

PX 1529

MONSANTO COMPANY / DAYTON LABORATORY / DAYTON, OHIO 45407

ESC/DAYTON
(Department/Section)

ANALYTICAL
(Type of Report)

REPORT NO.: MDA-566

JOB/PROJECT NO.: 484.4390

DATE: 8 January 1985

PERIOD COVERED:

TITLE: Analyses of Wipes for 2,3,7,8-TCDD

AUTHORS: G. L. Thomas

ABSTRACT: Wipe samples from the Nitro plant were analyzed for possible concentrations of 2,3,7,8-TCDD. The results of these analyses are shown in this report.

TECHNICAL APPROVAL:

P. L. Sherman
P. L. Sherman
Sr. Research Group Leader

APPROVED BY:

R. F. Ivory
R. F. Ivory
Environmental Sciences Center
Service Project Manager

APPROVAL DATE:

1-8-85

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C11180
C11130

AUTHORS: G. L. Thomas
TITLE: ANALYSES OF WIPES FOR 2,3,7,8-TCDD

REPORT NO.: MDA-566

COPY NO.: 4

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1-2-85
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MONSANTO COMPANY / DAYTON LABORATORY / DAYTON, OHIO 45407

ESC/DAYTON
(Department/Section)

ANALYTICAL
(Type of Report)

REPORT NO.: MDA-570

JOB/PROJECT NO.: 484.4340

DATE: 18 January 1985

PERIOD COVERED:

TITLE: ANALYSIS OF WIPES FOR 2,3,7,8-TCDD

AUTHORS: R. W. Noble

ABSTRACT: Wipe samples from the Nitro Plant were analyzed for possible concentrations of 2,3,7,8-TCDD. The results of these analyses are shown in this report.

TECHNICAL APPROVAL:

P. L. Sherman / 1-17-85

P. L. Sherman
Sr. Research Group Leader

APPROVED BY:

R. F. Ivory

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Environmental Sciences Center
Service Project Manager

APPROVAL DATE:

1-17-85

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C10904

R. W. Noble
ANALYSIS OF WIPES FOR 2,3,7,8-TCDD

AUTHORS:
TITLE:

REPORT NO.: MDA-570
COPY NO.: 4

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ABSTRACT ONLY

H. A. Woltermann

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ACKNOWLEDGEMENT

Contributions of the following Dayton Laboratory personnel to this project are gratefully acknowledged:

Analyses: G. L. Thomas

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C11132

ANALYSIS REPORT FOR 2,3,7,8-TCDD IN NITRO SAMPLES

INTRODUCTION

On 27 Nov 84 eleven wipe samples were received for the analysis of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). For internal purposes, the samples were assigned MRC Log #1-84-11-27-01. The samples were analyzed according to the September 1983 EPA Region VII method "Determination of 2,3,7,8-TCDD in Soil and Sediment". For quality control purposes MRC Method #07-QAQC-R3 was followed. Briefly this method requires that for every set of samples of the same matrix type a replicate sample, a low (9.6 ng in this case) spiked sample, a high (96 ng in this case) spiked sample, and a method blank must be analyzed.

PREPARATION AND ANALYSIS (WIPES)

The wipes were spiked with 24.0 ng of carbon-13 labeled 2,3,7,8-TCDD and 9.6 ng of chlorine-37 labeled 2,3,7,8-TCDD. Then ten grams of washed anhydrous sodium sulfate was added and the samples were stirred, allowed to stand and stirred again. Samples were mixed again immediately prior to addition of extraction solvents. The extraction process involved the addition of 15 mL of methanol (all solvents are Burdick and Jackson "distilled in glass" grade), stirring and the subsequent addition of 150 mL of hexane. The samples were then shaken for one hour on a wrist action shaker and the extraction solvent removed. The solvent was then successively extracted with 50 mL of water, concentrated sulfuric acid (until clear), water, 20% potassium hydroxide and water. The hexane was then dried with 10 grams of anhydrous sodium sulfate. Each sample was then placed on the head of a mixed phase column consisting of (top to bottom) 2 g of silica, 4 g of silica plus 40% sulfuric acid, 1 g of silica, 2 g of silica plus 36% potassium hydroxide and 1 g of silica. The column was eluted directly onto a column containing 2.5 g of Woelm basic alumina. The alumina column was first eluted with 10 mL of 2% methylene chloride/hexane (v/v) and this fraction discarded. An additional elution was made with 15 mL of a 50% methylene chloride/hexane (v/v) solution to elute the TCDD off the column.

All samples had 50 uL of dodecane keeper added to them and then were concentrated under a gentle stream of nitrogen and submitted for GC/MS analysis. The GC/MS analyses were conducted on a Hewlett/Packard 5987 GC/MS instrument. The analysis was conducted using a 60 m SP2330 capillary column. The mass spectrometer was operated in the selected ion monitoring mode analyzing for ions characteristic of both the native (unlabeled) 2,3,7,8-TCDD (m/z 257,320,322), chlorine-37 labeled 2,3,7,8-TCDD (m/z 328), and carbon-13 labeled 2,3,7,8-TCDD (m/z 332,334).

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STANDARDS

Standard solutions were prepared from standards that had been cross validated with a standard provided as a check sample by the EPA. Concentration of the internal standard conformed to the levels specified by the method.

RESULTS

The results of the analyses are given in tables 1-3. The tables also give all pertinent QA/QC information.

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C11134

TECO DATA REPORT
MORGANTO COMPANY, DAYTON LABORATORY

DC COLUMB SP2700
OF NATIVE 1.914
OF SURROGATE 1.287

SAMPLE NUMBER	ELEM METHOD	CLEAN	NR TECO	D.L.	ANALYTICAL DATE	TIME	SUM		320	322	257	328+	332	334	%
							322	334							
01	J	BC	1.10	—	11/27	1631	.75	.81	97.	9748.	13006.	5718.	304793.	744028.	323984.
02	J	BC	.99	—	11/27	1631	.85	.78	98.	9958.	11749.	6709.	323444.	274021.	350377.
03	J	BC	.87	—	11/27	1711	.73	.85	102.	9924.	13521.	8333.	417910.	352124.	412631.
04	J	BC	.78	—	11/27	1734	.84	.81	96.	10119.	12107.	7351.	414253.	360867.	447126.
05	J	BC	.73	—	11/27	1754	.69	.82	98.	7850.	11350.	3405.	391320.	335085.	409731.
06	J	BC	1.84	—	11/27	1834	.85	.81	95.	21006.	24636.	11388.	360041.	314326.	390442.
07	J	BC	.96	—	11/27	1853	.85	.81	97.	12595.	14812.	8796.	420294.	362987.	449408.
08	J	BC	1.03	—	11/27	1913	.81	.80	96.	11422.	14072.	7241.	363177.	313714.	390643.
09	J	BC	.82	—	11/27	1933	.87	.81	96.	11325.	13044.	6678.	431972.	377533.	467478.
10	J	BC	.75	—	11/27	1953	.77	.80	96.	9381.	12118.	7398.	417418.	362765.	453825.
11	J	BC	.78	—	11/27	2033	.78	.79	96.	8505.	11472.	6819.	369120.	317922.	404090.
LOW SPIKE	J	BC	5.87	—	11/27	2053	.79	.83	112.	56951.	71786.	31878.	373563.	292007.	339968.
HIGH SPIKE	J	BC	70.82	—	11/27	2113	.81	.84	102.	653026.	802964.	300140.	317883.	265313.	317745.
0	J	BC	ND	.44	11/27	2133	.68	.80	101.	3780.	5394.	0.	321927.	265654.	321450.

+ CORRECTED FOR CONTRIBUTION BY NATIVE TECO (SUBTRACT .009 OF N/E 322)

NOTE CODES:

IX: ISOTOPE RATIO OUT OF ACCEPTABLE RANGE
Y: % ACCURACY OUT OF ACCEPTABLE RANGE

MB-METHOD BLANK
P-PARTIAL SCAN
R-SEPARATE WEIGHING AND WORKUP
D-REPLICATE (INTERLAB)
FB-FIELD BLANK

L-M-NATIVE TECO SPIKES
ND-NOT DETECTED
FL-DETECTION LIMIT
J-MR

FILENAME =TECO06

00006

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TABLE 2. CALIBRATION SUMMARY

ug/Kg NATIVE TCDD	RRF (NATIVE)	DATE	TIME	RRF (SURROGATE)
0.5010	1.0199	11/27	1551	1.318
5.010	0.8902	11/27	1611	1.224
50.10	0.8713	11/27	1814	1.238
1.2515	0.9030	11/27	2013	1.240
12.515	0.9096	11/27	2153	1.329
125.15	0.8882	11/27	2213	1.350

GTT2X

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C11136

TABLE 3. QUALITY CONTROL SUMMARY

ITEM	# DATA POINTS	MEAN $\pm$ S.D.
SURROGATE ACCURACY	14	98.7 $\pm$ 4.5
SPIKE RECOVERY	2	*

* Not technically correct to report recoveries for internal standard calculated results.

GTT3X

ALL INFORMATION CONTAINED
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DATE 06-11-2008 BY 60322
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C11137

DOCUMENTATION INVENTORY FORM

Monsanto Research Corporation
Dayton Laboratory

I. Sample Information

Sample Identification: Nitro

Number of Samples: 11

Analyte: 2, 3, 7, 8 - TCDD

Matrix: wipes

Method: Determination of 2,3,7,8-TCDD in soil and sediment

II. Documentation Control

	<u>Copies Attached</u>	<u>Initials</u>
(a) Sample Receipt Form	<u>✓</u>	<u>BHW</u>
(b) Internal Sample Tracking Form	<u>—</u>	<u>—</u>
(c) Sample Tags	<u>—</u>	<u>—</u>
(d) Airbill (Number <u>PE 0004877</u>) <u>PACKAGE EXPRESS</u>	<u>✓</u>	<u>BHW</u>
(e) Chain of Custody Form	<u>✓</u>	<u>BHW</u>
(f) Analysis Request (Log Number <u>1-84-11-27-00</u>)	<u>✓</u>	<u>BHW</u>
(g) Extraction/Preparation notebook pages (NBP) <u>2831613</u>	<u>✓</u>	<u>BHW</u>
(h) Analysis NBP <u>2273277</u>	<u>✓</u>	<u>BHW</u>
Instrument Logbook pages <u>156700</u>	<u>✓</u>	<u>BHW</u>
Computer Data Files hard copy output	<u>✓</u>	<u>BHW</u>
Chromatograms	<u>✓</u>	<u>BHW</u>
(i) Data Reduction NBP <u>2273277</u>	<u>✓</u>	<u>BHW</u>
(j) Final Report	<u>✓</u>	<u>BHW</u>
(k) Additional Documentation	<u>✓</u>	<u>BHW</u>

(note immediately upon acquisition)

Standards Preparation

NBP 2273264, 2273265

File Complete

Barbara M. Williams
(signature)

1-4-85

(date)

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C11138

Sample Receipt Form

Monsanto Research Corporation
Dayton Laboratory

Customer Identification: NITRO

MRC Log Number: 1.84.11.27.01

Airbill Number: PE 0004877

Date: 27 Nov 84

Sample Receipt Information:

				Initials
(a) Shipping Containers	<u>intact</u>	damaged (describe below)	No. <u>1</u>	<u>GT</u>
(b) Custody Seals	present	<u>absent</u> (describe sealing below)	intact	<u>GT</u>
(c) Chain of Custody Forms	<u>present</u>	absent	No. <u>2</u>	<u>GT</u>
(d) Sample Tags	<u>present</u>	absent	No. <u>11</u>	<u>GT</u>
(e) Sample Containers	<u>intact</u>	damaged (describe below)	No. <u>11</u>	<u>GT</u>
(f) Agreement of Sample Documentation	<u>yes</u>	no (describe discrepancies)		<u>GT</u>

Additional Description (if sample numbers not listed on chain of custody form, list here and contact SMO).

D) SEALED WITH PACKING TAPE.

Gary Thomas
(signature)

06010

011139

packageexpress

UNIFORM STRAIGHT BILL OF LADING - ORIGINAL NOT NEGOTIABLE

PAYMENT (CHECK ONE)
☒ PREPAID ☐ COLLECT ☐ THIRD PARTY ☐ CASH

TYPE OF SERVICE (CHECK ONE)
☐ LETTER ☐ AIR
☐ PAK

PE0004877

PACKAGE EXPRESS ACCOUNT NUMBER TO BE BILLED

DATE
7/21/74

☒ BOX OR TUBE ☐ GROUND

ORIG. AIRPORT

DEST. AIRPORT

FROM COMPANY NAME (CONSIGNOR)

ARMED & DANGEROUS

TO COMPANY NAME (RECIPIENT)

WILSON LAB

SATURDAY
DELIVERY
SERVICE
REQUESTED
☐

STREET ADDRESS

STREET ADDRESS

1515 ...

DB
☐

CITY

STATE

CITY

STATE

P.O. OR REFERENCE NO.

71-94300

ZIP CODE (REQUIRED)

01111

THIRD PARTY NAME AND ADDRESS

East ...

ZIP OR POSTAL CODE (REQUIRED)

...

SHIPPER'S SIGNATURE

X

COURIER GUARD SIGNATURE

X

ROUTE

DATE

TIME

AM
PM

NON-NEGOTIABLE BILL OF LADING SUBJECT TO
CONDITIONS OF CONTRACT SET FORTH ON RE-
VERSE SIDE OF SHIPPER'S COPY.

DESCRIPTION OF CONTENTS

1 SMALL PLASTIC CASE

PIECES

WEIGHT

DECLARED VALUE

DIMENSIONS

L W H

FREIGHT

ADV.

VALUATION

SPECIAL CHGS

CO AMOUNT

TOTAL CHARGES

PLEASE DO NOT ENTER ANY INFORMATION IN THE BLUE
SHADED AREAS. COMPLETE ALL OTHER INFORMATION.
SEE REVERSE SIDE OF COPY NO. 4 FOR INSTRUCTIONS.

MOUNTAIN STATE ENGINEERING SUPPLY

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00011

C11140

CHAIN OF CUSTODY RECORD

MRC JOB NUMBER _____

CUSTOMER REPRESENTATIVE Keith S. Miller

CONTRACT NUMBER _____

MRC CONTRACT MANAGER _____

PLANT NAME OR CODE MONSANTO - NITRO

MRC TEAM LEADER _____

(Specific information on samples is available on attached "Sample Identification Log")

Signatures		Date	Time	Remarks
Team Leader Verification of Collected Samples:				
Relinquished by: <u>KSmiller</u>	Received by:	<u>11/26/84</u>	<u>3:00pm</u>	
Relinquished by:	Received by: <u>Shut Center</u>	<u>11/26/84</u>	<u>7:30</u>	
Logged-in-by: <u>Ry W. Webb</u>				
Received for Analysis by:				
Method of Shipment:		Number of Containers:		

Special Instructions (Sample preservation, security, delivery to, etc.)

<u>Deliver to MONSANTO DAYTON Research Lab</u>	
<u>1515 Nicholas Rd</u>	
<u>Dayton, OH 45176</u>	

00012

011141

SAMPLE IDENTIFICATION LOG

MRC Job No. _____

Customer Representative K.S. Miller

Contract No. _____

MRC Contract Manager _____

Plant Name or Code Mojave - Nitro Team Leader

[illegible]

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00013

C11142

ANALYSIS REQUEST		DATE 27 Nov 84	LOG NO. 1-84-11-27-01	REPORT RESULTS TO: FILES / KULIKOV P. Sherman R. Noble R. Ivory
MONSANTO RESEARCH CORPORATION DAYTON LABORATORY		REQUESTER** N. Ivory	CHARGE NO.** 48443919	ANALYSIS REQUEST 1 FILES / mrc P. Sherman R. Noble G. Thomas
SAMPLE DESCRIPTION	NUMBER OF BOTTLES: 11	NUMBER OF SAMPLES ** 11		
#1 Blank #2 Dry Valve House #3 NE Wall 46-N #4 North Pillar 846N #5 S. DR. No. 46N #6 SE Corner 46-N #7 Main Room South Wall 46-N #8 Center Fire Wall 46N #9 East Fire Wall 46S #10 Center Fire Wall 2nd level 46S #11 Center Fire Wall 3rd level 46S				
RECORDED BY: R. V. N. 2/20				SAMPLES FOR: R. Noble SAMPLE LOCATION 2/20
REQUIRED ANALYSIS**				

TCDD

KNOWN HEALTH HAZARD PRESENTED BY SAMPLE: ** Possible Toxic Possible Carcinogen	ANALYTICAL TECHNIQUE ** ☐ GAS CHROMATOGRAPHY ☐ ULTRAVIOLET ☐ VISIBLE ☐ INFRARED ☐ EMISSION ☐ EDAX XRF ☐ MICROSCOPY ☐ OTHER _____ ☐ NMR ☐ HPLC ☐ XRD ☐ ICP ☐ ATOMIC ABSORPTION ☐ MASS SPEC ☒ GC/MS ☐ AUTO ANALYZER														
REFERENCE TO PREVIOUS WORK (REQUEST #, JOURNAL, ETC.) ** 	REQUIRED QA/QC MRC #07-444C-023 CONFIDENTIAL SUBJECT TO PROTECTIVE ORDER														
COMPLETION DATE _____ TIME ALLOTTED FOR ANALYSES <table style="width:100%; border-collapse: collapse;"> <tr> <th style="width:33%; text-align: left;">ANALYST</th> <th style="width:33%; text-align: left;">HOURS</th> <th style="width:33%; text-align: left;">INST. TIME</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>		ANALYST	HOURS	INST. TIME											
ANALYST	HOURS	INST. TIME													

**SAMPLE DISPOSAL: AFTER REPORT COMPLETE
 ☐ DISCARD
 ☐ RETURN
 HOLD FOR ☐ 30 DAYS
☒ 60 DAYS
 OTI

C111143

** THIS INFORMATION MUST BE SUPPLIED BY ANALYSIS REQUEST ORIGINATOR

Nº 2831613

SUBJECT

Nitro Wipes - Dioxin Analysis

JOB NO.

760.42 484.43919

PREPARED BY (SIGNATURE)

Benet Curtis

DATE

27 Nov 8

Date 26 Nov 84

Nitro Wipes

Log No.

Job No.

Data Sheet

weighed by

spiked by

B. R. Curtis

Code No.	Nitro ID	Am. L. weight	Actual wt.	Am. & Nitro Spiked	Co (✓)	CI (✓)	Comments
UT 3179	#1 Blank				✓	✓	
UT 3180	#2 Dry Valve house (79)				✓	✓	each sample received
UT 3181	#3 NE Wall 46-N				✓	✓	100µl of Internal Std
UT 3182	#4 North Pillar B46-N				✓	✓	0.24 µg/l / 0.1 µg/l
UT 3183	#5 S. Pillar 46-N				✓	✓	in iso-octane
UT 3184	#6 SE Corner 46-N				✓	✓	
UT 3185	#7 Main Room South wall 46-N				✓	✓	
UT 3186	#8 Center Fire Wall 46-N				✓	✓	
UT 3187	#9 East Fire Wall 46-S				✓	✓	
UT 3188	#10 Center Fire Wall 2nd level 46-S				✓	✓	
UT 3189	#11 Center Fire Wall 3rd level 46-S				✓	✓	
UT 3190	Lo spike			40 µl	✓	✓	Hi/La spiked with
UT 3191	Hi spike			400 µl	✓	✓	0.24 Nitro TCDD
UT 3192	Solvent Blank (ours)				✓	✓	in iso-octane

1) Samples were spiked and prepared in the manner described on page 283/610. They were worked up in Lab 29 and CSLI using the most recent standards.

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C11144

READ AND UNDERSTOOD BY

DATE

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On your files
nitro
dioxin

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ESC/DAYTON
(Department/Section)

ANALYTICAL
(Type of Report)

REPORT NO.: MDA-570

JOB/PROJECT NO.: 484.4340

DATE: 18 January 1985

PERIOD COVERED:

TITLE: ANALYSIS OF WIPES FOR 2,3,7,8-TCDD

AUTHORS: R. W. Noble

ABSTRACT: Wipe samples from the Nitro Plant were analyzed for possible concentrations of 2,3,7,8-TCDD. The results of these analyses are shown in this report.

TECHNICAL APPROVAL:

P. L. Sherman / H-2

P. L. Sherman
Sr. Research Group Leader

APPROVED BY:

R. F. Ivory

R. F. Ivory
Environmental Sciences Center
Service Project Manager

APPROVAL DATE:

1-17-85

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C10904

R. W. Noble
ANALYSIS OF WIPES FOR 2,3,7,8-TCDD

AUTHORS:
TITLE:

REPORT NO.: MDA-570

COPY NO.: 4

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ANALYSIS REPORT FOR 2,3,7,8-TCDD IN NITRO SAMPLES

INTRODUCTION

On 1 Nov 84 thirty-five wipe samples were received for the analysis of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). For internal purposes, the samples were assigned MRC Log #1-84-11-01-02. The samples were analyzed according to the September 1983 EPA Region VII method "Determination of 2,3,7,8-TCDD in Soil and Sediment". For quality control purposes MRC Method #07-QAQC-R3 was followed. Briefly this method requires that for every set of samples of the same matrix type a replicate sample, a low (9.6 ng in this case) spiked sample, a high (96 ng in this case) spiked sample, and a method blank must be analysed.

PREPARATION AND ANALYSIS (WIPES)

The wipes were spiked with 24.0 ng of carbon-13 labeled 2,3,7,8-TCDD and 9.6 ng of chlorine-37 labeled 2,3,7,8-TCDD. Then ten grams of washed anhydrous sodium sulfate was added and the samples were stirred, allowed to stand and stirred again. Samples were mixed again immediately prior to addition of extraction solvents. The extraction process involved the addition of 15 mL of methanol (all solvents are Burdick and Jackson "distilled in glass" grade), stirring and the subsequent addition of 150 mL of hexane. The samples were then shaken for one hour on a wrist action shaker and the extraction solvent removed. The solvent was then successively extracted with 50 mL of water, concentrated sulfuric acid (until clear), water, 20% potassium hydroxide and water. The hexane was then dried with 10 grams of anhydrous sodium sulfate. Each sample was then placed on the head of a mixed phase column consisting of (top to bottom) 2 g of silica, 4 g of silica plus 40% sulfuric acid, 1 g of silica, 2 g of silica plus 36% potassium hydroxide and 1 g of silica. The column was eluted directly onto a column containing 2.5 g of Woelm basic alumina. The alumina column was first eluted with 10 mL of 2% methylene chloride/hexane (v/v) and this fraction discarded. An additional elution was made with 15 mL of a 50% methylene chloride/hexane (v/v) solution to elute the TCDD off the column.

All samples had 50 uL of dodecane keeper added to them and then were concentrated under a gentle stream of nitrogen and submitted for GC/MS analysis. The GC/MS analyses were conducted on a Hewlett/Packard 5987 GC/MS instrument. The analysis was conducted using a 60 m SP2330 capillary column. The mass spectrometer was operated in the selected ion monitoring mode analyzing for ions characteristic of both the native (unlabeled) 2,3,7,8-TCDD (m/z 257,320,322), chlorine-37 labeled 2,3,7,8-TCDD (m/z 328), and carbon-13 labeled 2,3,7,8-TCDD (m/z 332,334).

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STANDARDS

Standard solutions were prepared from standards that had been cross validated with a standard provided as a check sample by the EPA. Concentration of the internal standard conformed to the levels specified by the method.

RESULTS

The results of the analyses are given in tables 1-3. The tables also give all pertinent QA/QC information.

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C10908

TCDD DATA REPORT
MONSANTO COMPANY, DAYTON LABORATORY

TABLE 1

GC COLUMN: SP2300
RF NATIVE: .973
RF SURROGATE: 1.326

SAMPLE NUMBER	EXTR MTHD	CLEAN	GRAMS		PPB TCDD	D.L.	ANALYTICAL		320		332		SURR Y		320	322	257	328+	332	334	W
			MET	WGT			DATE	TIME	322	334	ATC	320	322	257							
LANDFILL 1A	J	BC	10.410	ND	.14	11/05	0100	.88	.81	99.		9308.	10543.	6421.	198278.	160080.	197544.				
LANDFILL 1B	J	BC	10.210	7.31	—	11/05	0120	.82	.79	100.		271699.	331687.	157982.	110569.	91898.	115793.				
LANDFILL 1B L	J	BC	11.270	9.87	—	11/05	0140	.83	.80	96.		598907.	721294.	318020.	153155.	136036.	169062.				
LANDFILL 1C	J	BC	10.020	1.62	—	11/05	0200	.81	.81	97.		97976.	120374.	55704.	178082.	155214.	190628.				
LANDFILL 1C R	J	BC	10.630	2.23	—	11/05	0220	.80	.82	98.		114939.	143415.	64206.	145743.	126212.	153195.				
LANDFILL 2	J	BC	10.250	.28	—	11/05	0305	.76	.81	99.		15714.	20590.	12100.	169523.	143702.	177596.				
LANDFILL 2 H	J	BC	10.410	9.19	—	11/05	0325	.81	.84	101.		414889.	512623.	218527.	133019.	113409.	135802.				
LANDFILL 3A	J	BC	9.960	.14	—	11/05	0345	.73	.81	101.		7138.	9792.	5905.	149050.	124292.	153953.				
LANDFILL 3A R	J	BC	10.150	.14	—	11/05	0405	.86	.87	99.		7014.	8151.	4040.	145384.	125136.	151916.				
LANDFILL 3B	J	BC	10.310	.23	—	11/05	0425	.81	.82	101.		11163.	13823.	10304.	145443.	122432.	148931.				
LANDFILL 3C	J	BC	10.770	.63	—	11/05	0510	.76	.83	107.		27784.	34250.	17421.	104397.	83700.	100360.				
LANDFILL 3C L	J	BC	10.560	1.20	—	11/05	0529	.79	.83	102.		59021.	74343.	34156.	144212.	122225.	147721.				
LANDFILL 4A	J	BC	10.400	ND	.13	11/05	0549	1.24	.83	102.		8896.	7064.	8719.	164274.	137753.	166849.				
LANDFILL 4R	J	BC	10.290	ND	.17	11/05	0609	1.18	.82	96.		9448.	7995.	0.	132433.	117207.	142756.				
LANDFILL 4B H	J	BC	11.020	9.41	—	11/05	0629	.83	.83	104.		513920.	618539.	290935.	154220.	177707.	152945.				
LANDFILL 4C	J	BC	11.540	.16	—	11/05	0714	.76	.84	112.		8990.	11831.	7781.	169937.	130522.	153119.				
LANDFILL 5A	J	BC	10.110	ND	.08	11/05	0734	1.10	.85	112.		7967.	7715.	0.	286390.	221556.	260291.				
LANDFILL 5B	J	BC	10.610	ND	.09	11/05	0754	.90	.84	105.		8272.	9185.	0.	258033.	212449.	251975.				
LANDFILL 6A	J	BC	10.050	ND	.09	11/05	0815	.72	.84	110.		5359.	7441.	0.	212569.	166153.	198014.				
BLANK	J	BC	10.000	ND	.06	11/05	0825	1.14	.83	103.		4901.	4314.	0.	233638.	193055.	222916.				

+ CORRECTED FOR CONTRIBUTION BY NATIVE TCDD (SUBTRACT .009 OF N/E 322)

NOTE CODES:

X: ISOTOPE RATIO OUT OF ACCEPTABLE RANGE
Y: % ACCURACY OUT OF ACCEPTABLE RANGE

MB=METHOD BLANK
P=PARTIAL SCAN
R=SEPARATE WEIGHING AND WORKUP
D=DUPLICATE (INTERLAB)
FB=FIELD BLANK

L=NATIVE TCDD SPIKES
ND=NOT DETECTED
DL=DETECTION LIMIT
J=JAR

FILENAME =TCDD02

CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

00006

C10909

TCDD DATA REPORT
MESA-ANTO COMPANY - DAYTON LABORATORY

GC COLUMN: SP2100
RF NATIVE: .725
RF SURROGATE: 1.023

TABLE 1 (CONT)

SAMPLE ID/REF	EXTR MTHD	CLEAN	GRAMS NET WGHT	PPR TCDD	D.L.	ANALYTICAL DATE	TIME	320 322	332 334	% ACC	320	322	327	328+	332	334	N
ANOFILL 68	J	BC	10.680	.11	—	11/05	1802	.81	.79	94.	2779.	2820.	2701.	55295.	63403.	80794.	
ANOFILL 68 H	J	BC	10.710	8.19	—	11/05	1827	.73	.80	90.	182902.	252199.	84382.	58406.	70261.	87733.	
ANOFILL 7A	J	BC	10.740	.11	—	11/05	1848	.84	.78	93.	2779.	3319.	2556.	63706.	73302.	93511.	
ANOFILL 7B	J	BC	10.250	ND	.10	11/05	1908	.84	.77	94.	2258.	2693.	0.	58432.	65867.	85687.	
ANOFILL 7B L	J	BC	10.590	.94	—	11/05	1928	.73	.77	97.	19379.	26564.	9399.	58260.	67820.	87475.	
ANOFILL 7C	J	BC	10.820	1.76	—	11/05	2009	.70	.77	102.	29827.	42418.	14043.	50349.	52525.	68411.	
NITRO SITE 1A	J	BC	10.610	.14	—	11/05	2029	.84	.78	98.	3061.	3627.	3137.	57441.	65114.	83298.	
NITRO SITE 1AR	J	BC	10.350	ND	.12	11/05	2049	.87	.81	98.	2671.	3072.	0.	57699.	63750.	79259.	
NITRO SITE 1B	J	BC	11.410	ND	.48	11/05	2109	.85	.76	107.	2516.	2960.	0.	14045.	13570.	18171.	
NITRO SITE 1BA	J	BC	9.950	9.28	—	11/05	2130	.75	.81	99.	63480.	84734.	28852.	20720.	22306.	28324.	
NITRO SITE 1C	J	BC	11.040	ND	.34	11/05	2210	.82	.77	96.	2819.	3438.	0.	20721.	22895.	29628.	
NITRO SITE 2	J	BC	10.400	ND	.46	11/05	2230	.81	.82	107.	2581.	3190.	0.	16760.	17278.	21013.	
NITRO SITE 2L	J	BC	11.110	1.52	—	11/05	2251	.78	.84	115.	4469.	5694.	3370.	8790.	8725.	10428.	
NITRO SITE 3A	J	BC	11.030	ND	.13	11/05	2311	.71	.78	122.	3100.	4355.	0.	79913.	70151.	90422.	
NITRO SITE 3B	J	BC	10.320	.14	—	11/05	2331	.76	.79	104.	3550.	4463.	2476.	75712.	78872.	99650.	
NITRO SITE 4	J	BC	11.660	ND	.09	11/05	0158	.83	.80	110.	2164.	2599.	0.	64856.	65753.	82695.	
NITRO SITE 4R	J	BC	10.980	ND	.04	11/05	0218	0.00	.80	110.	0.	2175.	0.	64859.	65753.	82695.	
NITRO SITE 5A	J	BC	11.560	.91	—	11/05	0239	.72	.78	102.	19078.	26403.	8419.	57525.	60593.	77450.	
NITRO SITE 5B	J	BC	11.530	.74	—	11/05	0259	.77	.73	103.	19325.	25090.	8327.	69985.	72387.	93277.	
NITRO SITE 5C	J	BC	10.290	.47	—	11/05	0319	.81	.79	106.	10611.	13085.	5434.	67502.	68351.	87047.	
NITRO SITE 6	J	BC	10.430	10.34	—	11/05	0405	.75	.79	111.	240370.	320370.	92691.	75223.	73061.	92481.	
NITRO SITE 7	J	BC	10.300	ND	.67	11/05	0425	.67	.74	97.	5078.	7535.	0.	73110.	24631.	33494.	
NITRO SITE 8	J	BC	11.060	ND	20.9	11/05	0445	0.00	.81	147.	0.	36039.	3956.	2997.	2230.	2745.	IV
FB	J	BC	10.000	ND	.03	11/05	0505	####	.78	110.	0.	0.	0.	71800.	69795.	89619.	I

* CORRECTED FOR CONTRIBUTION BY NATIVE TCDD (SUBTRACT .009 OF M/E 322)

NOTE CODES:

X: ISOTOPE RATIO OUT OF ACCEPTABLE RANGE
Y: % ACCURACY OUT OF ACCEPTABLE RANGE

ME=METHOD BLANK
P=PARTIAL SCAN
R=SEPARATE WEIGHING AND WORKUP
D=DUPLICATE (INTERLAB)
FB=FIELD BLANK

L=NONATIVE TCDD SPIKES
ND=NOT DETECTED
DL=DETECTION LIMIT
J=JAR

FILENAME =TCDD03

CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

06.06.77

C10910

TCDD DATA REPORT
MVASANTO COMPANY, MAYTON LABORATORY

GC COLUMN: SP2301
RF NATIVE: .721
RF SURROGATE: .924

TABLE 1 (cont)

SAMPLE NUMBER	EXTR MTHD	CLEAN	GRAMS		PPB TCDD	D.L.	ANALYTICAL		320		332		SURR Z		320	322	257	328+	332	334	Y
			NET WGT				DATE	TIME	322	334	ACC										
NITRO 89	J	BC	10.430	.84	—	11/9	1431	.82	.75	108.	1372.	1645.	1531.	4764.	5115.	6860.					
NITRO 810	J	BC	10.500	ND	.98	11/9	1452	****	.87	127.	0.	0.	0.	2356.	2334.	2698.	Y				
NITRO 810 L	J	BC	10.200	1.72	—	11/9	1512	.76	.76	78.	2053.	2688.	1913.	2681.	4030.	5315.					
NITRO 811	J	BC	10.570	3.70	—	11/9	1532	.71	.75	86.	48191.	67584.	22778.	32714.	44181.	52577.					
NITRO 812	J	BC	9.850	.89	—	11/9	1553	.87	.82	113.	8174.	9422.	6420.	29160.	31487.	32016.					
NITRO 812 H	J	BC	9.830	11.25	—	11/9	1635	.76	.78	98.	22410.	29318.	11939.	5844.	7104.	9109.					
NITRO 813	J	BC	10.840	.22	—	11/9	1657	.68	.82	108.	2051.	3030.	2613.	29983.	33996.	41333.					
NITRO 813 R	J	BC	10.500	.23	—	11/9	1737	.68	.82	108.	1814.	2651.	2243.	25970.	29287.	35794.					
NR	J	BC	10.000	ND	.07	11/9	1717	****	.79	108.	0.	0.	0.	29767.	32990.	41748.	Y				

+ CORRECTED FOR CONTRIBUTION BY NATIVE TCDD (SUBTRACT .009 OF N/E 322)

NOTE CODES:

X: ISOTOPE RATIO OUT OF ACCEPTABLE RANGE
Y: Z ACCURACY OUT OF ACCEPTABLE RANGE

B=BLANK
P=PARTIAL SCAN
R=SEPARATE WEIGHING AND WORKUP
D=DUPLICATE (INTERLAB)
F=FIELD BLANK

L=LABORATORY TCDD SPIKES
ND=NOT DETECTED
DL=DETECTION LIMIT
J=JULY

FILENAME =TCDD04

CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

06.000

C10911

TABLE 2. CALIBRATION SUMMARY

ug/Kg NATIVE TCDD	RRF (NATIVE)	DATE	TIME	RRF (SURROGATE)
.501	.836	11/9	13.51	.925
5.01	.662	11/9	14.11	.884
50.01	.703	11/9	16.14	.940
1.25	.729	11/9	17.58	.951
12.5	.721	11/9	18.19	.952
125.0	.677	11/9	18.39	.901
.501	1.11	11/5	00.38	1.27
5.01	.909	11/5	02.43	1.29
50.01	.944	11/5	04.47	1.40
1.25	1.04	11/5	06.52	1.37
12.5	.923	11/5	08.55	1.29
125.0	.923	11/5	09.15	1.32

00009

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SUBJECT TO PROTECTIVE ORDER

C10912

TABLE 3. QUALITY CONTROL SUMMARY

ITEM	# DATA POINTS	MEAN + S.D.
SURROGATE ACCURACY	35	105 10.8
SPIKE RECOVERY	10	*

* Not technically correct to report recoveries for
internal standard calculated results.

GTT3:GT

00010
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SUBJECT TO PROTECTIVE ORDER

C10913

DOCUMENTATION INVENTORY FORM

Monsanto Research Corporation
Dayton Laboratory

I. Sample Information

Sample Identification: NITRO

Number of Samples: 35

Analyte: 2,3,7,8 TCDD

Matrix: W_{air}

Method: DETERMINATION OF 2,3,7,8 TCDD IN SOIL + Sediment

II. Documentation Control

	<u>Copies Attached</u>	<u>Initials</u>
(a) Sample Receipt Form	<u>✓</u>	<u>RWN</u>
(b) Internal Sample Tracking Form	<u>-</u>	<u>RWN</u>
(c) Sample Tags	<u>-</u>	<u>RWN</u>
(d) Airbill (Number <u>-</u>)	<u>-</u>	<u>RWN</u>
(e) Chain of Custody Form	<u>✓</u>	<u>RWN</u>
(f) Analysis Request (Log Number <u>1-94-11-01-82</u>)	<u>✓</u>	<u>RWN</u>
(g) Extraction/Preparation notebook pages (NBP) <u>2831824-6</u> ^{RWN}	<u>✓</u>	<u>RWN</u>
(h) Analysis NBP <u>2637230-2</u>	<u>✓</u>	<u>RWN</u>
Instrument Logbook pages <u>1518142</u> <u>1518142-1518142</u>	<u>✓</u>	<u>RWN</u>
Computer Data Files hard copy output	<u>✓</u>	<u>RWN</u>
Chromatograms	<u>✓</u>	<u>RWN</u>
(i) Data Reduction NBP <u>see analysis NBP</u>	<u>✓</u>	<u>RWN</u>
(j) Final Report	<u>✓</u>	<u>RWN</u>
(k) Additional Documentation	<u>✓</u>	<u>RWN</u>

(note immediately upon acquisition)

File Complete

R. W. Noble
(signature)

00011
CONFIDENTIAL

10 Jan 85
(date)

SUBJECT TO PROTECTIVE ORDER

C10914

Sample Receipt Form

Monsanto Research Corporation
Dayton Laboratory

Customer Identification: NITRO
MRC Log Number: 1-84-11-01-02
Airbill Number: —
Date: 1 Nov. 84

Sample Receipt Information:

				Initials
(a) Shipping Containers	intact	damaged (describe below)	No. <u>2</u>	<u>RWN</u>
(b) Custody Seals	present	<u>absent</u> (describe sealing below)	intact <u>—</u>	<u>RWN</u>
(c) Chain of Custody Forms	<u>present</u>	absent	No. <u>3</u>	<u>RWN</u>
(d) Sample Tags	<u>present</u>	absent	No. <u>25</u>	<u>RWN</u>
(e) Sample Containers	<u>intact</u>	damaged (describe below)	No. <u>5</u>	<u>RWN</u>
(f) Agreement of Sample Documentation	<u>yes</u>	no (describe discrepancies)		<u>RWN</u>

Additional Description (if sample numbers not listed on chain of custody form, list here and contact SMO).

⑤ sealed with sealing Tape

00012

Ry W. Nite
(Signature)

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SUBJECT TO PROTECTIVE ORDER

C10915

MRC JOB NUMBER _____

CUSTOMER REPRESENTATIVE Mark Townsend

CONTRACT NUMBER _____

MRC CONTRACT MANAGER _____

PLANT NAME OR CODE Monsanto - Nitro

MRC TEAM LEADER _____

(Specific information on samples is available on attached "Sample Identification Log")

Signatures	Date	Time	Remarks
Team Leader Verification of Collected Samples:			
Relinquished by: <u>M. Townsend</u>	Received by:	<u>10/30/91</u>	<u>10:45</u>
Relinquished by:	Received by: <u>R. W. Nelson</u>	<u>10/31/91</u>	<u>230</u>
Logged-in-by:			
Received for Analysis by:			
Method of Shipment:	Number of Containers:		

Special Instructions (Sample preservation, security, delivery to, etc.)

CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

10013

C10916

10/30/44

Customer Representative Mark T. WENSE, IV

MRC Contract Manager _____

Team Leader _____

By W. 92566

SAMPLE IDENTIFICATION LOG

MRC Job No. _____

Customer Representative Mark Townsend 12/30/84

Contract No. _____

MRC Contract Manager _____

Plant Name or Code NITRO

Team Leader _____

Sampling Location	Run Number	Date Sampled	Type of Sample & No. of Containers	Analysis Required	Sample recovered By (Initials) and Comments
2			QD NITRO SOIL 1	2,3,7,8	
4			"	"	
13			"		
5C			"		
5A			"		
9			"		
6			"		
8			"		
13			"		
11			"		
10			"		
12			"		
3B			"		
1A			"		
5B			"		
7			"		
1C			"		
3A			"		
			18		

~~CONFIDENTIAL~~
SUBJECT TO PROTECTIVE ORDER

Roy W. Noto
31 Oct 84 C10918

484.4340

ANALYSIS REQUEST		DATE 1/1/84	LOG NO. 1-5741-11-11-10	REPORT RESUL FILES/KULIK
MONSANTO RESEARCH CORPORATION DAYTON LABORATORY		REQUESTER** P. J. H. / H. H.		CHARGE NO.** 34874240
SAMPLE DESCRIPTION	NUMBER OF BOTTLES: 35	NUMBER OF SAMPLES ** 35		
2 8 5B 1A 2				ANALYSIS REQ FILES/M... P. Sherr R. Nels P. Ivry G. Th... SAMPLES FOR R. Nels SAMPLE LOCA 2/12
4 1B 7 1B 7A				
13 11 1C 4B 4A				
5C 10 3A 5B 3A				
5A 12 6B 1C 7B				
9 3B 7C 6A 4C				
6 1A 3C 5A 3B				
RECORDED BY: P. J. H. / H. H.				
REQUIRED ANALYSIS**				

2378-T(100)

KNOWN HEALTH HAZARD PRESENTED BY SAMPLE: ** Possible Toxic Possible Corrosive			ANALYTICAL TECHNIQUE **	
REFERENCE TO PREVIOUS WORK (REQUEST #, JOURNAL, ETC.) **			☐ GAS CHROMATOGRAPHY ☐ NMR ☐ ULTRAVIOLET ☐ HPLC ☐ VISIBLE ☐ XRD ☐ INFRARED ☐ ICP ☐ EMISSION ☐ ATOMIC ABSORPT ☐ EDAX XRF ☐ MASS SPEC ☐ MICROSCOPY ☒ GC/MS ☐ OTHER _____ ☐ AUTO ANALYZER	
COMPLETION DATE _____			QUAL. _____ SEMIQUANT. _____ QUANT. ☒	
TIME ALLOTTED FOR ANALYSES			REQUIRED QA/QC	
ANALYST	HOURS	INST. TIME	M. R. H. / H. H.	
CONFIDENTIAL SUBJECT TO PROTECTIVE ORDER C10919				
**SAMPLE DISPOSAL: AFTER REPORT COMPLETE ☐ DISCARD ☐ RETURN HOLD FOR ☐ 30 DAYS ☒ 60 DAYS				
** THIS INFORMATION MUST BE SUPPLIED BY ANALYSIS REQUEST ORIGINATOR				

SUBJECT

Nitro Soils - Landfill site

JOB NO.

484,4340

PREPARED BY (SIGNATURE)

Benet Curtis

DATE

20 Nov 8

Date 1 Nov 84

Nitro Soils - Landfill

Log No.

Job No.

Data Sheet

weighed by Benet Curtis

spiked by Benet Curtis

Code No.				Am't. w weigh	Actual wt.	Am't. Spiked	Actual Active	Gas (%)	CI (%)	Comments
UT 3041	1A			10.09g	10.41			✓	✓	
42	1B				10.21			✓	✓	each sample received
43	1B	Lo Spike			11.27	40µl		✓	✓	100µl of internal std.
44	1C				10.02			✓	✓	2µl C / 1 C?
45	1C	Replicate			10.63			✓	✓	
46	2				10.25			✓	✓	
47	2	Hi spike			10.41	400µl		✓	✓	
48	3A				9.96			✓	✓	
49	3A	Replicate			10.15			✓	✓	
50	3B				10.31			✓	✓	
51	3C				10.77			✓	✓	
52	3C	Lo Spike			10.56	40µl		✓	✓	
53	4A				10.40			✓	✓	
54	4B				10.29			✓	✓	
55	4B	Hi Spike			11.02	400µl		✓	✓	
56	4C				11.54			✓	✓	
57	5A				10.11			✓	✓	
58	5B				10.61			✓	✓	
59	1A				10.05			✓	✓	
UT 3073	Master Blank							✓	✓	

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SUBJECT TO PROTECTIVE ORDER.

C10920

00017

READ AND UNDERSTOOD BY

Sam Thomas

DATE

10 JAN 8

MONSANTO COMPANY

Nº 2831625

SUBJECT

Nitro Soils - Landfill + Nitro Site Samples

JOB NO.

484.4340

PREPARED BY (SIGNATURE)

Benet R. Curtis

DATE

20 Nov 84

Date 11/4/84

Log No.

Job No.

484.4340 484.4340 Data Sheet

weighed by C. Koutantinos

Spiked by C. Koutantinos

Code No.				Amt. to weigh	Actual wt.	Amt of Native Spiked	Co (✓)	Cl (✓)	Comments
UT 3074	6B			10.0 gm	10.68				
75	6B	High Spike			10.71	100 µl			100 sample same spiked with
76	7A				10.79				24 "C/I" "C/I-THD
77	7B				10.35				µl at 100 µl
78	7B	Low Spike			10.59	40 µl			
79	7C				10.82				LANDFILL site ↑
80	1A				10.61				NITRO SITE ↓
81	1A	Replicate			10.35				
82	1B				11.41				
83	1B	High Spike			9.95	400 µl			
84	1C				11.04				
85	2				10.40				
86	2	Low Spike			11.11	40 µl			
87	3A				11.03				
88	3B				10.32				
89	4				11.66				
90	4	Replicate			10.98				
91	5A				11.56				
92	5B				11.53				
93	5C				10.29				
94	6				10.43				
95	7				10.30				
96	8				10.06				
97	Method	Blank							

CONFIDENTIAL

SUBJECT TO PROTECTIVE ORDER

C10921

00018

READ AND UNDERSTOOD BY

Darryl Thomas

DATE

10 JAN 85

Nº 2831626

SUBJECT

ST Nitro Soils - Nitro Site

JOB NO.

484.4340

PREPARED BY (SIGNATURE)

PREPARED BY (SIGNATURE)
Benet R. Curtis

DATE _____

20 Nov 84

Date 7 Nov 84

Nitro location Soils

Log No. _____
Site No. 484, 4340

Data Sheet

weighed by Benet Curtis

spiked by Beneft Curtis

[illegible]

~~CONFIDENTIAL~~

SUBJECT TO PROTECTIVE ORDER

C10922

00049

READ AND UNDERSTOOD BY

DATE _____

Dany Thomas

10 JAN 85

MONSANTO COMPANY

Nº 2637230

SUBJECT

Nitr. Soil

JOB NO.

760.18-503

PREPARED BY (SIGNATURE)

R. W. Nabe

DATE

10 Jan 84

TCD DATA REPORT
MONSANTO COMPANY, DAYTON LABORATORY

TABLE 1

GC COLUMN: 97203
RF: NATIVE: .973
RF: SUBSTRATE: 1.326

SAMPLE NUMBER	EXTR METHOD	CLEAN	DRUGS		PPR TCD	D.L.	DATE	TIME	SURF											
			NET	WGT					320	322	324	326	328	330	332	334	336	338	340	342
LACOFILL 1A	J	BC	10.810	ND	—	.18	11/05	0100	.88	.81	99.	9398.	10543.	6421.	198778.	140080.	197566.	1		
LACOFILL 1B	J	BC	10.210	7.31	—	—	11/05	0120	.82	.79	100.	271699.	231687.	157892.	110569.	91898.	115793.	1		
LACOFILL 1B L	J	BC	11.270	9.87	—	—	11/05	0140	.83	.80	96.	598907.	721794.	318020.	153153.	136036.	149042.	1		
LACOFILL 1C	J	BC	10.020	1.62	—	—	11/05	0200	.81	.81	97.	97976.	120374.	25704.	179082.	153214.	196428.	1		
LACOFILL 1C H	J	BC	10.630	2.23	—	—	11/05	0220	.80	.82	98.	114939.	143415.	64206.	147421.	126212.	153195.	1		
LACOFILL 2	J	BC	10.250	.78	—	—	11/05	0245	.76	.81	99.	15714.	20590.	12100.	169523.	145709.	177956.	1		
LACOFILL 2 H	J	BC	10.810	9.19	—	—	11/05	0325	.81	.84	101.	414989.	512623.	218527.	130019.	113409.	135902.	1		
LACOFILL 3A	J	BC	9.940	.14	—	—	11/05	0345	.73	.81	101.	7138.	9792.	5905.	149050.	124392.	153953.	1		
LACOFILL 3A H	J	BC	10.150	.14	—	—	11/05	0405	.86	.82	99.	7014.	8151.	4040.	145364.	125136.	151916.	1		
LACOFILL 7B	J	BC	10.310	.23	—	—	11/05	0425	.81	.82	101.	11163.	13823.	10904.	145463.	122432.	148923.	1		
LACOFILL 3C	J	BC	10.770	.83	—	—	11/05	0510	.76	.83	107.	27784.	36350.	17421.	104397.	83760.	100360.	1		
LACOFILL 3C L	J	BC	10.560	1.20	—	—	11/05	0529	.79	.83	102.	59021.	74343.	34156.	144212.	125725.	147721.	1		
LACOFILL 4A	J	BC	10.400	ND	—	.13	11/05	0549	1.26	.83	102.	8894.	7064.	8719.	164774.	137723.	142449.	1		
LACOFILL 4B	J	BC	10.790	ND	—	.17	11/05	0609	1.18	.82	96.	9468.	7995.	0.	132431.	117207.	142756.	1		
LACOFILL 4B H	J	BC	11.020	9.41	—	—	11/05	0629	.83	.83	104.	512920.	618539.	290925.	154720.	177707.	157045.	1		
LACOFILL 4C	J	BC	11.540	.16	—	—	11/05	0714	.76	.84	112.	8990.	11831.	7781.	169937.	139722.	155119.	1		
LACOFILL 5A	J	BC	10.110	ND	—	.08	11/05	0734	1.10	.85	112.	7967.	7215.	0.	296390.	221554.	260791.	1		
LACOFILL 5B	J	BC	10.610	ND	—	.09	11/05	0754	.90	.84	105.	8772.	9185.	0.	258033.	212448.	251975.	1		
LACOFILL 6A	J	BC	10.050	ND	—	.09	11/05	0815	.72	.84	110.	5239.	7441.	0.	212569.	166151.	198016.	1		
BLANK	J	BC	10.000	ND	—	.06	11/05	0825	1.14	.83	103.	4901.	4314.	0.	233438.	193055.	229116.	1		

* CORRECTED FOR CONTRIBUTION BY NATIVE TCD (SUBTRACT .009 OF R/E 322)

NOTE CODES:

R: ISOTOPE RATIO OUT OF ACCEPTABLE RANGE

Y: % ACCURACY OUT OF ACCEPTABLE RANGE

METHODS PLAN

P: PARTIAL SCAN

W: SEPARATE WEIGHING AND MIXING

T: DUPLICATE (INTERPLAN)

F: FIELD PLAN

L: NATIVE TCD SPIKES

N: NOT DETECTED

D: DETECTION LIMIT

J: JUDG

FILENAME: ATCD002

CONFIDENTIAL

SUBJECT TO PROTECTIVE ORDER C10923

00020

READ AND UNDERSTOOD BY

DATE

MONSANTO COMPANY

Nº 2637231

SUBJECT

R Nitro Soil

JOB NO.

710.18-502

PREPARED BY (SIGNATURE)

R. W. Webb

DATE

10 Jan

TCD DATA REPORT
MONSANTO COMPANY, DAYTON LABORATORYNO. COLUMNS 32
NO. DETECTORS 12
NO. SUBROUTINES 1,023

Table 1. CONTINUED

SAMPLE NUMBER	EXTR MTHD	GRAVS NET CLEAN WEIGHT	WTR TCD	D.L.	ANALYTICAL DATE	TIME	370 372	332 334	SUM %	320	322	327	329	332	334	336
ACIFILL 70	J	BC	10.680	.11	11/05	1902	.81	.79	94.	2279.	2820.	2201.	2272.	4340.	8079.	
ACIFILL 6A M	J	BC	10.710	8.19	11/05	1927	.73	.80	90.	182902.	257199.	84382.	28494.	70241.	87733.	
ACIFILL 7A	J	BC	10.740	.11	11/05	1848	.84	.78	93.	2779.	3319.	2256.	63706.	73002.	70311.	
ACIFILL 7B	J	BC	10.350	ND	11/05	1908	.84	.77	94.	2258.	2493.	0.	18472.	65269.	80487.	
ACIFILL 7B L	J	BC	10.590	.94	11/05	1928	.73	.77	97.	19379.	24504.	9799.	58245.	58700.	80495.	
ACIFILL 7C	J	BC	10.820	1.76	11/05	2009	.70	.77	102.	29827.	42818.	14547.	52549.	52025.	48411.	
NITRO SITE 1A	J	BC	10.410	.14	11/05	2029	.84	.79	98.	3061.	3627.	3137.	59441.	62114.	83278.	
NITRO SITE 10A	J	BC	10.320	ND	11/05	2049	.87	.81	98.	2473.	3072.	0.	57499.	43724.	79259.	
NITRO SITE 1B	J	BC	11.410	ND	11/05	2109	.85	.74	107.	2516.	2940.	0.	14043.	13970.	18171.	
NITRO SITE 10M	J	BC	9.950	9.20	11/05	2130	.75	.81	99.	63490.	84734.	28222.	20721.	22004.	28204.	
NITRO SITE 1C	J	BC	11.040	ND	11/05	2210	.82	.77	96.	2819.	3436.	0.	20721.	22872.	79428.	
NITRO SITE 2	J	BC	10.400	ND	11/05	2230	.81	.82	107.	2581.	3190.	0.	16740.	17774.	21013.	
NITRO SITE 2L	J	BC	11.110	1.52	11/05	2251	.78	.84	115.	4449.	5494.	3370.	8990.	8725.	10428.	
NITRO SITE 3A	J	BC	11.030	ND	11/05	2311	.71	.78	122.	3100.	4355.	0.	79913.	70151.	90422.	
NITRO SITE 3B	J	BC	10.320	.14	11/05	2331	.74	.79	106.	3270.	4563.	2476.	75712.	78572.	99450.	
NITRO SITE 4	J	BC	11.660	ND	11/05	0158	.83	.80	110.	2164.	2599.	0.	64824.	65773.	80495.	
NITRO SITE 4A	J	BC	10.990	ND	11/05	0218	0.00	.80	110.	0.	2195.	0.	64459.	65773.	80495.	
NITRO SITE 5A	J	BC	11.560	.91	11/05	0239	.72	.78	107.	19078.	26403.	8419.	57523.	60573.	77430.	
NITRO SITE 7B	J	BC	11.230	.74	11/05	0259	.77	.79	103.	19705.	25090.	8127.	49985.	77357.	93277.	
NITRO SITE 5C	J	BC	10.290	.87	11/05	0319	.81	.79	104.	10611.	13985.	2434.	47902.	48251.	87047.	
NITRO SITE 6	J	BC	10.430	10.34	11/05	0405	.75	.79	111.	249700.	320370.	97691.	77223.	77061.	92481.	
NITRO SITE 7	J	BC	10.300	ND	11/05	0425	.67	.74	97.	5078.	7535.	0.	23110.	24431.	30494.	
NITRO SITE 8	J	BC	11.040	ND	11/05	0445	0.00	.81	147.	0.	36079.	3754.	2997.	7730.	2745.	37
FB	J	BC	10.000	ND	11/05	0505	4444	.78	110.	0.	0.	0.	71900.	49795.	89619.	1

* CORRECTED FOR CONTRIBUTION BY NATIVE TCD (EXTRACT .009 OF N/E 322)

NOTE CODES:

N1 ISOTOPE RATIO OUT OF ACCEPTABLE RANGE
N2 ACCURACY OUT OF ACCEPTABLE RANGEP=POISONED BLANK
P=PARTIAL REAM
P=SEPARATE WEIGHING AND MURUP
D=DUPLICATE INTERLAB
F=FIELD BLANKL=LABORATIVE TCD SPICES
N=NOT DETECTED
D=DETECTION LIMIT
N=NR

FILENAME #70000

CONFIDENTIAL

SUBJECT TO PROTECTIVE ORDER.

C10924

00031

READ AND UNDERSTOOD BY

DATE

Nº 2637232

SUBJECT

Nitro Soil

JOB NO.

760.18. 503

PREPARED BY (SIGNATURE)

Roy W. Noble

DATE

10 Jan 8

TCD DATA REPORT
PERKINS COMPANY, DAYTON LABORATORY

TABLE 1 (cont)

DE CHARGE SPICER
OF NATIVES .721
OF CORRELATE .724

SAMPLE NUMBER	ELEM NTR	CLEAN	DRAMS		PPR	D.L.	ANALYTICAL DATE	TIME	TCD		SUM		320	322	257	320+	322	334	M
			NET	MOHT					322	334	322	334							
NITRO 89	J	BC	10.430	.84	—	11/9	1431	.82	.75	108.	1372.	1645.	1751.	8764.	5115.	4860.			
NITRO 810	J	BC	10.500	ND	.99	11/9	1452	0.00	.87	127.	0.	0.	0.	7756.	2374.	2499.	1		
NITRO 810 L	J	BC	10.200	1.72	—	11/9	1512	.74	.76	78.	2053.	2688.	1913.	2481.	4030.	5315.			
NITRO 811	J	BC	10.570	3.70	—	11/9	1530	.71	.75	84.	48191.	67584.	22778.	32714.	44181.	52577.			
NITRO 812	J	BC	9.820	.89	—	11/9	1553	.87	.82	113.	8174.	9422.	6420.	29160.	31457.	39314.			
NITRO 812 M	J	BC	9.830	11.25	—	11/9	1625	.74	.79	98.	27410.	29318.	11929.	5844.	7104.	9109.			
NITRO 813	J	BC	10.840	.22	—	11/9	1657	.68	.82	108.	2051.	3000.	2613.	29983.	30994.	41332.			
NITRO 813 R	J	BC	10.500	.23	—	11/9	1737	.68	.82	108.	1814.	2451.	2243.	27770.	27757.	35794.			
FB	J	BC	10.000	ND	.07	11/9	1717	0.00	.79	108.	0.	0.	0.	29767.	30990.	41748.	1		

* CORRECTED FOR CONTRIBUTION BY NATIVE TCD (SUBTRACT .009 OF AVE 322)

NOTE CODES

N: ISOTOPE RATIO OUT OF ACCEPTABLE RANGE
V: Z ACCURACY OUT OF ACCEPTABLE RANGENON-DETECTABLE BLANK
PARTIAL SCAN
RESEPARATE MEASURING AND WORKUP
DUPLICATE (INTER-AN)
FIELD BLANKL: NATIVE TCD SPIKES
ND: NOT DETECTED
DL: DETECTION LIMIT
N/A: N/A

FILENAME: 817004

CONFIDENTIAL

C10925

SUBJECT TO PROTECTIVE ORDER

00022

READ AND UNDERSTOOD BY

DATE

NAVTON L.A.IONA TION

DATE _____ 19____
SIGNATURE _____

19

MRC-D/
No 1570

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1 Nov
Model
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AT 484.15109

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CONFIDENTIAL

SUBJECT TO PROTECTIVE ORDER

00023

C10926

Date	Analyst	Job Number	Net of Time Day	CRN	AR	7920 Disc Pack	FRH	Vol (l)	Sample Identification	Comments	S. Bottle Number	EC Conditions	Run Time	MS Conditions
7/6/54	GT	4813329		A4			>40142	2	PLM-1002/46/2 1002/46/2 UT-3089	6/25/50	1	200-113/250		
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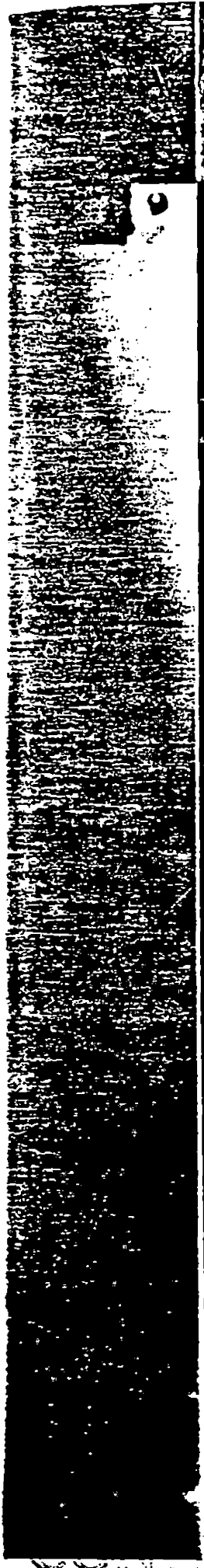
SUBJECT _____ DATE _____ 19____ READ AND UNDERSTOOD BY ME _____
SIGNATURE _____ DATE _____ 19____
JOB NO. _____

MRC-DA
NO 157074

Date	Analyst	Job Number	Net Time of Day	CRN	AR	7920 Disc Pack	FBN	Vol (cc)	Sample Identification	Comments	Bottle Number	GC Conditions	Run Time	MS Conditions
2 NOV 87	GT	4844419A		AT			260167	2	10.02/48/2		17	100.1/3/250	20	
							1	1	UT-3114		17			
							2	2			27			
							3	3			25			
							4	4			29			
							5	5			41			
							6	6			43			
							7	7			89			
							8	8						
							9	9						
							10	10						
							11	11						
							12	12						
							13	13						
							14	14						
							15	15						
							16	16						
							17	17						
							18	18						
							19	19						
							20	20						
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							22	22						
							23	23						
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							26	26						
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							93	93						
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							95	95						
							96	96						
							97	97						
							98	98						
							99	99						
							100	100						

C10928

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SUBJECT _____

DATE _____

19 ____

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DATE _____

19 ____

MRC-DA
Nº 15707

JOB NO. _____

Date	Analyst	Job Number	Net Time	Time of Day	CRN	AR	7920 Disc Pack	FRN	Vol (1/2)	Sample Identification	Comments	S Bottle Number	GC Conditions	Run Time	MS 1
12/20/87	GT	4544329			AY			260195	2	2501/14/2	2501/14/2		200-1/3/250		
								260196		2501/14/2	2501/14/2				
								260197		2501/14/2	2501/14/2				
								260198		2501/14/2	2501/14/2				
								260199		2501/14/2	2501/14/2				
								260200		2501/14/2	2501/14/2				
								260201		2501/14/2	2501/14/2				
								260202		2501/14/2	2501/14/2				
								260203		2501/14/2	2501/14/2				
								260204		2501/14/2	2501/14/2				
								260205		2501/14/2	2501/14/2				
								260206		2501/14/2	2501/14/2				
								260207		2501/14/2	2501/14/2				
								260208		2501/14/2	2501/14/2				
								260209		2501/14/2	2501/14/2				
								260210		2501/14/2	2501/14/2				
								260211		2501/14/2	2501/14/2				
								260212		2501/14/2	2501/14/2				
								260213		2501/14/2	2501/14/2				
								260214		2501/14/2	2501/14/2				
								260215		2501/14/2	2501/14/2				
								260216		2501/14/2	2501/14/2				
								260217		2501/14/2	2501/14/2				
								260218		2501/14/2	2501/14/2				
								260219		2501/14/2	2501/14/2				
								260220		2501/14/2	2501/14/2				
								260221		2501/14/2	2501/14/2				
								260222		2501/14/2	2501/14/2				
								260223		2501/14/2	2501/14/2				
								260224		2501/14/2	2501/14/2				
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								260232		2501/14/2	2501/14/2				
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								260234		2501/14/2	2501/14/2				
								260235		2501/14/2	2501/14/2				
								260236		2501/14/2	2501/14/2				
								260237		2501/14/2	2501/14/2				
								260238		2501/14/2	2501/14/2				
								260239		2501/14/2	2501/14/2				
								260240		2501/14/2	2501/14/2				
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								260242		2501/14/2	2501/14/2				
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								260300		2501/14/2	2501/14/2				

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C10929

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SUBJECT TO PROTECTIVE ORDER

My W. Unit

SUBJECT _____ DATE _____
 _____ SIGNATURE _____
 JOB No. _____

NEANTO RESEARCH CORPORATION
 DAYTON LABORATORY

1	Run	4847320	1700	03	703019	2	PE mix
					100		0.1002/48/20
					1		1.002/48/26
					2		UT-3066
					3		9
					4		70
					5		1
					6		2
					7		10.02/48/26
					8		2504
					9		2504
					10		2504
4	Run	4847340	4 hrs	Y	1	Y	Dartman
2			0015	03	2	2	PE mix
					3		0.1002
					4		UT-3041
					5		3042
					6		3043
					7		3044
					8		3045
					9		1.002/48/2
					20		UT 3046



156691A

19

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DATE

19

C10930

BTCHRN

SP2370

1

200-1/3/250

3

5

7

9

11

13

15

17

29

41

43

89

BTCHRN

SP2231

1

200-1/3/250

3

31

32

35

37

39

5

51

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15



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JOB NO. _____

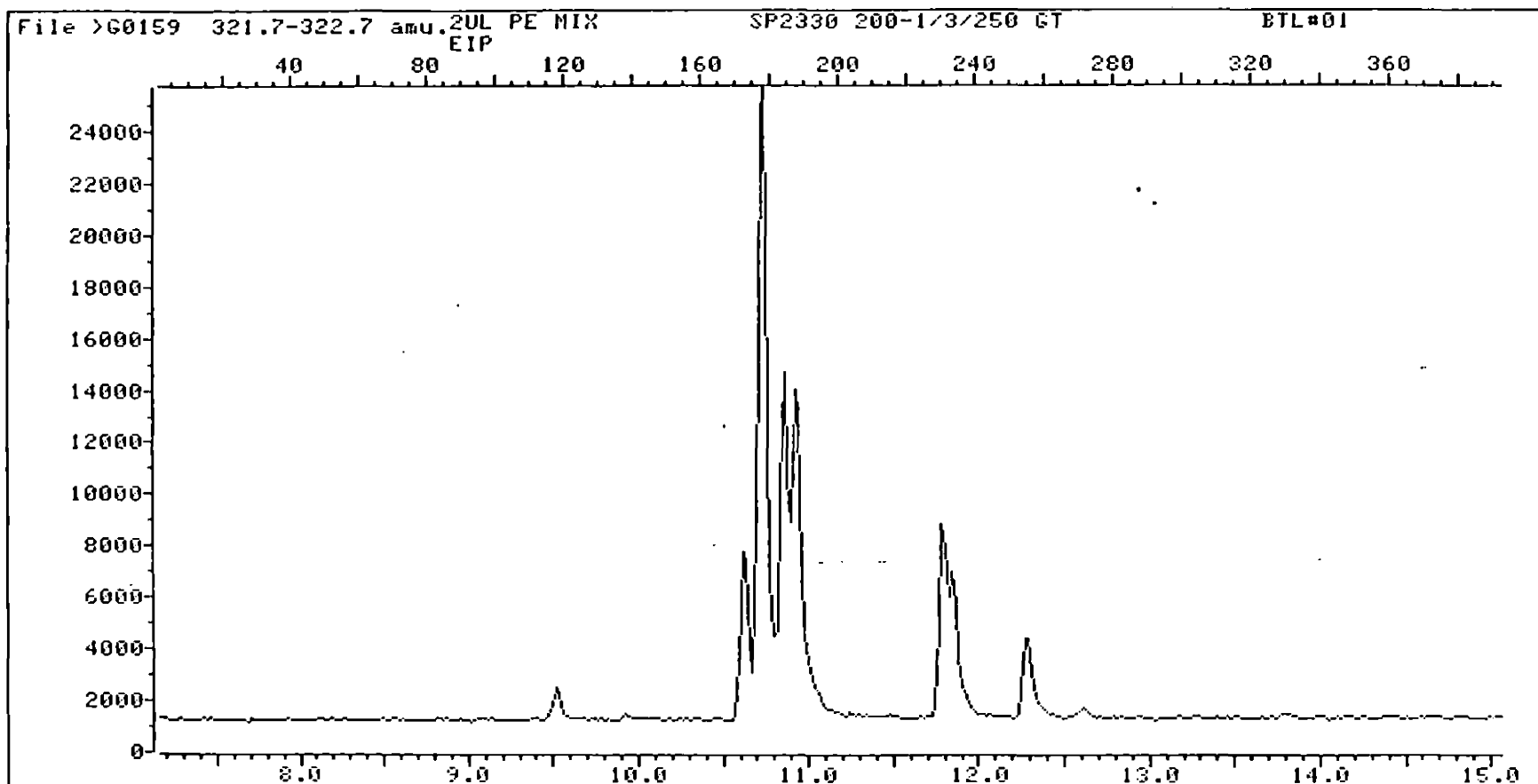
156691B

Analyst	Job Number	Net Time	Time of Day	CRN	AR	7920 Disc Pack	FRN	Volume (ul)	Sample Identification	Comments	ALS Bottle Number	GC Conditions	Run Time
4 Run	484 4840			03			283125	2	10.00/48/20	BT/HRN 50330	17	200-1/3/250	15
							6		45-3051		13		
							7		3052		15		
							8		3053		17		
							9		3054		19		
							30		3055		21		
							1		0.2504		23		
							2		45-3056		25		
							3		3057		27		
							4		3058		29		
							5		3059		31		
							6		3072		33		
							7		2504/48/20		35		
							8		2504/48/20		37		
		8 hr					9		Distillation		39		
31 Run	309 6101			03			356	2ul	Yucca P&F + Hydrocar	ISOPET		175-1/6/300	25
							357	1ul	Yucca P&F REP. Std.				
31 Run	309 6101			03			358	2ul	Std. C13-0000 (KUG) 1/20	H2O C000		200-1/10/275	18
							359	2ul	C137-0000	H2O C000			
11 Run	309 6602			03			2505	45	1ul TCDF (#1105A)	SYN/PRO Distillation		25-1/10/300	20
		2 1/3 hr					46	"	PCDD (#1105B)				
Run	309 6101	0.5		03			283140	2ul	Distillation (C5L)	DBSSZ		200-1/14/275	10

C10931

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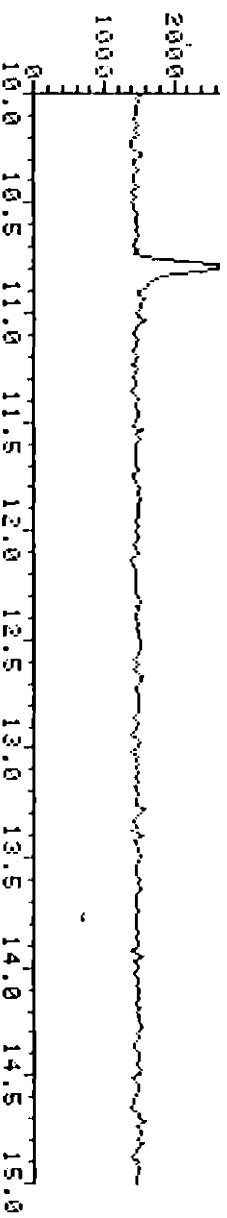
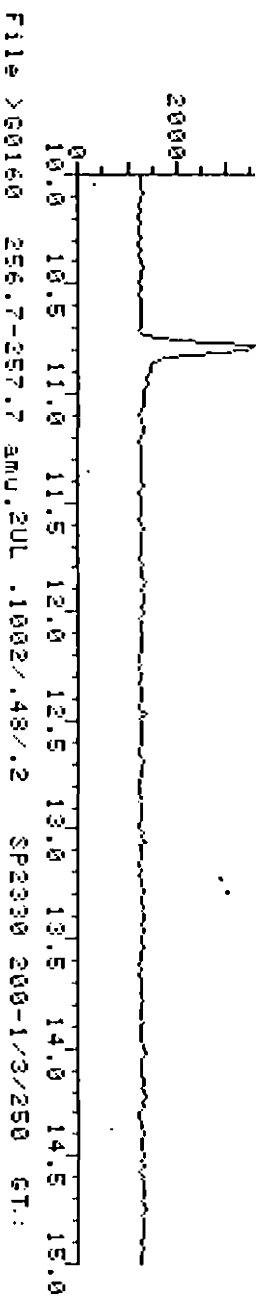
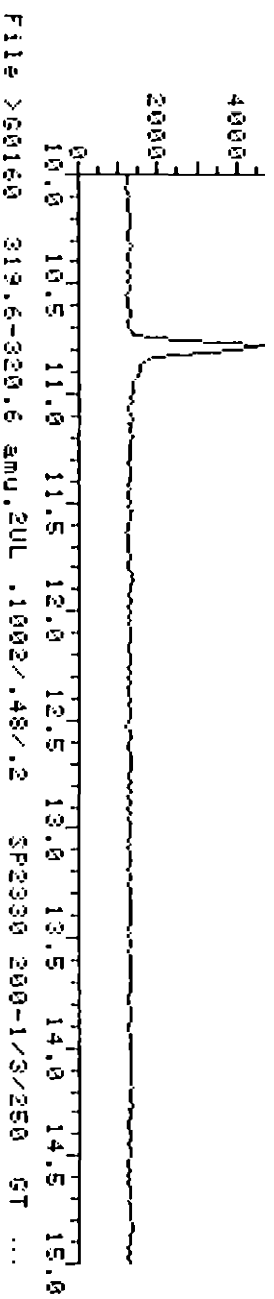
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C10932

File >G0160 321.6-322.6 amu.2UL .1002/.48/.2 SP2330 200-1/3/250 GT.

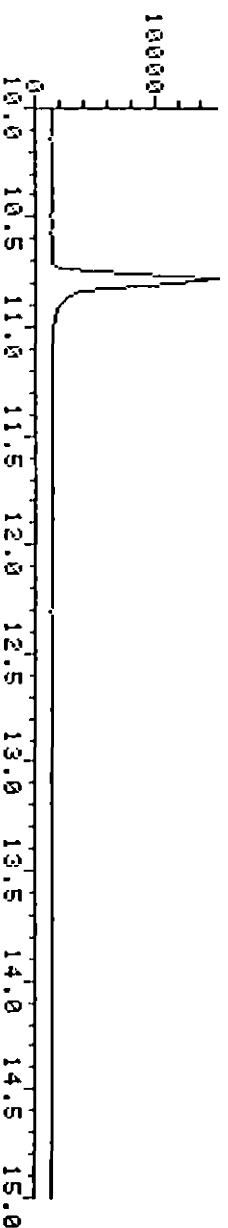
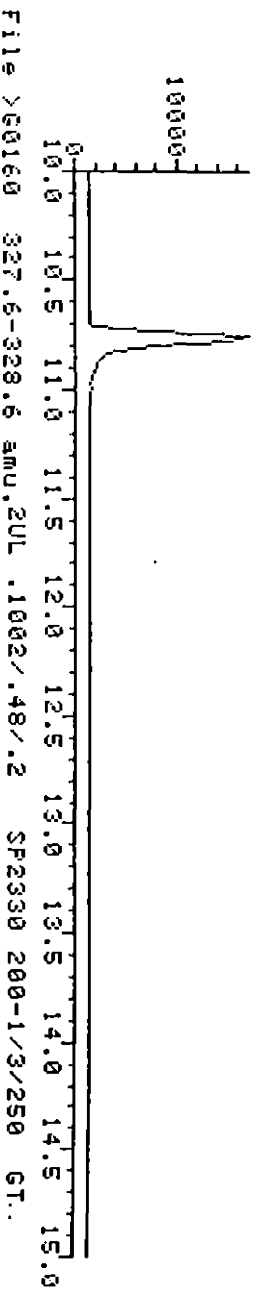
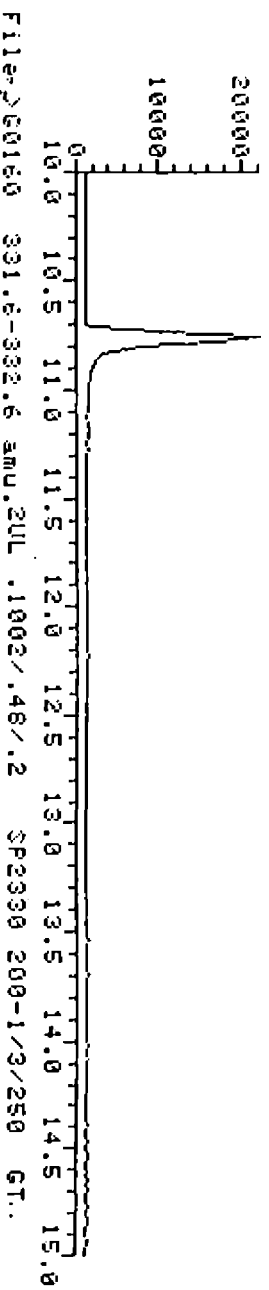


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C10933

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File >G0160 333.6-334.6 amu.2UL .1002/.48/.2 SP2330 200-1/3/250 GT.



MS data file header from : >G0160

Sample: 2UL .1002/.48/.2 S Operator: GARY MS2 11/09/84-13:51
Misc : P2330 200-1/3/250 GT BTL#03 BTL# 3
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.754	168	179	195	27	100828	65566	100.00
2	10.754	168	179	195	27	100828	63716	97.18

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.754	171	179	206	35	98202	54452	100.00
2	10.754	171	179	206	35	98202	52754	96.88

332/334 CALCULATION

R-Global(0) = .6305

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.774	165	180	196	31	85238	46364	100.00
2	10.774	165	180	196	31	85238	43853	94.58

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.774	175	180	190	15	31299	12159	100.00
2	10.774	175	180	190	15	31299	11611	95.49

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SUBJECT TO PROTECTIVE ORDER

C10934

S

>G0160

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.774	176	180	191	15	28013	8798	100.00
2	10.774	176	180	191	15	28013	8508	97.61

320/322 CALCULATION

R-Global(1) = .7236

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.795	178	181	186	8	17155	5723	100.00
2	10.795	178	181	186	8	17155	5443	95.11

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .1746

(328)/(332 + 334) CALCULATION

R-Global(3) = .3854

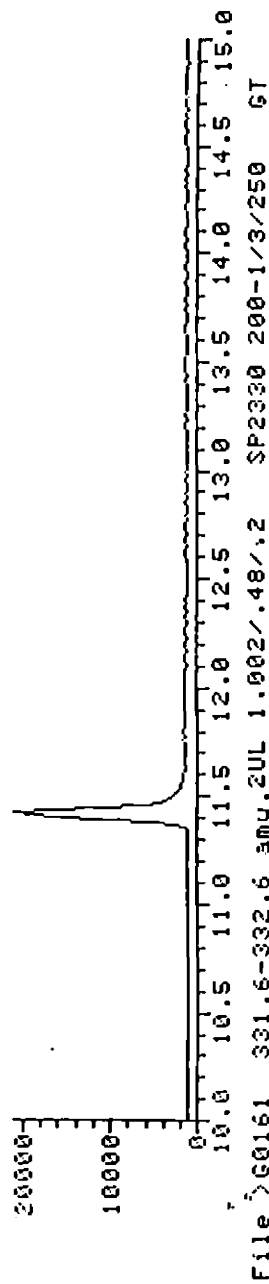
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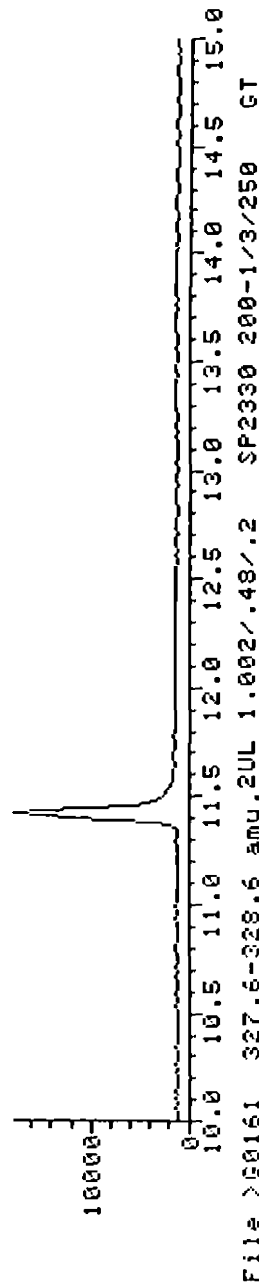
SUBJECT TO PROTECTIVE ORDER

C10935

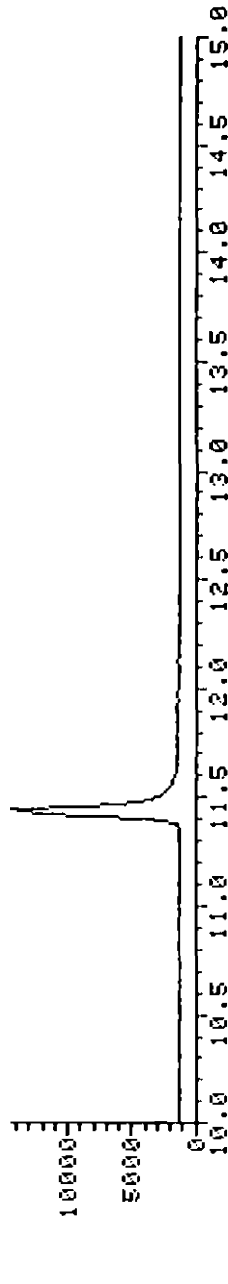
File >G0161 333.6-334.6 amu.2UL 1.002/.48/.2 SP2330 200-1/3/250 GT

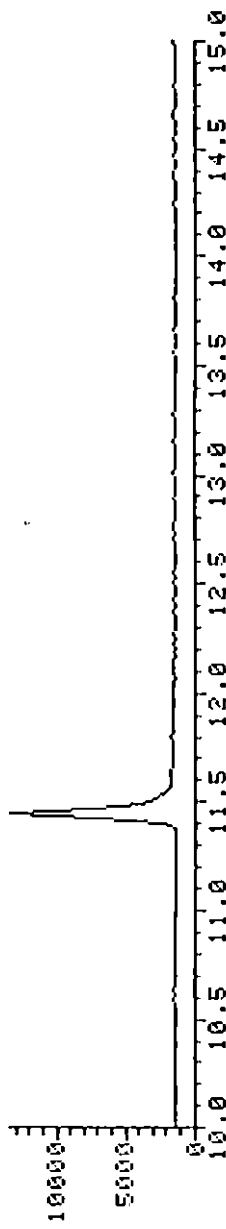
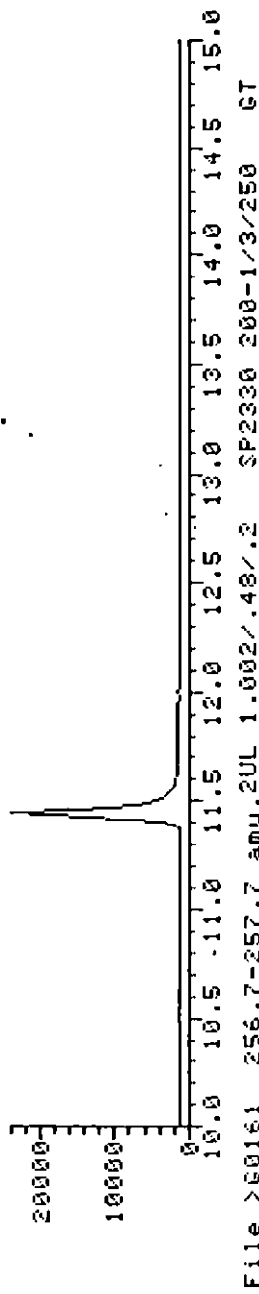
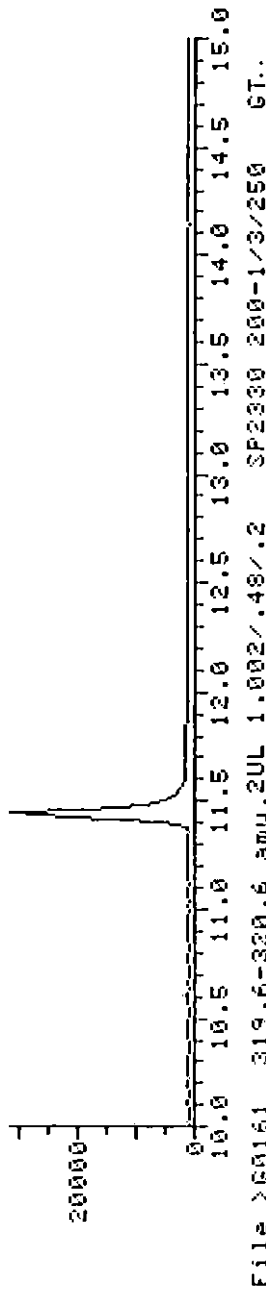


File >G0161 331.6-332.6 amu.2UL 1.002/.48/.2 SP2330 200-1/3/250 GT



File >G0161 327.6-328.6 amu.2UL 1.002/.48/.2 SP2330 200-1/3/250 GT





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C10936

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MS data file header from : >G0161

Sample: 2UL 1.002/.48/.2 S Operator: GARY MS2 11/09/84-14:11
Misc : P2330 200-1/3/250 GT BTL#05 BTL# 5
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp. : 265....

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.424	198	212	232	34	109186	66788	100.00
2	11.424	198	212	232	34	109186	62232	93.18

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.424	198	212	235	37	100274	56170	100.00
2	11.424	198	212	235	37	100274	53247	94.80

332/334 CALCULATION

R-Global(0) = .8410

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.444	203	213	227	24	75197	46205	100.00
2	11.444	203	213	227	24	75197	43385	93.90

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.444	199	213	238	39	147338	98900	100.00
2	11.444	199	213	238	39	147338	94142	95.19

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C10937

S

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.444	201	213	229	28	104678	71022	100.00
2	11.444	201	213	229	28	104678	65394	92.08

320/322 CALCULATION

R-Global(1) = .7181

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.444	199	213	232	33	85860	40386	100.00
2	11.444	199	213	232	33	85860	37746	93.46

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 1.3820

(328)/(332 + 334) CALCULATION

R-Global(3) = .3685

00035

C10938

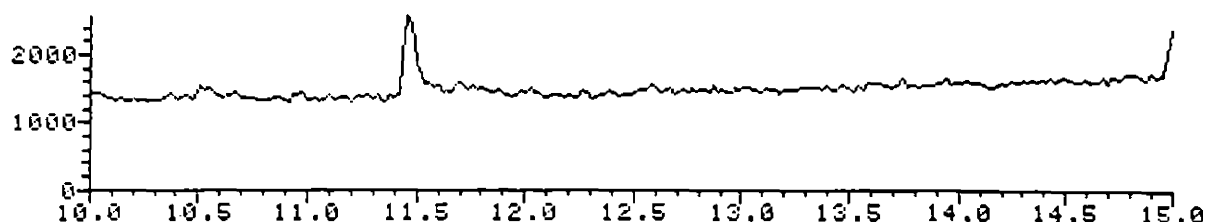
File >G0162 333.6-334.6 amu.2UL UT-3109

SP2330 200-1/3/250 GT



File >G0162 331.6-332.6 amu.2UL UT-3109

SP2330 200-1/3/250 GT



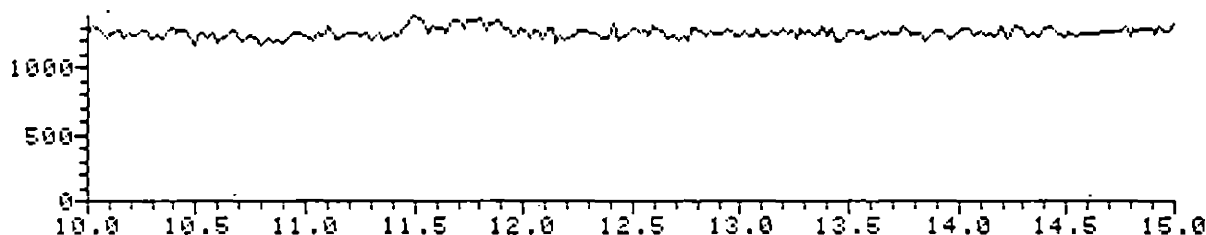
File >G0162 327.6-328.6 amu.2UL UT-3109

SP2330 200-1/3/250 GT



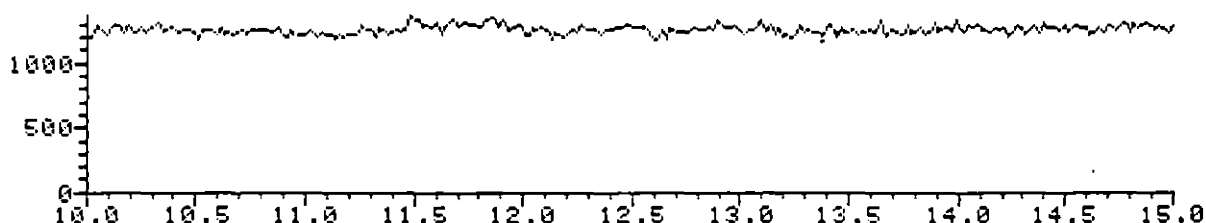
File >G0162 321.6-322.6 amu.2UL UT-3109

SP2330 200-1/3/250 GT



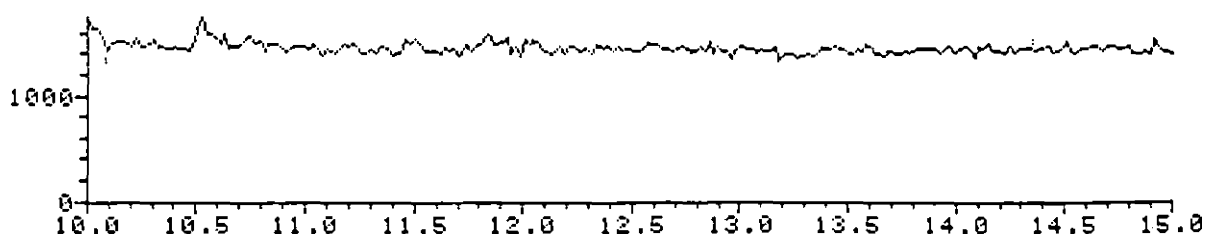
File >G0162 319.6-320.6 amu.2UL UT-3109

SP2330 200-1/3/250 GT



File >G0162 256.7-257.7 amu.2UL UT-3109

SP2330 200-1/3/250 GT



CONFIDENTIAL 00036

SUBJECT TO PROTECTIVE ORDER

C10939

MS data file header from : >G0162

Sample: 2UL UT-3109 Operator: GARY MS2 11/09/84 14:31
Misc : SP2330 200-1/3/250 GT BTL#07BTL# 7
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APE101 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.462	210	214	219	9	20045	6860	100.00
2	11.462	210	214	219	9	20045	5717	83.34

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.462	212	214	218	6	13497	5115	100.00
2	11.462	212	214	218	6	13497	4614	90.21

332/334 CALCULATION

R-Global(0) = .7456

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.482	212	215	219	7	13620	4779	100.00
2	11.482	212	215	219	7	13620	4089	85.56

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.502	213	216	219	5	8075	1665	100.00
2	11.502	213	216	219	5	8075	1482	89.01

00037

C10940

S

>GC162

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.482	215	215	217	2	4026	1372	100.00
2	11.482	215	215	217	2	4026	1330	96.94

(320/322) CALCULATION

R-Global(1) = .8240

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.462	213	214	214	1	2961	1551	100.00
2	11.462	213	214	214	1	2961	1480	95.42

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .2536

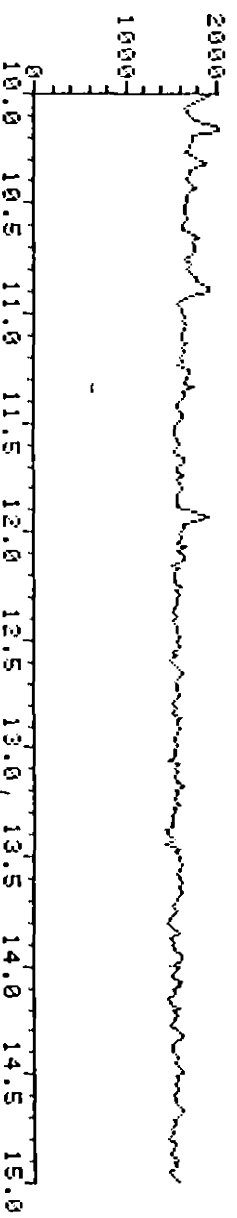
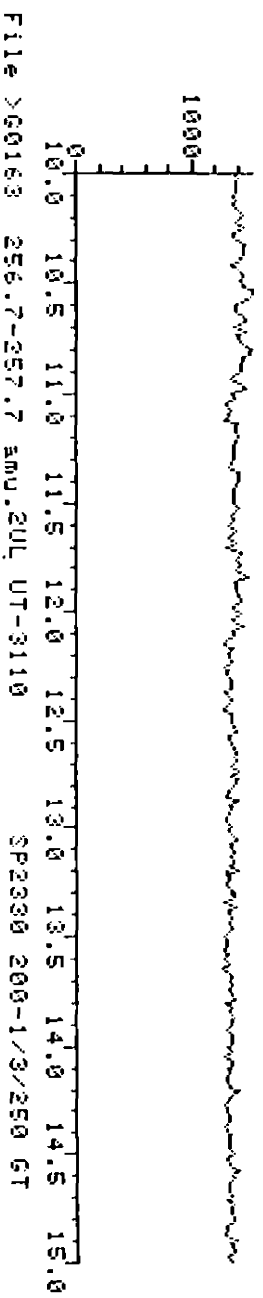
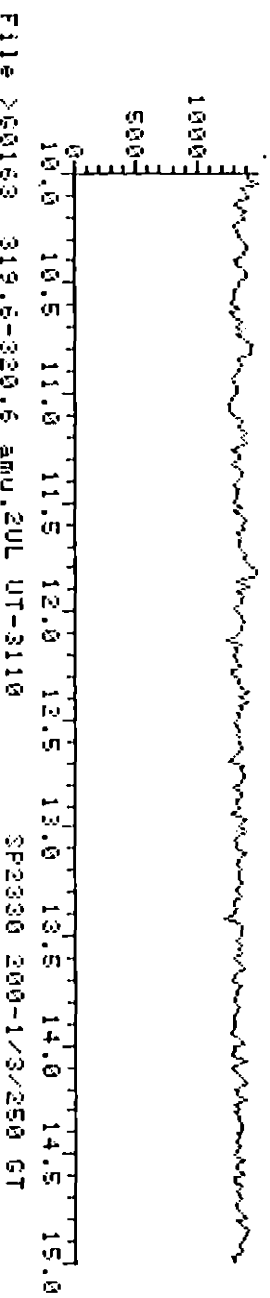
(328)/(332 + 334) CALCULATION

R-Global(3) = .3978

00038

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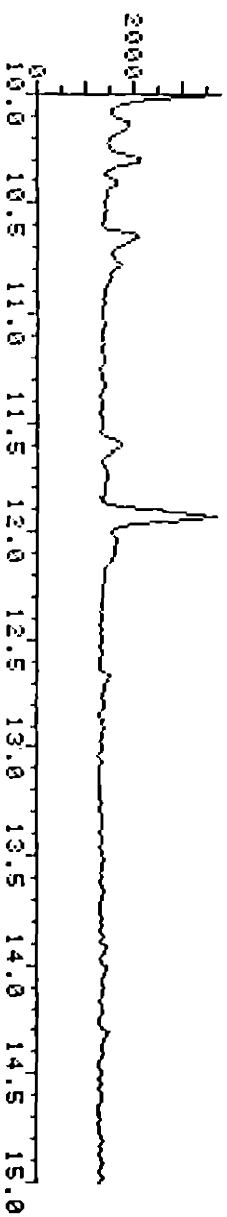
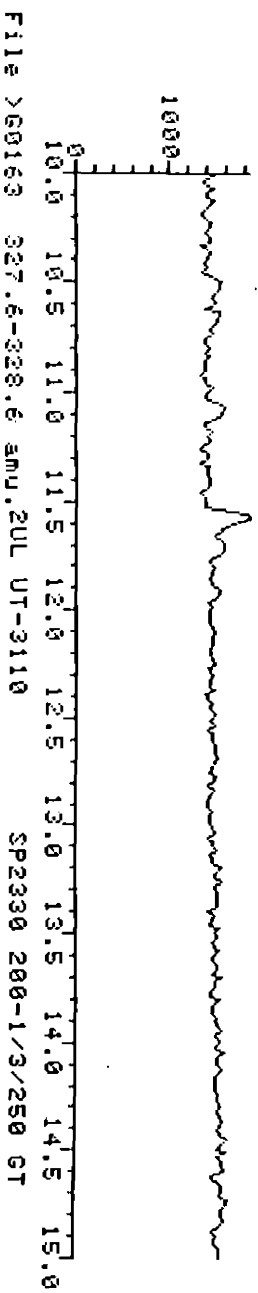
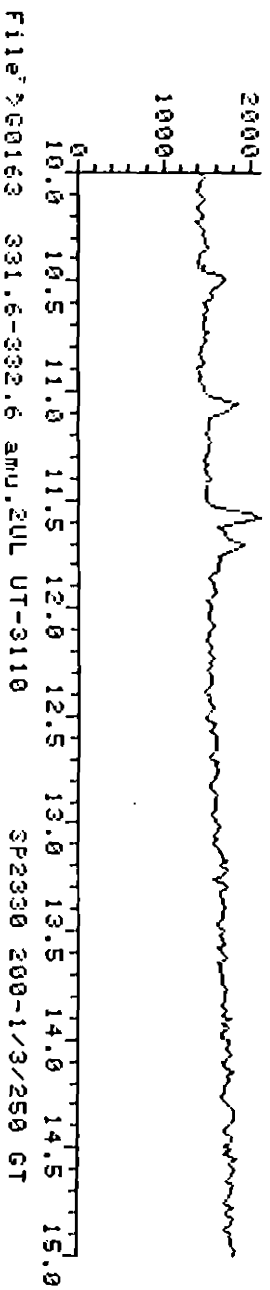
C10941



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C10942

File >G0163 333.6-334.6 amu.2UL UT-3110 SP2330 200-1/3/250 GT



File >G0163 321.6-322.6 amu.2UL UT-3110 SP2330 200-1/3/250 GT

MS data file header from : >G0163

Sample: 2UL UT-3110 S Operator: GARY MS2 11/09/84 14:52
Misc : P2330 200-1/3/250 GT BTL#09BTL# 9
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265.....

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.583	218	220	222	4	9162	2698	100.00
2	11.583	218	220	222	4	9162	2662	98.67

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.583	218	220	221	3	6854	2336	100.00
2	11.583	218	220	221	3	6854	2079	89.00

332/334 CALCULATION

R-Global(0) = .8658

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.603	219	221	223	4	8028	2356	100.00
2	11.603	219	221	223	4	8028	2052	87.10

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	224	0	223	-1	0	1341	100.00
2	0.000	224	0	223	-1	0	1341	100.00

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SUBJECT TO PROTECTIVE ORDER

00040

C10943

S

>60163

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	224	0	223	-1	0	1345	100.00
2	0.000	224	0	223	-1	0	1345	100.00

320/322 CALCULATION

R-Global(1) = 1.0030

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	224	0	223	-1	0	1605	100.00
2	0.000	224	0	223	-1	0	1605	100.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .5336

(328)/(332 + 334) CALCULATION

R-Global(3) = .4656

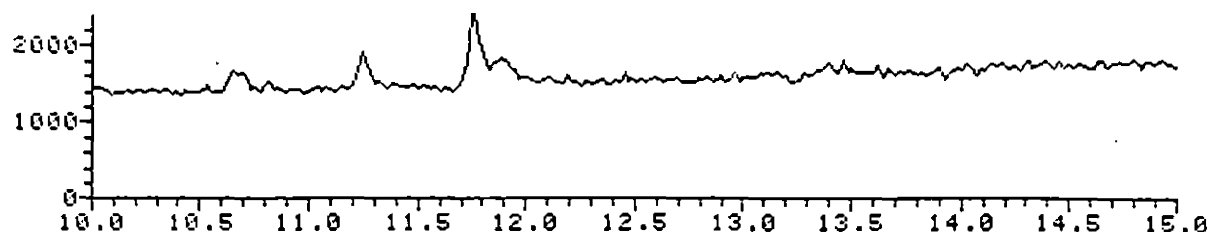
00041

SUBJECT TO FACILITY CHARGE

C10944

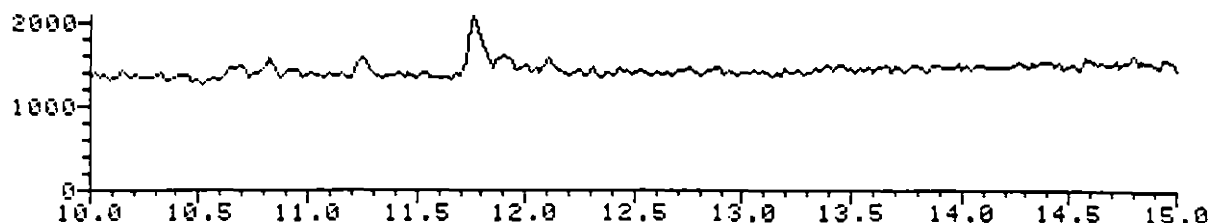
File >G0164 333.6-334.6 amu.2UL UT-3111

SP2330 200-1/3/250 GT



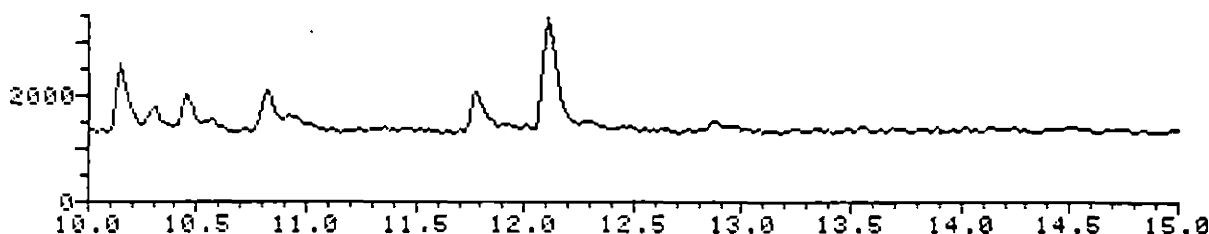
File >G0164 331.6-332.6 amu.2UL UT-3111

SP2330 200-1/3/250 GT



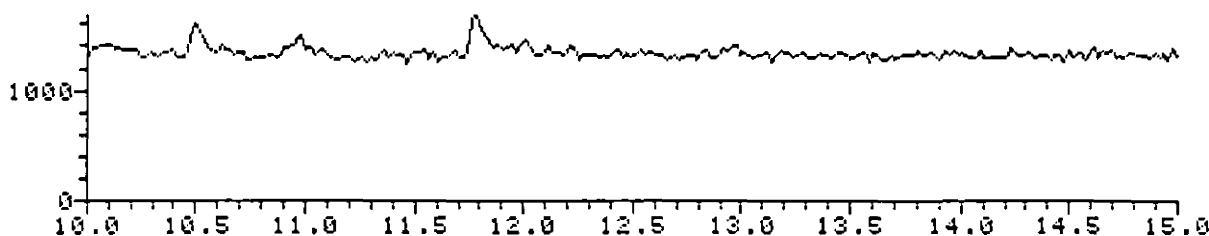
File >G0164 327.6-328.6 amu.2UL UT-3111

SP2330 200-1/3/250 GT



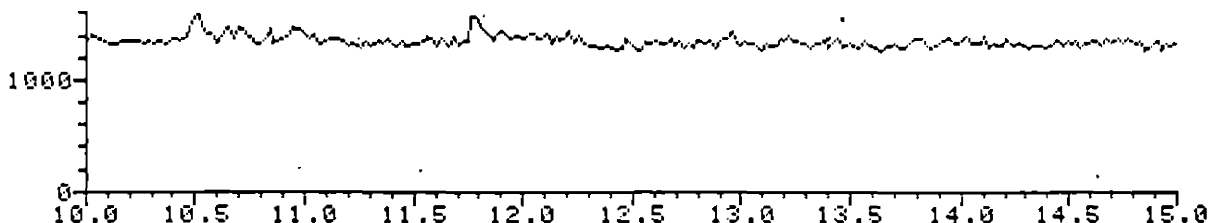
File >G0164 321.6-322.6 amu.2UL UT-3111

SP2330 200-1/3/250 GT



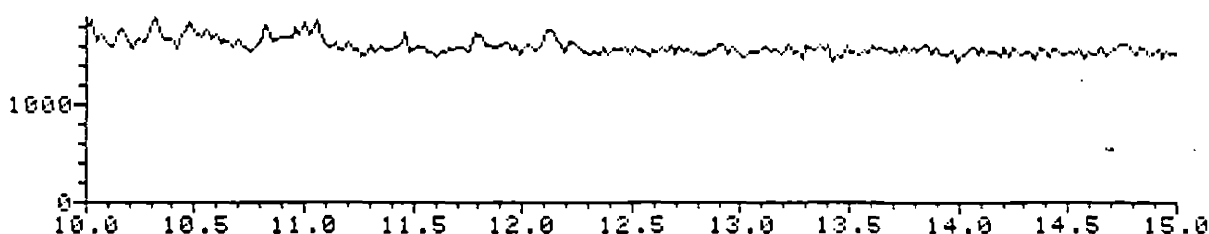
File >G0164 319.6-320.6 amu.2UL UT-3111

SP2330 200-1/3/250 GT



File >G0164 256.7-257.7 amu.2UL UT-3111

SP2330 200-1/3/250 GT



CONFIDENTIAL

00042

SUBJECT TO PROTECTIVE ORDER

C10945

GC/MS default file: >G0164::A4

MS data file header from : >G0164

Sample: 2UL UT-3111 Operator: GARY MS2 11/09/84 15:12 ..
Misc : SP2330 200-1/3/250 GT BTL#11BTL#11
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265....

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.746	224	228	232	8	16531	5315	100.00
2	11.746	224	228	232	8	16531	4231	79.60

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.766	226	229	232	6	12238	4030	100.00
2	11.766	226	229	232	6	12238	3346	83.03

332/334 CALCULATION

R-Global(0) = .7582

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.787	228	230	232	4	8937	2705	100.00
2	11.787	228	230	232	4	8937	2613	96.60

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.787	227	230	233	6	10530	2688	100.00
2	11.787	227	230	233	6	10530	2370	88.17

00043

C10946

S

>G0164

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.766	228	229	233	5	8833	2053	100.00
2	11.766	228	229	233	5	8833	1938	94.40

320/322 CALCULATION

R-Global(1) = .7638

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.787	229	230	232	3	6677	1913	100.00
2	11.787	229	230	232	3	6677	1857	97.07

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .5873

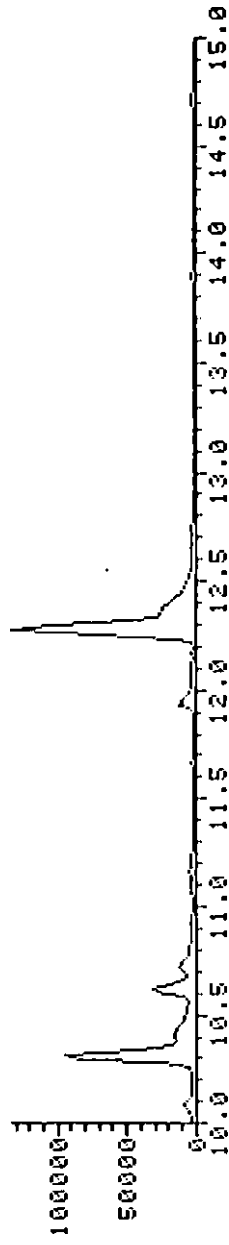
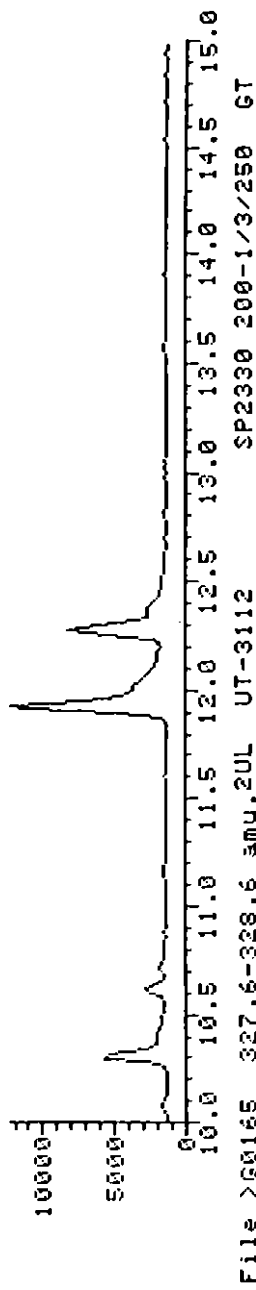
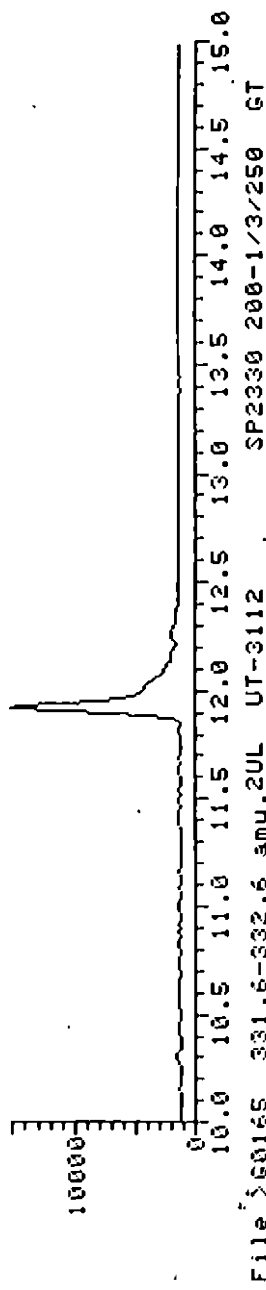
(328)/(332 + 334) CALCULATION

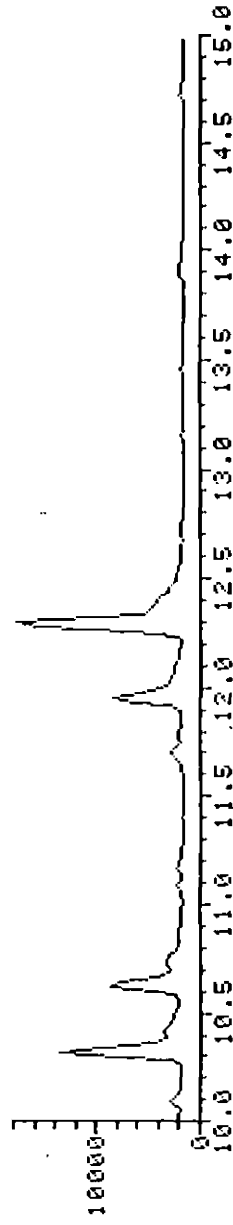
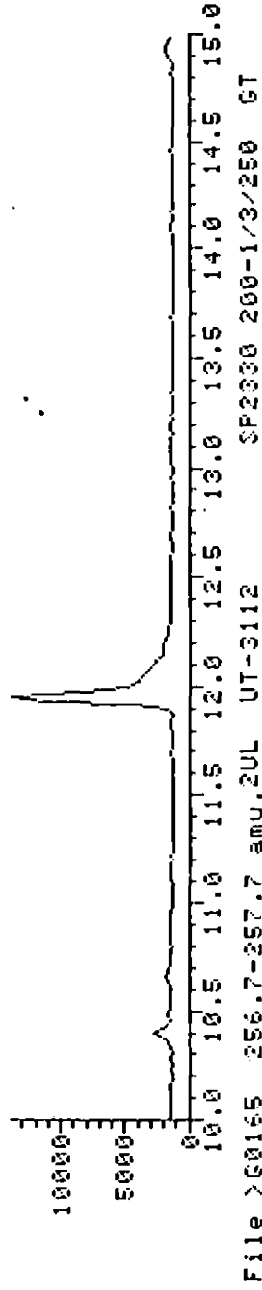
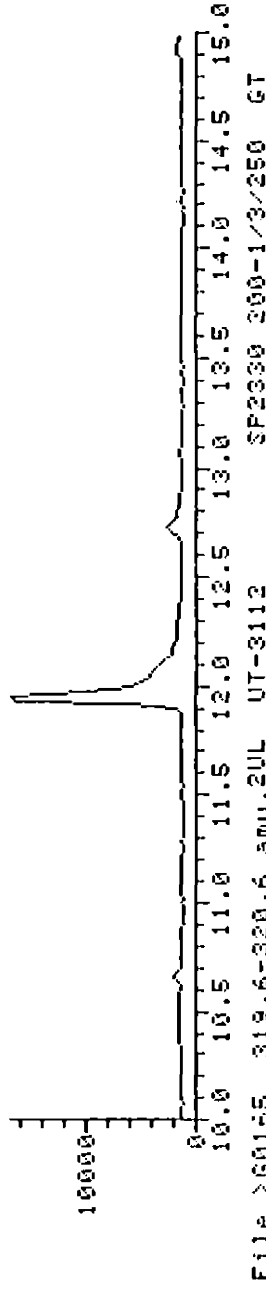
R-Global(3) = .2869

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C10947

File >60165 332.6-334.6 amu.2UL UT-3112 SP2330 200-1/3/250 GT





00045

C10948

MS data file header from : >G0165

Sample: 2UL UT-3112 Operator: GARY MS2 11/09/84 15:32
Misc : SP2330 200-1/3/250 GT BTL#13BTL#13
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: RPEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp. : 265....

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.913	230	235	246	16	81281	58577	100.00
2	11.913	230	235	246	16	81281	53057	90.58

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.933	228	236	243	15	64086	44181	100.00
2	11.933	228	236	243	15	64086	34348	77.74

332/334 CALCULATION

R-Global(0) = .7542

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.933	228	236	241	13	53953	33322	100.00
2	11.933	228	236	241	13	53953	22363	67.11

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.953	229	237	247	18	92820	67584	100.00
2	11.953	229	237	247	18	92820	58962	87.24

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00046

C10949

> 60.65

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.953	229	237	244	15	68471	48191	100.00
2	11.953	229	237	244	15	68471	37301	77.40

$$R\text{-Global}(1) = .7131$$

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.953	233	237	241	8	36664	22728	100.00
2	11.953	233	237	241	8	36664	17964	79.04

```
R-Global( 3) =      1.1267
```

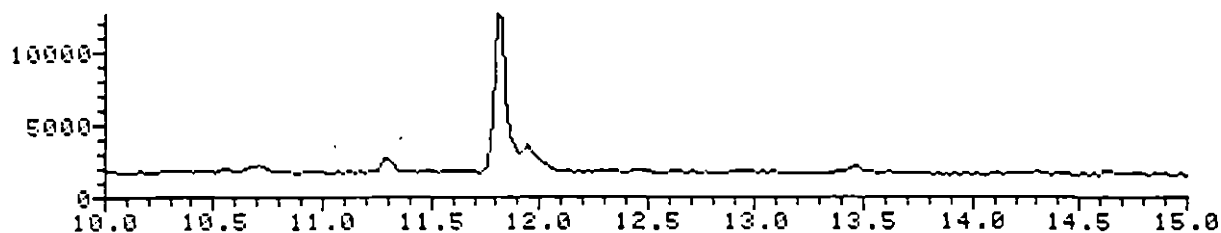
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R-Global( 3) =      .3184
```

00047

C10950

File >G0166 333.6-334.6 amu.2UL UT-3113

SP2330 200-1/3/250 GT



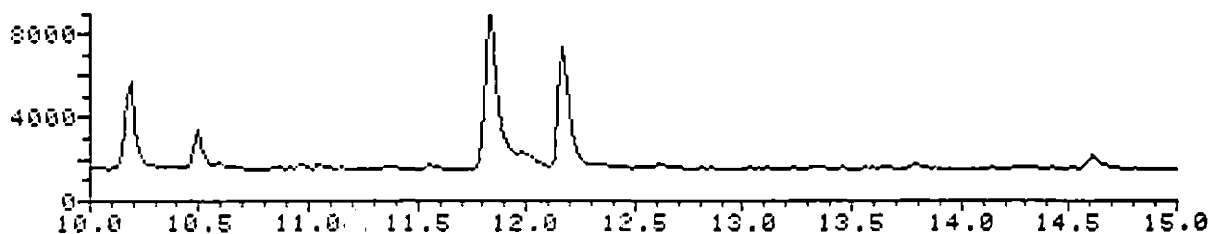
File >G0166 331.6-332.6 amu.2UL UT-3113

SP2330 200-1/3/250 GT



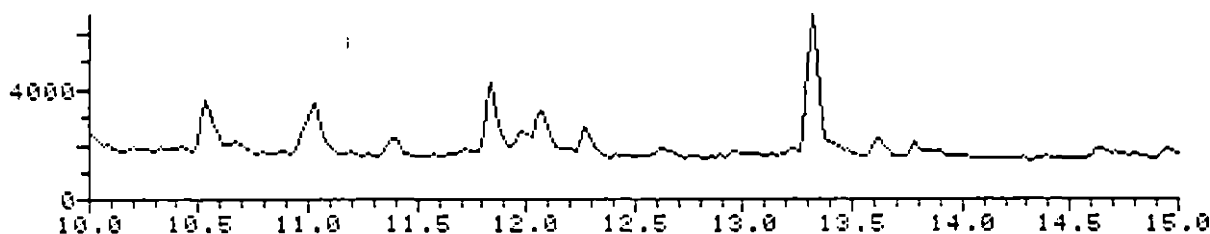
File >G0166 327.6-328.6 amu.2UL UT-3113

SP2330 200-1/3/250 GT



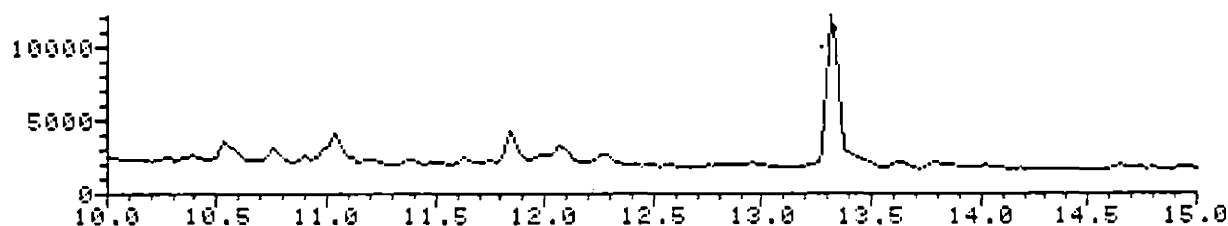
File >G0166 321.6-322.6 amu.2UL UT-3113

SP2330 200-1/3/250 GT



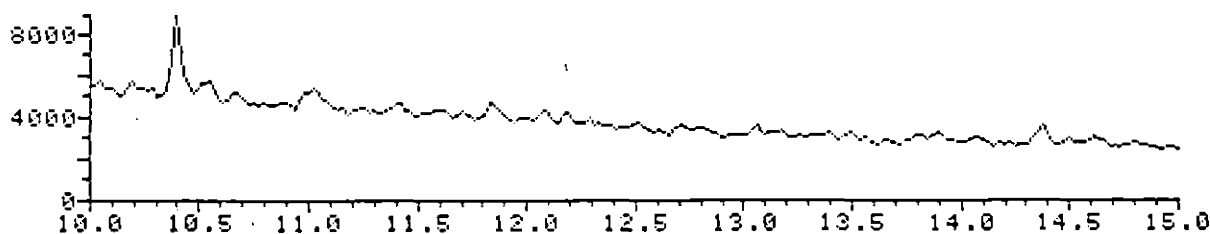
File >G0166 319.6-320.6 amu.2UL UT-3113

SP2330 200-1/3/250 GT



File >G0166 256.7-257.7 amu.2UL UT-3113

SP2330 200-1/3/250 GT



CONFIDENTIAL 00048
SUBJECT TO PROTECTIVE ORDER

C10951

GC/MS default file: >G0166::R4

MS data file header from : >G0166

Sample: 2UL UT-3113 Operator: GARY MS2 11/09/84 15:53 ..
Misc : SP2330 200-1/3/250 GT BTL#15BTL#15
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265.....

* Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.

Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.804	225	231	236	11	58402	38316	100.00
2	11.804	225	231	236	11	58402	31276	81.63

M/Z = 331.9

First peak is baseline drop corrected area.

Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.825	227	232	236	9	46526	31487	100.00
2	11.825	227	232	236	9	46526	26010	82.61

332/334 CALCULATION

R-Global(0) = .8218

M/Z = 327.9

First peak is baseline drop corrected area.

Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.845	227	233	239	12	47209	29245	100.00
2	11.845	227	233	239	12	47209	25381	86.79

M/Z = 321.9

First peak is baseline drop corrected area.

Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.845	230	233	236	6	20150	9422	100.00
2	11.845	230	233	236	6	20150	8732	92.68

00009

C10952

S

M/Z = 319.9

First peak is baseline drop corrected area.

Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.845	230	233	235	5	18949	8174	100.00
2	11.845	230	233	235	5	18949	6364	77.86

320/322 CALCULATION

R-Global(1) = .8675

M/Z = 257.0

First peak is baseline drop corrected area.

Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.845	230	233	236	6	30162	6420	100.00
2	11.845	230	233	236	6	30162	6324	98.50

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .2521

(328)/(332 + 334) CALCULATION

R-Global(3) = .4177

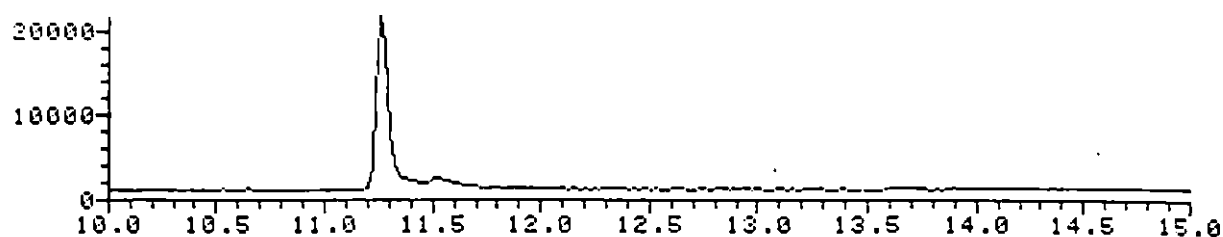
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00050

C10953

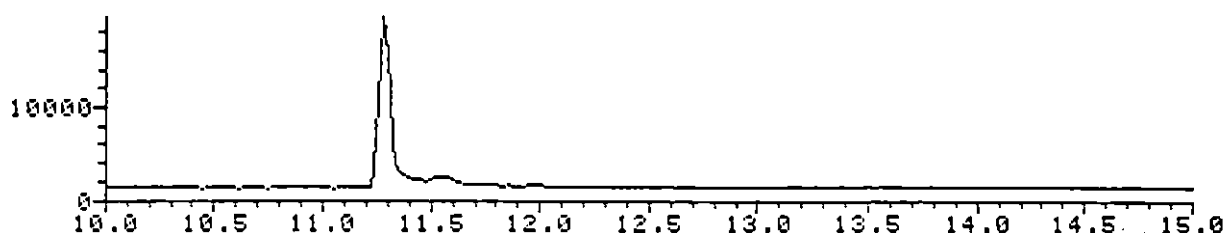
File >G0167 333.6-334.6 amu.2UL 10.02/.48/.20 SP2230 200-1/3/250 GT..



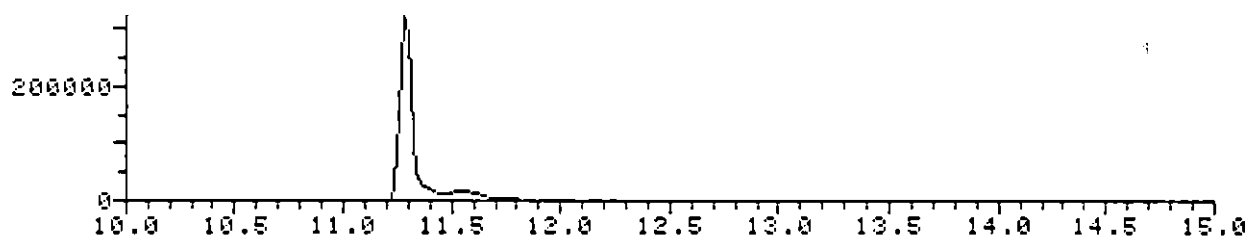
File >G0167 331.6-332.6 amu.2UL 10.02/.48/.20 SP2230 200-1/3/250 GT



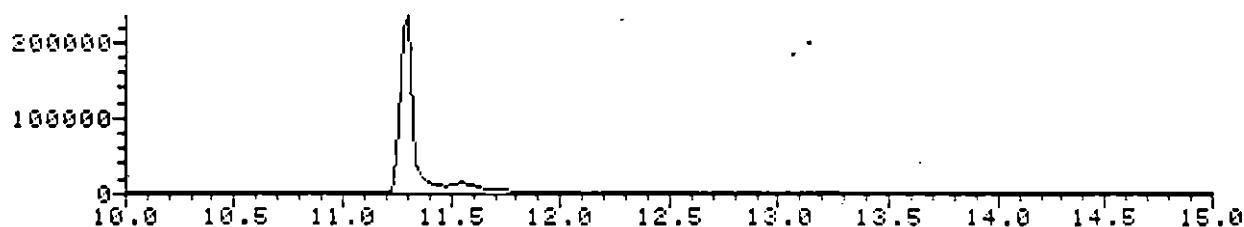
File >G0167 327.6-328.6 amu.2UL 10.02/.48/.20 SP2230 200-1/3/250 GT..



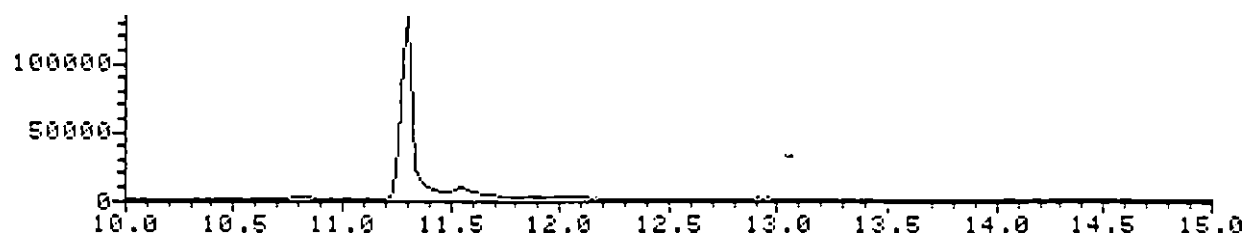
File >G0167 321.6-322.6 amu.2UL 10.02/.48/.20 SP2230 200-1/3/250 GT



File >G0167 319.6-320.6 amu.2UL 10.02/.48/.20 SP2230 200-1/3/250 GT...



File >G0167 256.7-257.7 amu.2UL 10.02/.48/.20 SP2230 200-1/3/250 GT..



00051

C10954

MS data file header from : >G0167

Sample: 2UL 10.02/.48/.20 Operator: GARY MS2 11/09/84-16:14...
Misc : SP2230 200-1/3/250 GT BTL#17BTL#17
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265....

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.260	194	202	210	16	90032	68336	100.00
2	11.260	194	202	210	16	90032	68928	89.16

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.260	196	202	211	15	75797	56597	100.00
2	11.260	196	202	211	15	75797	51129	90.34

332/334 CALCULATION

R-Global(0) = .0282

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.280	198	203	211	13	76469	58451	100.00
2	11.280	198	203	211	13	76469	53459	91.46

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.280	192	203	212	20	1085361	1057321	100.00
2	11.280	192	203	212	20	1085361	926731	87.65

CONFIDENTIAL

00052

C10955

SUBJECT TO PROTECTIVE ORDER

S

>G0167

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.300	195	204	212	17	800010	776958	100.00
2	11.300	195	204	212	17	800010	695145	89.47

320/322 CALCULATION

R-Global(1) = .7348

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	11.300	192	204	212	20	451265	416825	100.00
2	11.300	192	204	212	20	451265	363455	87.20

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 14.6821

(320)/(332 + 334) CALCULATION

R-Global(3) = .3917

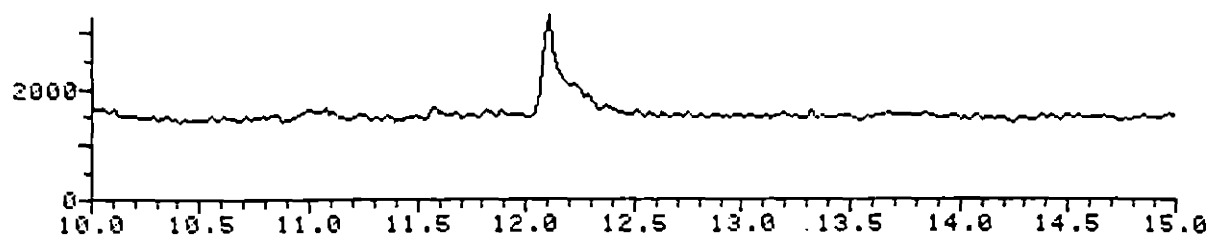
CONFIDENTIAL
 SUBJECT TO PROTECTIVE ORDER

00053

C10956

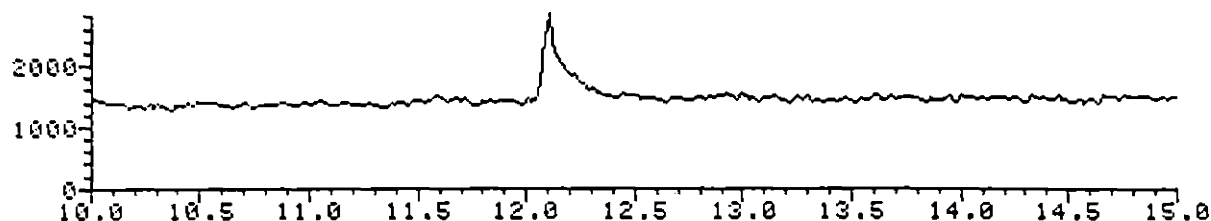
File >G0168 333.6-334.6 amu.2UL UT-3114

SP2330 200-1/3/250 GT



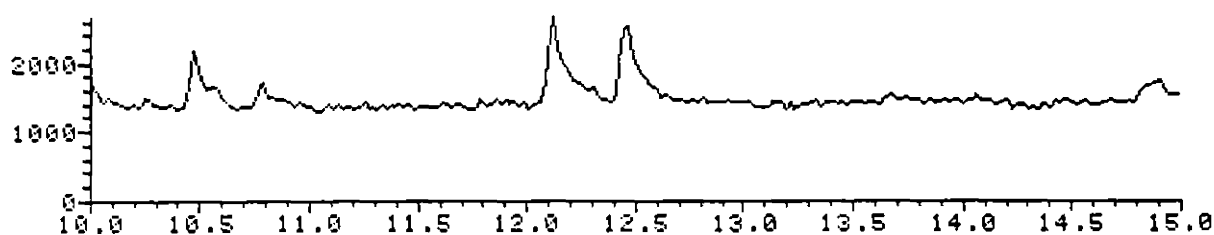
File >G0168 331.6-332.6 amu.2UL UT-3114

SP2330 200-1/3/250 GT



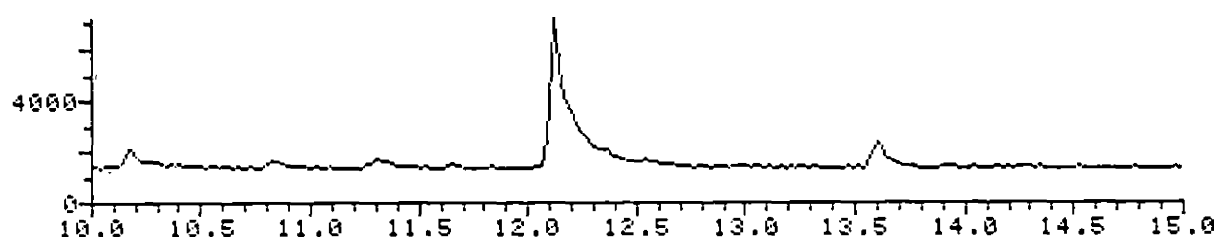
File >G0168 327.6-328.6 amu.2UL UT-3114

SP2330 200-1/3/250 GT



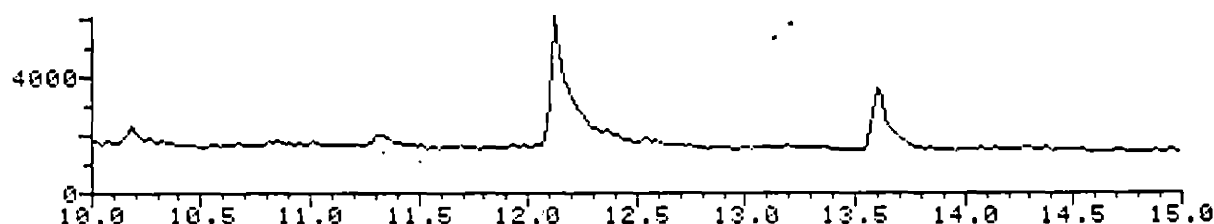
File >G0168 321.6-322.6 amu.2UL UT-3114

SP2330 200-1/3/250 GT



File >G0168 319.6-320.6 amu.2UL UT-3114

SP2330 200-1/3/250 GT



File >G0168 256.7-257.7 amu.2UL UT-3114

SP2330 200-1/3/250 GT



CONFIDENTIAL

SUBJECT TO PROTECTIVE ORDER

00054

C10957

MS data file header from : >G0168

Sample: 2UL UT-3114 Operator: GARY MS2 11/09/84 16:35
Misc : SP2330 200-1/3/250 GT BTL#19BTL#19
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.104	240	245	250	10	23759	9109	100.00
2	12.104	240	245	250	10	23759	6349	69.70

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.104	242	245	250	8	18562	7106	100.00
2	12.104	242	245	250	8	18562	5590	78.67

332/334 CALCULATION

R-Global(0) = .7801

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.124	243	246	250	7	16139	6108	100.00
2	12.124	243	246	250	7	16139	5044	82.58

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.124	240	246	255	15	50273	29318	100.00
2	12.124	240	246	255	15	50273	23340	79.61

SUBJECT TO PROTECTIVE ORDER

C10958

S

>60168

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.124	241	246	254	13	43223	22410	100.00
2	12.124	241	246	254	13	43223	18094	80.74

(320/322) CALCULATION

R-Global(1) = .7644

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.124	242	246	252	10	33539	11939	100.00
2	12.124	242	246	252	10	33539	9289	77.80

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 3.1901

(320)/(332 + 334) CALCULATION

R-Global(3) = .3604

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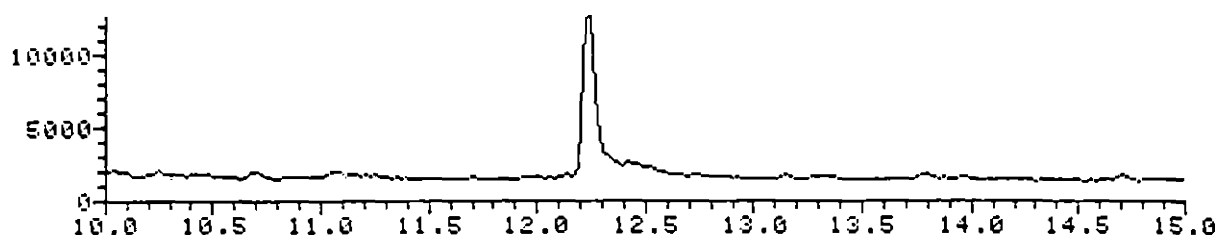
00056

SUBJECT TO PROTECTIVE ORDER

C10959

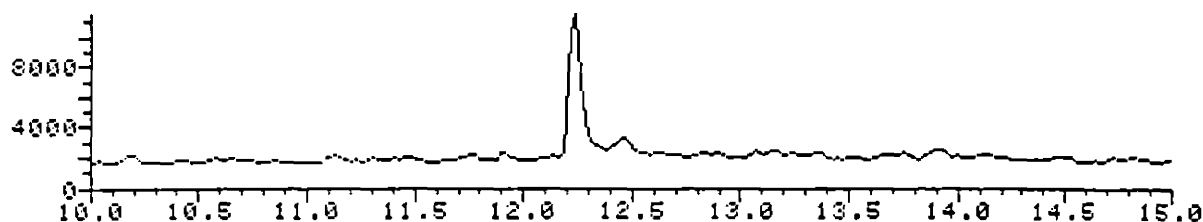
File >G0169 333.6-334.6 amu.2UL UT-3115

SP2330 200-1/3/250 GT



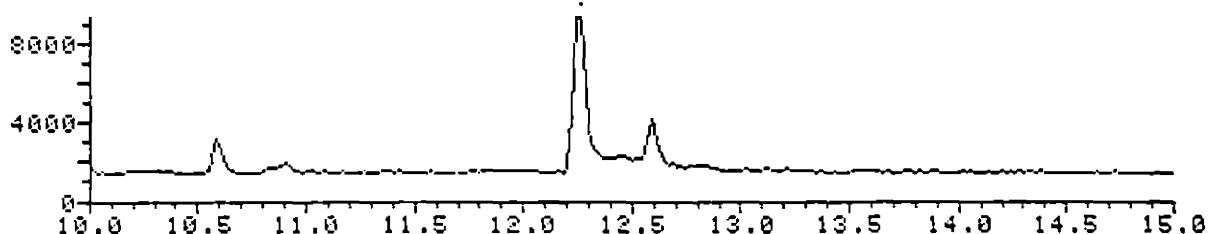
File >G0169 331.6-332.6 amu.2UL UT-3115

SP2330 200-1/3/250 GT



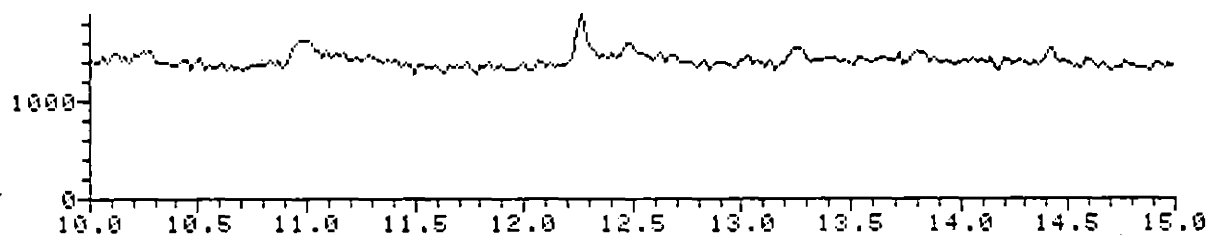
File >G0169 327.6-328.6 amu.2UL UT-3115

SP2330 200-1/3/250 GT



File >G0169 321.6-322.6 amu.2UL UT-3115

SP2330 200-1/3/250 GT



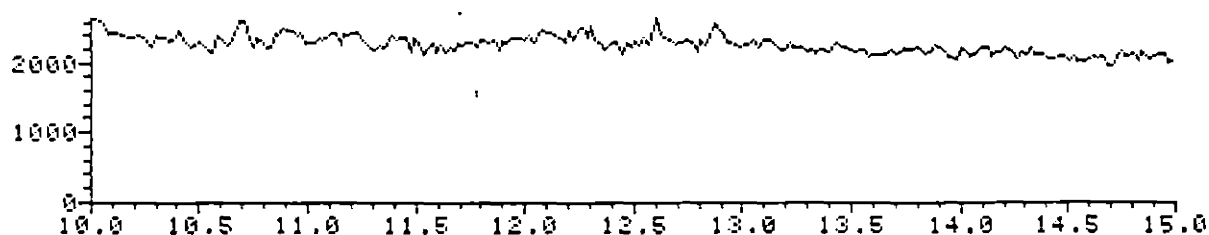
File >G0169 319.6-320.6 amu.2UL UT-3115

SP2330 200-1/3/250 GT



File >G0169 256.7-257.7 amu.2UL UT-3115

SP2330 200-1/3/250 GT



00057
SOURCE: ELECTRONIC CALER.

C10960

GC/MS default file: >G0169::A4

MS data file header from : >G0169

Sample: 2UL UT-3115 Operator: GARY MS2 11/09/84 16:52.
Misc : SP2330 200-1/3/250 GT BTL#21BTL#21
Sys. #: 1 MS model: 87 SW/HW rev.: CR ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265.....

* Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.244	245	250	257	12	63725	41333	100.00
2	12.244	245	250	257	12	63725	37763	91.36

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.244	246	250	256	10	54376	33996	100.00
2	12.244	246	250	256	10	54376	31331	92.16

332/334 CALCULATION

R-Global(0) = .8225

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.264	246	251	257	11	46509	30010	100.00
2	12.264	246	251	257	11	46509	26446	88.12

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.264	247	251	255	8	13966	3030	100.00
2	12.264	247	251	255	8	13966	2726	89.97

CONFIDENTIAL

00058

C10961

SUBJECT TO PROTECTIVE ORDER

> 60169

S

M/Z = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.264	250	251	253	3	7490	2051	100.00
2	12.264	250	251	253	3	7490	1985	96.78

320/322 CALCULATION

R-Global(1) = .6769

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.264	250	251	252	2	7371	2613	100.00
2	12.264	250	251	252	2	7371	2512	96.13

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .8675

(328)/(332 + 334) CALCULATION

R-Global(3) = .3980

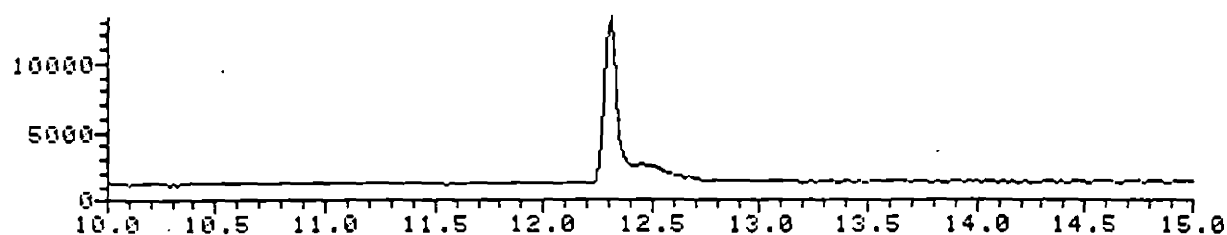
00059

CONFIDENTIAL
SUBJECT TO PATENT OFFICE

C10962

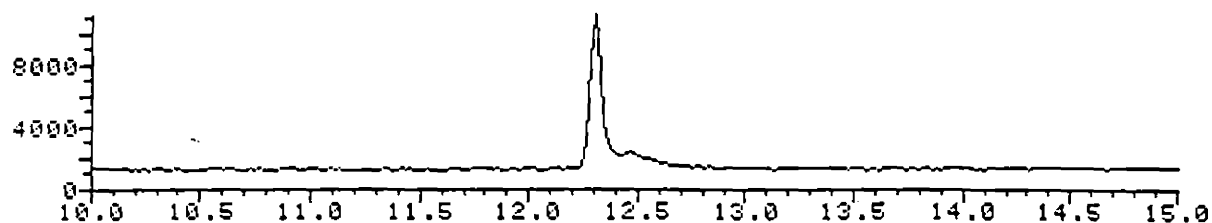
File >G0170 333.6-334.6 amu.2UL UT-3116

SP2330 200-1/3/250 GT



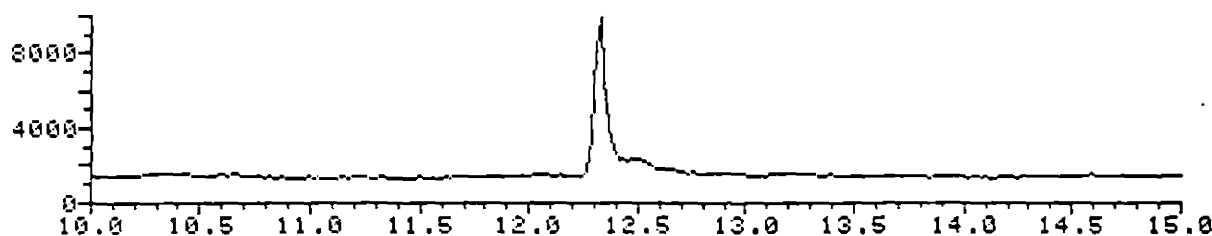
File >G0170 331.6-332.6 amu.2UL UT-3116

SP2330 200-1/3/250 GT



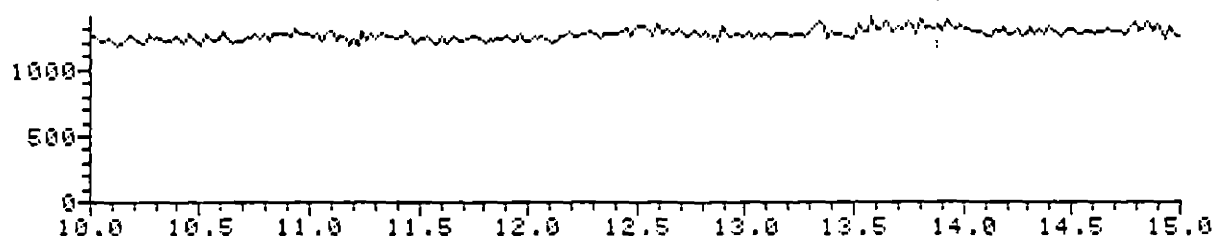
File >G0170 327.6-328.6 amu.2UL UT-3116

SP2330 200-1/3/250 GT



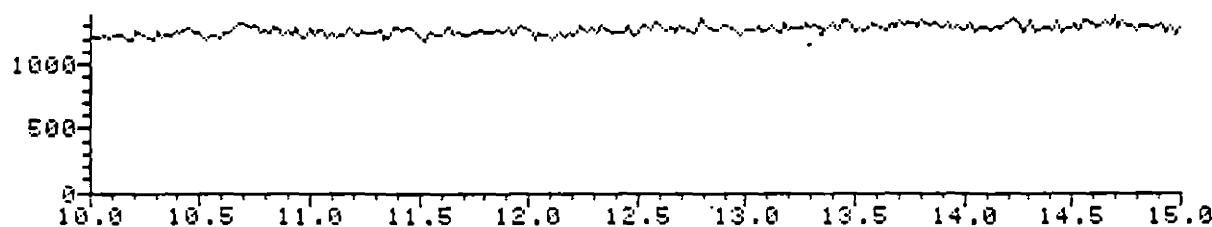
File >G0170 321.6-322.6 amu.2UL UT-3116

SP2330 200-1/3/250 GT



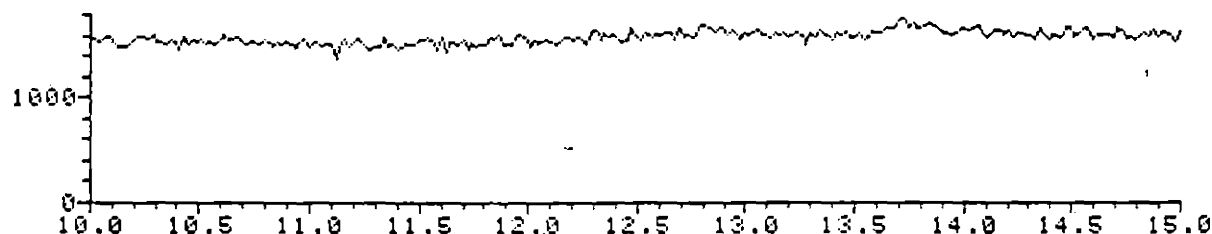
File >G0170 319.6-320.6 amu.2UL UT-3116

SP2330 200-1/3/250 GT



File >G0170 256.7-257.7 amu.2UL UT-3116

SP2330 200-1/3/250 GT



CONFIDENTIAL

SUBJECT TO PROTECTIVE ORDER

00060

C10963

MS data file header from : >G0170

Sample: 2UL UT-3116 Operator: GARY MS2 11/09/84 17:17 ..
Misc : SP2330 200-1/3/250 GT BTL#23BTL#23
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265.....

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.310	251	256	261	10	54708	41748	100.00
2	12.310	251	256	261	10	54708	36103	86.48

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.310	251	256	261	10	45680	32990	100.00
2	12.310	251	256	261	10	45680	28725	87.07

332/334 CALCULATION

R-Global(0) = .7902

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.330	247	257	261	14	48863	29767	100.00
2	12.330	247	257	261	14	48863	23488	78.91

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	262	0	261	-1	0	1273	100.00
2	0.000	262	0	261	-1	0	1273	100.00

CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER

00061

C10964

> G0170

S

M/Z = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	262	0	261	-1	0	1252	100.00
2	0.000	262	0	261	-1	0	1252	100.00

320/322 CALCULATION

R-Global(1) = .9835

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	262	0	261	-1	0	1557	100.00
2	0.000	262	0	261	-1	0	1557	100.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0338

(328)/(332 + 334) CALCULATION

R-Global(3) = .3981

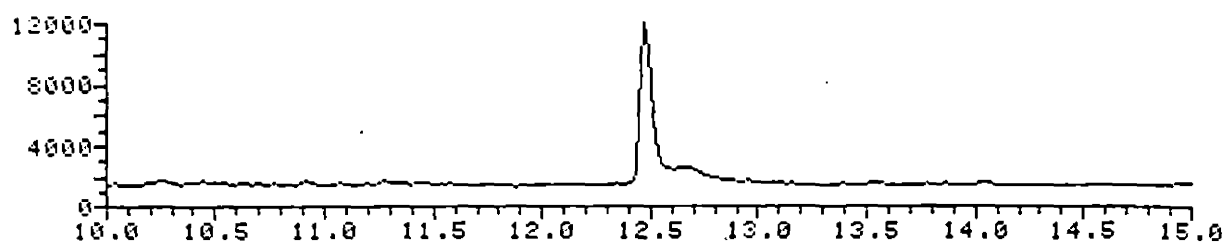
00062

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SUBJECT TO PROTECTION

C10965

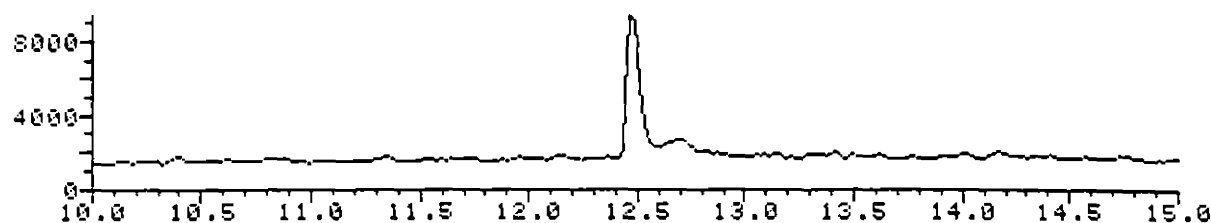
File >G0171 333.6-334.6 amu.2UL UT-3117

SP2330 200-1/3/250 GT



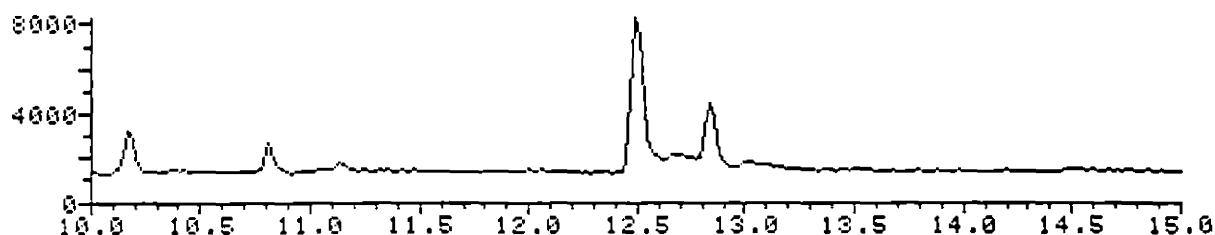
File >G0171 331.6-332.6 amu.2UL UT-3117

SP2330 200-1/3/250 GT



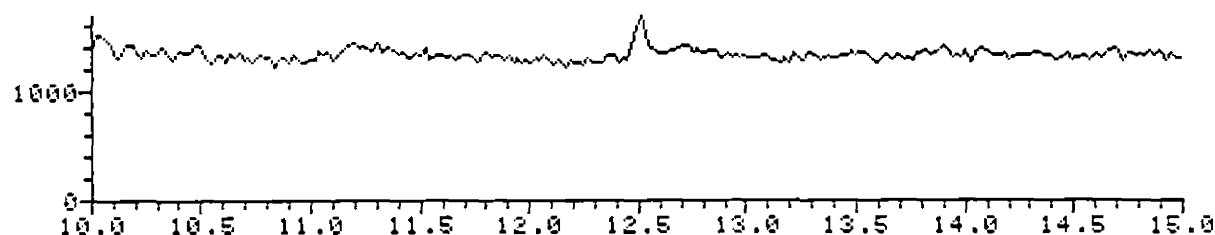
File >G0171 327.6-328.6 amu.2UL UT-3117

SP2330 200-1/3/250 GT



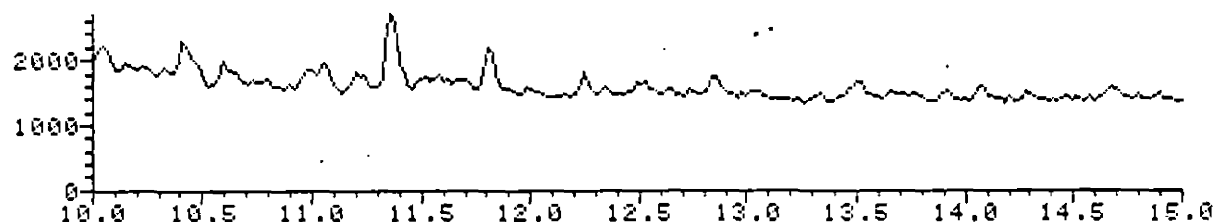
File >G0171 321.6-322.6 amu.2UL UT-3117

SP2330 200-1/3/250 GT



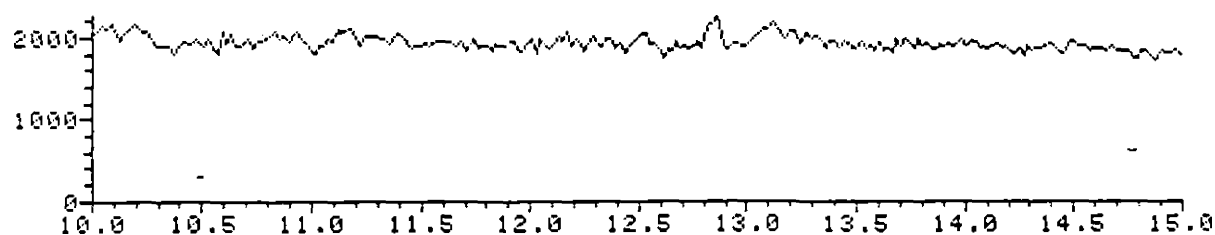
File >G0171 319.6-320.6 amu.2UL UT-3117

SP2330 200-1/3/250 GT



File >G0171 256.7-257.7 amu.2UL UT-3117

SP2330 200-1/3/250 GT



CONFIDENTIAL
SUBJECT TO REVIEW

00063

C10966

MS data file header from : >G0171

Sample: 2UL UT-3117 Operator: GARY MS2 11/09/84 17:37 ..
Misc : SP2330 200-1/3/250 GT BTL#25 BTL#25
Sys. #: 1 MS model: 87 SW/HW rev.: CR ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265.....

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.471	259	264	270	11	52602	35794	100.00
2	12.471	259	264	270	11	52602	30305	84.67

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.471	261	264	270	9	43822	29287	100.00
2	12.471	261	264	270	9	43822	26222	89.53

332/334 CALCULATION

R-Global(0) = .8182

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.491	260	265	271	11	40316	25994	100.00
2	12.491	260	265	271	11	40316	22617	87.01

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.511	263	266	270	7	11639	2651	100.00
2	12.511	263	266	270	7	11639	2392	90.23

CONFIDENTIAL
SUBJECT TO PROTECTION

00064

C10967

>G0171

S

M/Z = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.491	264	265	266	2	4832	1814	100.00
2	12.491	264	265	266	2	4832	1689	93.11

320/322 CALCULATION

R-Global(1) = .6843

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.531	264	267	268	4	9999	2243	100.00
2	12.531	264	267	268	4	9999	2237	99.73

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0686

(328)/(332 + 334) CALCULATION

R-Global(3) = .3990

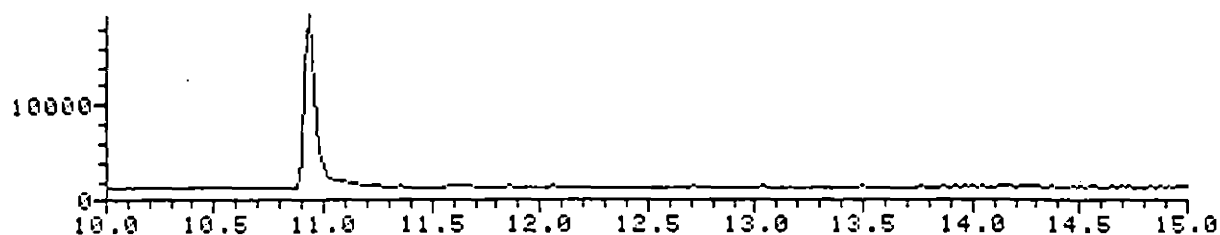
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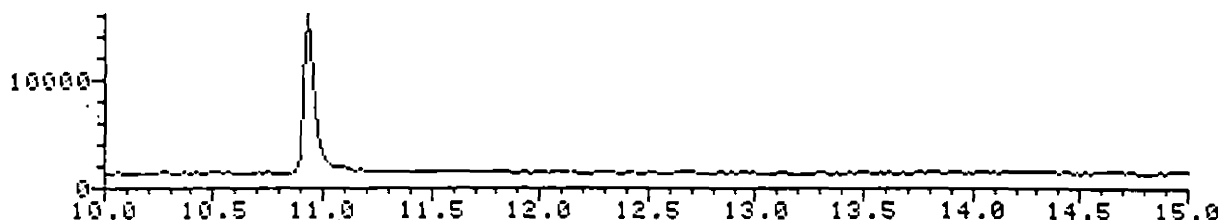
00065

C10968

File >G0173 333.6-334.6 amu.2UL .2503/.48/.20 SP2330 200-1/3/250 GT..



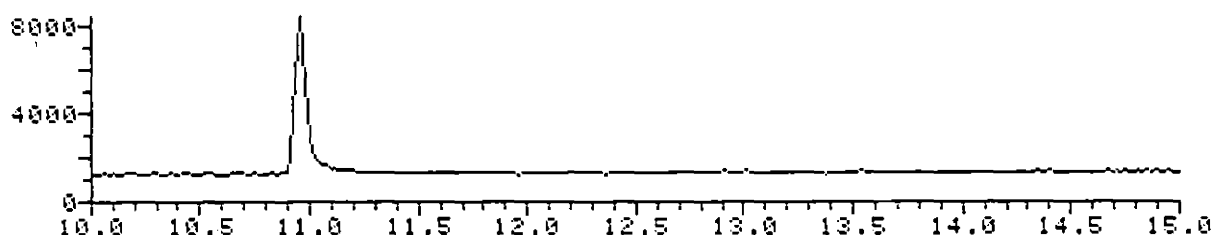
File >G0173 331.6-332.6 amu.2UL .2503/.48/.20 SP2330 200-1/3/250 GT



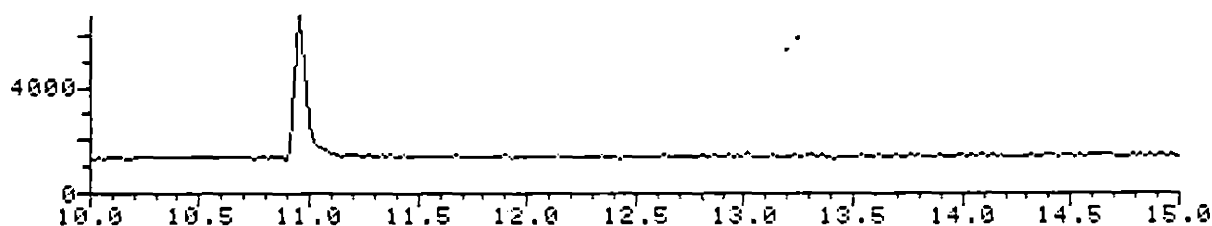
File >G0173 327.6-328.6 amu.2UL .2503/.48/.20 SP2330 200-1/3/250 GT..



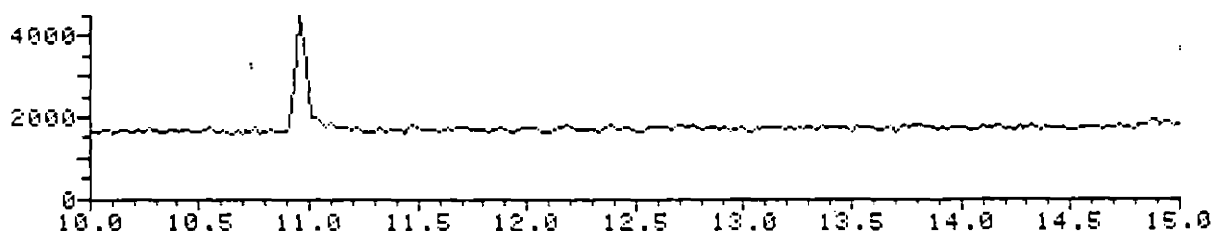
File >G0173 321.6-322.6 amu.2UL .2503/.48/.20 SP2330 200-1/3/250 GT



File >G0173 319.6-320.6 amu.2UL .2503/.48/.20 SP2330 200-1/3/250 GT...



File >G0173 256.7-257.7 amu.2UL .2503/.48/.20 SP2330 200-1/3/250 GT..



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000066

C10969

MS data file header from : >G0173

Sample: 2UL .2503/.48/.20 Operator: GARY MS2 11/09/84 17:50
Misc : SP2330 200-1/3/250 GT BTL#29BTL#29
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.936	178	188	205	27	95808	59655	100.00
2	10.936	178	188	205	27	95808	58062	97.33

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.936	183	188	200	17	69185	45606	100.00
2	10.936	183	188	200	17	69185	43073	94.45

332/334 CALCULATION

R-Global(0) = .7645

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.956	183	189	203	20	69961	41921	100.00
2	10.956	183	189	203	20	69961	39711	94.73

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.956	184	189	196	12	38007	22143	100.00
2	10.956	184	189	196	12	38007	20871	94.26

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000037

C10970

S

M/Z = 319.9

>G0173

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.956	184	189	201	17	40214	17842	100.00
2	10.956	184	189	201	17	40214	16966	95.09

320/322 CALCULATION

R-Global(1) = .8058

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	10.956	185	189	193	8	22850	9898	100.00
2	10.956	185	189	193	8	22850	8498	85.86

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .3799

(328)/(332 + 334) CALCULATION

R-Global(3) = .3964

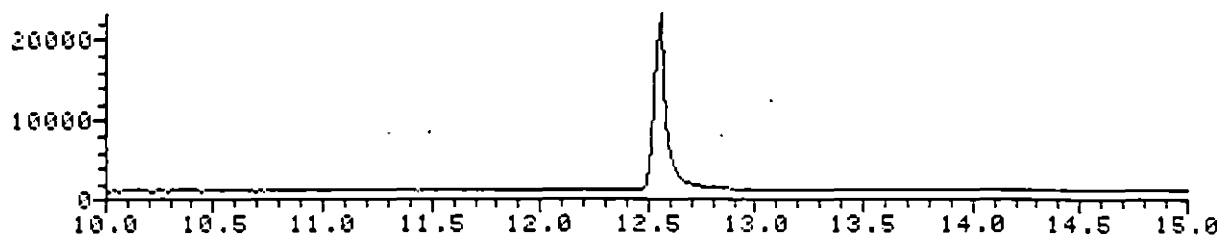
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C10971

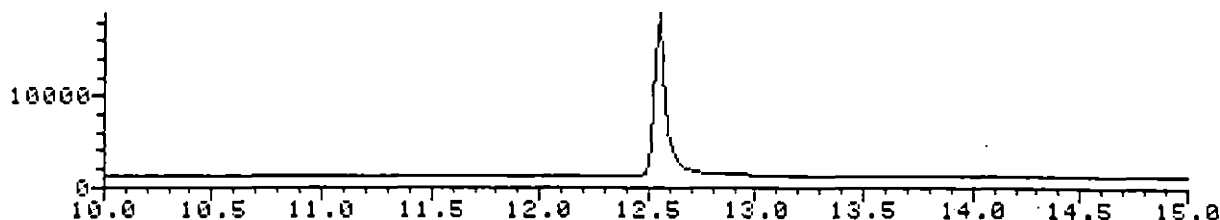
File >G0174 333.6-334.6 amu.2UL 2.503/.48/.20

SP2330 200-1/3/250.GT..



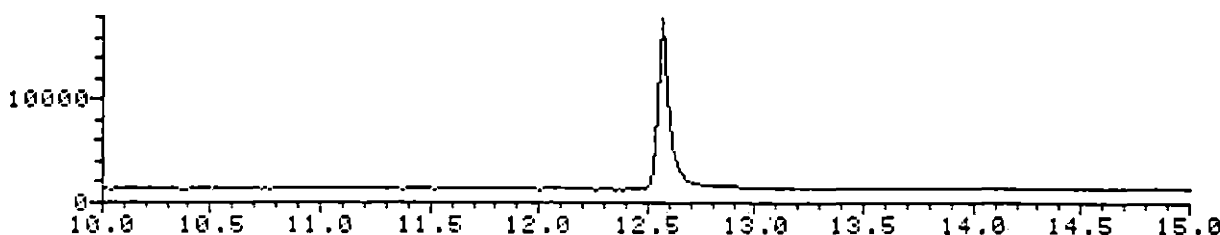
File >G0174 331.6-332.6 amu.2UL 2.503/.48/.20

SP2330 200-1/3/250 GT



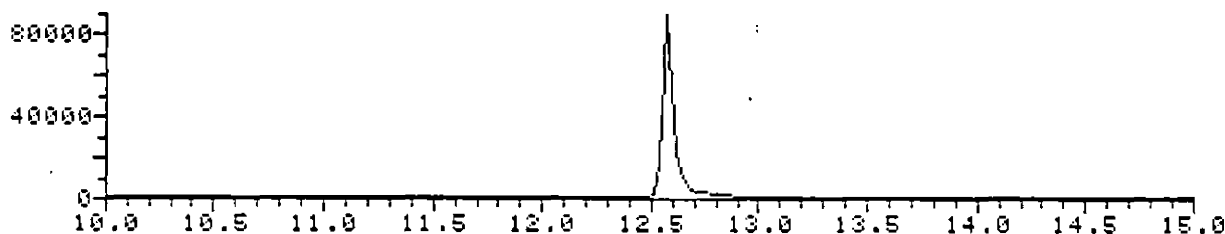
File >G0174 327.6-328.6 amu.2UL 2.503/.48/.20

SP2330 200-1/3/250.GT..



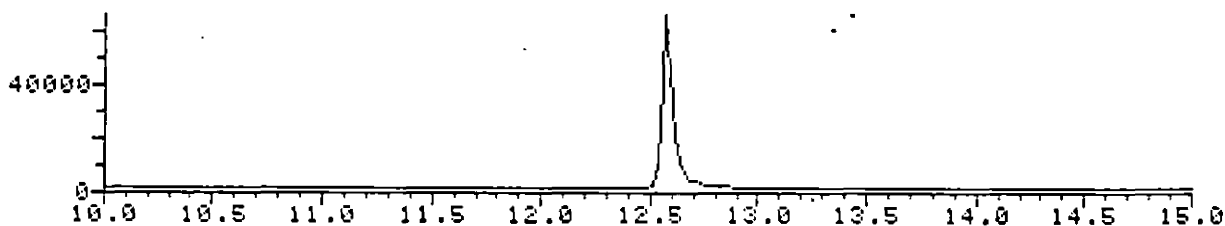
File >G0174 321.6-322.6 amu.2UL 2.503/.48/.20

SP2330 200-1/3/250 GT



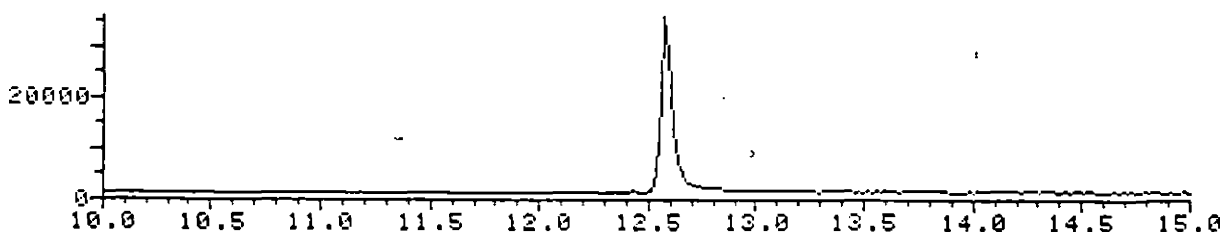
File >G0174 319.6-320.6 amu.2UL 2.503/.48/.20

SP2330 200-1/3/250.GT...



File >G0174 256.7-257.7 amu.2UL 2.503/.48/.20

SP2330 200-1/3/250.GT.



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C10972

MS data file header from : >G0174

Sample: 2UL 2.503/.48/.20 Operator: GARY MS2 11/09/84-18:1
Misc : SP2330 200-1/3/250 GT BTL#41BTL#41
Sys. #: 1 MS model: 87 SW/HW rev.: CR ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265...

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.552	260	268	278	18	98047	76015	100.00
2	12.552	260	268	278	18	98047	71083	93.51

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.552	260	268	285	25	92933	61233	100.00
2	12.552	260	268	285	25	92933	59658	97.43

332/334 CALCULATION

R-Global(0) = .8055

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.572	262	269	282	20	81762	57102	100.00
2	12.572	262	269	282	20	81762	54482	95.41

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.572	259	269	289	30	334113	298113	100.00
2	12.572	259	269	289	30	334113	287268	96.36

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00070

C10973

S

M/Z = 319.9

> G0174

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.572	258	269	284	26	248367	217141	100.00
2	12.572	258	269	284	26	248367	206078	94.91

(320/322) CALCULATION

R-Global(1) = .7284

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.572	259	269	285	26	156236	119342	100.00
2	12.572	259	269	285	26	156236	114285	95.76

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 3.7542

(328)/(332 + 334) CALCULATION

R-Global(3) = .3965

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C10974

File >G0175 333.6-334.6 amu.2UL 25.03/.48/.20

SP2330 200-1/3/250...GT...



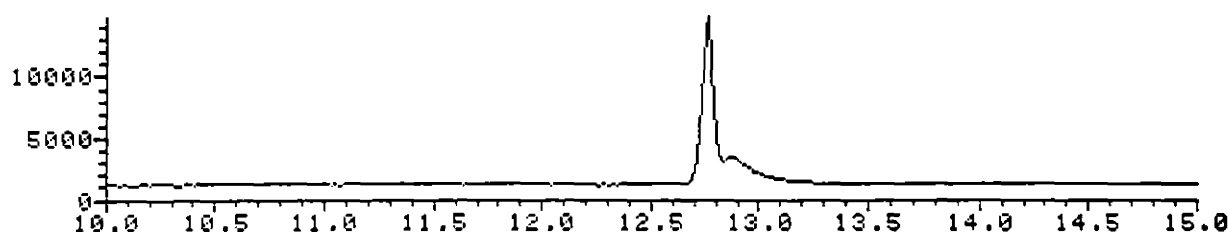
File >G0175 331.6-332.6 amu.2UL 25.03/.48/.20

SP2330 200-1/3/250...GT..



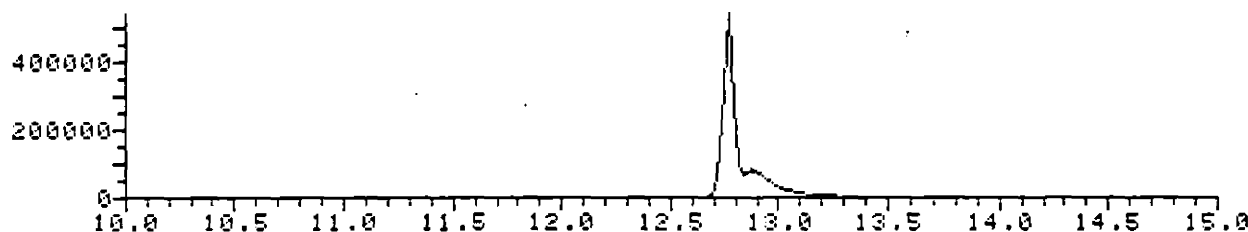
File >G0175 327.6-328.6 amu.2UL 25.03/.48/.20

SP2330 200-1/3/250...GT...



File >G0175 321.6-322.6 amu.2UL 25.03/.48/.20

SP2330 200-1/3/250...GT..



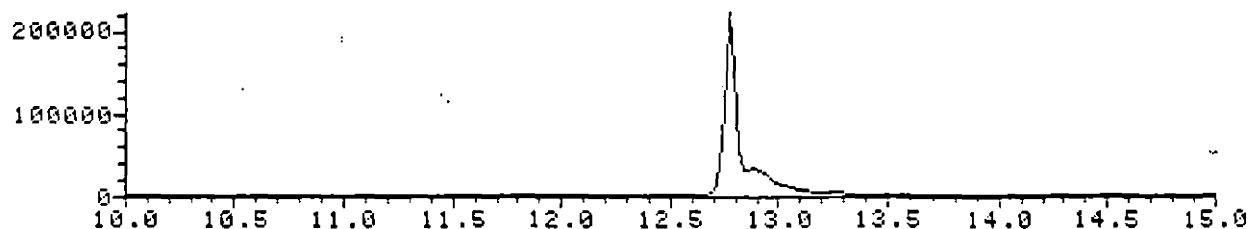
File >G0175 319.6-320.6 amu.2UL 25.03/.48/.20

SP2330 200-1/3/250...GT...



File >G0175 256.7-257.7 amu.2UL 25.03/.48/.20

SP2330 200-1/3/250...GT...



00072

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C10975

MS data file header from : >G0175

Sample: 2UL 25.03/.48/.20 Operator: GARY MS2 11/09/84 10:39---
Misc : SP2330 200-1/3/250 GT BTL#43BTL#43
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: RPEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 265 Transfer line temp.: 265....--

Chromatographic temperatures : 200. 250. 0. 0. 0.
Chromatographic times, min. : 1.0 25.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 3.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.754	272	278	281	9	58015	46495	100.00
2	12.754	272	278	281	9	58015	38048	81.83

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.754	272	278	281	9	48899	37883	100.00
2	12.754	272	278	281	9	48899	30611	80.80

332/334 CALCULATION

R-Global(0) = .8148

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.774	273	279	282	9	58142	46883	100.00
2	12.774	273	279	282	9	58142	39143	83.49

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.774	269	279	282	13	1736753	1721712	100.00
2	12.774	269	279	282	13	1736753	1282812	74.51

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00073

C10976

S

M/Z = 319.9

>60175

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.774	270	279	282	12	1267934	1253342	100.00
2	12.774	270	279	282	12	1267934	948926	75.71

320/322 CALCULATION

R-Global(1) = .7280

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.774	270	279	282	12	707015	691091	100.00
2	12.774	270	279	282	12	707015	517709	74.91

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 35.2586

(328)/(332 + 334) CALCULATION

R-Global(3) = .3720

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00074

C10977

MS data file header from 183113

Sample: 20L 1002/1087/20 Operator: ROY MS 11/05/84 0.38
misc : SP2330 200-1/3/250 BTL#03 BTL# 3
S99. # : 1 MS Model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

n/z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.335	249	255	267	18	428079	381512	100.00
2	12.335	249	255	267	18	428079	375528	98.45

n/z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.335	249	255	266	17	350343	308846	100.00
2	12.335	249	255	266	17	350343	301986	97.78

332/334 CALCULATION

R-Global(0) = .8095

n/z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	250	256	267	17	409322	366482	100.00
2	12.355	250	256	267	17	409322	358211	97.74

n/z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	251	256	269	18	135239	88042	100.00
2	12.355	251	256	269	18	135239	87584	99.48

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C10978

m/z = 319.9

> 3313

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	250	256	267	17	117128	71755	100.00
2	12.355	250	256	267	17	117128	69783	97.25

320/322 CALCULATION

R-Global(1) = .8150

m/z = 252.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	264	12	85928	42404	100.00
2	12.355	252	256	264	12	85928	38954	91.86

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .2315

(328)/(332 + 334) CALCULATION

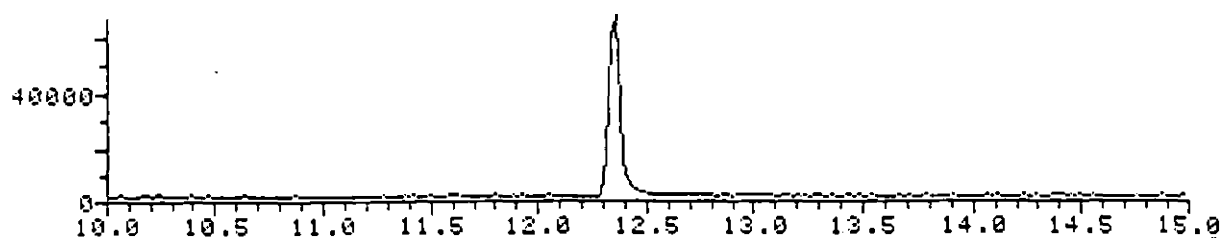
R-Global(3) = .5297

00076

File >B3114 333.6-334.6 amu.2UL UT-3041

SP2330 200-1/3/250 GT

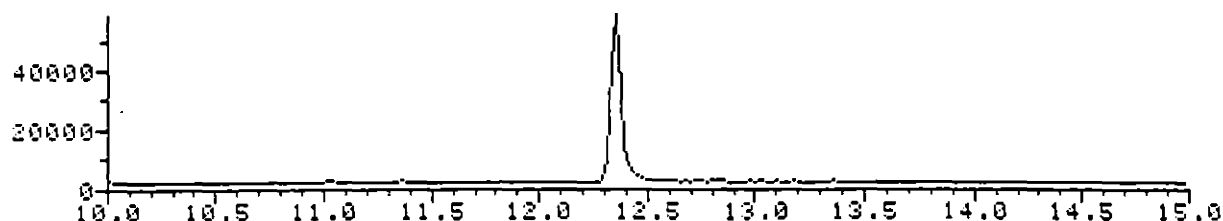
BT



File >B3114 331.6-332.6 amu.2UL UT-3041

SP2330 200-1/3/250 GT

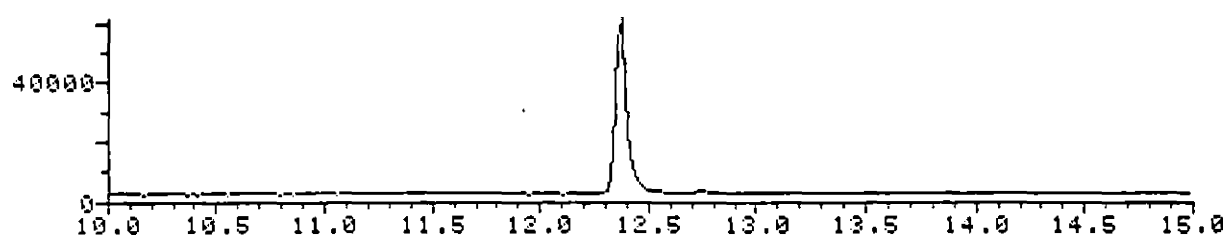
BT



File >B3114 327.6-328.6 amu.2UL UT-3041

SP2330 200-1/3/250 GT

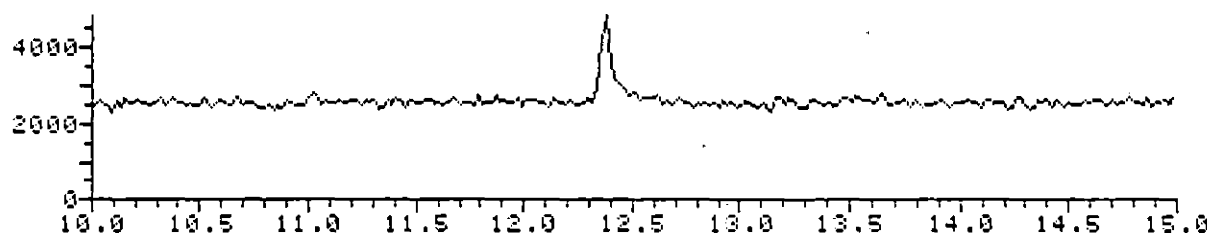
BT



File >B3114 321.6-322.6 amu.2UL UT-3041

SP2330 200-1/3/250 GT

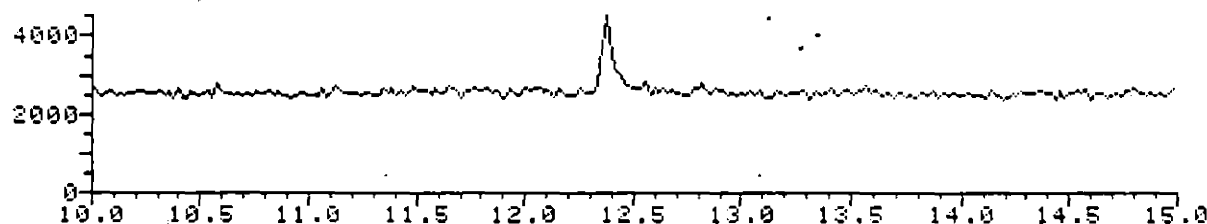
BT



File >B3114 319.6-320.6 amu.2UL UT-3041

SP2330 200-1/3/250 GT

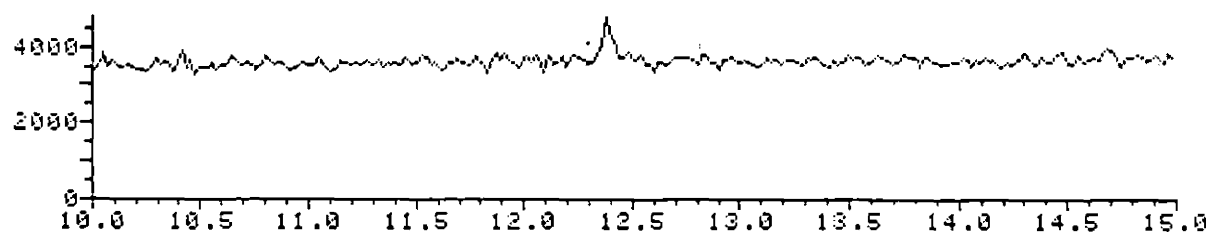
BT



File >B3114 256.7-257.7 amu.2UL UT-3041

SP2330 200-1/3/250 GT

BT



00077

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C10980

MS data file header from : B3114

Sample: 20L UT-3041 Operator: ROY MS 11/05/84 1:00
Insc : SP2330 200-1/3/250 GT BTL#31 BTL#31
Svs. #: 1 MS Model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APE101 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

m/z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.354	250	256	268	18	242036	197666	100.00
2	12.354	250	256	268	18	242036	192950	97.61

m/z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.354	250	256	266	16	200080	160080	100.00
2	12.354	250	256	266	16	200080	156912	98.02

332/334 CALCULATION

R-Global(0) = .8099

m/z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	251	257	268	17	233202	188373	100.00
2	12.375	251	257	268	17	233202	183859	97.50

m/z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	264	10	36043	10543	100.00
2	12.375	254	257	264	10	36043	9313	88.33

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C10981

00009

2B314

n/2 = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	253	257	264	11	37149	9308	100.00
2	12.375	253	257	264	11	37149	8466	90.95

520/322 CALCULATION

R-Global(1) = .8829

n/2 = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	260	8	35813	6421	100.00
2	12.375	252	257	260	8	35813	6121	95.33

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0555

(328)/(332 + 334) CALCULATION

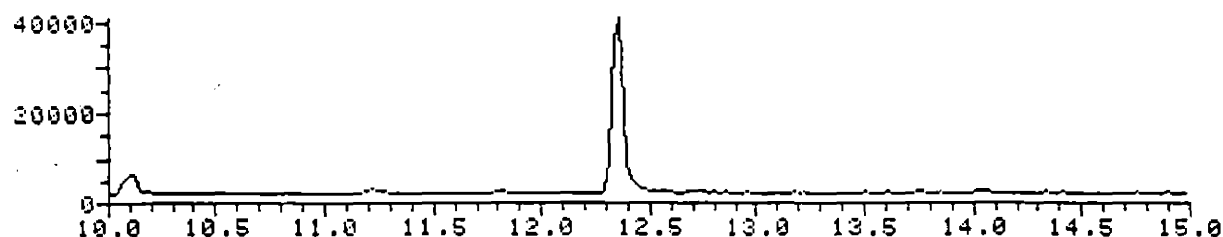
R-Global(3) = .5263

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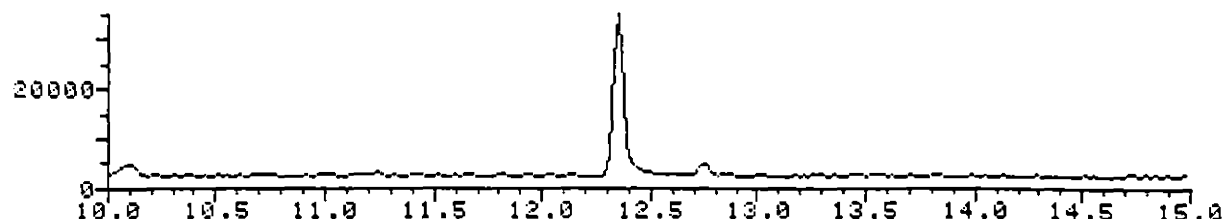
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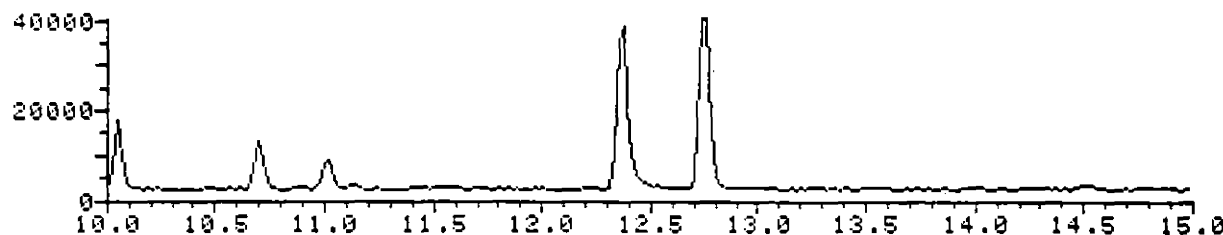
File >B3115 333.6-334.6 amu.2UL UT-3042 SP2330 200-1/3/250 GT BT



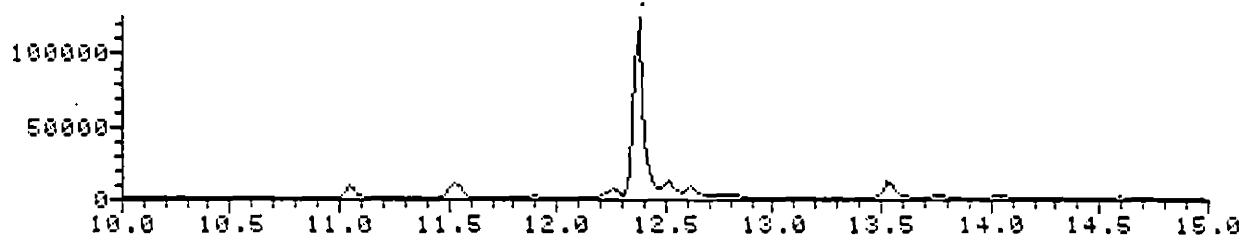
File >B3115 331.6-332.6 amu.2UL UT-3042 SP2330 200-1/3/250 GT BT



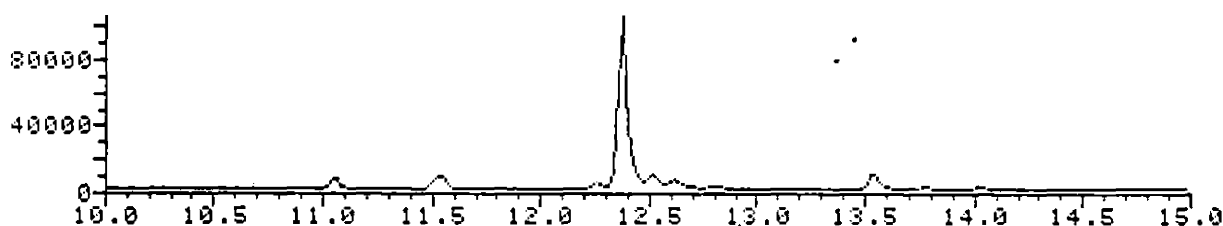
File >B3115 327.6-328.6 amu.2UL UT-3042 SP2330 200-1/3/250 GT BT



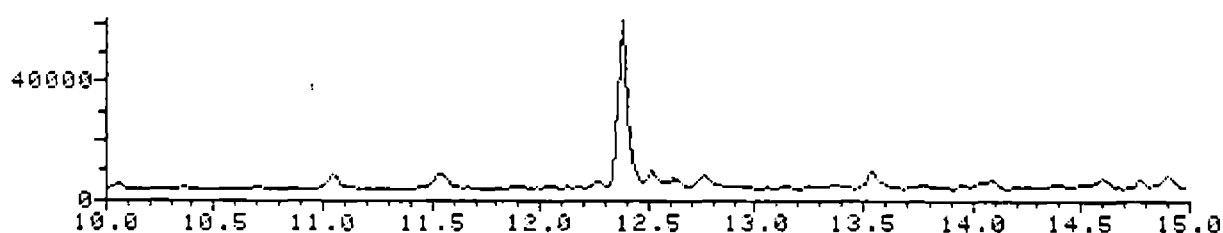
File >B3115 321.6-322.6 amu.2UL UT-3042 SP2330 200-1/3/250 GT BT



File >B3115 319.6-320.6 amu.2UL UT-3042 SP2330 200-1/3/250 GT BT



File >B3115 256.7-257.7 amu.2UL UT-3042 SP2330 200-1/3/250 GT BT



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C10983

MS data file header from : >B3115

Sample: 2UL UT-3042 Operator: ROY MS 11/05/84 1:20
Misc : SP2330 200-1/3/250 GT BTL#33 BTL#33
Svs. #: 1 MS Model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.354	250	256	266	16	154401	115793	100.00
2	12.354	250	256	266	16	154401	113657	98.16

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.354	250	256	265	15	128678	91898	100.00
2	12.354	250	256	265	15	128678	90413	98.38

332/334 CALCULATION

R-Global(0) = .7936

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	265	13	147887	113554	100.00
2	12.375	252	257	265	13	147887	109524	96.45

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	253	257	262	9	367975	331687	100.00
2	12.375	253	257	262	9	367975	313439	94.50

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> B315

m/z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	253	257	262	9	305215	271699	100.00
2	12.375	253	257	262	9	305215	257758	94.87

320/322 CALCULATION

R-Global(1) = .8191

m/z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	195226	157882	100.00
2	12.375	254	257	262	8	195226	150626	95.40

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 2.9052

(320)/(332 + 334) CALCULATION

R-Global(3) = .5324

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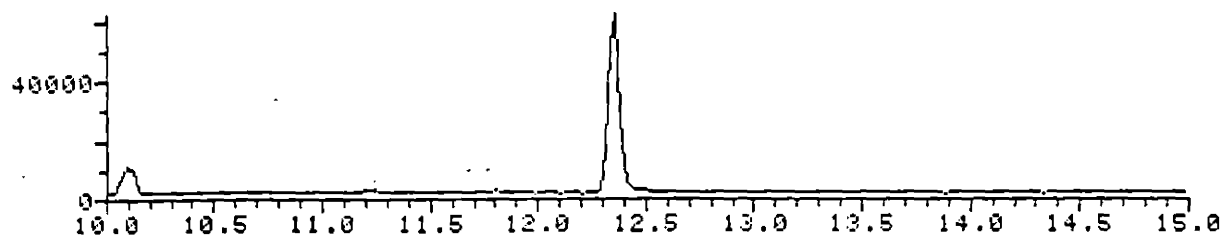
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C10985

File >B3116 333.6-334.6 amu.3UL UT-3043

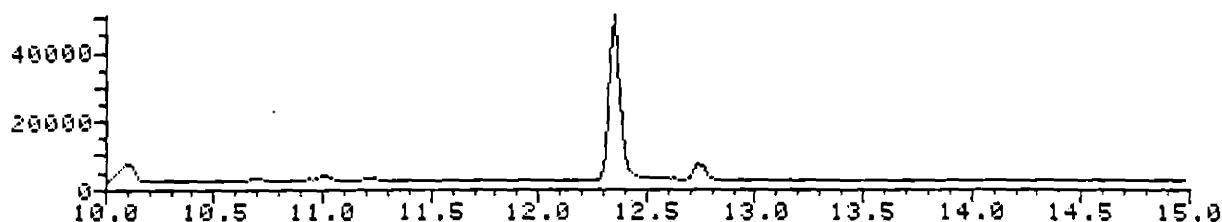
SP2330 200-1/3/250 GT BT

40



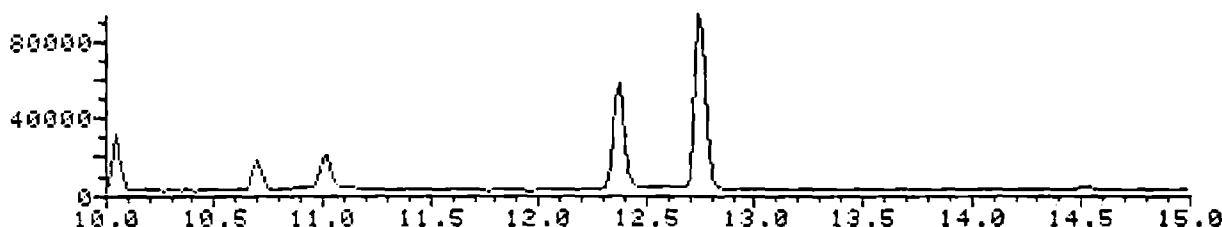
File >B3116 331.6-332.6 amu.2UL UT-3043

SP2330 200-1/3/250 GT BT



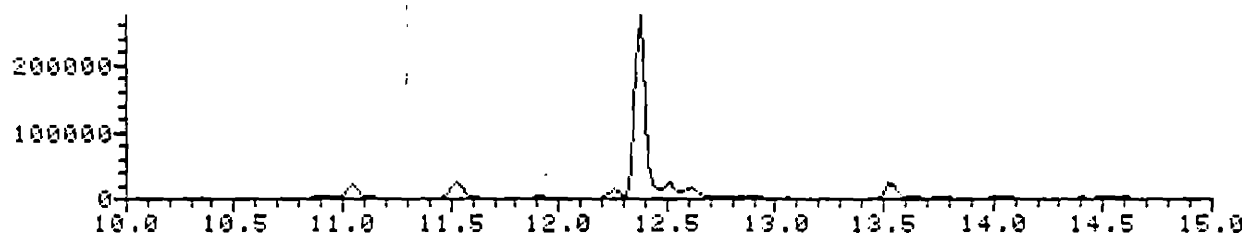
File >B3116 327.6-328.6 amu.2UL UT-3043

SP2330 200-1/3/250 GT BT



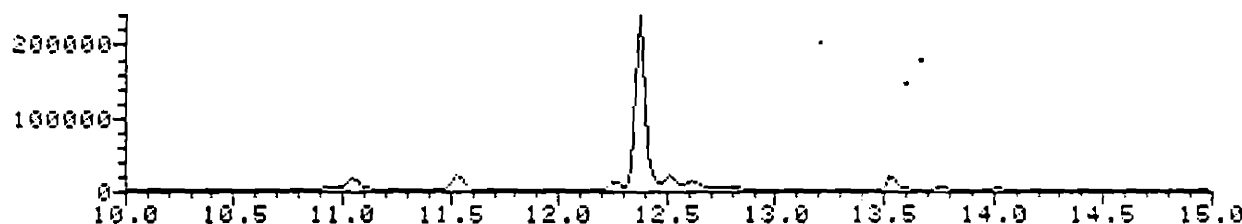
File >B3116 321.6-322.6 amu.2UL UT-3043

SP2330 200-1/3/250 GT BT



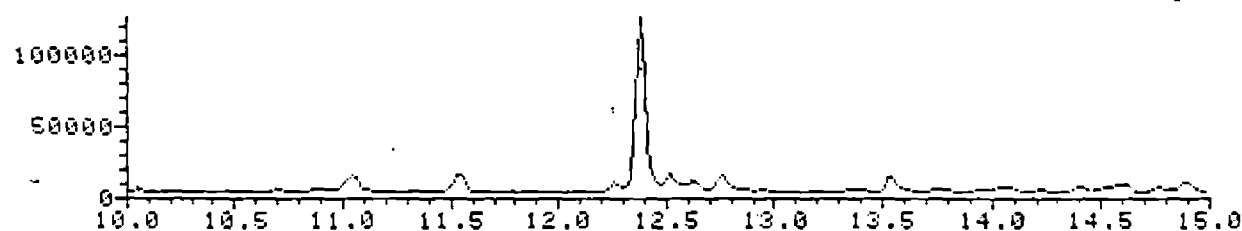
File >B3116 319.6-320.6 amu.2UL UT-3043

SP2330 200-1/3/250 GT BT



File >B3116 256.7-257.7 amu.2UL UT-3043

SP2330 200-1/3/250 GT BT



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C10986

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M/Z = 319.9

>B311

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	646915	598907	100.00
2	12.375	254	257	262	8	646915	575623	96.11

320/322 CALCULATION

R-Global(1) = .8303

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	374852	318020	100.00
2	12.375	254	257	262	8	374852	311824	98.05

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 4.3271

(328)/(332 + 334) CALCULATION

R-Global(3) = .5085

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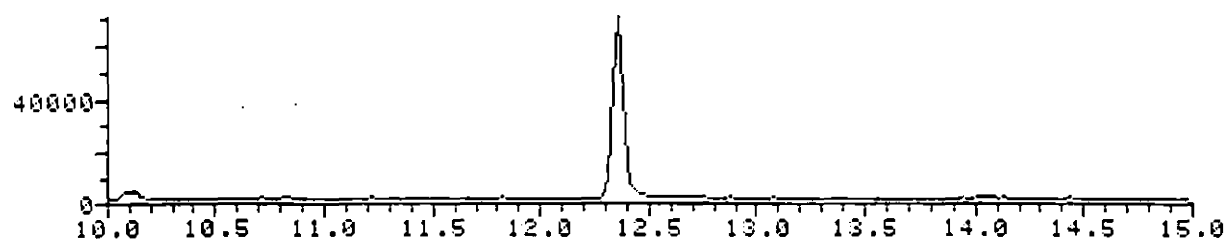
00085

C10988

File >B3117 333.6-334.6 amu.2UL UT-3044

SP2330 200-1/3/250 GT

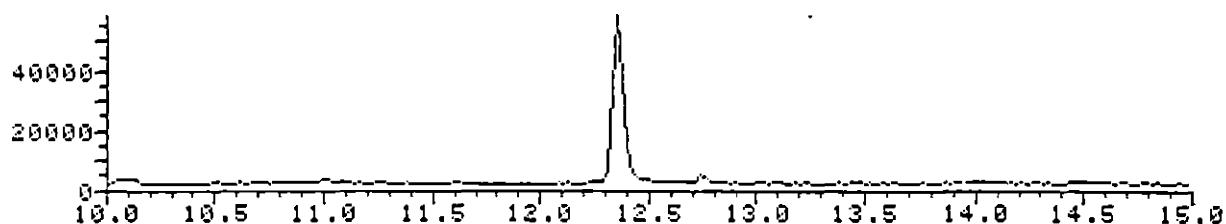
BT



File >B3117 331.6-332.6 amu.2UL UT-3044

SP2330 200-1/3/250 GT

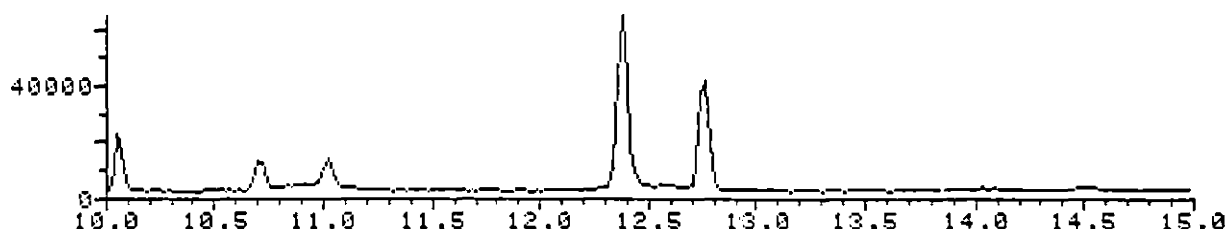
BT



File >B3117 327.6-328.6 amu.2UL UT-3044

SP2330 200-1/3/250 GT

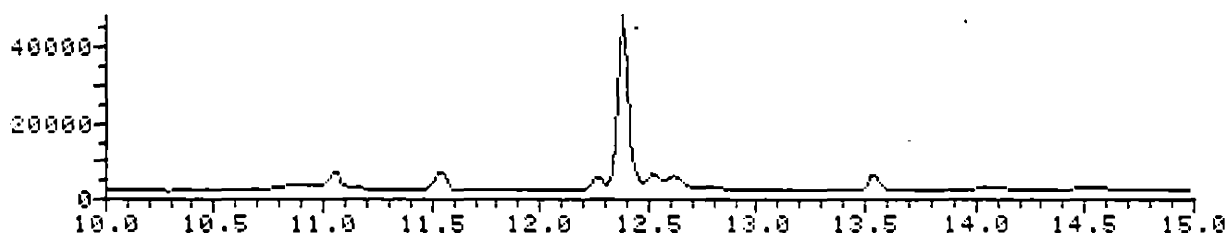
BT



File >B3117 321.6-322.6 amu.2UL UT-3044

SP2330 200-1/3/250 GT

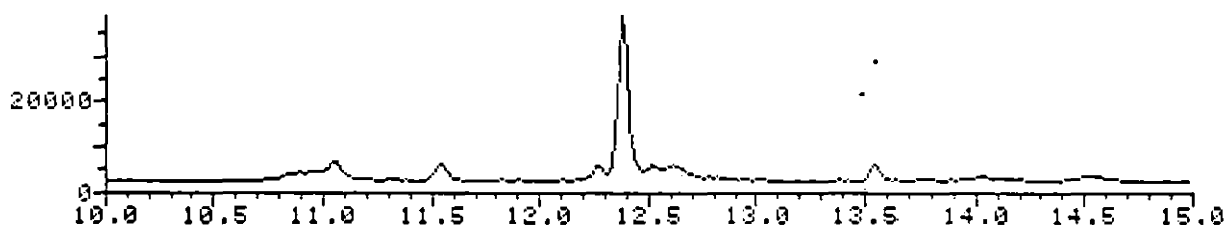
BT



File >B3117 319.6-320.6 amu.2UL UT-3044

SP2330 200-1/3/250 GT

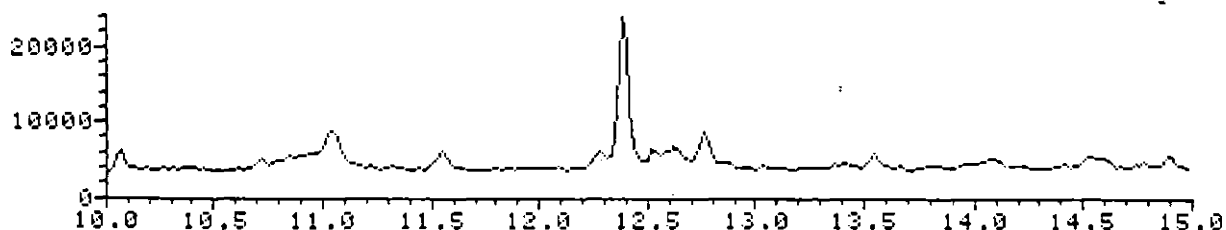
BT



File >B3117 256.7-257.7 amu.2UL UT-3044

SP2330 200-1/3/250 GT

BT



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C10989

MS data file header from : 083117

Sample: 2UL UF-3044 Operator: ROY MS 11/05/84 2:00
Misc : SP2330 200-1/3/250 GT BTL#37 BTL#37
Svs. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

m/z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	250	256	266	16	229668	190628	100.00
2	12.355	250	256	266	16	229668	185956	97.55

m/z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	250	256	264	14	191754	155214	100.00
2	12.355	250	256	264	14	191754	150629	97.05

332/334 CALCULATION

R-Global(0) = .8142

m/z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	251	257	265	14	226639	179165	100.00
2	12.375	251	257	265	14	226639	172774	96.43

m/z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	154102	120374	100.00
2	12.375	254	257	262	8	154102	117538	97.64

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m/z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	130072	97976	100.00
2	12.375	254	257	262	8	130072	96132	98.12

320/322 CALCULATION

R-Global(1) = .8139

m/z = 257.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	263	9	101154	55704	100.00
2	12.375	254	257	263	9	101154	54903	98.56

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .6314

(329)/(332 + 334) CALCULATION

R-Global(3) = .5149

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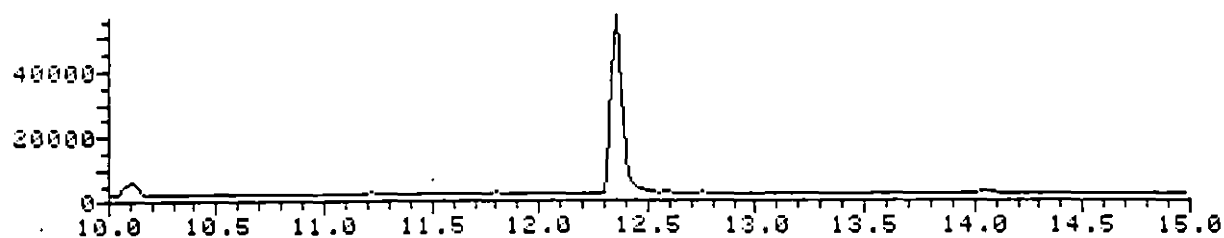
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File >B3118 333.6-334.6 amu.2UL UT-3045

SP2330 200-1/3/250 GT

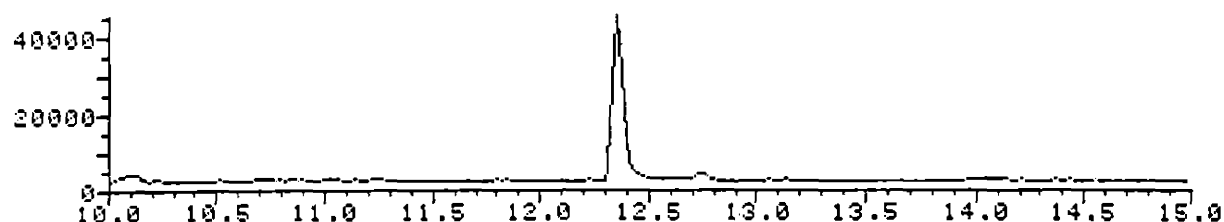
BT



File >B3118 331.6-332.6 amu.2UL UT-3045

SP2330 200-1/3/250 GT

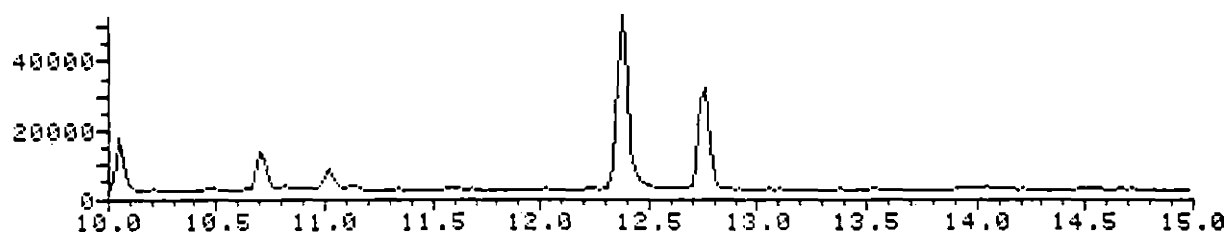
BT



File >B3118 327.6-328.6 amu.2UL UT-3045

SP2330 200-1/3/250 GT

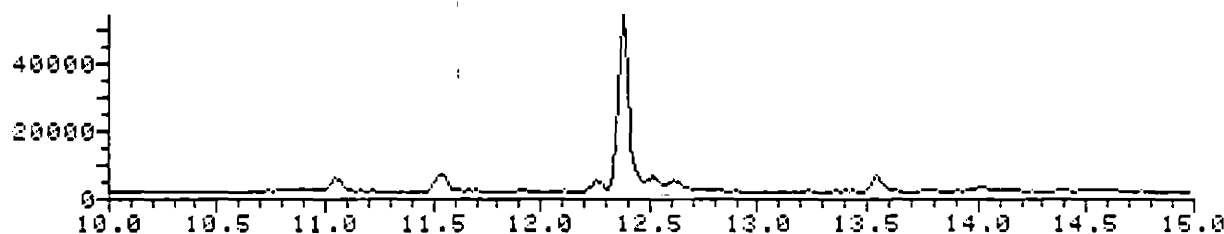
BT



File >B3118 321.6-322.6 amu.2UL UT-3045

SP2330 200-1/3/250 GT

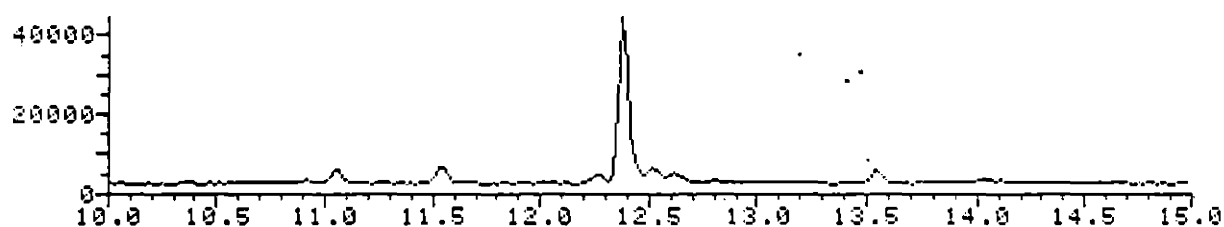
BT



File >B3118 319.6-320.6 amu.2UL UT-3045

SP2330 200-1/3/250 GT

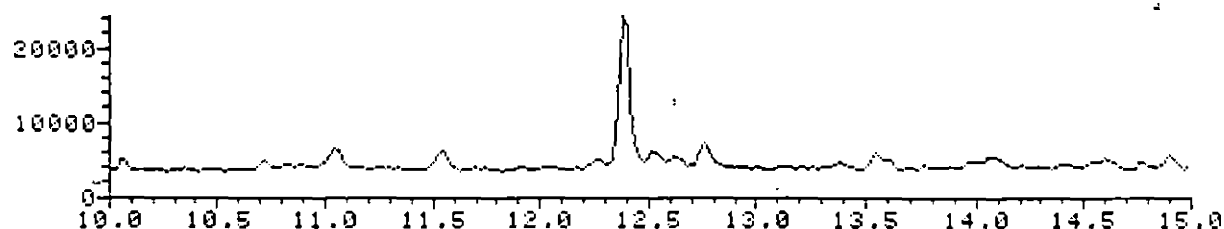
BT



File >B3118 256.7-257.7 amu.2UL UT-3045

SP2330 200-1/3/250 GT

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C10992

MS data file header from : >B3118

Sample: 2UL UT-3045 Operator: ROY MS 11/05/84 2:20
Misc : SP2330 200-1/3/250 GT BTL#39 BTL#39
Svs. #: 1 MS Model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

m/z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	251	256	267	16	195019	153195	100.00
2	12.355	251	256	267	16	195019	150411	98.18

m/z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	267	15	162092	126212	100.00
2	12.355	252	256	267	15	162092	123227	97.63

332/334 CALCULATION

R-Global(0) = .8239

m/z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	251	257	265	14	187228	147034	100.00
2	12.375	251	257	265	14	187228	143632	97.69

m/z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	168687	143415	100.00
2	12.375	254	257	262	8	168687	135535	94.51

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m/z = 319.9

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First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	140123	114939	100.00
2	12.375	254	257	262	8	140123	109047	94.87

320/322 CALCULATION

R-Global(1) = .8014

m/z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	262	8	98062	64206	100.00
2	12.375	254	257	262	8	98062	62230	96.92

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .9247

(328)/(332 + 334) CALCULATION

R-Global(3) = .5216

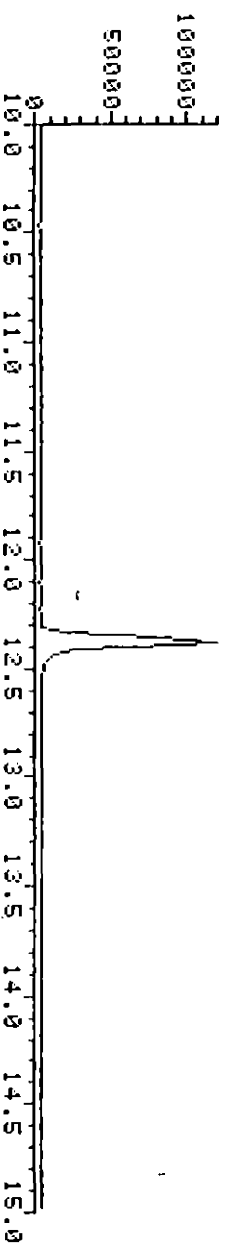
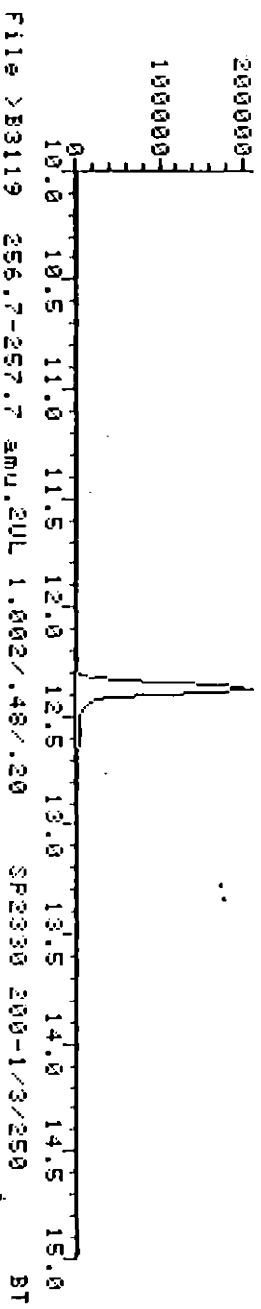
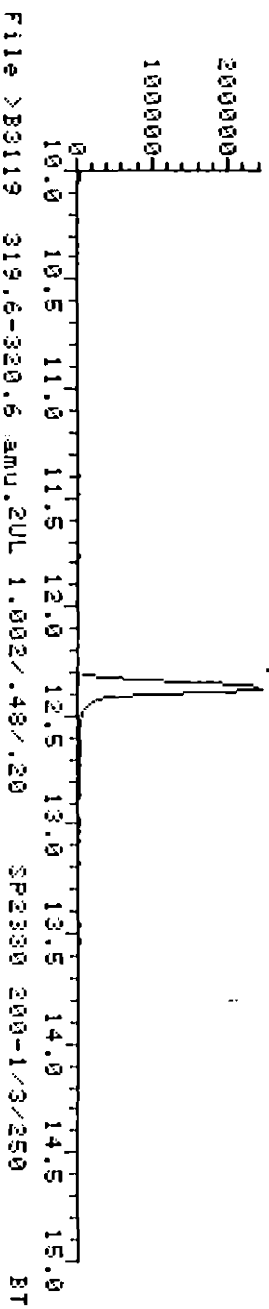
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File >B3119 321.6-322.6 amu.2UL 1.002/.48/.20 SP2330 200-1/3/250 BT



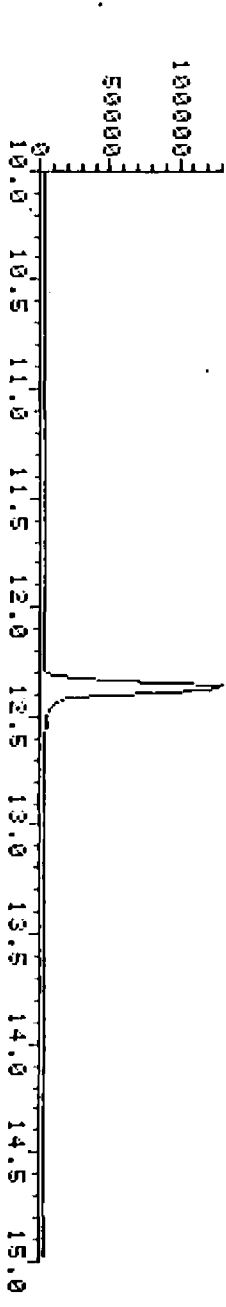
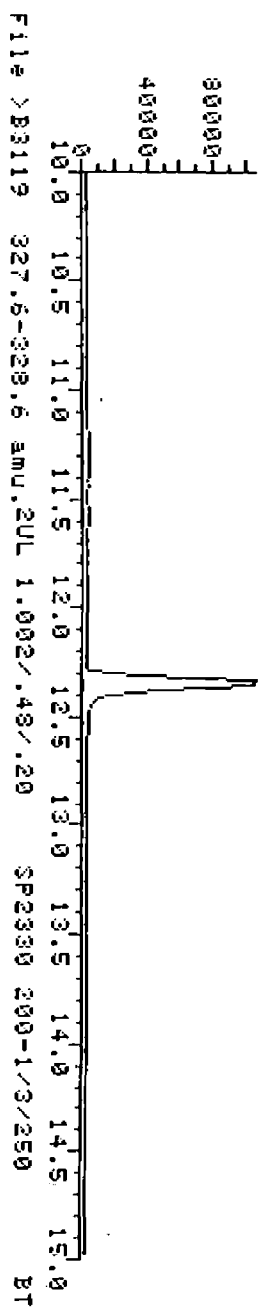
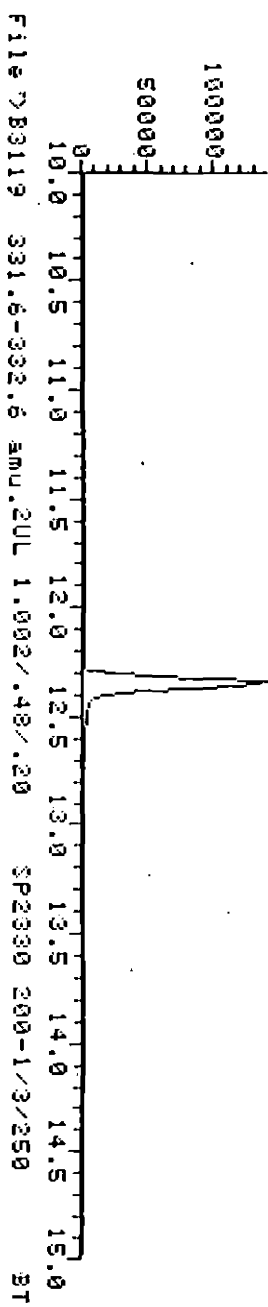
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STRICT TO PROTECT

C10995

File >B3119 333.6-334.6 amu.2UL 1.002/.48/.20 SP2330 200-1/3/250 BT



MS data file header from : >B3119

Sample: ZUL 1.002/.48/.20 Operator: ROY MS 11/05/84 2.43
Misc : SP2330 200-1/3/250 BTL#05 BTL# 5
Sys. #: 1 MS Model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.334	251	255	264	13	420210	389543	100.00
2	12.334	251	255	264	13	420210	381242	97.87

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.334	250	255	265	15	355362	317997	100.00
2	12.334	250	255	265	15	355362	311667	98.01

332/334 CALCULATION

R-Global(0) = .8163

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	266	14	424061	388935	100.00
2	12.355	252	256	266	14	424061	380493	97.83

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	266	14	774861	739973	100.00
2	12.375	252	257	266	14	774861	726127	98.13

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M/Z = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	250	257	266	16	644133	602389	100.00
2	12.375	250	257	266	16	644133	587541	97.54

320/322 CALCULATION

R-Global(1) = .8141

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	251	257	265	14	369061	321167	100.00
2	12.375	251	257	265	14	369061	311374	96.95

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 1.8972

(328)/(332 + 334) CALCULATION

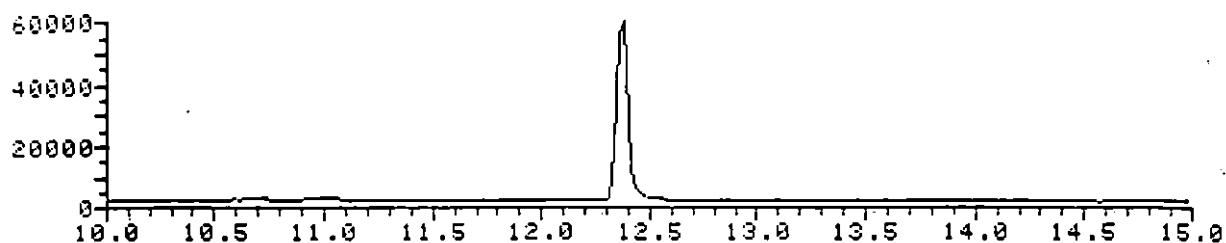
R-Global(3) = .5403

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C10997

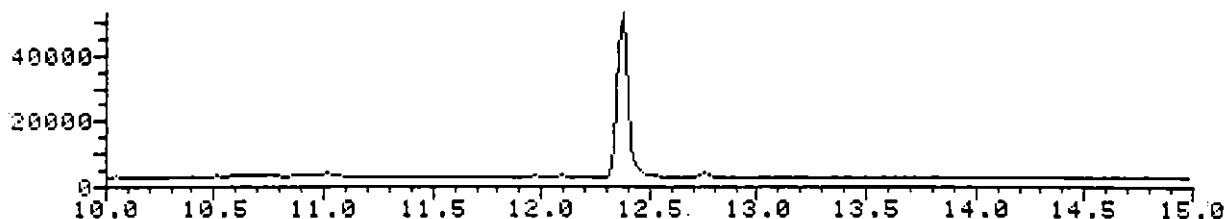
File >B3120 333.6-334.6 amu.2UL UT-3046

STAB.SP2330 180-1/7/275 B



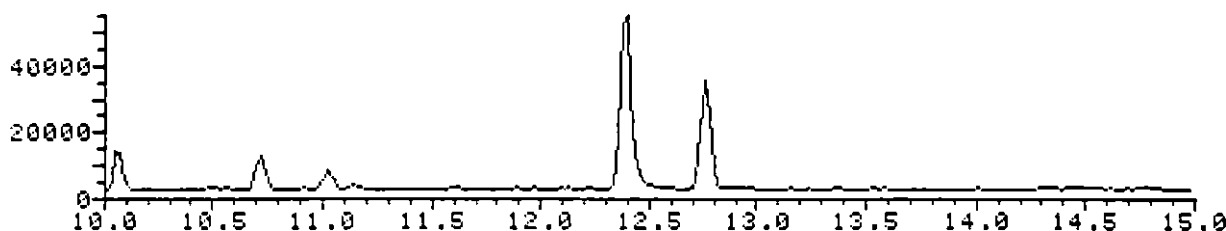
File >B3120 331.6-332.6 amu.2UL UT-3046

STAB.SP2330 180-1/7/275 B



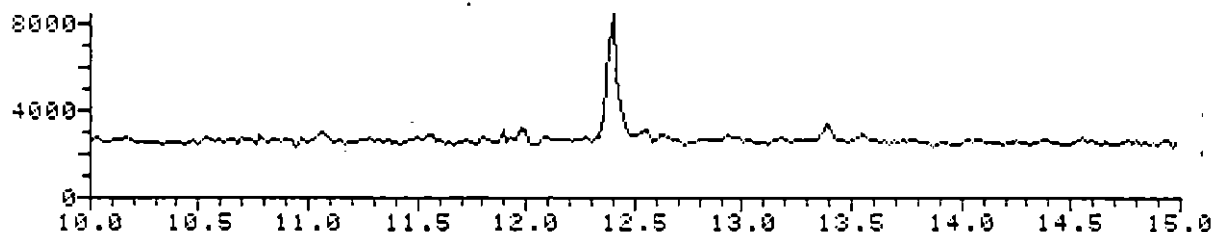
File >B3120 327.6-328.6 amu.2UL UT-3046

STAB.SP2330 180-1/7/275 B



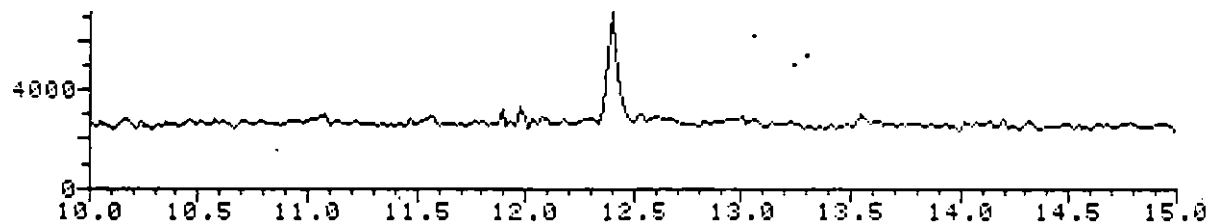
File >B3120 321.6-322.6 amu.2UL UT-3046

STAB.SP2330 180-1/7/275 B



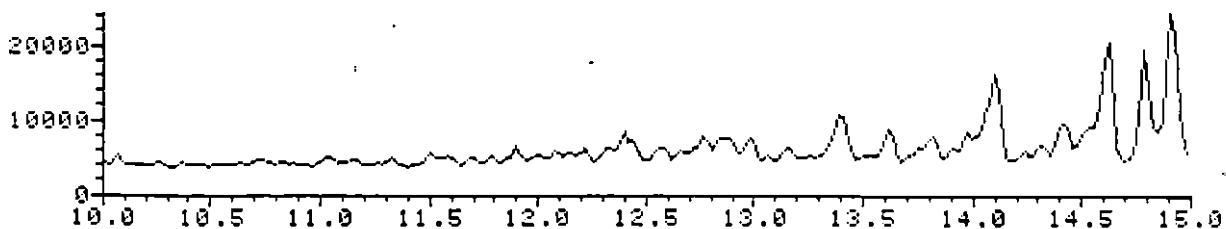
File >B3120 319.6-320.6 amu.2UL UT-3046

STAB.SP2330 180-1/7/275 B



File >B3120 256.7-257.7 amu.2UL UT-3046

STAB.SP2330 180-1/7/275 B



00095

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C10998

its file header from : >B3120

le: 20L UT-3046 Operator: ROY MS 11/05/94 3:05
: STAB.SP2330 180-1/7/275 BTL#51BTL#51
#: 1 MS Model: 87 SW/HW rev.: CA ALS #: 0
thod file: SP2330 Tuning file: APEI01 No. of extra records: 2
ce temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures :	0.	0.	0.	0.	0.	-
Chromatographic times, min. :	0.0	0.0	0.0	0.0	0.0	0
Chromatographic rate, deg/min:	0.0	0.0	0.0	0.0	0.0	4

= 333.9

st peak is baseline drop corrected area.
nd peak is tangent skimmed corrected area.

R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
12.376	252	257	266	14	214374	177596	100.00
12.376	252	257	266	14	214374	172948	97.38

= 331.9

st peak is baseline drop corrected area.
nd peak is tangent skimmed corrected area.

R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
12.376	252	257	264	12	175550	143702	100.00
12.376	252	257	264	12	175550	139508	97.08

334 CALCULATION

lobal(0) = .8092

= 327.9

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st peak is baseline drop corrected area.
nd peak is tangent skimmed corrected area.

R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
12.396	253	258	265	12	204100	169708	100.00
12.396	253	258	265	12	204100	165892	97.75

= 321.9

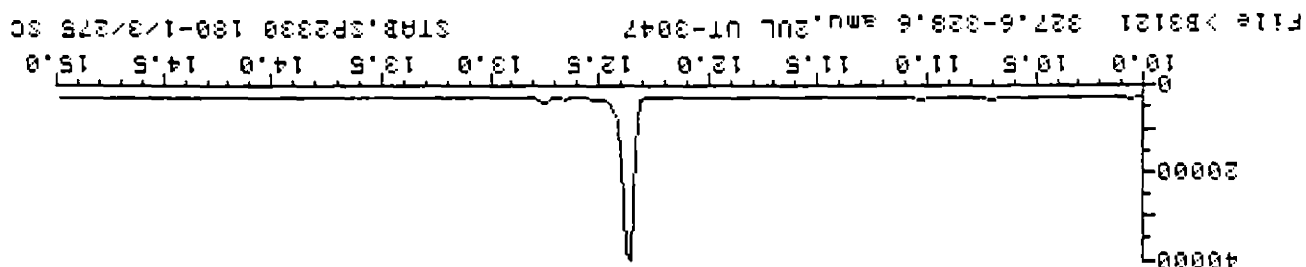
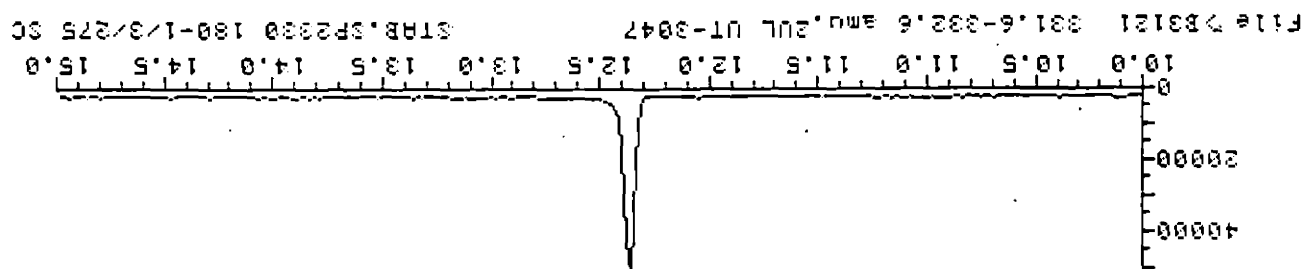
st peak is baseline drop corrected area.
nd peak is tangent skimmed corrected area.

C10999

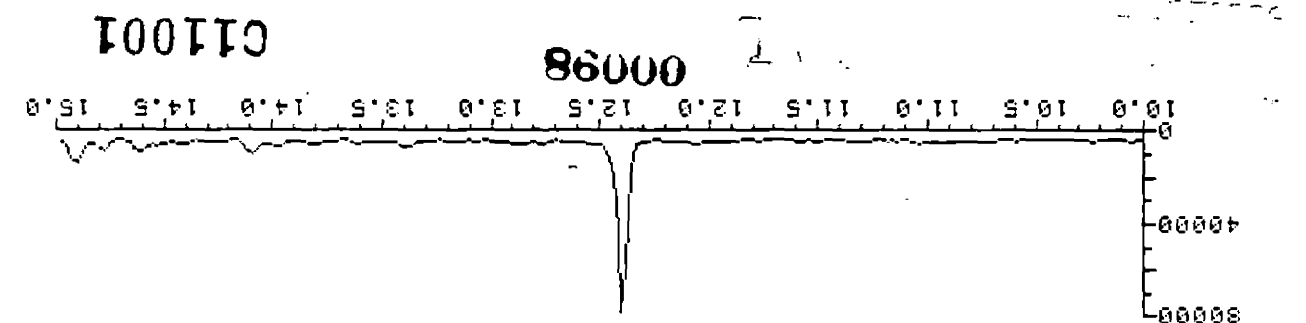
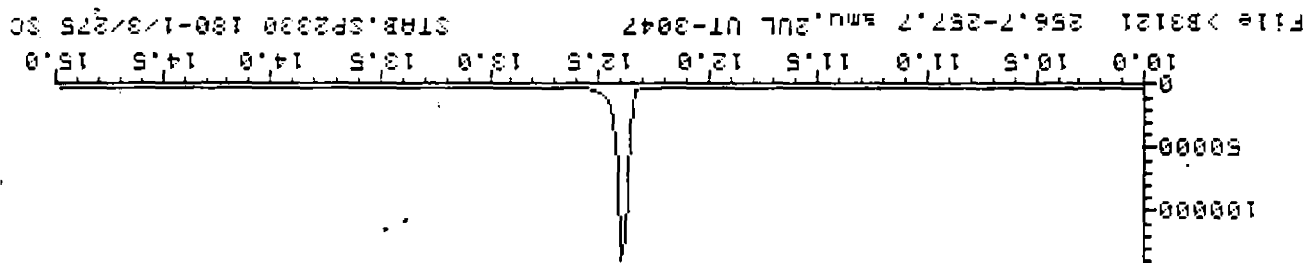
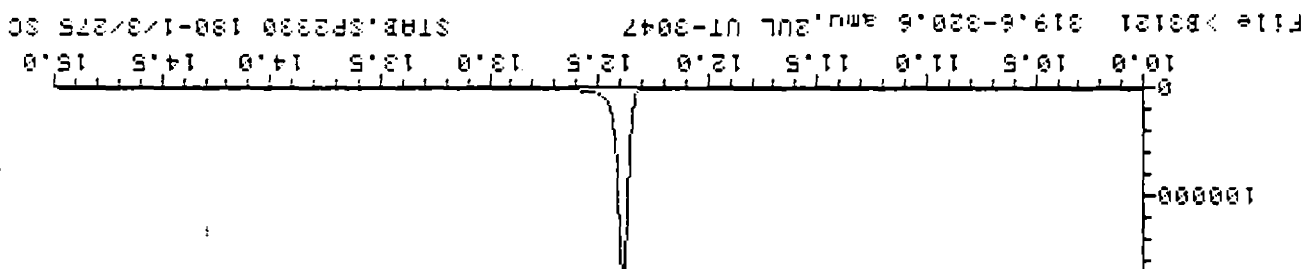
R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
12.396	253	258	264	11	49003	20590	100.00
12.396	253	258	264	11	49003	18626	90.46

60096

File >B3121 333.6-334.6 amu.2UL UT-3047 STAB.SP2330 180-1/3/275 SC



File >B3121 321.6-322.6 amu.2UL UT-3047 STAB.SP2330 180-1/3/275 SC



C11001

MS data file header from : >B3121

Sample: 20L UT-3047 Operator: RUY MS 11/05/84 3:25
Misc : STAB.SP2330 180-1/3/275 SCC BTL#53 BTL#53
Svs. #: 1 MS Model: B7 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APE101 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

m/z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	265	13	168497	135802	100.00
2	12.355	252	256	265	13	168497	131921	97.14

m/z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	266	14	148241	113409	100.00
2	12.355	252	256	266	14	148241	110994	97.87

332/334 CALCULATION

R-Global(0) = .8351

m/z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	266	14	174775	137633	100.00
2	12.375	252	257	266	14	174775	134434	97.68

m/z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	253	257	268	15	551083	512623	100.00
2	12.375	253	257	268	15	551083	501418	97.91

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C11002

00099

5

m/z = 319.9

> 33:21

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	269	17	456590	414889	100.00
2	12.395	252	258	269	17	456590	405853	97.82

320/322 CALCULATION

R-Global(1) = .8093

m/z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	269	17	292443	218527	100.00
2	12.395	252	258	269	17	292443	216334	99.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 3.7218

(328)/(332 + 334) CALCULATION

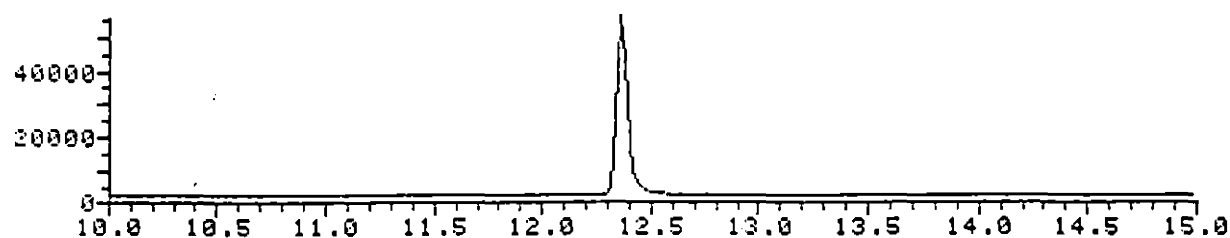
R-Global(3) = .5338

00100

C11003

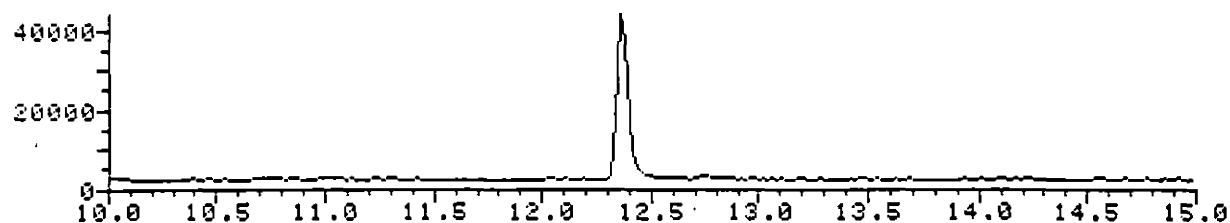
File >B3122 333.6-334.6 amu.2UL UT-3048

STAB.SP2330 180-1/3/275 SC



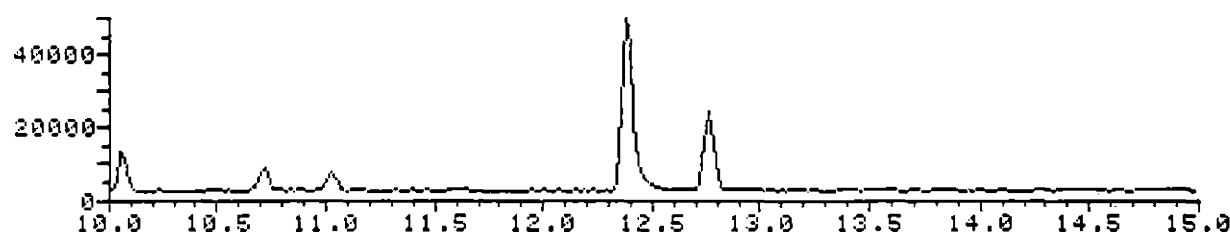
File >B3122 331.6-332.6 amu.2UL UT-3048

STAB.SP2330 180-1/3/275 SC



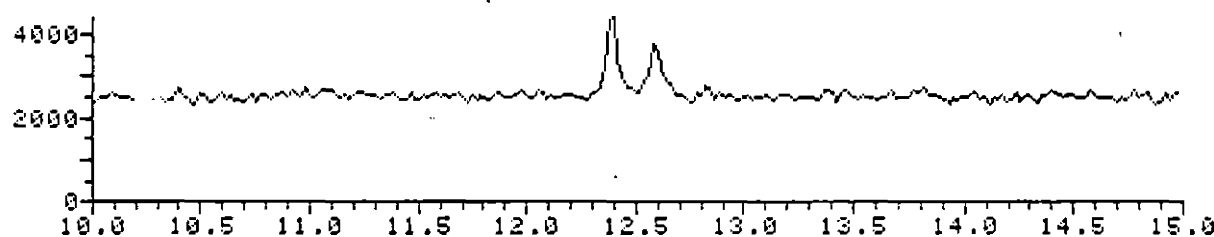
File >B3122 327.6-328.6 amu.2UL UT-3048

STAB.SP2330 180-1/3/275 SC



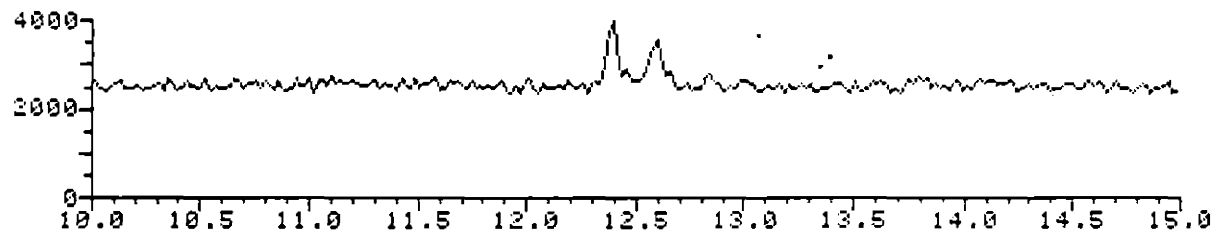
File >B3122 321.6-322.6 amu.2UL UT-3048

STAB.SP2330 180-1/3/275 SC



File >B3122 319.6-320.6 amu.2UL UT-3048

STAB.SP2330 180-1/3/275 SC



File >B3122 256.7-257.7 amu.2UL UT-3048

STAB.SP2330 180-1/3/275 SC



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33-301

SUBJECT TO PROTECTIVE ORDER.

C11004

MS data file header from : >B3122

Sample: 2UL UT-3048 Operator: ROY MS 11/05/84 3:45
Misc : STAB.SP2330 180-1/3/275 SCC BTL#55 BTL#55
Svs. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	268	16	192609	153953	100.00
2	12.355	252	256	268	16	192609	150769	97.93

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	266	14	159404	124292	100.00
2	12.355	252	256	266	14	159404	121688	97.90

332/334 CALCULATION

R-Global(0) = .8073

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	267	15	189083	149138	100.00
2	12.375	252	257	267	15	189083	145133	97.31

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	263	11	36775	9792	100.00
2	12.395	252	258	263	11	36775	8934	91.24

C11005

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9

m/z = 319.9

76312.3

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	255	258	262	7	25072	7138	100.00
2	12.395	255	258	262	7	25072	6875	96.32

320/322 CALCULATION

R-Global(1) = .7290

m/z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	256	258	262	6	27295	5905	100.00
2	12.395	256	258	262	6	27295	5848	99.03

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0608

(328)/(332 + 334) CALCULATION

R-Global(3) = .5357

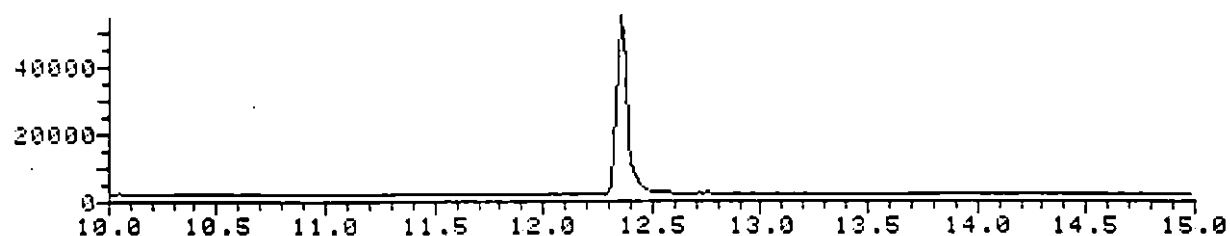
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20100

C11006

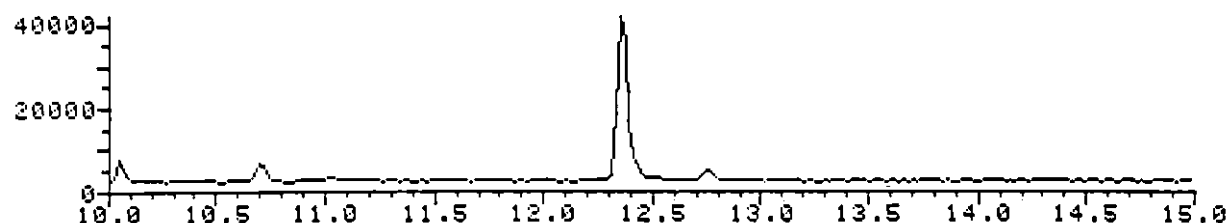
File >B3123 333.6-334.6 amu.2UL UT-3049

STAB.SP2330 200-1/3/250 RMN



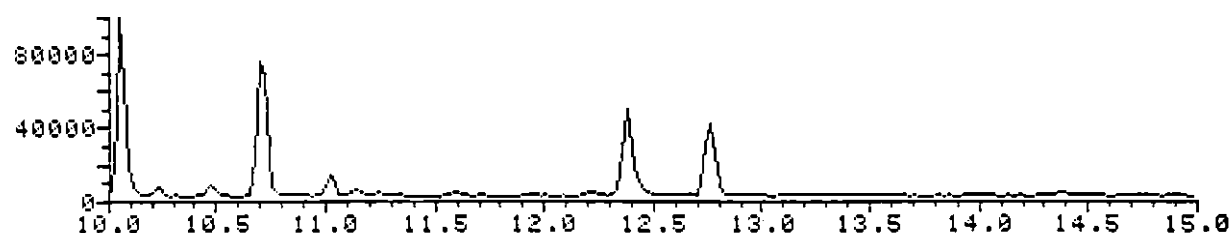
File >B3123 331.6-332.6 amu.2UL UT-3049

STAB.SP2330 200-1/3/250 RMN



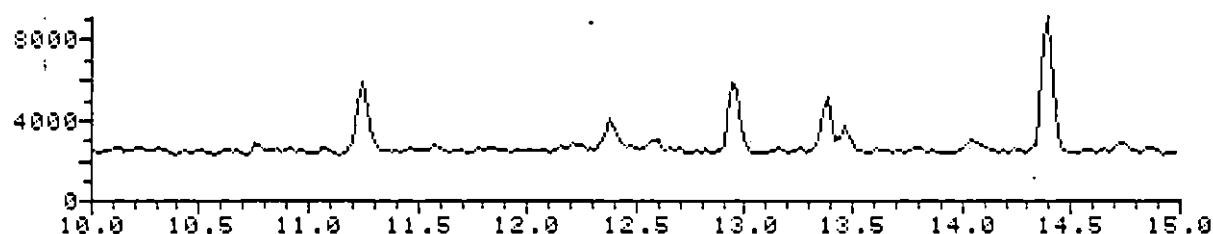
File >B3123 327.6-328.6 amu.2UL UT-3049

STAB.SP2330 200-1/3/250 RMN



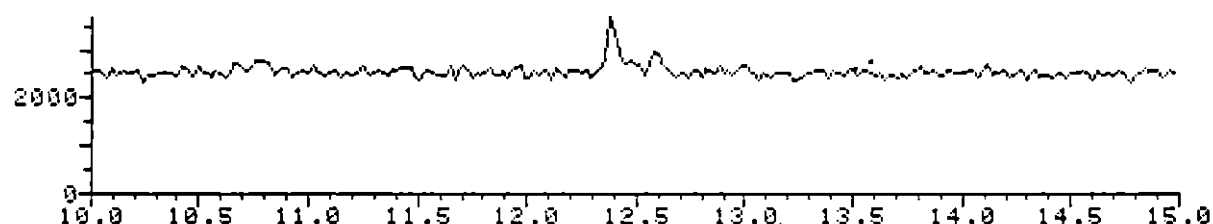
File >B3123 321.6-322.6 amu.2UL UT-3049

STAB.SP2330 200-1/3/250 RMN



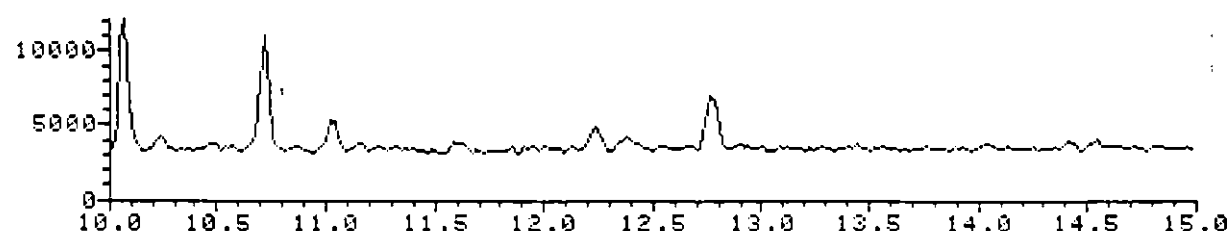
File >B3123 319.6-320.6 amu.2UL UT-3049

STAB.SP2330 200-1/3/250 RMN



File >B3123 256.7-257.7 amu.2UL UT-3049

STAB.SP2330 200-1/3/250 RMN



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C11007

MS data file header from : 83123

Sample: 20L 07-3049 Operator: ROY MS 11/05/84 4:05
Misc : STAB.SP2330 200-1/3/250 RWN BTL#57BTL#57
Sys. #: 1 MS Model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.354	250	256	272	22	206564	151916	100.00
2	12.354	250	256	272	22	206564	149012	98.09

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.354	246	256	267	21	173310	125136	100.00
2	12.354	246	256	267	21	173310	119791	95.73

332/334 CALCULATION

R-Global(0) = .8237

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	253	257	265	12	177485	145457	100.00
2	12.375	253	257	265	12	177485	141251	97.11

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	253	257	264	11	36003	8151	100.00
2	12.375	253	257	264	11	36003	7634	93.66

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C11008

00107

5

M/Z = 319.9

> 33123

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	254	257	265	11	34404	7014	100.00
2	12.375	254	257	265	11	34404	6865	97.88

(320/322) CALCULATION

R-Global(1) = .8605

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.536	261	265	272	11	42210	4040	100.00
2	12.536	261	265	272	11	42210	3308	81.88

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0547

(328)/(332 + 334) CALCULATION

R-Global(3) = .5248

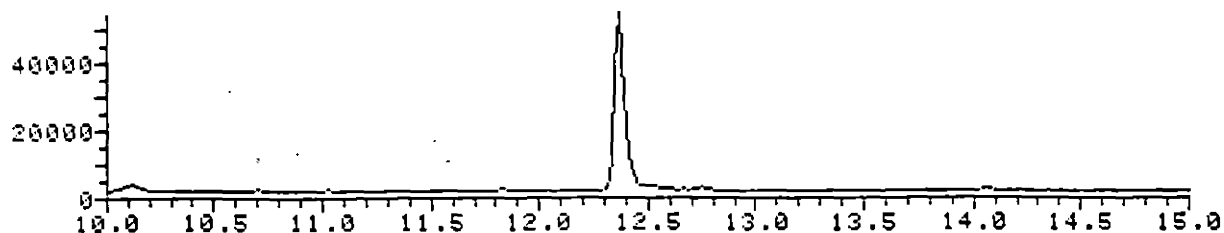
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00100

C11009

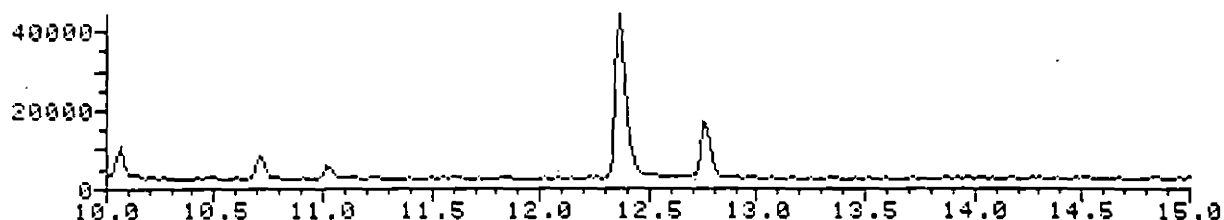
File >B3124 333.6-334.6 amu.2UL UT-3050

STAB.SP2330 200-1/3/250 RWN



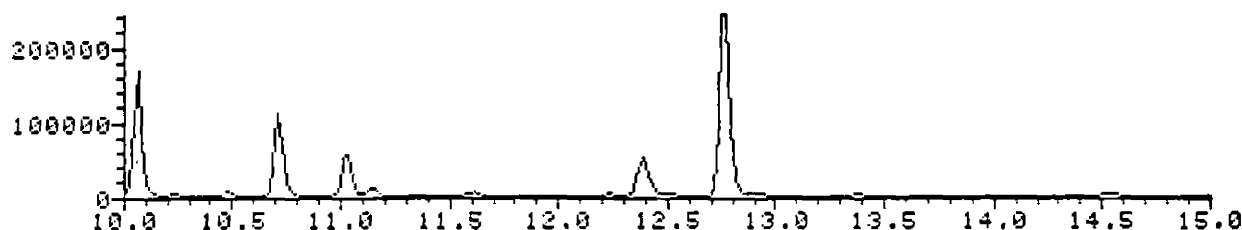
File >B3124 331.6-332.6 amu.2UL UT-3050

STAB.SP2330 200-1/3/250 RWN



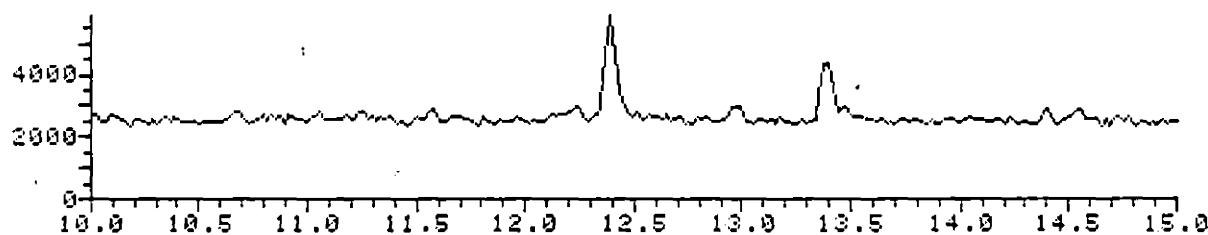
File >B3124 327.6-328.6 amu.2UL UT-3050

STAB.SP2330 200-1/3/250 RWN



File >B3124 321.6-322.6 amu.2UL UT-3050

STAB.SP2330 200-1/3/250 RWN



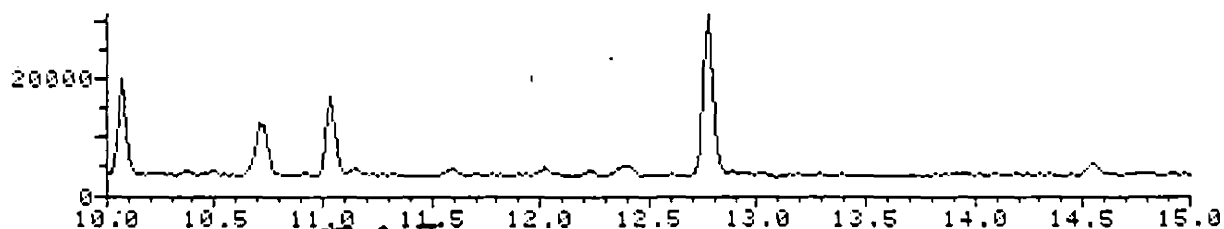
File >B3124 319.6-320.6 amu.2UL UT-3050

STAB.SP2330 200-1/3/250 RWN



File >B3124 256.7-257.7 amu.2UL UT-3050

STAB.SP2330 200-1/3/250 RWN



SUBJECT TO PROTECTIVE ORDER

00107

C11010

MS data file header from 183124

Sample: 20L UT-5050 Operator: ROY MS 11/05/84 4:25
Misc: STAB.SP2330 200-1/3/250 RWN BTL#59BTL#59
Sys. #: 1 MS Model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures: 0. 0. 0. 0. 0.
Chromatographic times, min.: 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.368	255	260	272	17	191246	148933	100.00
2	12.368	255	260	272	17	191246	145779	97.88

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.368	254	260	271	17	163470	122432	100.00
2	12.368	254	260	271	17	163470	119117	97.29

332/334 CALCULATION

R-Global(0) = .8221

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.389	257	261	268	11	177366	145587	100.00
2	12.389	257	261	268	11	177366	141511	97.20

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.389	256	261	269	13	46073	13833	100.00
2	12.389	256	261	269	13	46073	13027	94.17

C11011

m/z = 318.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.389	258	261	267	9	34662	11163	100.00
2	12.389	258	261	267	9	34662	10803	96.78

320/322 CALCULATION

R-Global(1) = .8070

m/z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

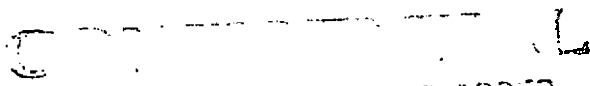
Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.389	257	261	267	10	46154	10304	100.00
2	12.389	257	261	267	10	46154	10209	99.08

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0921

(320)/(332 + 334) CALCULATION

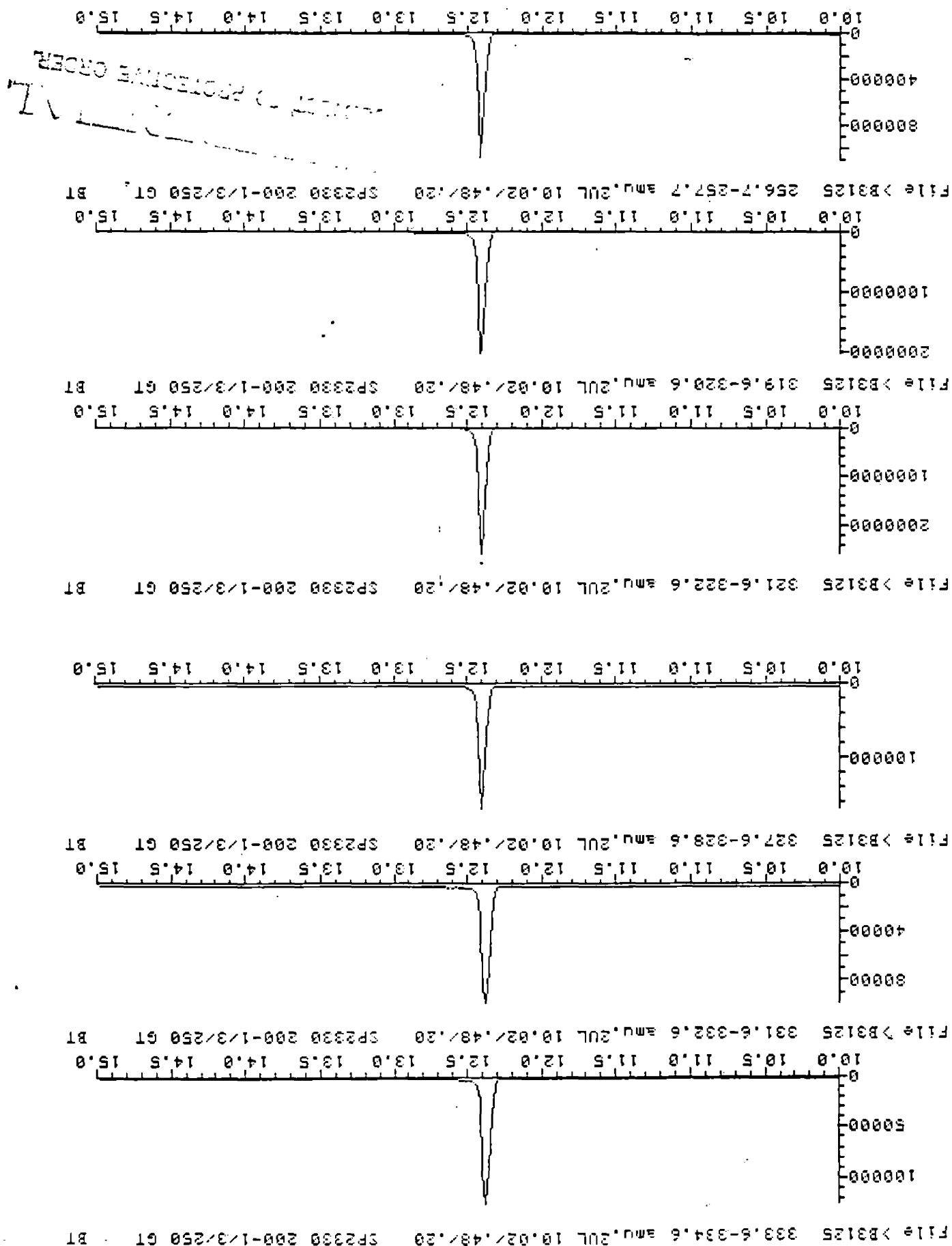
R-Global(3) = .5360


 SUBJECT TO PROTECTIVE ORDER.

00103

C11012

07:30



MS data file header from : >H3125

Sample: 2UL 10.02/.48/.20 Operator: ROY MS 11/05/84 4:47
Misc : SP2330 200-1/3/250 GT BTL#17 BTL#17
Svs. #: 1 MS-model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 248 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	250	257	268	18	424578	380406	100.00
2	12.375	250	257	268	18	424578	376518	98.98

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	267	15	352807	314857	100.00
2	12.375	252	257	267	15	352807	311812	99.03

332/334 CALCULATION

R-Global(0) = .8277

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	250	258	268	18	522373	475141	100.00
2	12.395	250	258	268	18	522373	468535	98.61

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	270	18	7572890	7529474	100.00
2	12.395	252	258	270	18	7572890	7443425	98.86

CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER.

C11014

5

- 783125

m/z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.415	253	259	274	21	6226951	6175942	100.00
2	12.415	253	259	274	21	6226951	6118413	99.07

320/322 CALCULATION

R-Global(1) = .8202

m/z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.415	253	259	279	26	3075655	2991051	100.00
2	12.415	253	259	279	26	3075655	2968600	99.25

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 19.7126

(320)/(332 + 334) CALCULATION

R-Global(3) = .5859

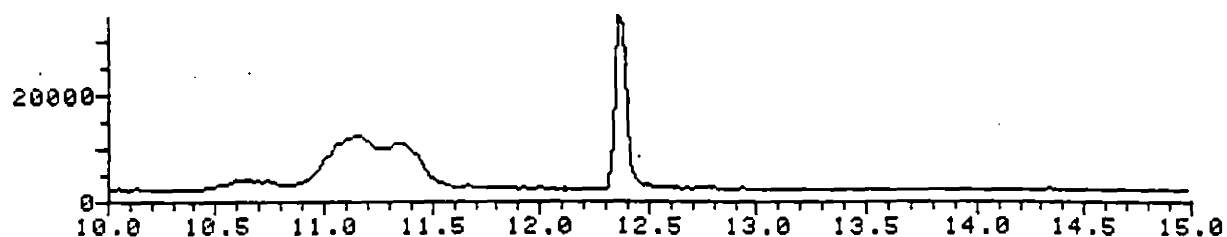
C11015

300-1111
 SUBJECT TO PATENTIVE ORDER

00110

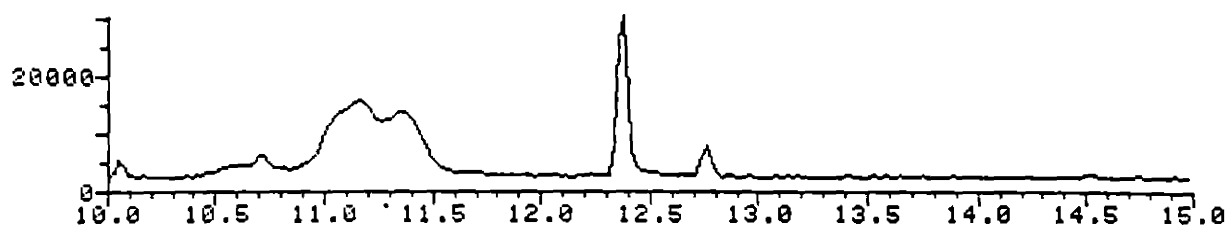
File >B3126 333.6-334.6 amu.2UL UT-3051

STAB.SP2330 200-1/3/250 RWN



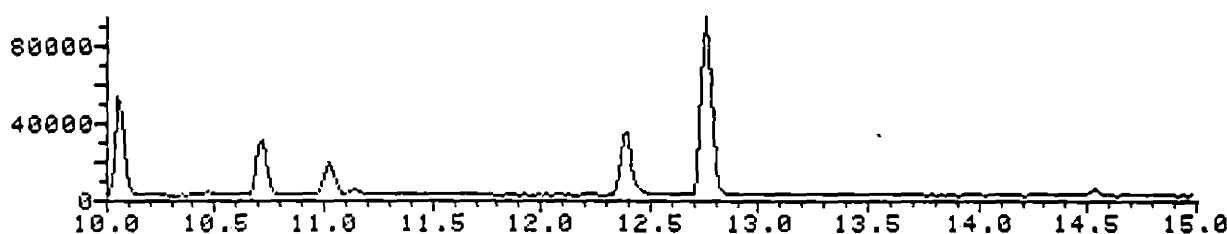
File >B3126 331.6-332.6 amu.2UL UT-3051

STAB.SP2330 200-1/3/250 RWN



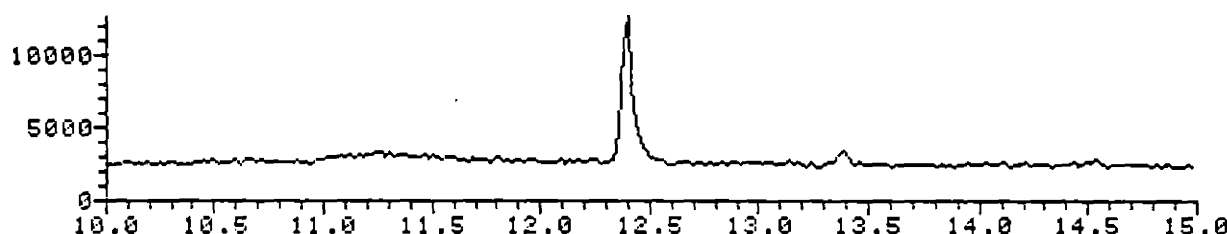
File >B3126 327.6-328.6 amu.2UL UT-3051

STAB.SP2330 200-1/3/250 RWN



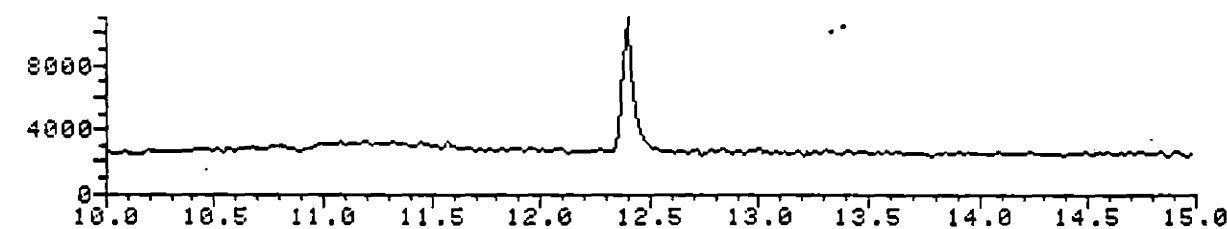
File >B3126 321.6-322.6 amu.2UL UT-3051

STAB.SP2330 200-1/3/250 RWN



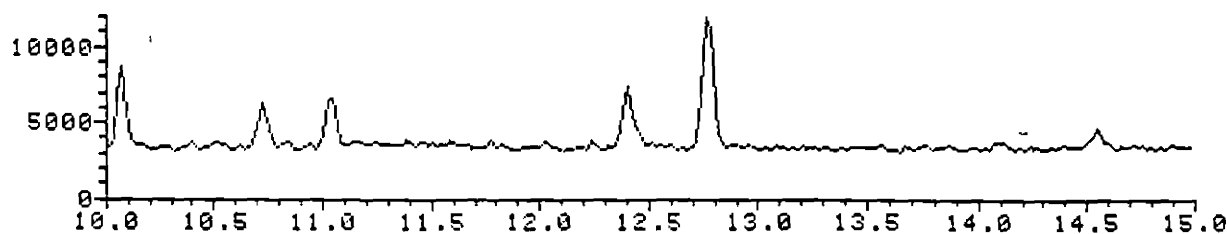
File >B3126 319.6-320.6 amu.2UL UT-3051

STAB.SP2330 200-1/3/250 RWN



File >B3126 256.7-257.7 amu.2UL UT-3051

STAB.SP2330 200-1/3/250 RWN



CONFIDENTIAL 00113

SUBJECT TO PROTECTIVE ORDER.

C11016

MS data file header from : >B3126

Sample: 2UL UT-3051 Operator: KOY MS 11/05/84 5:10
Misc : STAB.SP2330 200-1/3/250 RWN BTL#63BTL#63
Svs. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

m/z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	251	256	265	14	134268	100360	100.00
2	12.355	251	256	265	14	134268	95915	95.57

m/z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	253	257	267	14	120926	83700	100.00
2	12.375	253	257	267	14	120926	82496	98.56

332/334 CALCULATION

R-Global(0) = .8340

m/z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	253	258	266	13	138628	104724	100.00
2	12.396	253	258	266	13	138628	101357	96.78

m/z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	253	258	268	15	74495	36350	100.00
2	12.396	253	258	268	15	74495	35420	97.44

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SUBJECT TO PROTECTIVE ORDER

C11017

20444

m/z = 319.9

>B3126

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	253	258	266	13	61532	27784	100.00
2	12.396	253	258	266	13	61532	27576	99.25

320/322 CALCULATION

R-Global(1) = .7643

m/z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	253	258	264	11	54128	17421	100.00
2	12.396	253	258	264	11	54128	15303	87.84

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .3484

(329)/(332 + 334) CALCULATION

R-Global(3) = .5672

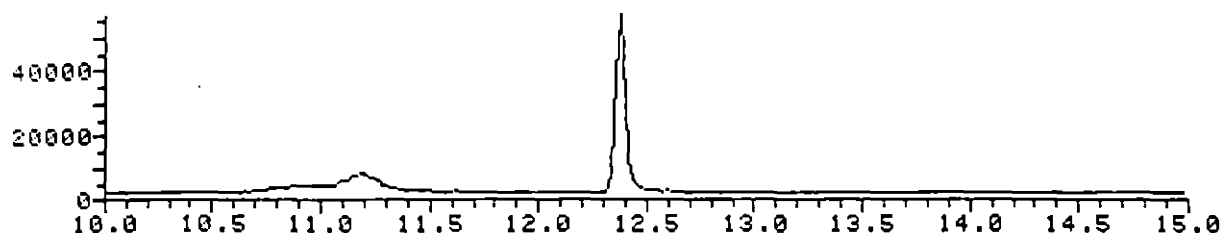
1
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e >B3127 333.6-334.6 amu.2UL UT-3052

SP2330 200-1/3/250 RWN BT



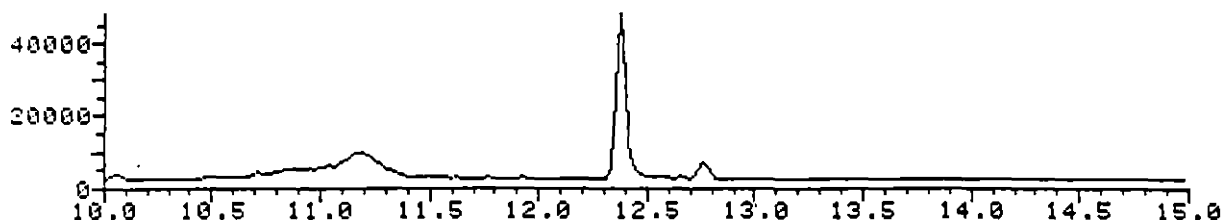
15/84 5:29

1s: 2
0

0.
0.0
0.0

e >B3127 331.6-332.6 amu.2UL UT-3052

SP2330 200-1/3/250 RWN BT

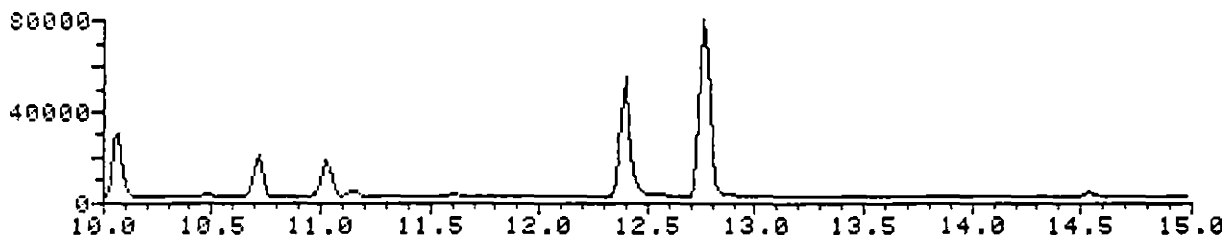


rr.
%

1.00
.03

e >B3127 327.6-328.6 amu.2UL UT-3052

SP2330 200-1/3/250 RWN BT

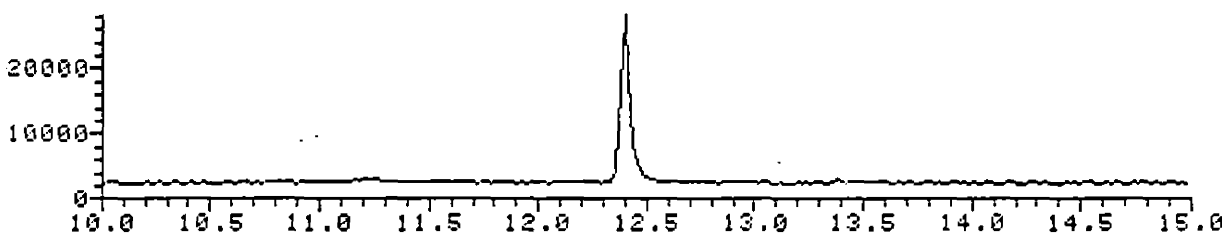


rr.
%

1.00
.16

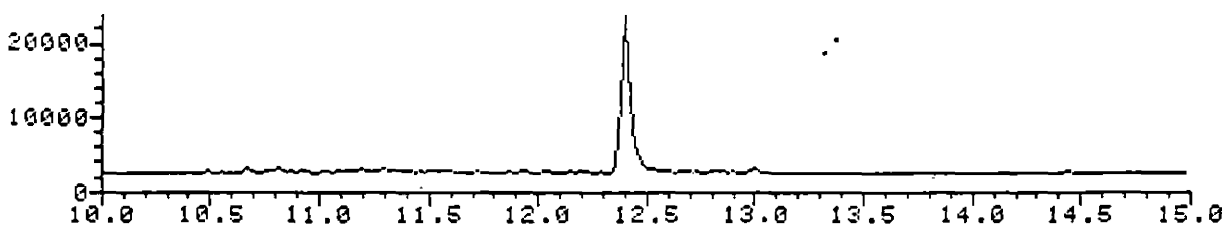
e >B3127 321.6-322.6 amu.2UL UT-3052

SP2330 200-1/3/250 RWN BT



e >B3127 319.6-320.6 amu.2UL UT-3052

SP2330 200-1/3/250 RWN BT

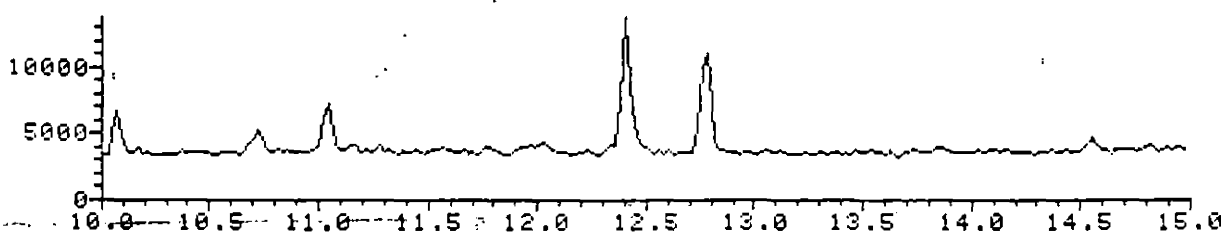


rr.
%

1.00
04

e >B3127 256.7-257.7 amu.2UL UT-3052

SP2330 200-1/3/250 RWN BT



rr.
%

1.00
85

VE ORDER.

ORDER TO FURNISH RE. ORDER

00116

C11019

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7133127

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	255	258	266	11	88479	59021	100.00
2	12.395	255	258	266	11	88479	58328	98.83

320/322 CALCULATION

R-Global(1) = .7939

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	265	13	77888	34156	100.00
2	12.395	252	258	265	13	77888	33506	98.10

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .4940

(320)/(332 + 334) CALCULATION

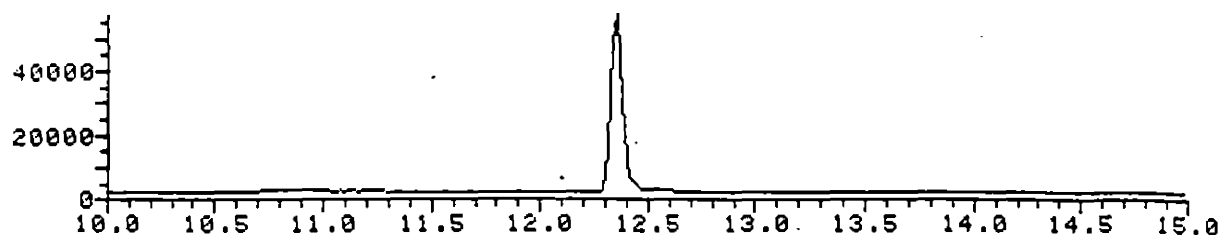
R-Global(3) = .5416

NOT A FINAL REPORT

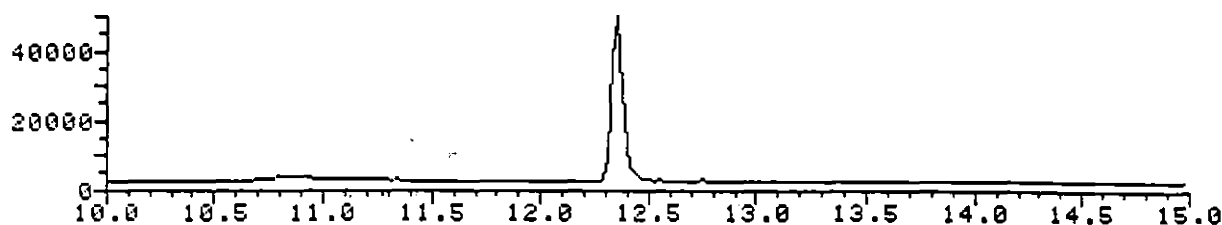
00018

C11021

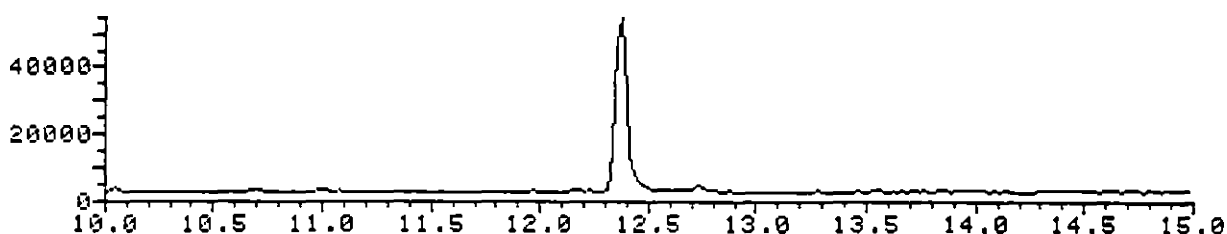
SP2330 200-1/3/250 RWN BT



SP2330 200-1/3/250 RWN BT



SP2330 200-1/3/250 RWN BT



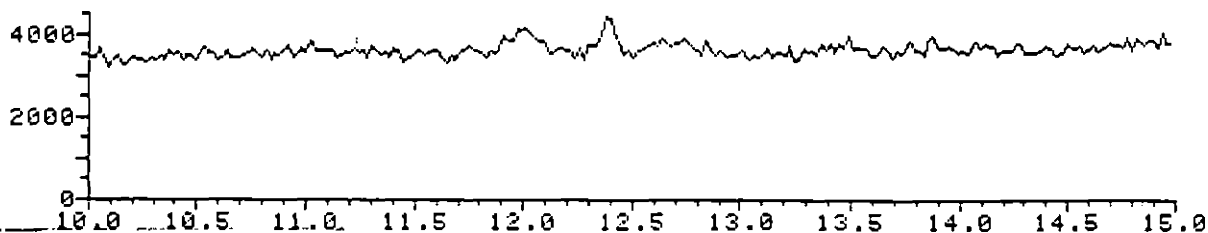
SP2330 200-1/3/250 RWN BT



SP2330 200-1/3/250 RUN BT



SP2330 200-1/3/250 RWN BT



004.3

SUBJECT TO PRICES IN ORDER.

C11022

MS data file header from : >83128

Sample: 2UL UT-3053 Operator: ROY MS 11/05/84 15:49...
Misc : SP2330 200-1/3/250 RWN BTL#67 BTL#67
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	250	256	266	16	208609	166849	100.00
2	12.355	250	256	266	16	208609	162753	97.55

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	248	256	268	20	191713	137753	100.00
2	12.355	248	256	268	20	191713	135873	98.64

332/334 CALCULATION

R-Global(0) = .8256

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	267	15	208463	164288	100.00
2	12.375	252	257	267	15	208463	162443	98.88

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	255	257	260	5	22714	7064	100.00
2	12.375	255	257	260	5	22714	7046	99.75

CONFIDENTIAL
SUBJECT TO PROTECTION ORDER

00420

C11023

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>B3128

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	251	257	264	13	42215	8896	100.00
2	12.375	251	257	264	13	42215	8636	97.08

320/322 CALCULATION

R-Global(1) = 1.2593

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	263	11	46064	8719	100.00
2	12.375	252	257	263	11	46064	8526	97.79

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0524

(328)/(332 + 334) CALCULATION

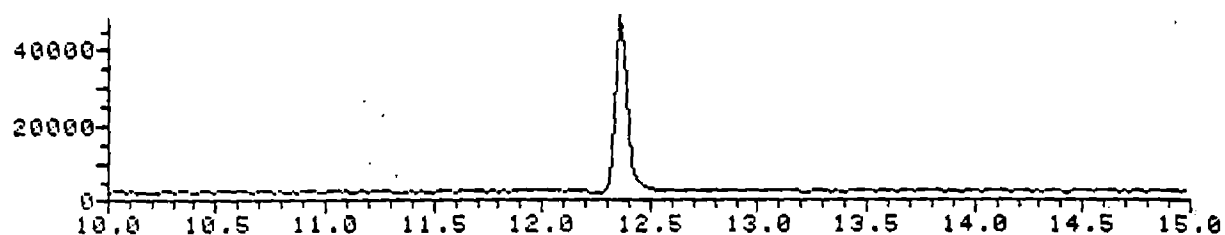
R-Global(3) = .5391

00121

C11024

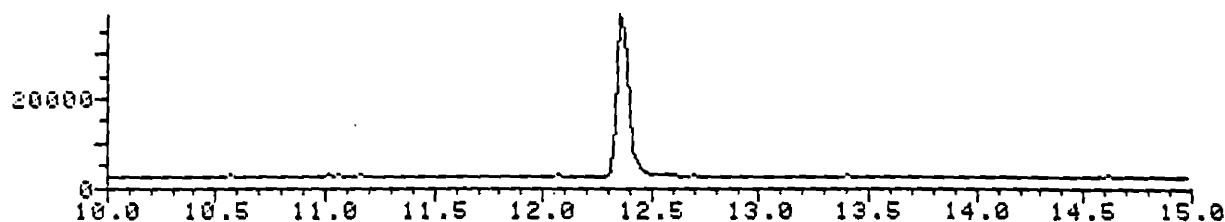
File >B3129 333.6-334.6 amu.2UL UT-3054

SP2330 200-1/3/250 RWN BT



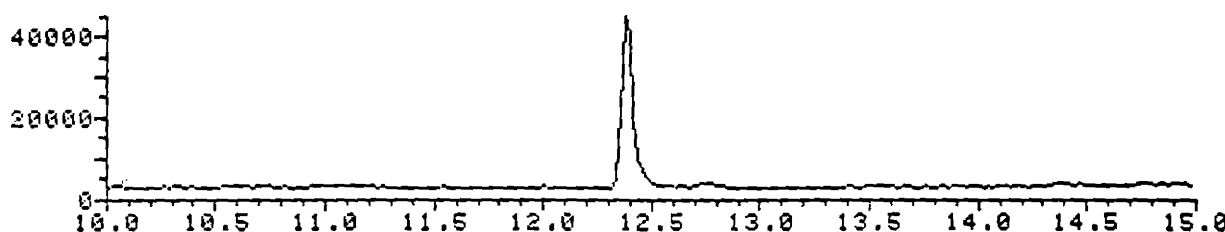
File >B3129 331.6-332.6 amu.2UL UT-3054

SP2330 200-1/3/250 RWN BT



File >B3129 327.6-328.6 amu.2UL UT-3054

SP2330 200-1/3/250 RWN BT



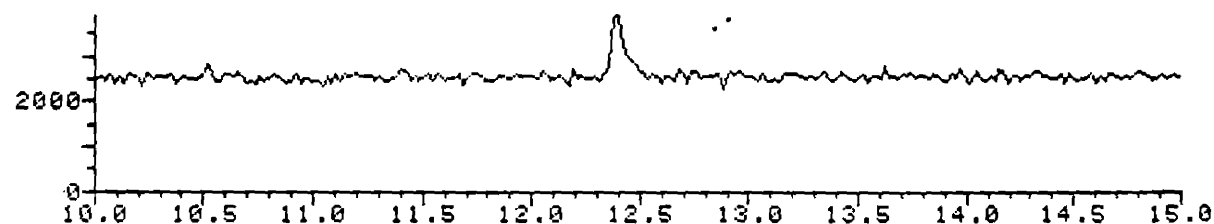
File >B3129 321.6-322.6 amu.2UL UT-3054

SP2330 200-1/3/250 RWN BT



File >B3129 319.6-320.6 amu.2UL UT-3054

SP2330 200-1/3/250 RWN BT



File >B3129 256.7-257.7 amu.2UL UT-3054

SP2330 200-1/3/250 RWN BT



SUBJECT TO PROTECTIVE ORDER

00422

C11025

MS data file header from : >B3129

Sample: 2UL UT-3054 Operator: ROY MS 11/05/84
Misc : SP2330 200-1/3/250 RWN BTL#69 BTL#69
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.:

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	270	18	186388	142756	100.00
2	12.355	252	256	270	18	186388	139030	97.39

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.355	252	256	268	16	155143	117207	100.00
2	12.355	252	256	268	16	155143	113935	97.21

332/334 CALCULATION

R-Global(0) = .8210

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	245	257	269	24	204193	132505	100.00
2	12.375	245	257	269	24	204193	132193	99.76

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	255	258	262	7	26293	7995	100.00
2	12.395	255	258	262	7	26293	7288	91.16

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SUBJECT TO PROTECTIVE ORDER

00122 C11026

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> B3129

M/Z = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	254	258	271	17	50710	9468	100.00
2	12.395	254	258	271	17	50710	9417	99.46

320/322 CALCULATION

R-Global(1) = 1.1842

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	272	0	271	-1	0	3897	100.00
2	0.000	272	0	271	-1	0	3897	100.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0672

(328)/(332 + 334) CALCULATION

R-Global(3) = .5094

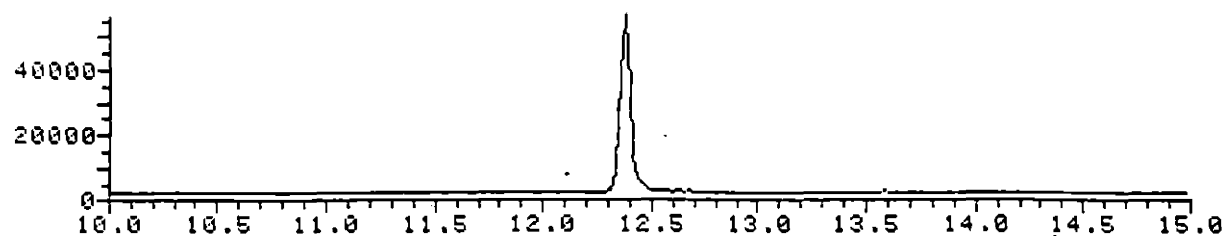
SUBJECT TO PROTECTIVE ORDER.

00124

C11027

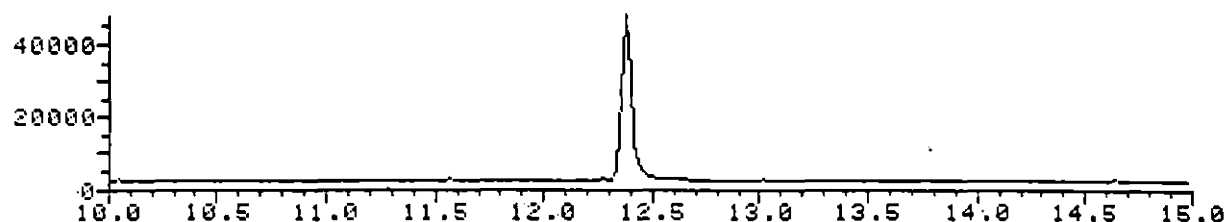
File >B3130 333.6-334.6 amu.2UL UT-3055

SP2330 200-1/3/250 RWN BT



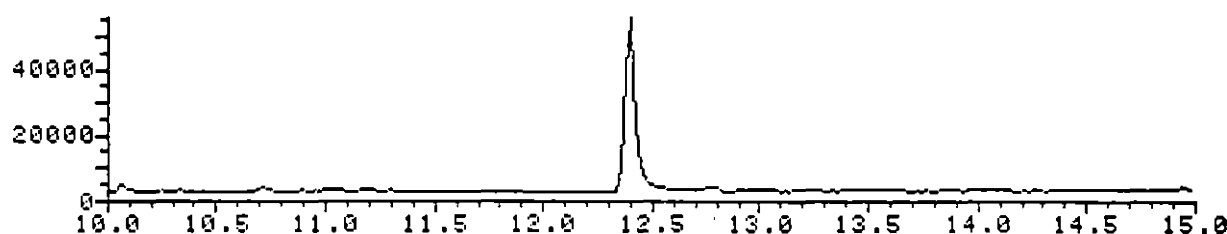
File >B3130 331.6-332.6 amu.2UL UT-3055

SP2330 200-1/3/250 RWN BT



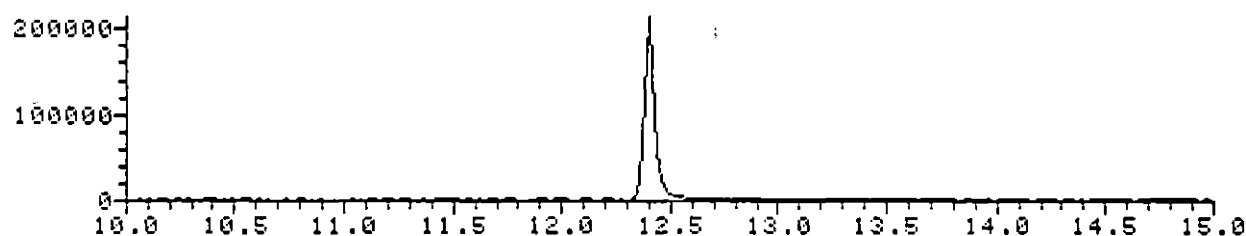
File >B3130 327.6-328.6 amu.2UL UT-3055

SP2330 200-1/3/250 RWN BT



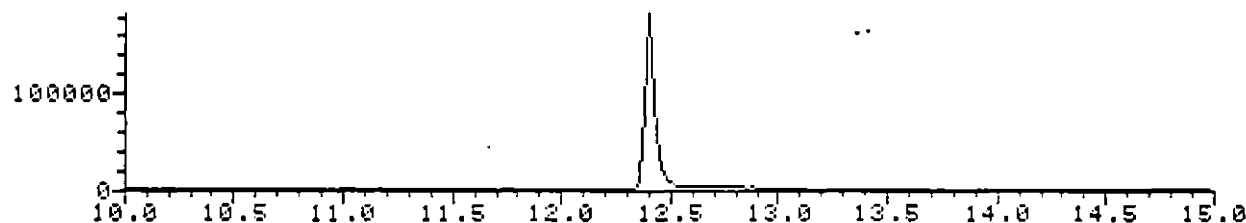
File >B3130 321.6-322.6 amu.2UL UT-3055

SP2330 200-1/3/250 RWN BT



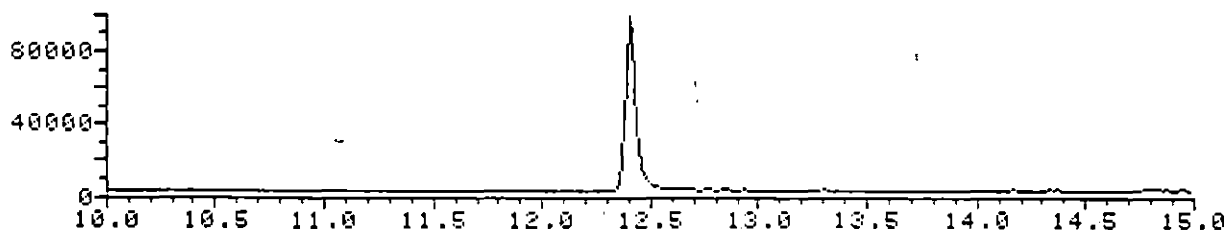
File >B3130 319.6-320.6 amu.2UL UT-3055

SP2330 200-1/3/250 RWN BT



File >B3130 256.7-257.7 amu.2UL UT-3055

SP2330 200-1/3/250 RWN BT



20175

ALL OUT TO PROTECTIVE ORDER

C11028

MS data file header from : >B3130

Sample: 2UL UT-3055 Operator: ROY MS 11/05/84 6:29...
Misc : SP2330 200-1/3/250 RWN BTL#71 BTL#71
Sys. #: 1 MS model: 87 SW/HW rev.: CR ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	251	257	269	18	199421	152945	100.00
2	12.375	251	257	269	18	199421	149318	97.63

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	251	257	268	17	169442	127707	100.00
2	12.375	251	257	268	17	169442	124009	97.10

332/334 CALCULATION

R-Global(0) = .8350

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	269	17	207880	159787	100.00
2	12.395	252	258	269	17	207880	155741	97.47

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	253	258	274	21	670010	618539	100.00
2	12.395	253	258	274	21	670010	607409	98.20

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C11029

S

> 83130

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	268	16	554384	513920	100.00
2	12.395	252	258	268	16	554384	500472	97.38

320/322 CALCULATION

R-Global(1) = .8309

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	251	258	271	20	364735	290935	100.00
2	12.395	251	258	271	20	364735	285515	98.14

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 4.0351

(328)/(332 + 334) CALCULATION

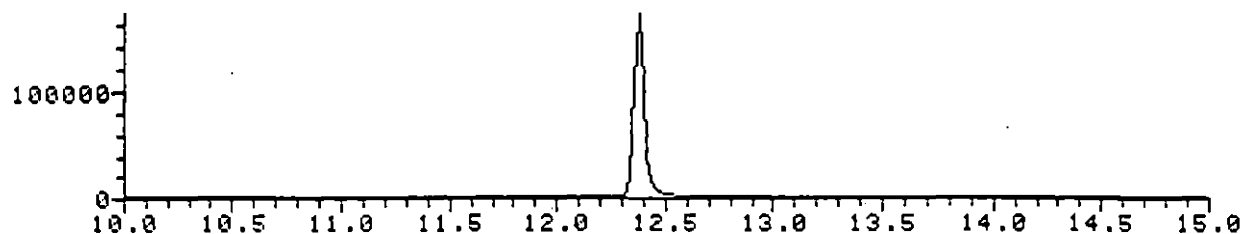
R-Global(3) = .5495

00127

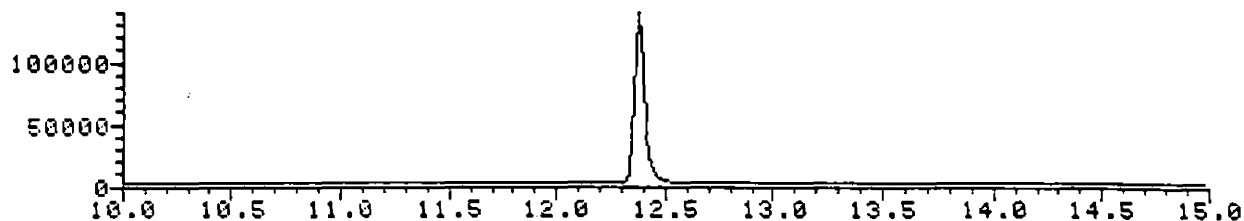
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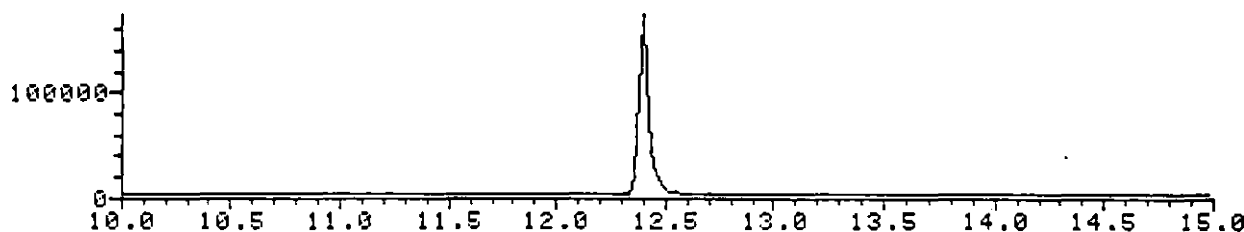
File >B3131 333.6-334.6 amu.2UL .2504/.48/.20 SP2330 200-1/3/250 GT BT



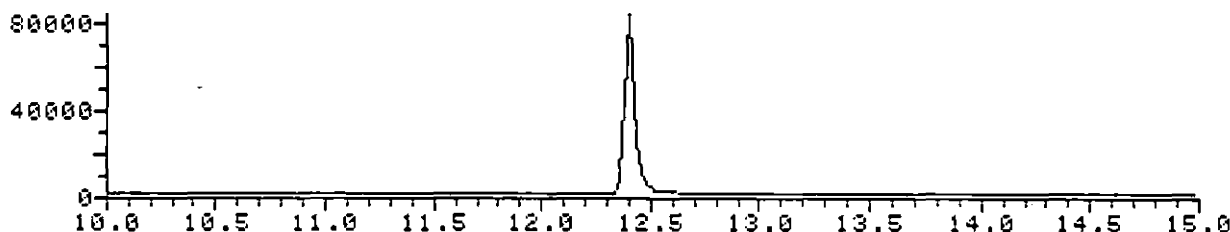
File >B3131 331.6-332.6 amu.2UL .2504/.48/.20 SP2330 200-1/3/250 GT BT



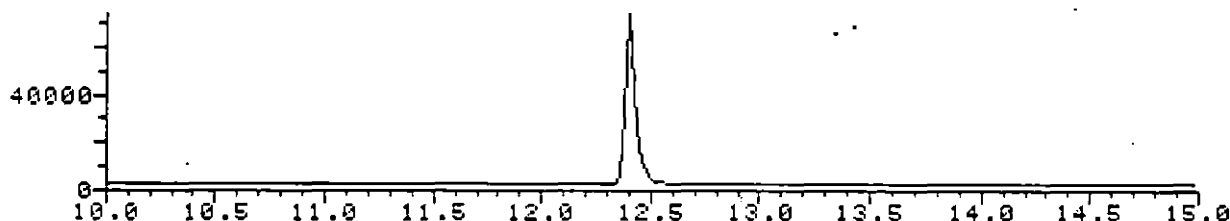
File >B3131 327.6-328.6 amu.2UL .2504/.48/.20 SP2330 200-1/3/250 GT BT



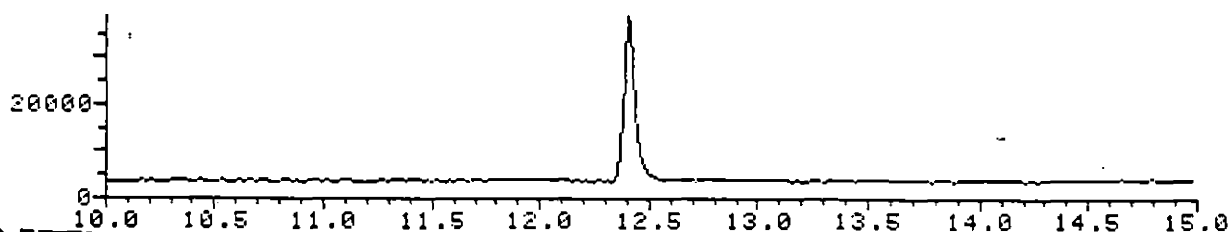
File >B3131 321.6-322.6 amu.2UL .2504/.48/.20 SP2330 200-1/3/250 GT BT



File >B3131 319.6-320.6 amu.2UL .2504/.48/.20 SP2330 200-1/3/250 GT BT



File >B3131 256.7-257.7 amu.2UL .2504/.48/.20 SP2330 200-1/3/250 GT BT



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00128

C11031

MS data file header from : >B3131

Sample: 2UL .2504/.48/.20 Operator: ROY MS 11/05/84 6:52
Misc : SP2330 200-1/3/250 GT BTL#29 BTL#29
Sys. #: 1 MS model: 87 SW/HW rev.: CR ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 248 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.376	250	257	270	20	524902	470402	100.00
2	12.376	250	257	270	20	524902	461832	98.18

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.376	252	257	271	19	433748	384082	100.00
2	12.376	252	257	271	19	433748	379313	98.76

332/334 CALCULATION

R-Global(0) = .8165

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	252	258	271	19	550359	492295	100.00
2	12.396	252	258	271	19	550359	484552	98.43

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	252	258	275	23	303091	246281	100.00
2	12.396	252	258	275	23	303091	241037	97.87

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00409

C11032

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M/Z = 319.9

> 63131

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	250	258	274	24	275452	214564	100.00
2	12.396	250	258	274	24	275452	212416	99.00

(320/322) CALCULATION

R-Global(1) = .8712

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.396	253	258	269	16	174909	116653	100.00
2	12.396	253	258	269	16	174909	112437	96.39

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .5393

(328)/(332 + 334) CALCULATION

R-Global(3) = .5735

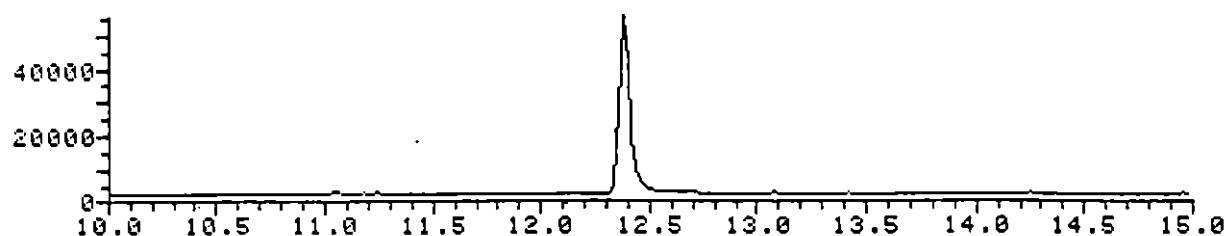
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00430

C11033

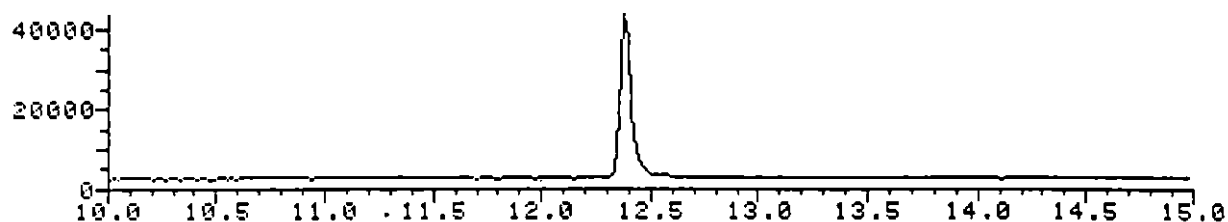
File >B3132 333.6-334.6 amu.2UL UT-3056

SP2330 200-1/3/250 RWN BT



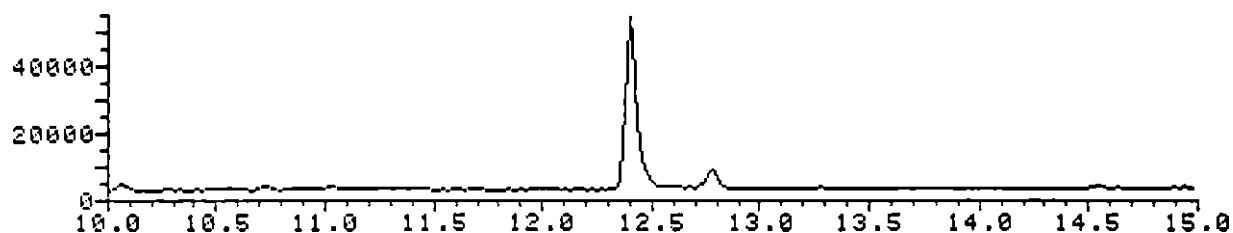
File >B3132 331.6-332.6 amu.2UL UT-3056

SP2330 200-1/3/250 RWN BT



File >B3132 327.6-328.6 amu.2UL UT-3056

SP2330 200-1/3/250 RWN BT



File >B3132 321.6-322.6 amu.2UL UT-3056

SP2330 200-1/3/250 RWN BT



File >B3132 319.6-320.6 amu.2UL UT-3056

SP2330 200-1/3/250 RWN BT



File >B3132 256.7-257.7 amu.2UL UT-3056

SP2330 200-1/3/250 RWN BT



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06131

C11034

MS data file header from : >83132

Sample: 2UL UT-3056 Operator: ROY MS 11/05/84 7:14
Misc : SP2330 200-1/3/250 RWN BTL#75 BTL#75
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times. min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate. deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	252	257	270	18	203827	155119	100.00
2	12.375	252	257	270	18	203827	152275	38.17

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.375	250	257	270	20	180942	130522	100.00
2	12.375	250	257	270	20	180942	126722	97.09

332/334 CALCULATION

R-Global(0) = .8414

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.395	252	258	270	18	223935	170043	100.00
2	12.395	252	258	270	18	223935	163887	96.38

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
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C11035

CONFIDENTIAL

00433

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C11036

> 3.31.32

1	12.305	255	258	262	7	28519	11831	100.00
2	12.325	255	258	262	7	28519	8873	75.00

763132

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M/Z = 319.3

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.415	256	259	268	12	40070	8990	100.00
2	12.415	256	259	268	12	40070	2492	94.46

320/322 CALCULATION

R-Global(1) = .7599

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.415	254	259	266	12	54041	7781	100.00
2	12.415	254	259	266	12	54041	7553	97.07

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0729

(328)/(332 + 334) CALCULATION

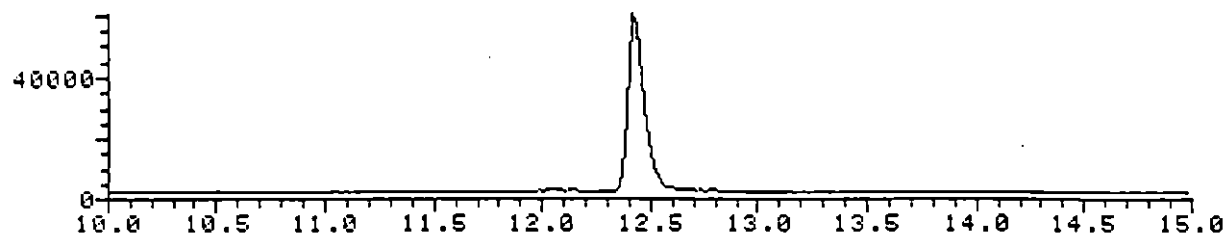
R-Global(3) = .5949

SECRET
SUBJECT TO PROTECTIVE ORDER 134

C11037

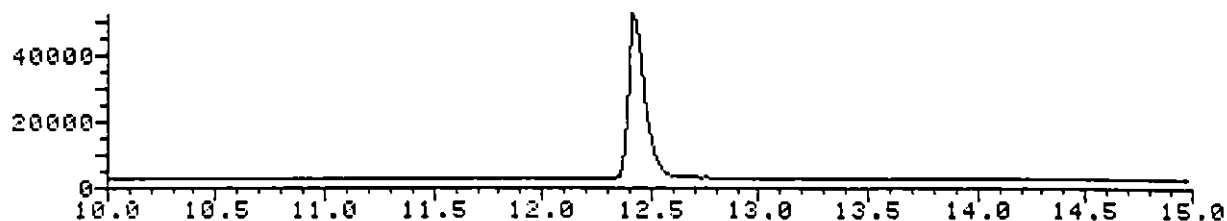
File >B3133 333.6-334.6 amu.2UL UT-3057

SP2330 200-1/3/250 RWN BT



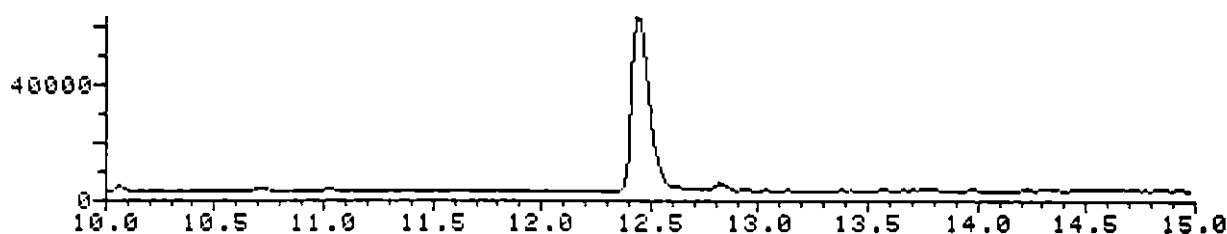
File >B3133 331.6-332.6 amu.2UL UT-3057

SP2330 200-1/3/250 RWN BT



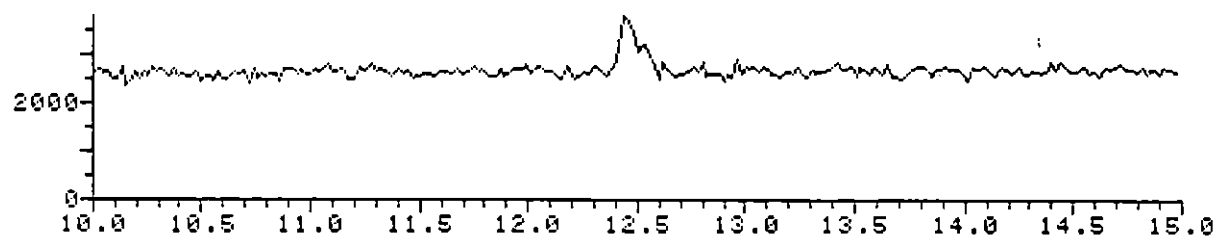
File >B3133 327.6-328.6 amu.2UL UT-3057

SP2330 200-1/3/250 RWN BT



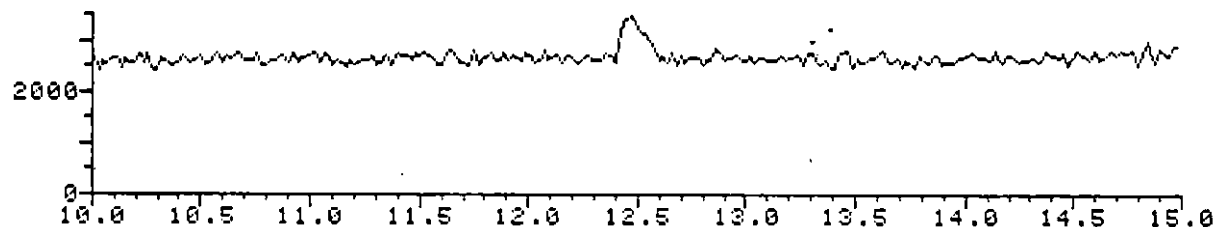
File >B3133 321.6-322.6 amu.2UL UT-3057

SP2330 200-1/3/250 RWN BT



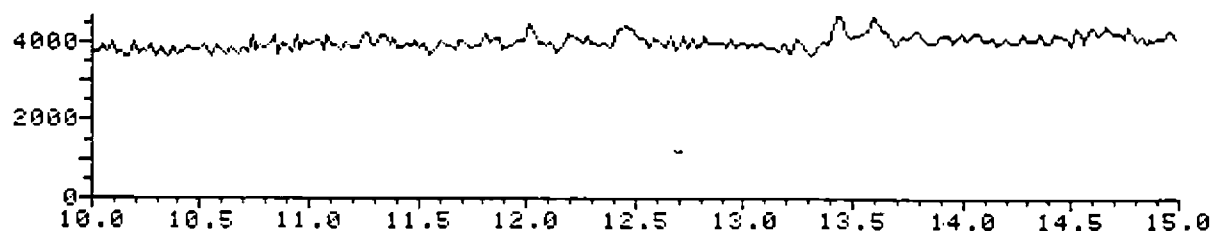
File >B3133 319.6-320.6 amu.2UL UT-3057

SP2330 200-1/3/250 RWN BT



File >B3133 256.7-257.7 amu.2UL UT-3057

SP2330 200-1/3/250 RWN BT



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00135

C11038

MS data file header from : >B3133

Sample: 2UL UT-3057 Operator: ROY MS 11/05/84 7:34
Misc : SP2330 200-1/3/250 RWN BTL#77 BTL#77
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APE101 No. of extra records: 2
Source temp.: 248 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.415	253	259	271	18	310151	260291	100.00
2	12.415	253	259	271	18	310151	253343	97.33

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.415	251	259	272	21	277458	221556	100.00
2	12.415	251	259	272	21	277458	215392	97.22

332/334 CALCULATION

R-Global(0) = .8512

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.435	254	260	273	19	345516	286445	100.00
2	12.435	254	260	273	19	345516	280070	97.77

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.435	255	260	264	9	30993	7215	100.00
2	12.435	255	260	264	9	30993	4888	67.75

SUBJECT TO PROTECTIVE ORDER.

00136

C11039

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M/Z = 319.9

>B3133

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.476	255	262	268	13	41741	7967	100.00
2	12.476	255	262	268	13	41741	7830	98.28

320/322 CALCULATION

R-Global(1) = 1.1042

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	269	0	268	-1	0	4058	100.00
2	0.000	269	0	268	-1	0	4058	100.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0315

(328)/(332 + 334) CALCULATION

R-Global(3) = .5943

CONFIDENTIAL

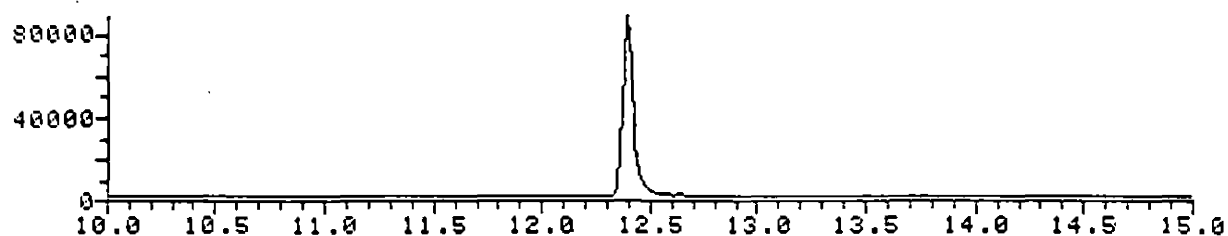
SUBJECT TO PROTECTIVE ORDER.

00137

C11040

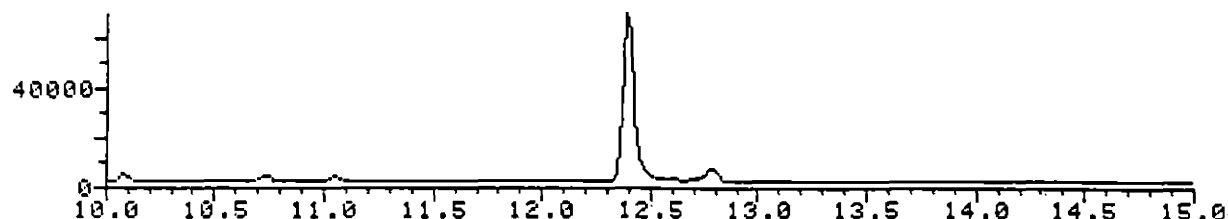
File >B3134 333.6-334.6 amu.2UL UT-3058

SP2330 200-1/3/250 RWN BT



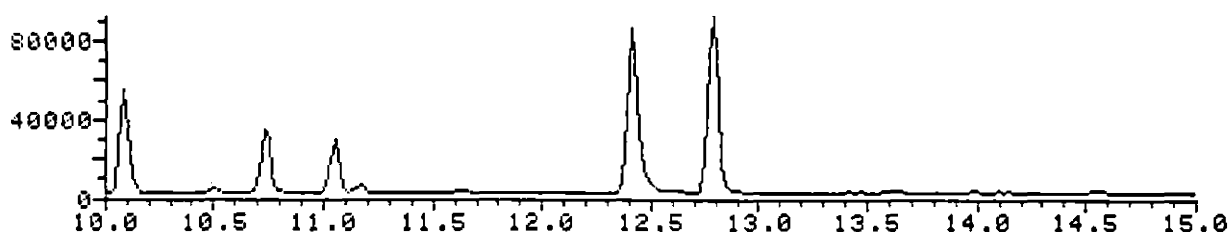
File >B3134 331.6-332.6 amu.2UL UT-3058

SP2330 200-1/3/250 RWN BT



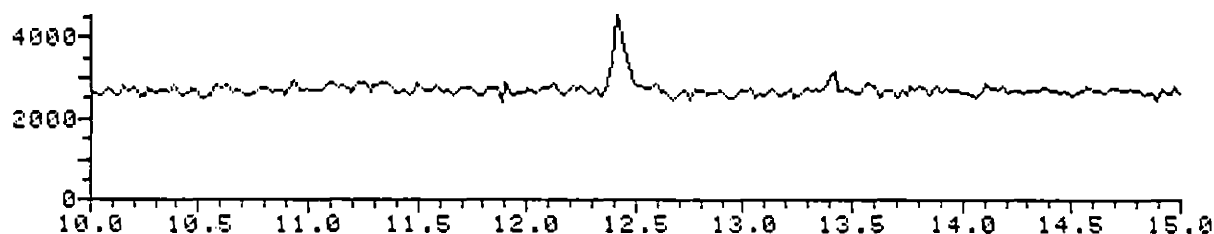
File >B3134 327.6-328.6 amu.2UL UT-3058

SP2330 200-1/3/250 RWN BT



File >B3134 321.6-322.6 amu.2UL UT-3058

SP2330 200-1/3/250 RWN BT



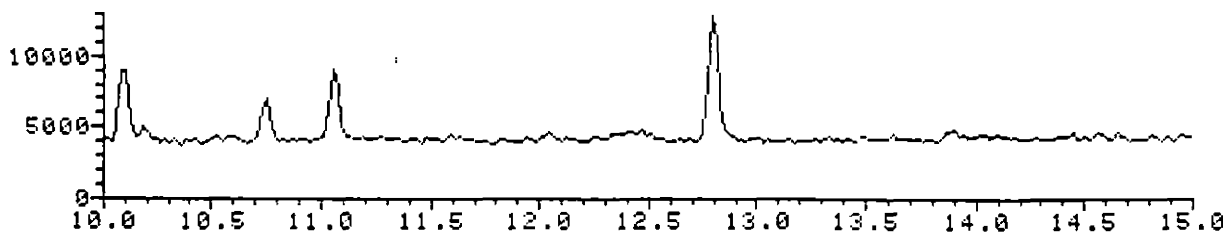
File >B3134 319.6-320.6 amu.2UL UT-3058

SP2330 200-1/3/250 RWN BT



File >B3134 256.7-257.7 amu.2UL UT-3058

SP2330 200-1/3/250 RWN BT



00138

SUBJECT TO PROTECTIVE ORDER

C11041

MS data file header from : >B3134

Sample: 2UL UT-3058 Operator: ROY MS 11/05/84 7:54
Misc : SP2330 200-1/3/250 RWN BTL#79 BTL#79
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.386	247	257	269	22	311507	251975	100.00
2	12.386	247	257	269	22	311507	244627	97.88

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.386	251	257	269	18	256725	212445	100.00
2	12.386	251	257	269	18	256725	204543	96.28

332/334 CALCULATION

R-Global(0) = .8431

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.406	251	258	267	16	310916	258116	100.00
2	12.406	251	258	267	16	310916	248116	96.13

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.406	255	258	261	6	24773	9185	100.00
2	12.406	255	258	261	6	24773	7025	76.48

00133

C11042

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783134

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.406	254	258	267	13	42683	8272	100.00
2	12.406	254	258	267	13	42683	7979	96.46

320/322 CALCULATION

R-Global(1) = .9806

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	257	0	256	-1	0	4558	100.00
2	0.000	257	0	256	-1	0	4558	100.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0376

(328)/(332 + 334) CALCULATION

R-Global(3) = .5556

C000000

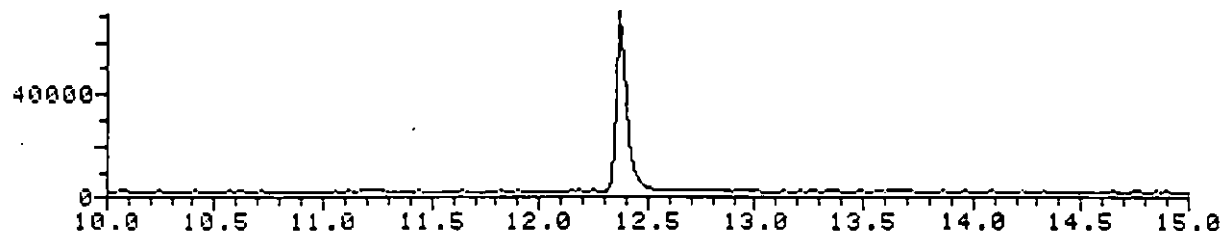
00140

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C11043

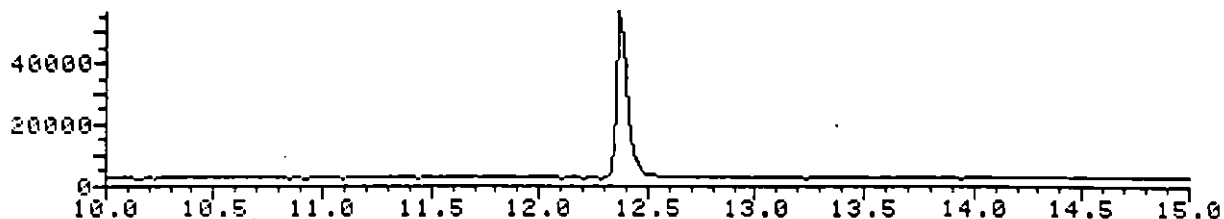
File >B3135 333.6-334.6 amu.2UL UT-3059

SP2330 200-1/3/250 RWN BT



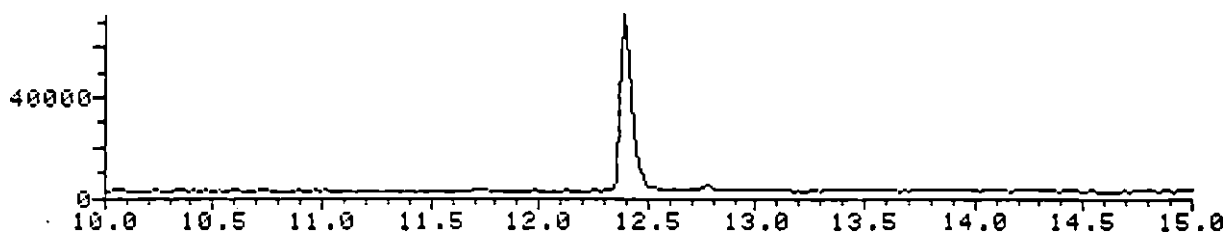
File >B3135 331.6-332.6 amu.2UL UT-3059

SP2330 200-1/3/250 RWN BT



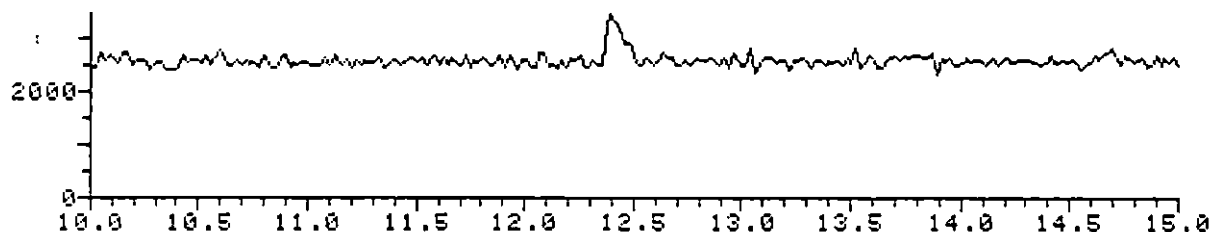
File >B3135 327.6-328.6 amu.2UL UT-3059

SP2330 200-1/3/250 RWN BT



File >B3135 321.6-322.6 amu.2UL UT-3059

SP2330 200-1/3/250 RWN BT



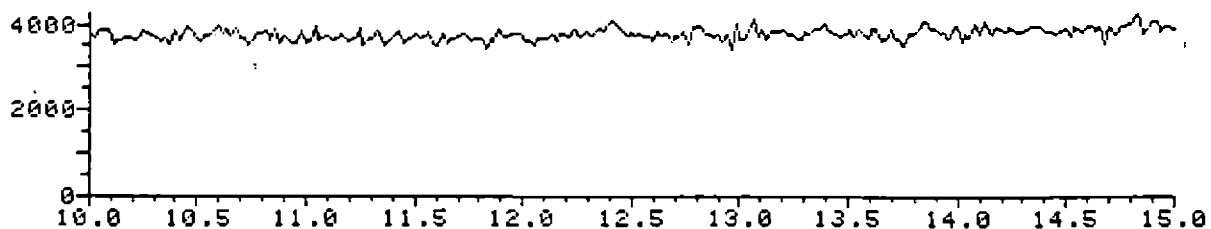
File >B3135 319.6-320.6 amu.2UL UT-3059

SP2330 200-1/3/250 RWN BT



File >B3135 256.7-257.7 amu.2UL UT-3059

SP2330 200-1/3/250 RWN BT



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C11044

MS data file header from : >B3135

Sample: 2UL UT-3059 Operator: ROY MS 11/05/84 8:15
Misc : SP2330 200-1/3/250 RWN BTL#81 BTL#81
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 248 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.372	252	259	268	16	238576	198016	100.00
2	12.372	252	259	268	16	238576	190088	96.00

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.372	250	259	273	23	223423	166153	100.00
2	12.372	250	259	273	23	223423	161334	97.10

332/334 CALCULATION

R-Global(0) = .8391

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.393	255	260	271	16	258300	212636	100.00
2	12.393	255	260	271	16	258300	207076	97.39

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.393	255	260	271	16	46945	7441	100.00
2	12.393	255	260	271	16	46945	6353	85.38

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M/Z = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.393	258	260	265	7	23083	5359	100.00
2	12.393	258	260	265	7	23083	5282	98.56

320/322 CALCULATION

R-Global(1) = .7202

M/Z = .257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	266	0	265	-1	0	3787	100.00
2	0.000	266	0	265	-1	0	3787	100.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0351

(328)/(332 + 334) CALCULATION

R-Global(3) = .5837

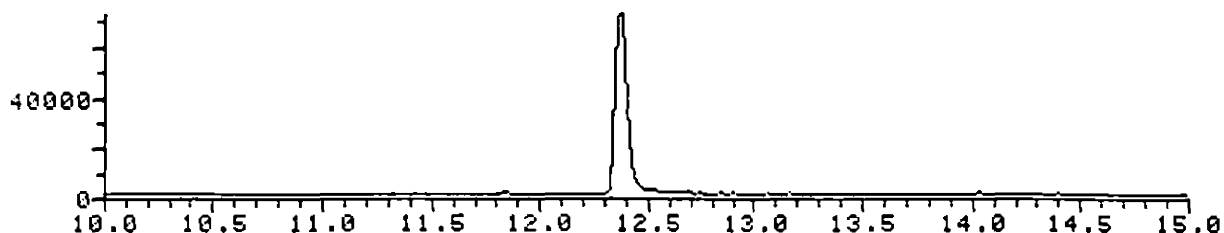
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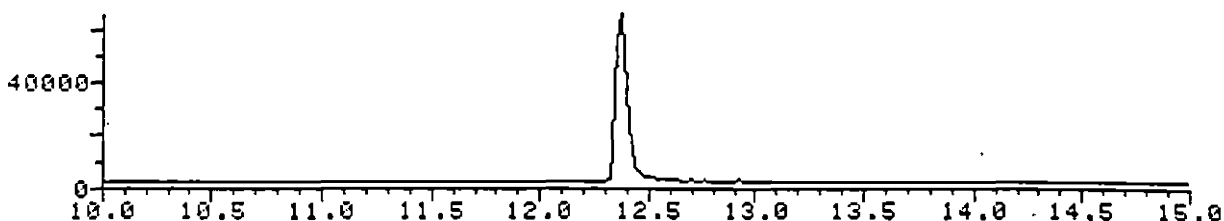
File >B3136 333.6-334.6 amu.2UL UT-3073

SP2330 200-1/3/250 RWN BT



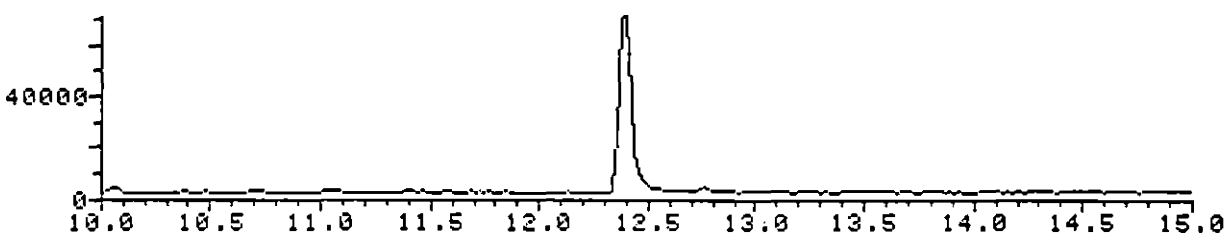
File >B3136 331.6-332.6 amu.2UL UT-3073

SP2330 200-1/3/250 RWN BT



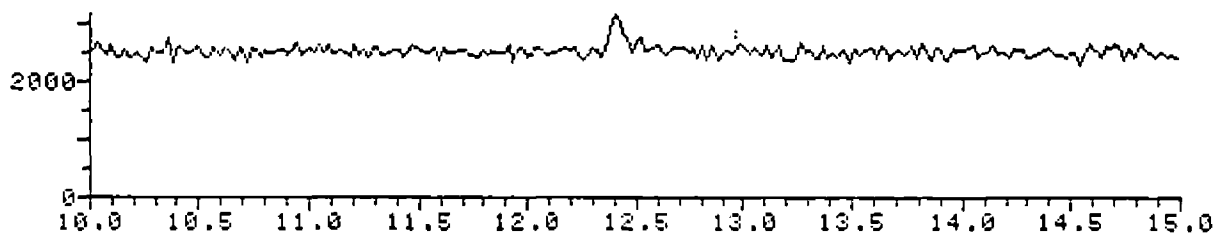
File >B3136 327.6-328.6 amu.2UL UT-3073

SP2330 200-1/3/250 RWN BT



File >B3136 321.6-322.6 amu.2UL UT-3073

SP2330 200-1/3/250 RWN BT



File >B3136 319.6-320.6 amu.2UL UT-3073

SP2330 200-1/3/250 RWN BT



File >B3136 256.7-257.7 amu.2UL UT-3073

SP2330 200-1/3/250 RWN BT



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C11047

MS data file header from : >B3136

Sample: 2UL UT-3873 Operator: ROY MS 11/05/84 8:35
Misc : SP2330 200-1/3/250 RWN BTL#83 BTL#83
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APE101 No. of extra records: 2
Source temp.: 248 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.379	251	258	271	20	281696	232916	100.00
2	12.379	251	258	271	20	281696	228696	98.19

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.379	248	258	270	22	246911	193855	100.00
2	12.379	248	258	270	22	246911	186488	96.60

332/334 CALCULATION

R-Global(0) = .8289

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.399	247	259	270	23	297042	233677	100.00
2	12.399	247	259	270	23	297042	224948	96.26

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.399	257	259	261	4	14562	4314	100.00
2	12.399	257	259	261	4	14562	3716	86.14

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M/Z = 319.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.399	252	259	268	16	44997	4901	100.00
2	12.399	252	259	268	16	44997	4605	93.96

320/322 CALCULATION

R-Global(1) = 1.1361

M/Z = 257.0

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	0.000	269	0	268	-1	0	3688	100.00
2	0.000	269	0	268	-1	0	3688	100.00

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = .0216

(328)/(332 + 334) CALCULATION

R-Global(3) = .5485

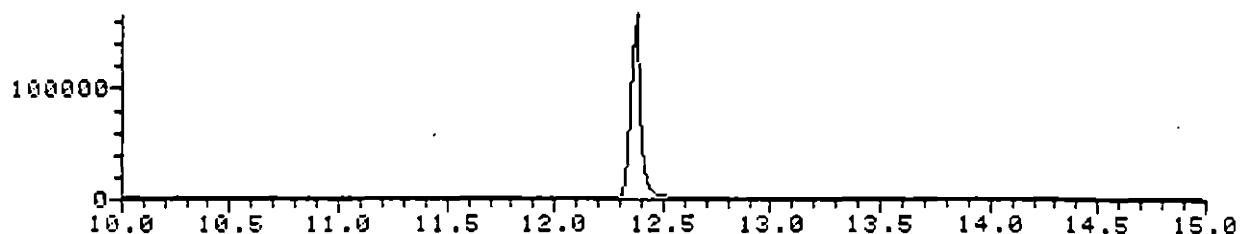
00146

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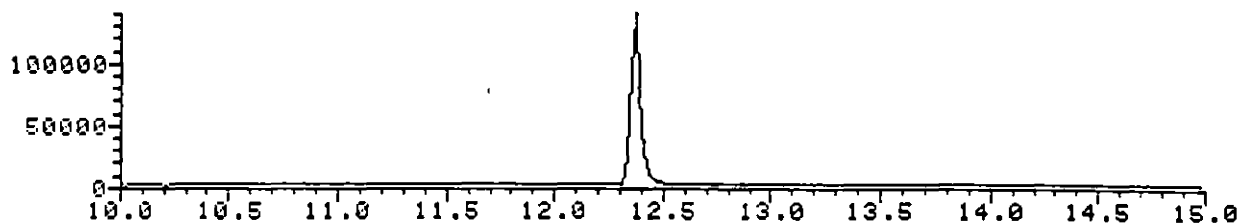
SUBJECT TO PROTECTIVE ORDER

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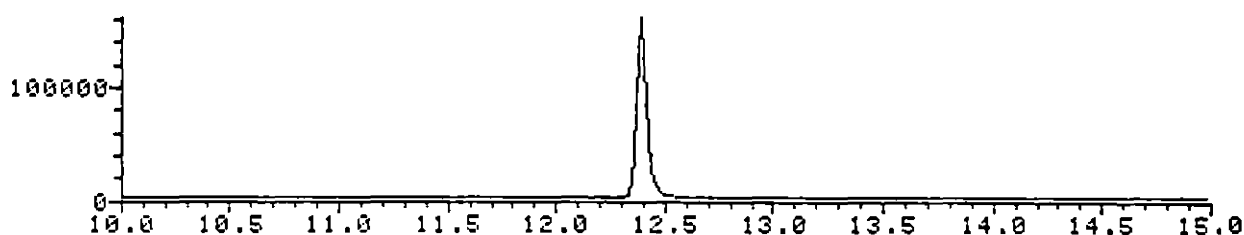
File >B3137 333.6-334.6 amu.2UL 2.504/.48/.20 SP2330 200-1/3/250 GT BT



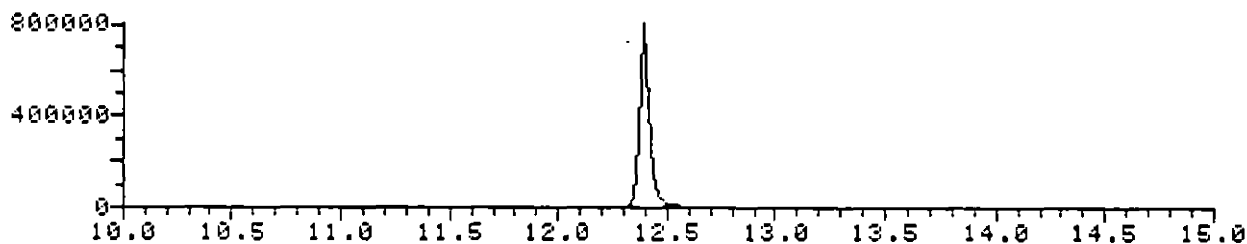
File >B3137 331.6-332.6 amu.2UL 2.504/.48/.20 SP2330 200-1/3/250 GT BT



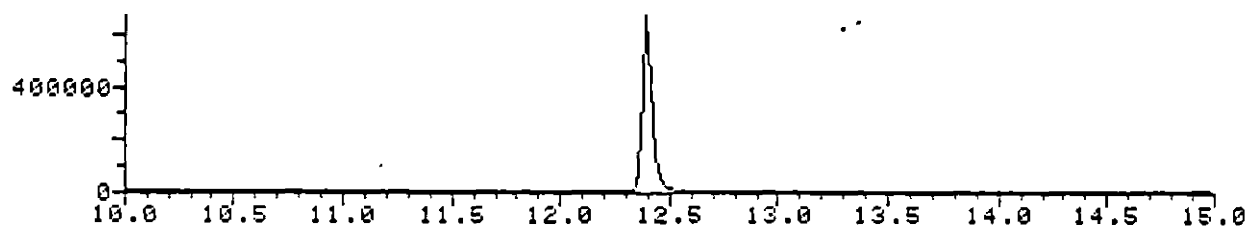
File >B3137 327.6-328.6 amu.2UL 2.504/.48/.20 SP2330 200-1/3/250 GT BT



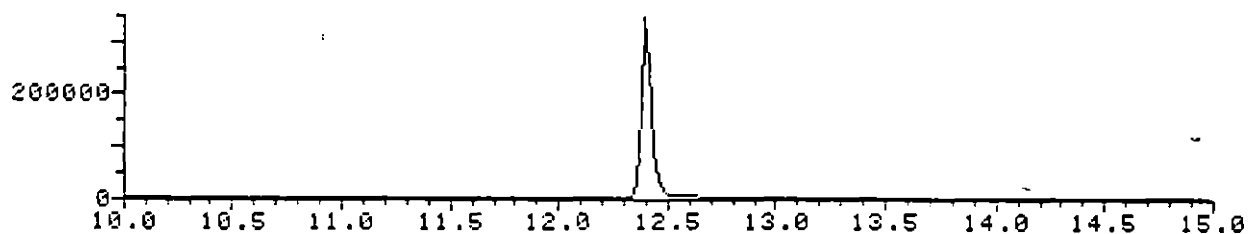
File >B3137 321.6-322.6 amu.2UL 2.504/.48/.20 SP2330 200-1/3/250 GT BT



File >B3137 319.6-320.6 amu.2UL 2.504/.48/.20 SP2330 200-1/3/250 GT BT



File >B3137 256.7-257.7 amu.2UL 2.504/.48/.20 SP2330 200-1/3/250 GT BT



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C11050

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MS data file header from : >B3137

Sample: 2UL 2.504/.48/.20 Operator: ROY MS 11/05/84 8:55
Misc : SP2330 200-1/3/250 GT BTL#41 BTL#41
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS #: 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 248 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.374	252	257	272	20	512301	464061	100.00
2	12.374	252	257	272	20	512301	457901	98.67

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.374	247	257	270	23	430776	375231	100.00
2	12.374	247	257	270	23	430776	367744	98.00

332/334 CALCULATION

R-Global(0) = .8086

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.394	253	258	271	18	520261	471769	100.00
2	12.394	253	258	271	18	520261	466036	98.78

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.394	246	258	271	25	2278243	2214793	100.00
2	12.394	246	258	271	25	2278243	2174668	98.19

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M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.394	249	258	272	23	1874580	1818966	100.00
2	12.394	249	258	272	23	1874580	1791136	98.47

320/322 CALCULATION

R-Global(1) = .8213

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.394	250	258	273	23	1050625	965341	100.00
2	12.394	250	258	273	23	1050625	955163	98.95

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 4.8061

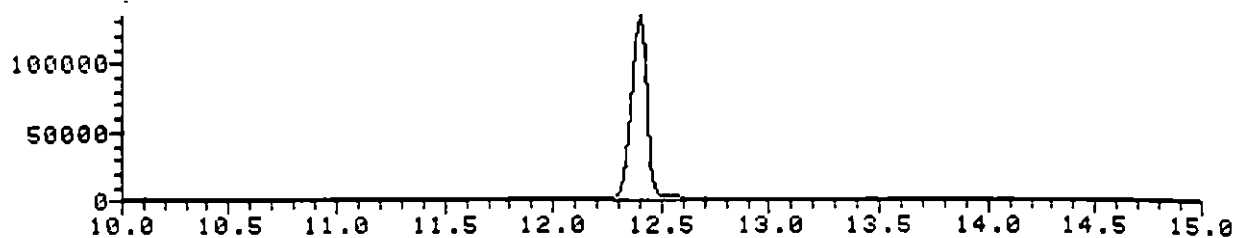
(328)/(332 + 334) CALCULATION

R-Global(3) = .5384

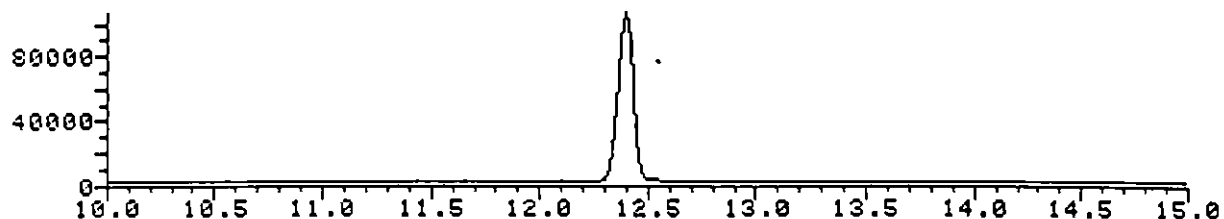
CC-00149
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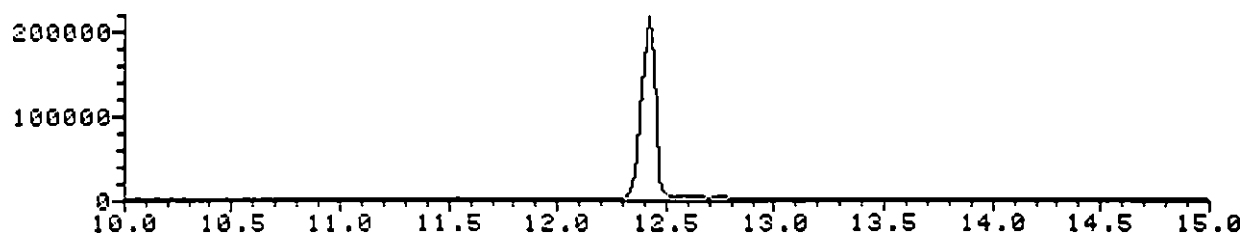
File >B3138 333.6-334.6 amu.2UL 25.04/.48/.20 SP2330 200-1/3/250 GT BT



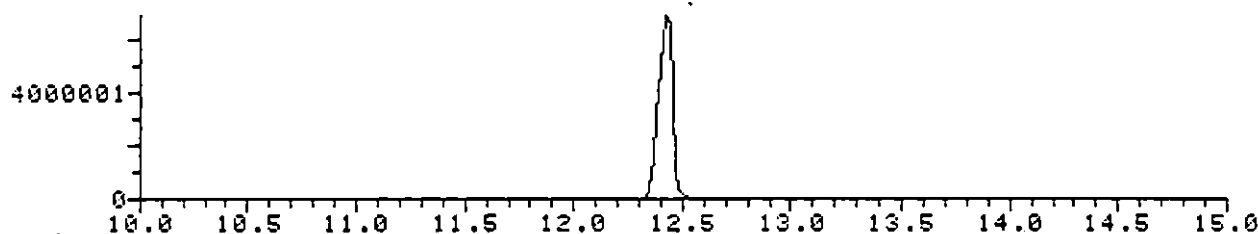
File >B3138 331.6-332.6 amu.2UL 25.04/.48/.20 SP2330 200-1/3/250 GT BT



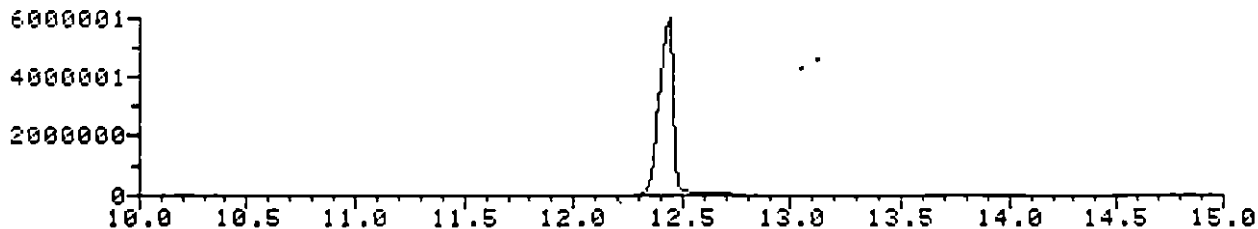
File >B3138 327.6-328.6 amu.2UL 25.04/.48/.20 SP2330 200-1/3/250 GT BT



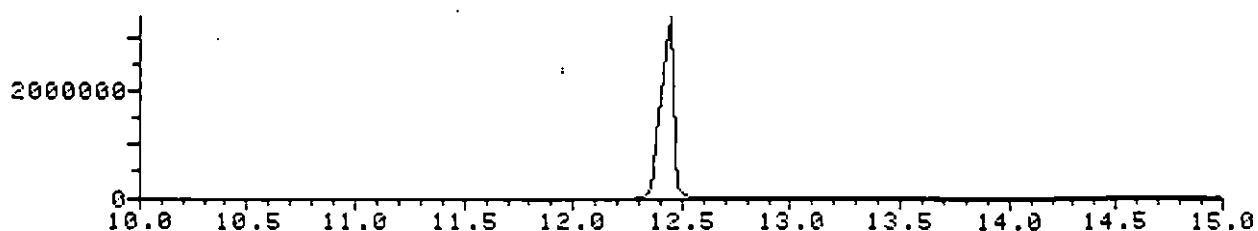
File >B3138 321.6-322.6 amu.2UL 25.04/.48/.20 SP2330 200-1/3/250 GT BT



File >B3138 319.6-320.6 amu.2UL 25.04/.48/.20 SP2330 200-1/3/250 GT BT



File >B3138 256.7-257.7 amu.2UL 25.04/.48/.20 SP2330 200-1/3/250 GT BT



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C11053

MS data file header from : >B3138

Sample: 2UL 25.04/.48/.20 Operator: ROY MS 11/05/84 9:15
Misc : SP2330 200-1/3/250 GT BTL#43 BTL#43
Sys. #: 1 MS model: 87 SW/HW rev.: CA ALS # : 0
Method file: SP2330 Tuning file: APEI01 No. of extra records: 2
Source temp.: 250 Analyzer temp.: 0 Transfer line temp.: 0

Chromatographic temperatures : 0. 0. 0. 0. 0.
Chromatographic times, min. : 0.0 0.0 0.0 0.0 0.0
Chromatographic rate, deg/min: 0.0 0.0 0.0 0.0 0.0

M/Z = 333.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.402	245	260	268	23	594999	538235	100.00
2	12.402	245	260	268	23	594999	527287	97.97

M/Z = 331.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.402	250	260	275	25	496056	436156	100.00
2	12.402	250	260	275	25	496056	432081	99.07

332/334 CALCULATION

R-Global(0) = .8103

M/Z = 327.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.422	252	261	273	21	819857	767294	100.00
2	12.422	252	261	273	21	819857	759377	98.97

M/Z = 321.9

First peak is baseline drop corrected area.
Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.422	252	261	270	18	25792552	25748148	100.00
2	12.422	252	261	270	18	25792552	25407972	98.68

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>B3138

M/Z = 319.9

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.442	249	262	272	23	21171796	21112984	100.00
2	12.442	249	262	272	23	21171796	20842836	98.72

320/322 CALCULATION

R-Global(1) = .8200

M/Z = 257.0

First peak is baseline drop corrected area.
 Second peak is tangent skimmed corrected area.

Peak #	R.T. min.	first scan	max scan	last scan	peak width	raw area	corr. area	corr. %
1	12.442	250	262	274	24	11339390	11262638	100.00
2	12.442	250	262	274	24	11339390	11137286	98.89

(320 + 322)/(332 + 334) CALCULATION

R-Global(3) = 48.0927

(328)/(332 + 334) CALCULATION

R-Global(3) = .5496

CONFIDENTIAL 00152

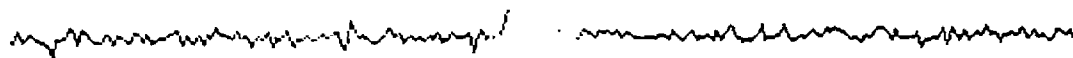
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C11055

9 333.6-334.6 amu.DODECANE

SP2330 200-1/3/250 RWN BT

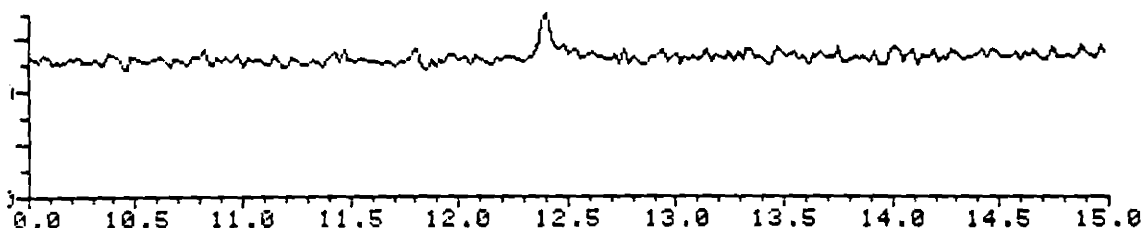
2273264



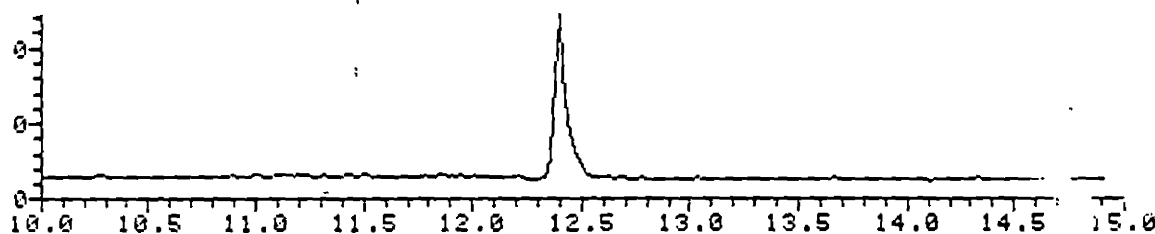
10 331.6-332.6 amu.DODECANE SP2330 200-1/3/250 RWN BT



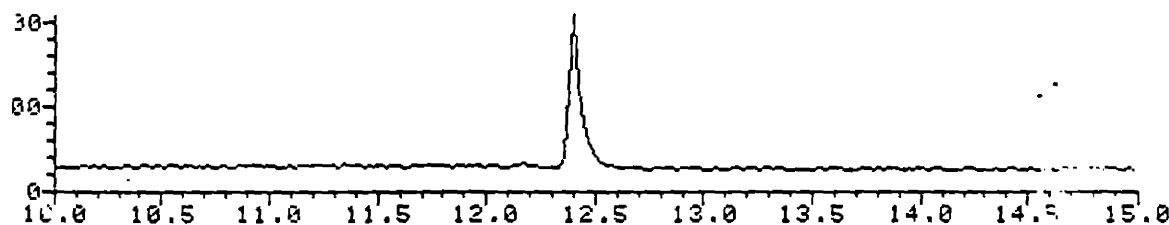
11 327.6-328.6 amu.DODECANE SP2330 200-1/3/250 RWN BT



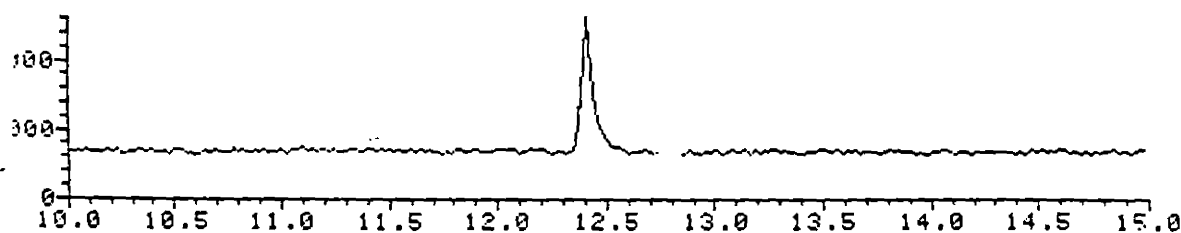
139 321.6-322.6 amu.DODECANE SP2330 200-1/3/250 RWN BT



3139 319.6-320.6 amu.DODECANE SP2330 200-1/3/250 RWN BT



33139 256.7-257.7 amu.DODECANE SP2330 200-1/3/250 RWN BT



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DATE
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in HML:
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1 anisole
conc =

1.5 ml
u =

rd 2.5 ml
d

27 ug/ml

27 ug/ml

3 ug/ml

5 ug/ml

103 ug/ml

DATE
10 Jan 85

SUBJECT

Standard 7 mg

JOB NO.

309.10011

PREPARED BY (SIGNATURE)

Domy Thomas

DATE

2 OCT 84

Native TCDD stock: Using Cahn microbalance in HPL. NBS weight true value = 1.0000 mg OBSERVED = 1.0006 mg Weight of TCDD = 500.7 mg. Diluted to 10 ml w/ 0-xylene. Final conc = 50.07 mg/ml

³¹Cl-TCDD stock: KOL ISOTOPES 100 µg in 0.25 ml anisole. LOT NO. J-II-70. Diluted to 25 ml in decaane. Final conc = 4 µg/ml.

¹³C-TCDD stock solution (prepared 4/10/84) 12 µg/ml

Alternative stock solution: 2 ml of 13 µg/ml ¹³C-TCDD and 2.5 ml of 4 µg/ml ³¹Cl-TCDD diluted to 25 ml w/ decaane. Final conc = 0.96 µg/ml ¹³C/1.40 ³¹Cl (for 1:1 dilutions w/ ¹²C) #1

Internal standard spiking solution: 2 ml of 12 µg/ml ¹³C-TCDD and 2.5 ml of 4 µg/ml ³¹Cl-TCDD diluted to 100 ml w/ iso-octane. Final conc = 0.24 µg/ml ¹³C/0.10 ³¹Cl

12C intermediate stock solutions: (all in decaane)

1 ml of 50.07 µg/ml diluted to 10 ml. Final conc = 5.007 µg/ml

1 ml of 5.007 µg/ml diluted to 10 ml. Final conc = 0.5007 µg/ml

2 ml of 50.07 µg/ml diluted to 5 ml. Final conc = 20.03 µg/ml

2 ml of 5.007 µg/ml diluted to 5 ml. Final conc = 2.003 µg/ml

2 ml of 0.5007 µg/ml diluted to 5 ml. Final conc = 0.2003 µg/ml

(cont. next page)

C11057

READ AND UNDERSTOOD BY

22/10/84

DATE

10 Jan 85

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MONSANTO COMPANY

Nº 2273265

SUBJECT

from Previous Page

JOB NO.

309.10011

PREPARED BY (SIGNATURE)

Jimmy Thomas

DATE

17 OCT 84

Prep of analytical standards

1ml of .96 ug/ml $^{13}\text{C}/^{14}\text{C}$ and 1ml 50 50.07 ug/ml ^{12}C	$= 25.04 \text{ } ^{12}\text{C}/^{13}\text{C}/.20 \text{ } ^{12}\text{C}$
1ml 5.007	$= 2.504 \text{ } ^{12}\text{C}/^{13}\text{C}/.20 \text{ } ^{12}\text{C}$
1ml 25.007	$= 0.2504 \text{ } ^{12}\text{C}/^{13}\text{C}/.20 \text{ } ^{12}\text{C}$
1ml 20.03	$= 10.02 \text{ } ^{12}\text{C}/^{13}\text{C}/.20 \text{ } ^{12}\text{C}$
1ml 2.003	$= 1.002 \text{ } ^{12}\text{C}/^{13}\text{C}/.20 \text{ } ^{12}\text{C}$
1ml 0.2003	$= 0.1002 \text{ } ^{12}\text{C}/^{13}\text{C}/.20$

5ml of .096 ug/ml $^{13}\text{C}/^{14}\text{C}$ and 1ml of 0.2003 ug/ml ^{12}C - TC-DD
 diluted to 10ml with decacone final conc = $0.0100 \text{ } ^{12}\text{C}/^{13}\text{C}/.20$

Prepared samples to check results - final vol = 50 μl

Sample #

101601	0.0100 $^{12}\text{C}/^{13}\text{C}/.20 \text{ } ^{12}\text{C}$
2	0.1002
3	0.2504
4	1.002
5	2.504
6	10.02
7	25.04
8	100 μl 0.24 ug/ml $^{13}\text{C}/^{14}\text{C}$

9	↓	↓	↓	+ 10 μl ^{12}C 0.24 ug/ml
10	↓	↓	↓	+ 100 μl ^{12}C 0.24 ug/ml

SUBJECT TO PROTECTIVE ORDER

C11058

C1155

READ AND UNDERSTOOD BY

R. O. 100

DATE