mass	184.00	amu	PV	36148	1544	100.00	5.69	100.00	18.64
19.737	Mass	184.00	amu	VV	75971	1597	100.00	11.95	100.00	39.17
19.922	Mass	178.00	amu	VV	68950	1838	100.00	6.12	100.00	7.32
20.039	Mass	184.00	amu	PV	154552	2116	100.00	24.32	100.00	79.69
20.310	Mass	184.00	amu	PV	74563	1470	100.00	11.73	100.00	38.45
20.350	Mass	167.00	amu	BV	134624	2961	100.00	33.26	100.00	74.48
20.573	Mass	179.00	amu	VV	67747	1852	100.00	11.28	100.00	37.03
20.590	Mass	167.00	amu	PV	180742	3446	100.00	44.65	100.00	100.00
20.631	Mass	184.00	amu	PV	87666	2050	100.00	13.80	100.00	45.20
20.899	Mass	188.00	amu	PV	1254244	44058	86.61	100.00	100.00	100.00
20.898	Mass	184.00	amu	BV	193931	6306	13.39	30.52	15.46	100.00
20.946	Mass	179.00	amu	VV	182959	4241	16.26	30.46	19.42	100.00
20.941	Mass	178.00	amu	PV	942142	24658	83.74	83.62	100.00	100.00
.045	Mass	179.00	amu	VV	116086	3529	54.90	19.33	100.00	63.45
21.049	Mass	178.00	amu	VV	95358	2177	45.10	8.46	82.14	.10.12
21.249	Mass	179.00	amu	PV	93740	1592	100.00	15.61	100.00	51.24
21.327	Mass	179.00	amu	VV	66116	1756	100.00	11.01	100.00	36.14
21.593	Mass	167.00	amu	PV	89420	2673	100.00	22.09	100.00	49.47
21.610	Mass	179.00	amu	PV	73984	2003	100.00	12.32	100.00	40.44
24.019	Mass	202.00	amu	PV	209062	5921	100.00	56.56	100.00	100.00
24.592	Mass	202.00	amu	BB	160567	4272	100.00	43.44	100.00	76.80
24.677	Mass	212.00	amu	PV	141340	5123	100.00	100.00	100.00	100.00
26.547	Mass	240.00	amu	PH	70330	3333	100.00	100.00	100.00	100.00
27.783	Mass	228.00	amu	VV	63826	1864	100.00	100.00	100.00	100.00
29.715	Mass	252.00	amu	PV	16128	666	100.00	13.59	100.00	17.68
30.338	Mass	252.00	amu	PV	11357	461	100.00	9.57	100.00	12.45
039	Mass	252.00	amu	BV	91197	2088	100.00	76.84	100.00	100.00
31.117	Mass	264.00	amu	BV	1399089	33195	100.00	100.00	100.00	100.00
35.661	Mass	276.00	amu	BB	148404	2229	100.00	100.00	100.00	100.00

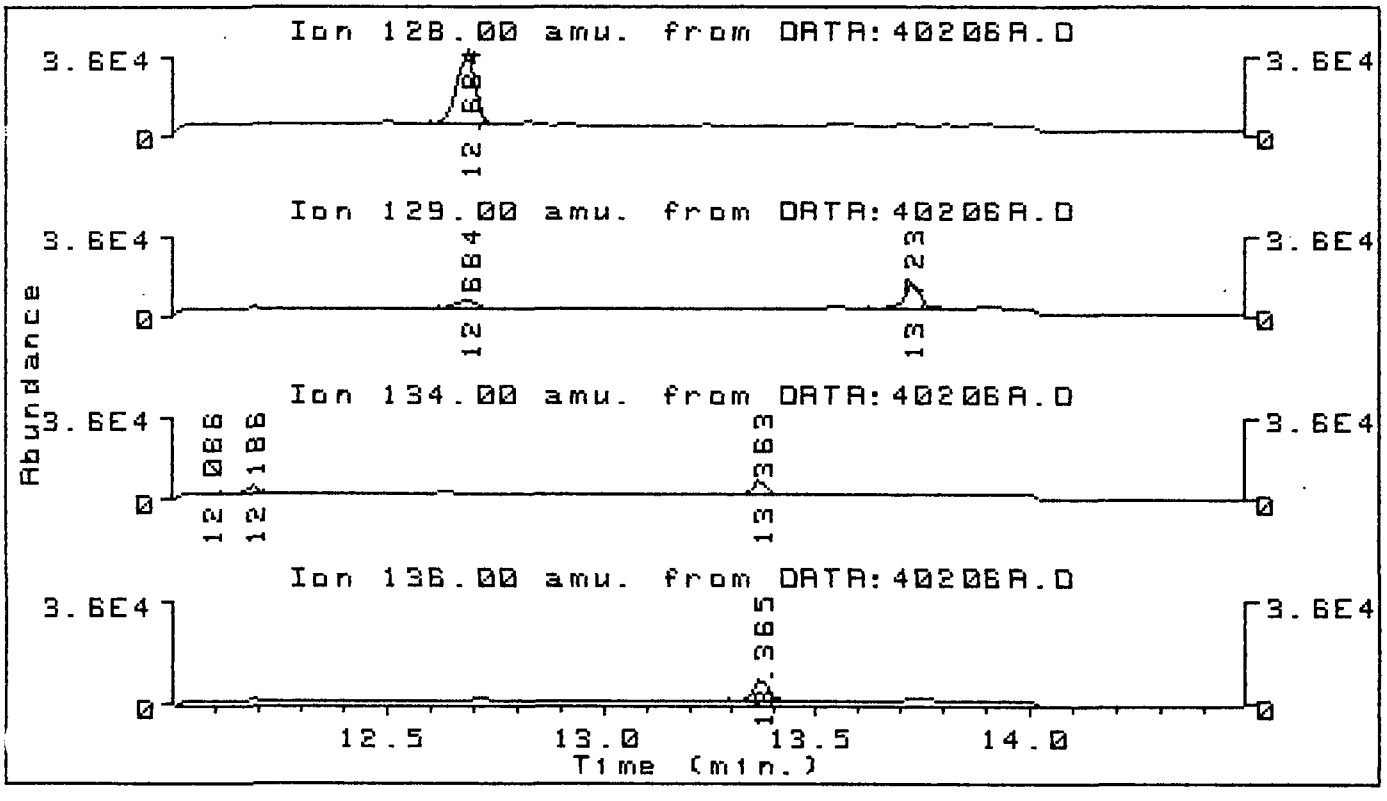

TIC of DATA:40206A.D
6.0E4
0E4
2.0E4
0
10
11
12
13
14
Time (min.)

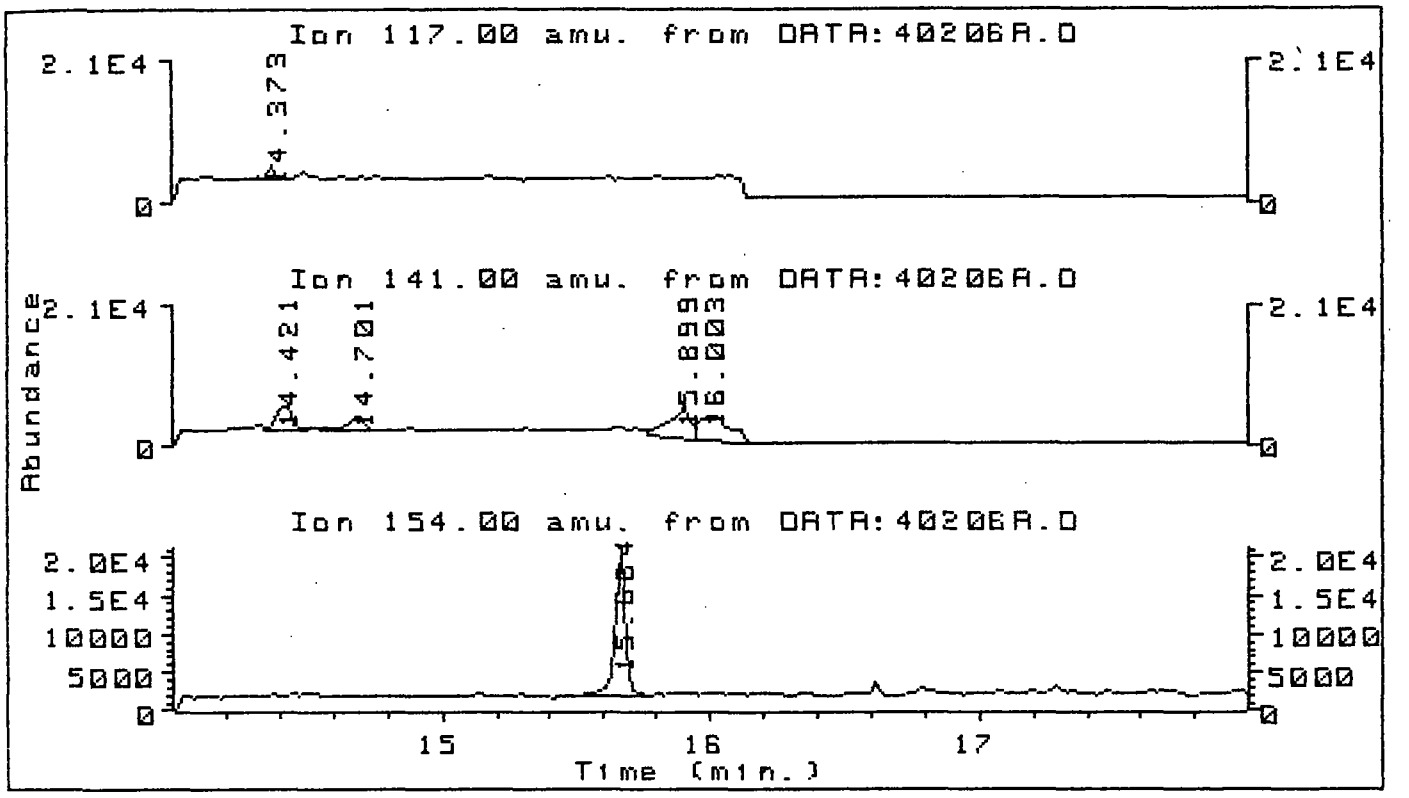

TIC of DATA:40206A.D
Abundance
6.0E4
4.0E4
2.0E4
0
14
15
16
17
Time (min.)

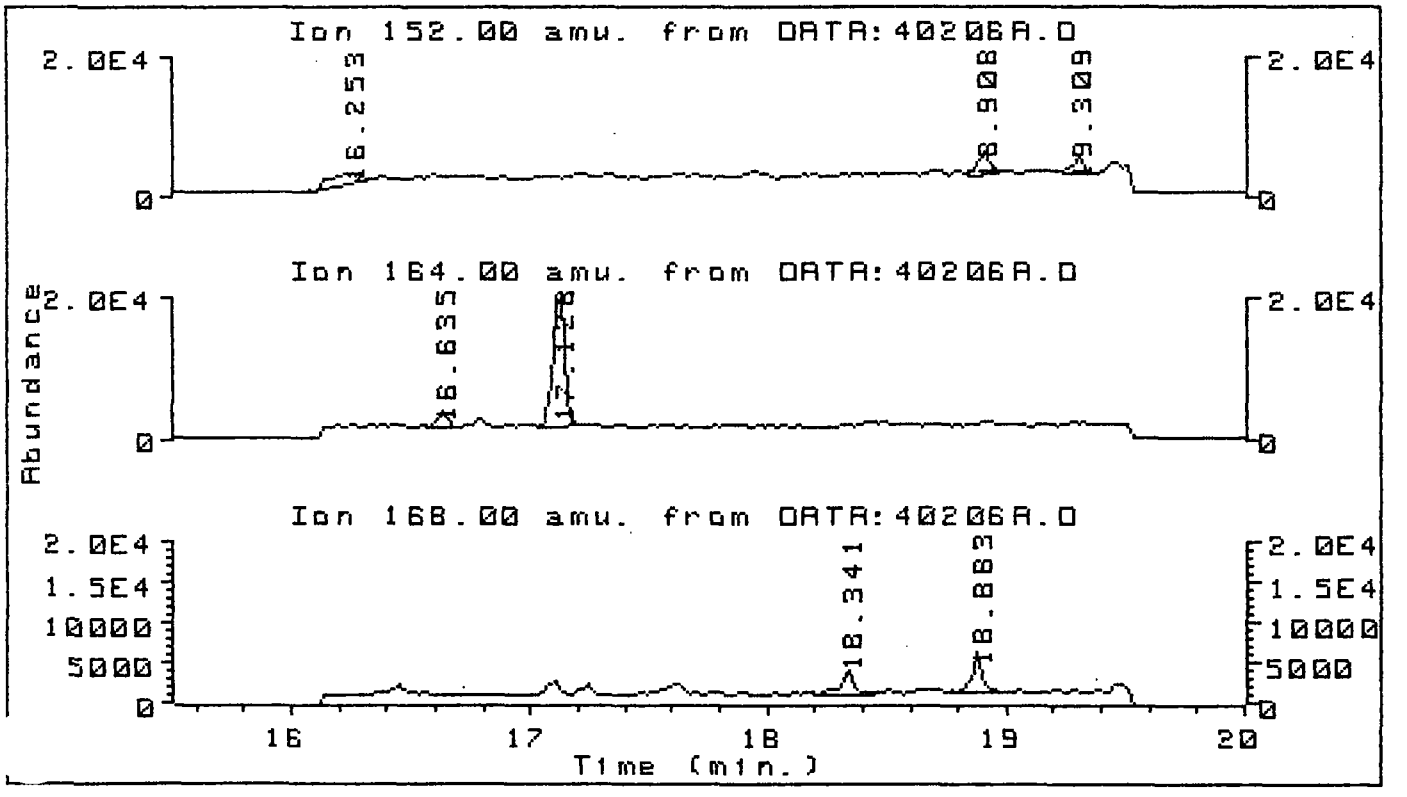

TIC of DATA:40206A.D
Abundance
6.0E4
4.0E4
2.0E4
0
18
20
22
24
26
28
30
Time (min.)

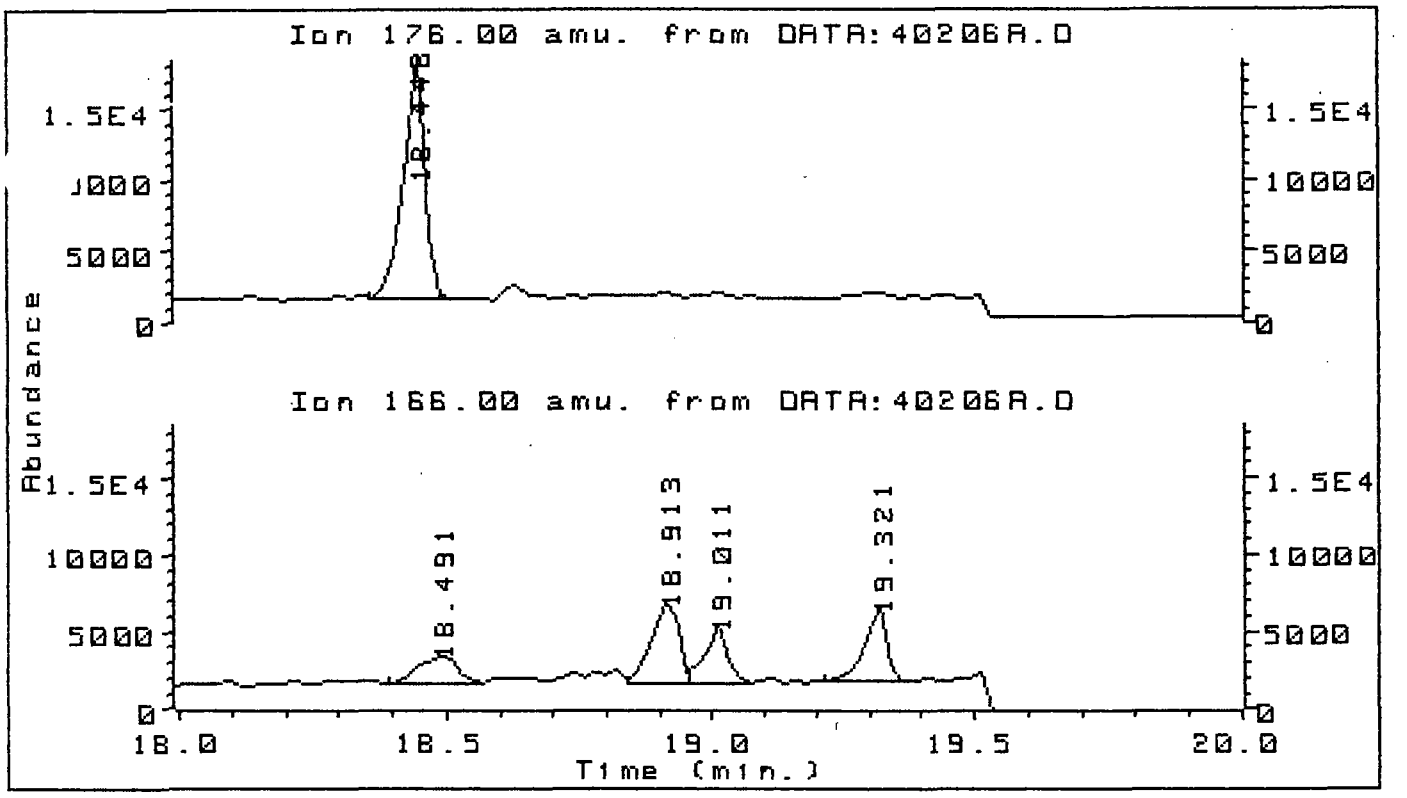

TIC of DATA:40206A.D
Abundance
6.0E4
4.0E4
2.0E4
0
32
34
36
38
40
Time (min.)

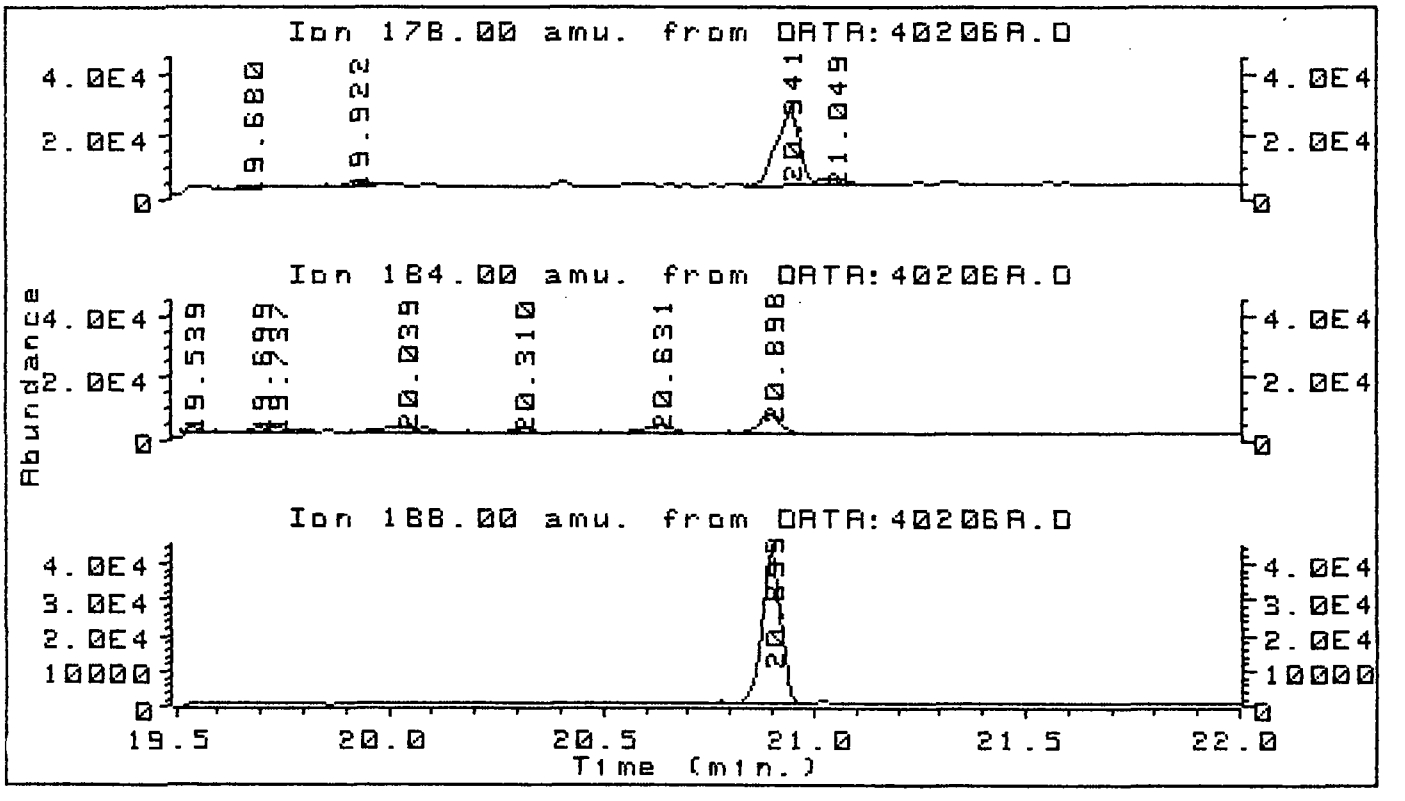

Ion 116.00 amu. from DATA:40206A.D
10.742
11.349
Ion 118.00 amu. from DATA:40206A.D
10.080
10.638
10.756
Abundance
1.2E4
10000
8000
6000
4000
2000
0
9
10
11
12
Time (min.)

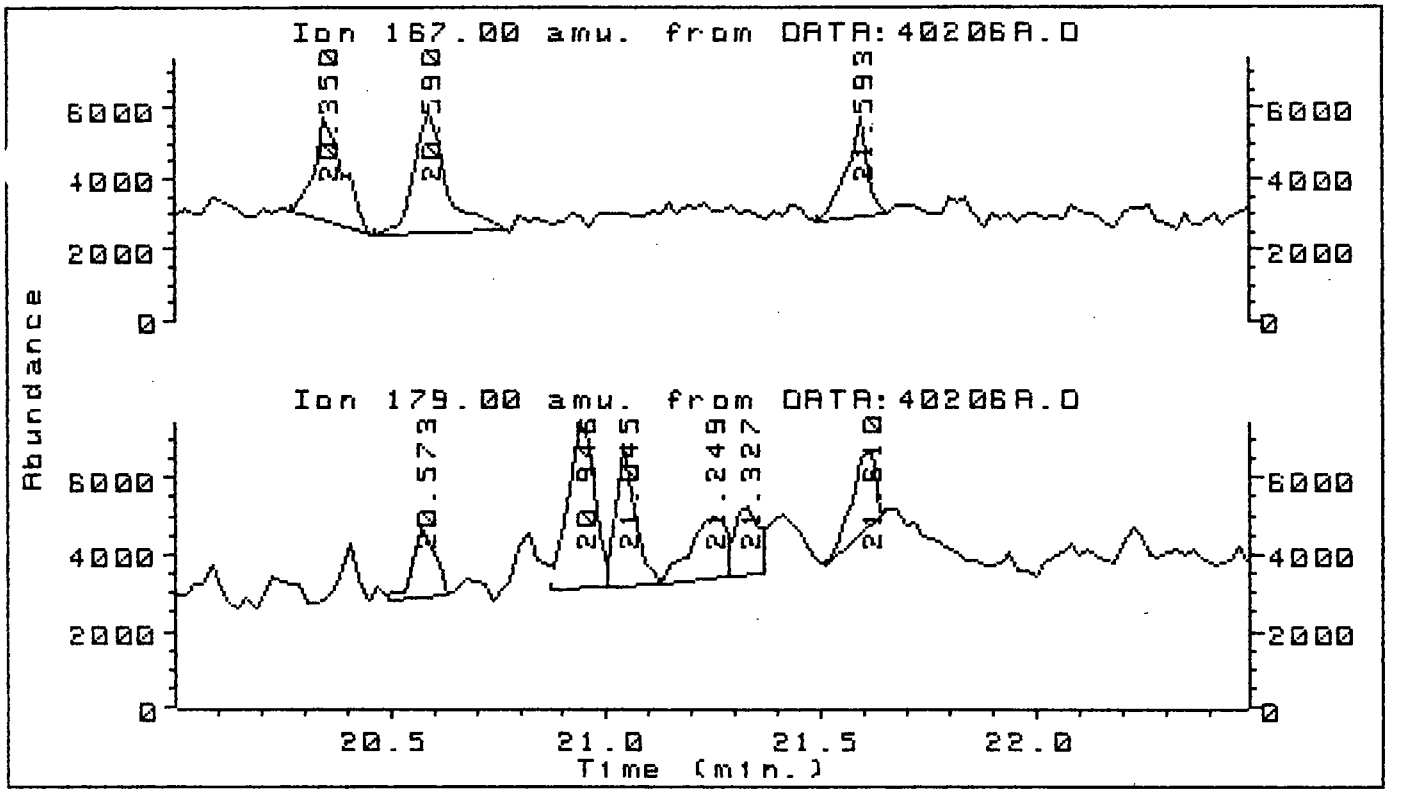

Ion 128.00 amu. from DATA:40206A.D
Ion 129.00 amu. from DATA:40206A.D
Ion 134.00 amu. from DATA:40206A.D
Ion 136.00 amu. from DATA:40206A.D
Abundance
3.6E4
0
12.5
13.0
13.5
14.0
Time (min.)

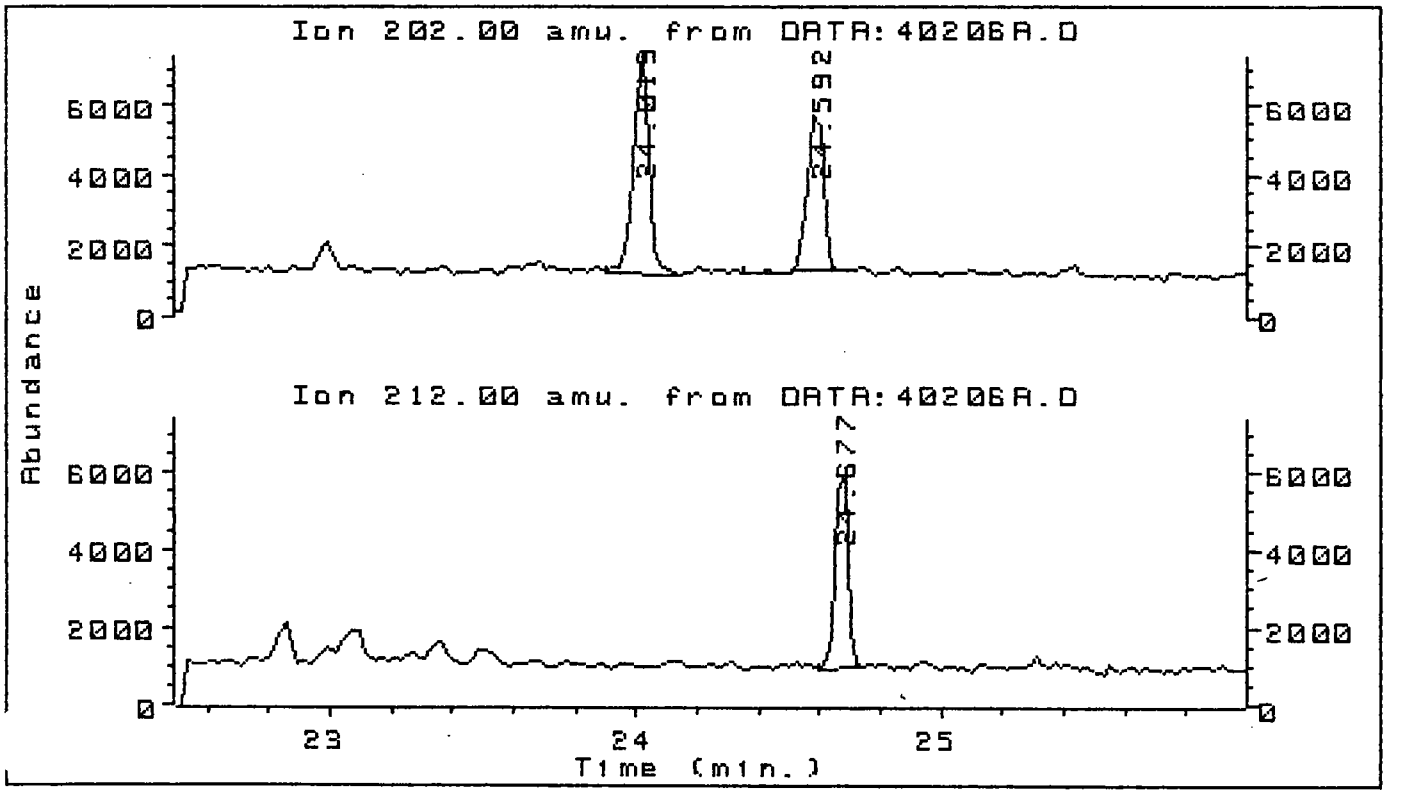

Ion 117.00 amu. from DATA:40206A.D
2.1E4
0
4.373
Ion 141.00 amu. from DATA:40206A.D
Abundance
4.421
4.701
5.899
6.003
Ion 154.00 amu. from DATA:40206A.D
2.0E4
1.5E4
10000
5000
15
16
17
Time (min.)

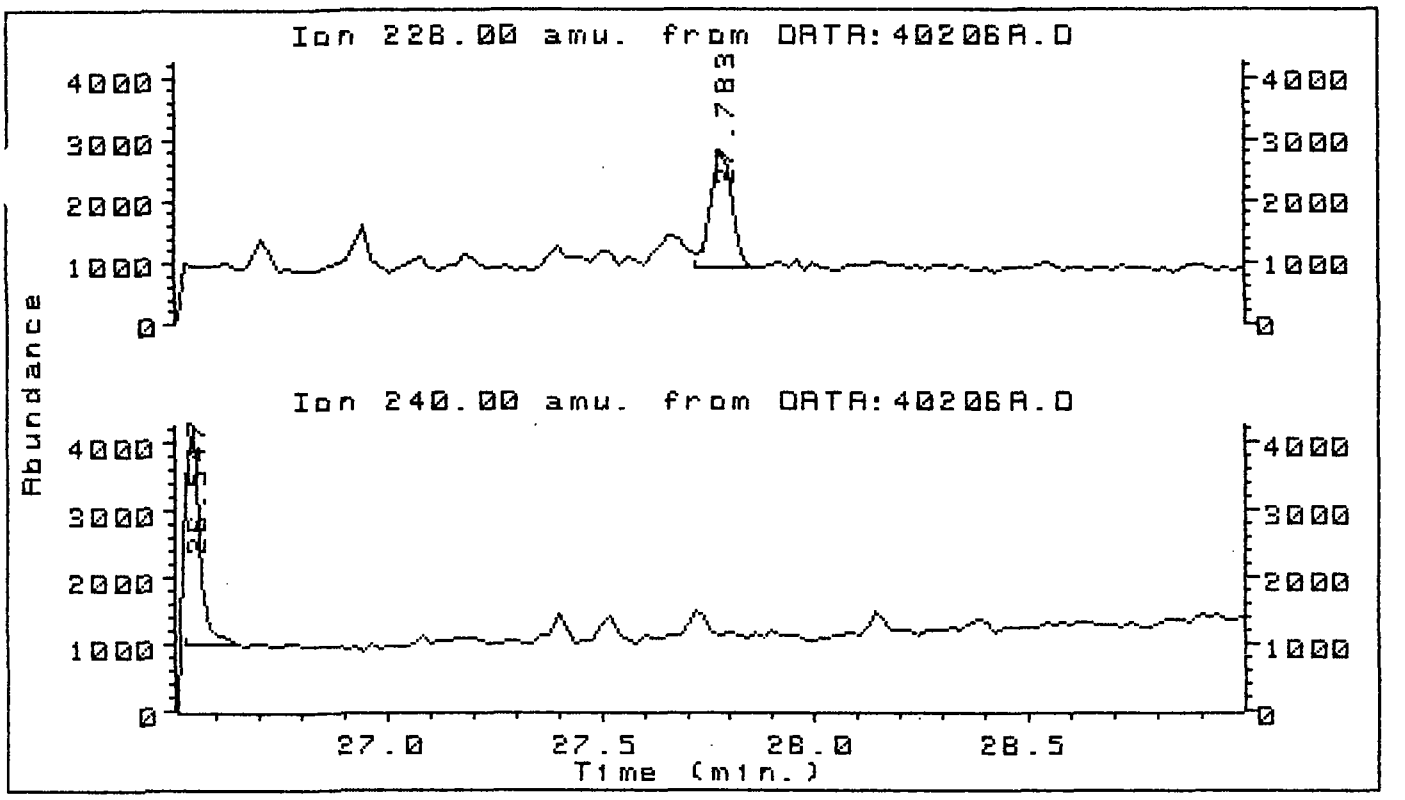

Ion 152.00 amu. from DATA:40206A.D
2.0E4
0
16.253
18.908
19.309
Ion 164.00 amu. from DATA:40206A.D
Abundance
16.635
Ion 168.00 amu. from DATA:40206A.D
1.5E4
10000
5000
18.341
18.883
16
17
18
19
20
Time (min.)

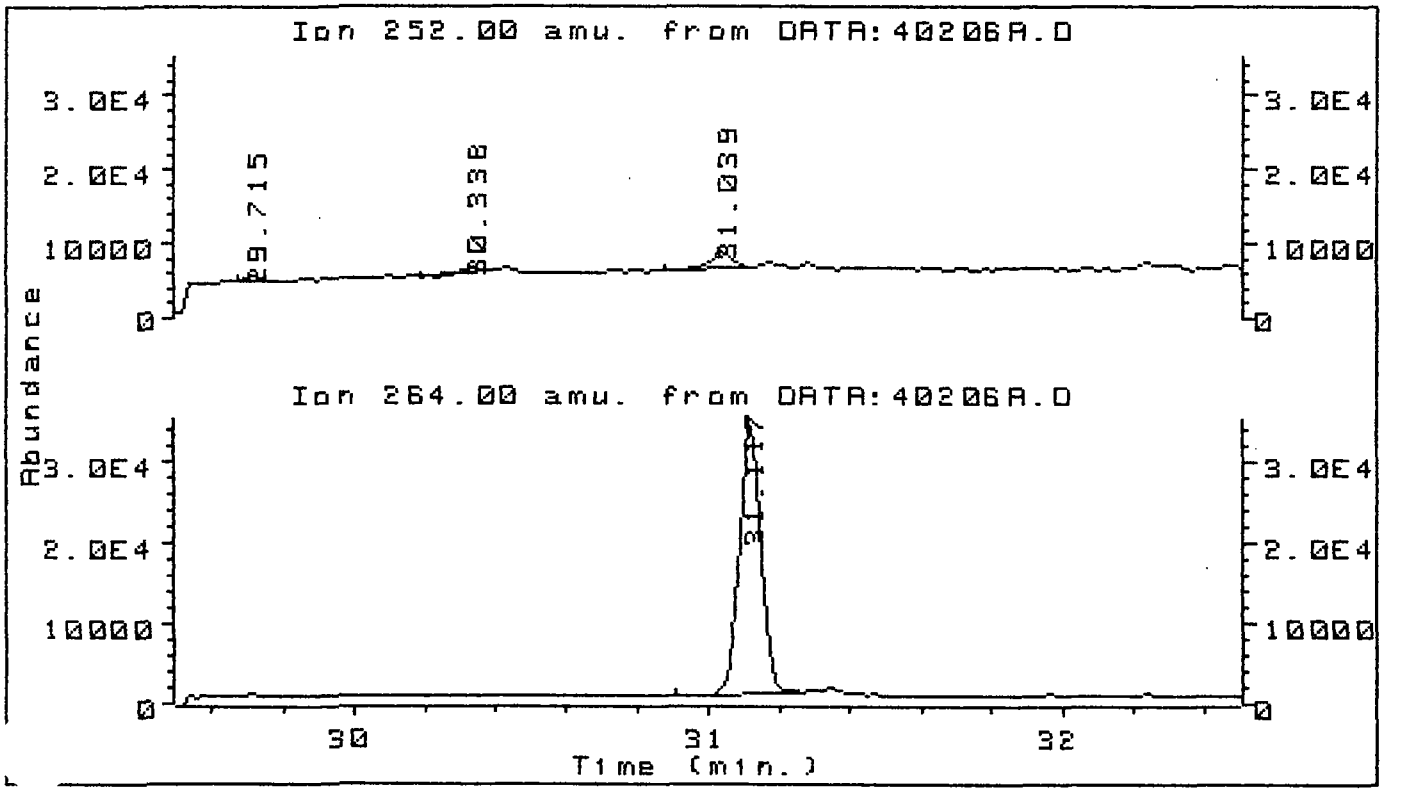

Ion 176.00 amu. from DATA:40206A.D
Ion 166.00 amu. from DATA:40206A.D
Abundance
1.5E4
10000
5000
0
18.491
18.913
19.011
19.321
18.0
18.5
19.0
19.5
20.0
Time (min.)

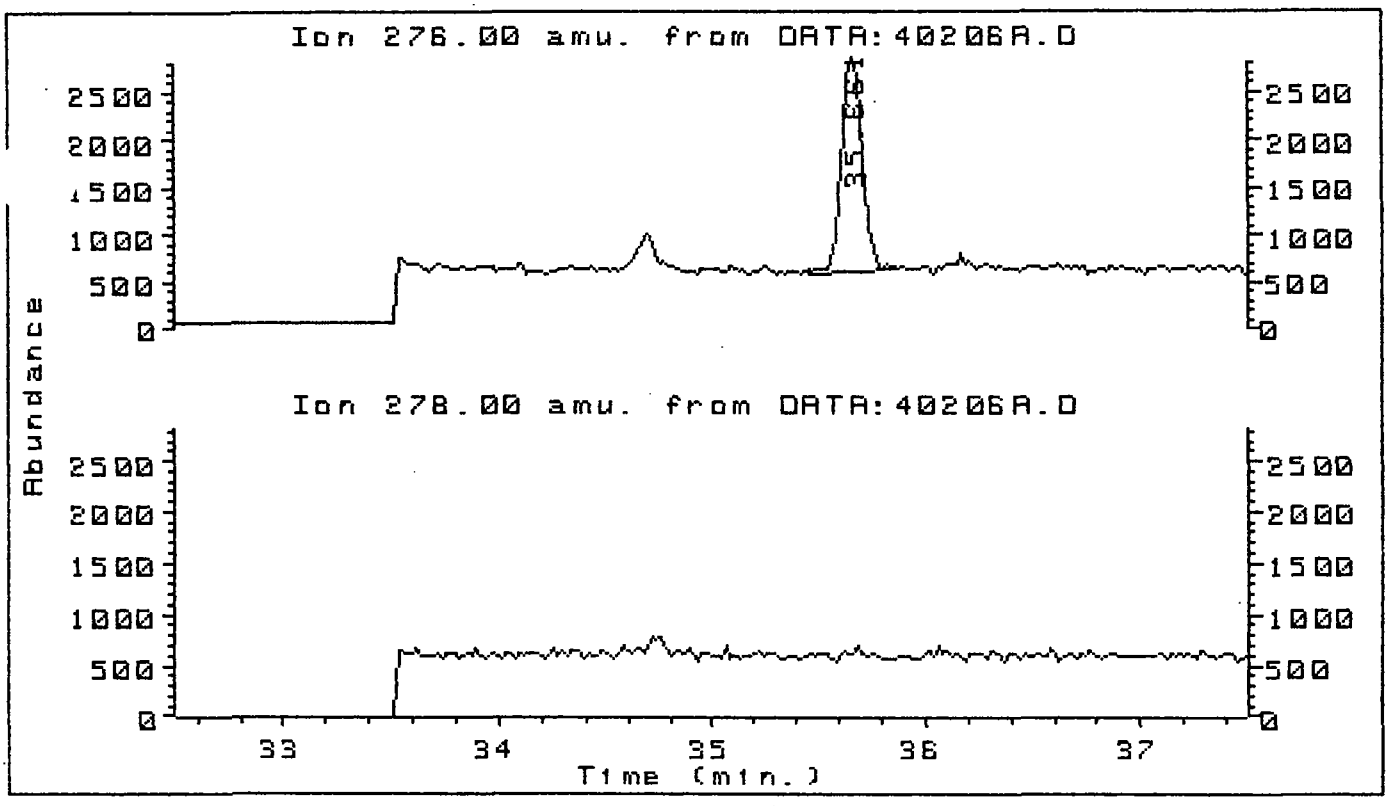

Ion 178.00 amu. from DATA:40206A.D
Ion 184.00 amu. from DATA:40206A.D
Ion 188.00 amu. from DATA:40206A.D
Abundance
4.0E4
3.0E4
2.0E4
10000
0
19.680
19.922
20.941
21.049
19.539
20.039
20.310
20.631
20.898
19.5
20.0
20.5
21.0
21.5
22.0
Time (min.)

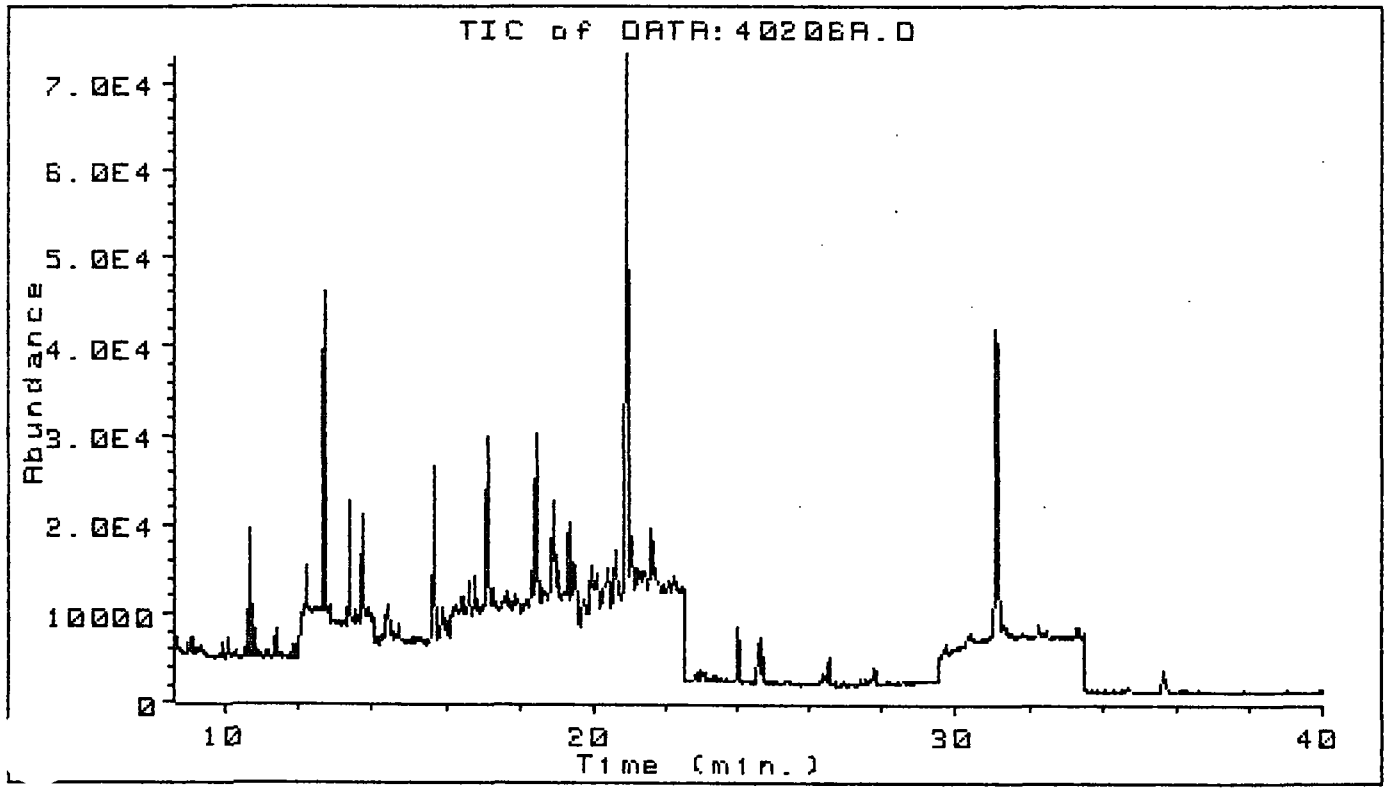

Ion 167.00 amu. from DATA:40206A.D
Ion 179.00 amu. from DATA:40206A.D
Abundance
6000
4000
2000
0
20.5
21.0
21.5
22.0
Time (min.)


Ion 202.00 amu. from DATA:40206A.D
Ion 212.00 amu. from DATA:40206A.D
Abundance
6000
4000
2000
0
23
24
25
Time (min.)


Ion 228.00 amu. from DATA:40206A.D
27.783
Ion 240.00 amu. from DATA:40206A.D
Abundance
4000
3000
2000
1000
0
27.0
27.5
28.0
28.5
Time (min.)


Ion 252.00 amu. from DATA:40206A.D
29.715
30.338
31.039
Ion 264.00 amu. from DATA:40206A.D
Abundance
3.0E4
2.0E4
10000
0
30
31
32
Time (min.)


Ion 276.00 amu. from DATA:40206A.D
Ion 278.00 amu. from DATA:40206A.D
Abundance
2500
2000
1500
1000
500
0
33
34
35
36
37
Time (min.)


TIC of DATA:40206A.D
Abundance
7.0E4
6.0E4
5.0E4
4.0E4
3.0E4
2.0E4
10000
0
10
20
30
40
Time (min.)

STANDARD 40229 11-19-86

SAMPLE ID	AREA COUNTS MASS 136	MASS 135	MASS 134	TOTAL	CONC.	% RECOVERY
STANDARD	1333508	417771	238232	1989511		
40145	617849	274985	139675	1032509	41.51	51.89
40146	751386	248423	211577	1211386	48.71	60.88
40147	1167595	397915	257154	1822664	73.29	91.61
40148	769933	352143	394606	1516682	60.98	76.23
40149	989893	339116	423848	1752857	70.48	88.10

STANDARD CONCENTRATION = 80 NG/ML
RESPONSE FACTOR = 0.00004021
SURROGATE CONCENTRATION = 80 NG/ML

Surrog Mix Stan ar LF860927 (MS86R164)

Ion 136.00 amu. from DATA:MID40229.D
MID 128-136 SURROGATE SPIKE #40228 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
	12.649	BV	0.054	1333508	12.515	12.795

Ion 135.00 amu. from DATA:MID40229.D
MID 128-136 SURROGATE SPIKE #40228 :TUE. 16 DEC 86

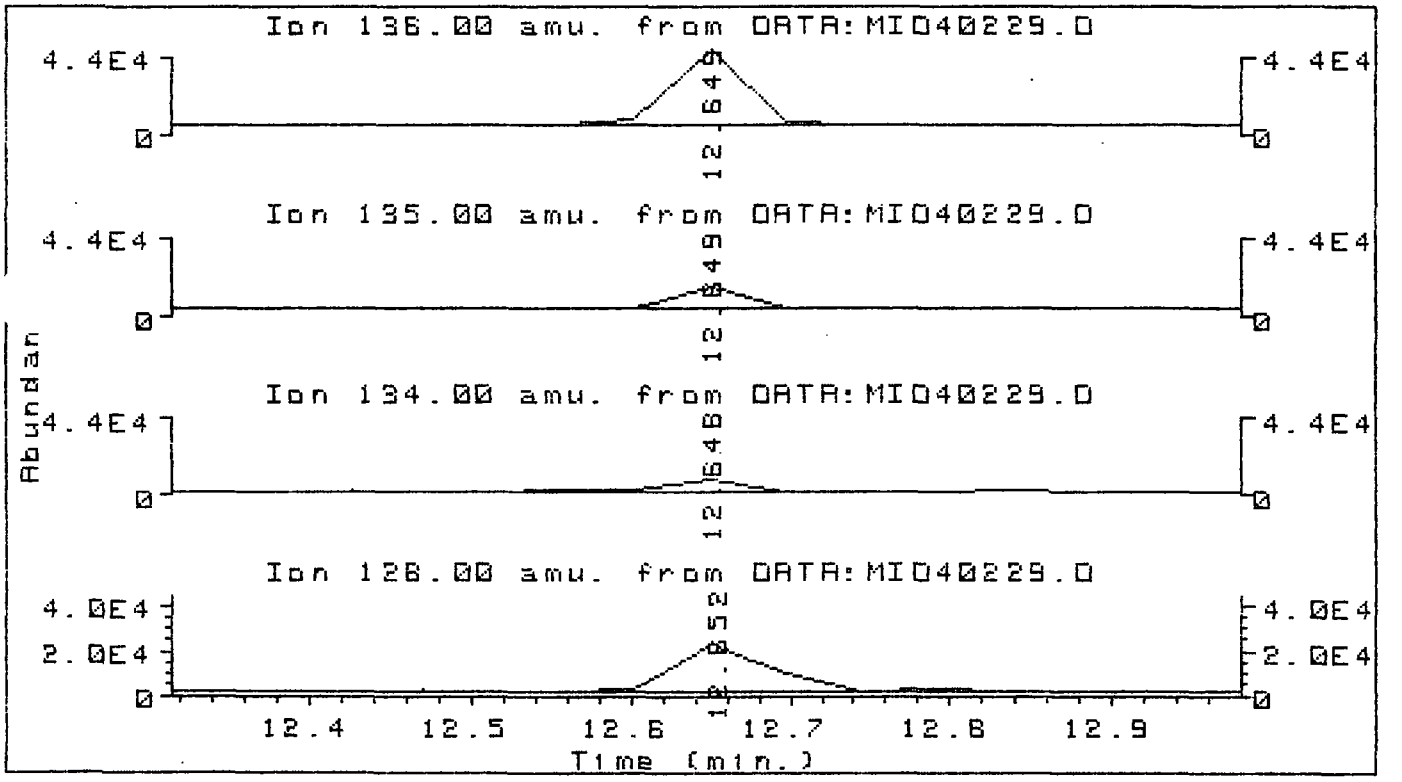
Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.649	BV	0.056	417771	12.515	12.848

Ion 134.00 amu. from DATA:MID40229.D
MID 128-136 SURROGATE SPIKE #40228 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.648	BV	0.057	238232	12.426	12.770

Ion 128.00 amu. from DATA:MID40229.D
MID 128-136 SURROGATE SPIKE #40228 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.652	BBA	0.069	928819	12.471	12.868



T-09

Ion 136.00 amu. from DATA:MID40145.D
MID 128-136 ERT#40145 THU. 18 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
	12.927	BV	0.090	617849	12.754	13.053

Ion 135.00 amu. from DATA:MID40145.D
MID 128-136 ERT#40145 THU. 18 DEC 86

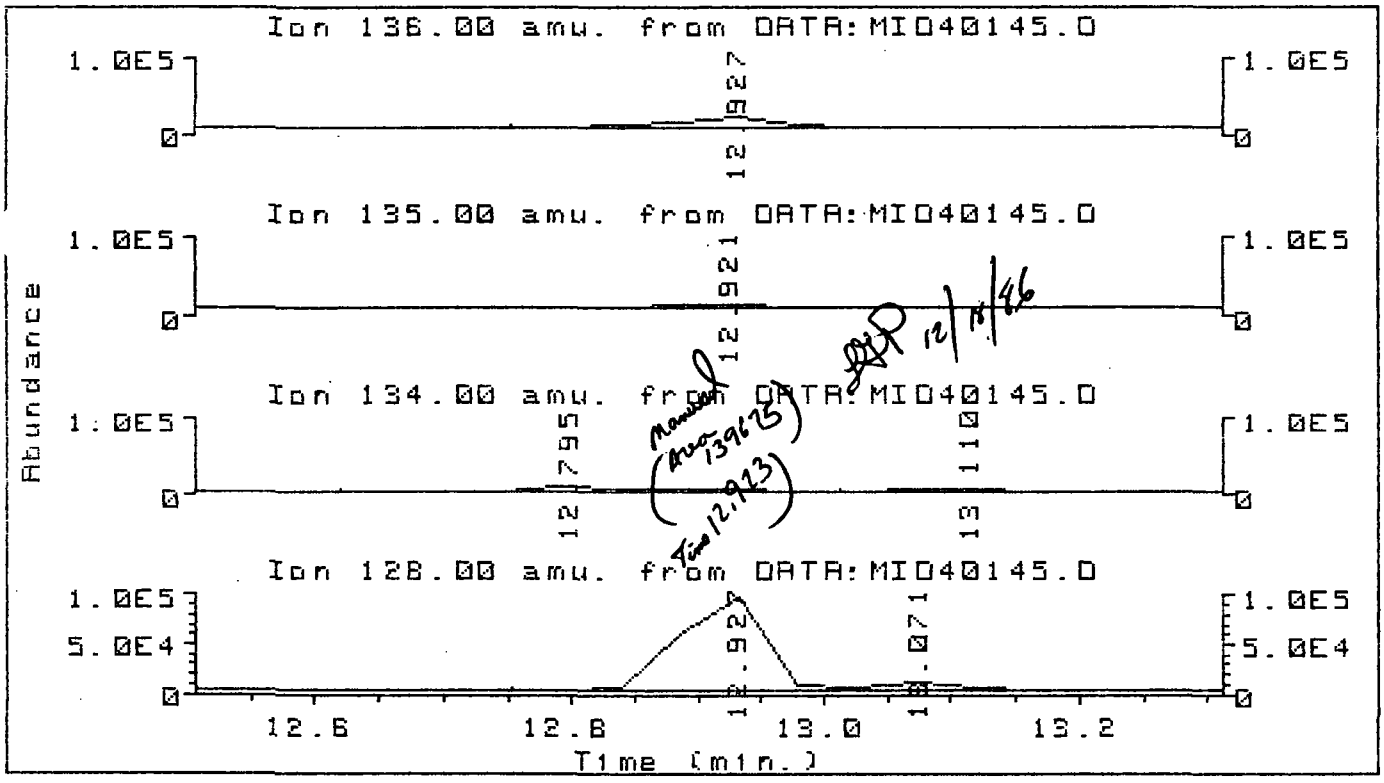
Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.921	BV	0.094	274985	12.709	13.043

Ion 134.00 amu. from DATA:MID40145.D
MID 128-136 ERT#40145 THU. 18 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.795	BV	0.114	509630	12.620	13.012
2	13.110 12.923	VBA	0.089	142665 139675	13.012	13.209

Ion 128.00 amu. from DATA:MID40145.D
MID 128-136 ERT#40145 THU. 18 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.927	BV	0.068	4484549	12.754	13.018
2	13.071	VBA	0.075	248101	13.018	13.209



TD-09

Ion 136.00 amu. from DATA:MID40146.D
MID 128-136 ERT#40147 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
	12.650	VV	0.054	751386	12.592	12.798

Ion 135.00 amu. from DATA:MID40146.D
MID 128-136 ERT#40147 :TUE. 16 DEC 86

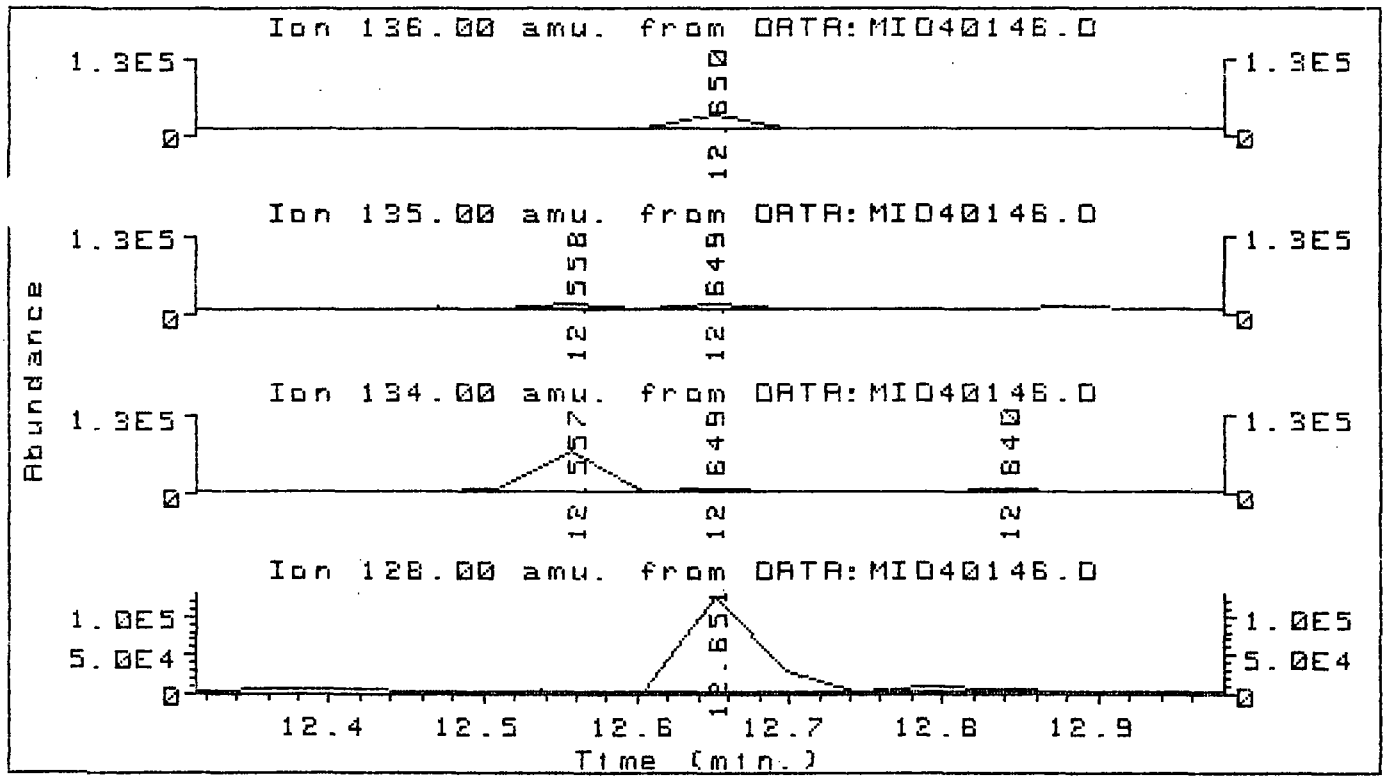
Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.558	BV	0.051	236235	12.471	12.603
2	12.649	VV	0.054	248423	12.603	12.758

Ion 134.00 amu. from DATA:MID40146.D
MID 128-136 ERT#40147 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.557	BV	0.054	207691	12.404	12.613
2	12.649	VV	0.051	211577	12.613	12.739
3	12.840	PBA	0.037	68272	12.739	12.879

Ion 128.00 amu. from DATA:MID40146.D
MID 128-136 ERT#40147 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.651	BBA	0.072	4421190	12.537	12.868



Matrix Spike

Ion 136.00 amu. from DATA:MID40147.D
MID 128-136 LAB FORT ERT#40147 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.650	BBA	0.055	1167595	12.537	12.868

Ion 135.00 amu. from DATA:MID40147.D
MID 128-136 LAB FORT ERT#40147 :TUE. 16 DEC 86

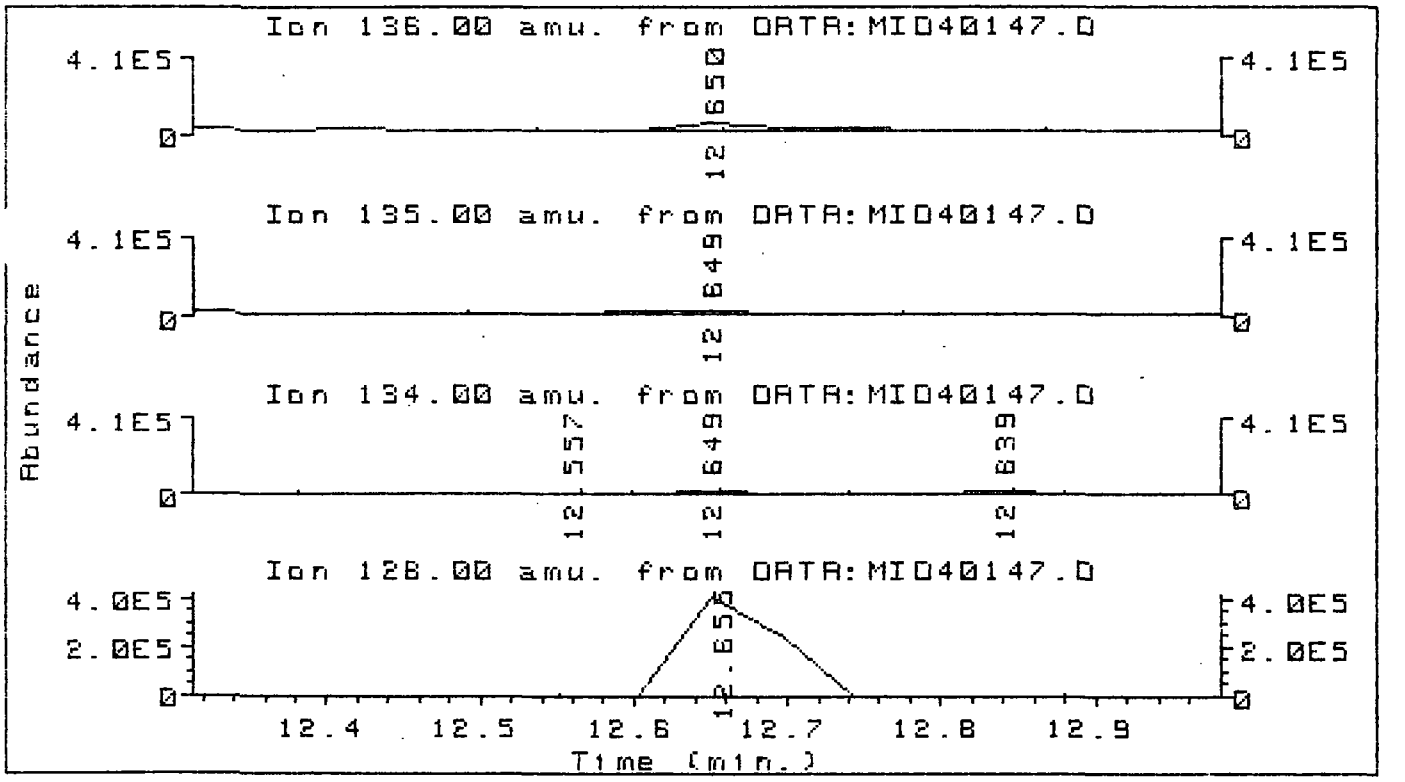
Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.649	BV	0.072	397915	12.493	12.775

Ion 134.00 amu. from DATA:MID40147.D
MID 128-136 LAB FORT ERT#40147 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.557	BV	0.069	124848	12.382	12.598
2	12.649	VV	0.051	257154	12.598	12.740
3	12.839	PBA	0.038	107247	12.740	12.879

Ion 128.00 amu. from DATA:MID40147.D
MID 128-136 LAB FORT ERT#40147 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.655	VBA	0.077	18638348	12.551	12.879



Method BLANK 10

Ion 136.00 amu. from DATA:MID40148.D
MID 128-136 ERT#40148 :TUE. 16 DEC 86

P k#	Ret Time	Type	Width	Area	Start Time	End Time
	12.744	BBA	0.071	769933	12.603	12.868

Ion 135.00 amu. from DATA:MID40148.D
MID 128-136 ERT#40148 :TUE. 16 DEC 86

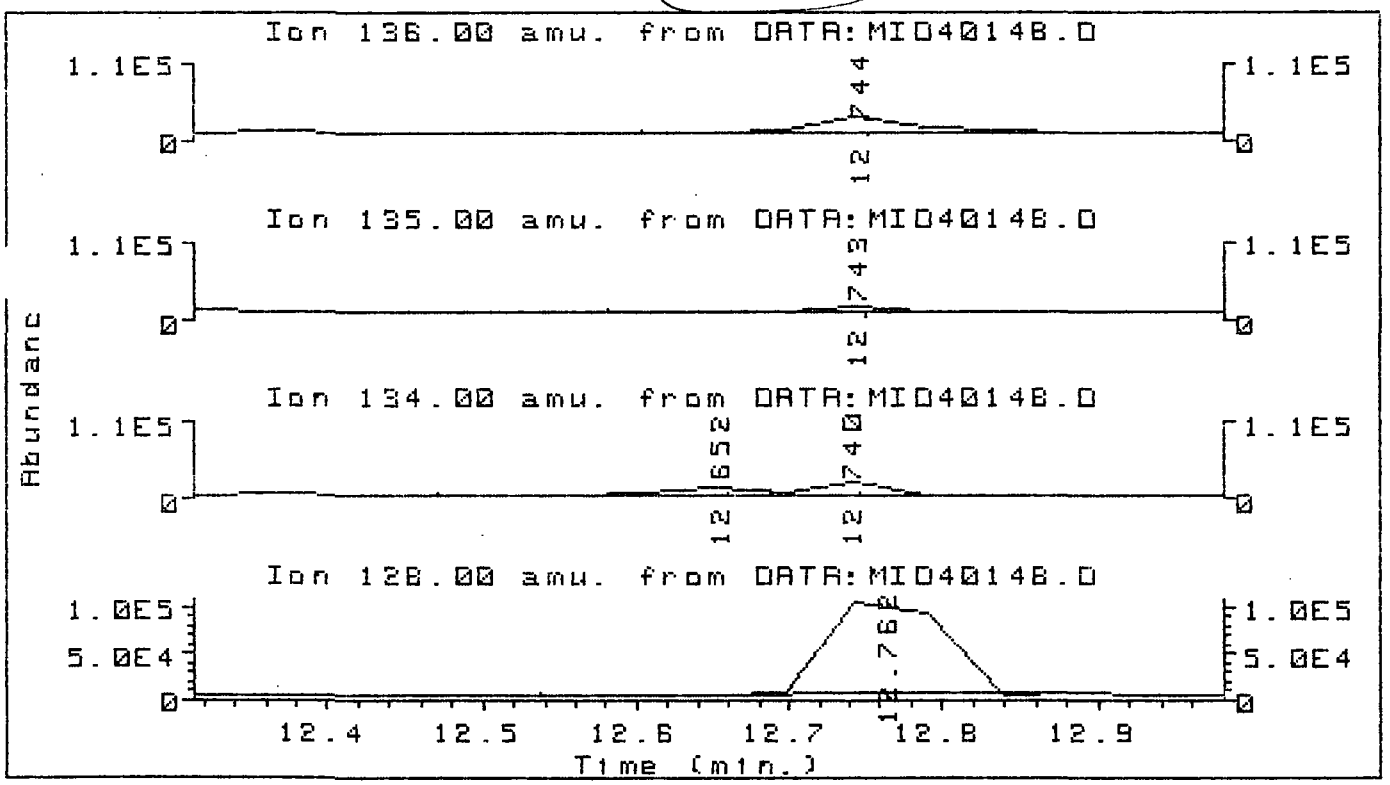
Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.743	BBA	0.086	352143	12.581	12.868

Ion 134.00 amu. from DATA:MID40148.D
MID 128-136 ERT#40148 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.652	BV	0.079	394606	12.471	12.688
2	12.740	VV	0.067	617709	12.688	12.854

Ion 128.00 amu. from DATA:MID40148.D
MID 128-136 ERT#40148 :TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.762	BBA	0.091	5139541	12.537	12.868



Shipping Blank

on 136.00 amu. from DATA:MID40149.D
MID 128-136 ERT#40149 THU. 18 DEC. 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
.	13.073	PBA	0.066	989893	12.939	13.324

Ion 135.00 amu. from DATA:MID40149.D
MID 128-136 ERT#40149 THU. 18 DEC. 86

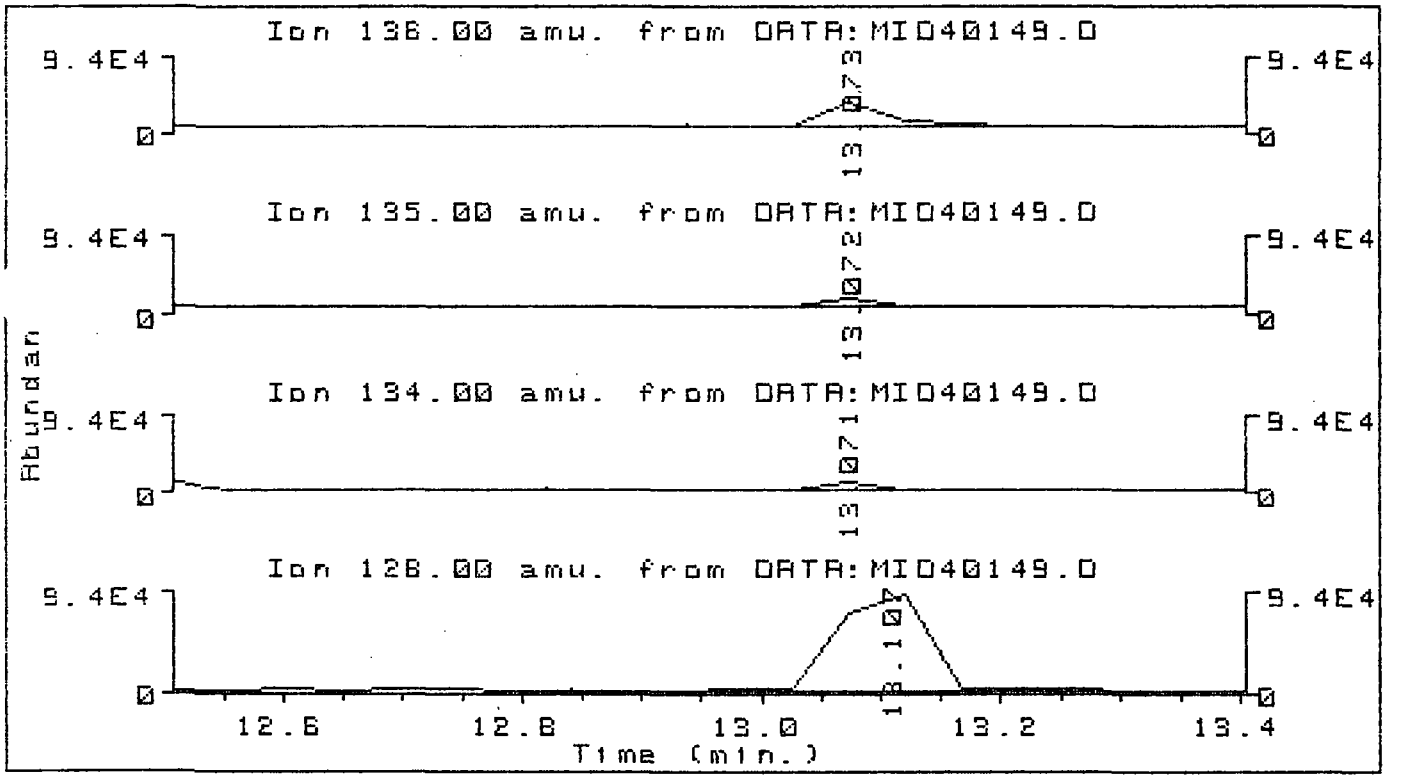
Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	13.072	PV	0.093	339116	12.926	13.190

Ion 134.00 amu. from DATA:MID40149.D
MID 128-136 ERT#40149 THU. 18 DEC. 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	13.071	PV	0.082	423848	12.820	13.181

Ion 128.00 amu. from DATA:MID40149.D
MID 128-136 ERT#40149 THU. 18 DEC. 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	13.107	PBA	0.090	4688903	12.841	13.324



Daily Check Std of 40 PPT PAH

MS960249 + 25ul IS

Ion 136.00 amu. from DATA:MID40STD.D
MID 129-136 CHECK 40 PPT PAH : TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.671	VV	0.060	856415	12.574	12.754

135.00 amu. from DATA:MID40STD.D
MID 129-136 CHECK 40 PPT PAH : TUE. 16 DEC 86

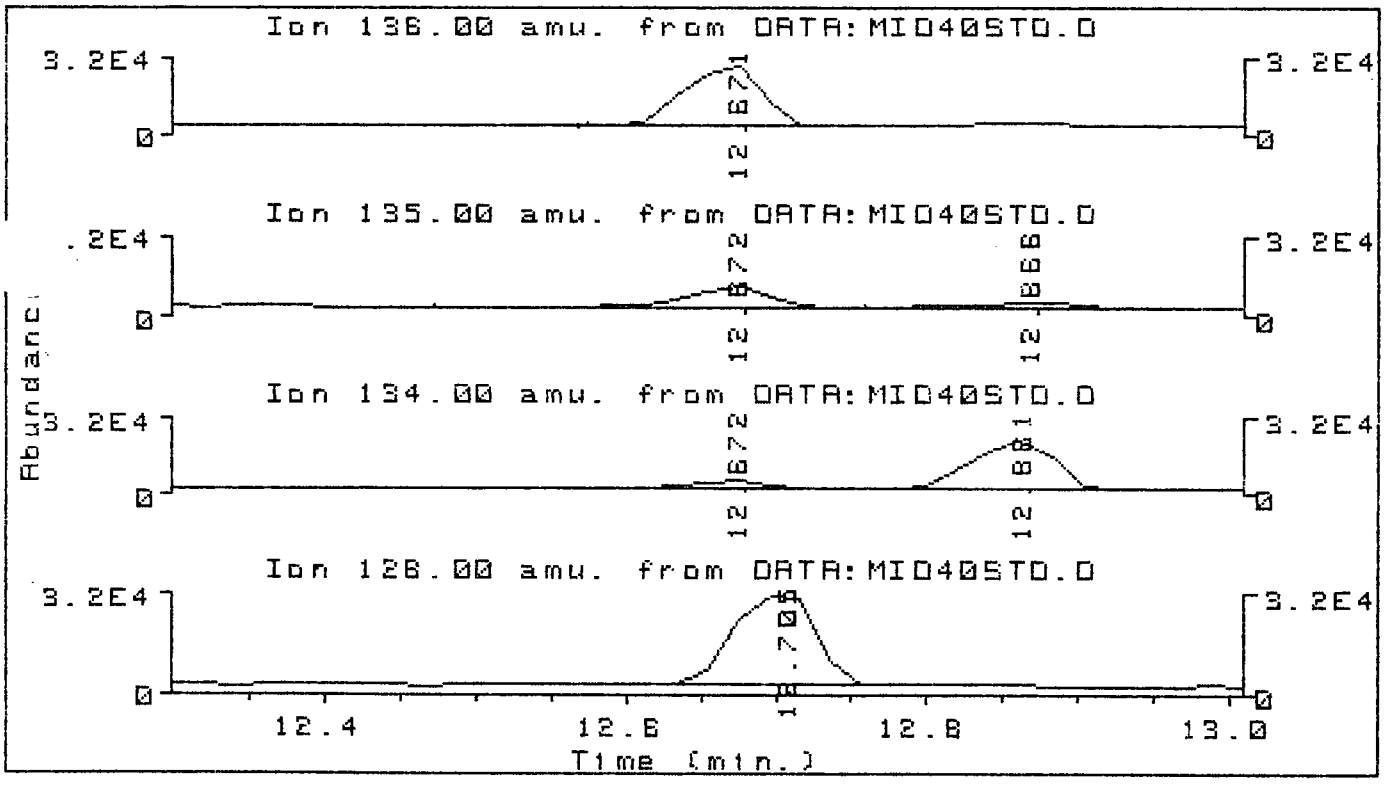
Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.672	BV	0.058	307065	12.472	12.758
2	12.866	PV	0.068	70026	12.758	12.948

Ion 134.00 amu. from DATA:MID40STD.D
MID 129-136 CHECK 40 PPT PAH : TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.672	VV	0.053	140571	12.596	12.752
2	12.861	PV	0.064	748423	12.752	12.932

Ion 128.00 amu. from DATA:MID40STD.D
MID 129-136 CHECK 40 PPT PAH : TUE. 16 DEC 86

Peak#	Ret Time	Type	Width	Area	Start Time	End Time
1	12.705	VV	0.065	1138100	12.623	12.811



STANDARD 40229 11-15-86

SAMPLE ID	MASS 136	AREA COUNTS MASS 135	MASS 134	TOTAL	CONC.	% RECOVERY
STANDARD	1333508	417771	238232	1989511	RF CHECK STD	
40145	617849	274985	139675	1032509	31.67	39.58
40156	751386	248423	211577	1211386	37.15	46.44
40147	1167595	397915	257154	1822664	55.90	69.88
40148	769933	352143	394606	1516682	46.52	58.15
40149	989893	339116	423848	1752857	53.76	67.20

STANDARD CONCENTRATION = 80 NG/ML
RESPONSE FACTOR = 0.00004021
SURROGATE CONCENTRATION = 80 NG/ML

DAILY CHECK STD	856415	307065	140571	1304051	40	100

STANDARD CONCENTRATION = 40 NG/ML
RESPONSE FACTOR = 0.00003067
SURROGATE CONCENTRATION = 40 NG/ML

Out-of-Control Event

Date 12/18/86 Time 4:00pm Analyst Louie Pounds

Method ERT ppt PAH Matrix WATER

Initials of individual initially notified

Suspect lab numbers

Out-of-control lab numbers (40149, 40145)#1
(40148, 40146)#2

Indication of out-of-control event #1 Naphthalene-d8 less than 95% Confidence interval of 42-102% / #2 Chrysene-d12 greater than the 95% confidence interval of 10-54%

Cause determined No conclusive insight or explanation of these recoveries

Action taken Review of calcutions, examination of internal standards & surrogates solutions for degradation and contamination.

Date and time QAC notified

Date and time control resumed

Precision criteria met Accuracy criteria met

Reanalysis of data completed 12/18/86 40145, 40146, 40147, 40148 40149, 40228.

These samples were found to compare very well in both analytical results and surrogate recoveries. The Naphthalene-d8 recoveries for all the samples were compared to the Matrix Spike Standard (ERT# 40229 MS860352) which the recoveries range ~~than~~ from 52 - 92%

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1. FIELD IDENTIFICATION: T-09
2. ERT SAMPLE NUMBER: 40145
3. FIELD LOGBOOK/PAGE NUMBER: —
4. SAMPLING DATE: 11/13/86
5. DATE RECEIVED: 11/14/86
6. DATE EXTRACTED: 11/18/86
7. DATE ANALYZED: 11/25/86
8. GC/MS FILE #: 40145AD
9. GC/MS TAPE #: MSD1
10. CORRESPONDING DFTPP FILE #: DFTPP33
11. CORRESPONDING MATRIX SPIKE SAMPLE: ERT 40147
12. CORRESPONDING METHOD BLANK SAMPLE: ERT 40148
13. CORRESPONDING SOLVENT BLANK SAMPLE: ERT 40206
14. CORRESPONDING GC/MS CALIBRATION FILE #: STD51
15. COMMENTS:

DF 12/10/86

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1. FIELD IDENTIFICATION: TD-09
2. ERT SAMPLE NUMBER: 40146
3. FIELD LOGBOOK/PAGE NUMBER: —
4. SAMPLING DATE: 11/13/86
5. DATE RECEIVED: 11/14/86
6. DATE EXTRACTED: 11/18/86
7. DATE ANALYZED: 11/25/86
8. GC/MS FILE #: 40146AD
9. GC/MS TAPE #: MSD1
10. CORRESPONDING DFTPP FILE #: DFTPP33
11. CORRESPONDING MATRIX SPIKE SAMPLE: ERT 40147
12. CORRESPONDING METHOD BLANK SAMPLE: ERT 40148
13. CORRESPONDING SOLVENT BLANK SAMPLE: ERT 40206
14. CORRESPONDING GC/MS CALIBRATION FILE #: STD51
15. COMMENTS:

12/10/86

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1. FIELD IDENTIFICATION: Matrix Spike (TD-09A)
2. ERT SAMPLE NUMBER: 40147
3. FIELD LOGBOOK/PAGE NUMBER: —
4. SAMPLING DATE: 11/13/86
5. DATE RECEIVED: 11/14/86
6. DATE EXTRACTED: 11/18/86
7. DATE ANALYZED: 11/25/86
8. GC/MS FILE #: 40147AD
9. GC/MS TAPE #: MSD1
10. CORRESPONDING DFTPP FILE #: DFTPP33
11. CORRESPONDING MATRIX SPIKE SAMPLE: ERT 40147
12. CORRESPONDING METHOD BLANK SAMPLE: ERT 40148
13. CORRESPONDING SOLVENT BLANK SAMPLE: ERT 40206
14. CORRESPONDING GC/MS CALIBRATION FILE #: STD51
15. COMMENTS:

OF 12/10/86

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1. FIELD IDENTIFICATION: Method Blank
2. ERT SAMPLE NUMBER: 40148
3. FIELD LOGBOOK/PAGE NUMBER: —
4. SAMPLING DATE: —
5. DATE RECEIVED: —
6. DATE EXTRACTED: 11/18/86
7. DATE ANALYZED: 11/25/86
8. GC/MS FILE #: 40148AD
9. GC/MS TAPE #: MSD1
10. CORRESPONDING DFTPP FILE #: DFTPP33
11. CORRESPONDING MATRIX SPIKE SAMPLE: ERT 40147
12. CORRESPONDING METHOD BLANK SAMPLE: ERT 40148
13. CORRESPONDING SOLVENT BLANK SAMPLE: ERT 40206
14. CORRESPONDING GC/MS CALIBRATION FILE #: STD51
15. COMMENTS:

GG 12/10/86

ERT ANALYTICAL LABORATORY
SAMPLING REPORT
POLYAROMATIC HYDROCARBONS

1. FIELD IDENTIFICATION: Shipping Blank
2. ERT SAMPLE NUMBER: 40149
3. FIELD LOGBOOK/PAGE NUMBER: —
4. SAMPLING DATE: 11/10/86
5. DATE RECEIVED: 11/14/86
6. DATE EXTRACTED: 11/18/86
7. DATE ANALYZED: 11/25/86
8. GC/MS FILE #: 40149AD
9. GC/MS TAPE #: MS01
10. CORRESPONDING DFTPP FILE #: DFTPP33
11. CORRESPONDING MATRIX SPIKE SAMPLE: ERT 40147
12. CORRESPONDING METHOD BLANK SAMPLE: ERT 40148
13. CORRESPONDING SOLVENT BLANK SAMPLE: ERT 40206
14. CORRESPONDING GC/MS CALIBRATION FILE #: STD51
15. COMMENTS:

OR 12/10/86

174

0,9 12/10/86

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: T-09

ERT NO.: 40145

CARCINOGENIC PAH'S

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

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	<3.4
INDENE	ND
NAPHTHALENE	
BENZO (B) THIOPHENE	
INDOLE	
2-METHYLNAPHTHALENE	
1-METHYLNAPHTHALENE	
BIPHENYL	
ACENAPHTHYLENE	
ACENAPHTHENE	1.3
DIBENZOFURAN	ND
FLUORENE	1.3-1.8 = ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	3.6-9.9 = ND
ANTHRACENE	ND
ACRIDINE	2.2-5.2 = ND
CARBAZOLE	ND
FLUORANTHENE	
PYRENE	
BENZO (E) PYRENE	
PERYLENE	
TOTAL OTHER PAH	1.3
TOTAL PAH'S	1.3

ND = Concentration < 95% Confidence Interval of MDL

175
99 12/10/86

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: TD-09

ERT NO.: 40146

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	2.4
BENZO (A) ANTHRACENE	ND
CHRYSENE	
BENZOFLUORANTHENES	
BENZO (A) PYRENE	
INDENO (1,2,3-CD) PYRENE	
DIBENZ (A,H) ANTHRACENE	
BENZO (G,H,I) PERYLENE	
TOTAL CARCINOGENIC PAH	2.4

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	8.3
INDENE	ND
NAPHTHALENE	
BENZO (B) THIOPHENE	
INDOLE	
2-METHYLNAPHTHALENE	
1-METHYLNAPHTHALENE	
BIPHENYL	
ACENAPHTHYLENE	2.6-2.3 = ND
ACENAPHTHENE	2.7
DIBENZOFURAN	ND
FLUORENE	2.0-1.8 = ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	3.8-9.9 = ND
ANTHRACENE	ND
ACRIDINE	
CARBAZOLE	
FLUORANTHENE	
PYRENE	
BENZO (E) PYRENE	
PERYLENE	
TOTAL OTHER PAH	11.0
TOTAL PAH'S	13.4

ND = Concentration < 95% Confidence Interval of MDL

OFI 12/10/86

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: Matrix Spike

ERT NO.: 40147

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	11.0
BENZO (A) ANTHRACENE	ND
CHRYSENE	8.2
BENZOFLUORANTHENES	ND
BENZO (A) PYRENE	↓
INDENO (1,2,3-CD) PYRENE	↓
DIBENZ (A,H) ANTHRACENE	↓
BENZO (G,H,I) PERYLENE	5.5
TOTAL CARCINOGENIC PAH	24.7

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	11
INDENE	2.5
NAPHTHALENE	<47
BENZO (B) THIOPHENE	ND
INDOLE	< 1.9
2-METHYLNAPHTHALENE	8.0
1-METHYLNAPHTHALENE	ND
BIPHENYL	ND
ACENAPHTHYLENE	1.9-2.3=ND
ACENAPHTHENE	3.7
DIBENZOFURAN	ND
FLUORENE	13
DIBENZOTHIOPHENE	ND
PHENANTHRENE	6.0-9.9=ND
ANTHRACENE	ND
ACRIDINE	2.5-2.3=ND
CARBAZOLE	ND
FLUORANTHENE	3.0-4.4=ND
PYRENE	ND
BENZO (E) PYRENE	8.7
PERYLENE	ND
TOTAL OTHER PAH	51.9
TOTAL PAH'S	76.6

ND = Concentration < 95% Confidence Interval of MDL

FA-F...../50

177

12/10/86

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: Method Blank

ERT NO.: 40148

CARCINOGENIC PAH'S

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

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	
INDENE	
NAPHTHALENE	
BENZO (B) THIOPHENE	
INDOLE	
2-METHYLNAPHTHALENE	
1-METHYLNAPHTHALENE	
BIPHENYL	
ACENAPHTHYLENE	2.3
ACENAPHTHENE	ND
DIBENZOFURAN	2.9
FLUORENE	1.8
DIBENZOTHIOPHENE	ND
PHENANTHRENE	9.9
ANTHRACENE	ND
ACRIDINE	5.2
CARBAZOLE	<2.6
FLUORANTHENE	4.4
PYRENE	<4.1
BENZO (E) PYRENE	ND
PERYLENE	ND
TOTAL OTHER PAH	26.5
TOTAL PAH'S	26.5

ND = Concentration < 95% Confidence Interval of MDL

12/10/86

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
POLYAROMATIC HYDROCARBONS

FIELD ID: 40149

ERT NO.: Shipping Blank

CARCINOGENIC PAH'S

PARAMETERS	ANALYTICAL RESULT (NG/L)
QUINOLINE	<1.9
BENZO (A) ANTHRACENE	ND
CHRYSENE	
BENZOFLUORANTHENES	
BENZO (A) PYRENE	
INDENO (1,2,3-CD) PYRENE	
DIBENZ (A,H) ANTHRACENE	
BENZO (G,H,I) PERYLENE	
TOTAL CARCINOGENIC PAH	ND

OTHER PAH'S

2,3-BENZOFURAN	ND
2,3-DIHYDROINDENE	
INDENE	
NAPHTHALENE	
BENZO (B) THIOPHENE	
INDOLE	
2-METHYLNAPHTHALENE	
1-METHYLNAPHTHALENE	
BIPHENYL	
ACENAPHTHYLENE	
ACENAPHTHENE	
DIBENZOFURAN	
FLUORENE	1.0-1.8=ND
DIBENZOTHIOPHENE	ND
PHENANTHRENE	4.3-9.9=ND
ANTHRACENE	ND
ACRIDINE	
CARBAZOLE	
FLUORANTHENE	
PYRENE	
BENZO (E) PYRENE	
PERYLENE	
TOTAL OTHER PAH	ND
TOTAL PAH'S	ND

ND = Concentration < 95% Confidence Interval of MDL

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

FIELD ID: T-09

ERT NO.: 40145

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	10	42-102
FLUORENE - D10	9.5	83	60-128
CHRYSENE - D12	9.8	34	10-54

12/10/86

12/10/86

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

FIELD ID: TD-09

ERT NO.: 40146

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	121	42-102
FLUORENE - D10	9.5	104	60-128
CHRYSENE - D12	9.8	66	10-54

12/10/86

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

FIELD ID: Matrix Spike

ERT NO.: 40147

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	31	42-102
FLUORENE - D10	9.5	82	60-128
CHRYSENE - D12	9.8	34	10-54

12/10/86

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

-182

FIELD ID: Method Blank

ERT NO.: 40148

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	36	42-102
FLUORENE - D10	9.5	124	60-128
CHRYSENE - D12	9.8	86	10-54

D.G. 12/10/86

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

FIELD ID: Shipping Blank

ERT NO.: 40149

SURROGATE	SPIKE LEVEL (NG/L)	% RECOVERY	95% CONFIDENCE LIMITS (%)
NAPHTHALENE - D8	9.9	48	42-102
FLUORENE - D10	9.5	105	60-128
CHRYSENE - D12	9.8	42	10-54

12/10/86

ERT ANALYTICAL LABORATORY
SUMMARY OF ANALYTICAL RESULTS
QUALITY CONTROL CHECK SAMPLES
POLYAROMATIC HYDROCARBONS

FIELD ID:

ERT NO.: 40147

PARAMETERS	SPIKE LEVEL (NG/L)	% RECOVERY
NAPHTHALENE	110	39
FLUORENE	21	62
CHRYSENE	24	34
BENZO (G,H,I) PERYLENE	22	24
INDENE	25	30
QUINOLINE	24	47
BENZO (E) PYRENE	20	43
2-METHYLNAPHTHALENE	21	38
AVERAGE % RECOVERY		40

AVERAGE % RECOVERY TARGET RANGE = 20%-150%

GF 12/10/86

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