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AIR

EPA

Air Emissions From Reinforced Plastics Composite Manufacturing Process LASCO Panel Products: Volume III

FINAL REPORT

AIR EMISSIONS FROM REINFORCED PLASTICS COMPOSITE MANUFACTURING PROCESS LASCO PANEL PRODUCTS

VOLUME III OF III
APPENDICES B THROUGH E

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Prepared for:

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TABLE OF CONTENTS

VOLUME I Page

1.0 INTRODUCTION 1-1

2.0 SUMMARY OF TEST RESULTS 2-1

2.1 EMISSIONS TEST LOG 2-1
2.2 PROCESS LINE RESULTS 2-4
2.3 TOTAL TEMPORARY ENCLOSURE - METHOD 25A TOTAL HYDROCARBON RESULTS 2-5
2.4 TOTAL TEMPORARY ENCLOSURE - VOLUMETRIC AIR FLOW RATE RESULTS 2-5
2.5 TOTAL TEMPORARY ENCLOSURE - METHOD 18 RESULTS .. 2-5
2.6 OVEN NOS. 9 AND 10 - METHOD 25A TOTAL HYDROCARBON RESULTS 2-23
2.7 OVEN NOS. 9 AND 10 - VOLUMETRIC FLOW RATE RESULTS 2-23
2.8 OVEN NOS. 9 AND 10 - METHOD 18 HAP RESULTS 2-23
2.9 UNCATALYZED RESIN (UCR) AND GEL COAT SAMPLE RESULTS 2-23
2.10 RESPONSE FACTOR RESULTS 2-41
2.11 METHOD 204 TOTAL TEMPORARY ENCLOSURE VERIFICATION 2-41

3.0 PROCESS DESCRIPTION 3-1

4.0 SAMPLING LOCATIONS 4-1

4.1 MAIN EXHAUST STACK 4-1
4.2 ROOM EXHAUST STACK 4-1
4.3 AUXILIARY EXHAUST STACK 4-4
4.4 NATURAL DRAFT OPENINGS 4-4
4.5 OVEN EXHAUST NO. 9 AND NO. 10 4-4

TABLE OF CONTENTS (Continued)

5.0 SAMPLING AND ANALYTICAL PROCEDURES 5-1

5.1 LOCATION OF MEASUREMENT SAMPLE/VELOCITY TRAVERSE POINTS 5-1
5.2 DETERMINATION OF STACK GAS VOLUMETRIC FLOW RATE 5-1
5.3 DETERMINATION OF DRY MOLECULAR WEIGHT 5-4
5.4 EXHAUST GAS MOISTURE CONTENT 5-4
5.5 DETERMINATION OF HAZARDOUS AIR POLLUTANTS 5-4
5.6 DETERMINATION OF TOTAL HYDROCARBONS 5-6
5.7 DETERMINATION OF VOLATILE MATTER CONTENT, DENSITY, VOLUME OF SOLIDS, WEIGHT OF SOLIDS, WATER CONTENT, AND HAPS BY DISTILLATION 5-6
5.8 RESPONSE FACTORS FOR FLAME IONIZATION ANALYZERS 5-10

6.0 QUALITY ASSURANCE/QUALITY CONTROL 6-1

6.1 CALIBRATION OF APPARATUS 6-1
6.2 ONSITE QA/QC 6-3

APPENDIX A - RAW FIELD DATA

Appendix A.1 Manual Methods Raw Field Data

A.1.1 Method 1 Field Data Sheets (includes flows, moistures, and Method 18)
A.1.2 Condition 1 (includes flows, moistures, and Method 18)
A.1.3 Condition 2 (includes flows, moistures, and Method 18)
A.1.4 Condition 3 (includes flows, moistures, and Method 18)
A.1.5 Condition 4 (includes flows, moistures, and Method 18)
A.1.6 Condition 5 (includes flows, moistures, and Method 18)
A.1.7 Condition 6 (includes flows, moistures, and Method 18)
A.1.8 Condition 7 (includes flows, moistures, and Method 18)
A.1.9 Condition 8 (includes flows, moistures, and Method 18)
A.1.10 Condition 9 (includes flows, moistures, and Method 18)
A.1.11 Condition 10 (includes flows, moistures, and Method 18)
A.1.12 Condition 11 (includes flows, moistures, and Method 18)
A.1.13 Condition 12 (includes flows, moistures, and Method 18)
A.1.14 Condition 13 (includes flows, moistures, and Method 18)
A.1.15 NDO Summary Data

TABLE OF CONTENTS (Continued)

VOLUME II

Appendix A.2 Instrumental Methods Raw Field Data

A.2.1 TTE Static Pressures
A.2.2 Method 25A Calibration Data
A.2.3 Condition 1 Method 25A
A.2.4 Condition 2 Method 25A
A.2.5 Condition 3 Method 25A
A.2.6 Condition 4 Method 25A
A.2.7 Condition 5 Method 25A
A.2.8 Condition 6 Method 25A
A.2.9 Condition 7 Method 25A
A.2.10 Condition 8 Method 25A
A.2.11 Condition 9 and 10 Method 25A
A.2.12 Condition 11 Method 25A
A.2.13 Condition 12 Method 25A
A.2.14 Condition 13 Method 25A
A.2.15 Conditions 1-13 Method 25A Strip Charts
A.2.16 Oven Nos. 9 and 10 Method 25A

VOLUME III

APPENDIX B - ANALYTICAL DATA

B.1 Method 18 Analytical Data
B.2 Method 18 GC Chromatograms

APPENDIX C - CALCULATIONS

APPENDIX D - QA/QC DATA

APPENDIX E - PROJECT PARTICIPANTS

LIST OF TABLES

VOLUME I

		Page
Table 1.1	LASCO Panel Products Test Matrix	1-6
Table 2.1	Emission Test Log, LASCO Panel Products, Florence, Kentucky	2-2
Table 2.2	TTE Total Hydrocarbon Mass Emission Rate Summary	2-6
Table 2.3	Summary of TTE Stack Gas Conditions, and THC Concentrations and Mass Emission Rates, Condition 1 - May 14, 1997	2-8
Table 2.4	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 2 - May 14, 1997	2-9
Table 2.5	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 3 - May 15, 1997	2-10
Table 2.6	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 4 - May 15, 1997	2-11
Table 2.7	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 5 - May 19, 1997	2-12
Table 2.8	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 6 - May 19, 1997	2-13
Table 2.9	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 7 - May 20, 1997	2-14
Table 2.10	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 8 - May 22, 1997	2-15
Table 2.11	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 9 - May 22, 1997	2-16
Table 2.12	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 10 - May 22, 1997	2-17
Table 2.13	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 11 - May 23, 1997	2-18
Table 2.14	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 12 - May 29, 1997	2-19
Table 2.15	Summary of TTE Stack Gas Conditions and THC Concentrations - Condition 13 - May 29, 1997	2-20
Table 2.16	TTE Mass Rate Summary - Styrene, Methyl Methacrylate, and Cumene by EPA Method 18	2-21
Table 2.17	Ovens 9 and 10 THC Mass Emission Rate Summary	2-24

LIST OF TABLES (Concluded)

Table 2.18 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 1 - May 14, 1997 2-26
Table 2.19 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 2 - May 14, 1997 2-27
Table 2.20 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 3 - May 15, 1997 2-28
Table 2.21 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 4 - May 15, 1997 2-29
Table 2.22 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 5 - May 19, 1997 2-30
Table 2.23 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 6 - May 19, 1997 2-31
Table 2.24 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 7 - May 20, 1997 2-32
Table 2.25 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 8 - May 22, 1997 2-33
Table 2.26 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 9 - May 22, 1997 2-34
Table 2.27 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 10 - May 22, 1997 2-35
Table 2.28 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 11 - May 23, 1997 2-36
Table 2.29 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 12 - May 29, 1997 2-37
Table 2.30 Summary of Oven Stack Gas Conditions and THC Concentrations and Mass Emission Rates, Condition 13 - May 29, 1997 2-38
Table 2.31 Ovens 9 and 10 Mass Emission Rate Summary - Styrene, Methyl Methacrylate, and Cumene by EPA Method 18 2-39
Table 2.32 Summary of Response Factor Results - Styrene Bag Standards 2-42

Table 5.1 Sources, Test Parameters, and Methods Summary LASCO Panel Products - Florence, Kentucky 5-2

Table 6.1 Summary of Temperature Sensors Calibration Requirements 6-2
Table 6.2 Summary of Calibration Results for THC Analyzers Condition Nos. 1-13, LASCO Panel Products 6-5
Table 6.3 Summary of EPA Method 18 Quality Assurance Results Styrene Recovery Efficiencies 6-7
Table 6.4 Summary of Desorption Efficiencies 6-7

LIST OF FIGURES

VOLUME I

		Page
Figure 1.1	Key Personnel and Responsibility for Testing at LASCO Panel Products	1-2
Figure 1.2	Overview of Sampling Locations	1-5
Figure 2.1	Diagram of Temporary Total Enclosure	2-43
Figure 4.1	Main Exhaust Sample Location	4-2
Figure 4.2	Room Exhaust Sample Location	4-3
Figure 4.3	Auxiliary Exhaust Sampling Location	4-5
Figure 4.4	Natural Draft Opening Sampling Location	4-6
Figure 4.5	Oven No. 9 Schematic of Sampling Location	4-7
Figure 4.6	Oven No. 10 Schematic of Sampling Location	4-8
Figure 5.1	Schematic of EPA Method 4 Sampling Train	5-5
Figure 5.2	Schematic of EPA Method 18 Sampling System - Sorbent Tube Method	5-7
Figure 5.3	Schematic of Methane/Ethane Sampling System	5-8
Figure 5.4	EPA Method 25A Total Gaseous Organic Analyzer and Sample System	5-9
Figure 5.5	Schematic of Bag Standard Preparation System	5-13

APPENDIX B

ANALYTICAL DATA

APPENDIX B.1

Method 18 Analytical Data

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July 29, 1997

Mr. Dan Scheffel
Pacific Environmental Services, Inc
4700 Duke Drive, Suite 150
Mason, Ohio 45040

Dear Mr. Sheffel,

Enclosed with this letter are printouts and an electronic copy of the GC data from the PES/EPA task performed at Lasco in Florence, KY. You had requested various sets of data deemed missing from our previous submittal. These printouts show the referenced data for methane, ethane, styrene, cumene, and methyl methacrylate. These sheets also include separate spike recovery results and cylinder analysis results. These are listed on separate pages for weeks 2 and 3 to prevent confusion with sample data. Please note that values that are at or near the calculated detection limit are flagged with a "DL", and the precision between the duplicate injections are not calculated. The precision requirements are not applicable at the detection limit, since by definition the detection limit is a point where the precision and accuracy of measurements begin to vary statistically. A diskette is also included with this data presented in a Excel format. If you have any questions, please feel free to call and discuss these results with either myself or Pete Zemek.

Sincerely,

Barry Rayfield

Barry Rayfield
Project Manager

enclosures

LASCO | Tube Samples | Standard Curve from 5/14/97
Job No. 97-3020 | File: N:\--\Lasco\97-3020\Styrene.WQ2
Analyte (mg)

			Low Standard		Mid Standard		High Standard	
Styrene								
Purity	99.0%	Inj. Vol.	1.2	uL	6.0	uL	12.0	uL
Density	0.91	Std./Fit	0.4	10.2%	1.8	-3.1%	3.6	0.7%
Slope	234910.5	Peak Areas	94290	94442	406416	415814	848540	858260
Intcp	1116.1	Avg./Dev.	94366	0.1%	411115	1.1%	853400	0.6%
Avg RF	4.14E-06	RF	3.82E-06		4.38E-06		4.22E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error	Blank
Concal 5/14/97 @ 18:44	Styrene	361653	368725	365189	1.0%	1.550	1.5	3.2%	
Concal 5/14/97 @ 23:30	Styrene	380417	352150	366284	3.9%	1.6	1.5	3.5%	
Concal 5/15/97 @ 12:08	Styrene	384658	381343	383001	0.4%	1.6	1.5	8.3%	
Con Cal 5/15/97 @ 20:56	Styrene	391349	374306	382828	2.2%	1.6	1.5	8.2%	

Desorption Efficiency Study; Charcoal

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	100	0.0%	-0.00	
0.9009		185442		176639	181041	2.4%	0.77	85.0%
4.5045		1048067		903904	975986	7.4%	4.15	92.1%
9.009		1946652		1867256	1906954	2.1%	8.11	90.1%
							Average	89.1%

Tubes

				Inject 1		Inject 2	Average	Deviation	Mass (mg)	Sample Conc. (mg/cuM)
Unspiked Gas Vol.										
Unspiked Gas Vol.				14.3 dsl						
9-2-1A-FH	Front		e	6094		6266	6180	1.4%	0.02	1.5
9-2-1A-BH	Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
9-2-1B-FH	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
Unpiked Sample; Run 10-1-1 PTS										
Unspiked Gas Vol.				15.5 dsl						
10-1-2A-FH	Front		e	1507		2350	1929	21.9%	0.00	0.2
10-1-2A-BH	Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
10-1-2B-FH	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
Unspiked Sample;										
Gas Vol.	14.6 dsl									
NDA-1-1A-	Front		e	3955		3942	3949	0.2%	0.01	0.8
NDA-1-1A-	Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
NDA-1-1A-	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
Unspiked Sample;										
Gas Vol.	14.6 dsl									
NDA-2-2A-	Front		e	13536		10940	12238	10.6%	0.05	3.3
NDA-2-2A-	Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
NDA-2-2B-	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
Unspiked Sample;										
Gas Vol.	14.7 dsl									
NDB-2-3A-	Front		e	3298		3437	3368	2.1%	0.01	0.7
NDB-2-3A-	Back		e	465		576	521	10.7%	-0.00	-0.2
NDB-2-3B-	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3

Unspiked Sample; NDB-1-3 PTS

Gas Vol.	15.7 dsl									
NDB-1-3A-	Front		e	1337		1330	1334	0.3%	0.00	0.1
NDA-1-3A-	Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
NDA-1-3A-	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3

Unspiked Sample; ME-1-3 PTS

Gas Vol.	6.2 dsl									
ME-1-1A-F	Front	E	e	3934626	E	3894949	3914788	0.5%	16.66	2682.8
ME-1-1A-B	Back	<	e	100	<	100	100	0.0%	-0.00	-0.7
ME-1-1B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.7

Unspiked Sample;

Gas Vol.	8.9 dsl									
ME-2-1A-F	Front	E	e	4394997	E	4322457	4358727	0.8%	18.55	2084.3
ME-2-1A-B	Back	<	e	100	<	100	100	0.0%	-0.00	-0.5
ME-2-1B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.5

Unspiked Sample;

Gas Vol.	8.9 dsl									
ME-2-1B-F	Front		e				0	ERR	-0.00	-0.8
ME-2-1B-B	Back	<	e	100	<	100	100	0.0%	-0.00	-0.5
ME-2-1B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.5

Spiked Sample;

Gas Vol.	2.3 dsl									
ME-3-3A-F	Front		e	742801		782920	762861	2.6%	3.24	1441.2
ME-3-3A-B	Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
ME-3-3B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
Spiked Vol (ul)				2.5						
Theoretical Spiked Mass (mg)				2.53						
Actual Spiked Mass (mg)				2.56						

UNSpiked Sample;

Gas Vol.	2.3 dsl									
ME-3-3A-F	Front		e	158837		162860	160849	1.3%	0.68	302.2
ME-3-3A-B	Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
ME-3-3B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
Spike Recovery %				101.3%						
% of Theoretical				371.9%						

Unspiked Sample; RE-1-3 PTS

Gas Vol.	14.6 dsl									
RE-1-1A-F	Front		e	729930		745980	737955	1.1%	3.14	214.8
RE-1-1A-B	Back		e	1106		808	957	15.6%	-0.00	-0.0
RE-1-1B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3

Unspiked Sample;

Gas Vol.	14.7 dsl									
RE-2-1A-F	Front		e	1230510		1168310	1199410	2.6%	5.10	346.8
RE-2-1A-B	Back	<	e	100	<	100	100	0.0%	-0.00	-0.3
RE-2-1B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-0.3

Spiked Sample;

Gas Vol.	2.3 dsl									
RE-4-1A-F	Front		e	121917		125805	123861	1.6%	0.52	232.2
RE-4-1A-B	Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
RE-4-1B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
Spiked Vol (ul)				0.25						
Theoretical Spiked Mass (mg)				0.35						
Actual Spiked Mass (mg)				0.44						

Unspiked Sample;

Gas Vol.	2.3 dsl									
RE-4-1A-F	Front		e	19431		19358	19395	0.2%	0.08	5.3
RE-4-1A-B	Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
RE-4-1B-F	1st Back	<	e	100	<	100	100	0.0%	-0.00	-1.9
Spike Recovery %				127.1%						
% of Theoretical				449.8%						

LASCO | Tube Samples | Standard Curve from 5/14/97
Job No. 97-3020 | File: N:\--\Lasco\97-3020\Cumene.WQ2
Analyte (mg)

			Low Standard		Mid Standard		High Standard	
Cumene								
Purity	99.9%	Inj. Vol.	1.5	uL	6.0	uL	12.0	uL
Density	0.86	Std./Fit	0.4	3.9%	1.7	-7.2%	3.4	1.7%
Slope	228592.9	Peak Areas	93703	88874	350253	357234	785786	790985
Intcp	-10752.8	Avg./Dev.	91288.5	2.6%	353743.5	1.0%	788386	0.3%
Avg RF	4.64E-06	RF	4.71E-06		4.86E-06		4.36E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/14/97 @ 18:44	Cumene	311554	316622	314088	0.8%	1.4	1.4	-0.7%
Concal 5/14/97 @ 23:30	Cumene	327082	301611	314347	4.1%	1.4	1.4	-0.7%
Concal 5/15/97 @ 12:08	Cumene	330319	329017	329668	0.2%	1.5	1.4	4.0%
Concal 5/15/97 @ 20:56	Cumene	336637	323555	330096	2.0%	1.5	1.4	4.1%

Desorption Efficiency Study; Charcoal

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	10	900.0%	0.05	
0.86		267850		253391	260621	2.8%	1.19	138.0%
4.3		1413161		1214978	1314070	7.5%	5.80	134.8%
8.6		2418484		2317357	2367921	2.1%	10.41	121.0%
				2859174			Average	131.3%

Tubes

Unpiked Sample;				Inject 1		Inject 2	Average	Deviation	Mass (mg)	Sample Conc. (mg/cuM)
Unspiked Gas Vol.				14.3 dsl						
9-2-1A-FH	Front	<	e	100	<	100	100	0.0%	0.05	3.3
9-2-1A-BH	Back	<	e	100	<	100	100	0.0%	0.05	3.3
9-2-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.05	3.3

Unpiked Sample;										
Unspiked Gas Vol.				15.5 dsl						
10-1A-FH	Front	<	e	100	<	100	100	0.0%	0.05	3.1
10-1A-BH	Back	<	e	100	<	100	100	0.0%	0.05	3.1
10-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.05	3.1

Unpiked Sample; 10-1-1 PTS										
Unspiked Gas Vol.				15.5 dsl						
10-1-1A-FH	Front	<	e	100	<	100	100	0.0%	0.05	3.1
10-1-1A-BH	Back	<	e	100	<	100	100	0.0%	0.05	3.1
10-1-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.05	3.1

Unspiked Sample;									
Gas Vol.	14.6 dsl								
NDA-1A-FH	Front	<	e	100	<	100	100	0.0%	0.05	3.3
NDA-1A-BH	Back	<	e	100	<	100	100	0.0%	0.05	3.3
NDA-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.05	3.3
Unspiked Sample;									
Gas Vol.	14.6 dsl								
NDA-2-2A-	Front	<	e	100	<	100	100	0.0%	0.05	3.3
NDA-2-2A-	Back	<	e	100	<	100	100	0.0%	0.05	3.3
NDA-2-2B-	1st Back	<	e	100	<	100	100	0.0%	0.05	3.3
Unspiked Sample;									
Gas Vol.	14.6 dsl								
NDB-2-3A-	Front	<	e	100	<	100	100	0.0%	0.05	3.3
NDB-2-3A-	Back	<	e	100	<	100	100	0.0%	0.05	3.3
NDB-2-3B-	1st Back	<	e	100	<	100	100	0.0%	0.05	3.3
Unspiked Sample; NDB-1-3 PTS									
Gas Vol.	15.7 dsl								
NDB-1-3A-	Front	<	e	100	<	100	100	0.0%	0.05	3.0
NDB-1-3A-	Back	<	e	100	<	100	100	0.0%	0.05	3.0
NDB-1-3B-	1st Back	<	e	100	<	100	100	0.0%	0.05	3.0
Unspiked Sample; ME-1-3 PTS									
Gas Vol.	6.2 dsl								
ME-1-3A-F	Front		e	3216		3286	3251	1.1%	0.06	9.9
ME-1-3A-B	Back	<	e	100	<	100	100	0.0%	0.05	7.6
ME-1-3B-F	1st Back	<	e	100	<	100	100	0.0%	0.05	7.6
Unspiked Sample;									
Gas Vol.	8.9 dsl								
ME-2-1A-F	Front		e	5050		4920	4985	1.3%	0.07	7.8
ME-2-1A-B	Back	<	e	100	<	100	100	0.0%	0.05	5.4
ME-2-1B-F	1st Back	<	e	100	<	100	100	0.0%	0.05	5.4

Unspiked Sample;
Gas Vol. 8.9 dsl

ME-2-1B-F	Front	<	e	100 <	100	100	ERR	0.05	~~5.3~~ 5.4 BR 7/28
ME-2-1B-B	Back	<	e	100 <	100	100	0.0%	0.05	5.4
ME-2-1B-F	1st Back	<	e	100 <	100	100	0.0%	0.05	5.4

Unspiked Sample;
Gas Vol. 2.5 dsl

ME-3-3A-F	Front		e	1072	1128	1100	2.5%	0.05	20.7
ME-3-3A-B	Back	<	e	100 <	100	100	0.0%	0.05	19.0
ME-3-3B-F	1st Back	<	e	100 <	100	100	0.0%	0.05	19.0

Unspiked Sample; RE-1-3 PTS
Gas Vol. 14.6 dsl

RE-1-1A-F	Front	<	e	1187	1136	1162	2.2%	0.05	3.6
RE-1-1A-B	Back	<	e	100 <	100	100	0.0%	0.05	3.3
RE-1-1B-F	1st Back	<	e	100 <	100	100	0.0%	0.05	3.3

Unspiked Sample;
Gas Vol. 14.7 dsl

RE-2-1A-F	Front	<	e	2259	1864	2062	9.6%	0.06	3.8
RE-2-1A-B	Back	<	e	100 <	100	100	0.0%	0.05	3.2
RE-2-1B-F	1st Back	<	e	100 <	100	100	0.0%	0.05	3.2

Unspiked Sample;
Gas Vol. 14.7 dsl

RE-4-1A-F	Front	<	e	100	100	100	0.0%	0.05	3.2
RE-4-1A-B	Back	<	e	100 <	100	100	0.0%	0.05	3.2
RE-4-1B-F	1st Back	<	e	100 <	100	100	0.0%	0.05	3.2

LASCO | Tube Samples | Standard Curve from 5/14/97
Job No. 97-3020 | File: N:\--\Lasco\97-3020\MMA.WQ2
Analyte (mg) | Low Standard | Mid Standard | High Standard

Methyl Methacrylate								
Purity	99.0%	Inj. Vol.	1.2	uL	6.0	uL	12.0	uL
Density	0.94	Std./Fit	0.4	11.2%	1.9	-7.4%	3.7	1.7%
Slope	117474.6	Peak Areas	45804	44110	201927	195825	440469	441914
Intcp	-3657.0	Avg./Dev.	44957	1.9%	198876	1.5%	441192	0.2%
Avg RF	8.69E-06	RF	8.28E-06		9.36E-06		8.44E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/14/97 @ 18:44	Methyl Methacryl	169927	171239	170583	0.4%	1.5	1.6	-4.4%
Concal 5/14/97 @ 23:30	Methyl Methacryl	176763	162612	169688	4.2%	1.5	1.6	-4.9%
Concal 5/15/97 @ 12:08	Methyl Methacryl	177144	173999	175572	0.9%	1.5	1.6	-1.6%
Concal 5/15/97 @ 20:56	Methyl Methacryl	177854	170309	174082	2.2%	1.5	1.6	-2.4%

Desorption Efficiency Study; Charcoal

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	100	0.0%	0.03	
0.9306		64370		61140	62755	2.6%	0.57	60.7%
4.653		540734		478995	509865	6.1%	4.37	93.9%
9.306		940651		914954	927803	1.4%	7.93	85.2%
							Average	80.0%

Tubes

				Inject 1		Inject 2	Average	Deviation	Mass (mg)	Sample Conc. (mg/cuM)
Unpiked Sample;										
Unspiked Gas Vol.				14.3 dsl						
9-2-1A-FH	Front		e	834		847	841	0.8%	0.04	2.7
9-2-1A-BH	Back	<	e	100	<	100	100	0.0%	0.03	2.2
9-2-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.03	2.2
Unspiked Gas Vol.				15.5 dsl						
10-1A-FH	Front		e	321		362	342	6.0%	0.03	2.2
10-1A-BH	Back	<	e	100	<	100	100	0.0%	0.03	2.1
10-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.03	2.1
Unpiked Sample;	10-1-1		PTS							
Unspiked Gas Vol.				15.5 dsl						
10-1-~~2~~A-FH	Front	<	e	100	<	100	100	0.0%	0.03	2.1
10-1-~~2~~A-BH	Back	<	e	100	<	100	100	0.0%	0.03	2.1
10-1-~~2~~B-FH	1st Back	<	e	100	<	100	100	0.0%	0.03	2.1
Unspiked Sample;										
Gas Vol.	14.6 dsl									
NDA-1A-FH	Front		e	337		332	335	0.7%	0.03	2.3
NDA-1A-BH	Back	<	e	100	<	100	100	0.0%	0.03	2.2
NDA-1A-FH	1st Back	<	e	100	<	100	100	0.0%	0.03	2.2
Unspiked Sample;										
Gas Vol.	14.6 dsl									
NDA-2-2A-F	Front		e	1317		1672	1495	11.9%	0.04	3.0
NDA-2-2A-B	Back	<	e	100	<	100	100	0.0%	0.03	2.2
NDA-2-2B-F	1st Back	<	e	100	<	100	100	0.0%	0.03	2.2
Unspiked Sample;										
Gas Vol.	14.7 dsl									
NDB-2-3A-F	Front	<	e	100	<	100	100	0.0%	0.03	2.2
NDB-2-3A-B	Back	<	e	100	<	100	100	0.0%	0.03	2.2
NDB-2-3B-F	1st Back	<	e	100	<	100	100	0.0%	0.03	2.2

Unspiked Sample; NDB-1-3 PTS
Gas Vol. 15.7 dsl

NDD-1-3A-F Front	<	e	100 <	100	100	0.0%	0.03	2.0
NDD-1-3A-B Back	<	e	100 <	100	100	0.0%	0.03	2.0
NDD-1-3A-F 1st Back	<	e	100 <	100	100	0.0%	0.03	2.0

Unspiked Sample; ME-1-3 PTS
Gas Vol. 6.2 dsl

ME-1-3A-FH Front		e	591876	579782	585829	1.0%	5.02	808.0
ME-1-3A-BH Back	<	e	100 <	100	100	0.0%	0.03	5.2
ME-1-3B-FH 1st Back	<	e	100 <	100	100	0.0%	0.03	5.2

Unspiked Sample;
Gas Vol. 8.9 dsl

ME-2-1A-FH Front		e	826657	773904	800281	3.3%	6.84	771.5
ME-2-1A-BH Back	<	e	100 <	100	100	0.0%	0.03	3.6
ME-2-1B-FH 1st Back	<	e	100 <	100	100	0.0%	0.03	3.6

Unspiked Sample;
Gas Vol. 8.9 dsl

ME-2-1B-FH Front	<	e	100 <	100	100	ERR	0.03	3.6 BR 7/28
ME-2-1B-BH Back	<	e	100 <	100	100	0.0%	0.03	3.6
ME-2-1B-FH 1st Back	<	e	100 <	100	100	0.0%	0.03	3.6

Unspiked Sample;
Gas Vol. 2.5 dsl

ME-3-3A-FH Front		e	499	523	511	2.3%	0.04	14.2
ME-3-3A-BH Back	<	e	100 <	100	100	0.0%	0.03	12.8
ME-3-3B-FH 1st Back	<	e	100 <	100	100	0.0%	0.03	12.8

Unspiked Sample;
Gas Vol. 14.6 dsl

RE-1-1A-FH	Front		e	144936		146550	145743	0.6%	1.27	87.1
RE-1-1A-BH	Back	<	e	100	<	100	100	0.0%	0.03	2.2
RE-1-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.03	2.2
RE-1-3 PTS										
Unspiked Sample;										
Gas Vol.	14.7 dsl									
RE-2-1A-FH	Front		e	259497		246858	253178	2.5%	2.19	148.6
RE-2-1A-BH	Back	<	e	100	<	100	100	0.0%	0.03	2.2
RE-2-1B-FH	1st Back	<	e	100	<	100	100	0.0%	0.03	2.2

LASCO
Job No. 97-3020
Initial Calibration:

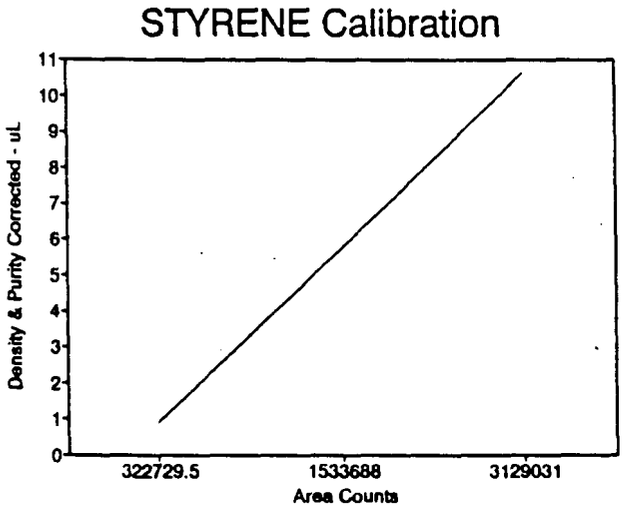
Tube Samples
File: TUBEW2_3.WQ2

Standard Curve from 5/19/97

Styrene

			Low Standard		Mid Standard		High Standard	
Purity	99.0%	Inj. Vol.	1.2 uL		6.0 uL		12.0 uL	
Density	0.91	Std./Fit	1.1	3.9%	5.4	-1.6%	10.8	0.4%
Slope	288535.9	Peak Areas	313821	331638	1559010	1508366	3153635	3104427
Intcp	-1359.5	Avg./Dev.	322729.5	2.8%	1533688	1.7%	3129031	0.8%
Avg RF	3.44E-06	RF	3.35E-06		3.5E-06		3.45E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected



Styrene Calibration

Curve linearity check	uL	Corrected	Area count
Zero	0	0	0
Std1 low	1.2	1.08108	322729.5
Std2 mid	6	5.4054	1533688
Std3 high	12	10.8108	3129031

Regression Output:

Constant	-2763.61	
Std Err of Y Est	29567.12	Corr. Coefficient
R Squared	0.999779	0.9998897
No. of Observations	3	
Degrees of Freedom	1	
X Coefficient(s)	288700.8	
Std Err of Coef.	4288.761	

Continuing Calibrations:

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/21/97 @ 10:34	Styrene	1671766	1639020	1655393	1.0%	5.7	5.9	-3.4%
Concal 5/21/97 @ 18:21	Styrene	1749622	1820856	1785239	2.0%	6.2	5.9	4.1%
Concal 5/22/97 @2:26	Styrene	1650673	1760397	1705535	3.2%	5.9	5.9	-0.5%
Concal 5/22/97 @16:35	Styrene	1781913	1813355	1797634	0.9%	6.2	5.9	4.9%
Concal 5/23/97 @8:13	Styrene	1835350	1805627	1820489	0.8%	6.3	5.9	6.2%
Concal 5/28/97 @16:30	Styrene	1628690	1579553	1604122	1.5%	5.6	5.9	-6.4%
Concal 2 5/28/97 @17:29	Styrene	1791912	1791912	1791912	0.0%	6.2	6.1	1.5%
Concal 2 5/30/97 @9:10	Styrene	1874301	1819724	1847013	1.5%	6.4	6.1	4.6%
Concal 3 6/06/97 @16:00	Styrene	1869258	1778858	1824058	2.5%	6.3	6.3	0.3%

Desorption Efficiency Study; Charcoal - 5/21/97 BHR
Styrene

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	100	0.0%	0.01	
0.9009		196351		199217	197784	0.7%	0.69	76.6%
4.5045		1053672		1027860	1040766	1.2%	3.61	80.2%
9.009		2104049		2203707	2153878	2.3%	7.47	82.9%
							Average	79.9%

Tube Results - STYRENE

Unspiked Sample	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)	
10-11-1	FH		1316659		1201618		1259139	4.6%	4.37	
10-12-1	FH		367320		367320		367320	0.0%	1.28	
10-12-4	FH		1223044		1156430		1189737	2.8%	4.13	
10-13-1	FH		1552161		1532526		1542344	0.6%	5.35	
10-2-2	FH		1858		1961		1910	2.7%	0.01	DL
10-3-1	FH	<	100	<	100	<	100	0.0%	0.01	DL
10-4-1	FH	<	100	<	100	<	100	0.0%	0.01	DL
10-5-2	FH		426375		431523		428949	0.6%	1.49	
10-5-2	BH	<	100	<	100	<	100	0.0%	0.01	DL
10-6-1	FH		372292		365549		368921	0.9%	1.28	
10-7-2	FH		641363		628193		634778	1.0%	2.20	
10-8-1	FH		112707		117551		115129	2.1%	0.40	
9-11-2	FH	<	100	<	100	<	100	0.0%	0.01	DL
9-12-~~2~~3 PTS	FH		16003		15616		15810	1.2%	0.06	
9-13-2	FH		23684		27958		25821	8.3%	0.09	
9-3-2	FH		13945		13869		13907	0.3%	0.05	
9-4-2	FH		224232		217027		220630	1.6%	0.77	
9-5-1	FH		25066		25525		25296	0.9%	0.09	
9-6-2	FH		25154		24221		24688	1.9%	0.09	
9-7-1	FH	<	100	<	100	<	100	0.0%	0.01	DL
AF-12-1	FH		248058		215052		231555	7.1%	0.81	
AF-13-1	FH		317929		253564		285747	11.3%	1.00	
AF-5-2	BH	<	100	<	100	<	100	0.0%	0.01	DL
AF-5-2	FH		292067		305172		298620	2.2%	1.04	
ME-11-1	FH		275585		291489		283537	2.8%	0.99	
ME-12-1	FH		197234		184270		190752	3.4%	0.67	
ME-13-2	FH		522127		501291		511709	2.0%	1.78	
ME-3-1	FH		688527		681005		684766	0.5%	2.38	
ME-3-2	FH		477292		448801		463047	3.1%	1.61	
ME-4-2	FH		428194		421774		424984	0.8%	1.48	
ME-5-1	FH		197782		200156		198969	0.6%	0.69	
ME-6-2	FH		425582		456713		441148	3.5%	1.53	
ME-7-1	FH		380856		389348		385102	1.1%	1.34	
ME-7-3	FH		489359		467190		478275	2.3%	1.66	
ME-8-1	FH		625243		623337		624290	0.2%	2.17	
ME-9-1	FH		561780		538755		550268	2.1%	1.91	
NDA-10-1	FH		653		558		606	7.8%	0.01	DL
NDA-11-1	FH		1031		1399		1215	0.0%	0.01	DL
NDA-12-1	FH	<	100	<	100	<	100	0.0%	0.01	DL
NDA-13-1	FH		24368		23442		23905	1.9%	0.09	
NDA-3-2	FH		25328		25205		25267	0.2%	0.09	
NDA-4-1	FH		25328		25205		25267	0.2%	0.09	
NDA-5-1	FH		697		652		675	3.3%	0.01	DL
NDA-6-1	FH		3369		3188		3279	2.8%	0.02	
NDA-6-3	FH	<	100	<	100	<	100	0.0%	0.01	DL
NDA-7-1	FH	<	100	<	100	<	100	0.0%	0.01	DL
NDA-8-1	FH		2039		2163		2101	3.0%	0.01	DL
NDA-9-1	FH		503		501		502	0.2%	0.01	DL
NDB-12-~~3~~4 PTS	FH		21106		18785		19946	5.8%	0.07	
NDB-3-3	FH		4455		4077		4266	4.4%	0.02	

NDB-4-2	FH	<	100	<	100	<	100	0.0%	0.01	DL
NDB-5-2	FH	<	100	<	100	<	100	0.0%	0.01	DL
NDB-7-2	FH		2482		2490		2486	0.2%	0.01	DL
NDB-8-2	FH		3347		3550		3449	2.9%	0.02	
RE-10-1	FH		28910		28751		28831	0.3%	0.10	
RE-11-1	FH		85960		90963		88462	2.8%	0.31	
RE-13-1	FH		207215		193557		200386	3.4%	0.70	
RE-3-1	FH		373486		337788		355637	5.0%	1.24	
RE-5-1	BH	<	100	<	100	<	100	0.0%	0.01	DL
RE-5-1	FH		232442		227643		230043	1.0%	0.80	
RE-6-1	FH		290765		271797		281281	3.4%	0.98	
RE-7-1	FH		69916		68914		69415	0.7%	0.25	
RE-8-1	FH		210373		211971		211172	0.4%	0.74	
RE-9-1	FH		102095		100765		101430	0.7%	0.36	

DL --> At or below the estimated limit of detection

STYRENE Cylinder GC Results

Sample:	Tube Section	Inject 1	Inject 2	Average	Deviation	Mass (mg)	ppm Found	% of Cyl. Value
102S6L (102ppm)	FH,BH	461442	553321	507382	9.1%	1.76	84.9	81.6%
143.1S6L (143.1ppm)	FH,BH	537505	522005	529755	1.5%	1.84	88.6	61.9%
250.7S6L (250.7ppm)	FH,BH	757613	749641	753627	0.5%	2.62	126.0	50.3%

Six (6) liters drawn through all tubes

Includes styrene desorption efficiency of 79.9%

PTS

Spiked Tube Results

Sample:	Tube Section		Inject 1		Inject 2	Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;									
Gas Vol.		2.02 dsl							
MES-3-3A	Front		742801		782920	762861	2.6%	3.24	1605.3
MES-3-3A	Back	<	100	<	100	100	0.0%	0.00	-2.1
Spiked Vol (ul)			2.5						
Theoretical Spiked Mass (mg)			2.25						
Theoretical Spike Conc. mg/CuM			1114.98		Spike Recovery %		93.6%		
Actual Spike Conc. (mg/CuM)			1043.34		Spike as % of Native Amount		198.4%		
Unspiked Sample;									
Gas Vol.		1.21 dsl							
ME-3-3A	Front		158837		162860	160849	1.3%	0.68	562.0
ME-3-3A	Back	<	100	<	100	100	0.0%	0.00	-3.6

Sample:	Tube Section		Inject 1		Inject 2	Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;									
Gas Vol.		1.95 dsl							
RES-4-1A	Front		121917		125805	123861	1.6%	0.52	268.0
RES-4-1A	Back	<	100	<	100	100	0.0%	0.00	-2.2
Spiked Vol (ul)			**0.25**						
Theoretical Spiked Mass (mg)			0.23						
Theoretical Spike Conc. mg/CuM			115.50		Spike Recovery %		194.6%		
Actual Spike Conc. (mg/CuM)			224.73		Spike as % of Native Amount		267.2%		
UNSpiked Sample;									
Gas Vol.		1.80 dsl							
RE-4-1A	Front		19431		19358	19395	0.2%	0.08	43.2
RE-4-1A	Back	<	100	<	100 <	100	0.0%	0.00	-2.4

Spiked Tube Results

Sample:	Tube Section		Inject 1		Inject 2	Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;									
Gas Vol.		1.39 dsl							
MES-6-2A	Front		778043		651103	714573	8.9%	2.48	1785.1
MES-6-2A	Back	<	100	<	100	100	0.0%	0.01	3.6
Spiked Vol (ul)			1.3						
Theoretical Spiked Mass (mg)			1.17						
Theoretical Spike Conc. mg/CuM			842.57		Spike Recovery %		102.9%		
Actual Spike Conc. (mg/CuM)			866.74		Spike as % of Native Amount		91.7%		
Unspiked Sample;									
Gas Vol.		1.67 dsl							
ME-6-2A	Front		425582		456713	441148	3.5%	1.53	918.3
ME-6-2A	Back	<	100	<	100	100	0.0%	0.01	3.0

Sample:	Tube Section		Inject 1		Inject 2	Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;									
Gas Vol.		7.01 dsl							
AFS-5-2A	Front		535707		536639	536173	0.1%	1.86	265.8
AFS-5-2A	Back	<	100	<	100	100	0.0%	0.01	0.7
Spiked Vol (ul)			1.3						
Theoretical Spiked Mass (mg)			1.17						
Theoretical Spike Conc. mg/CuM			167.07		Spike Recovery %		69.5%		
Actual Spike Conc. (mg/CuM)			116.17		Spike as % of Native Amount		111.7%		
UNSpiked Sample;									
Gas Vol.		6.95 dsl							
AF-5-2A	Front		292067		305172	298620	2.2%	1.04	149.6
AF-5-2A	Back	<	100	<	100 <	100	0.0%	0.01	0.7

Spiked Tube Results

Sample:	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;										
Gas Vol.		2.52 dsl								
MES-11-2A	Front		557483		580495		568989	2.0%	1.98	784.4
MES-11-2A	Back	<	100	<	100	<	100	0.0%	0.01	2.0
Spiked Vol (ul)			0.95							
Theoretical Spiked Mass (mg)			0.86							
Theoretical Spike Conc. mg/CuM			339.63		Spike Recovery %			84.6%		
Actual Spike Conc. (mg/CuM)			287.38		Spike as % of Native Amount			68.3%		
UNspiked Sample;										
Gas Vol.		2.41 dsl								
ME-11-2A	Front		336572		351941		344257	2.2%	1.20	497.0
ME-11-2A	Back	<	100	<	100	<	100	0.0%	0.01	2.1

Sample:	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;										
Gas Vol.		3.01 dsl								
RES-11-3A	Front		106764		115758		111261	4.0%	0.39	129.7
RES-11-3A	Back	<	100	<	100		100	0.0%	0.01	1.7
Spiked Vol (ul)			0.4							
Theoretical Spiked Mass (mg)			0.36							
Theoretical Spike Conc. mg/CuM			119.72		Spike Recovery %			79.0%		
Actual Spike Conc. (mg/CuM)			94.57		Spike as % of Native Amount			341.1%		
UNspiked Sample;										
Gas Vol.		3.57 dsl								
RE-11-3A	Front		35176		34420		34798	1.1%	0.13	35.1
RE-11-3A	Back	<	100	<	100		100	0.0%	0.01	1.4

Spiked Tube Results

Sample:	Tube Section		Inject 1		Inject 2	Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;									
Gas Vol.		8.39 dsl							
AFS-12-4A	Front		516297		560983	538640	4.1%	1.87	223.1
AFS-12-4A	Back	<	100	<	100	100	0.0%	0.01	0.6
Spiked Vol (ul)			0.67						
Theoretical Spiked Mass (mg)			0.60						
Theoretical Spike Conc. mg/CuM			71.94		Spike Recovery %		68.3%		
Actual Spike Conc. (mg/CuM)			49.15		Spike as % of Native Amount		41.4%		
UNspiked Sample;									
Gas Vol.		9.22 dsl							
AF-12-4A	Front		461321		461286	461304	0.0%	1.60	173.9
AF-12-4A	Back	<	100	<	100	100	0.0%	0.01	0.5

Sample:	Tube Section		Inject 1		Inject 2	Average	Deviation	Mass (mg)	(mg/CuM)
Spiked Sample;									
Gas Vol.		8.66 dsl							
MES-12-3A	Front		1269876		1555674	1412775	10.1%	4.90	565.9
MES-12-3A	Back	<	100	<	100	100	0.0%	0.01	0.6
Spiked Vol (ul)			1.8						
Theoretical Spiked Mass (mg)			1.62						
Theoretical Spike Conc. mg/CuM			187.25		Spike Recovery %		111.2%		
Actual Spike Conc. (mg/CuM)			208.29		Spike as % of Native Amount		52.4%		
UNspiked Sample;									
Gas Vol.		8.28 dsl							
ME-12-3A	Front		827233		878962	853098	3.0%	2.96	357.7
ME-12-3A	Back	<	100	<	100	100	0.0%	0.01	0.6

TUBE SPIKE
AUXILIARY FAN EXHAUST

BHR
5/19/97

AF-5-2 60 ppmv AS STYRENE (150 ppm AS PROPANE)
(7.73L) TOTAL VOL. $\frac{150 ml}{MIN} \times 60 MIN = 9.0L$

AFS-5-2
(7.89L) $60 ppm STP \times \frac{104.2 MW}{24.055 IDGLC} = 259.9 \frac{mg}{M^3} = 0.259 mg/L$

$0.2599 \frac{mg}{L} \times 9.0L = 2.34 mg$ ON TUBE THEORETICAL

SPIKE AT 50%

$2.339 \times 0.5 = 1.17 mg$

$\frac{1.17 mg}{0.91 mg/ml \times 0.99 PUR.} = 1.3 \mu l$

** 150 cc/MIN X 60 MIN.

MAIN EXHAUST 360 ppmv AS STYRENE

ME-6-2
(1.82L) 150 cc/MIN X 10 MIN

MES-6-2
(1.52L) 1.3 µl OR 1.17 mg (50% SPIKE)

BHR
5/23/97

RE-11-3 (3.75L)

RES-11-3 (3.20L)

ROOM EXHAUST

48 ppm AS STYRENE (120 AS PROPANE)

$$\frac{48 \times 4.332}{1000} = 0.2079 \frac{mg}{L} \times 4.5L$$

$$= 0.9356 mg / 2 (50\%) = 0.4678$$

$$\frac{0.4678}{0.91 \times 0.99} = 0.51 \mu l$$

* DROP TO 0.4 µl OTHER SPIKES AROUND 100% OF NATIVE

(10:1 SPIKE; 4.0 µl)

ME-11-2 (2.53L)

MES-11-2 (2.63L)

MAIN EXHAUST (RF = 4.2 NOT 2.5)

131 ppm AS STYRENE

$$\frac{131 \times 4.332}{1000} = 0.5675 \frac{mg}{L} \times 3L =$$

$$1.7 mg / 2 = \frac{0.851}{0.91 \times 0.99} = 0.945 \mu l$$

(10:1 SPIKE; 9.5 µl)

BHR
5/29/97

MAIN EXHAUST

ME-12-3

ME SPIKE

350 AS PROPANE / 4.2 RF =

83.3 AS STYRENE

ASSUME 9.0 L

$$\frac{83.3_{STY}}{1000} \times \frac{104.2}{24.055} = 0.3608 \text{ mg/L} \times 9\text{L}$$

= 3.2475 mg ON TUBE

50% SPIKE = 1.624 mg

$$\frac{1.624}{0.91 \times 0.99} = 1.8 \mu l$$

VOLUMES MES-12-3 8.94 L
ME -12-3 8.63 L

AUXILIARY FAN

BHR
5/29/97

AF-12-4

AF SPIKE

130 AS PROPANE / 4.2 RF =

30.95 ppm AS STYRENE

ASSUME 9.0 L

$30.95 \times \frac{4.33174}{1000} = \cancel{0.1310}\ 0.134\ mg/L \times 9L$

= 1.207 mg ON TUBE

50% = 0.603 mg / (0.91 x 0.99) =

0.67 µl

6.7 µl OF 10:1 STYRENE DILUTION

VOLUMES

AFS-12-4	8.72 L
AF -12-4	9.71 L

BHR
5/29/97

STYRENE CYLINDER ON TUBE

LOW $\frac{104 \text{ ppm STY} \times 4.33174}{1000} = 0.405 \text{ mg/L}$

6L ASSUMED → 2.7 mg

80% EFF → 2.16 mg
(79.9)

$$\text{ppm FOUND} = \frac{\text{mg FOUND}}{\text{L}} \times \frac{1000}{4.33174} \times \frac{1}{\text{EFF}}$$

$$= \frac{1.6 \text{ mg}}{6\text{L}} \times \frac{1000}{4.33174} \times \frac{1}{0.799}$$

$$= 61.56 \times 0.799 = 77.24 \text{ ppm}$$

LASCO
Job No. 97-3020
Calibration:

Tube Samples
File: TUBE_WK2.WQ2

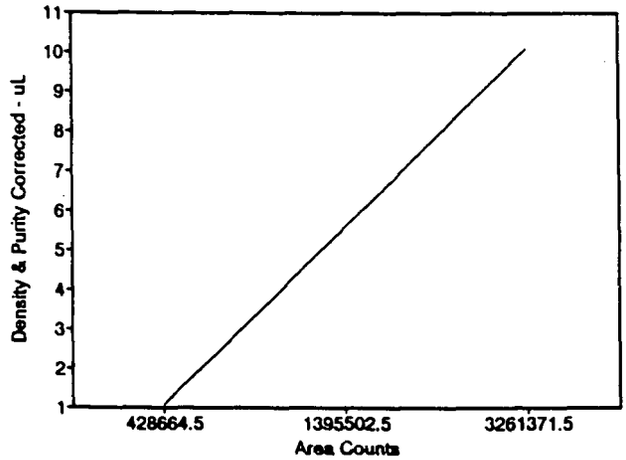
Standard Curve from 5/19/97

Cumene

			Low Standard		Mid Standard		High Standard	
Purity	99.9%	Inj. Vol.	1.5	uL	6.0	uL	12.0	uL
Density	0.86	Std./Fit	1.3	15.3%	5.2	-11.0%	10.3	2.5%
Slope	311862.7	Peak Areas	425122	432207	1413539	1377466	3301385	3221358
Intcp	-34792.2	Avg./Dev.	428664.5	0.8%	1395503	1.3%	3261372	1.2%
Avg RF	3.29E-06	RF	3.01E-06		3.69E-06		3.16E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected

CUMENE Calibration



Cumene Calibration

Curve linearity check	uL	Corrected	Area count
Zero	0	0	0
Std1 low	1.5	1.28871	428664.5
Std2 mid	6	5.15484	1395503
Std3 high	12	10.30968	3261372

Regression Output:

Constant	-72875.5	
Std Err of Y Est	201138.1	Corr. Coefficient
R Squared	0.990244	0.99511
No. of Observations	3	
Degrees of Freedom	1	
X Coefficient(s)	316605.5	
Std Err of Coef.	31425.62	

::

Continuing Calibrations:

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/21/97 @ 10:34	Cumene	1531862	1500336	1516099	1.0%	5.0	5.2	-4.4%
Concal 5/21/97 @ 18:21	Cumene	1607211	1675417	1641314	2.1%	5.4	5.2	3.4%
Concal 5/22/97 @2:26	Cumene	1514010	1615963	1564987	3.3%	5.1	5.2	-1.4%
Concal 5/22/97 @16:35	Cumene	1641625	1667710	1654668	0.8%	5.4	5.2	4.2%
Concal 5/23/97 @8:13	Cumene	1688369	1662881	1675625	0.8%	5.5	5.2	5.5%
Concal 5/28/97 @16:30	Cumene	1489575	1454962	1472269	1.2%	4.8	5.2	-7.1%
Concal 2 5/28/97 @17:29	Cumene	1649534	1649534	1649534	0.0%	5.4	5.2	3.9%
Concal 2 5/30/97 @9:10	Cumene	1730764	1678605	1704685	1.5%	5.6	5.2	7.3%
Concal 3 6/06/97 @16:00	Cumene	1662389	1749100	1705745	2.5%	5.6	5.2	7.3%

Desorption Efficiency Study; Cumene on Charcoal - 5/21/97 BHR

Spike Level (mg)	Inject 1	Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	< 100	< 100	10	900.0%	0.11	
0.86	247201	250869	249035	0.7%	0.91	105.8%
4.3	1200100	1173132	1186616	1.1%	3.92	91.1%
8.6	2313958	2420783	2367371	2.3%	7.70	89.6%
		2859174			Average	95.5%

Tube Results - CUMENE

Unspiked Sample	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)	
10-11-1	FH		1087		375		731	0.0%	0.11	DL
10-12-1	BH	<	100	<	100	<	100	0.0%	0.11	DL
10-12-4	FH		3765		2456		3111	0.0%	0.12	DL
10-13-1	BH	<	100	<	100	<	100	0.0%	0.11	DL
10-2-2	FH		1412		468		940	0.0%	0.11	DL
10-3-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
10-4-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
10-5-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
10-5-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
10-6-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
10-7-2	FH		552		471		512	0.0%	0.11	DL
10-8-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-11-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-12-~~2~~3 PTS	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-13-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-3-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-4-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-5-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-6-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
9-7-1	FH		1066		1051		1059	0.7%	0.11	DL
AF-12-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
AF-13-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
AF-5-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
AF-5-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
ME-11-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
ME-12-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
ME-13-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
ME-3-1	FH		1050		778		914	0.0%	0.11	DL
ME-3-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
ME-4-2	FH		1377		2080		1729	0.0%	0.12	DL
ME-5-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
ME-6-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
ME-7-1	FH		831		1278		1055	0.0%	0.11	DL
ME-7-3	FH		1167		1221		1194	0.0%	0.12	DL
ME-8-1	FH		1894		1643		1769	0.0%	0.12	DL
ME-9-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDA-10-1	FH		1485		1928		1707	0.0%	0.12	DL
NDA-11-1	FH		499		510		505	0.0%	0.11	DL
NDA-12-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDA-13-1	FH		1302		444		873	0.0%	0.11	DL
NDA-3-2	FH		1379		1757		1568	0.0%	0.12	DL
NDA-4-1	FH		8229		8650		8440	2.5%	0.14	
NDA-5-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDA-6-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDA-6-3	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDA-7-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDA-8-1	FH		8147		8147		8147	0.0%	0.14	
NDA-9-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDB-12-~~3~~4 PTS	FH		704		632		668	5.4%	0.11	DL
NDB-3-3	FH	<	100	<	100	<	100	0.0%	0.11	DL

NDB-4-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDB-5-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
NDB-7-2	FH		3079		2574		2827	0.0%	0.12	DL
NDB-8-2	FH	<	100	<	100	<	100	0.0%	0.11	DL
RE-10-1	FH		4812		4706		4759	1.1%	0.13	
RE-11-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
RE-13-1	FH		611		545		578	0.0%	0.11	DL
RE-3-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
RE-5-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
RE-5-1	FH		1402		1319		1361	0.0%	0.12	DL
RE-6-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
RE-7-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
RE-8-1	FH	<	100	<	100	<	100	0.0%	0.11	DL
RE-9-1	FH	<	100	<	100	<	100	0.0%	0.11	DL

DL --> At or below the estimated limit of detection

LASCO

Job No. 97-3020

Calibration:

Tube Samples

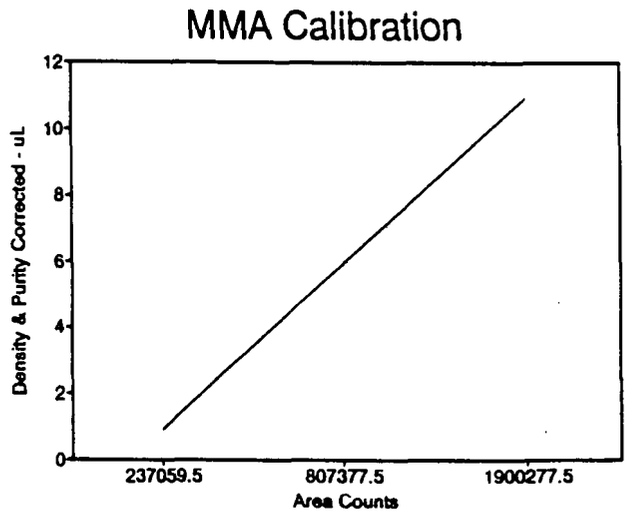
File: TUBE_WK2.WQ2

Standard Curve from 5/19/97

Methyl Methacrylate

			Low Standard		Mid Standard		High Standard	
Purity	99.0%	Inj. Vol.	1.2	uL	6.0	uL	12.0	uL
Density	0.936	Std./Fit	1.1	30.9%	5.6	-12.3%	11.1	2.8%
Slope	166775.9	Peak Areas	235866	238253	832159	782596	1925615	1874940
Intcp	-5619.1	Avg./Dev.	237059.5	0.5%	807377.5	3.1%	1900278	1.3%
Avg RF	5.81E-06	RF	4.69E-06		6.89E-06		5.85E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected



Methyl Methacrylate Calibration

Curve linearity check	uL	Corrected	Area count
Zero	0	0	0
Std1 low	1.2	1.111968	237059.5
Std2 mid	6	5.55984	807377.5
Std3 high	12	11.11968	1900278

Regression Output:

Constant	-2078.49	
Std Err of Y Est	117422.7	Corr. Coefficient
R Squared	0.990293	0.995135
No. of Observations	3	
Degrees of Freedom	1	
X Coefficient(s)	166544.2	
Std Err of Coef.	16488.78	

Continuing Calibrations:

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/21/97 @ 10:34	Methyl Methacrylat	735470	732471	733971	0.2%	4.4	4.6	-4.3%
Concal 5/21/97 @ 23:30	Methyl Methacrylat	757277	787351	772314	1.9%	4.7	4.6	0.7%
Concal 5/22/97 @2:26	Methyl Methacrylat	713704	754327	734016	2.8%	4.4	4.6	-4.3%
Concal 5/22/97 @16:35	Methyl Methacrylat	746430	762476	754453	1.1%	4.6	4.6	-1.6%
Concal 5/22/97 @16:35	Methyl Methacrylat	760730	735306	748018	1.7%	4.5	4.6	-2.5%
Concal 5/28/97 @16:30	Methyl Methacrylat	758935	737574	748255	1.4%	4.5	4.6	-2.4%
Concal 2 5/28/97 @17:29	Methyl Methacrylat	919220	919220	919220	0.0%	5.5	5.6	-0.3%
Concal 2 5/30/97 @9:10	Methyl Methacrylat	916432	916432	916432	0.0%	5.5	5.6	-0.6%
Concal 3 6/06/97 @16:00	Methyl Methacrylat	703764	669425	686595	2.5%	4.2	4.4	-6.7%

Desorption Efficiency Study; MMA on Charcoal - 5/21/97 BHR

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	100	0.0%	0.03	
0.92664		93793		95070	94432	0.7%	0.60	64.7%
4.6332		552721		538699	545710	1.3%	3.31	71.4%
9.2664		1117140		1175094	1146117	2.5%	6.91	74.5%
							Average	70.2%

Tube Results - METHYL METHACRYLATE

Unspiked Sample	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)	
10-11-1	FH		43376		44832		44104	1.7%	0.30	
10-12-1	BH	<	100	<	100	<	100	0.0%	0.03	DL
10-12-4	FH		11724		11888	<	11806	0.7%	0.10	
10-13-1	BH	<	100	<	100	<	100	0.0%	0.03	DL
10-2-2	FH		31430		30702		31066	1.2%	0.22	
10-3-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
10-4-1	FH		405		537		471	0.0%	0.04	DL
10-5-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
10-5-2	FH		1882		1920		1901	1.0%	0.05	
10-6-1	FH		1983		2369		2176	8.9%	0.05	
10-7-2	FH		21970		22108		22039	0.3%	0.17	
10-8-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
9-11-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
9-12-~~2~~3 PTS	FH		1860		1798		1829	1.7%	0.04	
9-13-2	FH		31733		40474		36104	12.1%	0.25	
9-3-2	FH		535		515		525	0.0%	0.04	DL
9-4-2	FH		7050		6951		7001	0.7%	0.08	
9-5-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
9-6-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
9-7-1	FH		408		411		410	0.0%	0.04	DL
AF-12-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
AF-13-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
AF-5-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
AF-5-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
ME-11-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
ME-12-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
ME-13-2	FH		432		421		427	1.3%	0.04	DL
ME-3-1	FH		5865		5304		5585	5.0%	0.07	
ME-3-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
ME-4-2	FH		1275		1254		1265	0.0%	0.04	DL
ME-5-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
ME-6-2	FH		11634		11406		11520	1.0%	0.10	
ME-7-1	FH		42390		43533		42962	1.3%	0.29	
ME-7-3	FH		56351		53320		54836	2.8%	0.36	
ME-8-1	FH		13137		12825		12981	1.2%	0.11	
ME-9-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDA-10-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDA-11-1	FH		300		296		298	0.0%	0.04	DL
NDA-12-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDA-13-1	FH		972		779		876	0.0%	0.04	DL
NDA-3-2	FH		358		302		330	0.0%	0.04	DL
NDA-4-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDA-5-1	FH		451		487		469	0.0%	0.04	DL
NDA-6-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDA-6-3	FH		339		362		351	0.0%	0.04	DL
NDA-7-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDA-8-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDA-9-1	FH		441		387		414	0.0%	0.04	DL
NDB-12-~~3~~4 PTS	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDB-3-3	FH	<	100	<	100	<	100	0.0%	0.03	DL

NDB-4-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDB-5-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDB-7-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
NDB-8-2	FH	<	100	<	100	<	100	0.0%	0.03	DL
RE-10-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
RE-11-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
RE-13-1	FH		602		557		580	0.0%	0.04	DL
RE-3-1	FH		1092		1036		1064	0.0%	0.04	DL
RE-5-1	FH		2279		1988		2134	6.8%	0.05	
RE-5-1	FH		1135		1090		1113	0.0%	0.04	DL
RE-6-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
RE-7-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
RE-8-1	FH	<	100	<	100	<	100	0.0%	0.03	DL
RE-9-1	FH		1730		1656		1693	2.2%	0.04	

DL --> At or below the estimated limit of detection

LASCO Bag Samples Standard Curve From 5/14/97

Curve

Analyte (ppmv)

Methane			Std 1		Std 2		Std 3	
Density	1	ppmv						
Purity	100.0%	Std./Fit	24.9	-3.1%	87.2	-1.0%	510.4	0.0%
Slope	380.2	Peak Areas	8604	8664	32195	32396	195060	192122
Intcp	-543.6	Avg./Dev.	8634	0.3%	32295.5	0.3%	193591	0.8%
Response Factors			2.89E-03		2.70E-03		2.64E-03	
Avg. Response factor		2.74E-03			49.8		87.2	
					19338	18620	32195	32396

Ethane			Std 1		Std 2		Std 3	
Density	0.79	ppmv						
Purity	99.8%	Std./Fit	5.0	-4.3%	9.0	1.2%	99.0	0.0%
Slope	632.0	Peak Areas	2942	2966	5668	5705	63629	61370
Intcp	-68.9	Avg./Dev.	2954	0.4%	5686.5	0.3%	62499.5	1.8%
Response Factors			1.69E-03		1.58E-03		1.58E-03	
Avg. Response factor		1.62E-03						

ASCO Bag Samples

Standard Curve From 5/14/97

		Methane	Ethane
con-cal			
5/14/97		Methane	Ethane
@20:07	Inject 1 (AC)	17271	57019
	Inject 2 (AC)	18551	61099
	Deviation	3.6%	3.5%
	Measured (ppmv)	48.5	93.6
	Expected (ppmv)	49.83	99
	Error %	-2.7%	-5.8%

		Methane	Ethane
con-cal		Methane	Ethane
5/15/97	Inject 1 (AC)	18669	61320
@12:08	Inject 2 (AC)	19131	62793
	Deviation	1.2%	1.2%
	Measured (Mg/CuM)	51.1	98.3
	Expected (Mg/CuM)	49.83	99
	Error %	2.6%	-0.7%

		Methane	Ethane
Run 1 Open 9			
Bag		Methane	Ethane
C1	Inject 1 (AC)	108487	4482
	Inject 2 (AC)	105427	4375
	Deviation	1.4%	1.2%
	Measured (ppmv)	282.7	7.1
	Measured (Mg/CuM)	188.1	8.9

		Methane	Ethane
Run 1 Open 10			
Bag		Methane	Ethane
C1	Inject 1 (AC)	32471	1886
	Inject 2 (AC)	29629	1731
	Deviation	4.6%	4.3%
	Measured (ppmv)	83.1	3.1 RF
	Measured (Mg/CuM)	55.3	3.8

		Methane	Ethane
Run 2 Open 9			
Bag		Methane	Ethane
C1	Inject 1 (AC)	117443	4766
	Inject 2 (AC)	119755	4858
	Deviation	1.0%	1.0%
	Measured (ppmv)	313.3	7.7

ASCO Bag Samples Standard Curve From 5/14/97

	Measured (Mg/CuM)	208.4	9.6

Run 2 Open 10

Bag		Methane	Ethane
Unspiked	Inject 1 (AC)	34381	1937
C1	Inject 2 (AC)	33904	1914
	Inject 3 (AC)	34934	1970
	Inject 4 (AC)	33165	1872
	Deviation	2.7%	2.7%
	Measured (ppmv)	91.2	3.3 RF
	Measured (Mg/CuM)	60.7	4.1
R2 Open 10		Methane	Ethane
Bag Spike	Inject 1 (AC)	27032	43565
C1	Inject 2 (AC)	27177	43800
	Deviation	0.3%	0.3%
	Measured (ppmv)	72.7	69.2
	Initial Volume (l)	2	2
	Final Volume (l)	4	4
	Spike Conc (ppmv)	49.83	1.0E+06
	Spike Vol (l)	2.0000	0.0100
	Expected Conc. (ppmv)	70.53	75.88
	Spike Recovery %	103.1%	91.2%

Open 10		Methane	Ethane
Run 3	Inject 1 (AC)	32240	1850
C1	Inject 2 (AC)	32807	1848
	Deviation	0.9%	0.1%
	Measured (ppmv)	87.0	3.1 RF
	Measured (Mg/CuM)	57.8	3.9

Open 9		Methane	Ethane
Run 3	Inject 1 (AC)	112227	4613
C1	Inject 2 (AC)	120588	4923
	Deviation	3.6%	3.3%
	Measured (ppmv)	307.6	7.7
	Measured (Mg/CuM)	204.6	9.5

Open 10		Methane	Ethane
Run 1	Inject 1 (AC)	29265	1717
C2	Inject 2 (AC)	31523	1849
	Deviation	3.7%	3.7%
	Measured (ppmv)	81.4	3.0
	Measured (Mg/CuM)	54.1	3.8

ASCO Bag Samples Standard Curve From 5/14/97

		Methane	Ethane
Open 9			
Run 1	Inject 1 (AC)	86375	3634
C2	Inject 2 (AC)	88076	3707
	Deviation	1.0%	1.0%
	Measured (ppmv)	230.8	5.9
	Measured (Mg/CuM)	153.5	7.4

		Methane	Ethane
Open 9			
Run 2	Inject 1 (AC)	82117	3595
C2	Inject 2 (AC)	80850	3532
	Deviation	0.8%	0.9%
	Measured (ppmv)	215.7	5.7
	Measured (Mg/CuM)	143.5	7.2

		Methane	Ethane
Open 10			
Run 2	Inject 1 (AC)	28642	6158
C2	Inject 2 (AC)	28793	6187
	Deviation	0.3%	0.2%
	Measured (ppmv)	77.0	9.9
	Measured (Mg/CuM)	51.2	12.3

		Methane	Ethane
Open 10			
Run 3	Inject 1 (AC)	31605	1879
C2	Inject 2 (AC)	31923	1893
	Deviation	0.5%	0.4%
	Measured (ppmv)	85.0	3.2
	Measured (Mg/CuM)	56.5	4.0

		Methane	Ethane
Open 9			
Run 3	Inject 1 (AC)	99055	4290
C2	Inject 2 (AC)	99985	4332
	Deviation	0.5%	0.5%
	Measured (ppmv)	263.2	6.9
	Measured (Mg/CuM)	175.0	8.6

		Methane	Ethane
Open 9			
Run 1	Inject 1 (AC)	58330	2481
C3	Inject 2 (AC)	58408	2476
	Deviation	0.1%	0.1%
	Measured (ppmv)	154.9	4.2
	Measured (Mg/CuM)	103.1	5.2

ASCO Bag Samples Standard Curve From 5/14/97

		Methane	Ethane
Open 10		Methane	Ethane
Run 1	Inject 1 (AC)	18751	1573
C3	Inject 2 (AC)	18235	1518
	Deviation	1.4%	1.8%
	Measured (ppmv)	50.1	2.6
	Measured (Mg/CuM)	33.3	3.3

Oven 7 ~~Open 10~~		Methane	Ethane
Run 2	Inject 1 (AC)	104518	4190
C3	Inject 2 (AC)	104518	4190
	Deviation	0.0%	0.0%
	Measured (ppmv)	276.3	6.7
	Measured (Mg/CuM)	183.8	8.4

No Sample for Oven 10 Run 2 Cond. 3

Open 10		Methane	Ethane
Run 3	Inject 1 (AC)	17640	1435
C3	Inject 2 (AC)	18343	1496
	Deviation	2.0%	2.1%
	Measured (ppmv)	48.7	2.5
	Measured (Mg/CuM)	32.4	3.1

Open 9		Methane	Ethane
Run 3	Inject 1 (AC)	93350	3727
C3	Inject 2 (AC)	88748	3548
	Deviation	2.5%	2.5%
	Measured (ppmv)	240.9	5.9
	Measured (Mg/CuM)	160.2	7.3

Open 10		Methane	Ethane
Run 1	Inject 1 (AC)	20001	1582
C4	Inject 2 (AC)	20989	1664
	Deviation	2.4%	2.5%
	Measured (ppmv)	55.3	2.7
	Measured (Mg/CuM)	36.8	3.4

Open 9		Methane	Ethane
Run 1	Inject 1 (AC)	97436	4125
C4	Inject 2 (AC)	98149	4128
	Deviation	0.4%	0.0%
	Measured (ppmv)	258.6	6.6
	Measured (Mg/CuM)	172.0	8.3

Open 10		Methane	Ethane

ASCO Bag Samples

Standard Curve From 5/14/97

Run 2	Inject 1 (AC)	22526	1797
C4	Inject 2 (AC)	21186	1691
	Deviation	3.1%	3.0%
	Measured (ppmv)	58.9	3.0
	Measured (Mg/CuM)	39.2	3.7

		Methane	Ethane
Open 9			
Run 2	Inject 1 (AC)	97652	4236
C4	Inject 2 (AC)	94425	4115
	Deviation	1.7%	1.4%
	Measured (ppmv)	254.0	6.7
	Measured (Mg/CuM)	169.0	8.4

LASCO Bag Samples

Standard Curve From 5/19/97

Curve								
Analyte (ppmv)								
Methane			Std 1		Std 2		Std 3	
Density	1	ppmv						
Purity	100.0%	Std./Fit	29.9	-0.5%	174.4	6.2%	510.4	-0.7%
Slope	364.7	Peak Areas	13777	12986	71464	68690	189780	184917
Intcp	2534.9	Avg./Dev.	13381.5	3.0%	70077	2.0%	187348.5	1.3%
Response Factors			2.23E-03		2.49E-03		2.72E-03	
Avg. Response factor		2.48E-03			49.8		87.2	
					19338	18620	32195	32396
Ethane			Std 1		Std 2		Std 3	
Density	0.79	ppmv						
Purity	99.8%	Std./Fit	4.0	-3.5%	10.7	5.3%	107.0	-0.0%
Slope	542.4	Peak Areas	2302	2289	6426	6201	58972	57455
Intcp	202.5	Avg./Dev.	2295.5	0.3%	6313.5	1.8%	58213.5	1.3%
Response Factors			1.74E-03		1.69E-03		1.84E-03	
Avg. Response factor		1.76E-03						

		Methane	Ethane	
con-cal				
5/19/97		Methane	Ethane	
@19:15	Inject 1 (AC)	64816	5884	Second Bag (midrange)
	Inject 2 (AC)	64271	5810	
	Deviation	0.4%	0.6%	
	Measured (ppmv)	170.0	10.4	
	Expected (ppmv)	174.4	10.7	
	Error %	-2.6%	-2.8%	

		Methane	Ethane
con-cal		Methane	Ethane
5/20/97	Inject 1 (AC)	63187	5745
@16:37	Inject 2 (AC)	64599	5868
	Deviation	1.1%	1.1%
	Measured (Mg/CuM)	168.2	10.3
	Expected (Mg/CuM)	174.4	10.7
	Error %	-3.7%	-3.6%

		Methane	Ethane
Open 9			
Run 1		Methane	Ethane
Cond. 5	Inject 1 (AC)	125902	5117
5/19/97	Inject 2 (AC)	126728	5169
	Deviation	0.3%	0.5%
	Measured (ppmv)	339.4	9.1
	Measured (Mg/CuM)	225.7	11.4

		Methane	Ethane	
Open 10				
Run 1		Methane	Ethane	
Cond. 5	Inject 1 (AC)	18342	1049	
5/19/97	Inject 2 (AC)	16781	962	
	Deviation	4.4%	4.3%	
	Measured (ppmv)	41.2	1.8	RF
	Measured (Mg/CuM)	27.4	2.2	

		Methane	Ethane
Open 9			
Run 2		Methane	Ethane
Cond.5	Inject 1 (AC)	117354	4805
5/19/97	Inject 2 (AC)	119232	4897
	Deviation	0.8%	0.9%
	Measured (ppmv)	317.4	8.6
	Measured (Mg/CuM)	211.1	10.7

		Methane	Ethane	
Open 10				
Run 2		Methane	Ethane	
Cond.5	Inject 1 (AC)	22818	1261	
5/19/97	Inject 2 (AC)	24500	1319	
	Deviation	3.6%	2.2%	
	Measured (ppmv)	57.9	2.2	RF
	Measured (Mg/CuM)	38.5	2.8	

		Methane	Ethane
Open 9		Methane	Ethane
Run 3	Inject 1 (AC)	102146	4098
Cond.5	Inject 2 (AC)	102868	4119
5/19/97	Deviation	0.4%	0.3%

		Methane	Ethane	
Open 10				
Run 3	Inject 1 (AC)	13822	745	Leak in Bag detected
Cond.5	Inject 2 (AC)	13822	745	
5/19/97	Deviation	0.0%	0.0%	
	Measured (ppmv)	30.9	1.3	RF
	Measured (Mg/CuM)	20.6	1.6	

		Methane	Ethane
Open 9			
Run 1	Inject 1 (AC)	84288	3454
Cond.6	Inject 2 (AC)	78405	3230
5/19/97	Deviation	3.6%	3.4%
	Measured (ppmv)	216.1	5.8
	Measured (Mg/CuM)	143.7	7.2

		Methane	Ethane
Open 10			
Run 1	Inject 1 (AC)	16205	895
Cond.6	Inject 2 (AC)	16410	903
5/19/97	Deviation	0.6%	0.4%
	Measured (ppmv)	37.8	1.6
	Measured (Mg/CuM)	25.1	2.0

		Methane	Ethane
Open 9			
Run 2	Inject 1 (AC)	106894	4370
Cond.6	Inject 2 (AC)	104139	4261
5/19/97	Deviation	1.3%	1.3%
	Measured (ppmv)	282.4	7.6
	Measured (Mg/CuM)	187.8	9.5

		Methane	Ethane
Open 10			
Run 2	Inject 1 (AC)	25129	1362
Cond.6	Inject 2 (AC)	23202	1251
5/19/97	Deviation	4.0%	4.2%
	Measured (ppmv)	59.3	2.3
	Measured (Mg/CuM)	39.4	2.8

		Methane	Ethane
Open 9			
Run 3	Inject 1 (AC)	102608	4163
Cond.6	Inject 2 (AC)	105189	4249
5/19/97	Deviation	1.2%	1.0%
	Measured (ppmv)	277.9	7.4
	Measured (Mg/CuM)	184.9	9.2

		Methane	Ethane
Open 10			
Run 3	Inject 1 (AC)	21997	1149
Cond.6	Inject 2 (AC)	20500	1080
5/19/97	Deviation	3.5%	3.1%
	Measured (ppmv)	51.3	1.9
	Measured (Mg/CuM)	34.1	2.4

		Methane	Ethane
Open 9			
Run 1	Inject 1 (AC)	112319	4567
Cond.7	Inject 2 (AC)	114910	4611
5/20/97	Deviation	1.1%	0.5%
	Measured (ppmv)	304.6	8.1
	Measured (mg/CuM)	202.6	10.1

		Methane	Ethane
Open 10			
Run 1	Inject 1 (AC)	21062	1120
Cond.7	Inject 2 (AC)	20324	1088
5/20/97	Deviation	1.8%	1.4%
	Measured (ppmv)	49.8	1.9
	Measured (mg/CuM)	33.1	2.4

		Methane	Ethane
Open 9			
Run 2	Inject 1 (AC)	75045	3088
Cond.7	Inject 2 (AC)	76569	3129
5/20/97	Deviation	1.0%	0.7%
	Measured (ppmv)	200.9	5.4
	Measured (Mg/CuM)	133.6	6.7

		Methane	Ethane
Open 10			
Run 2	Inject 1 (AC)	17505	933
Cond.7	Inject 2 (AC)	17726	935
5/20/97	Deviation	0.6%	0.1%
	Measured (ppmv)	41.3	1.6
	Measured (Mg/CuM)	27.5	2.0

		Methane	Ethane
Open 9			
Run 3	Inject 1 (AC)	71308	2897
Cond.7	Inject 2 (AC)	68186	2762
5/20/97	Deviation	2.2%	2.4%
	Measured (ppmv)	184.3	4.8
	Measured (Mg/CuM)	122.6	6.0

		Methane	Ethane
Open 10			
Run 3	Inject 1 (AC)	17249	939
Cond.7	Inject 2 (AC)	16656	885
5/20/97	Deviation	1.7%	3.0%
	Measured (ppmv)	39.5	1.6
	Measured (Mg/CuM)	26.3	2.0

LASCO Bag Samples Standard Curve From 5/22/97

Curve
Analyte (ppmv)

Methane			Std 1		Std 2		Std 3	
Density	1	ppmv						
Purity	100.0%	Std./Fit	49.8	-3.0%	174.4	2.4%	510.4	-0.3%
Slope	312.0	Peak Areas	15477	15535.00	55987	56299	156054	162487
Intcp	431.2	Avg./Dev.	15506	0.2%	56143	0.3%	159270.5	2.0%
Response Factors			0.00321		0.00311		0.00320	
Avg. Response factor		0.003175			49.8		87.2	
					19338	18620	32195	32396

Ethane			Std 1		Std 2		Std 3	
Density	0.79	ppmv			*		*	
Purity	99.8%	Std./Fit	6.6	5.9%	10.00	-9.2%	107.0	0.1%
Slope	508.7	Peak Areas	3301	3313	4479	4290	53094	55363
Intcp	-237.3	Avg./Dev.	3307	0.2%	4384.5	2.2%	54228.5	2.1%
Response Factors			0.00199		0.00228		0.00197	
Avg. Response factor		0.0020812						

LASCO Bag Samples — Standard Curve From 5/22/97

		Methane	Ethane	
con-cal 5/22/97 11:23	Inject 1 (AC)	16365	6070	Second Bag, 11 mL 1.07%E,
	Inject 2 (AC)	15900	5751	10 L Bal.49.8M
	Deviation	1.4%	2.7%	
	Measured (ppmv)	50.3	12.1	
	Expected (ppmv)	49.8	11.8	
	Error %	1.0%	2.6%	

		Methane	Ethane
con-cal	Inject 1 (AC)	15638	5838
	Inject 2 (AC)	15638	5838
	Deviation	0.0%	0.0%
	Measured (ppmv)	48.7	11.9
	Expected (ppmv)	49.8	11.8
	Error %	-2.2%	1.4%

		Methane	Ethane	
con-cal 5/29/97 7:35	Inject 1 (AC)	14619	5067	Second Bag, 10 mL 1.07%E,
	Inject 2 (AC)	14922	5166	10 L Bal.49.8M
	Deviation	1.0%	1.0%	
	Measured (ppmv)	46.0	10.5	
	Expected (ppmv)	49.8	10.7	
	Error %	-8.4%	-1.7%	

		Methane	Ethane
con-cal 5/29/97 20:15	Inject 1 (AC)	15069	5202
	Inject 2 (AC)	14515	5027
	Deviation	1.9%	1.7%
	Measured (Mg/CuM)	46.0	10.5
	Expected (Mg/CuM)	49.8	10.7
	Error %	-8.2%	-1.7%

		Methane	Ethane
Oven 10			
Run 1	Inject 1 (AC)	18811	1478
Cond.8	Inject 2 (AC)	18879	1477
5/22/97	Deviation	0.2%	0.0%
	Measured (ppmv)	59.0	2.9
	Measured (Mg/CuM)	39.3	3.7

LASCO Bag Samples — Standard Curve From 5/22/97

		Methane	Ethane
Oven 9			
Run 2	Inject 1 (AC)	101712	3971
Cond.8	Inject 2 (AC)	102614	4011
5/22/97	Deviation	0.4%	0.5%
	Measured (ppmv)	326.1	8.3
	Measured (Mg/CuM)	216.9	10.4

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		Methane	Ethane
Oven 9			
Run 1	Inject 1 (AC)	103959	4216
Cond.8	Inject 2 (AC)	103959	4216
5/22/97	Deviation	0.0%	0.0%
	Measured (ppmv)	331.8	8.8
	Measured (Mg/CuM)	220.7	10.9

		Methane	Ethane
Oven 10			
Run 2	Inject 1 (AC)	19737	1406
Cond.8	Inject 2 (AC)	20239	1429
5/22/97	Deviation	1.3%	0.8%
	Measured (ppmv)	62.7	2.8
	Measured (Mg/CuM)	41.7	3.5

		Methane	Ethane
Oven 9			
Run 3	Inject 1 (AC)	90911	3601
Cond.8	Inject 2 (AC)	91681	3571
5/22/97	Deviation	0.4%	0.4%
	Measured (ppmv)	291.2	7.5
	Measured (Mg/CuM)	193.7	9.4

		Methane	Ethane
Oven 10			
Run 3	Inject 1 (AC)	16968	1346
Cond.8	Inject 2 (AC)	16968	1346
5/22/97	Deviation	0.0%	0.0%
	Measured (ppmv)	53.0	2.7
	Measured (Mg/CuM)	35.3	3.3

		Methane	Ethane
Oven 9			
Run 1	Inject 1 (AC)	40419	1790
Cond.9	Inject 2 (AC)	37234	1647
5/22/97	Deviation	4.1%	4.2%
	Measured (ppmv)	123.1	3.4
	Measured (Mg/CuM)	81.9	4.3

LASCO Bag Samples		Standard Curve From 5/22/97	
Oven 10		Methane	Ethane
Run 1	Inject 1 (AC)	11779	777
Cond.9	Inject 2 (AC)	11044	723
5/22/97	Deviation	3.2%	3.6%
	Measured (ppmv)	36.7 R	1.5
	Measured (Mg/CuM)	24.4	1.9
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Oven 9		Methane	Ethane
Run 1	Inject 1 (AC)	59090	2430
Cond.10	Inject 2 (AC)	60892	2472
5/22/97	Deviation	1.5%	0.9%
	Measured (ppmv)	190.9	4.9
	Measured (Mg/CuM)	127.0	6.1
Oven 10		Methane	Ethane
Run 1	Inject 1 (AC)	19083	1282
Cond.10	Inject 2 (AC)	18982	1273
5/22/97	Deviation	0.3%	0.4%
	Measured (ppmv)	59.6	2.5
	Measured (Mg/CuM)	39.7	3.2
Oven 9		Methane	Ethane
Run 1	Inject 1 (AC)	52339	2329
Cond.11	Inject 2 (AC)	49733	2228
5/23/97	Deviation	2.6%	2.2%
	Measured (ppmv)	162.2	4.5
	Measured (Mg/CuM)	107.9	5.7
Oven 10		Methane	Ethane
Run 1	Inject 1 (AC)	21969	1485
Cond.11	Inject 2 (AC)	20647	1409
5/23/97	Deviation	3.1%	2.6%
	Measured (ppmv)	66.9	2.9
	Measured (Mg/CuM)	44.5	3.6
Oven 9		Methane	Ethane
Run 2	Inject 1 (AC)	48032	2102
Cond.11	Inject 2 (AC)	47098	2081
5/23/97	Deviation	1.0%	0.5%
	Measured (ppmv)	151.1	4.2
	Measured (Mg/CuM)	100.5	5.2

LASCO Bag Samples — Standard Curve From 5/22/97

		Methane	Ethane
Oven 10			
Run 2	Inject 1 (AC)	13808	930
Cond.11	Inject 2 (AC)	14298	960
5/23/97	Deviation	1.7%	1.6%
	Measured (ppmv)	45.2 R	1.9
	Measured (Mg/CuM)	30.0	2.3

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		Methane	Ethane
Oven 9			
Run 3	Inject 1 (AC)	52973	2278
Cond.11	Inject 2 (AC)	52973	2278
5/23/97	Deviation	0.0%	0.0%
	Measured (ppmv)	168.4	4.5
	Measured (Mg/CuM)	112.0	5.7

		Methane	Ethane
Oven 10			
Run 3	Inject 1 (AC)	19854	1246
Cond.11	Inject 2 (AC)	20001	1248
5/23/97	Deviation	0.4%	0.1%
	Measured (ppmv)	62.5	2.5
	Measured (Mg/CuM)	41.6	3.1

		Methane	Ethane
Oven 10			
Run.1	Inject 1 (AC)	18366	1476
Cond.12	Inject 2 (AC)	16669	1341
5/29/97	Deviation	4.8%	4.8%
	Measured (ppmv)	54.8	2.8
	Measured (Mg/CuM)	36.4	3.5

		Methane	Ethane
Oven 9			
Run 1	Inject 1 (AC)	66302	3138
Cond.12	Inject 2 (AC)	64000	3042
5/29/97	Deviation	1.8%	1.6%
	Measured (ppmv)	207.4	6.1
	Measured (Mg/CuM)	138.0	7.7

		Methane	Ethane
Oven 9			
Run 3	Inject 1 (AC)	87352	4035
Cond.12	Inject 2 (AC)	88406	4086
5/29/97	Deviation	0.6%	0.6%
	Measured (ppmv)	280.3	8.4
	Measured (Mg/CuM)	186.4	10.5

LASCO Bag Samples

Standard Curve From 5/22/97

		Methane	Ethane
Oven 10			
Run 3	Inject 1 (AC)	15369	1264
Cond.12	Inject 2 (AC)	14820	1215
5/29/97	Deviation	1.8%	2.0%
	Measured (ppmv)	48.5 R	2.5
	Measured (Mg/CuM)	32.3	3.1

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		Methane	Ethane
Oven 9			
Run 4	Inject 1 (AC)	80294	3725
Cond.12	Inject 2 (AC)	80787	3758
5/29/97	Deviation	0.3%	0.4%
	Measured (ppmv)	256.8	7.8
	Measured (Mg/CuM)	170.8	9.8

		Methane	Ethane
Oven 10			
Run 4	Inject 1 (AC)	18933	1565
Cond.12	Inject 2 (AC)	18906	1550
5/29/97	Deviation	0.1%	0.5%
	Measured (ppmv)	59.3	3.1
	Measured (Mg/CuM)	39.4	3.9

		Methane	Ethane
Oven 9			
Run 1	Inject 1 (AC)	87617	4077
Cond.13	Inject 2 (AC)	80318	3758
5/29/97	Deviation	4.3%	4.1%
	Measured (ppmv)	267.8	8.2
	Measured (Mg/CuM)	178.1	10.2

		Methane	Ethane
Oven 10			
Run 1	Inject 1 (AC)	19900	1621
Cond.13	Inject 2 (AC)	19813	1557
5/29/97	Deviation	0.2%	2.0%
	Measured (ppmv)	62.3	3.2
	Measured (Mg/CuM)	41.4	3.9

		Methane	Ethane
Oven 9			
Run 2	Inject 1 (AC)	91663	4251
Cond.13	Inject 2 (AC)	90948	4203
5/29/97	Deviation	0.4%	0.6%
	Measured (ppmv)	291.3	8.8
	Measured (Mg/CuM)	193.7	10.9

LASCO Bag Samples — Standard Curve From 5/22/97

		Methane	Ethane
Oven 10			
Run 2	Inject 1 (AC)	18758	1532
Cond.13	Inject 2 (AC)	18758	1532
5/29/97	Deviation	0.0%	0.0%
	Measured (ppmv)	58.7	3.0
	Measured (Mg/CuM)	39.1	3.8

		Methane	Ethane
Oven 9			
Run 3	Inject 1 (AC)	73908	3360
Cond.13	Inject 2 (AC)	73908	3360
5/29/97	Deviation	0.0%	0.0%
	Measured (ppmv)	235.5	7.1
	Measured (Mg/CuM)	156.6	8.8

		Methane	Ethane
Oven 10			
Run 3	Inject 1 (AC)	12497	1005
Cond.13	Inject 2 (AC)	13126	1076
5/29/97	Deviation	2.5%	3.4%
	Measured (ppmv)	41.2 R	2.1
	Measured (Mg/CuM)	27.4	2.6

LASCO
Job No. 97-3020
Tube Results - STYRENE

Tube Samples
File: TUBE_WK2.WQ2

Standard Curve from 5/19/97

Unspiked Sample	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)
10-2-2	FH		1858		1961		1910	2.7%	0.01
10-3-1	FH	<	100	<	100	<	100	0.0%	0.01
10-4-1	FH	<	100	<	100	<	100	0.0%	0.01
10-5-2	BH	<	100	<	100	<	100	0.0%	0.01
10-5-2	FH		426375		431523		428949	0.6%	1.49
10-6-1	FH		372292		365549		368921	0.9%	1.28
10-7-2	FH		641363		628193		634778	1.0%	2.20
9-3-2	FH		13945		13869		13907	0.3%	0.05
9-4-2	FH		224232		217027		220630	1.6%	0.77
9-5-1	FH		25066		25525		25296	0.9%	0.09
9-6-2	FH		25154		24221		24688	1.9%	0.09
9-7-1	FH	<	100	<	100	<	100	0.0%	0.01
AF-5-2	FH		292067		305172		298620	2.2%	1.04
AF-5-2	BH	<	100	<	100	<	100	0.0%	0.01
ME-3-1	FH		688527		681005		684766	0.5%	2.38
ME-3-2	FH		477292		448801		463047	3.1%	1.61
ME-4-2	FH		428194		421774		424984	0.8%	1.48
ME-5-1	FH		197782		200156		198969	0.6%	0.69
ME-6-2	FH		425582		456713		441148	3.5%	1.53
ME-7-1	FH		380856		389348		385102	1.1%	1.34
ME-7-3	FH		489359		467190		478275	2.3%	1.66
ME-8-1	FH		625243		623337		624290	0.2%	2.17
NDA-3-2	FH		25328		25205		25267	0.2%	0.09
NDA-4-1	FH		25328		25205		25267	0.2%	0.09
NDA-5-1	FH		697		652		675	3.3%	0.01
NDA-6-1	FH		3369		3188		3279	2.8%	0.02
NDA-6-3	FH	<	100	<	100	<	100	0.0%	0.01
NDA-7-1	FH	<	100	<	100	<	100	0.0%	0.01
NDA-8-1	FH		2039		2163		2101	3.0%	0.01
NDB-3-3	FH		4455		4077		4266	4.4%	0.02
NDB-4-2	FH	<	100	<	100	<	100	0.0%	0.01
NDB-5-2	FH	<	100	<	100	<	100	0.0%	0.01
NDB-7-2	FH		2482		2490		2486	0.2%	0.01
RE-3-1	FH		373486		337788		355637	5.0%	1.24
RE-5-1	BH	<	100	<	100	<	100	0.0%	0.01
RE-5-1	FH		232442		227643		230043	1.0%	0.80
RE-6-1	FH		290765		271797		281281	3.4%	0.98
RE-7-1	FH		69916		68914		69415	0.7%	0.25
RE-8-1	FH		210373		211971		211172	0.4%	0.74

LASCO
Job No. 97-3020
Tube Results - CUMENE

Tube Samples
File: TUBE_WK2.WQ2

Standard Curv

Unspiked Sample	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)
10-2-2	FH		1087		375		731	48.7%	0.11
10-3-1	BH	<	100	<	100	<	100	0.0%	0.11
10-4-1	FH		3765		2456		3111	21.0%	0.12
10-5-2	BH	<	100	<	100	<	100	0.0%	0.11
10-5-2	FH		1412		468		940	50.2%	0.11
10-6-1	FH	<	100	<	100	<	100	0.0%	0.11
10-7-2	FH	<	100	<	100	<	100	0.0%	0.11
9-3-2	FH	<	100	<	100	<	100	0.0%	0.11
9-4-2	FH	<	100	<	100	<	100	0.0%	0.11
9-5-1	FH	<	100	<	100	<	100	0.0%	0.11
9-6-2	FH		552		471		512	7.9%	0.11
9-7-1	FH	<	100	<	100	<	100	0.0%	0.11
AF-5-2	FH	<	100	<	100	<	100	0.0%	0.11
AF-5-2	FH	<	100	<	100	<	100	0.0%	0.11
ME-3-1	FH	<	100	<	100	<	100	0.0%	0.11
ME-3-2	FH	<	100	<	100	<	100	0.0%	0.11
ME-4-2	FH	<	100	<	100	<	100	0.0%	0.11
ME-5-1	FH	<	100	<	100	<	100	0.0%	0.11
ME-6-2	FH	<	100	<	100	<	100	0.0%	0.11
ME-7-1	FH		1066		1051		1059	0.7%	0.11
ME-7-3	FH	<	100	<	100	<	100	0.0%	0.11
ME-8-1	FH	<	100	<	100	<	100	0.0%	0.11
NDA-3-2	FH	<	100	<	100	<	100	0.0%	0.11
NDA-4-1	FH	<	100	<	100	<	100	0.0%	0.11
NDA-5-1	FH	<	100	<	100	<	100	0.0%	0.11
NDA-6-1	FH	<	100	<	100	<	100	0.0%	0.11
NDA-6-3	FH	<	100	<	100	<	100	0.0%	0.11
NDA-7-1	FH		1050		778		914	14.9%	0.11
NDA-8-1	FH	<	100	<	100	<	100	0.0%	0.11
NDB-3-3	FH		1377		2080		1729	20.3%	0.12
NDB-4-2	FH	<	100	<	100	<	100	0.0%	0.11
NDB-5-2	FH	<	100	<	100	<	100	0.0%	0.11
NDB-7-2	FH		831		1278		1055	21.2%	0.11
RE-3-1	FH		1167		1221		1194	2.3%	0.12
RE-5-1	FH		1894		1643		1769	7.1%	0.12
RE-5-1	FH	<	100	<	100	<	100	0.0%	0.11
RE-6-1	FH		1485		1928		1707	13.0%	0.12
RE-7-1	FH		499		510		505	1.1%	0.11
RE-8-1	FH	<	100	<	100	<	100	0.0%	0.11

LASCO Tube Samples Standard Curv

Job No. 97-3020 File: TUBE_WK2.WQ2

Tube Results - METHYL METHACRYLATE

Unspiked Sample	Tube Section		Inject 1		Inject 2		Average	Deviation	Mass (mg)
10-2-2	FH		43376		44832		44104	1.7%	0.30
10-3-1	BH	<	100	<	100	<	100	0.0%	0.03
10-4-1	FH		11724		11888	<	11806	0.7%	0.10
10-5-2	BH	<	100	<	100	<	100	0.0%	0.03
10-5-2	FH		31430		30702		31066	1.2%	0.22
10-6-1	FH	<	100	<	100	<	100	0.0%	0.03
10-7-2	FH		405		537		471	14.0%	0.04
9-3-2	FH	<	100	<	100	<	100	0.0%	0.03
9-4-2	FH		1882		1920		1901	1.0%	0.05
9-5-1	FH		1983		2369		2176	8.9%	0.05
9-6-2	FH		21970		22108		22039	0.3%	0.17
9-7-1	FH	<	100	<	100	<	100	0.0%	0.03
AF-5-2	FH	<	100	<	100	<	100	0.0%	0.03
AF-5-2	FH		1860		1798		1829	1.7%	0.04
ME-3-1	FH		31733		40474		36104	12.1%	0.25
ME-3-2	FH		535		515		525	1.9%	0.04
ME-4-2	FH		7050		6951		7001	0.7%	0.08
ME-5-1	FH	<	100	<	100	<	100	0.0%	0.03
ME-6-2	FH	<	100	<	100	<	100	0.0%	0.03
ME-7-1	FH		408		411		410	0.4%	0.04
ME-7-3	FH	<	100	<	100	<	100	0.0%	0.03
ME-8-1	FH	<	100	<	100	<	100	0.0%	0.03
NDA-3-2	FH	<	100	<	100	<	100	0.0%	0.03
NDA-4-1	FH	<	100	<	100	<	100	0.0%	0.03
NDA-5-1	FH	<	100	<	100	<	100	0.0%	0.03
NDA-6-1	FH	<	100	<	100	<	100	0.0%	0.03
NDA-6-3	FH		432		421		427	1.3%	0.04
NDA-7-1	FH		5865		5304		5585	5.0%	0.07
NDA-8-1	FH	<	100	<	100	<	100	0.0%	0.03
NDB-3-3	FH		1275		1254		1265	0.8%	0.04
NDB-4-2	FH	<	100	<	100	<	100	0.0%	0.03
NDB-5-2	FH		11634		11406		11520	1.0%	0.10
NDB-7-2	FH		42390		43533		42962	1.3%	0.29
RE-3-1	FH		56351		53320		54836	2.8%	0.36
RE-5-1	FH		13137		12825		12981	1.2%	0.11
RE-5-1	FH	<	100	<	100	<	100	0.0%	0.03
RE-6-1	FH	<	100	<	100	<	100	0.0%	0.03
RE-7-1	FH		300		296		298	0.7%	0.04
RE-8-1	FH	<	100	<	100	<	100	0.0%	0.03

LASCO
Job No. 97-3020
Initial Calibration:

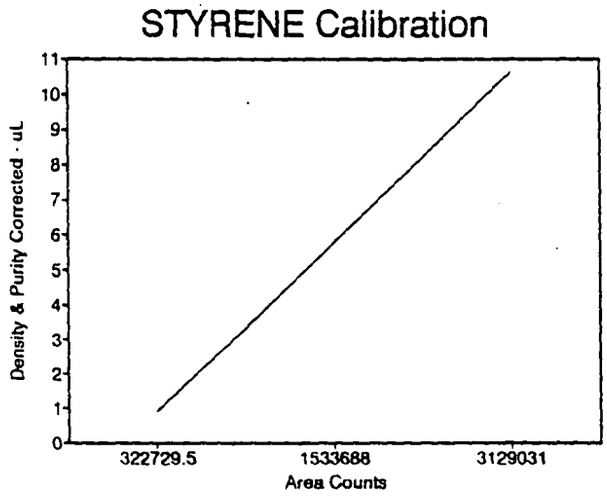
Tube Samples
File: TUBE_WK2.WQ2

Standard Curve from 5/19/97

Styrene

			Low Standard		Mid Standard		High Standard	
Purity	99.0%	Inj. Vol.	1.2 uL		6.0 uL		12.0 uL	
Density	0.91	Std./Fit	1.1	3.9%	5.4	-1.6%	10.8	0.4%
Slope	288535.9	Peak Areas	313821	331638	1559010	1508366	3153635	3104427
Intcp	-1359.5	Avg./Dev.	322729.5	2.8%	1533688	1.7%	3129031	0.8%
Avg RF	3.44E-06	RF	3.35E-06		3.5E-06		3.45E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected



Styrene Calibration			
Curve linearity check	uL	Corrected	Area count
Zero	0	0	0
Std1 low	1.2	1.08108	322729.5
Std2 mid	6	5.4054	1533688
Std3 high	12	10.8108	3129031

Regression Output:

Constant	-2763.61	
Std Err of Y Est	29567.12	Corr. Coefficient
R Squared	0.999779	0.9998897
No. of Observations	3	
Degrees of Freedom	1	
X Coefficient(s)	288700.8	
Std Err of Coef.	4288.761	

LASCO
Job No. 97-3020
Calibration:

Tube Samples
File: TUBE_WK2.WQ2

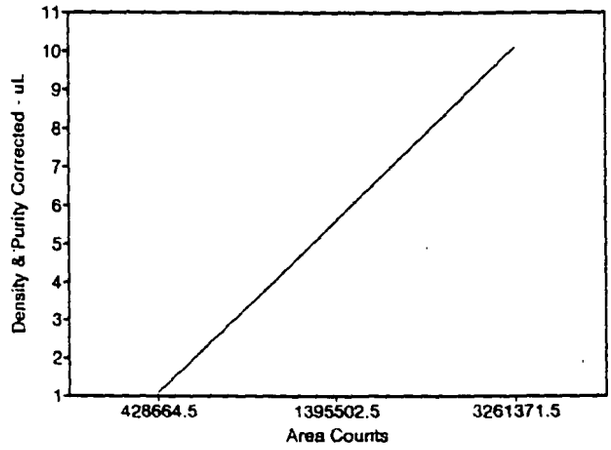
Standard Curve from 5/19/97

Cumene

			Low Standard		Mid Standard		High Standard	
Purity	99.9%	Inj. Vol.	1.5	uL	6.0	uL	12.0	uL
Density	0.86	Std./Fit	1.3	15.3%	5.2	-11.0%	10.3	2.5%
Slope	311862.7	Peak Areas	425122	432207	1413539	1377466	3301385	3221358
Intcp	-34792.2	Avg./Dev.	428664.5	0.8%	1395503	1.3%	3261372	1.2%
Avg RF	3.29E-06	RF	3.01E-06		3.69E-06		3.16E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected

CUMENE Calibration



Cumene Calibration			
Curve linearity check	uL	Corrected	Area count
Zero	0	0	0
Std1 low	1.5	1.28871	428664.5
Std2 mid	6	5.15484	1395503
Std3 high	12	10.30968	3261372

Regression Output:

Constant	-72875.5	
Std Err of Y Est	201138.1	Corr. Coefficient
R Squared	0.990244	0.99511
No. of Observations	3	
Degrees of Freedom	1	
X Coefficient(s)	316605.5	
Std Err of Coef.	31425.62	

LASCO
Job No. 97-3020
Calibration:

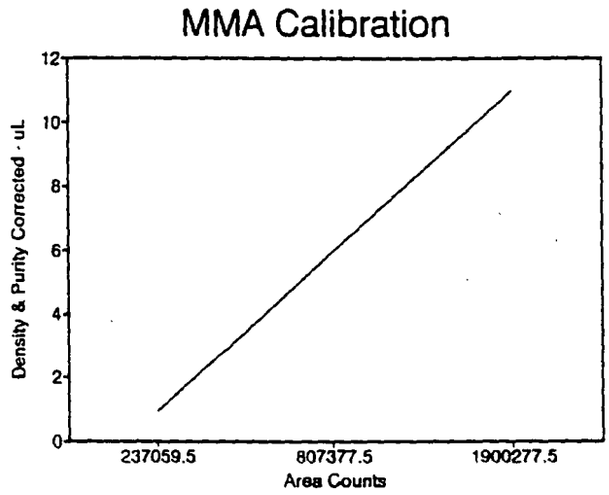
Tube Samples
File: TUBE_WK2.WQ2

Standard Curve from 5/19/97

Methyl Methacrylate

			Low Standard		Mid Standard		High Standard	
Purity	99.0%	Inj. Vol.	1.2 uL		6.0 uL		12.0 uL	
Density	0.94	Std./Fit	1.1	30.9%	5.6	-12.3%	11.2	2.8%
Slope	166066.2	Peak Areas	235866	238253	832159	782596	1925615	1874940
Intcp	-5619.1	Avg./Dev.	237059.5	0.5%	807377.5	3.1%	1900278	1.3%
Avg RF	5.83E-06	RF	4.71E-06		6.92E-06		5.88E-06	

Blank Avg 0 Note: Average area counts are reagent blank corrected



Methyl Methacrylate Calibration			
Curve linearity check	uL	Corrected	Area count
Zero	0	0	0
Std1 low	1.2	1.11672	237059.5
Std2 mid	6	5.5836	807377.5
Std3 high	12	11.1672	1900278

Regression Output:		
Constant	-2078.49	
Std Err of Y Est	117422.7	Corr. Coefficient
R Squared	0.990293	0.995135
No. of Observations	3	
Degrees of Freedom	1	
X Coefficient(s)	166544.2	
Std Err of Coef.	16488.78	

LASCO
Job No. 97-3020
Continuing Calibrations:

Tube Samples
File: TUBE_WK2.WQ2

Standard Curve from 5/19/97

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/21/97 @ 10:34	Styrene	1671766	1639020	1655393	1.0%	5.7	5.9	-3.3%
Concal 5/21/97 @ 18:21	Styrene	1749622	1820856	1785239	2.0%	6.2	5.9	4.2%
Concal 5/22/97 @2:26	Styrene	1650673	1760397	1705535	3.2%	5.9	5.9	-0.4%
Concal 5/22/97 @16:35	Styrene	1781913	1813355	1797634	0.9%	6.2	5.9	5.0%

LASCO
Job No. 97-3020
Continuing Calibrations:

Tube Samples
File: TUBE_WK2.WQ2

Standard Curve from 5/19/97

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/21/97 @ 10:34	Cumene	1531862	1500336	1516099	1.0%	5.0	5.2	-4.4%
Concal 5/21/97 @ 18:21	Cumene	1607211	1675417	1641314	2.1%	5.4	5.2	3.4%
Concal 5/22/97 @2:26	Cumene	1514010	1615963	1564987	3.3%	5.1	5.2	-1.4%
Concal 5/22/97 @16:35	Cumene	1641625	1667710	1654668	0.8%	5.4	5.2	4.2%

LASCO
Job No. 97-3020
Continuing Calibrations:

Tube Samples
File: TUBE_WK2.WQ2

Standard Curve from 5/19/97

		Inject 1	Inject 2	Average	Deviation	Mass (mg)	Expected (mg)	Error
Concal 5/21/97 @ 10:34	Methyl Methacrylat	735470	732471	733971	0.2%	4.5	4.8	-7.5%
Concal 5/21/97 @ 23:30	Methyl Methacrylat	757277	787351	772314	1.9%	4.7	4.8	-2.7%
Concal 5/22/97 @2:26	Methyl Methacrylat	713704	754327	734016	2.8%	4.5	4.8	-7.2%
Concal 5/22/97 @16:35	Methyl Methacrylat	~~177654~~	~~170309~~	~~174082~~	~~2.2%~~	~~1.1~~	~~1.6~~	~~-30.2%~~

STYRENE

LASCO Tube Samples Standard Curve from 5/19/97

Job No. 97-3020 File: TUBE_WK2.WQ2

Desorption Efficiency Study; Charcoal - 5/21/97 BHR

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	100	0.0%	0.01	
0.9009		196351		199217	197784	0.7%	0.69	76.6%
4.5045		1053672		1027860	1040766	1.2%	3.61	80.2%
9.009		2104049		2203707	2153878	2.3%	7.47	82.9%
							Average	79.9%

CUMENE

LASCO Tube Samples Standard Curve from 5/19/97

Job No. 97-3020 File: TUBE_WK2.WQ2

Desorption Efficiency Study; Charcoal - 5/21/97 BHR

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	10	900.0%	0.11	
0.86		247201		250869	249035	0.7%	0.91	105.8%
4.3		1200100		1173132	1186616	1.1%	3.92	91.1%
8.6		2313958		2420783	2367371	2.3%	7.70	89.6%
				2859174			Average	95.5%

MMA

LASCO Tube Samples Standard Curve from 5/19/97

Job No. 97-3020 File: TUBE_WK2.WQ2

Desorption Efficiency Study; Charcoal - 5/21/97 BHR

Spike Level (mg)		Inject 1		Inject 2	Average	Deviation	Mass (mg)	Desorp. Efficiency (blank corr.)
0	<	100	<	100	100	0.0%	0.03	
0.9306		93793		95070	94432	0.7%	0.60	64.7%
4.653		552721		538699	545710	1.3%	3.32	71.4%
9.306		1117140		1175094	1146117	2.5%	6.94	74.5%
							Average	70.2%

APPENDIX B.2

Method 18 GC Chromatograms

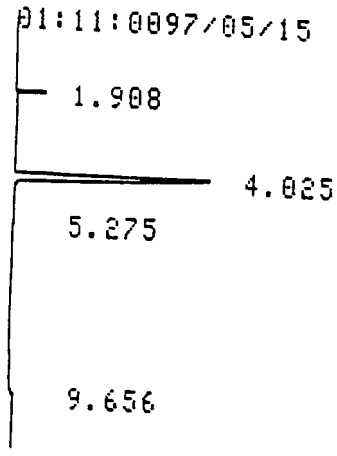
DEECO™
P.O. Box 4159
Cary, NC 27519
1-800-733-3261 Fax (919) 250-1835

Lasco, Inc. / PES

GC Chromatograms
& M25A Recorder Traces

01:11:0097/05/15 LASCO TUBES

RE1-1A-B14



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 95

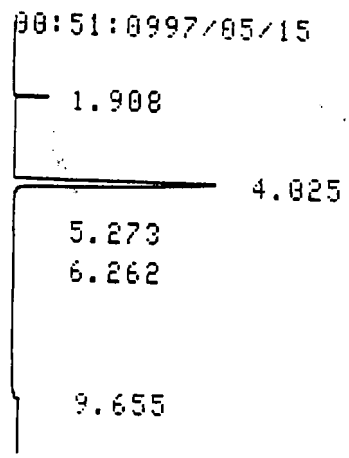
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	8773				
2	4.025	202427		4	99.6024	CS2
3	5.275	1360				
4	9.656	808		1	0.3976	STYRENE
TOTAL		213369			100	

Shimadzu

00:51:0997/05/15 LASCO TUBES

RE-1-1A-BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 94

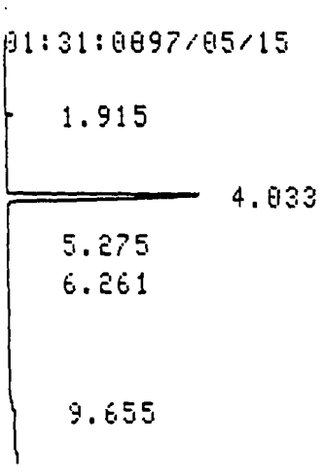
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	9922				
2	4.025	218254		4	99.496	CS2
3	5.273	1526				
4	6.262	311				
5	9.655	1106		1	0.504	STYRENE
	TOTAL	231118			100	

004

01:31:0897/05/15 LASCO TUBES

RE1-1A-BH



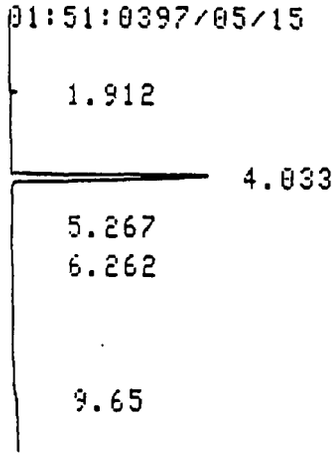
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 96

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.915	2385				
2	4.033	204359		4	99.7842	CS2
3	5.275	419				
4	6.261	282				
5	9.655	442		1	0.2158	STYRENE
	TOTAL	207887			100	

01:51:0397/05/15 LASCO TUBES

BEI-1A-BH



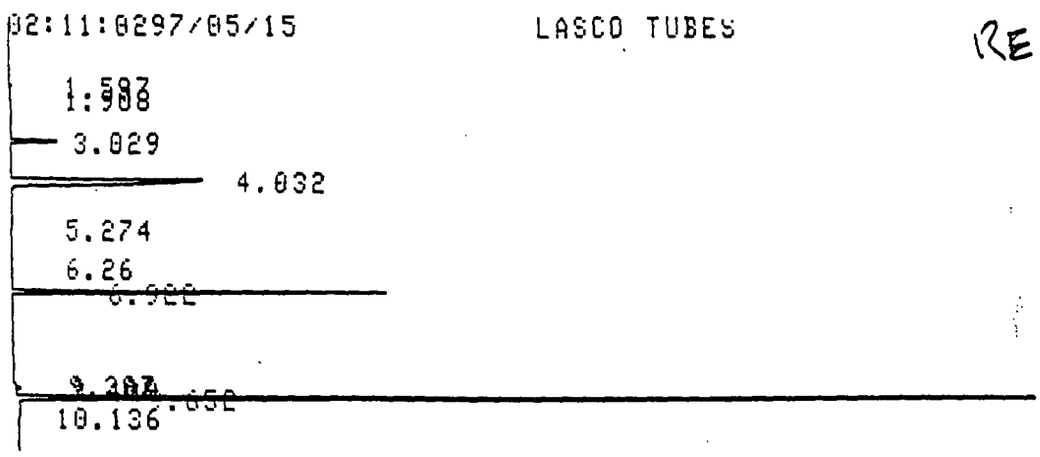
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 97

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	2355				
2	4.033	204422		4	99.8734	CS2
3	5.267	421				
4	6.262	280				
5	9.65	259		1	0.1266	STYRENE
	TOTAL	207737			100	

02:11:0297/05/15 LASCO TUBES

RE-1-1A-FA



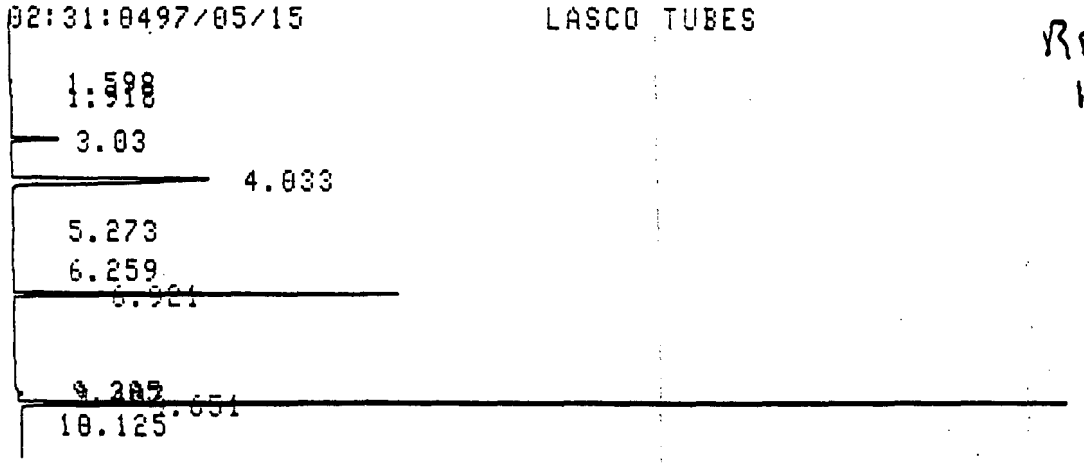
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO. 98

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.597	1282				
2	1.908	940				
3	3.029	22367				
4	4.032	204027		4	18.8917	CS2
5	5.274	426				
6	6.26	286				
7	6.922	144936		3	13.4203	MMA
8	9.307	654				
9	9.408	2293	V			
10	9.652	729930		1	67.5874	STYRENE
11	10.136	1087		2	0.1006	CUMENE
	TOTAL	1108229			100	

02:31:0497/05/15 LASCO TUBES

RE-1
1A FH



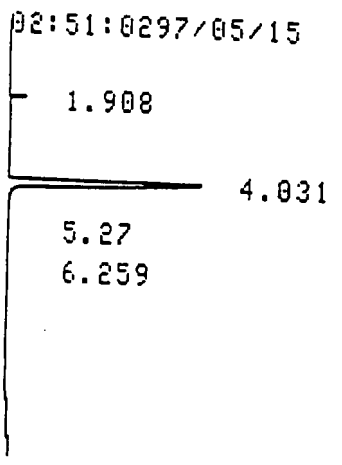
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 99

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.598	1253				
2	1.918	918				
3	3.03	22061				
4	4.033	203994		4	18.5844	CS2
5	5.273	424				
6	6.259	292				
7	6.921	146550		3	13.3512	MMA
8	9.305	675				
9	9.407	2347	V			
10	9.651	745980		1	67.9609	STYRENE
11	10.125	1136		2	0.1035	CUMEME
	TOTAL	1125629			100	

02:51:0297/05/15 LASCO TUBES

ME-2-1B-B1+



CHROMATOGRAM 1 MEMORIZED

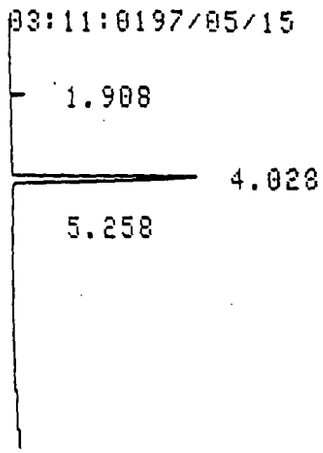
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 100

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	4949				
2	4.031	214406		4	100	CS2
3	5.27	1427				
4	6.259	285				
	TOTAL	221067			100	

03:11:0197/05/15 LASCO TUBES

ME-2-1B-B14



CHROMATOGRAM 1 MEMORIZED

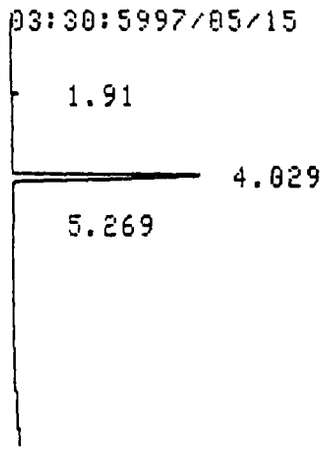
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 101

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	4206				
2	4.028	187804		4	100	CS2
3	5.258	1207				
	TOTAL	193218			100	

03:30:5997/05/15 LASCO TUBES

NDD
1-3A
BH

⊕ Shimadzu



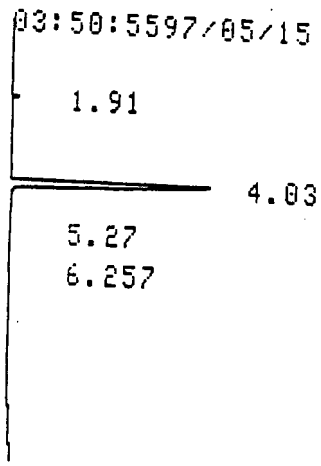
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 102

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.91	2323				
2	4.029	187131		4	100	CS2
3	5.269	429				
	TOTAL	189883			100	

03:50:5597/05/15 LASCO TUBES

NDD
1-3A
BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 103

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.91	2598				
2	4.03	201871		4	100	CS2
3	5.27	480				
4	6.257	272				
	TOTAL	205221			100	

04:10:5297/05/15 LASCO TUBES

Blank

~~1.899~~

4.025

5.264

6.253

9.649

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 104

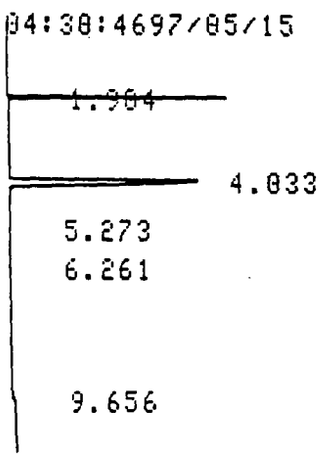
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.899	52237				
2	4.025	197281		4	99.7378	CS2
3	5.264	1104				
4	6.253	268				
5	9.649	519		1	0.2622	STYRENE
TOTAL		251408			100	

⊕ Shinadu

04:38:4697/05/15 LASCO TUBES

Blank



CHROMATOGRAM 1 MEMORIZED

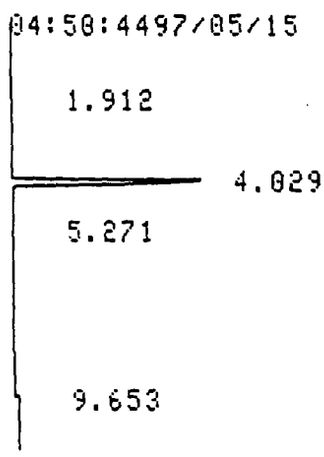
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 105

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.904	50390				
2	4.033	191917		4	99.722	CS2
3	5.273	1052				
4	6.261	253				
5	9.656	535		1	0.278	STYRENE
	TOTAL	244147			100	

04:50:4497/05/15 LASCO TUBES

NDD
1-3A
FH

23-02037-02



CHROMATOGRAM 1 MEMORIZED

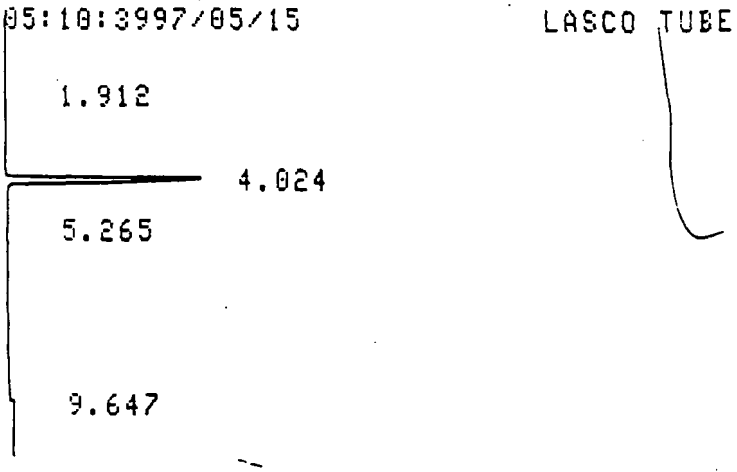
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 106

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	766				
2	4.029	190240		4	99.3022	CS2
3	5.271	345				
4	9.653	1337		1	0.6978	STYRENE
	TOTAL	192688			100	

Shimadzu

05:10:3997/05/15 LASCO TUBES

NDD
1-3A
FH



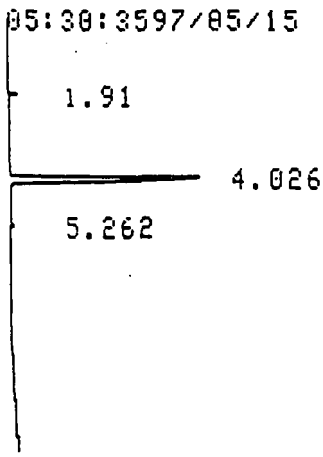
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 107

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	737				
2	4.024	188111		4	99.2981	CS2
3	5.265	336				
4	9.647	1330		1	0.7019	STYRENE
	TOTAL	190514			100	

05:30:3597/05/15 LASCO TUBES

ME-2-110
FCA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 108

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.91	2931				
2	4.026	186459		4	100	CS2
3	5.262	2528				
	TOTAL	191919			100	

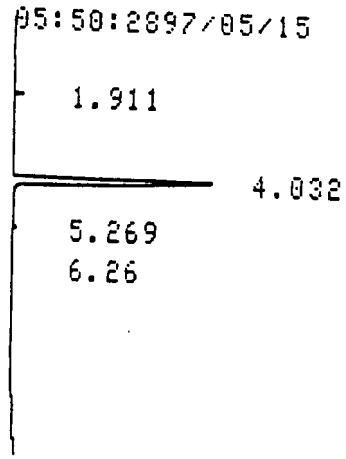
223-02037-02

010

⊕ 57

05:50:2897/05/15 LASCO TUBES

ME-2-1B
FH



CHROMATOGRAM 1 MEMORIZED

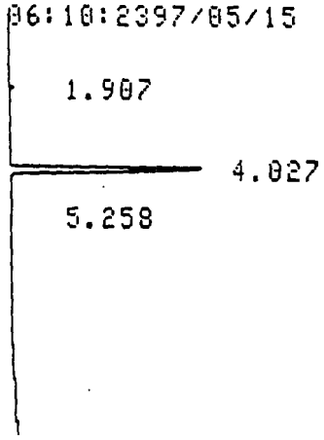
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO. 0
REPORT NO 109

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.911	3404				
2	4.032	206196		4	100	CS2
3	5.269	2964				
4	6.26	288				
	TOTAL	212850			100	

06:10:2397/05/15 LASCO TUBES

ME-2-1A-BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 110

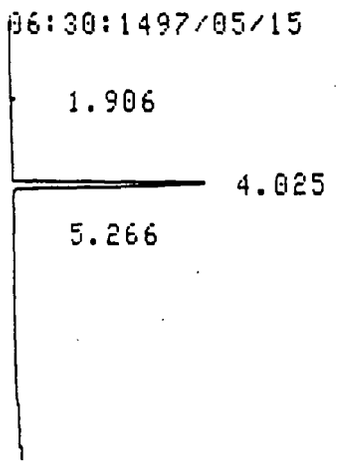
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.907	1846				
2	4.027	189110		4	100	CS2
3	5.258	669				
	TOTAL	191625			100	

C 11

223-02037-02

06:30:1497/05/15 LASCO TUBES

ME2-1A BH



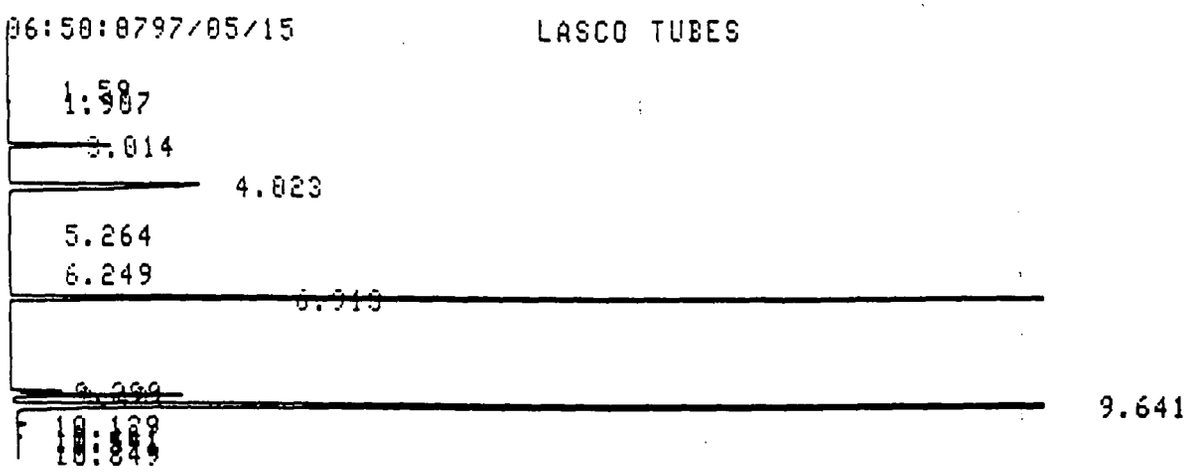
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 111

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.906	1790				
2	4.025	188038		4	100	CS2
3	5.266	662				
	TOTAL	190490			100	

ME-2-1A-BH

06:50:0797/05/15 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

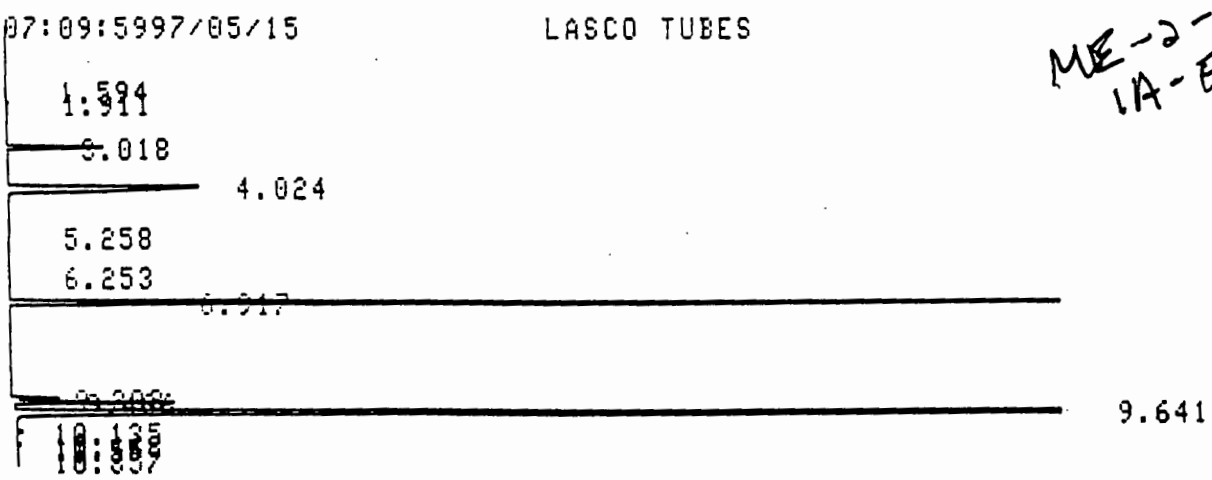
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 112

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.59	574				
2	1.907	1414				
3	3.014	45600				
4	4.023	193053		4	3.562	CS2
5	5.264	1038				
6	6.249	263				
7	6.913	826657		3	15.2527	MMA
8	9.299	18403				
9	9.401	64203	V			
10	9.641	4394997	VE	1	81.0921	STYRENE
11	10.129	5050	V	2	0.0932	CUMEME
12	10.441	2719	V			
13	10.541	295	V			
14	10.849	930				
	TOTAL	5555192			100	

223-02037-02

07:09:5997/05/15 LASCO TUBES

ME-2-
1A-EX



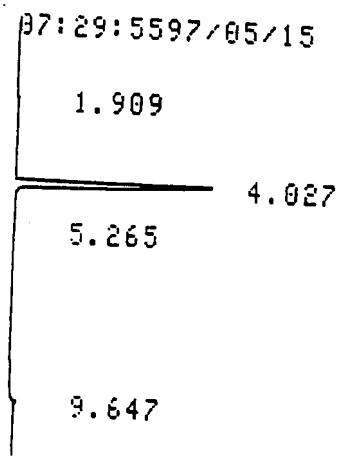
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 113

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.594	557				
2	1.911	1357				
3	3.018	43251				
4	4.024	185731		4	3.513	CS2
5	5.258	971				
6	6.253	247				
7	6.917	773904		3	14.6378	MMA
8	9.303	17224				
9	9.406	61135	V			
10	9.641	4322457	VE	1	81.7561	STYRENE
11	10.135	4920	V	2	0.0931	CUMEME
12	10.448	2512	V			
13	10.55	366	V			
14	10.857	867				
	TOTAL	5415498			100	

97:29:5597/05/15 LASCO TUBES

9-2-1A
BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 114

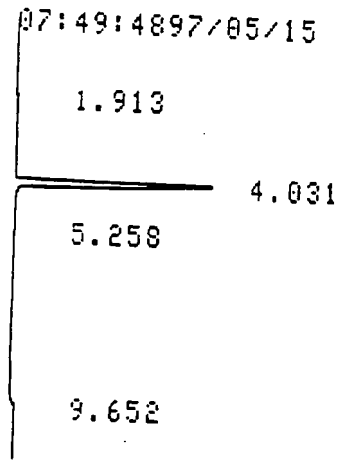
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.909	1237				
2	4.027	200227		4	99.2616	CS2
3	5.265	892				
4	9.647	1490		1	0.7384	STYRENE
	TOTAL	203845			100	

0 13
223-02037-02

07:49:4897/05/15 LASCO TUBES

9-2-1A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0

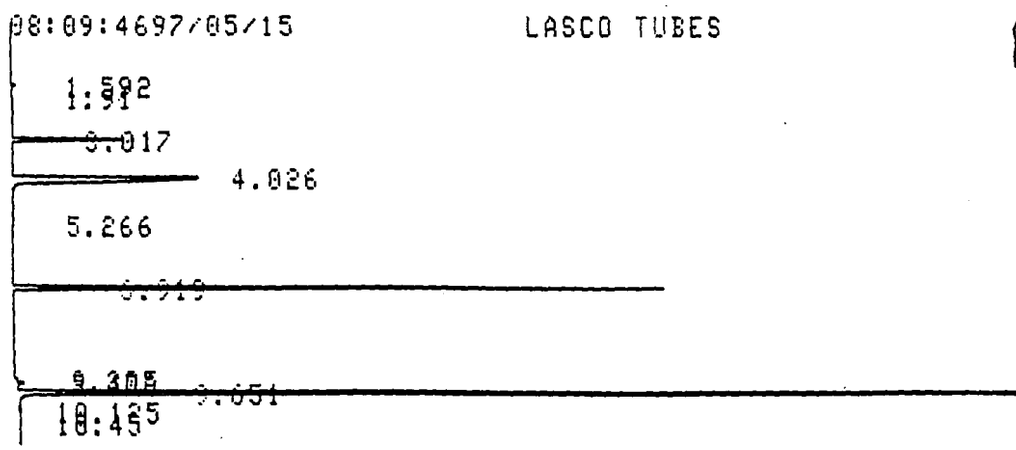
FILE 0
METHOD 0002

REPORT NO 115

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.913	1182				
2	4.031	196952		4	99.6189	CS2
3	5.258	860				
4	9.652	753		1	0.3811	STYRENE
	TOTAL	199747			100	

08:09:4697/05/15 LASCO TUBES

RE-2-
1A-FH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 116

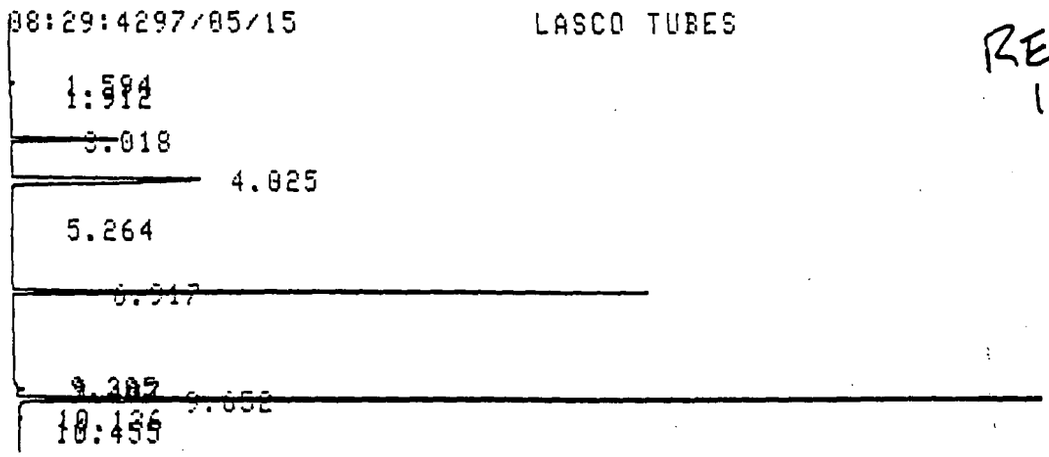
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.592	1601				
2	1.91	1078				
3	3.017	51724				
4	4.026	197570		4	11.6917	CS2
5	5.266	1095				
6	6.919	259497		3	15.3563	MMA
7	9.305	977				
8	9.406	3546	V			
9	9.651	1230510	V	1	72.8183	STYRENE
10	10.125	2259	V	2	0.1337	CUMEME
11	10.45	414				
	TOTAL	1750269			100	

014

223-02037-02

08:29:4297/05/15 LASCO TUBES

RE-2
1A-F1



CHROMATOGRAM 1 MEMORIZED

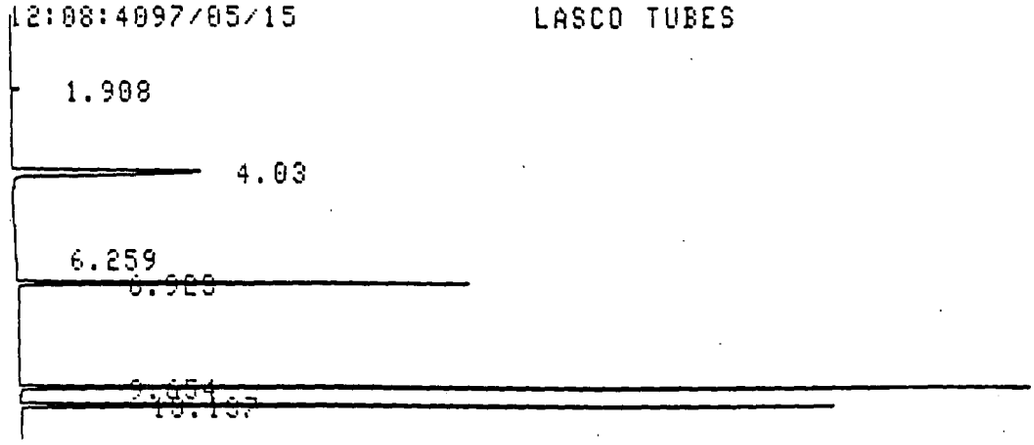
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002

REPORT NO 117

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.594	1518				
2	1.912	1013				
3	3.018	49007				
4	4.025	188254		4	11.7271	CS2
5	5.264	1039				
6	6.917	246858		3	15.3778	MMA
7	9.305	906				
8	9.407	3245	V			
9	9.652	1168310	V	1	72.7789	STYRENE
10	10.136	1864		2	0.1161	CUMEME
11	10.455	385				
	TOTAL	1662400			100	

Con Cal

12:08:4097/05/15 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 118

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	2805				
2	4.03	196528		4	18.0525	CS2
3	6.259	303				
4	6.923	177144		3	16.2719	MMA
5	9.654	384658		1	35.3335	STYRENE
6	10.137	330319	V	2	30.3421	CUMEME
	TOTAL	1091757			100	

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223-02037-02

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97/05/15 12:20:07 LASCO BAG SAMPLES

Con Cal

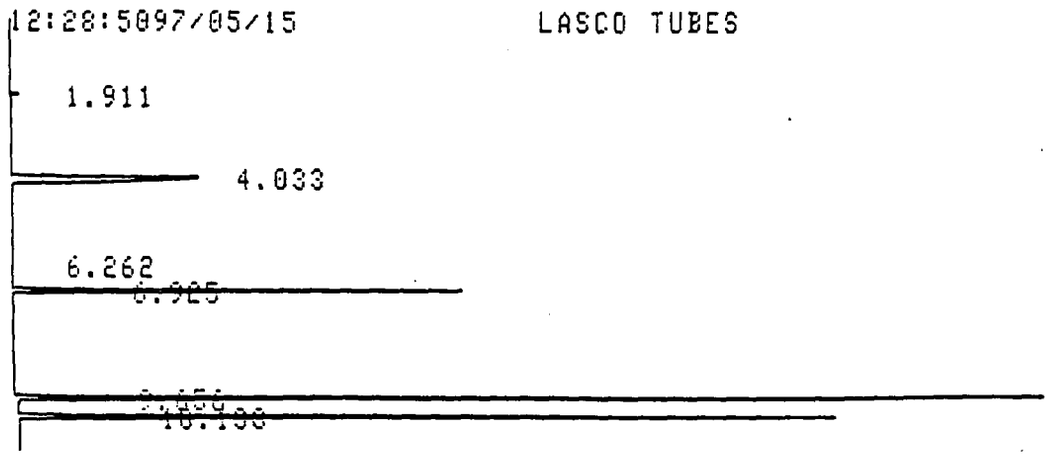
2.583

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 119

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	19131		1	23.3526	METHANE
2	2.583	62793	V	2	76.6474	ETHANE
	TOTAL	81924			100	

Concal

12:28:5097/05/15 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 120

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.911	2605				
2	4.033	192314		4	17.8619	CS2
3	6.262	253				
4	6.925	173999		3	16.1608	MMA
5	9.656	381343		1	35.4187	STYRENE
6	10.138	329017		2	30.5587	CUMENE
	TOTAL	1079530			100	

O 16

223-02037-02

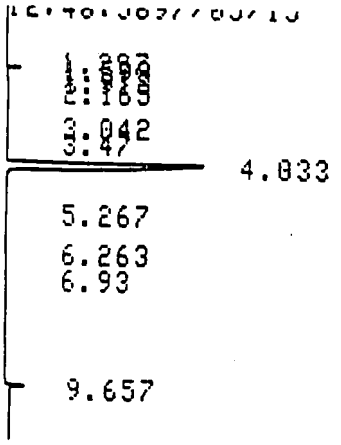
87/05/15 12:40:18 LASCO BAG SAMPLES

Con'd

2:583

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 121

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	18669		1	23.3399	METHANE
2	2.583	61320	V	2	76.6601	ETHANE
	TOTAL	79989			100	



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 122

FILE 0
METHOD 0002

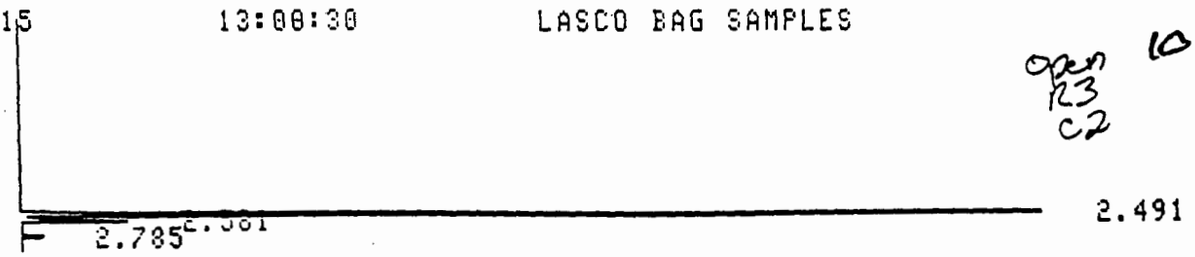
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.397	347				
2	1.599	3955				
3	1.913	1506				
4	2.165	1226	V			
5	3.042	1399				
6	3.47	486				
7	4.033	214996		4	96.878	CS2
8	5.267	1090				
9	6.263	468				
10	6.93	834		3	0.3758	MMA
11	9.657	6094		1	2.7461	STYRENE
	TOTAL	232402			100	

C 17

223-02037-02

97/05/15 13:00:30 LASCO BAG SAMPLES

open 10
123
C2



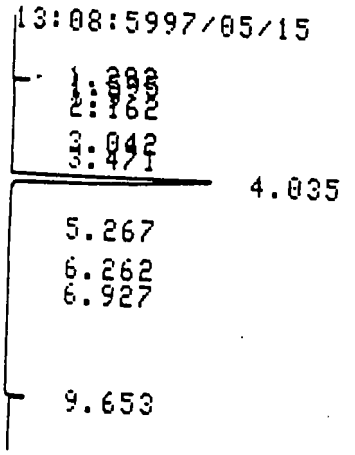
Shimadzu

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 123

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	31605		1	94.3886	METHANE
2	2.581	1879	V	2	5.6113	ETHANE
3	2.785	367	V			
	TOTAL	33850			100	

13:08:5997/05/15 LASCO TUBES

9-2-1k
FH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 124

FILE 0
METHOD 0002

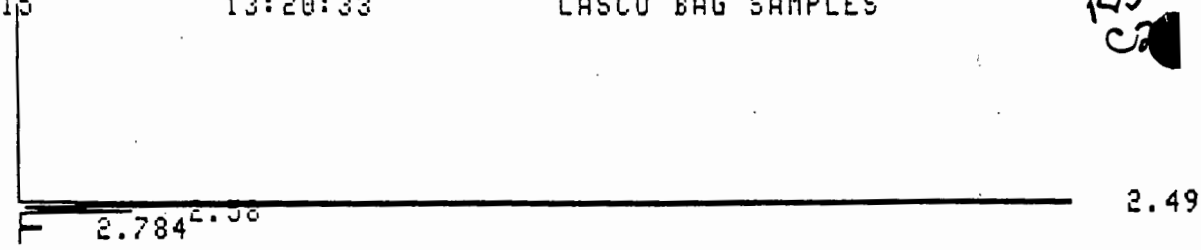
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.393	355				
2	1.595	4045				
3	1.9	1556				
4	2.162	1252	V			
5	3.042	1445				
6	3.471	503				
7	4.035	219012		4	96.8544	CS2
8	5.267	1131				
9	6.262	483				
10	6.927	847		3	0.3745	MMA
11	9.653	6266		1	2.771	STYRENE

TOTAL 236895 100

018

open
10
R3
C2

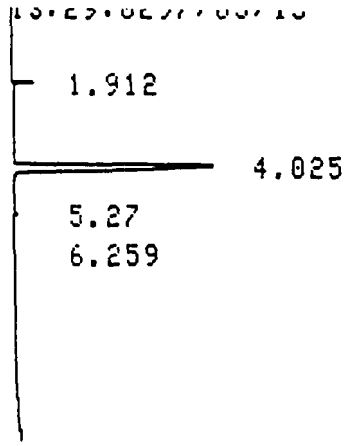
97/05/15 13:20:33 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 125

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	31923		1	94.402	METHANE
2	2.58	1893	V	2	5.598	ETHANE
3	2.784	377	V			
	TOTAL	34194			100	

RE BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 126

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	6131				
2	4.025	219772		4	100	CS2
3	5.27	2279				
4	6.259	312				
	TOTAL	228494			100	

open 10
R2

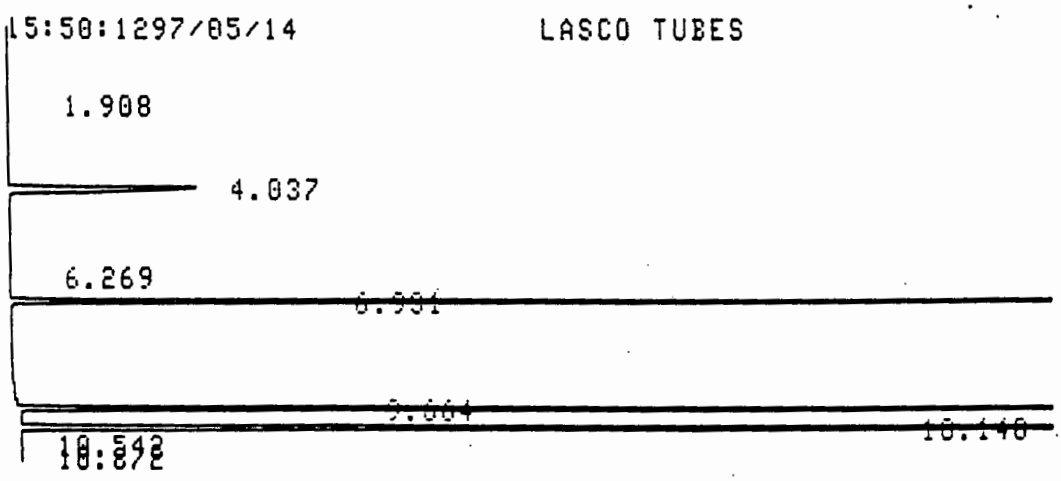
87/05/14 15:40:57 LASCO BAG SAMPLES

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	33904		1	94.6566	METHANE
2	2.587	1914	V	2	5.3434	ETHANE
3	2.79	411	V			
	TOTAL	36229			100	

Desorb 10

15:50:1297/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 42

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	824				
2	4.037	186620		4	3.5303	CS2
3	6.269	270				
4	6.931	914954		3	17.3084	MMA
5	9.664	1867256		1	35.3233	STYRENE
6	10.148	2317357		2	43.838	CUMEME
7	10.542	2612				
8	10.872	261				
	TOTAL	5290153			100	

14 1

223-02037-02

87/05/14 16:01:42 LASCO BAG SAMPLES

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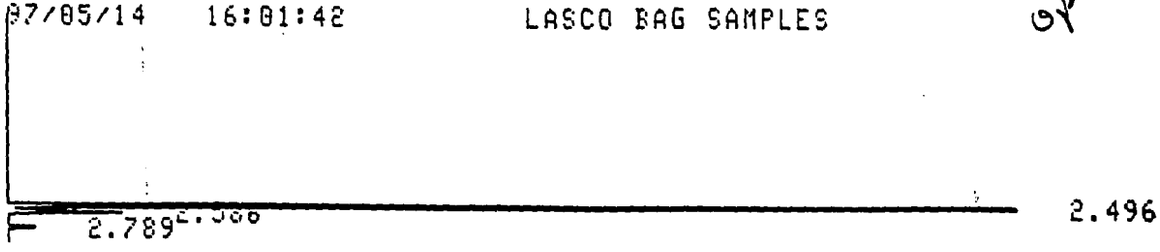
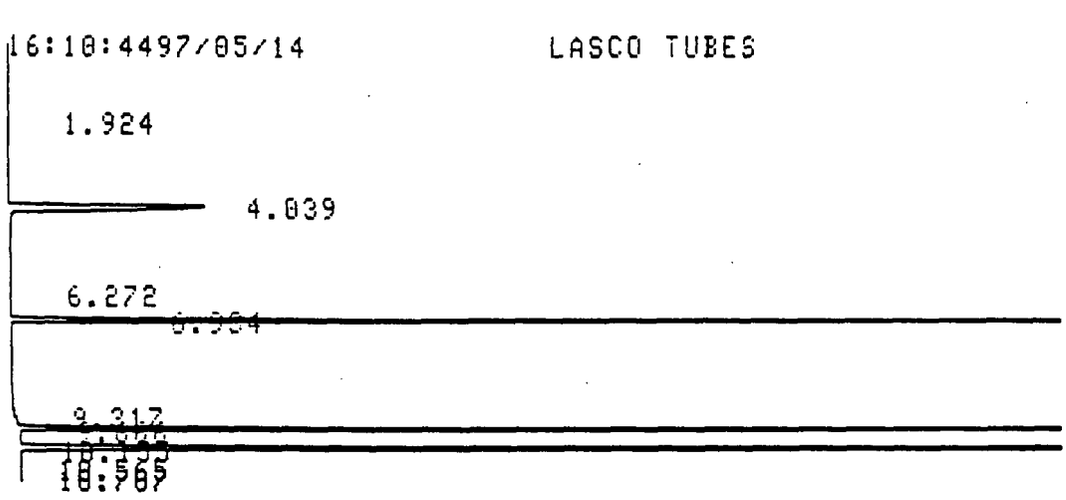


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 43

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	34934		1	94.6631	METHANE
2	2.586	1970	V	2	5.3369	ETHANE
3	2.789	422	V			
	TOTAL	37325			100	

Desopt. =

16:10:4497/05/14 LASCO TUBES



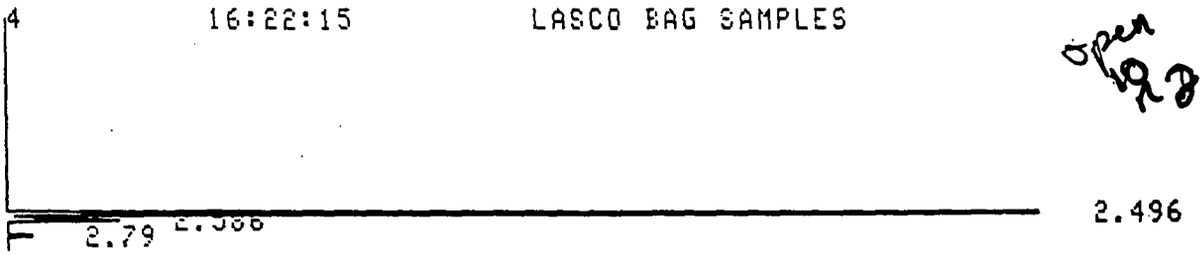
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 44

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.924	623				
2	4.039	202512		4	6.3197	CS2
3	6.272	300				
4	6.934	540734		3	16.8743	MMA
5	9.317	535				
6	9.666	1048067	V	1	32.7064	STYRENE
7	10.155	1413161	V	2	44.0996	CUMEME
8	10.565	2162	V			
9	10.707	3371	V			
	TOTAL	3211464			100	

97/05/14 16:22:15 LASCO BAG SAMPLES

open 1.28



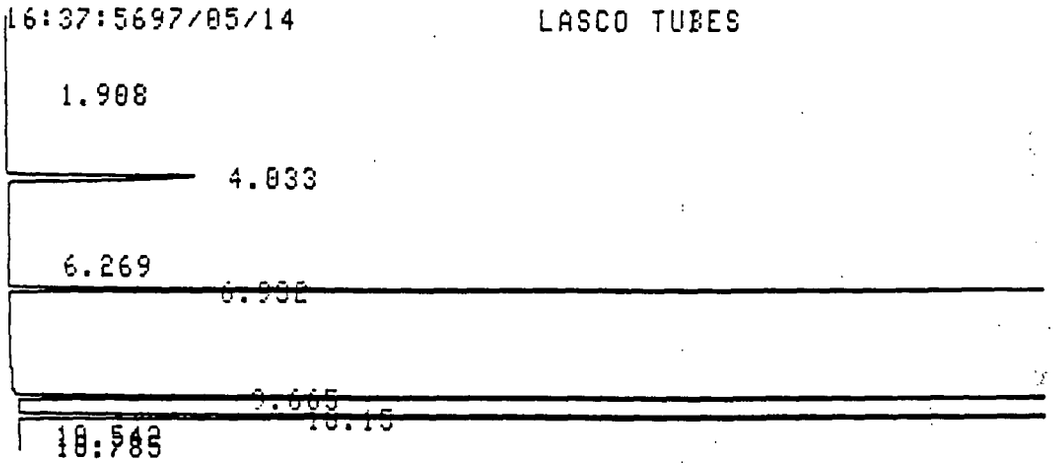
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 45

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	33165		1	94.6565	METHANE
2	2.586	1872	V	2	5.3435	ETHANE
3	2.79	395	V			
	TOTAL	35432			100	

Desorp 5

Shimadzu

16:37:5697/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

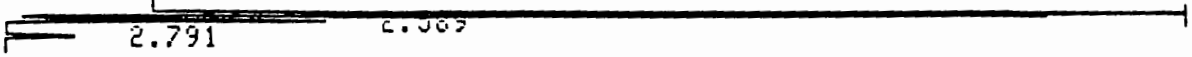
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 46

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	569				
2	4.033	189456		4	6.797	CS2
3	6.269	266				
4	6.932	478995		3	17.1847	MMA
5	9.665	903904		1	32.429	STYRENE
6	10.15	1214978		2	43.5893	CUMENE
7	10.542	327				
8	10.785	3860	V			
TOTAL		2792353			100	

14

97/05/14 16:49:26 LASCO BAG SAMPLES

Open 1/3
R2



223-02037-02

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 47

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	114561		1	96.0851	METHANE
2	2.589	4668	V	2	3.9149	ETHANE
3	2.791	1064	V			
	TOTAL	120293			100	

16:58:3897/05/14 LASCO TUBES

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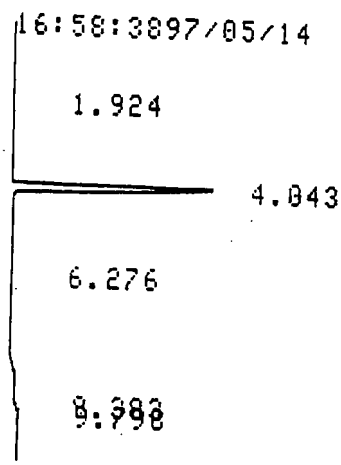

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 48

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.924	912				
2	4.043	219193		4	100	CS2
3	6.276	324				
4	9.383	3017				
5	9.798	9332	V			
TOTAL		232778			100	

LASCO BAG SAMPLES

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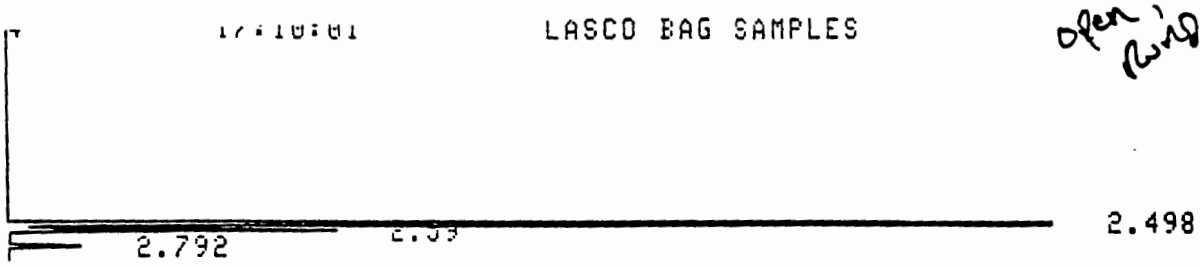


CR501 CHROMATOPAC

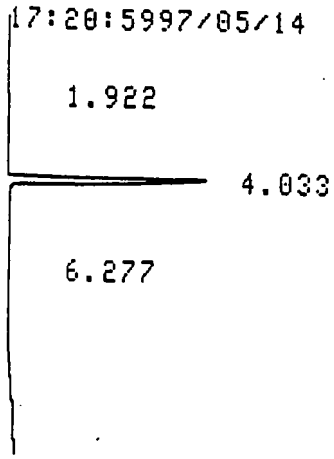
CHANNEL NO	2	FILE	9
SAMPLE NO	0	METHOD	0002 .
REPORT NO	49		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	119768		1	96.0926	METHANE
2	2.59	4870	V	2	3.9074	ETHANE
3	2.792	1107	V			
	TOTAL	125745			100	

14 4

223C

17:20:5997/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 50

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.922	844				
2	4.033	206421		4	100	CS2
3	6.277	298				
	TOTAL	207563			100	

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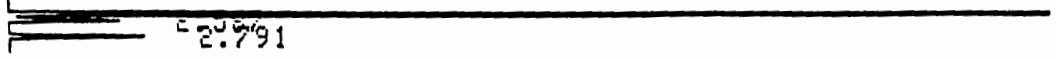
Shimadzu

97/05/14 17:32:19 LASCO BAG SAMPLES

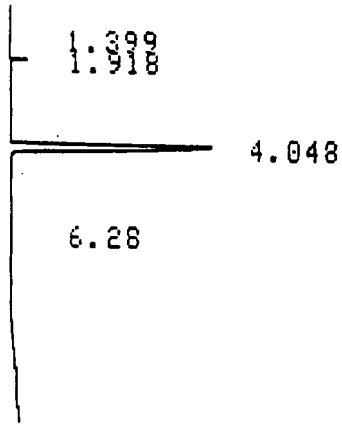
Open 10 Run3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 51

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	32240		1	94.5737	METHANE
2	2.587	1850	V	2	5.4263	ETHANE
3	2.791	2051	V			
	TOTAL	36140			100	

10 1A-5n

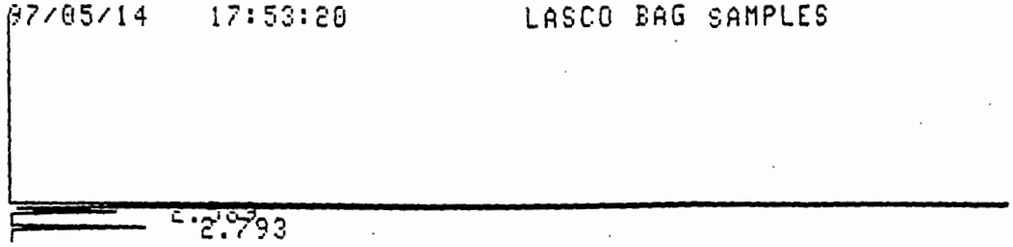


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 52

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.399	199				
2	1.918	5013				
3	4.048	216640		4	100	CS2
4	6.28	317				
	TOTAL	222169			100	

87/05/14 17:53:20 LASCO BAG SAMPLES



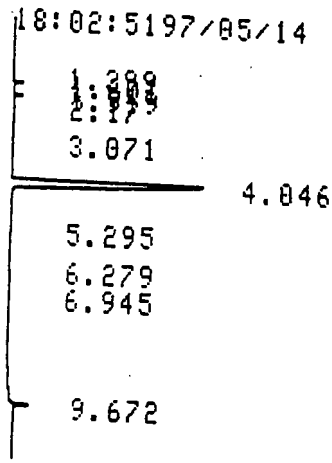
Open to 3e-Minutes

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 53

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	32807		1	94.6662	METHANE
2	2.589	1848	V	2	5.3338	ETHANE
3	2.793	2085	V			
	TOTAL	36740			100	

18:02:5197/05/14 LASCO TUBES

10-11



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 54

FILE 0
METHOD 0002

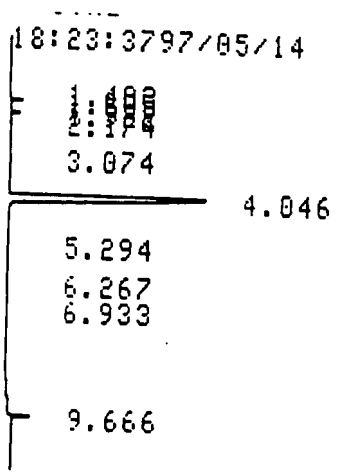
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.399	494				
2	1.601	3034				
3	1.919	3285				
4	2.17	867	V			
5	3.071	483				
6	4.046	201693		4	97.1228	CS2
7	5.295	341				
8	6.279	437				
9	6.945	321		3	0.1544	MMA
10	9.672	5654		1	2.7228	STYRENE
	TOTAL	216609			100	

14 6

225-0203

18:23:3797/05/14 LASCO TUBES

10-1A
FM



CHROMATOGRAM 1 MEMORIZED

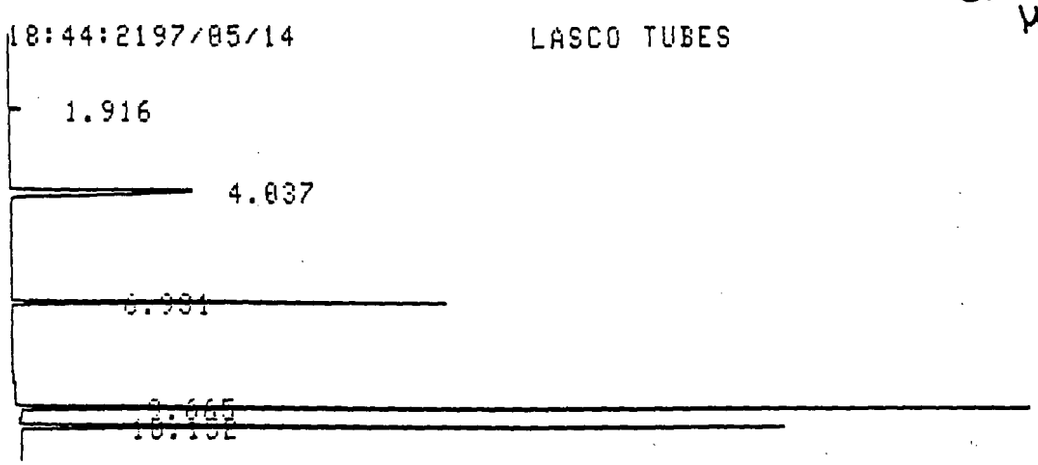
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 56

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.403	555				
2	1.605	3427				
3	1.922	3702				
4	2.174	978	V			
5	3.074	539				
6	4.046	218955		4	96.9893	CS2
7	5.294	397				
8	6.267	498				
9	6.933	362		3	0.1604	MMA
10	9.666	6434		1	2.8502	STYRENE
	TOTAL	235848			100	

Concg\
Hd

18:44:2197/05/14 LASCO TUBES



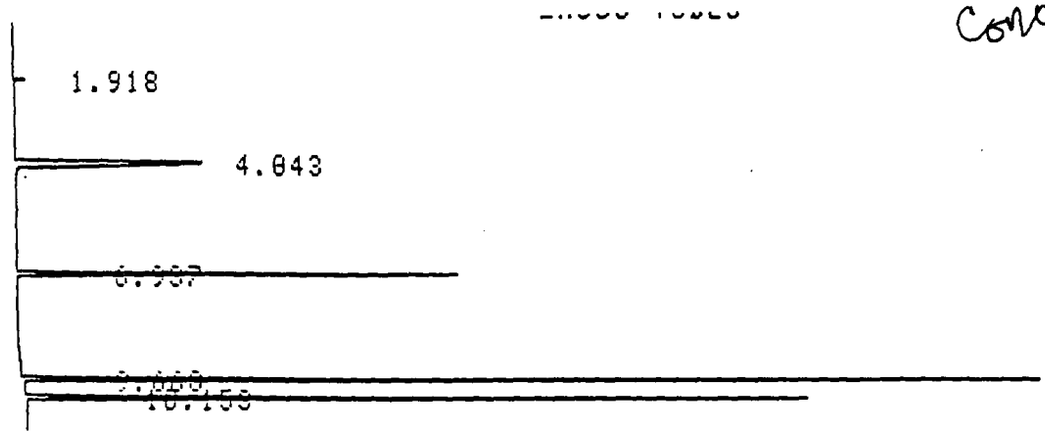
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 58

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.916	3560				
2	4.037	184246		4	17.9336	CS2
3	6.931	169927		3	16.5399	MMA
4	9.665	361653		1	35.2015	STYRENE
5	10.152	311554		2	30.3251	CUMEME
	TOTAL	1030939			100	

Concas Mel

7-02



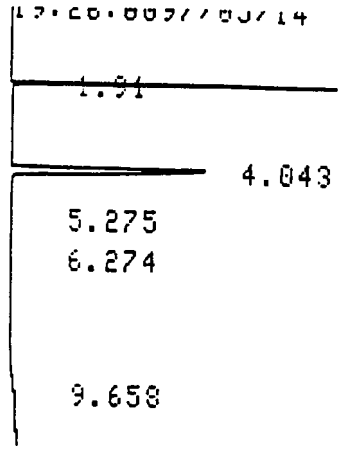
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 60

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.918	3522				
2	4.043	184481		4	17.7203	CS2
3	6.937	171239		3	16.4484	MMA
4	9.668	368725		1	35.418	STYRENE
5	10.153	316622		2	30.4132	CUMENE
	TOTAL	1044589			100	

Shimadzu

10



CHROMATOGRAM 1 MEMORIZED

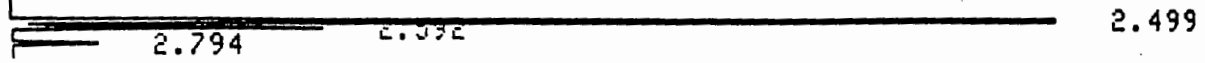
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 62

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.91	73354				
2	4.043	202315		4	99.8723	CS2
3	5.275	1229				
4	6.274	289				
5	9.658	259		1	0.1277	STYRENE
	TOTAL	277447			100	

97/05/14 19:37:23 LASCO BAG SAMPLES

open 9
run 3

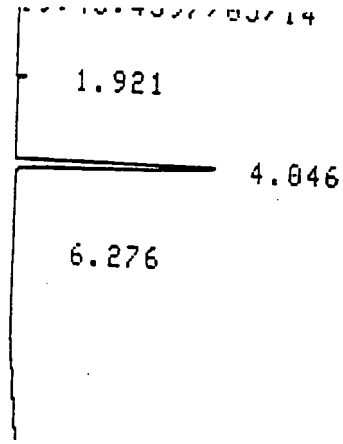


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 63

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	112227		1	96.0516	METHANE
2	2.592	4613	V	2	3.9484	ETHANE
3	2.794	1268	V			
	TOTAL	118108			100	

LASCO TUBES

NDA-11-34



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 64

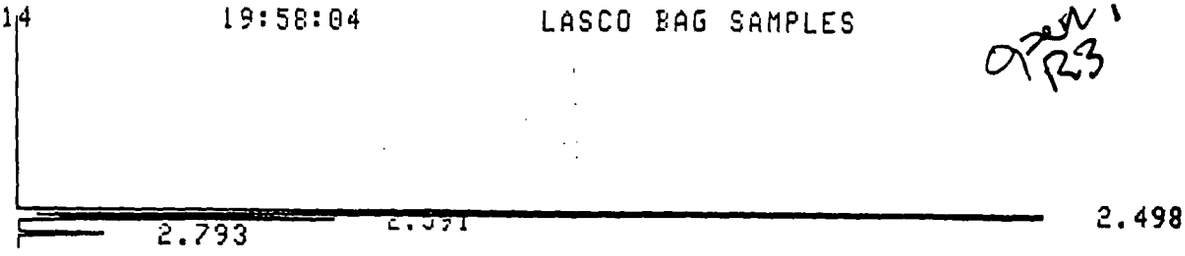
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.921	3371				
2	4.046	217752		4	100	CS2
3	6.276	324				
	TOTAL	221448			100	

15

97/05/14 19:58:04 LASCO BAG SAMPLES

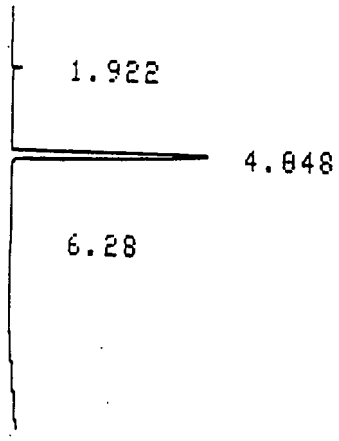
OPEN
R3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 65

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	120588		1	96.0776	METHANE
2	2.591	4923	V	2	3.9224	ETHANE
3	2.793	1358	V			
	TOTAL	126860			100	

NDA-1A
B[redacted]



CHROMATOGRAM 1 MEMORIZED

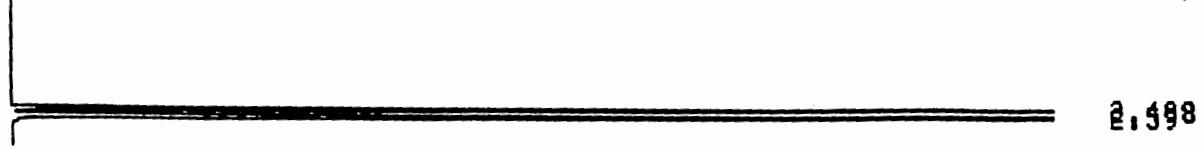
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 66

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.922	3266				
2	4.048	211517		4	100	CS2
3	6.28	310				
	TOTAL	215093			100	

97/05/14 20:18:43 LASCO BAG SAMPLES

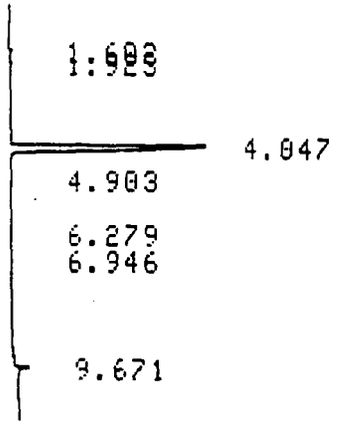
Con Cal



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 67

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	17271		1	23.2481	METHANE
2	2.59	57019	V	2	76.7519	ETHANE
	TOTAL	74290			100	

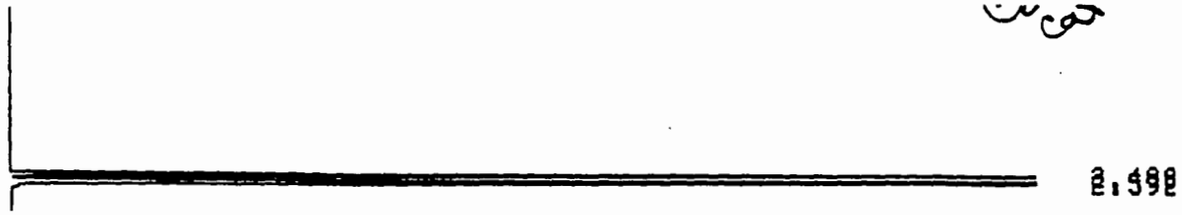
223-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 68

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.602	1155				
2	1.923	1161				
3	4.047	202099		4	97.9205	CS2
4	4.903	345				
5	6.279	292				
6	6.946	337		3	0.1631	MMA
7	9.671	3955		1	1.9163	STYRENE
	TOTAL	209344			100	



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

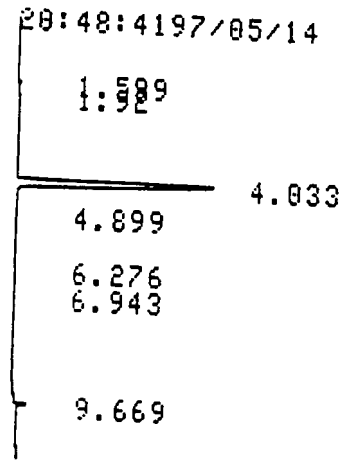
SAMPLE NO 0 METHOD 0002

REPORT NO 69

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	18551		1	23.2906	METHANE
2	2.592	61099	V	2	76.7094	ETHANE
	TOTAL	79650			100	

20:48:4197/05/14 LASCO TUBES

NDA 1-1A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 70

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.599	1135				
2	1.92	1153				
3	4.033	200070		4	97.9082	CS2
4	4.899	345				
5	6.276	283				
6	6.943	332		3	0.1626	MMA
7	9.669	3942		1	1.9292	STYRENE
	TOTAL	207260			100	

97/05/14 21:00:08 LASCO BAG SAMPLES

Room Air

Shimadzu

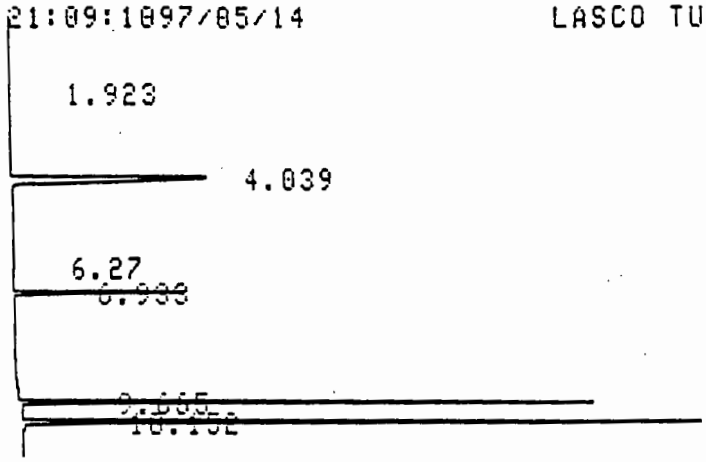
2.498

CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 71

FILE 9
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	677		1	100	METHANE
	TOTAL	677			100	

21:09:1097/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

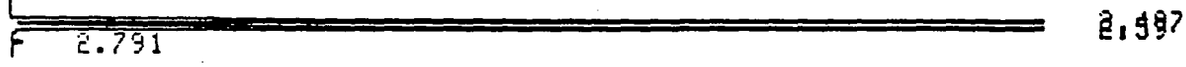
CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	72		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.923	673				
2	4.039	194553		4	27.3166	CS2
3	6.27	271				
4	6.933	64370		3	9.038	MMA
5	9.665	185442		1	26.0373	STYRENE
6	10.152	267850		2	37.6081	CUMEME
	TOTAL	713158			100	

87/05/14 21:20:38 LASCO BAG SAMPLES

Bag Spike



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

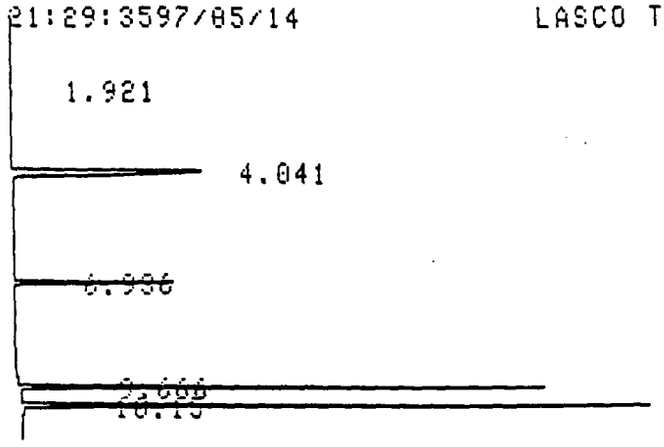
REPORT NO 73

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	27032		1	38.2983	METHANE
2	2.59	43565	V	2	61.7097	ETHANE
3	2.791	212	V			
	TOTAL	70809			100	

Shimadzu

21:29:3597/85/14 LASCO TUBES

1 Desorp



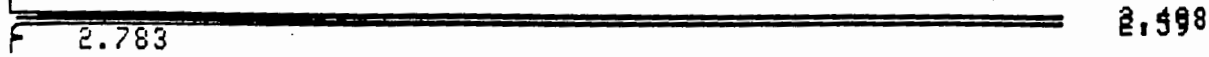
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 74

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.921	637				
2	4.041	188660		4	27.7511	CS2
3	6.936	61140		3	8.9934	MMA
4	9.666	176639		1	25.9828	STYRENE
5	10.15	253391		2	37.2727	CUMEME
	TOTAL	680467			100	

97/05/14 21:40:58 LASCO BAG SAMPLES

Bag [redacted] S[redacted]



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 75

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	27177		1	38.2899	METHANE
2	2.59	43800	V	2	61.7101	ETHANE
3	2.783	219	V			
	TOTAL	71196			100	

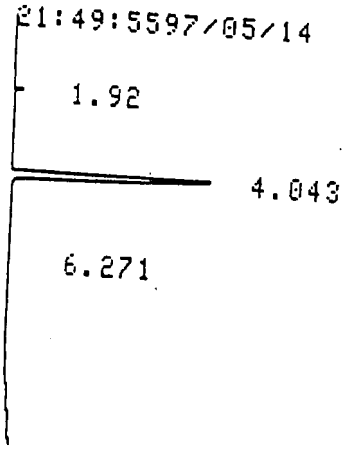
[redacted]5 [redacted]4

223-02037-02[redacted]

64

21:49:5597/05/14 LASCO TUBES

10-12A
BLK



CHROMATOGRAM 1 MEMORIZED

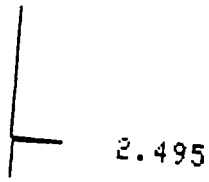
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 76

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.92	3250				
2	4.043	220265		4	100	CS2
3	6.271	319				
	TOTAL	223833			100	

~~SAMPLES~~

Room Air



CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 77

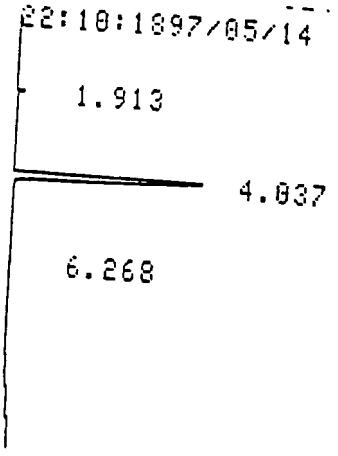
FILE 9
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	624		1	100	METHANE
	TOTAL	624			100	

22:10:1897/05/14

LASCO TUBES

10-1 2H 3H



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 78

FILE 0
METHOD 0002

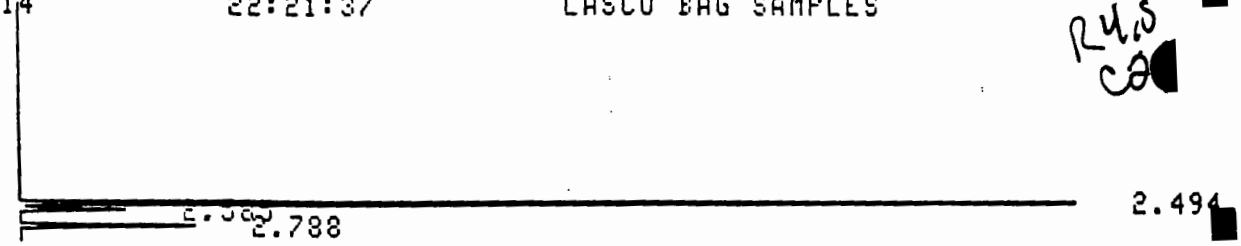
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.913	2499				
2	4.037	189803				
3	6.268	256		4	100	CS2
	TOTAL	192558			100	

15 5

223-02037-02

97/05/14 22:21:37 LASCO BAG SAMPLES

operc R4.5 CO (1)

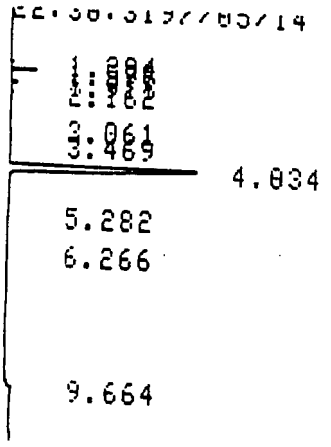


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 79

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	29265		1	94.4575	METHANE
2	2.585	1717	V	2	5.5425	ETHANE
3	2.788	2438	V			
	TOTAL	33420			100	

22:38:31977/05/14 LASCU TUBES

10-1
2A FH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 80

FILE 0
METHOD 0002

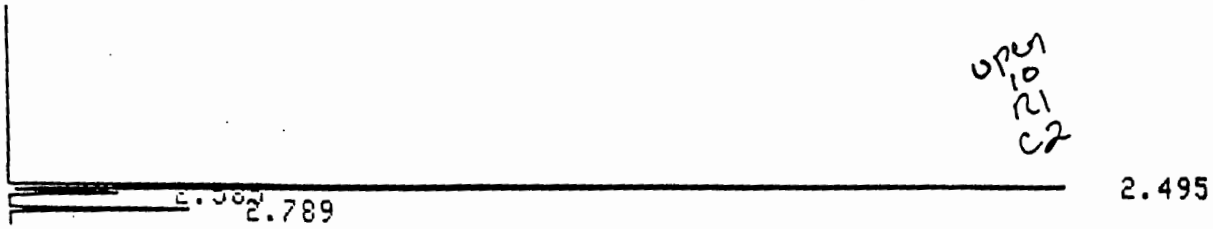
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.394	725				
2	1.596	5761				
3	1.911	3121				
4	2.162	1879	V			
5	3.061	1069				
6	3.469	681				
7	4.034	183771		4	99.1866	CS2
8	5.282	599				
9	6.266	443				
10	9.664	1507		1	0.8134	STYRENE
	TOTAL	199556			100	

15 6

223-02037-02

LASCU BAG SAMPLES

open 10 21 C2



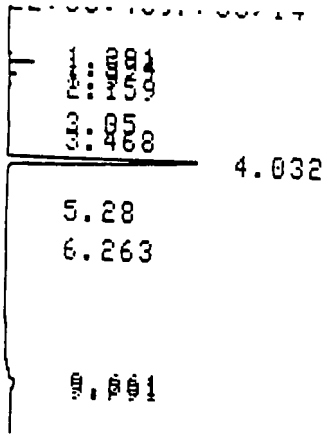
CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 81

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	31523		1	94.4586	METHANE
2	2.585	1849	V	2	5.5414	ETHANE
3	2.789	2623	V			
	TOTAL	35996			100	



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 82

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.391	708				
2	1.594	5684				
3	1.9	3058				
4	2.159	1858	V			
5	3.05	1067				
6	3.468	676				
7	4.032	182233		4	98.7268	CS2
8	5.28	585				
9	6.263	435				
10	9.661	2350		1	1.2732	STYRENE
11	9.791	1700	V			
TOTAL		200354			100	

..ORT NO 83

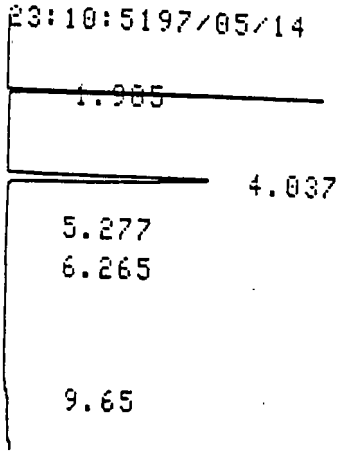
FILE 9

METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	86375		1	95.9627	METHANE
2	2.586	3634	V	2	4.0373	ETHANE
3	2.788	1371	V			
TOTAL		91380			100	

23:10:5197/05/14 LASCO TUBES

Blank



CHROMATOGRAM 1 MEMORIZED

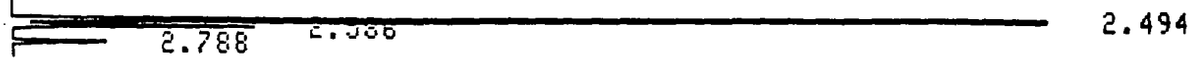
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 84

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.905	72072				
2	4.037	213930		4	99.8329	CS2
3	5.277	1287				
4	6.265	309				
5	9.65	358		1	0.1671	STYRENE
	TOTAL	287955			100	

97/05/14 23:22:14 LASCO BAG SAMPLES

open 9
C2 B



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002
REPORT NO 85

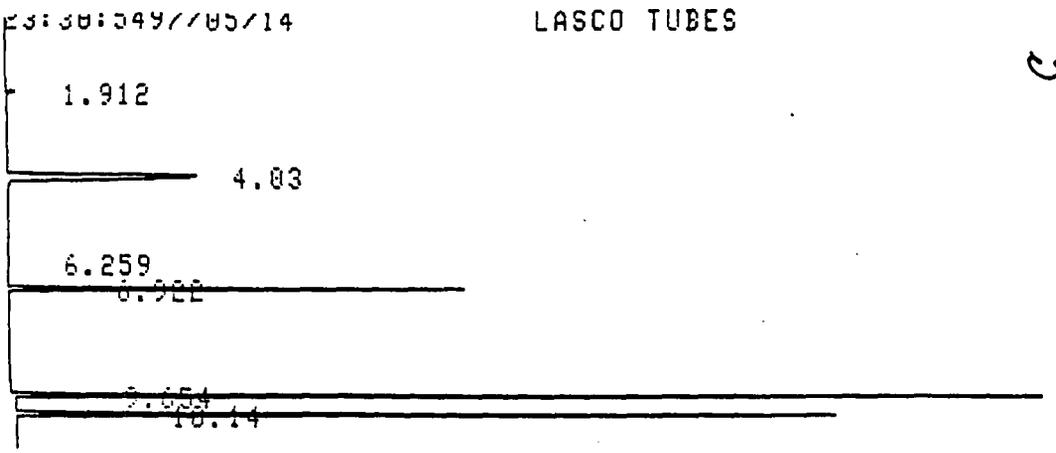
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	88076		1	95.9608	METHANE
2	2.586	3707	V	2	4.0391	ETHANE
3	2.788	1397	V			
	TOTAL	93180			100	

15 8

223-02037-02

23:38:54 97/05/14 LASCO TUBES

Con Gal



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 86

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	3107				
2	4.03	191710		4	17.8174	CS2
3	6.259	255				
4	6.922	176763		3	16.4282	MMA
5	9.654	380417		1	35.3557	STYRENE
6	10.14	327082		2	30.3987	CUMENE
	TOTAL	1079333			100	

97/05/14 23:42:20 LASCO BAG SAMPLES

open 9 R3 C2

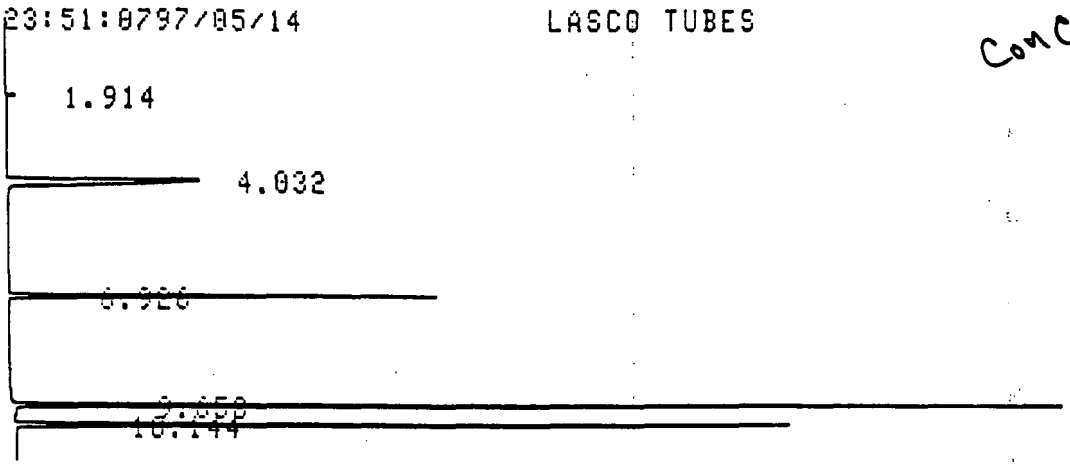
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 87

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	82117		1	95.8056	METHANE
2	2.585	3595	V	2	4.1944	ETHANE
3	2.787	819	V			
	TOTAL	86531			100	

⊕ Shinadu

23:51:0797/05/14 LASCO TUBES

Concal



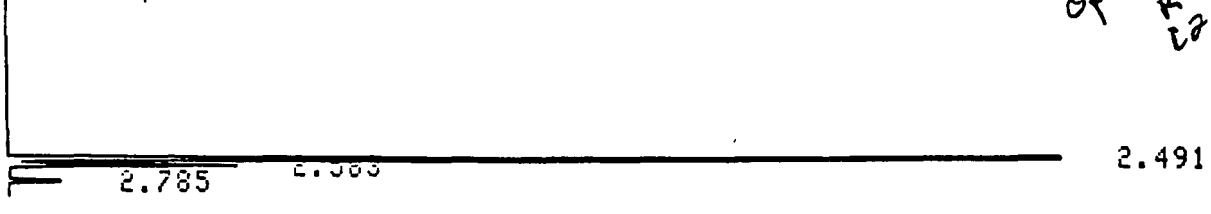
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 88

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.914	2902				
2	4.032	182653		4	18.2831	CS2
3	6.926	162612		3	16.2771	MMA
4	9.658	352150		1	35.2493	STYRENE
5	10.144	301611		2	30.1905	CUMEME
	TOTAL	1001929			100	

97/05/15 00:02:31 LASCO BAG SAMPLES

open 9 R2 L2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 89

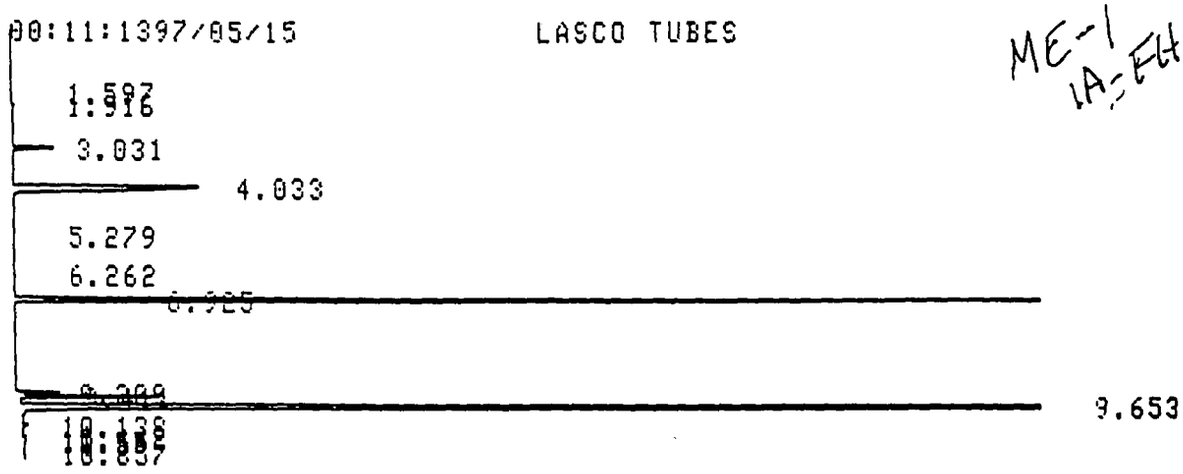
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	80850		1	95.8142	METHANE
2	2.583	3532	V	2	4.1858	ETHANE
3	2.785	808	V			
	TOTAL	85189			100	

15 9

223-02037-02

00:11:1397/05/15 LASCO TUBES

ME-1
1A-EH



CHROMATOGRAM 1 MEMORIZED

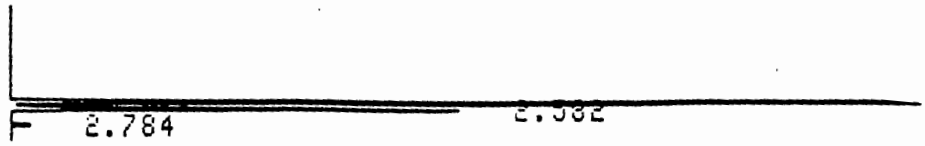
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 90

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.597	645				
2	1.916	1191				
3	3.031	19563				
4	4.033	187438		4	3.9735	CS2
5	5.279	686				
6	6.262	257				
7	6.925	591876		3	12.5473	MMA
8	9.309	15608				
9	9.411	54213	V			
10	9.653	3934626	VE	1	83.411	STYRENE
11	10.138	3216	V	2	0.0682	CUMENE
12	10.442	2218				
13	10.55	314	V			
14	10.857	829				
	TOTAL	4812677			100	

16 0

223-02037-02

77



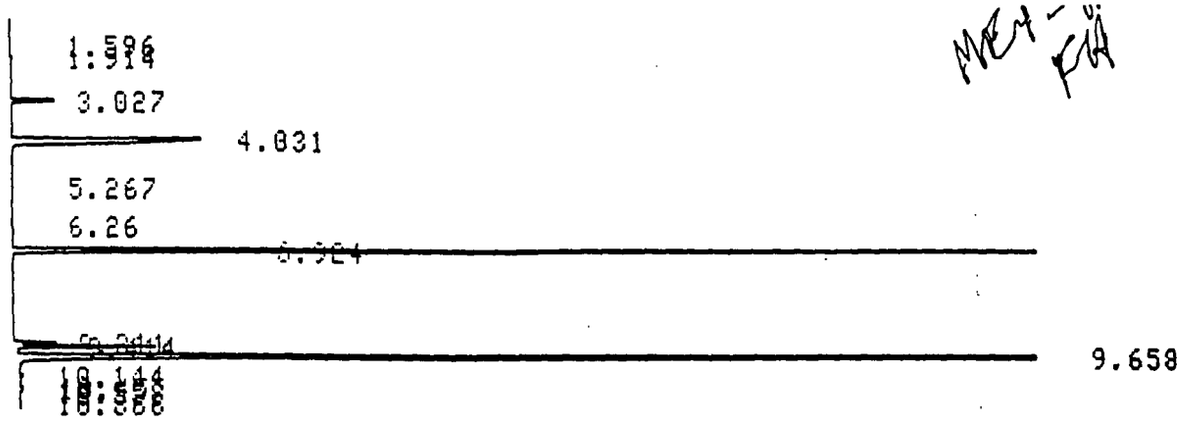
CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 91

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	28649		1	82.307	METHANE
2	2.582	6158	V	2	17.6929	ETHANE
3	2.784	318	V			
	TOTAL	35126			100	



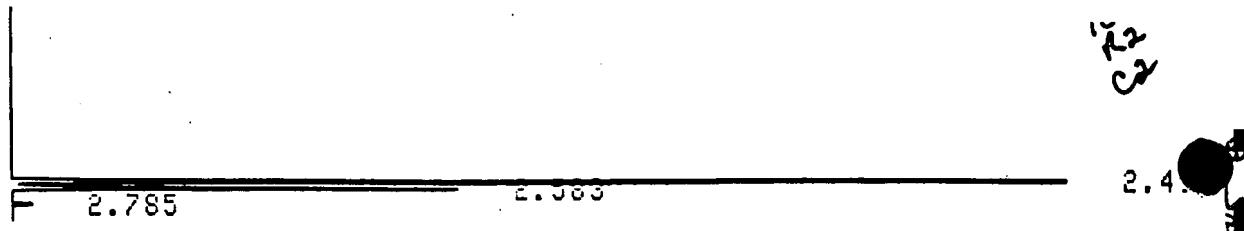
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 92

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.596	708				
2	1.914	1301				
3	3.027	20173				
4	4.031	186745		4	4.0033	CS2
5	5.267	681				
6	6.26	252				
7	6.924	579782		3	12.429	MMA
8	9.311	15092				
9	9.414	52981	V			
10	9.658	3894949	VE	1	83.4973	STYRENE
11	10.144	3286	V	2	0.0704	CUMENE
12	10.45	2115				
13	10.558	340	V			
14	10.866	760				
	TOTAL	4759162			100	

16 1

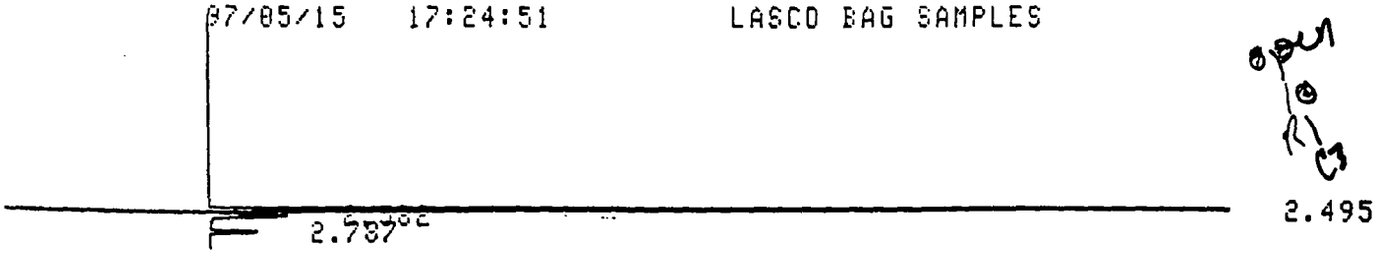
223-02037-02



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 93

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	28793		1	82.3133	METHANE
2	2.583	6187	V	2	17.6867	ETHANE
3	2.785	311	V			
	TOTAL	35290			100	

CHROMATOGRAM 101 MEMORIZED
87/05/15 17:24:51 LASCO BAG SAMPLES

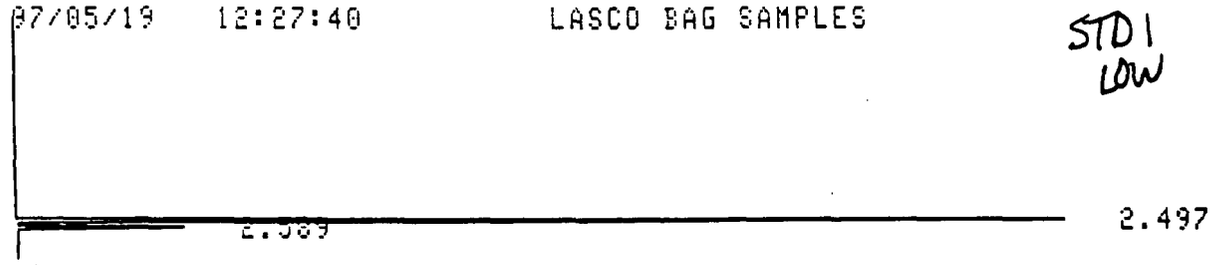


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 143

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	19008		1	91.3987	METHANE
2	2.582	1789	V	2	8.6013	ETHANE
3	2.787	738	V			
	TOTAL	21535			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 12:27:40 LASCO BAG SAMPLES

STD 1
LOW

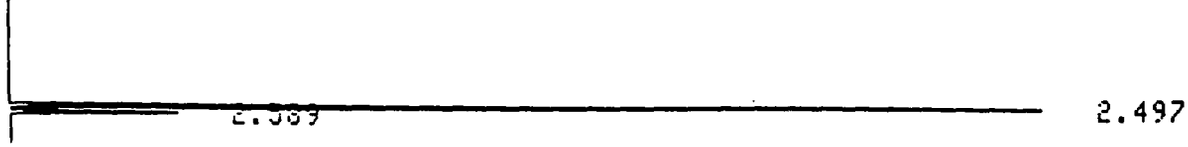


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 193

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	13777		1	85.7541	METHANE
2	2.589	2289	V	2	14.2459	ETHANE
	TOTAL	16066			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 12:18:53 LASCO BAG SAMPLES

STD 1
LOW



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 192

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	13897		1	85.7904	METHANE
2	2.589	2302	V	2	14.2096	ETHANE
	TOTAL	16199			100	

223-02037-02

CHROMATOGRAM 101 MEMORIZED

87/05/19 12:01:15 LASCO BAG SAMPLES

STD 1
LOW

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

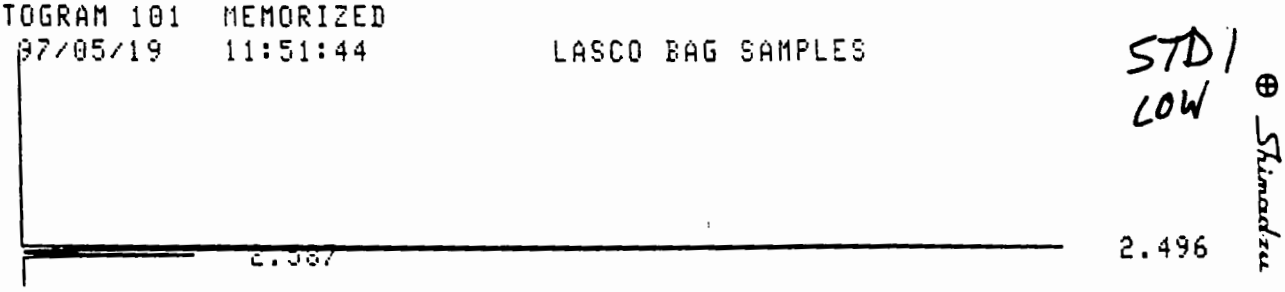
REPORT NO 191

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	12986		1	85.7491	METHANE
2	2.587	2158	V	2	14.2509	ETHANE
	TOTAL	15145			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 11:51:44 LASCO BAG SAMPLES

STD 1
LOW

⊕ Shimadzu

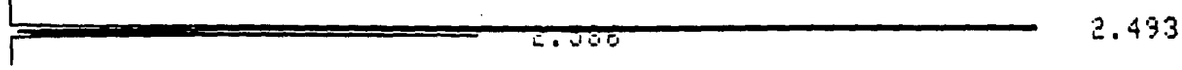


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 190

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	13813		1	85.809	METHANE
2	2.587	2284	V	2	14.191	ETHANE
	TOTAL	16097			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 11:40:34 LASCO BAG SAMPLES

STD2
MID



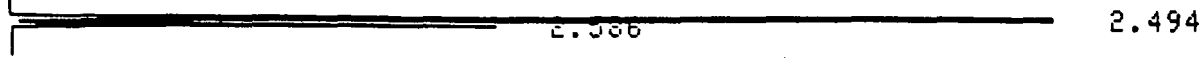
223-02037-02

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 189

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	68690		1	91.7195	METHANE
2	2.586	6201	V	2	8.2804	ETHANE
	TOTAL	74891			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 11:29:18 LASCO BAG SAMPLES

STD 2
MID

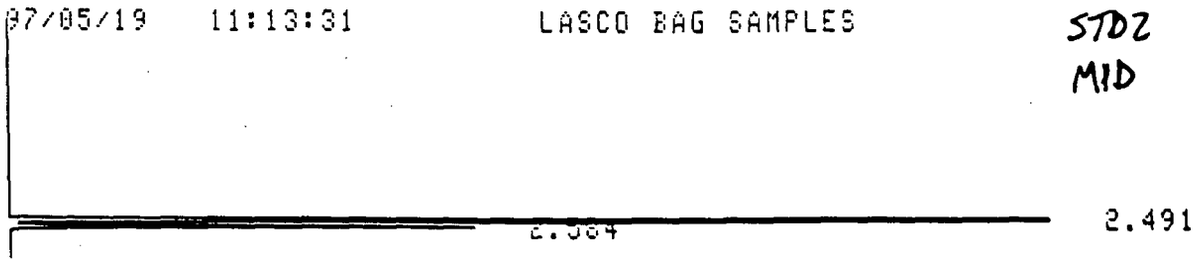


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 188

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	71464		1	91.7503	METHANE
2	2.586	6426	V	2	8.2497	ETHANE
	TOTAL	77890			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 11:13:31 LASCO BAG SAMPLES

STD2
MID



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 187

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	68685		1	91.7474	METHANE
2	2.584	6178	V	2	8.2526	ETHANE
	TOTAL	74863			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 10:50:40 LASCO BAG SAMPLES

223-02037-02

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 186

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	184917		1	76.2947	METHANE
2	2.585	57455	V	2	23.7052	ETHANE
	TOTAL	242372			100	

← STD3 HIGH

CHROMATOGRAM 101 MEMORIZED
87/05/19 10:45:22 LASCO BAG SAMPLES

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002

REPORT NO 185

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	189780		1	76.2929	METHANE
2	2.582	58972	V	2	23.707	ETHANE
	TOTAL	248752			100	

← STD3 HIGH

CHROMATOGRAM 101 MEMORIZED
87/05/19 10:12:13 LASCO BAG SAMPLES

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 184

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	197996		1	76.343	METHANE
2	2.582	61355	V	2	23.657	ETHANE
	TOTAL	259351			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 10:00:09 LASCO BAG SAMPLES

WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED
97/05/19 10:04:19 LASCO BAG SAMPLES

HIGH
STD3

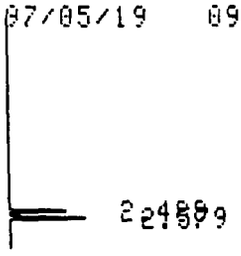
223-02037-02

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 183

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.488	188255		1	76.2938	METHANE
2	2.58	58495	V	2	23.7062	ETHANE
	TOTAL	246751			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 09:53:03 LASCO BAG SAMPLES

AMBIENT AIR



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 182

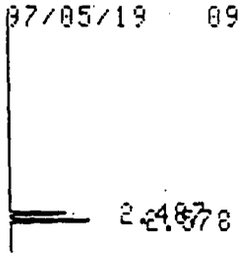
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.488	738		1	41.5542	METHANE
2	2.579	1038	V	2	58.4458	ETHANE
	TOTAL	1776			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 09:40:07 LASCO BAG SAMPLES

WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED
87/05/19 09:43:13 LASCO BAG SAMPLES

AMBIENT AIR

⊕ Shimadzu



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 181

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.487	741		1	40.4145	METHANE
2	2.578	1093	V	2	59.5855	ETHANE
	TOTAL	1834			100	

ad

CHROMATOGRAM 101 MEMORIZED
87/05/15 23:38:23 LASCO BAG SAMPLES

open 9
cy
Shimadzu

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 179

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	94425		1	95.8239	METHANE
2	2.579	4115	V	2	4.1761	ETHANE
3	2.781	1054	V			
	TOTAL	99594			100	

CHROMATOGRAM 101 MEMORIZED
87/05/15 23:34:43 LASCO BAG SAMPLES

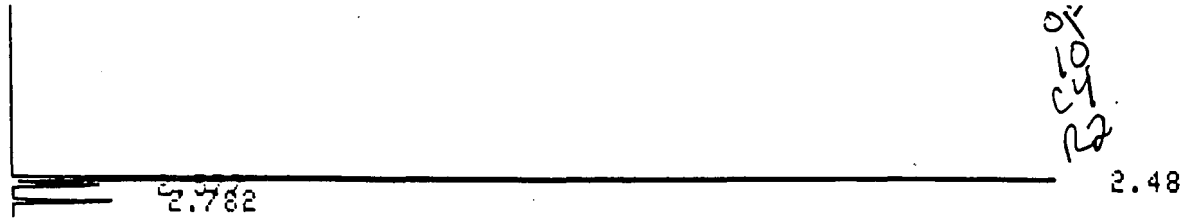
open 9
CH
RZ

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 178

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	97652		1	95.8428	METHANE
2	2.58	4236	V	2	4.1571	ETHANE
3	2.781	1087	V			
	TOTAL	102975			100	

223-02037-02

06



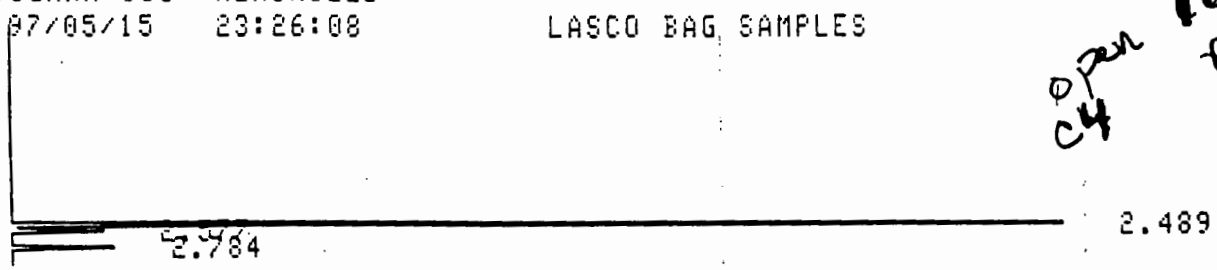
OK
10
C4
R2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 177

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	21186		1	92.6091	METHANE
2	2.577	1691	V	2	7.3909	ETHANE
3	2.782	1527	V			
	TOTAL	24403			100	

CHROMATOGRAM 101 MEMORIZED
87/05/15 23:26:08 LASCO BAG SAMPLES

open 10 R2 C4



Shimadzu

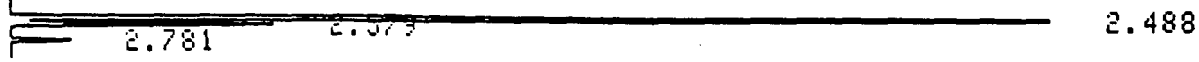
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 176

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	22526		1	92.6109	METHANE
2	2.577	1797	V	2	7.3891	ETHANE
3	2.784	1626	V			
	TOTAL	25949			100	

9R

87/05/15 23:15:55 LASCO BAG SAMPLES

open air CH4 RL



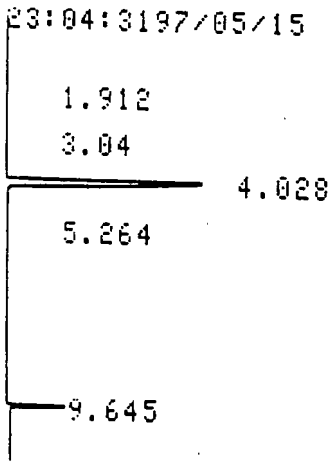
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 175

0.38

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.488	98149		1	95.9639	METHANE
2	2.579	4128	V	2	4.036	ETHANE
3	2.781	976	V			
	TOTAL	103253			100	

223-02037-02

23:04:3197/05/15 LASCO TUBES



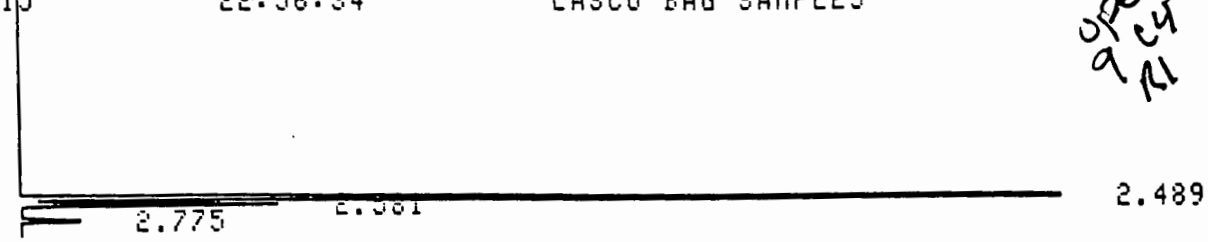
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 174

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	576				
2	3.04	553				
3	4.028	194827		4	90.9619	CS2
4	5.264	1720				
5	9.645	19358		1	9.0381	STYRENE
	TOTAL	217034			100	

97/05/15 22:56:34 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 173

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	97436		1	95.9382	METHANE
2	2.581	4125	V	2	4.0618	ETHANE
3	2.775	972	V			
	TOTAL	102533			100	

223-02037-02

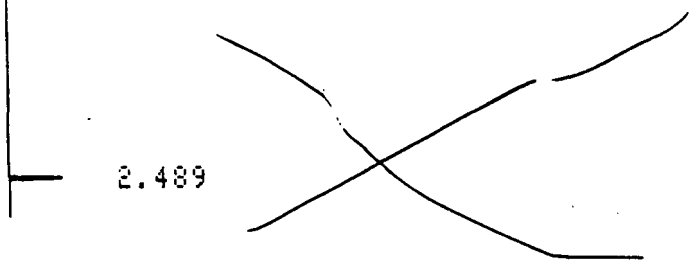
⊕ Shinada

61

97/05/15 22:37:03 LASCO BAG SAMPLES

Blank

Shimadzu

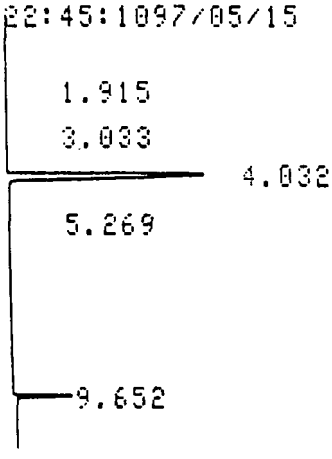


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD : 0002
REPORT NO 171

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	670		1	100	METHANE
	TOTAL	670			100	

22:45:1097/05/15 LASCO TUBES

REG-1A
FH
UnSpike



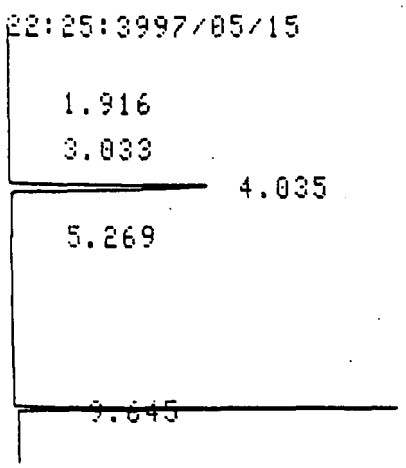
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 172

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.915	614				
2	3.033	564				
3	4.032	195750		4	90.9698	CS2
4	5.269	1738				
5	9.652	19431		1	9.0301	STYRENE
	TOTAL	218097			100	

22:25:3997/05/15 LASCO TUBES

AE-4-
1A
spike
FH



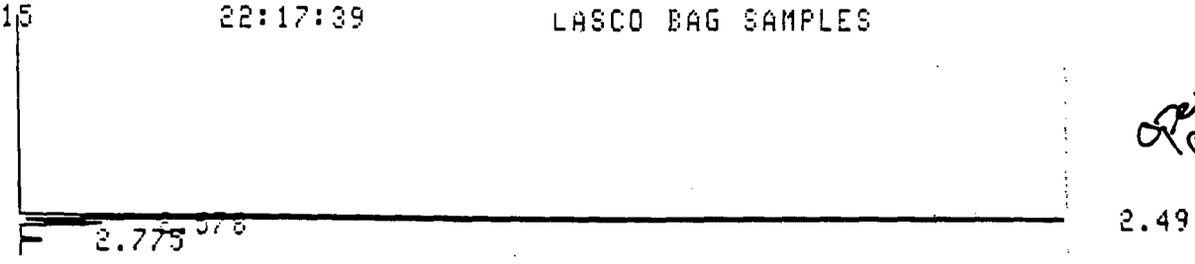
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 170

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.916	575				
2	3.033	671				
3	4.035	196568		4	60.9753	CS2
4	5.269	1986				
5	9.645	125805		1	39.0247	STYRENE
	TOTAL	325604			100	

223-02037-02

97/05/15 22:17:39 LASCO BAG SAMPLES



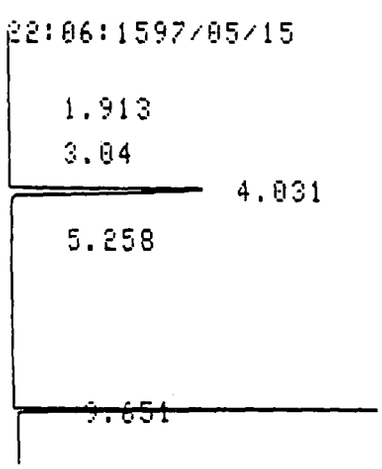
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 169

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	20989		1	92.6564	METHANE
2	2.578	1664	V	2	7.3436	ETHANE
3	2.775	367	V			
	TOTAL	23020			100	

22:06:1597/05/15 LASCO TUBES

RE-4
1A
FH
Spike

2237-2037.02



CHROMATOGRAM 1 MEMORIZED

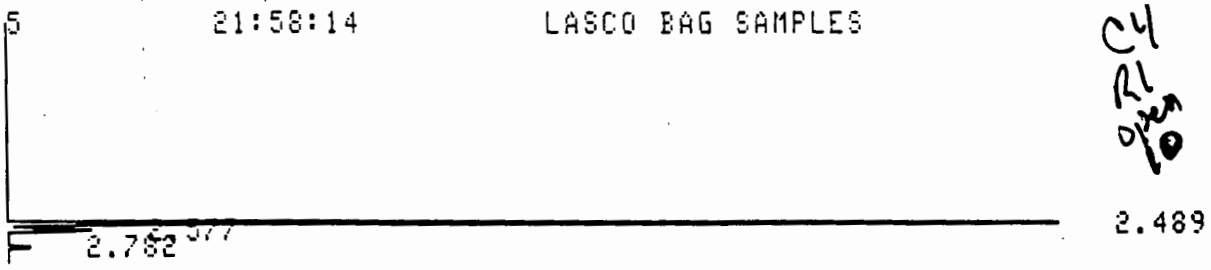
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 168

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.913	588				
2	3.04	667				
3	4.031	194588		4	61.4802	CS2
4	5.258	1963				
5	9.651	121917		1	38.5198	STYRENE
	TOTAL	319724			100	

⊕ Shimadzu

97/05/15 21:58:14 LASCO BAG SAMPLES

C4
RL
open
10

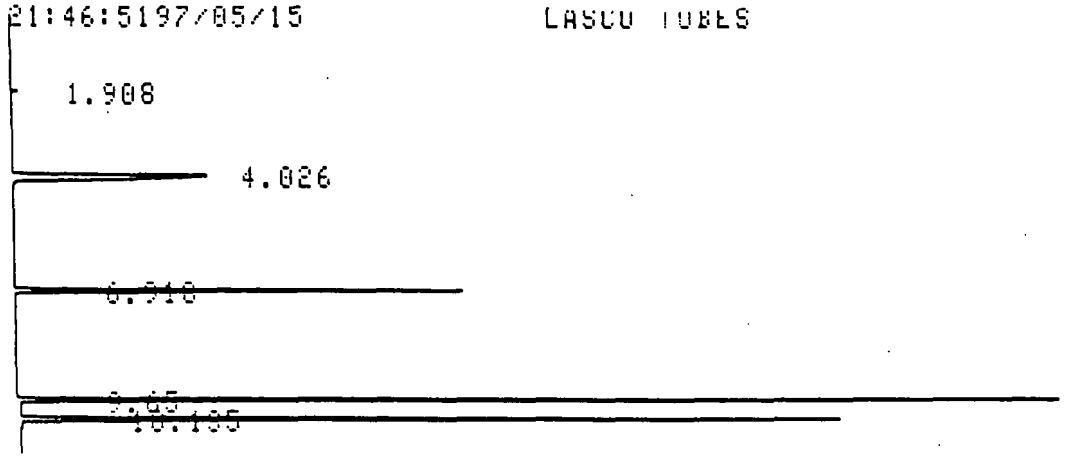


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 167

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	20001		1	92.6712	METHANE
2	2.577	1582	V	2	7.3288	ETHANE
3	2.782	346	V			
	TOTAL	21929			100	

106

21:46:5197/05/15 LASCU TUBES

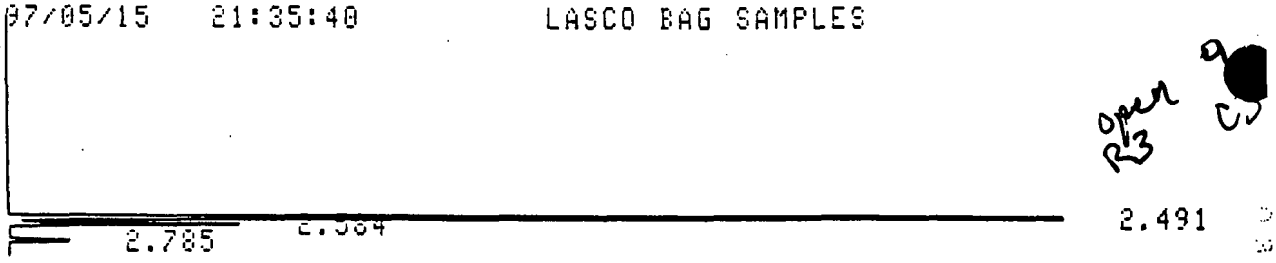


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 166

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	2204				
2	4.026	193795		4	18.2488	CS2
3	6.918	170309		3	16.0371	MMA
4	9.65	374306		1	35.2466	STYRENE
5	10.135	323555		2	30.4676	CUMEME
	TOTAL	1064169			100	

CHROMATOGRAM 101 MEMORIZED
87/05/15 21:35:40 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 165

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	88748		1	96.1555	METHANE
2	2.584	3548	V	2	3.8445	ETHANE
3	2.785	948	V			
	TOTAL	93244			100	

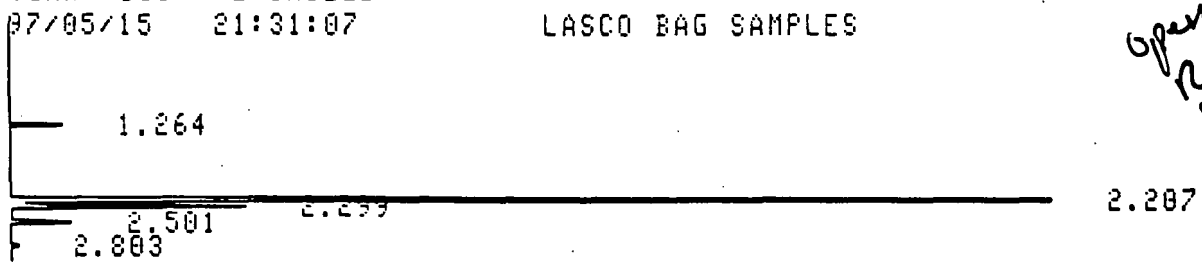
223-02037-02

108

CHROMATOGRAM 101 MEMORIZED
87/05/15 21:27:58 LASCO BAG SAMPLES

WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED
87/05/15 21:31:07 LASCO BAG SAMPLES

open 9
R3
C3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 164

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.264	673				
2	2.207	93350				
3	2.299	3727	V			
4	2.501	992	V	1	100	METHANE
5	2.803	224				
	TOTAL	98966			100	

CHROMATOGRAM 101 MEMORIZED

87/05/15 21:24:25 LASCO BAG SAMPLES

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

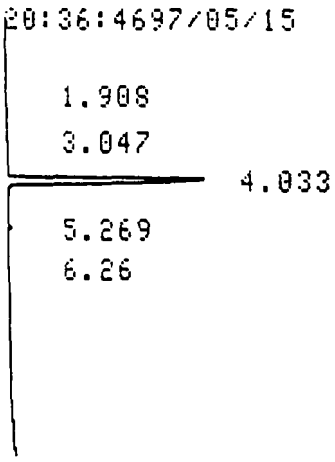
SAMPLE NO 0 METHOD 0002

REPORT NO 163

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	18343		1	92.4601	METHANE
2	2.58	1496	V	2	7.5399	ETHANE
3	2.786	1838	V			
	TOTAL	21677			100	

20:36:4697/05/15 LASCO TUBES

ME-3-
3A-3B
unspk



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 160

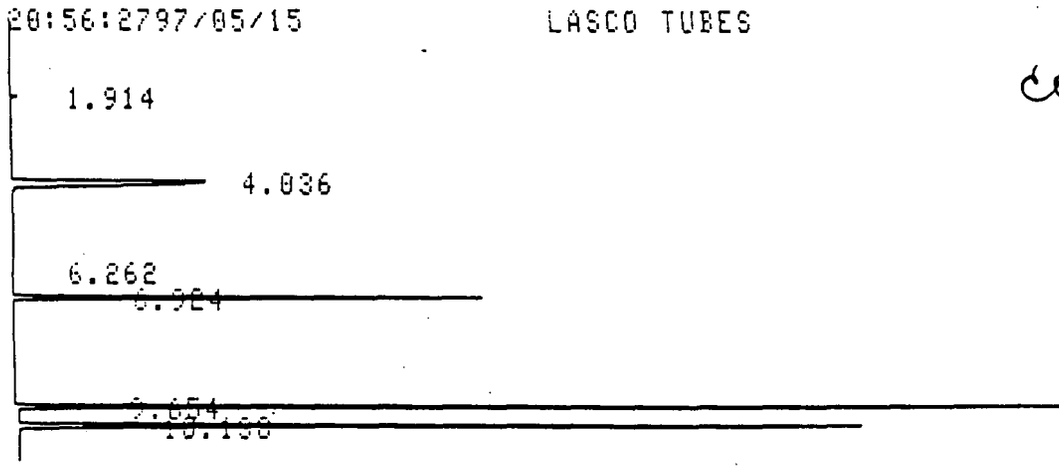
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	1024				
2	3.047	400				
3	4.033	215560		4	100	CS2
4	5.269	2398				
5	6.26	304				
	TOTAL	219685			100	

223-02037-02

111

20:56:2797/05/15 LASCO TUBES

concal



CHROMATOGRAM 1 MEMORIZED

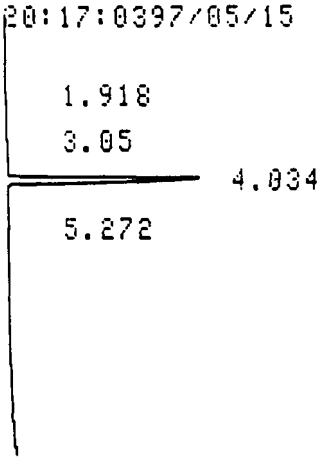
CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	161		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.914	2473				
2	4.036	199442		4	18.0444	CS2
3	6.262	261				
4	6.924	177854		3	16.0913	MMA
5	9.654	391349		1	35.4071	STYRENE
6	10.138	336637		2	30.4572	CUMEME
	TOTAL	1108016			100	

20:17:0397/05/15 LASCO TUBES

ME-3-
3A-B&H
unspike



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 159

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.918	863				
2	3.05	336				
3	4.034	192912		4	100	CS2
4	5.272	2011				
	TOTAL	196122			100	

97/05/15 19:48:41 LASCO BAG SAMPLES

open 10 C3 pm

2.495

2.583

2.788

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 157

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	17736		1	92.2287	METHANE
2	2.583	1494	V	2	7.7713	ETHANE
3	2.788	711	V			
	TOTAL	19941			100	

19:57:1197/05/15 LASCO TUBES

ME-3 3A FH unspike

1.908
3.033
4.033
5.271
6.262
9.659
10.146

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 158

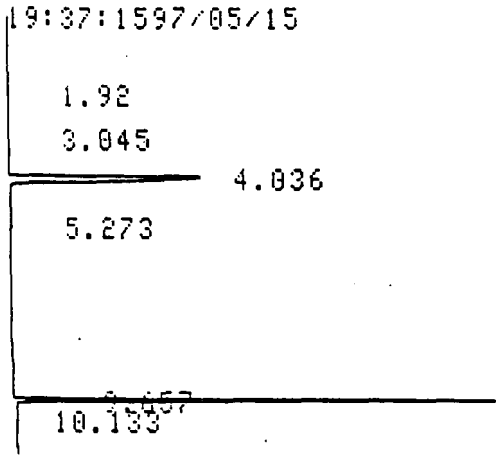
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	412				
2	3.033	1078				
3	4.033	194870		4	54.4166	CS2
4	5.271	1981				
5	6.262	266				
6	9.659	162860		1	45.4778	STYRENE
7	10.146	378		2	0.1057	CUMEME
	TOTAL	361846			100	

2037-02

Shimadzu

19:37:1597/05/15 LASCO TUBES

ME-3-
3A Fit
unspike



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 156

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.92	414				
2	3.045	1087				
3	4.036	193737		4	54.8942	CS2
4	5.273	1964				
5	9.657	158837		1	45.0055	STYRENE
6	10.133	354		2	0.1003	CUMENE
	TOTAL	356393			100	

97/05/15 19:28:38 LASCO BAG SAMPLES

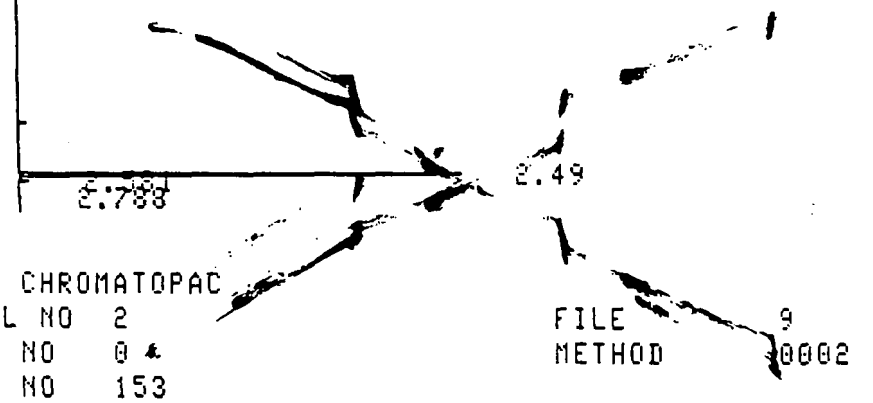
2.496

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 155

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	679		1	100	METHANE
	TOTAL	679			100	

223-02037-02

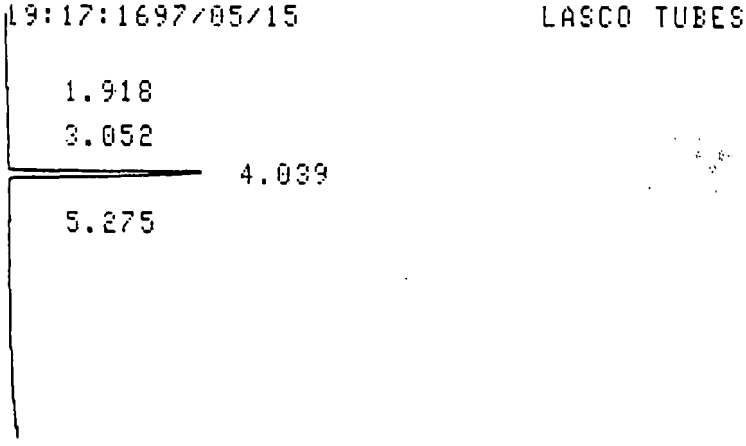
87/05/15 19:08:40 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 153

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	4833		1	96.2915	METHANE
2	2.581	186	V	2	3.7085	ETHANE
	TOTAL	5019			100	

19:17:1697/05/15 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 154

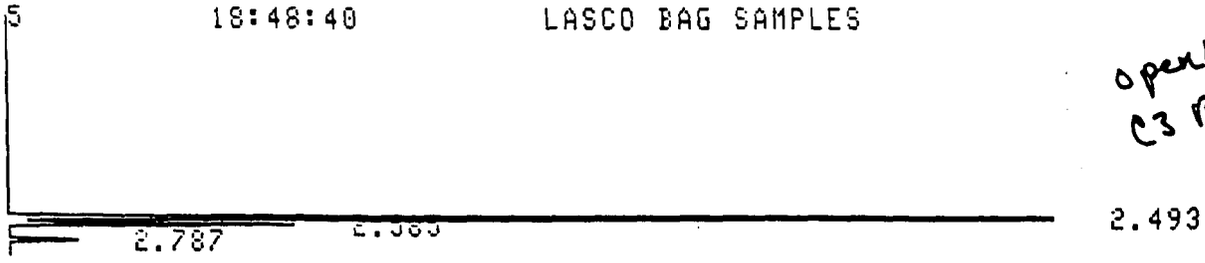
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.918	1222				
2	3.052	343				
3	4.039	195222		4	100	CS2
4	5.275	2069				
	TOTAL	198857			100	

⊕ Shimadzu

M/E-3-
3A BH
spike

97/05/15 18:48:40 LASCO BAG SAMPLES

opened C3 R2

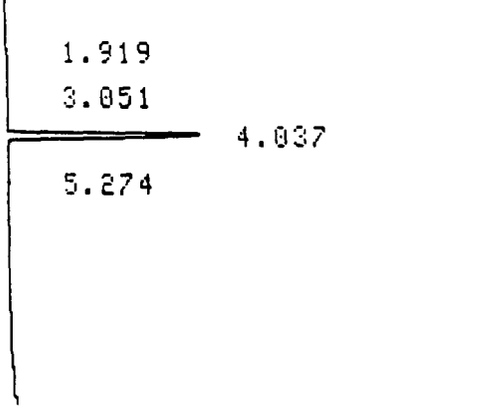


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 151

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	106829		1	96.1541	METHANE
2	2.585	4273	V	2	3.8459	ETHANE
3	2.787	1038	V			
	TOTAL	112139			100	

18:57:1797/05/15 LASCO TUBES

ME-3-3A Blk spike



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002
REPORT NO 152

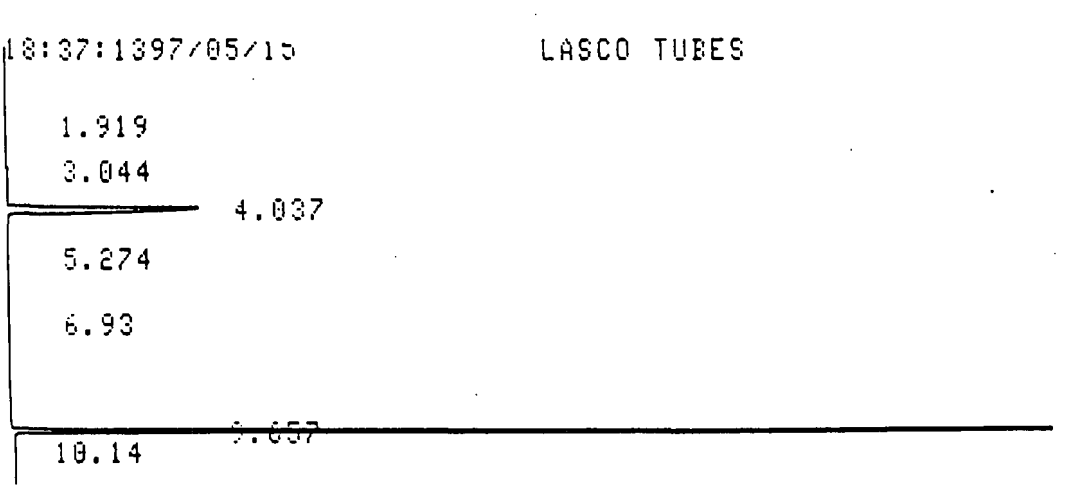
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.919	1228				
2	3.051	343				
3	4.037	196598		4	100	CS2
4	5.274	2087				
	TOTAL	200256			100	

C 29

223-02037-02

ME-3-
3A FH
spike

18:37:1397/05/15 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 150

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.919	749				
2	3.044	1834				
3	4.037	193385		4	19.7744	CS2
4	5.274	1810				
5	6.93	523		3	0.0535	MMA
6	9.657	782920		1	80.0567	STYRENE
7	10.14	1128		2	0.1154	CUMENE
	TOTAL	982349			100	

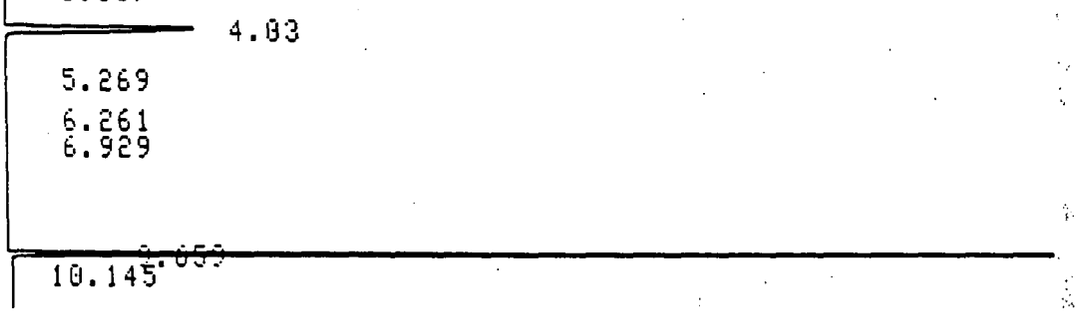
223-02037-02

Shinadzu

18:17:1597/05/15 LASCO TUBES

MK-3
3A BH
spike

Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 148

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.914	733				
2	3.037	1780				
3	4.03	189241		4	20.2697	CS2
4	5.269	1714				
5	6.261	252				
6	6.929	499		3	0.0534	MMA
7	9.659	742801		1	79.562	STYRENE
8	10.145	1072		2	0.1148	CUMEME
	TOTAL	938091			100	

87/05/15 18:03:48 LASCO BAG SAMPLES

open
R2
C3

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 147

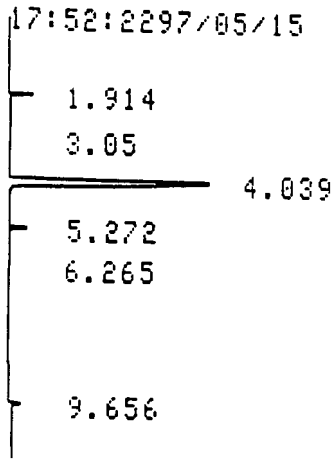
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	104518		1	96.1459	METHANE
2	2.585	4190	V	2	3.8541	ETHANE
3	2.786	1024	V			
	TOTAL	109731			100	

223-02037-02

121

17:52:2297/05/15 LASCO TUBES

NDB 2-3A FH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 146

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.914	6735				
2	3.05	945				
3	4.039	218877		4	98.4542	CS2
4	5.272	8841				
5	6.265	316				
6	9.656	3437		1	1.5458	STYRENE
	TOTAL	239151			100	

97/05/15 17:44:30 LASCO BAG SAMPLES

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 145

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	18235		1	92.3163	METHANE
2	2.58	1518	V	2	7.6836	ETHANE
3	2.786	699	V			
	TOTAL	20451			100	

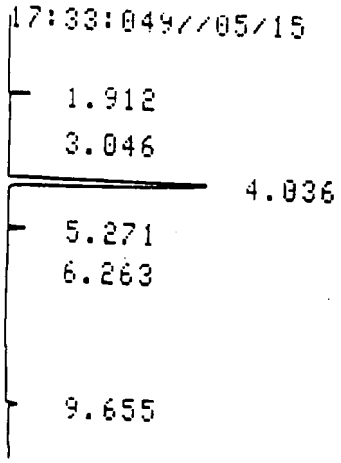
223-02037-02

Open 10/13/97

Shimadzu

17:33:049//05/15 LASCO TUBES

ND3
2-3A
F1)



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 144

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	6338				
2	3.046	889				
3	4.036	212453		4	98.4714	CS2
4	5.271	8374				
5	6.263	297				
6	9.655	3298		1	1.5286	STYRENE
	TOTAL	231650			100	

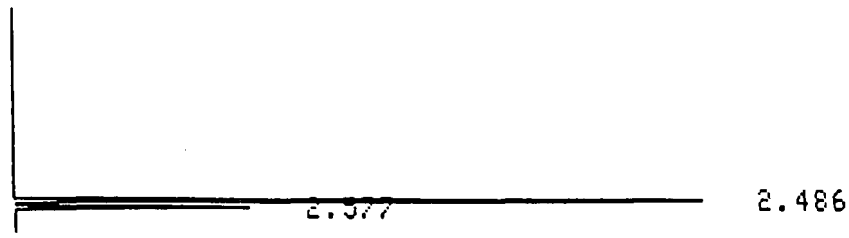
23-0237-02

⊕ Shimadzu

WARNING NO PEAK

WARNING NO PEAK

CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 3

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.486	8971		2	74.558	ETHANE
2	2.577	3061	V	2	25.442	ETHANE
	TOTAL	12033			100	

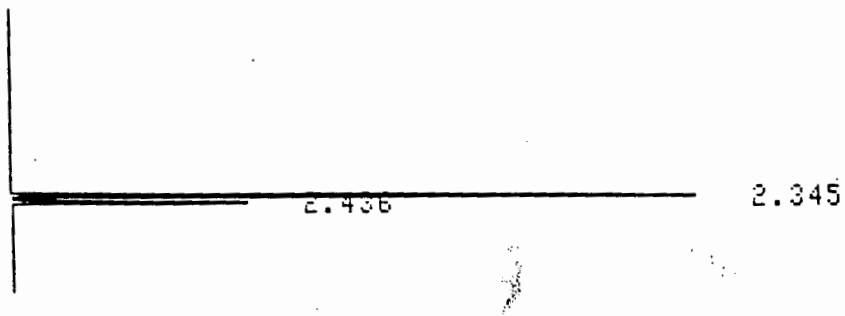
std

125

CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK

WARNING NO PEAK

CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 4

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.345	8604				
2	2.436	2942	V	1	100	METHANE
	TOTAL	11545			100	

223-02037-02

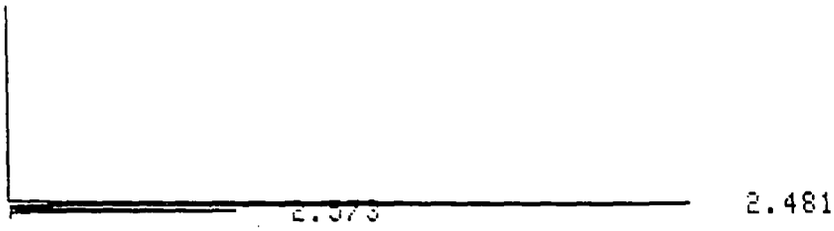
std 1

Shimadzu

120

std 1

CHROMATOGRAM 101 MEMORIZED



CR501 CHROMATOPAC

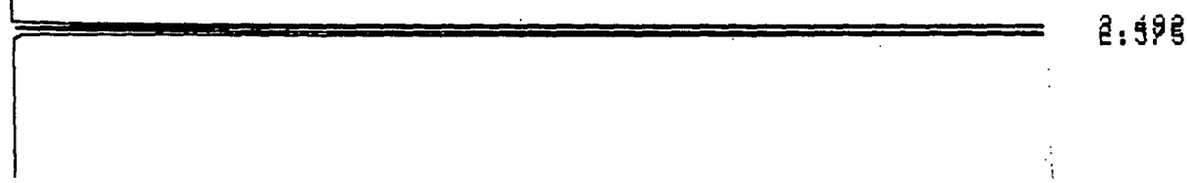
CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 5

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.481	8664		2	74.4947	ETHANE
2	2.573	2966	V	2	25.5052	ETHANE
	TOTAL	11630			100	

97/05/14 08:19:01 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 6

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	19338		2	23.3084	ETHANE
2	2.575	63629	V	2	76.6916	ETHANE
	TOTAL	82968			100	

223-02037-02

77/03/14 08:23:27 LASCO BAG SAMPLES

std 2

2.575

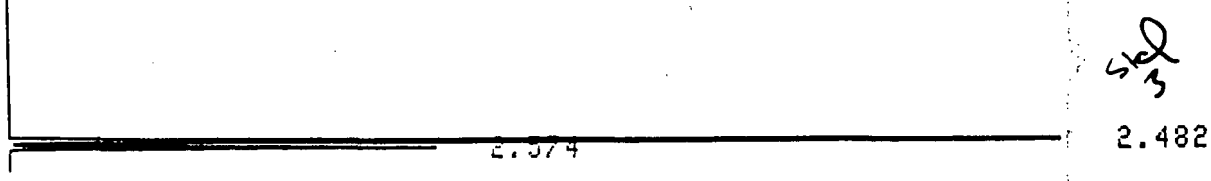
⊕ Shimadzu

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 7

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	18620		1	23.2777	METHANE
2	2.575	61370	V	2	76.7223	ETHANE
	TOTAL	79989			100	

CHROMATOGRAM 101 MEMORIZED
87/05/14 08:41:55 LASCO BAG SAMPLES

std 3



CR501 CHROMATOPAC

CHANNEL NO	2	FILE	9
SAMPLE NO	0	METHOD	0002
REPORT NO	8		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	32195		1	85.0304	METHANE
2	2.574	5668	V	2	14.9696	ETHANE
	TOTAL	37862			100	

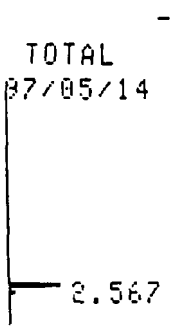
```
        97/05/14   09:01:38          LASCO BAG SAMPLES
CHROMATOGRAM    1  MEMORIZED
WARNING NO PEAK
        09:02:28   97/05/14          LASCO

CHROMATOGRAM    1  MEMORIZED
WARNING NO PEAK
97/05/14           09:02:53          LASCO BAG SAMPLES

WARNING NO PEAK
        09:03:11   97/05/14          LASCO

CHROMATOGRAM    1  MEMORIZED
WARNING NO PEAK
CHROMATOGRAM 101   MEMORIZED
        97/05/14   09:03:22          LASCO BAG SAMPLES
WARNING NO PEAK


RT CHECK STYRENE
        09:20:2797/05/14             LASCO TUBES
```

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 10

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.893	50471				
2	4.016	188389				
	TOTAL	238860			0	

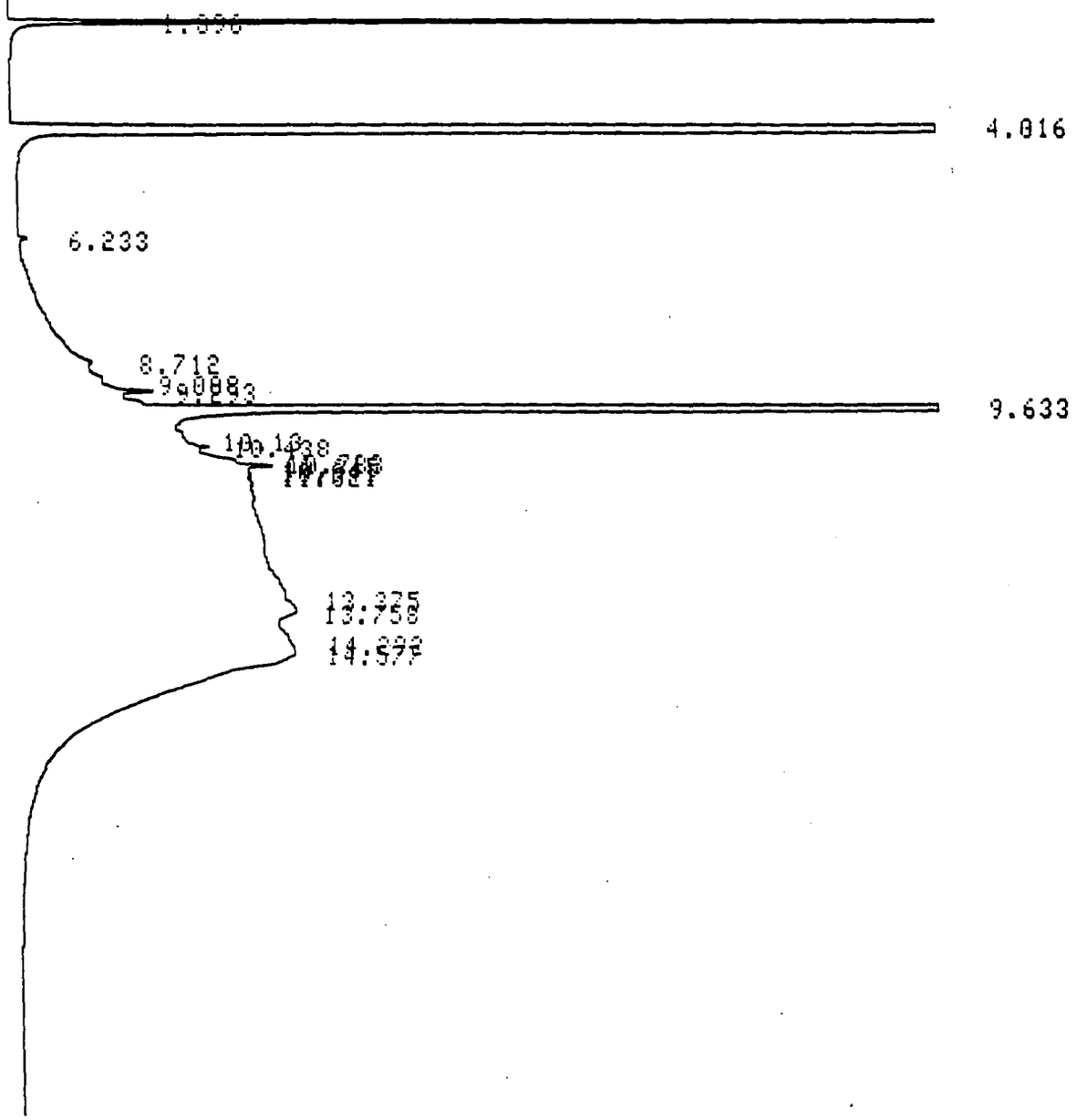
87/05/14 09:25:45 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 11

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.567	120		2	100	ETHANE
	TOTAL	120			100	

09:43:2497/05/14 LASCO TUBES

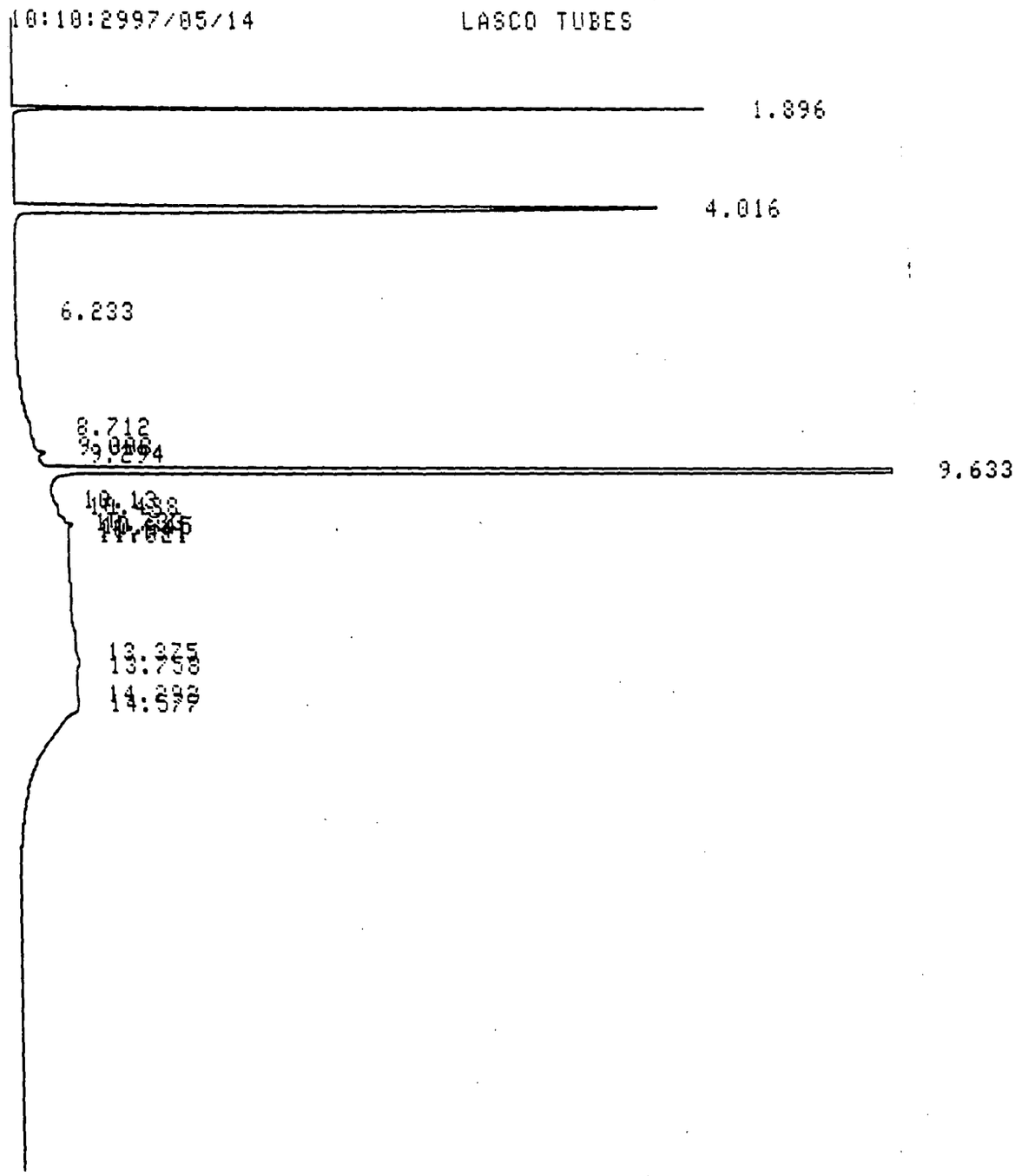


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 12

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	47218				
2	4.016	179905				
3	6.233	233				
4	8.712	651				
5	9.008	228	V			
6	9.293	1353				
7	9.633	4589262	VE			
8	10.13	1272	V			
9	10.438	665	V			
10	10.733	866				
11	10.845	1856	V			
12	10.941	494	V			
13	11.021	339	V			
14	13.375	690				
15	13.758	2613	V			
16	14.292	4169				
17	14.577	22863	V			
	TOTAL	4854674			0	

02037-02
Shimadzu



CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	13		

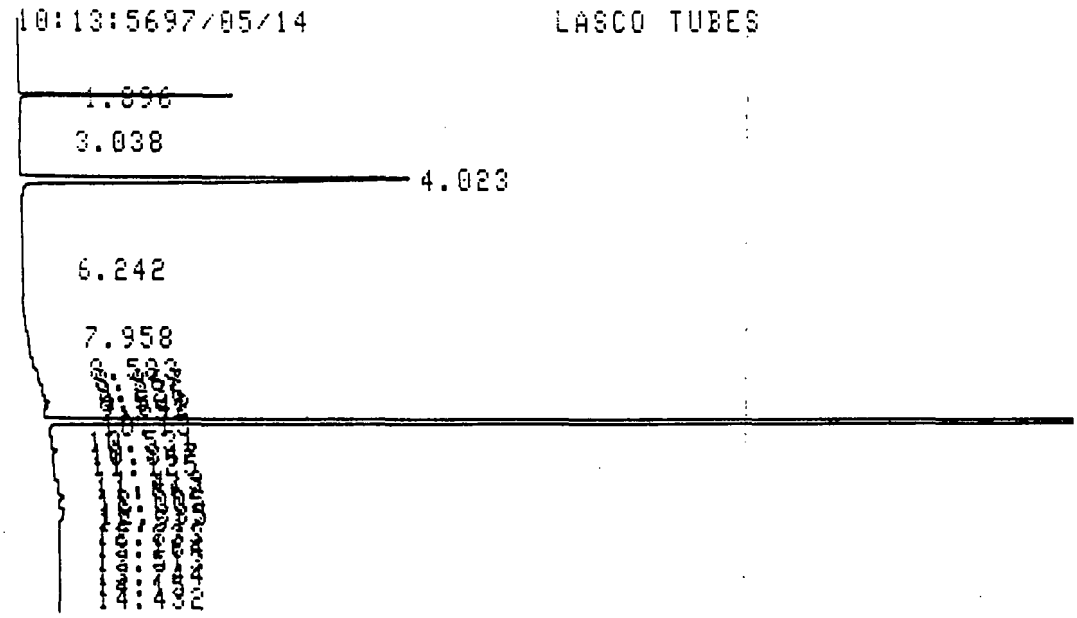
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	47218				
2	4.016	179905				
3	6.233	233				
4	8.712	651				
5	9.008	228	V			

223-02037-02

SUMEME BT CHECK

Shimadzu

10:13:5697/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

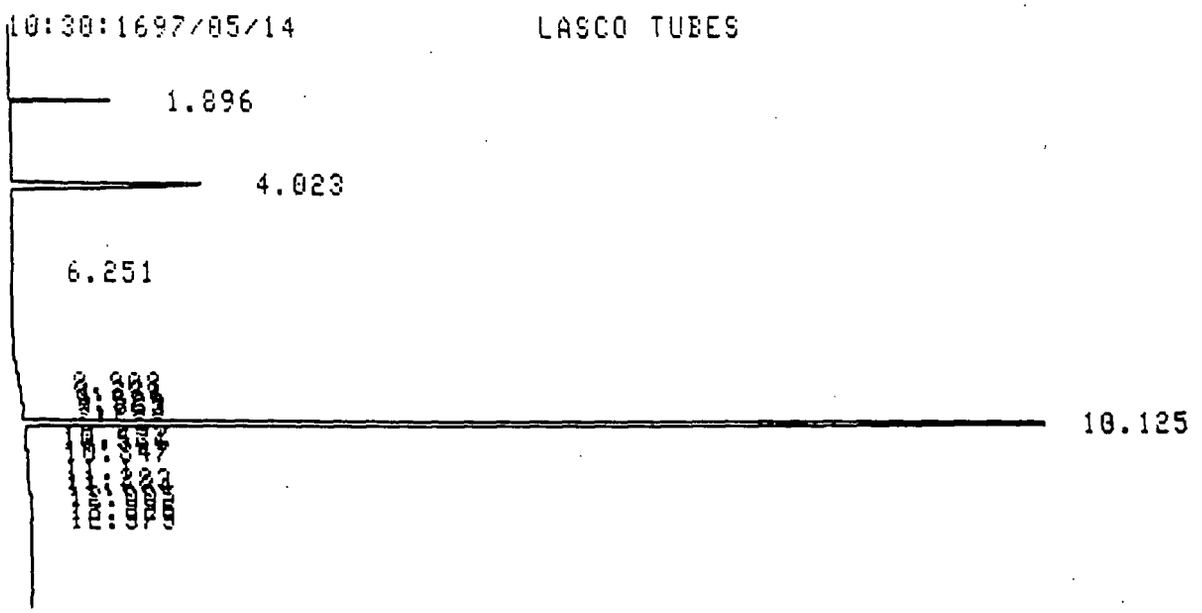
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 14

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	24422				
2	3.038	302				
3	4.023	187806				
4	6.242	272				
5	7.958	129				
6	8.583	2593				
7	8.967	6060	V			
8	9.276	7983	V			
9	9.531	6791	V	1	0.1576	STYRENE
10	9.642	3829	V	1	0.0889	STYRENE
11	9.753	6177	V	1	0.1434	STYRENE
12	10.13	4275420	VE	2	99.2323	CUMEME
13	10.531	12025	V			
14	10.847	13349	V			
15	11.125	8446	V			
16	11.413	11900	V			
17	11.667	14047	V			
18	12.005	16277	V	3	0.3778	MMA
19	12.335	16148	V			
20	12.517	9978	V			
21	12.833	11331	V			
22	13.164	10054	V			
23	13.513	7763	V			
24	13.744	8950	V			
25	14.15	5279	V			
26	14.432	2383	V			
	TOTAL	4669713			100	

12 9

223-[redacted]-02

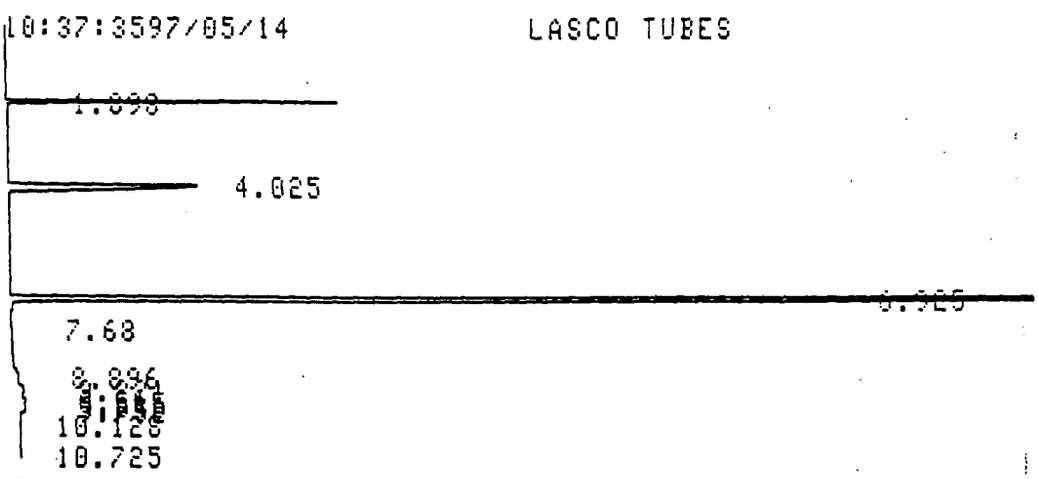
136



CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 15

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	24174				
2	4.023	186477				
3	6.251	272				
4	8.908	2731				
5	9.281	4099	V			
6	9.529	3537	V	1	0.0827	STYRENE
7	9.633	2072	V	1	0.0485	STYRENE
8	9.753	2727	V	1	0.0638	STYRENE
9	10.125	4264508	E	2	99.7343	CUMEME
10	10.422	1082	V			
11	10.531	1258	V			
12	10.847	1687				
13	11.1	396				
14	11.383	792				
	TOTAL	4505029			100	

10:37:3597/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002

REPORT NO 16

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.898	77543				
2	4.025	193654		4	4.3409	CS2
3	6.925	4240512	E	3	95.0551	MMA
4	7.68	1075				
5	8.896	5872				
6	9.221	15397	V			
7	9.515	13223	V	1	0.2964	STYRENE
8	9.646	2294	V	1	0.0514	STYRENE
9	9.752	7908	V	1	0.1773	STYRENE
10	10.128	3518	V	2	0.0789	CUMEME
11	10.725	683				
	TOTAL	4561678			100	

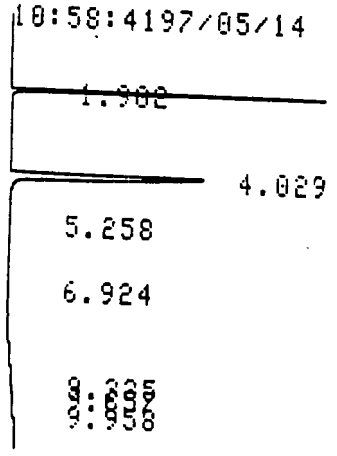
13 0

223-02037-02

Shimada

BLANK CS2

10:58:4197/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

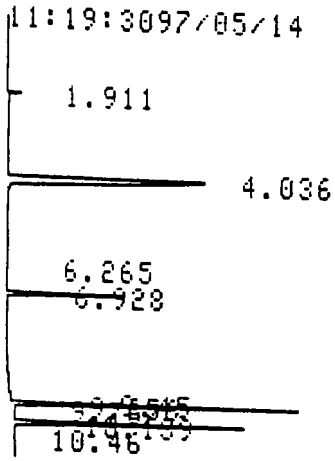
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 17

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.902	73866				
2	4.029	200698		4	98.6651	CS2
3	5.258	1153				
4	6.924	466		3	0.2289	MMA
5	9.335	2521				
6	9.657	2250	V	1	1.106	STYRENE
7	9.958	1023				
	TOTAL	281976			100	

11:19:3097/05/14 LASCO TUBES

std



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 18

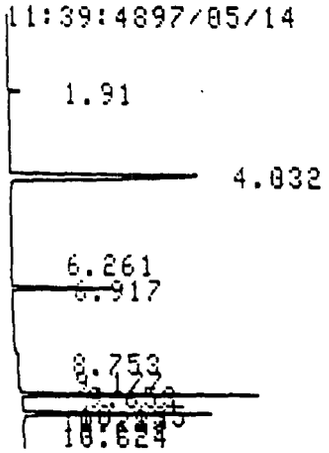
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.911	4199				
2	4.036	204551		4	46.6641	CS2
3	6.265	235				
4	6.928	45804		3	10.4492	MMA
5	9.45	1985				
6	9.656	94290	V	1	21.5104	STYRENE
7	9.767	2226	V			
8	10.139	93703	V	2	21.3763	CUMEME
9	10.46	3646	V			
TOTAL		450689			100	

std

223-02037-02

11:39:4897/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

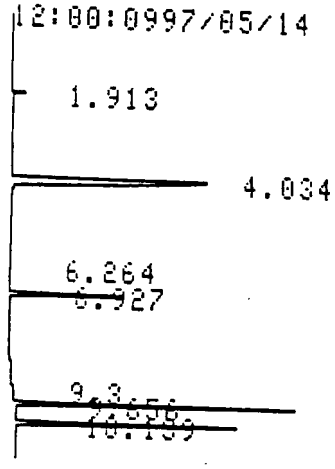
SAMPLE NO 0 METHOD 0002

REPORT NO 19

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.91	3541				
2	4.032	183621		4	48.1844	CS2
3	6.261	243				
4	6.917	38945		3	10.2196	MMA
5	8.753	4598				
6	9.177	2800	V			
7	9.653	80317		1	21.0762	STYRENE
8	10.135	78197		2	20.5198	CUMENE
9	10.283	1581	V			
10	10.624	2636				
	TOTAL	396478			100	

LOW STD LIQ; RUN 1 OPEN 9 BAG

12:00:0997/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

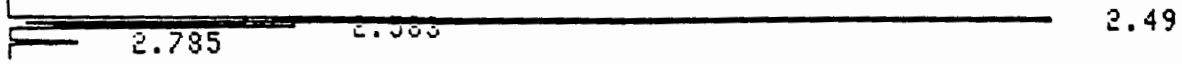
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 20

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.913	3996				
2	4.034	198832		4	46.646	CS2
3	6.264	279				
4	6.927	44110		3	10.3482	MMA
5	9.3	2835				
6	9.656	94442		1	22.156	STYRENE
7	10.139	88874	V	2	20.8498	CUMEME
	TOTAL	433367			100	

97/05/14 12:11:36 LASCO BAG SAMPLES

Run 1 open



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

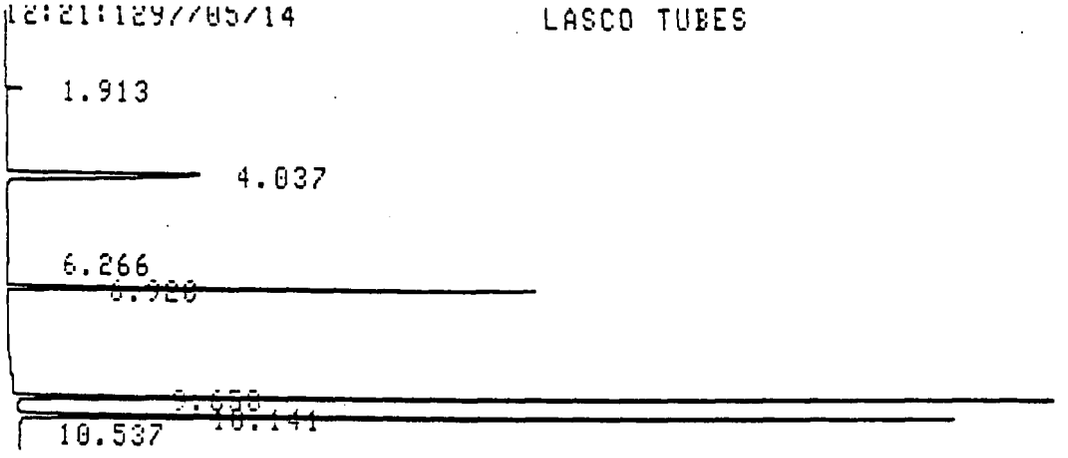
SAMPLE NO 0 METHOD: 0002

REPORT NO 21

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	108487		1	96.0325	METHANE
2	2.583	4482	V	2	3.9675	ETHANE
3	2.785	1060	V			
	TOTAL	114029			100	

12:21:129//05/14 LASCO TUBES

Std 2 6'4



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 22

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.913	4543				
2	4.037	204428		4	16.7031	CS2
3	6.266	293				
4	6.928	201927		3	16.4988	MMA
5	9.658	435506		1	35.5838	STYRENE
6	10.141	382027	V	2	31.2142	CUMENE
7	10.537	5471	V			
	TOTAL	1234195			100	

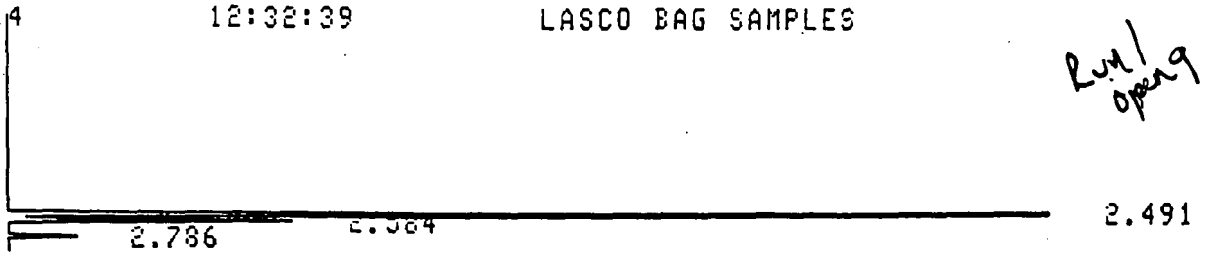
13 3

223-02037-02

97/05/14 12:32:39 LASCO BAG SAMPLES

Run/ open 9

⊕ Shimadzu



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

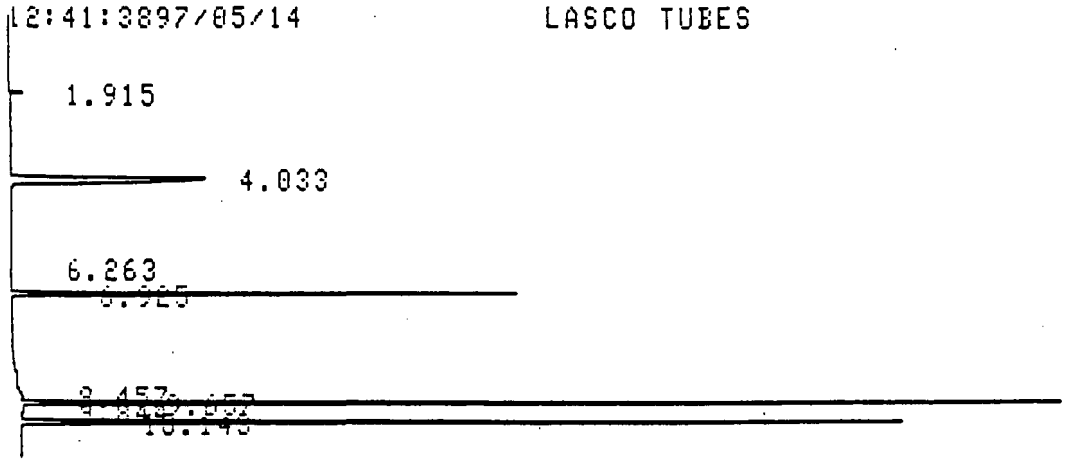
SAMPLE NO 0 METHOD 0002

REPORT NO 23

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	105427		1	96.0154	METHANE
2	2.584	4375	V	2	3.9846	ETHANE
3	2.786	1036	V			
	TOTAL	110838			100	

Mid std

12:41:3897/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 24

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.915	4278				
2	4.033	198658		4	17.3117	CS2
3	6.263	277				
4	6.925	192208		3	16.7496	MMA
5	9.457	8058				
6	9.657	406416	V	1	35.4164	STYRENE
7	9.844	5644	V			
8	10.143	350253		2	30.5222	CUMEME
	TOTAL	1165791			100	

13

223-02C

146

37-02

97/05/14 12:53:09 LASCU BAG SAMPLES

SLO.4 CH4

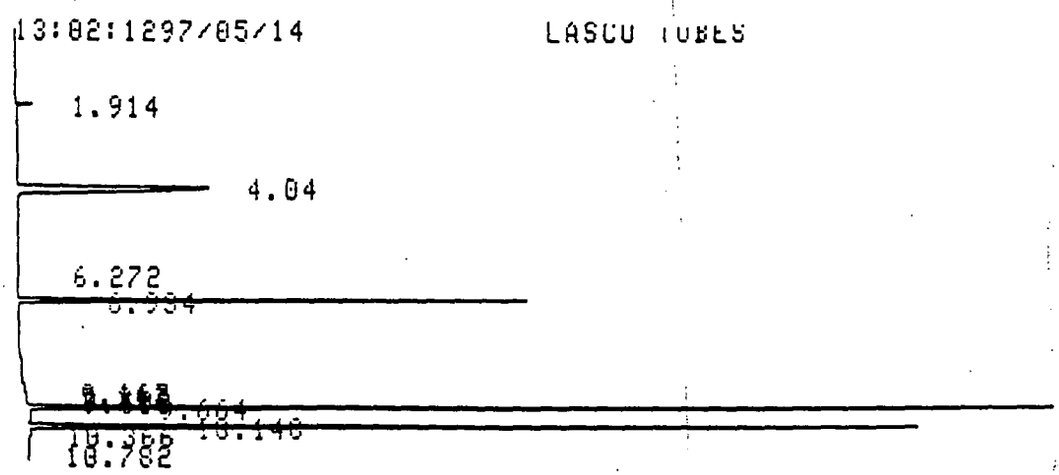
2.491

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 25

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	195060		1	100	METHANE
	TOTAL	195060			100	

Shimadzu

13:02:1297/05/14 LASCU TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 26

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.914	4457				
2	4.04	200713		4	17.1597	CS2
3	6.272	284				
4	6.934	195825		3	16.7418	MMA
5	9.167	1700				
6	9.317	736	V			
7	9.408	643	V			
8	9.513	749	V			
9	9.664	415814		1	35.5495	STYRENE
10	10.148	357324		2	30.549	CUMENE
11	10.366	2208	V			
12	10.782	3467				
	TOTAL	1183921			100	

13 5

87/05/14 13:13:48 LASCO BAG SAMPLES

510.4
All H2 Std

2.493

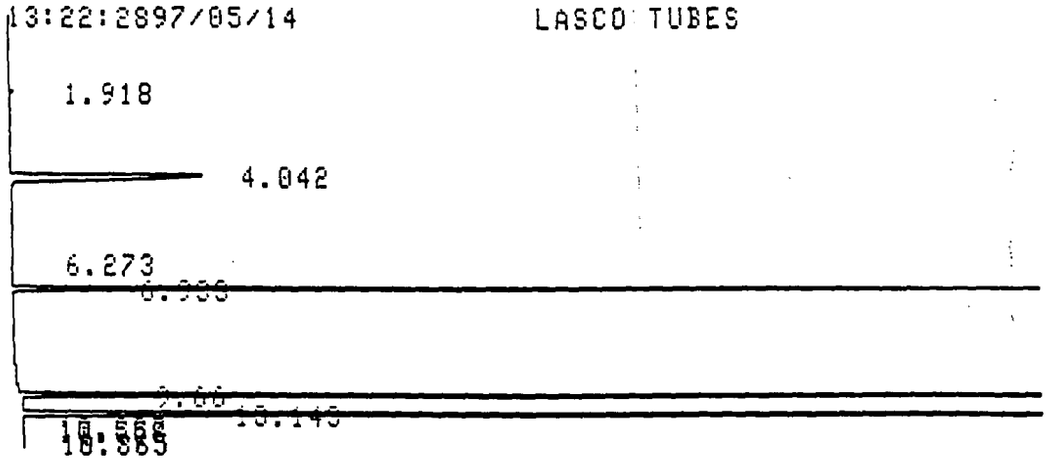
223-02037-02

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 27

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	192122		1	100	METHANE
	TOTAL	192122			100	

13:22:2897/05/14 LASCO TUBES

SD3



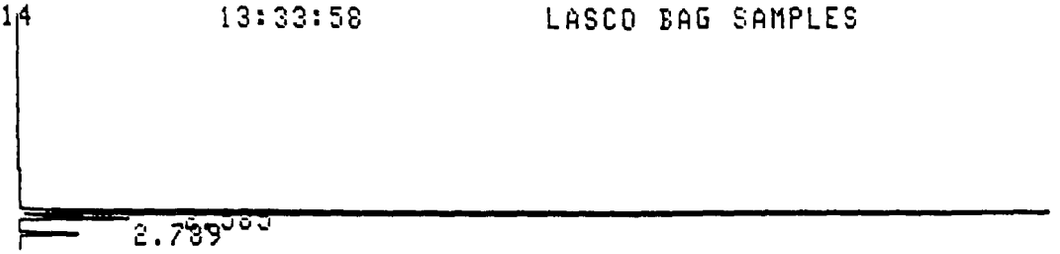
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 28

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.918	1851				
2	4.042	208882		4	9.1467	CS2
3	6.273	305				
4	6.933	440469		3	19.2877	MMA
5	9.66	848540		1	37.1567	STYRENE
6	10.143	785786	V	2	34.4088	CUMEME
7	10.387	3412	V			
8	10.558	450	V			
9	10.865	2841				
	TOTAL	2292537			100	

97/05/14 13:33:58 LASCO BAG SAMPLES

6 per 10 R1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002

REPORT NO 29

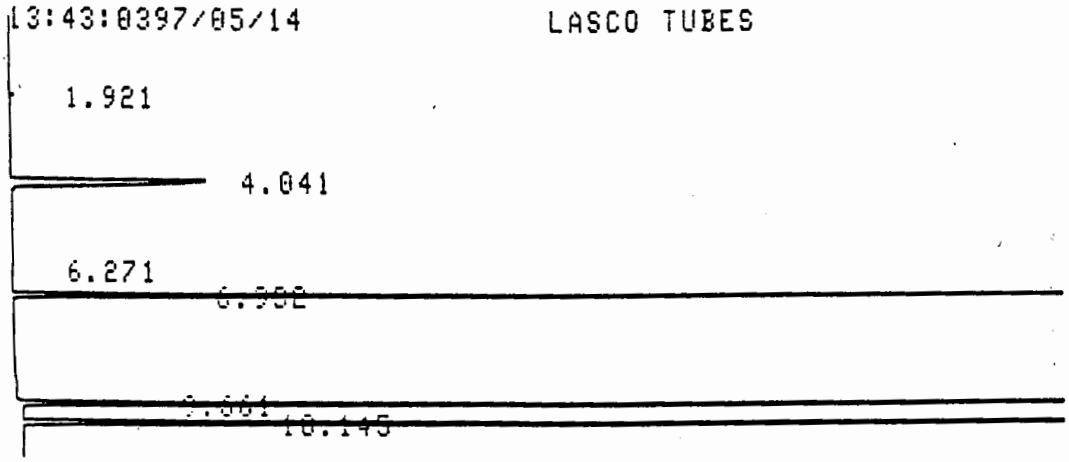
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	32471		1	94.5104	METHANE
2	2.585	1886	V	2	5.4896	ETHANE
3	2.789	923	V			
	TOTAL	35280			100	

13 6

223-02037

13:43:0397/05/14 LASCO TUBES

Std 3



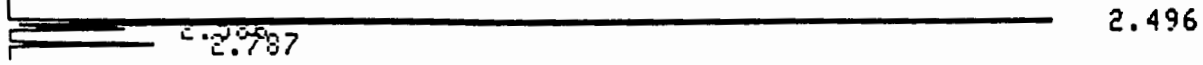
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 30

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.921	1837				
2	4.041	208233		4	9.056	CS2
3	6.271	312				
4	6.932	441914		3	19.2187	MMA
5	9.661	858260		1	37.3255	STYRENE
6	10.145	790985	V	2	34.3997	CUMEME
	TOTAL	2301541			100	

87/05/14 13:54:29 LASCO BAG SAMPLES

open 10 x1

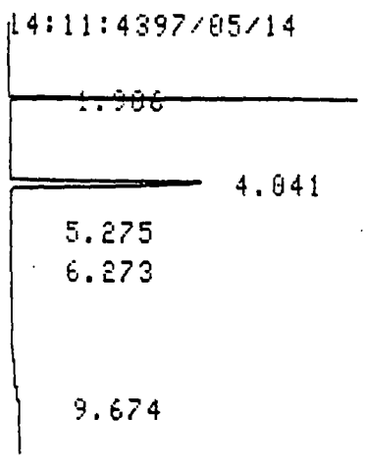


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 31

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	36705		1	94.6656	METHANE
2	2.586	2068	V	2	5.3344	ETHANE
3	2.787	2197	V			
	TOTAL	40971			100	

Blank

14:11:4397/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 32

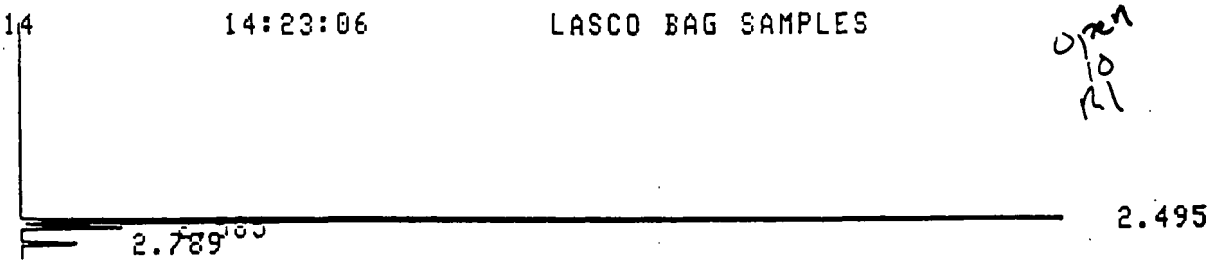
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.906	78862				
2	4.041	203548		4	98.7415	CS2
3	5.275	1250				
4	6.273	294				
5	9.674	2594		1	1.2585	STYRENE
	TOTAL	286549			100	

223-02037-02

97/05/14 14:23:06 LASCO BAG SAMPLES

open 10 RI

Timodzu



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 33

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	29629		1	94.479	METHANE
2	2.585	1731	V	2	5.521	ETHANE
3	2.789	854	V			
	TOTAL	32214			100	

OPEN 9 RUN 2 BAG; BLANK LIQ
14:32:1897/05/14 LASCO TUBES

Blank

1.909

4.041

5.282
6.272

9.798
10.858

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 34

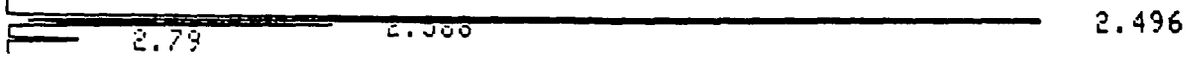
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.909	79635				
2	4.041	203413		4	100	CS2
3	5.282	1245				
4	6.272	288				
5	9.798	3398				
6	10.858	2417				
	TOTAL	290396			100	

13 8

225-02037-02

97/05/14 14:43:44 LASCO BAG SAMPLES

opg 9
Run 2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 35

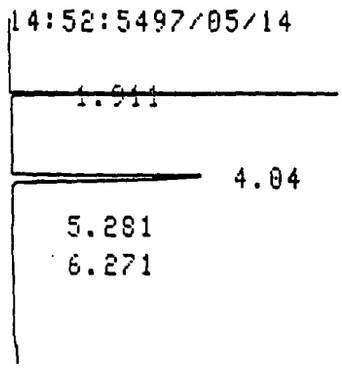
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	117443		1	96.1001	METHANE
2	2.588	4766	V	2	3.8999	ETHANE
3	2.79	1097	V			
	TOTAL	123306			100	

Shimadzu

127

14:52:5497/05/14 LASCO TUBES

Blank



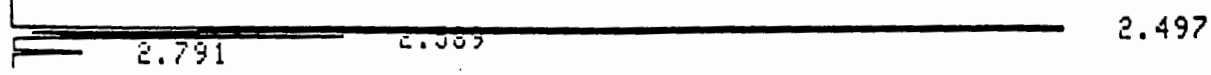
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 36

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.911	77445				
2	4.04	202520		4	100	CS2
3	5.281	1235				
4	6.271	285				
	TOTAL	281484			100	

87/05/14 15:02:10 LASCO BAG SAMPLES

open 9



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

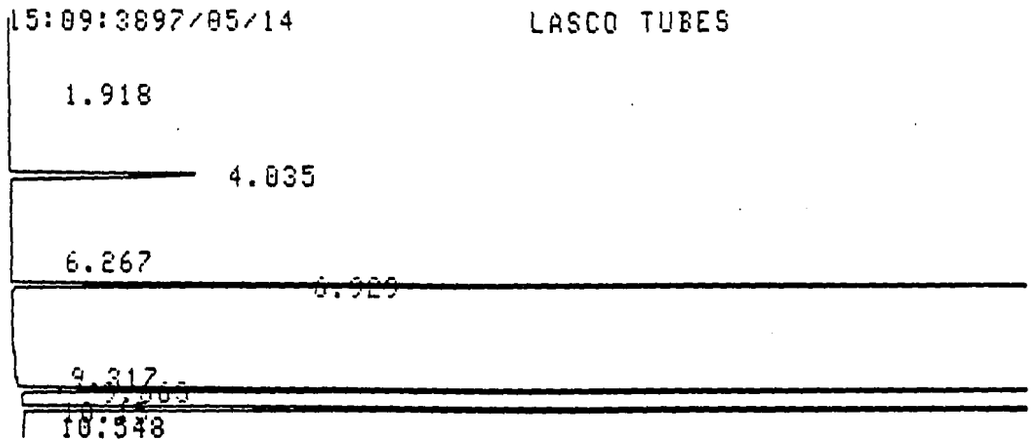
SAMPLE NO 0 METHOD 0002

REPORT NO 37

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	119759		1	96.1015	METHANE
2	2.589	4858	V	2	3.8985	ETHANE
3	2.791	1110	V			
	TOTAL	125727			100	

Desorb study 10

15:09:3897/05/14 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 38

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.918	836				
2	4.035	189702		4	3.452	CS2
3	6.267	272				
4	6.929	940651		3	17.1168	MMA
5	9.317	286				
6	9.663	1946652		1	35.4227	STYRENE
7	10.15	2418484	V	2	44.0085	CUMENE
8	10.548	1999	V			
	TOTAL	5498882			100	

Shimadzu

87/05/14 15:21:01 LASCO BAG SAMPLES

Run 0. open 10

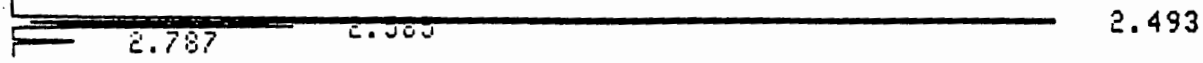
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 39.

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	34381		1	94.6672	METHANE
2	2.586	1937	V	2	5.3328	ETHANE
3	2.789	406	V			
	TOTAL	36723			100	

Desorb 10 0_#1

97/05/15 13:40:24 LASCO BAG SAMPLES

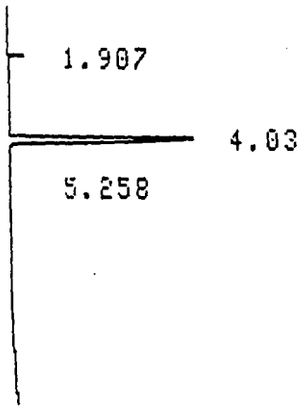
open 9
R3
C2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 127

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	99055		1	95.8485	METHANE
2	2.585	4290	V	2	4.1515	ETHANE
3	2.787	921	V			
	TOTAL	104267			100	

RE2-117
BLT



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 128

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.907	4808				
2	4.03	191645		4	100	CS2
3	5.258	1813				
	TOTAL	198266			100	

97/05/15 14:00:27 LASCO BAG SAMPLES

9 ppm C2

CR501 CHROMATOPAC

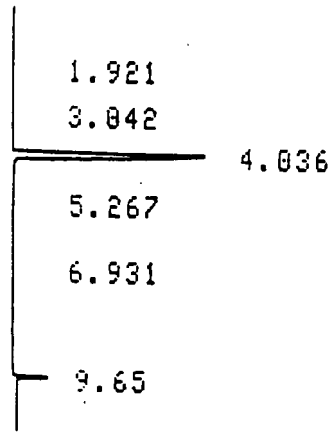
CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 129

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	99985		1	95.8469	METHANE
2	2.584	4332	V	2	4.1531	ETHANE
3	2.786	937	V			
	TOTAL	105254			100	

NDH-
2-2 FH



CHROMATOGRAM 1 MEMORIZED

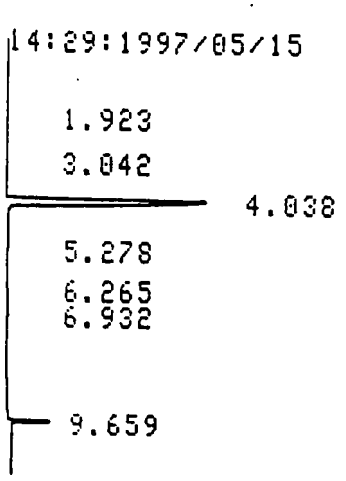
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 130

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.921	323				
2	3.042	451				
3	4.036	188643		4	93.8988	CS2
4	5.267	743				
5	6.931	1317		3	0.6557	MMA
6	9.65	10940		1	5.4455	STYRENE
	TOTAL	202418			100	

14:29:1997/05/15 LASCO TUBES

NDA-2
2-2 FU



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 132

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.923	407				
2	3.042	557				
3	4.038	217406		4	93.4623	CS2
4	5.278	924				
5	6.265	315				
6	6.932	1672		3	0.7187	MMA
7	9.659	13536		1	5.8191	STYRENE
	TOTAL	234816			100	

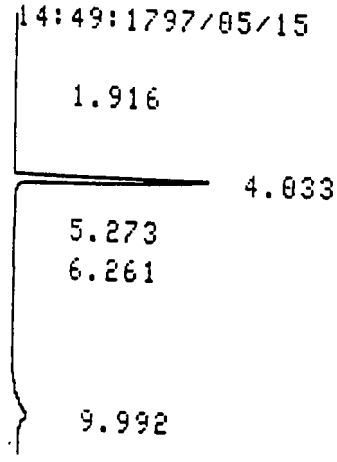
021

223-020

166

CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
14:41:1997/05/15 LASCO TUBES
CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK

14:49:1797/05/15 LASCO TUBES



NOA-A
2-2
BH

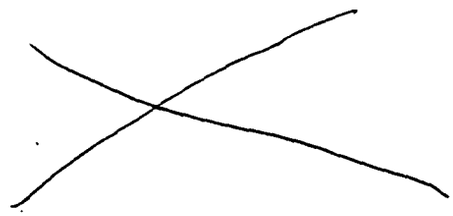
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 134

FILE 0
METHOD 0002

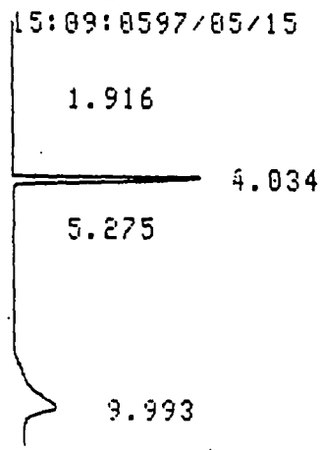
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.916	980				
2	4.033	204983		4	100	CS2
3	5.273	908				
4	6.261	265				
5	9.992	33664				
	TOTAL	240800			100	

97/05/15 15:00:39 LASCO BAG SAMPLES



WARNING NO PEAK

15:09:0597/05/15 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	135		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.916	855				
2	4.034	188834		4	100	CS2
3	5.275	814				
4	9.993	178857				
	TOTAL	369359			100	

NDA 2-7 BH

223-02037-02

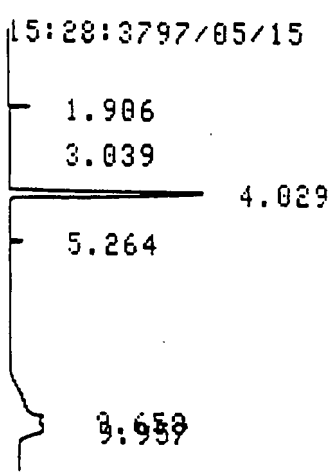
O 22

⊕ Shinadzu

128

15:28:3797/05/15 LASCO TUBES

NV1/2-3A FF

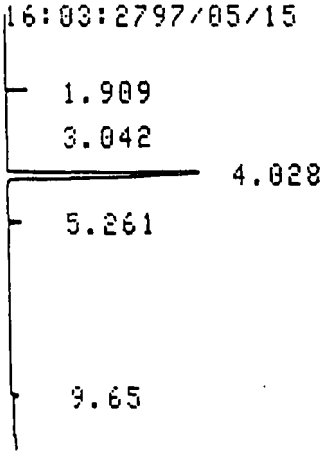


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 136

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.906	5747				
2	3.039	743				
3	4.029	191399		4	69.6607	CS2
4	5.264	6993				
5	9.658	83360		1	30.3393	~~STYRENE~~ AC
6	9.957	94751	V			
	TOTAL	382993			100	

16:03:2797/05/15 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 137

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.909	5699				
2	3.042	744				
3	4.028	191037		4	98.6427	CS2
4	5.261	6981				
5	9.65	2629		1	1.3573	STYRENE
	TOTAL	207089			100	

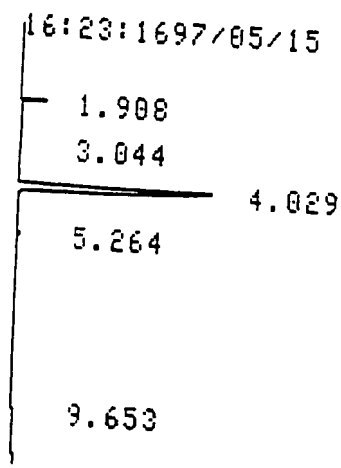
023

223-02037-02

⊕ Skin

16:23:1697/05/15 LASCO TUBES

NDB 2-[redacted] BH



CHROMATOGRAM 1 MEMORIZED

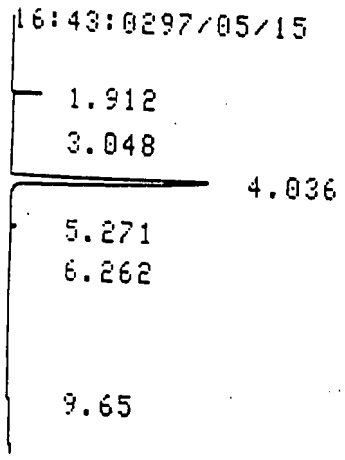
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 138

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	6808				
2	3.044	476				
3	4.029	193979		4	99.7609	CS2
4	5.264	3120				
5	9.653	465		1	0.239	STYRENE
	TOTAL	204848			100	

16:43:0297/05/15 LASCO TUBES

NDB 2-3A BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 139

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.912	8212				
2	3.048	576				
3	4.036	223871		4	99.7432	CS2
4	5.271	3814				
5	6.262	311				
6	9.65	576		1	0.2568	STYRENE
	TOTAL	237361			100	

024

223-02037-02

CHROMATOGRAM 101 MEMORIZED
87/05/15 17:05:21 LASCO BAG SAMPLES

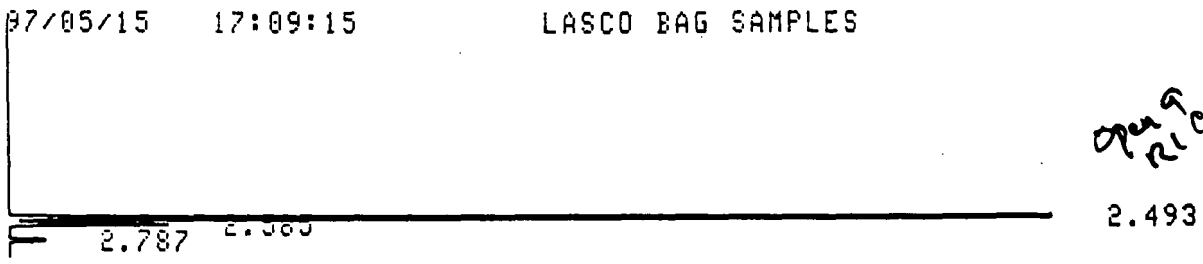
open 9
R# C3

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 140

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	58330		1	95.9207	METHANE
2	2.585	2481	V	2	4.0793	ETHANE
3	2.787	593	V			
	TOTAL	61403			100	

CHROMATOGRAM 101 MEMORIZED
87/05/15 17:09:15 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 141

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	58408		1	95.9335	METHANE
2	2.585	2476	V	2	4.0665	ETHANE
3	2.787	572	V			
	TOTAL	61456			100	

CHROMATOGRAM 101 MEMORIZED
87/05/15 17:21:16 LASCO BAG SAMPLES

Open 10
R1
C3

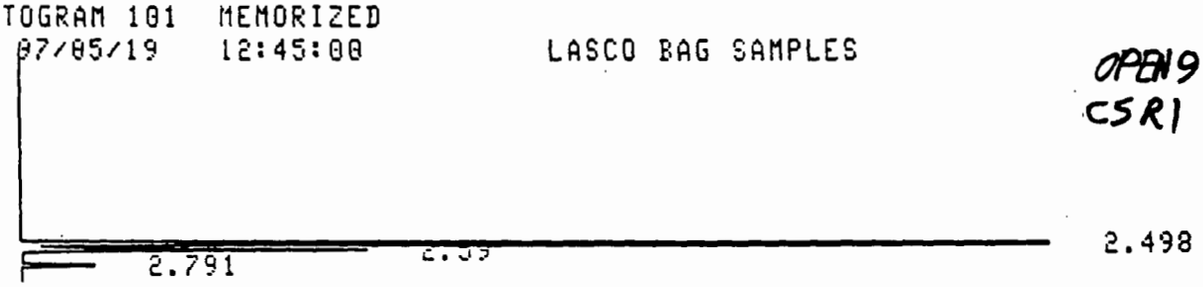
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 142

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	18751		1	92.2583	METHANE
2	2.581	1573	V	2	7.7417	ETHANE
3	2.788	738	V			
	TOTAL	21062			100	

223-02037-02

CHROMATOGRAM 101 MEMORIZED
87/05/19 12:45:00 LASCO BAG SAMPLES

OPEN9
C5R1

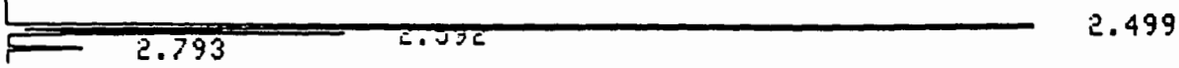


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 194

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	125902		1	96.0947	METHANE
2	2.59	5117	V	2	3.9053	ETHANE
3	2.791	1170	V			
	TOTAL	132189			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 13:12:52 LASCO BAG SAMPLES

OPEN9
C5R1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 195

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	126728		1	96.0813	METHANE
2	2.592	5169	V	2	3.9187	ETHANE
3	2.793	1170	V			
	TOTAL	133066			100	

0 4 5

223-02037-02

⊕ Stinnett

CHROMATOGRAM 101 MEMORIZED
07/05/19 13:32:53 LASCO BAG SAMPLES

OPEN 10
CSR1

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 196

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.502	18342		1	94.5893	METHANE
2	2.593	1049	V	2	5.4106	ETHANE
3	2.796	181	V			
TOTAL		19572			100	

CHROMATOGRAM 101 MEMORIZED
07/05/19 13:48:02 LASCO BAG SAMPLES

OPEN 10
CSR1

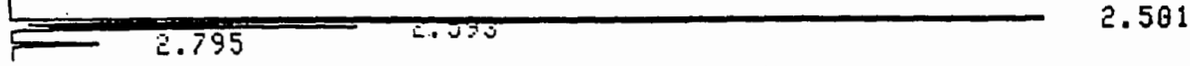
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 197

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.502	16781		1	94.5774	METHANE
2	2.593	962	V	2	5.4225	ETHANE
3	2.796	167	V			
TOTAL		17910			100	

046

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:07:35 LASCO BAG SAMPLES

OPEN9
C5R2

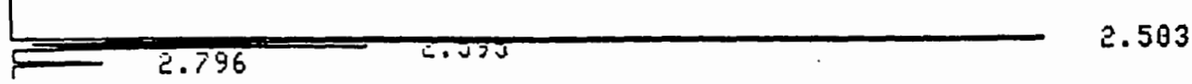


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 199

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.501	117354		1	96.0663	METHANE
2	2.593	4805	V	2	3.9337	ETHANE
3	2.795	1249	V			
	TOTAL	123408			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:14:58 LASCO BAG SAMPLES

OPEN9
C5R2

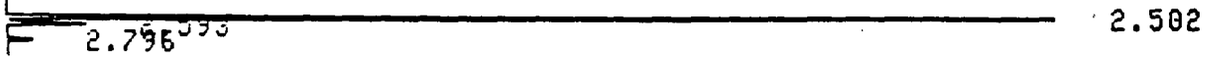


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 200

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.503	119232		1	96.0546	METHANE
2	2.595	4897	V	2	3.9454	ETHANE
3	2.796	1275	V			
	TOTAL	125404			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:22:03 LASCO BAG SAMPLES

OPEN 10
RZ C5

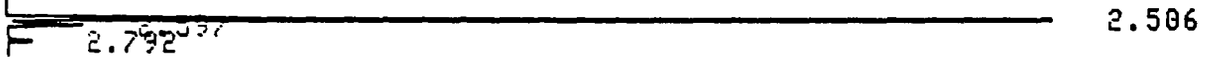


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 201

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.502	22818		1	94.7615	METHANE
2	2.593	1261	V	2	5.2385	ETHANE
3	2.796	381	V			
	TOTAL	24461			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:27:28 LASCO BAG SAMPLES

OPEN 10
RZ C5



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 202

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.506	24500		1	94.8925	METHANE
2	2.597	1319	V	2	5.1075	ETHANE
3	2.792	406	V			
	TOTAL	26225			100	

73-02037-01
Shimadzu

97/05/19 15:35:47 LASCO BAG SAMPLES

OPEN 9
C5 R3
(9-5-3)

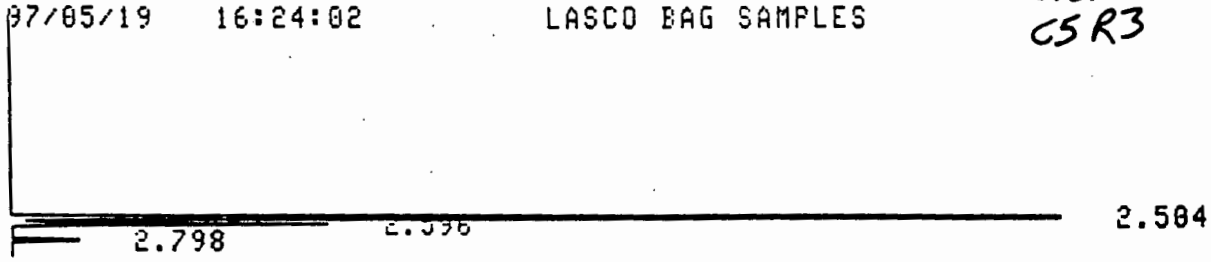
223-02037-02

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 206

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.503	102146		1	96.1426	METHANE
2	2.595	4098	V	2	3.8574	ETHANE
3	2.797	979				
	TOTAL	107224			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 16:24:02 LASCO BAG SAMPLES

OPEN 9
C5 R3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 210

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.504	102868		1	96.1502	METHANE
2	2.596	4119	V	2	3.8498	ETHANE
3	2.798	967				
	TOTAL	107954			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 16:31:56 LASCO BAG SAMPLES

WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED

WARNING NO PEAK

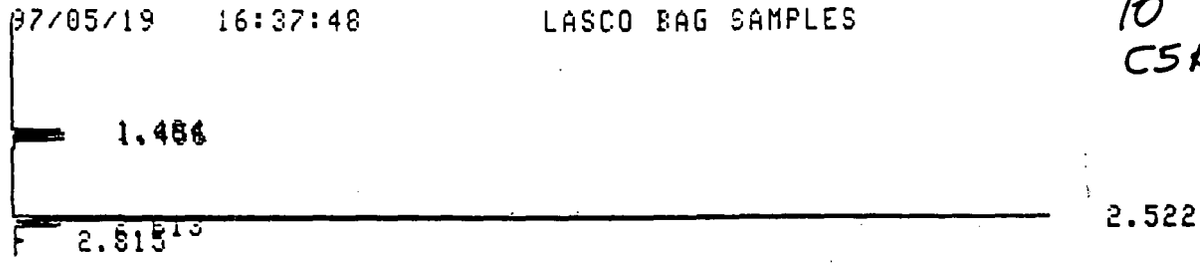
5

223-02037-02

Shimadzu

CHROMATOGRAM 101 MEMORIZED
97/05/19 16:37:48 LASCO BAG SAMPLES

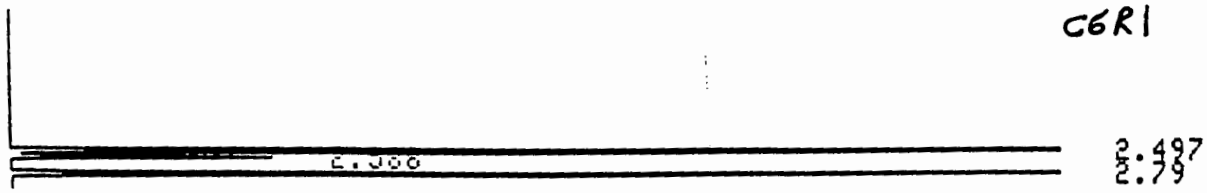
10
CSR3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 211

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.404	663				
2	1.456	1374	V			
3	2.522	13822		1	94.883	METHANE
4	2.613	745	V	2	5.117	ETHANE
5	2.815	126				
	TOTAL	16729			100	

OPEN 4
C6R1

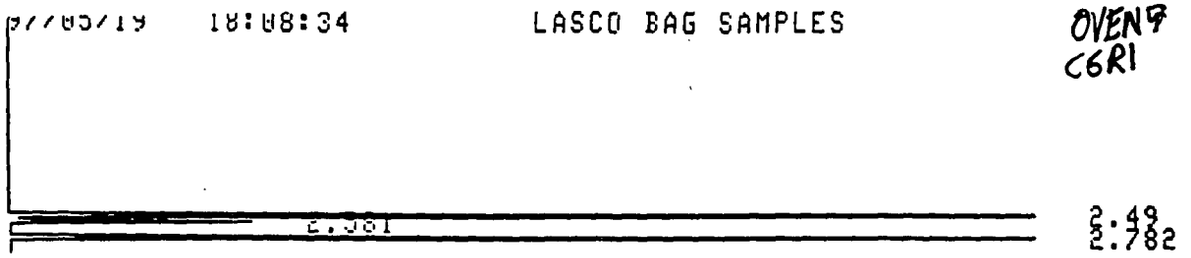


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 216

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	84288		1	96.0639	METHANE
2	2.588	3454	V	2	3.9361	ETHANE
3	2.79	16654	V			

97/05/19 18:08:34 LASCO BAG SAMPLES

OVEN 7
C6R1



Shimadzu

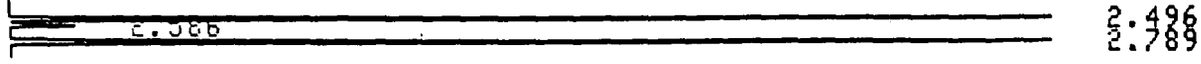
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 218

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	78485		1	96.0435	METHANE
2	2.581	3230	V	2	3.9565	ETHANE
3	2.782	15511	V			
	TOTAL	97146			100	

TOTAL 1264436 100

97/05/19 18:32:19 LASCO BAG SAMPLES

OPEN 10
R1C6



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

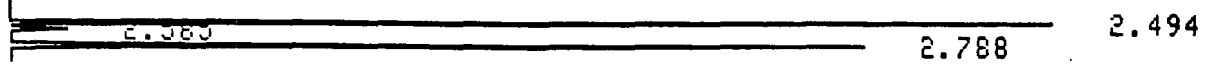
REPORT NO 220

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	18311		1	94.7756	METHANE
2	2.586	1009	V	2	5.2244	ETHANE
3	2.789	15562	V			
	TOTAL	34883			100	

Shimadzu

TOTAL 4921430 100
87/05/19 18:52:39 LASCO BAG SAMPLES

10
C6R1

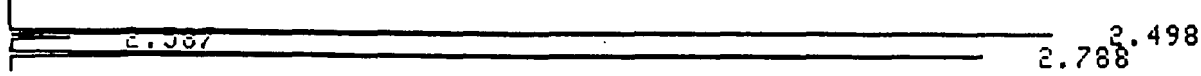


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 222

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	16205		1	94.7689	METHANE
2	2.585	895	V	2	5.2311	ETHANE
3	2.788	11603	V			
	TOTAL	28703			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 19:01:49 LASCO BAG SAMPLES

10
C6R1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 223

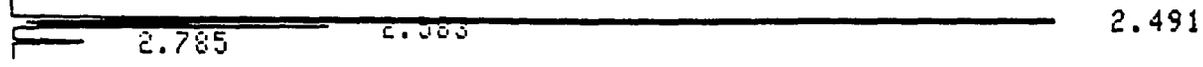
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	16410		1	94.7831	METHANE
2	2.587	903	V	2	5.2169	ETHANE
3	2.788	13096				
	TOTAL	30409			100	

CHROMATOGRAM 101 MEMORIZED

1037-02
Shimadzu

CHROMATOGRAM 101 MEMORIZED
97/05/19 19:55:38 LASCO BAG SAMPLES

OPEN 9
C6R2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 230

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	106894		1	96.0721	METHANE
2	2.583	4370	V	2	3.9278	ETHANE
3	2.785	1016	V			
	TOTAL	112280			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 20:00:10 LASCO BAG SAMPLES

OPEN 9
C6R2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 231

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	104139		1	96.0693	METHANE
2	2.584	4261	V	2	3.9307	ETHANE
3	2.785	985	V			
	TOTAL	109385			100	

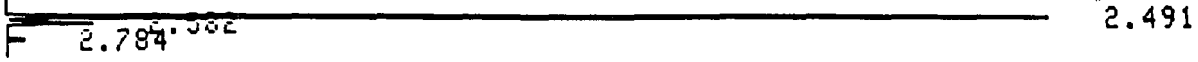
059

223-02037-02

Shimadzu

CHROMATOGRAM 101 MEMORIZED
97/05/19 20:12:34 LASCO BAG SAMPLES

10
C6R2

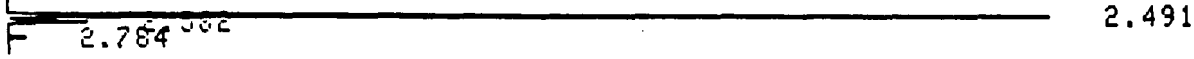


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 232

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	25129		1	94.8572	METHANE
2	2.582	1362	V	2	5.1428	ETHANE
3	2.784	276	V			
	TOTAL	26767			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 20:17:12 LASCO BAG SAMPLES

10
C6R2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002
REPORT NO 233

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	23202		1	94.8847	METHANE
2	2.582	1251	V	2	5.1153	ETHANE
3	2.784	262	V			
	TOTAL	24715			100	

060

223-02037-02

CHROMATOGRAM 101 MEMORIZED
87/05/19 20:26:41 LASCO BAG SAMPLES

9
C6R3

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 234

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	102608		1	96.1014	METHANE
2	2.583	4163	V	2	3.8986	ETHANE
3	2.784	969	V			
	TOTAL	107739			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 20:34:26 LASCO BAG SAMPLES

9
C6R3

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 235

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	105189		1	96.1176	METHANE
2	2.585	4249	V	2	3.8824	ETHANE
3	2.786	981				
	TOTAL	110418			100	

Shimadzu

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 236

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	24219		1	94.9786	METHANE
2	2.584	1280	V	2	5.0214	ETHANE
3	2.786	290	V			
	TOTAL	25789			100	

O 6 1

223-02037-02

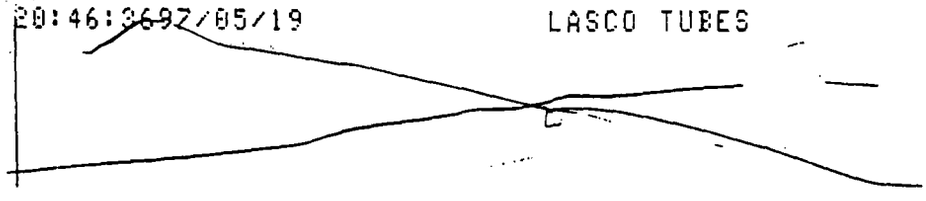
CHROMATOGRAM 101 MEMORIZED
97/05/19 20:43:50 LASCO BAG SAMPLES

10
C6R3

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 237

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	21997		1	95.0377	METHANE
2	2.585	1149	V	2	4.9622	ETHANE
3	2.787	249	V			
	TOTAL	23395			100	

20:46:36 97/05/19 LASCO TUBES



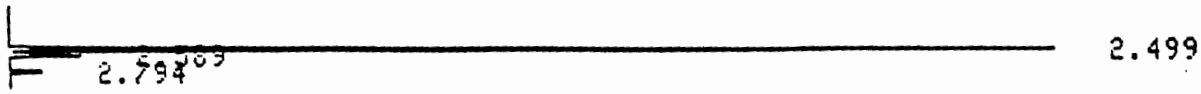
CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
97/05/19 20:50:58 LASCO BAG SAMPLES

10
C6R3

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 238

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	20500		1	94.9931	METHANE
2	2.582	1080	V	2	5.0069	ETHANE
3	2.784	225				
	TOTAL	21805			100	

Shimadzu



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 37

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	16802		1	92.7344	METHANE
2	2.589	1316	V	2	7.2656	ETHANE
3	2.794	470	V			
	TOTAL	18589			100	

13 5

TOTAL

87/05/22 16:03:49 LASCO BAG SAMPLES

10-0-

CR501 CHROMATOPAC

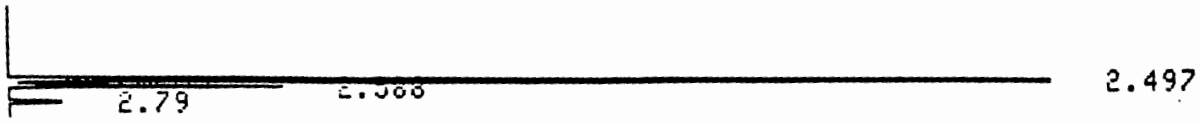
CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 34

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	16968		1	92.6508	METHANE
2	2.585	1346	V	2	7.3492	ETHANE
3	2.79	475	V			

Shimadzu



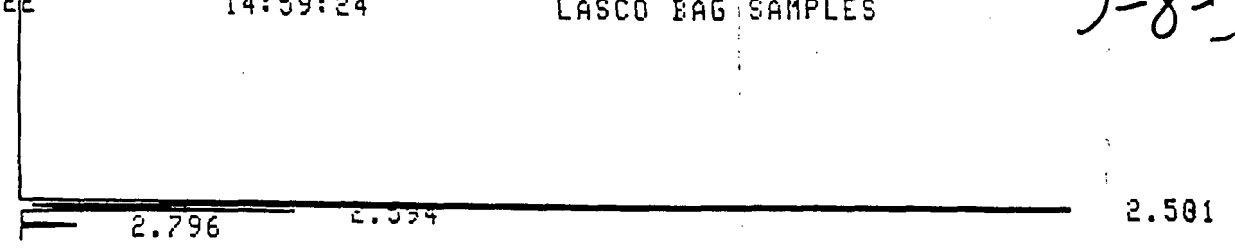
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 30

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	91681		1	96.2508	METHANE
2	2.588	3571	V	2	3.7492	ETHANE
3	2.79	800	V			

TOTAL 939286 100

97/05/22 14:59:24 LASCO BAG SAMPLES

9-8-3



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 28

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.501	90911		1	96.1895	METHANE
2	2.594	3601	V	2	3.8105	ETHANE
3	2.796	794	V			
	TOTAL	95306			100	

13 1

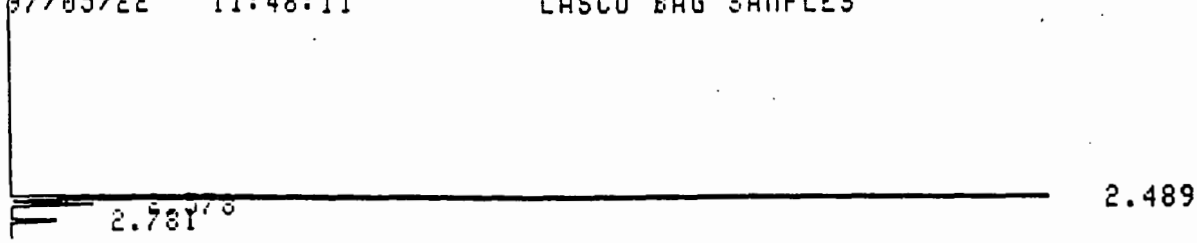
223-02

TOTAL 107584 100

CHROMATOGRAM 101 MEMORIZED

97/05/22 11:48:11 LASCO BAG SAMPLES

10-8-2



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

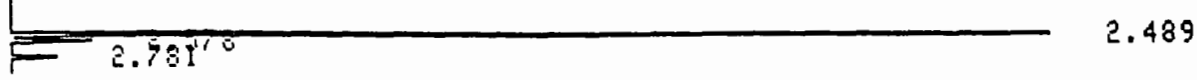
REPORT NO 17

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	19737		1	93.3484	METHANE
2	2.578	1406	V	2	6.6516	ETHANE
3	2.781	681	V			
	TOTAL	21825			100	

CHROMATOGRAM 101 MEMORIZED

97/05/22 11:52:41 LASCO BAG SAMPLES

10-8-2



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

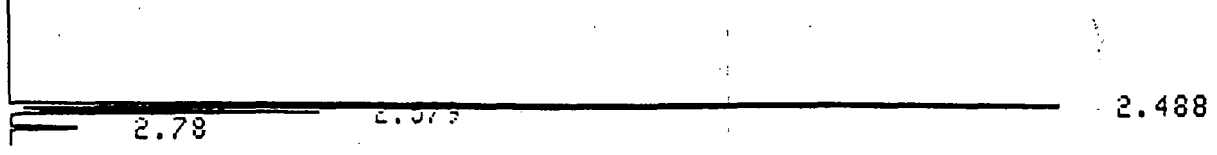
REPORT NO 18

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	20239		1	93.4068	METHANE
2	2.578	1429	V	2	6.5932	ETHANE
3	2.781	668	V			
	TOTAL	22336			100	

12 6

223-02037-02

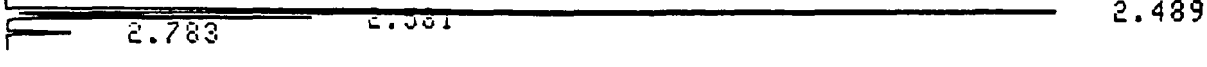
CHROMATOGRAM 101 MEMORIZED
97/05/22 11:39:35 LASCO BAG SAMPLES 9-8-2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 15

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.488	101712		1	96.2422	METHANE
2	2.579	3971	V	2	3.7578	ETHANE
3	2.78	950	V			
	TOTAL	106633			100	

CHROMATOGRAM 101 MEMORIZED
97/05/22 11:43:59 LASCO BAG SAMPLES 9-8-2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 16

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	102614		1	96.2381	METHANE
2	2.581	4011	V	2	3.7619	ETHANE
3	2.783	959	V			

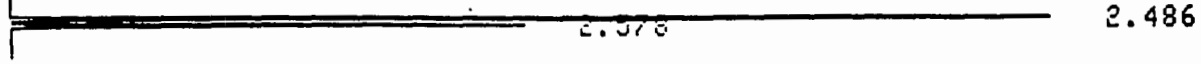
12 5

223-02037-02

Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/22 11:15:10 LASCO BAG SAMPLES

CONCAL

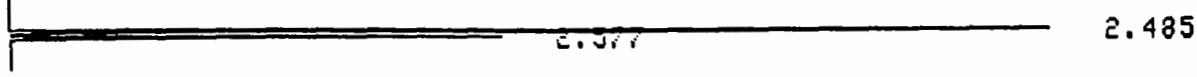


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 13

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.486	16365		1	72.9448	METHANE
2	2.578	6070	V	2	27.0552	ETHANE
TOTAL		22435			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 11:23:23 LASCO BAG SAMPLES

CONCAL



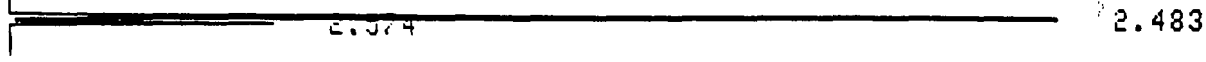
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 14

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.485	15413		1	72.8251	METHANE
2	2.577	5751	V	2	27.1749	ETHANE
TOTAL		21164			100	

C R

CHROMATOGRAM 101 MEMORIZED
97/05/22 10:49:11 LASCO BAG SAMPLES

MID/LOW
M E
STD

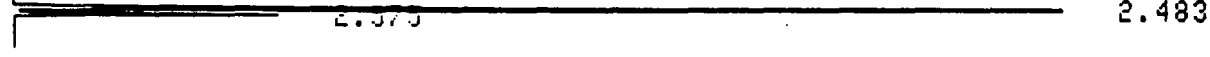


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 11

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.483	55987		1	94.4324	METHANE
2	2.574	3301	V	2	5.5676	ETHANE
	TOTAL	59288			100	

CHROMATOGRAM 101 MEMORIZED
97/05/22 10:55:33 LASCO BAG SAMPLES

MID/LOW
M E
STD



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002

REPORT NO 12

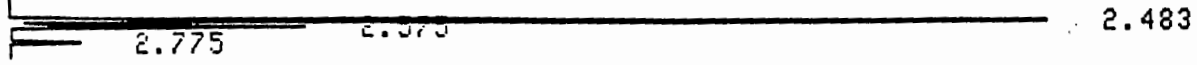
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.483	56299		1	94.4432	METHANE
2	2.575	3313	V	2	5.5568	ETHANE
	TOTAL	59612			100	

13 4

223-02037-(

87/05/22 10:31:50 LASCO BAG SAMPLES

9-8-1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 9

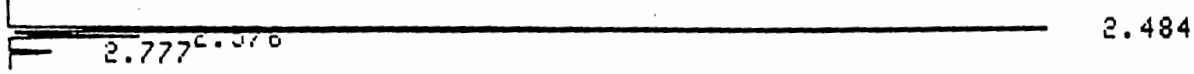
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.483	103959		1	96.1028	METHANE
2	2.575	4216	V	2	3.8972	ETHANE
3	2.775	1057	V			
	TOTAL	109231			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 10:38:03 LASCO BAG SAMPLES

VOID

LOW BAG VOLUME



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 10

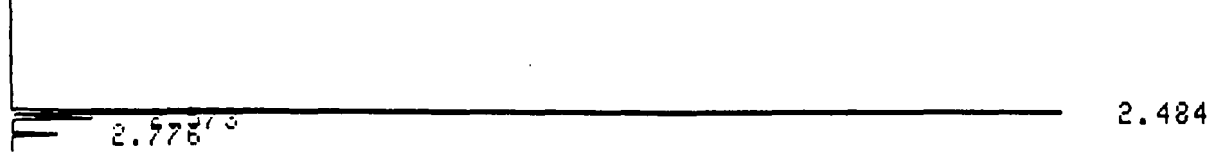
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.484	45549		1	96.0425	METHANE
2	2.576	1877	V	2	3.9575	ETHANE
3	2.777	597	V			
	TOTAL	48024			100	

12 3

223-02037-02

⊕ Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/22 10:20:02 LASCO BAG SAMPLES 10-8-1

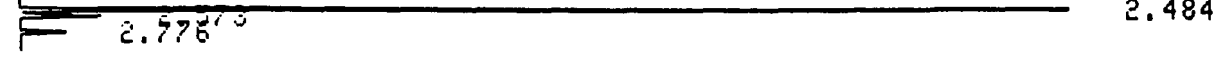


CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 7

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.484	18811		1	92.7172	METHANE
2	2.573	1478	V	2	7.2828	ETHANE
3	2.776	674	V			
	TOTAL	20963			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 10:25:16 LASCO BAG SAMPLES 10-8-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 8

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.484	18879		1	92.743	METHANE
2	2.573	1477	V	2	7.257	ETHANE
3	2.776	672	V			
	TOTAL	21028			100	

CHROMATOGRAM 101 MEMORIZED

02037-02

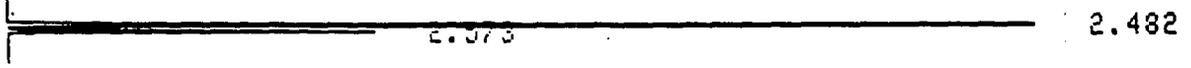
Shimadzu

TOTAL 217850 100

CHROMATOGRAM 101 MEMORIZED

87/05/22 10:06:09 LASCO BAG SAMPLES

ETHANE MID STD



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 5

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	24473		1	84.5306	METHANE
2	2.573	4479	V	2	15.4694	ETHANE
	TOTAL	28952			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 10:12:34 LASCO BAG SAMPLES

ETHANE MID STD

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

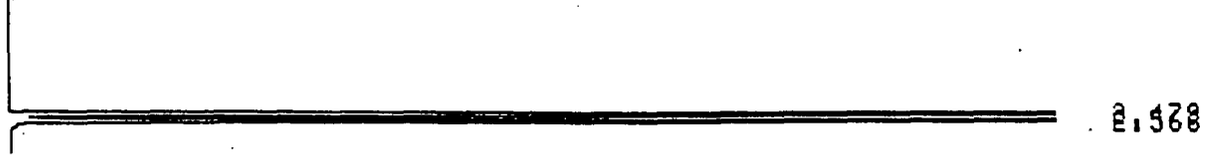
SAMPLE NO 0 METHOD 0002

REPORT NO 6

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	23572		1	84.6029	METHANE
2	2.572	4290	V	2	15.3971	ETHANE
	TOTAL	27862			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 09:45:46 LASCO BAG SAMPLES

HIGH STD



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 3

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.479	156054		1	74.6142	METHANE
2	2.566	53094	V	2	25.3858	ETHANE
	TOTAL	209148			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 09:53:38 LASCO BAG SAMPLES

HIGH STD

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 4

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.481	162487		1	74.5868	METHANE
2	2.573	55363	V	2	25.4132	ETHANE

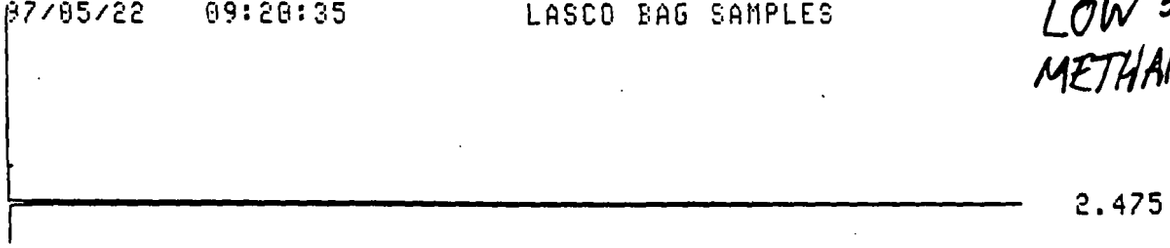
12 1

223-02037-02

Shimadzu

CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED
87/05/22 09:28:35 LASCO BAG SAMPLES

LOW STD METHANE



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 1

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.475	15477		1	100	METHANE
	TOTAL	15477			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 09:29:06 LASCO BAG SAMPLES

LOW STD METHANE

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 2

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.48	15535		1	100	METHANE
	TOTAL	15535			100	

Shimadzu

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 48

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	18982		1	93.7146	METHANE
2	2.585	1273	V	2	6.2854	ETHANE
3	2.788	13322				
	TOTAL	33577			100	

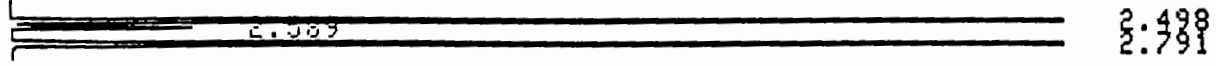
2.791

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 47

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	19083		1	93.7042	METHANE
2	2.587	1282	V	2	6.2958	ETHANE
3	2.791	13402				
	TOTAL	33767			100	

CHROMATOGRAM 101 MEMORIZED

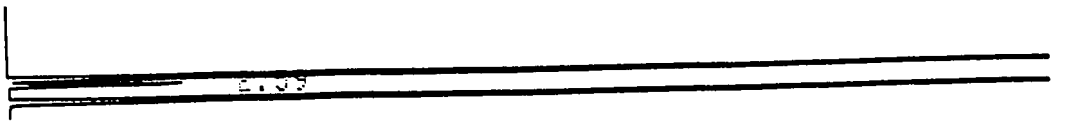
97/05/22 21:32:07 LASCO BAG SAMPLES 9-10-1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 46

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	60892		1	96.0984	METHANE
2	2.589	2472	V	2	3.9016	ETHANE
3	2.791	31201	V			
	TOTAL	94565			100	

CHROMATOGRAM 101 MEMORIZED



CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 45

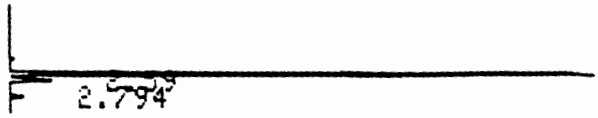
FILE 9
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	59090		1	96.0506	METHANE
2	2.59	2430	V	2	3.9494	ETHANE
3	2.793	32101	V			
	TOTAL	93621			100	

CHROMATOGRAM 101 MEMORIZED

13 8

223-02037-02



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

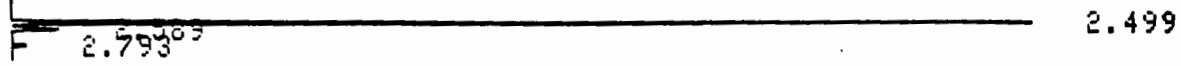
SAMPLE NO 0 METHOD 0002

REPORT NO 43

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	11044		1	93.8524	METHANE
2	2.59	723	V	2	6.1476	ETHANE
3	2.794	200	V			
	TOTAL	11967			100	

223-020[redacted]2

87/05/22 20:55:10 LASCO BAG SAMPLES 10-9-1

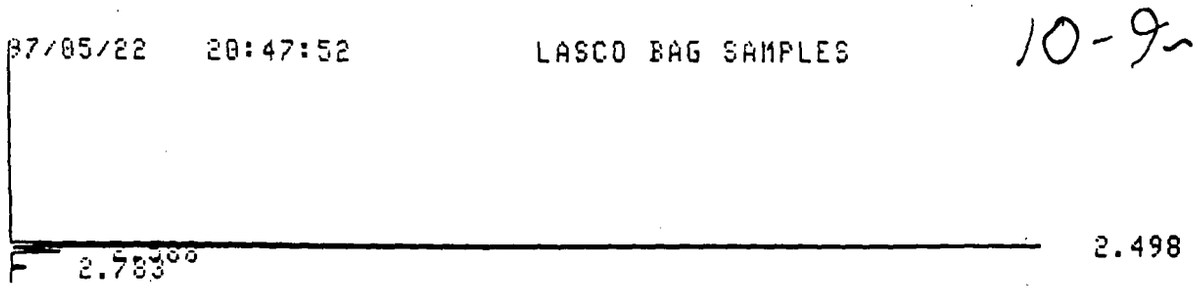


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 42

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	11779		1	93.8085	METHANE
2	2.589	777	V	2	6.1915	ETHANE
3	2.793	213				
	TOTAL	12769			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 20:47:52 LASCO BAG SAMPLES 10-9-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

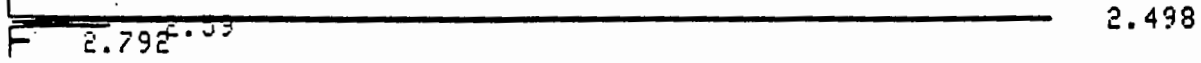
SAMPLE NO 0 METHOD 0002

REPORT NO 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	12469		1	93.8044	METHANE
2	2.588	824	V	2	6.1956	ETHANE
3	2.783	240	V			
	TOTAL	13532			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 20:38:33 LASCO BAG SAMPLES 9-94



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 40

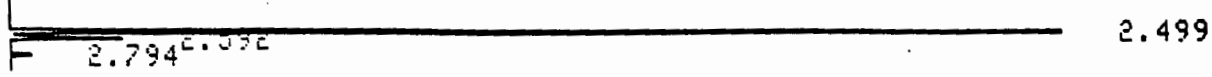
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	32850		1	95.7582	METHANE
2	2.59	1455	V	2	4.2418	ETHANE
3	2.792	284	V			
TOTAL		34589			100	

CHROMATOGRAM 101 MEMORIZED

13 6

223-02037-02

97/05/22 20:32:14 LASCO BAG SAMPLES 9-9-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 39

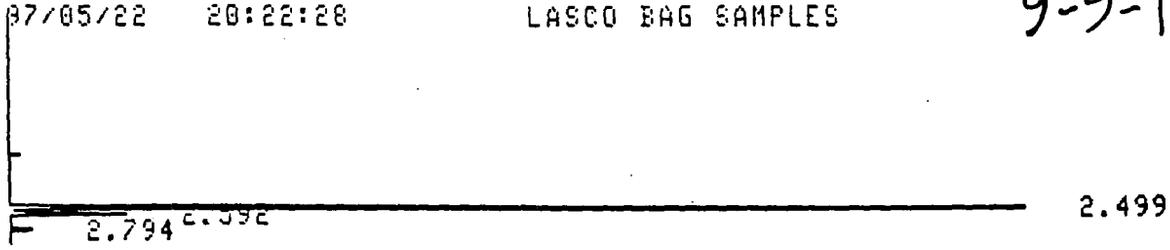
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	37234		1	95.764	METHANE
2	2.592	1647	V	2	4.2359	ETHANE
3	2.794	313	V			
	TOTAL	39194			100	

CHROMATOGRAM 101 MEMORIZED

-02037-02

CHROMATOGRAM 101 MEMORIZED
87/05/22 20:22:28 LASCO BAG SAMPLES

9-9-1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 38

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	40419		1	95.7582	METHANE
2	2.592	1790	V	2	4.2418	ETHANE
3	2.794	347	V			
	TOTAL	42556			100	

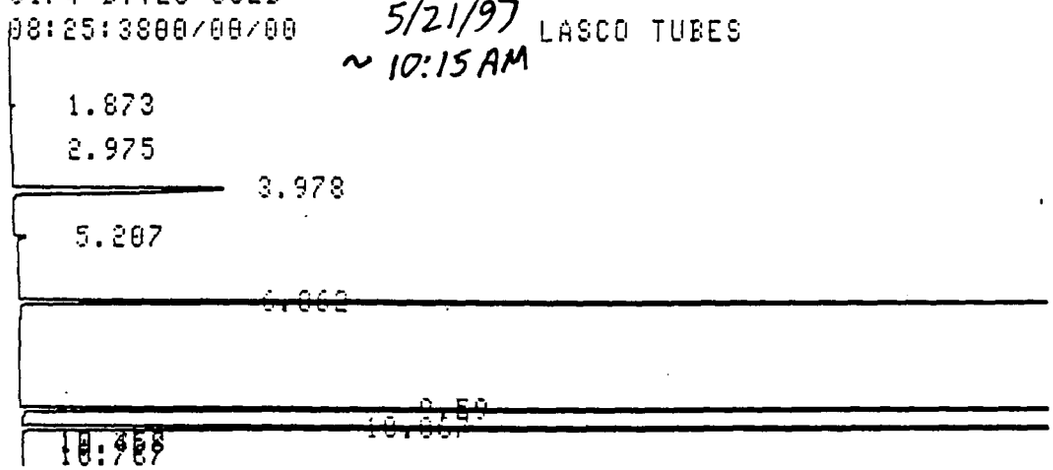
CHROMATOGRAM 101 MEMORIZED

⊕ Shimadzu

1849/ 8174 BYTES USED
08:25:3800/00/00 5/21/97 LASCO TUBES

CONCAL

~ 10:15 AM



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 2

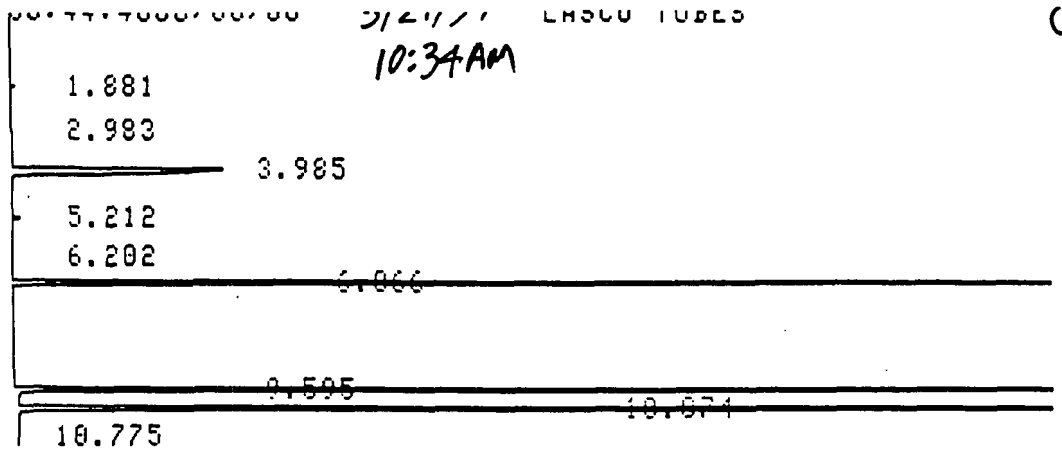
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.873	1712				
2	2.975	874				
3	3.978	221136		4	5.3155	CS2
4	5.207	4656				
5	6.862	735470		3	17.6786	MMA
6	9.59	1671766		1	40.1844	STYRENE
7	10.067	1531862	V	2	36.8215	CUMEME
8	10.367	185				
9	10.458	460	V			
10	10.767	590				
	TOTAL	4168708			100	

CONTROL

223-02037-02

Shimadzu

10:34AM



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	3		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.881	1688				
2	2.983	868				
3	3.985	222127		4	5.4257	CS2
4	5.212	4682				
5	6.202	285				
6	6.866	732471		3	17.8915	MMA
7	9.595	1639020		1	40.0351	STYRENE
8	10.074	1500336	V	2	36.6476	CUMENE
9	10.775	629				
	TOTAL	4102106			100	

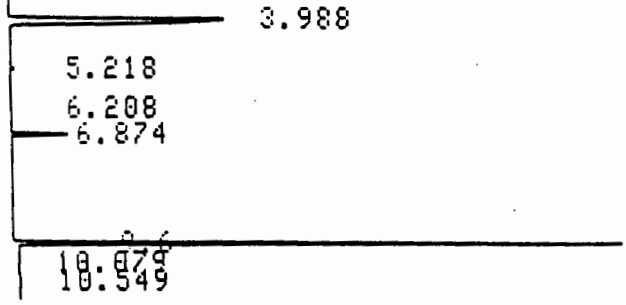
10:53:1097/05/21 LASCO TUBES

CHROMATOGRAM 1 MEMORIZED

WARNING NO PEAK

10:55:3097/05/21 LASCO TUBES

ME-51
FHA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002

REPORT NO 4

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.994	1291				
2	3.988	220490		4	50.0304	CS2
3	5.218	2870				
4	6.208	276				
5	6.874	21970		3	4.985	MMA
6	9.6	197782		1	44.8778	STYRENE
7	10.079	471		2	0.1068	CUMEME
8	10.549	5827				

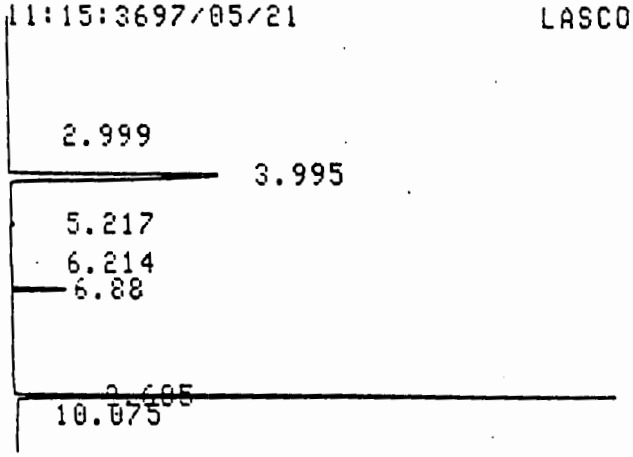
093

22

ME-5-1
FH A

3-02037-02

TOTAL 450977 100
11:15:3697/05/21 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

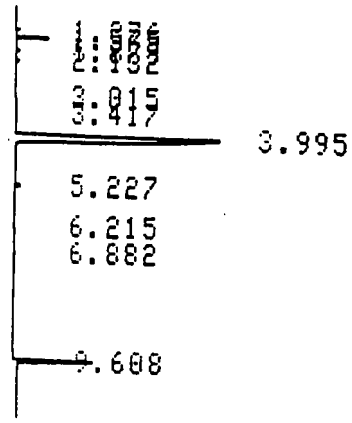
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO. 5

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.999	1276				
2	3.995	219319		4	49.5551	CS2
3	5.217	2882				
4	6.214	278				
5	6.88	22108		3	4.9953	MMA
6	9.605	200156		1	45.2252	STYRENE
7	10.075	993		2	0.2244	CUMEME
	TOTAL	447012			100	

Shimadzu

218

FHA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0

FILE 0
METHOD 0002

REPORT NO 6

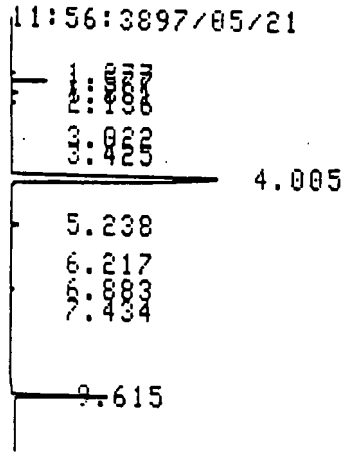
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.376	825				
2	1.575	7473				
3	1.879	2588				
4	2.132	2608	V			
5	3.015	2111				
6	3.417	1052				
7	3.995	221948		4	88.5426	CS2
8	5.227	3956				
9	6.215	622				
10	6.882	1983		3	0.791	MMA
11	9.608	26737		1	10.6664	STYRENE
	TOTAL	271904			100	

094

223-02037-02

11:56:3897/05/21 LASCO TUBES

9-5-1
FH A



CHROMATOGRAM 1 MEMORIZED

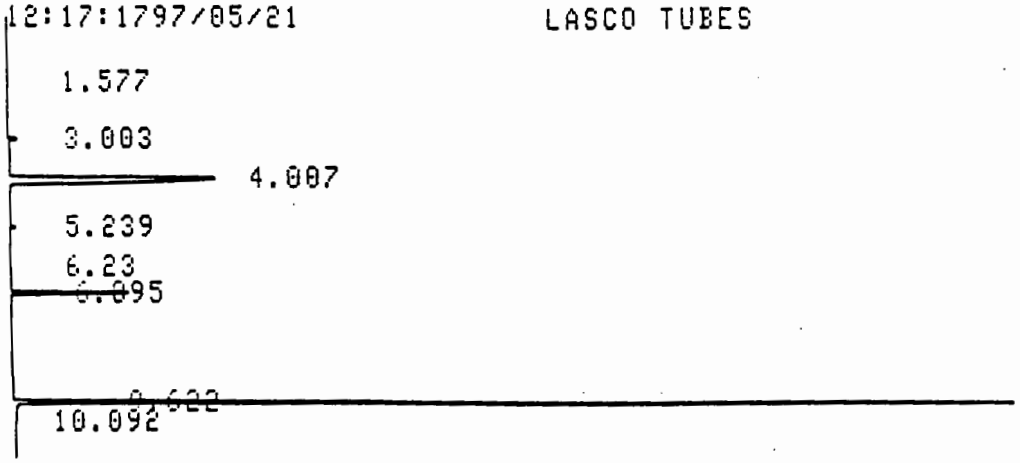
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 7

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.377	994				
2	1.577	8961				
3	1.881	3089				
4	2.136	3086	V			
5	3.022	2518				
6	3.425	1245				
7	4.005	243732		4	87.5975	CS2
8	5.238	4673				
9	6.217	741				
10	6.883	2369		3	0.8513	MMA
11	7.434	343				
12	9.615	32140		1	11.5512	STYRENE

Shimadzu

TOTAL 303891 100
12:17:1797/05/21 LASCO TUBES

AF-5-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 8

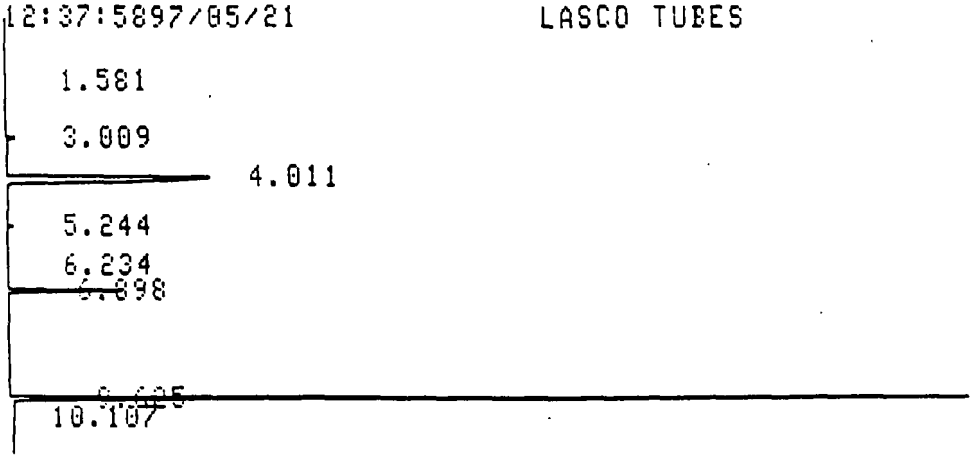
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.577	622				
2	3.003	5429				
3	4.007	219490		4	36.9744	CS2
4	5.239	3402				
5	6.23	299				
6	6.895	45897		3	7.7317	MMA
7	9.622	327598		1	55.1858	STYRENE
8	10.092	642		2	0.1082	CUMEME

095

223-02037-02

AF-5-2
FH A

TOTAL 603380 100
12:37:5897/05/21 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

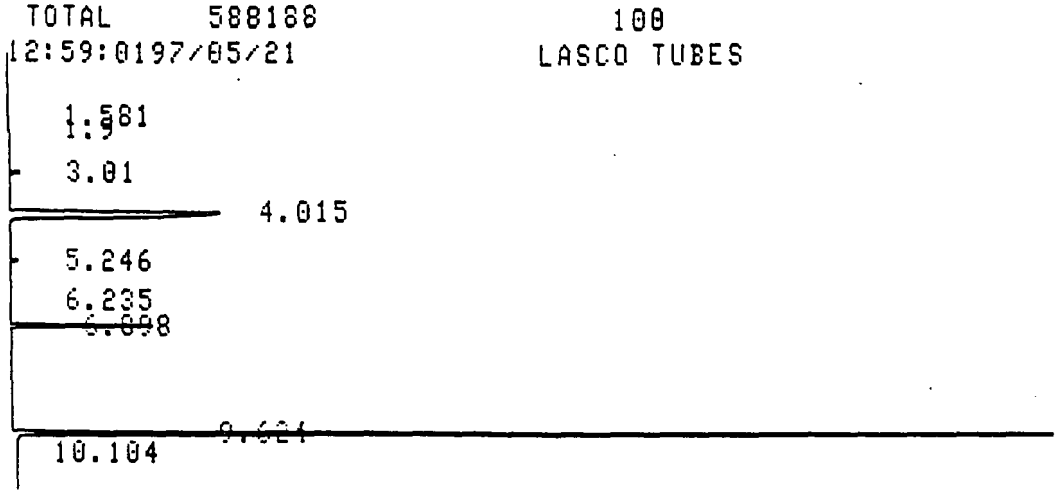
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 9

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.581	621				
2	3.009	5335				
3	4.011	215484		4	37.2407	CS2
4	5.244	3318				
5	6.234	289				
6	6.898	44624		3	7.712	MMA
7	9.625	317893		1	54.9394	STYRENE
8	10.107	624		2	0.1078	CUMEME
		---			---	

⊕ Shimadzu

TOTAL 588188 100
12:59:0197/05/21 LASCO TUBES

AFS-5-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 10

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.581	838				
2	1.9	351				
3	3.01	6478				
4	4.015	254701		4	24.5693	CS2
5	5.246	4836				
6	6.235	379				
7	6.898	55945		3	5.3966	MMA
8	9.624	724851		1	69.9215	STYRENE
9	10.104	1168		2	0.1126	CUMEME

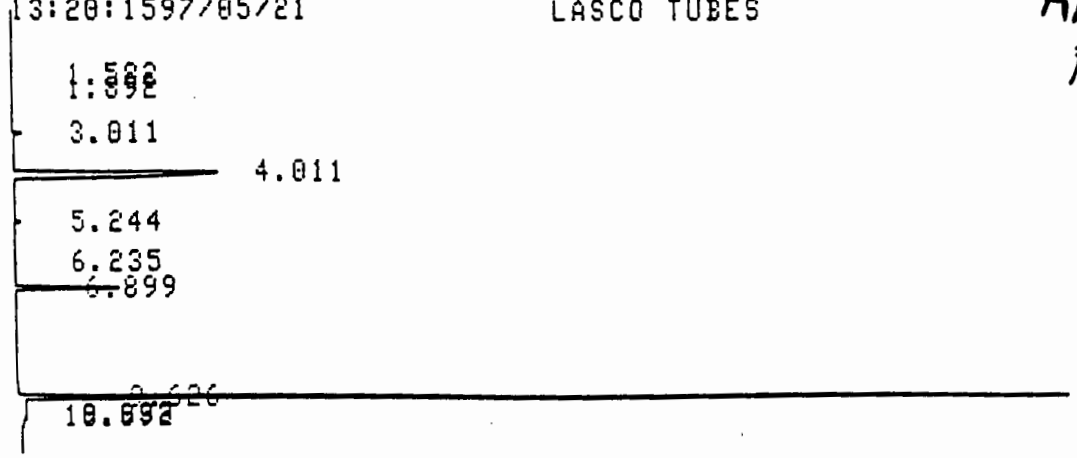
0.96

223-02037-02

AFS-5-2
FH A

TOTAL 1649346 100

13:20:1597/05/21 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

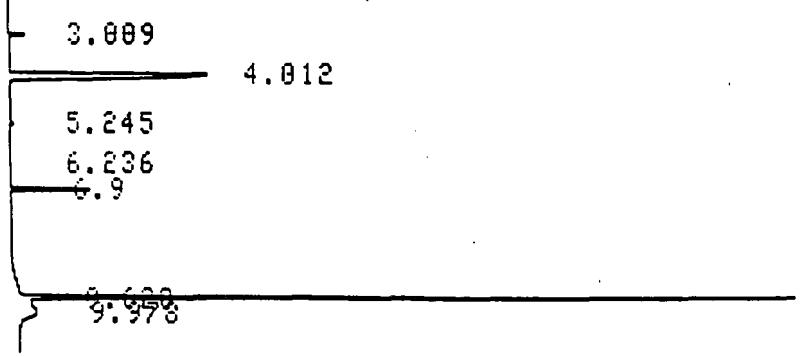
SAMPLE NO 0 METHOD 0002

REPORT NO 11

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.582	612				
2	1.892	245				
3	3.011	4715				
4	4.011	210302		4	27.1641	CS2
5	5.244	3492				
6	6.235	282				
7	6.899	40048		3	5.1729	MMA
8	9.626	519374		1	67.0863	STYRENE
9	9.933	10814	V			
10	10.092	4465	V	2	0.5767	CUMEME

TOTAL 794346 100
13:41:5197/05/21 LASCO TUBES

REG-1
FHA



CHROMATOGRAM 1 MEMORIZED

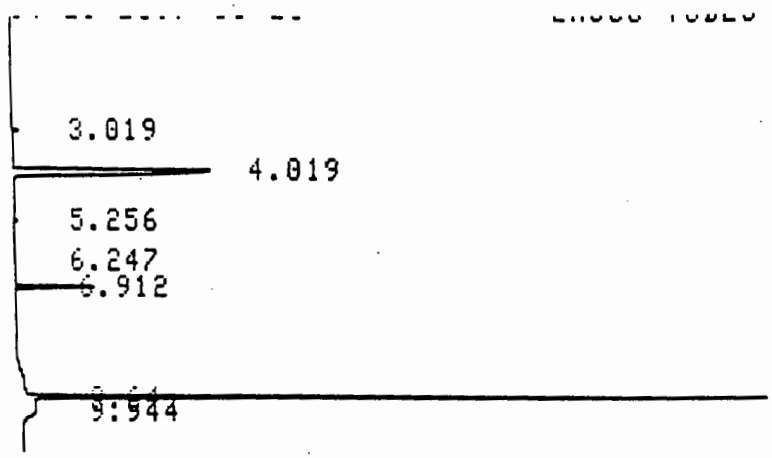
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 12

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.009	8297				
2	4.012	207281		4	41.1319	CS2
3	5.245	3100				
4	6.236	277				
5	6.9	31733		3	6.2969	MMA
6	9.628	264928		1	52.5713	STYRENE
7	9.978	54693	V			
		---			---	
		[illegible]				

0 97

223-020370-02

KE-57
FH A



CHROMATOGRAM 1 MEMORIZED

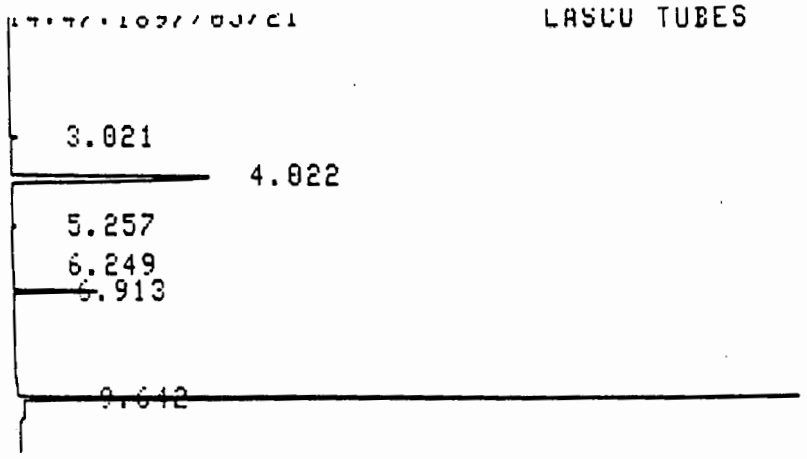
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 14

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.019	3776				
2	4.019	207175		4	40.4048	CS2
3	5.256	2953				
4	6.247	277				
5	6.912	31127		3	6.0706	MMA
6	9.64	274446		1	53.5246	STYRENE
7	9.944	42388	V			
	TOTAL	562142			100	

0 98
223-02037-02

LASCU TUBES

KE-5-1



CHROMATOGRAM 1 MEMORIZED

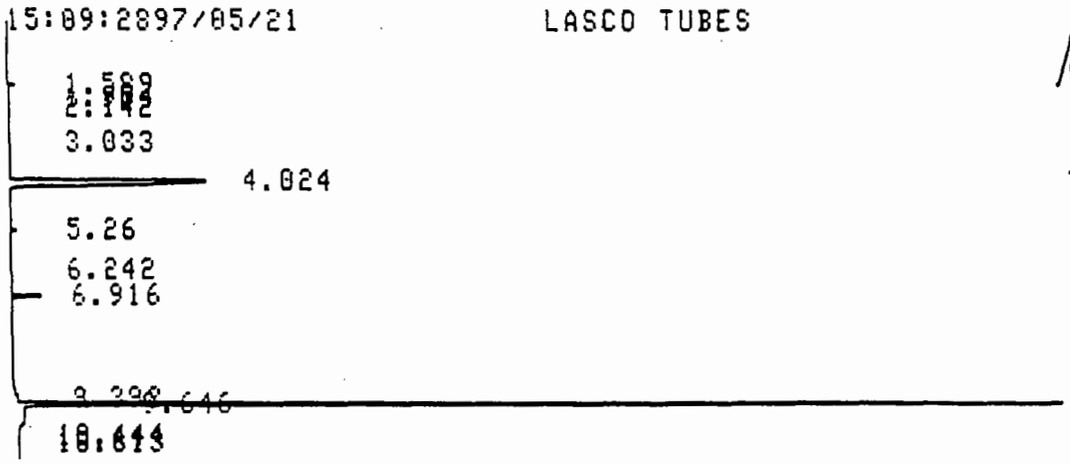
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 15

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.021	3966				
2	4.022	212787		4	42.3142	CS2
3	5.257	3133				
4	6.249	291				
5	6.913	33191		3	6.6003	MMA
6	9.642	256896		1	51.0855	STYRENE
	TOTAL	510265			100	

Shimadzu

15:09:2897/05/21 LASCO TUBES

10-5-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 16

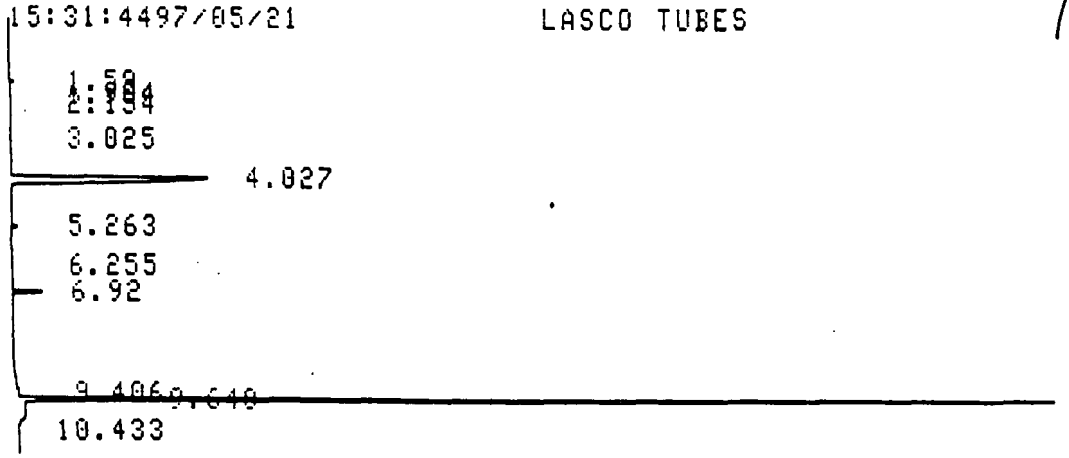
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.589	1863				
2	1.904	662				
3	2.142	475	V			
4	3.033	1166				
5	4.024	209743		4	31.0549	CS2
6	5.26	3497				
7	6.242	387				
8	6.916	12347		3	1.8281	MMA
9	9.392	286				
10	9.646	453303		1	67.117	STYRENE
11	10.444	661				
12	10.613	536	V			
	TOTAL	684926			100	

0.99

223-02037-02

15:31:4497/05/21 LASCO TUBES

10-5-2



CHROMATOGRAM 1 MEMORIZED

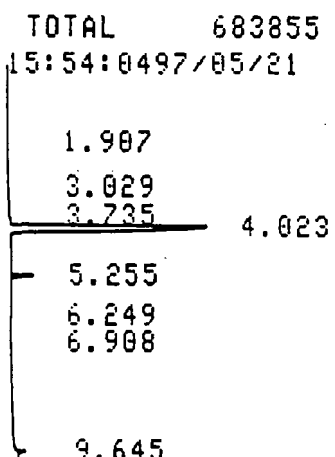
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 17

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.59	1793				
2	1.904	644				
3	2.154	460	V			
4	3.025	1157				
5	4.027	208191		4	30.845	CS2
6	5.263	3508				
7	6.255	383				
8	6.92	12389		3	1.8355	MMA
9	9.406	273				
10	9.648	454380		1	67.3195	STYRENE
11	10.433	677				

Shinadzu

TOTAL 683855 100
15:54:0497/05/21 LASCO TUBES

NDA-6-1
FH-A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 18

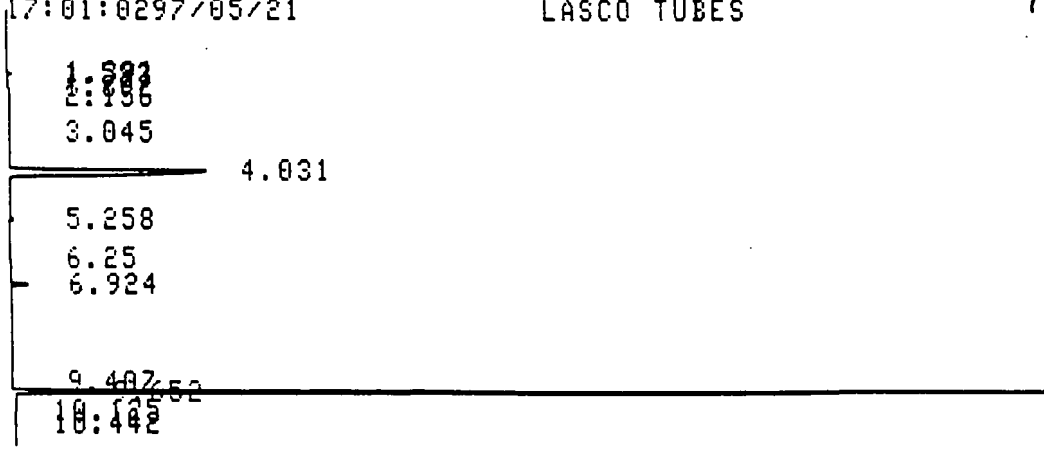
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.907	469				
2	3.029	1425				
3	3.735	330				
4	4.023	206158		4	98.1418	CS2
5	5.255	10367				
6	6.249	280				
7	6.908	535		3	0.2545	MMA
8	9.645	3369		1	1.6036	STYRENE

223-02037-02

10-6-1

TOTAL 738611 100

17:01:0297/05/21 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002

REPORT NO 21

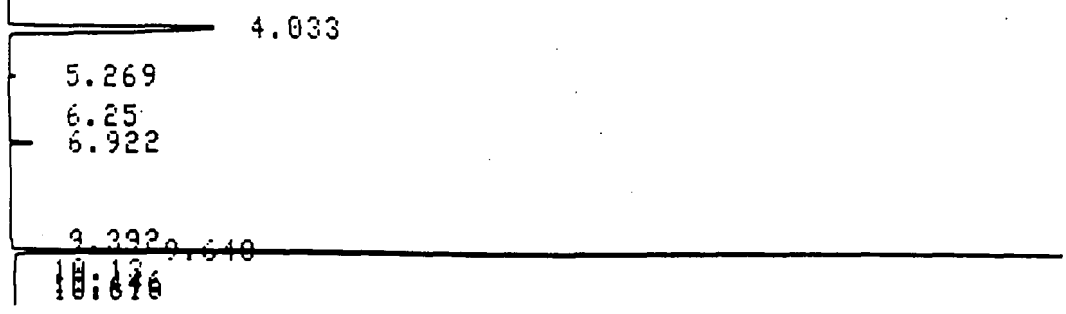
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.391	180				
2	1.593	1455				
3	1.892	505				
4	2.156	438				
5	3.045	705				
6	4.031	206563		4	34.8081	CS2
7	5.258	2849				
8	6.25	389				
9	6.924	7173		3	1.2087	MMA
10	9.407	271				
11	9.652	379165		1	63.8933	STYRENE
12	10.125	534		2	0.09	CUMENE
13	10.442	366				
	TOTAL	600592			100	

⊕ Shimadzu

TOTAL 218520 100

16:38:4497/85/21 LASCO TUBES

10-6-1
FH A



CHROMATOGRAM 1 MEMORIZED

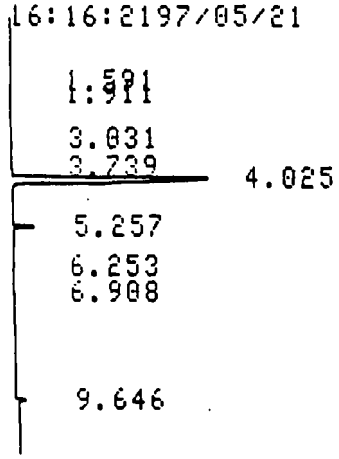
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 20

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.395	278				
2	1.596	1905				
3	1.905	668				
4	2.15	651	V			
5	3.047	927				
6	4.033	237847		4	32.6372	CS2
7	5.269	3651				
8	6.25	496				
9	6.922	9179		3	1.2596	MMA
10	9.392	371				
11	9.648	481095		1	66.0156	STYRENE
12	10.13	639		2	0.0876	CUMEME
13	10.446	399				
14	10.616	506				

223-02037-02

NDA-6-1

TOTAL 222931 100
16:16:2197/05/21 LASCO TUBES

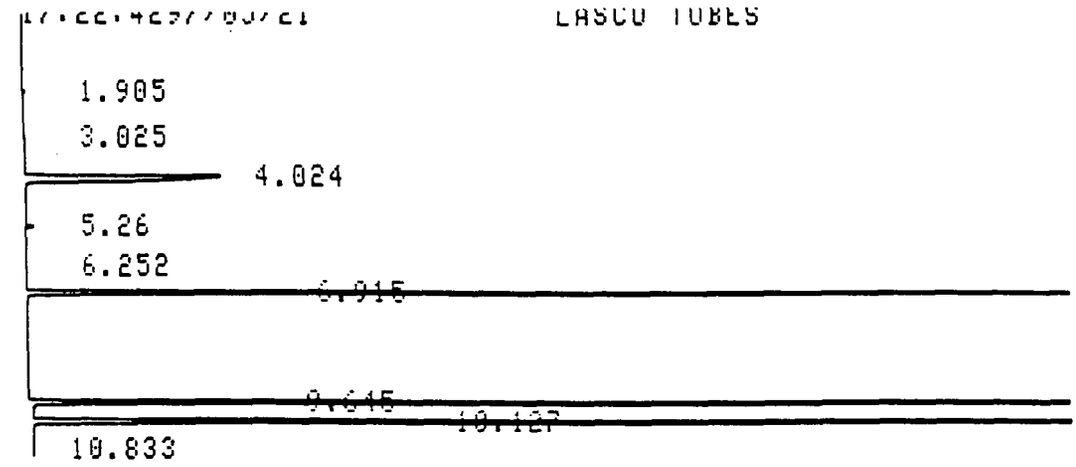


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 19

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.591	248				
2	1.911	454				
3	3.031	1374				
4	3.739	323				
5	4.025	202180		4	98.2016	CS2
6	5.257	9967				
7	6.253	271				
8	6.908	515		3	0.25	MMA
9	9.646	3188		1	1.5483	STYRENE
		---			---	

Shimadzu



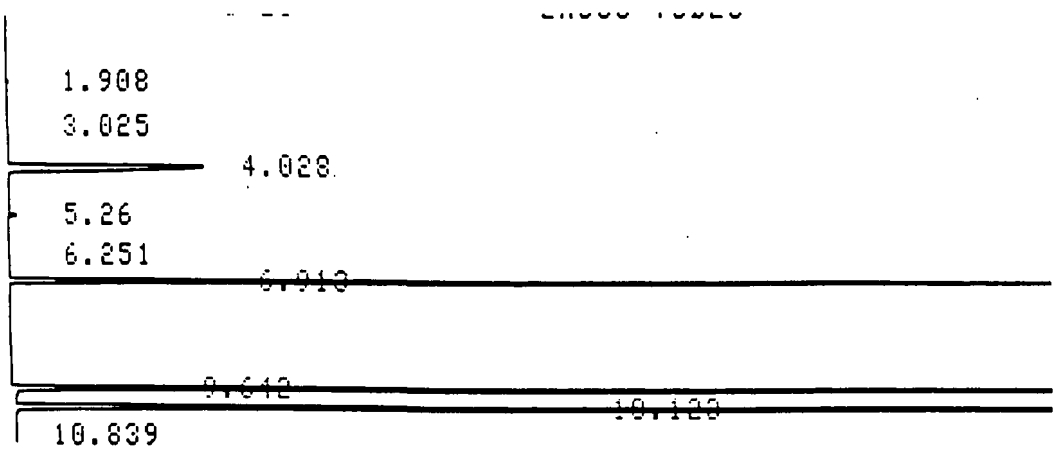
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	22		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.905	1447				
2	3.025	920				
3	4.024	207124		4	5.0686	CS2
4	5.26	4505				
5	6.252	281				
6	6.915	715602		3	17.5117	MMA
7	9.645	1648994		1	40.3531	STYRENE
8	10.127	1514694	V	2	37.0666	CUMEME
9	10.833	979				
	TOTAL	4094545			100	

223-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

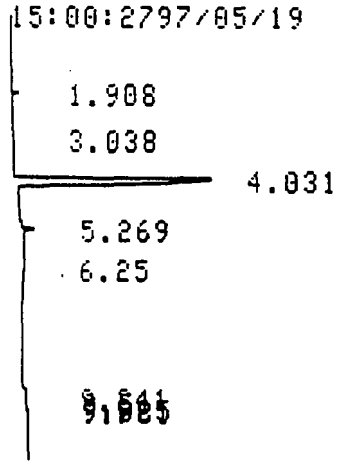
SAMPLE NO 0 METHOD 0002

REPORT NO 23

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	1428				
2	3.025	912				
3	4.028	208357		4	5.0861	CS2
4	5.26	4507				
5	6.251	282				
6	6.913	717542		3	17.5156	MMA
7	9.642	1653884		1	40.3723	STYRENE
8	10.123	1516798	V	2	37.0259	CUMEME
9	10.839	1092				
	TOTAL	4104800			100	

15:00:2797/05/19 LASCO TUBES

RINSE
BLK



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 203

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.908	2389				
2	3.038	1016				
3	4.031	232035		4	99.4324	CS2
4	5.269	5290				
5	6.25	349				
6	9.241	4037				
7	9.5	798	V			
8	9.625	1325	V	1	0.5676	STYRENE
9	9.781	789	V			
	TOTAL	248028			100	

223-02037-02

15:24:2297/05/19 LASCO TUBES

BLANK

1.907
3.025
4.028
5.266
10.383
10.708

CHROMATOGRAM 1 MEMORIZED

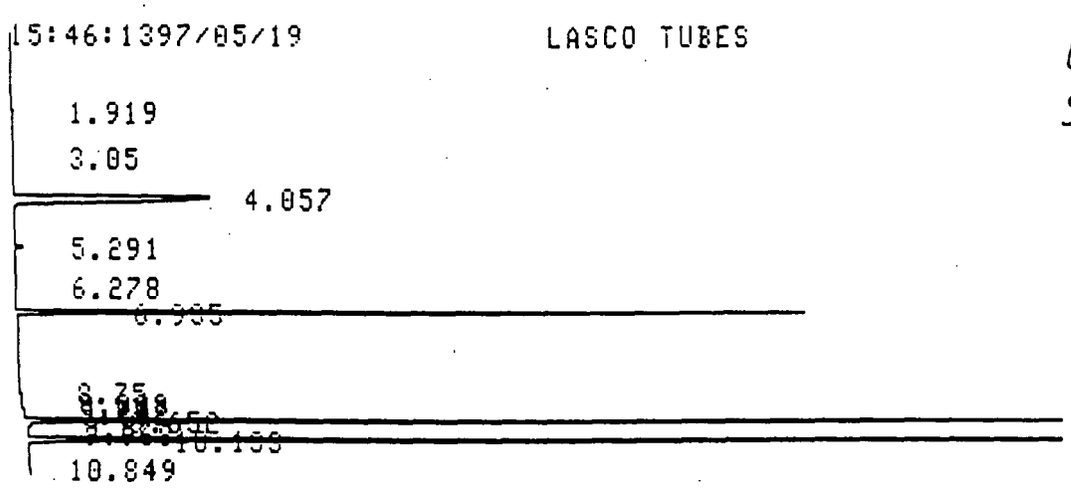
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 205

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.907	1592				
2	3.025	761				
3	4.028	200308		4	100	CS2
4	5.266	3810				
5	10.383	3113				
6	10.708	7899	V			
	TOTAL	217484			100	

15:46:1397/05/19 LASCO TUBES

LOW STD 1

Shimadzu



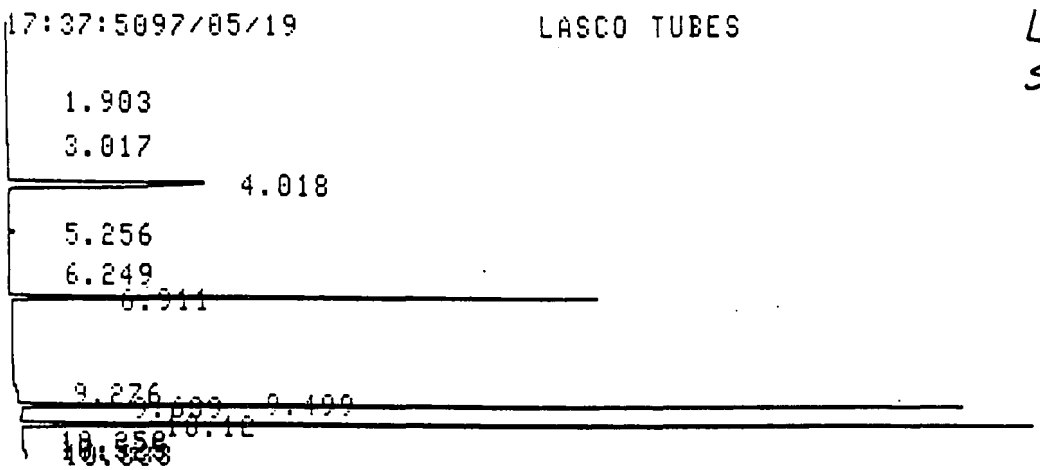
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 207

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.919	1446				
2	3.05	928				
3	4.057	232072		4	15.67	CS2
4	5.291	4936				
5	6.278	348				
6	6.935	298416		3	20.1496	MMA
7	8.75	1147				
8	9.008	861				
9	9.267	725	V			
10	9.442	1196	V			
11	9.652	418191	V	1	28.2371	STYRENE
12	9.8	1647	V			
13	9.968	1367	V			
14	10.133	532322	V	2	35.9433	CUMENE
15	10.849	2424				
	TOTAL	1498027			100	

17:37:5097/05/19 LASCO TUBES

LOW STD1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 215

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.903	1049				
2	3.017	699				
3	4.018	200563		4	17.5622	CS2
4	5.256	3724				
5	6.249	260				
6	6.911	224942		3	19.6969	MMA
7	9.276	1487				
8	9.499	1348				
9	9.639	313821	V	1	27.4796	STYRENE
10	10.12	402689		2	35.2613	CUMEME
11	10.358	1530	V			
12	10.525	996	V			
13	10.833	3817	V			
	TOTAL	1156925			100	

053

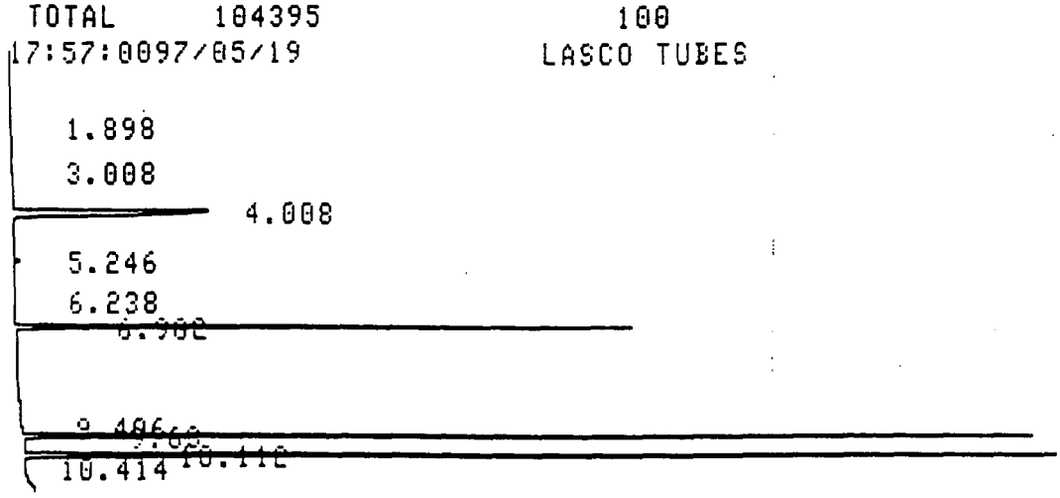
223-02037-02

⊕ Shinadr

TOTAL 104395 100

17:57:0097/05/19 LASCO TUBES

LOW STD 1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002

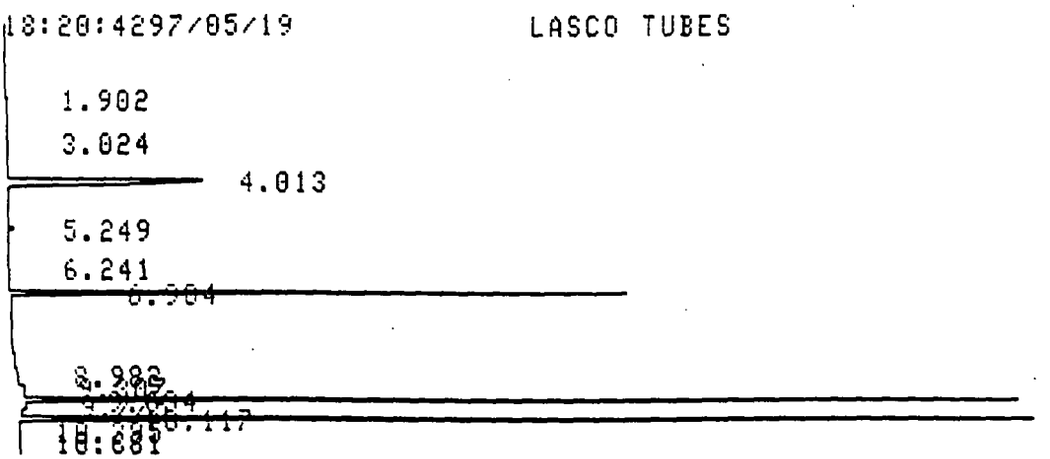
REPORT NO 217

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.898	1038				
2	3.008	716				
3	4.008	204590		4	17.0888	CS2
4	5.246	3861				
5	6.238	280				
6	6.902	235866		3	19.7012	MMA
7	9.406	1525				
8	9.63	331638		1	27.7008	STYRENE
9	10.112	425122		2	35.5092	CUMEME
10	10.414	1941				
	TOTAL	1206576			100	

223-02037-02

18:20:4297/05/19 LASCO TUBES

LOW STD1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 219

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.902	1119				
2	3.024	738				
3	4.013	206944		4	16.889	CS2
4	5.249	3943				
5	6.241	299				
6	6.904	238253		3	19.4442	MMA
7	8.982	6178				
8	9.307	11652	V			
9	9.634	347916	V	1	28.3939	STYRENE
10	9.775	11332	V			
11	10.117	432207	V	2	35.273	CUMEME
12	10.395	2464	V			
13	10.681	1389				

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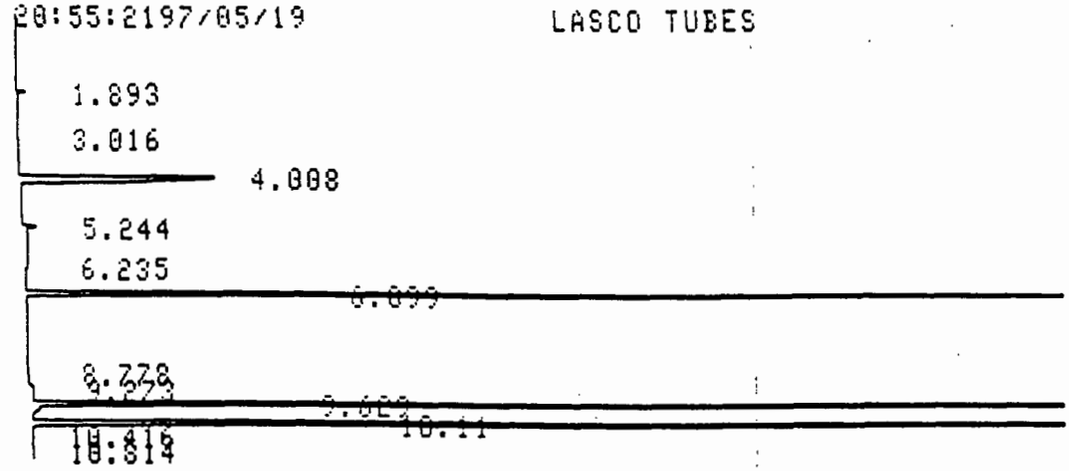
0 55

223-02037-02

20:55:2197/05/19 LASCO TUBES

STD2
M10



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 239

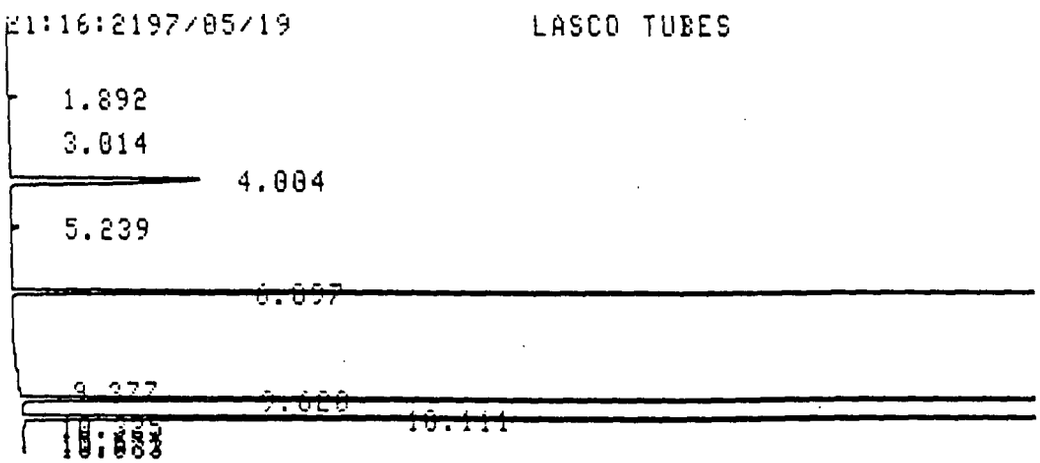
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.893	3024				
2	3.016	950				
3	4.008	204434		4	5.2461	CS2
4	5.244	5009				
5	6.235	269				
6	6.899	719888		3	18.4735	MMA
7	8.778	2431				
8	9.273	10104				
9	9.629	1559010	V	1	40.0067	STYRENE
10	10.11	1413539	V	2	36.2737	CUMEME
11	10.416	5141	V			
12	10.814	3361				
	TOTAL	3927158			100	

223-02037-02

Shimadzu

STD 2
MID

E1:16:2197/05/19 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

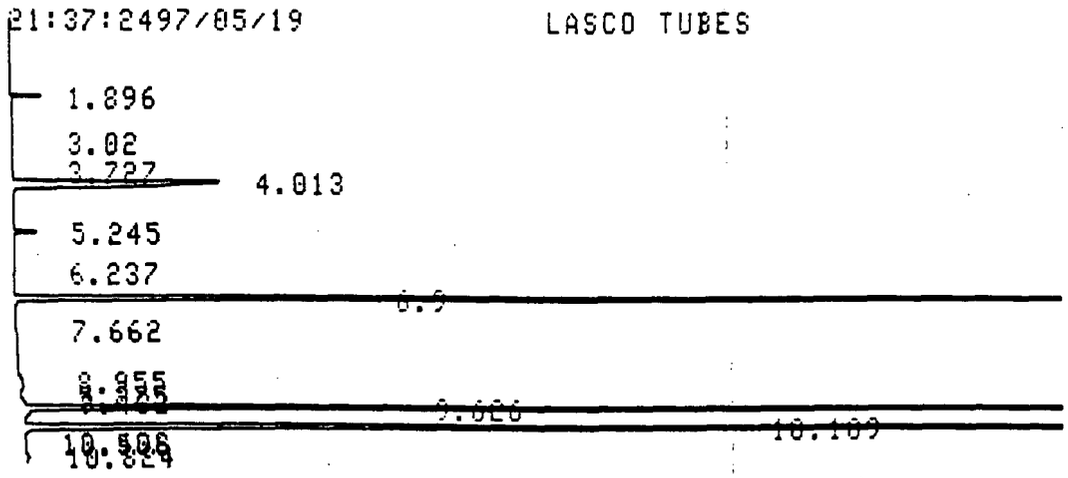
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 240

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.892	2837				
2	3.014	893				
3	4.004	202791		4	5.3595	CS2
4	5.239	4728				
5	6.897	695168		3	18.3721	MMA
6	9.377	4793				
7	9.628	1508366	V	1	39.864	STYRENE
8	10.111	1377466	V	2	36.4045	CUMEME
9	10.325	2971	V			
10	10.671	6102	V			
11	10.833	542	V			
	TOTAL	3806648			100	

21:37:2497/05/19 LASCO TUBES

STD3
HIGH

223-02037-02



CHROMATOGRAM 1 MEMORIZED

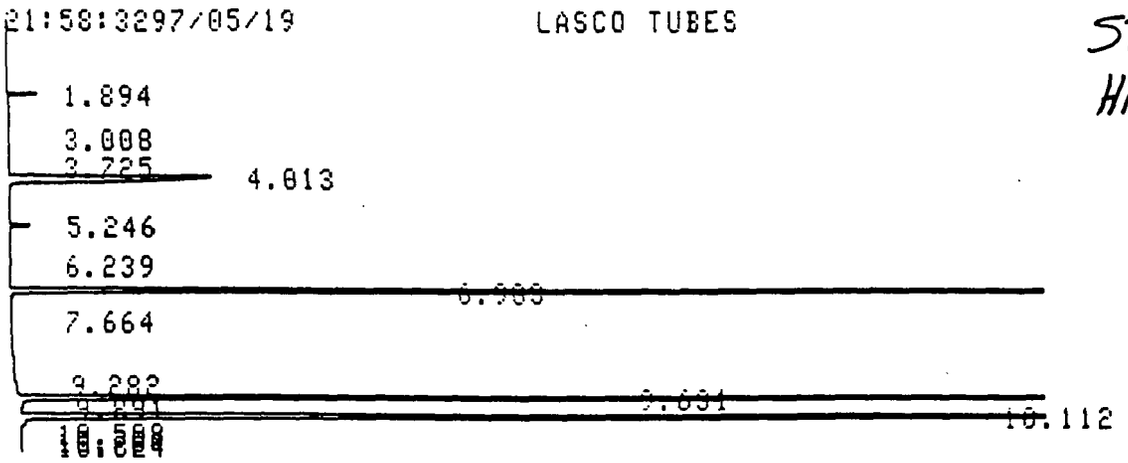
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 241

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	8410				
2	3.02	1812				
3	3.727	406				
4	4.013	231512		4	2.6882	CS2
5	5.245	10462				
6	6.237	352				
7	6.9	1925615		3	22.3593	MMA
8	7.662	457				
9	8.955	5929				
10	9.275	403				
11	9.482	5570	V			
12	9.626	3153635	VE	1	36.6185	STYRENE
13	10.109	3301385	VE	2	38.3341	CUMEME
14	10.408	1219	V			
15	10.506	1823	V			
16	10.824	3980	V			
	TOTAL	8652968			100	

⊕ Shimadzu

21:58:3297/05/19 LASCO TUBES

STD3
HIGH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 242

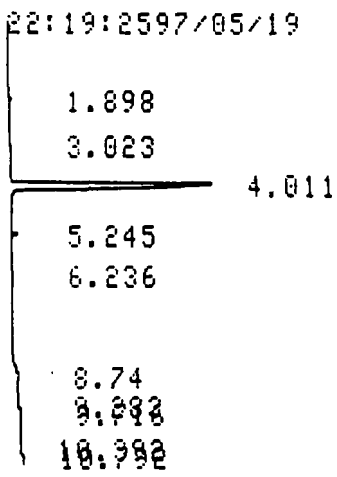
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.894	7878				
2	3.008	1733				
3	3.725	395				
4	4.013	227633		4	2.7008	CS2
5	5.246	10147				
6	6.239	338				
7	6.903	1874940		3	22.2456	MMA
8	7.664	399				
9	9.282	2003				
10	9.631	3104427	VE	1	36.8331	STYRENE
11	9.891	3053	V			
12	10.112	3221358	SVE	2	38.2205	CUMEME
13	10.508	422	T			
14	10.704	2651	TV			
15	10.824	1220	TV			
	TOTAL	8458593			100	

223-02037-02

22:19:2597/05/19 LASCO TUBES

BLK

B Shinadzu



CHROMATOGRAM 1 MEMORIZED

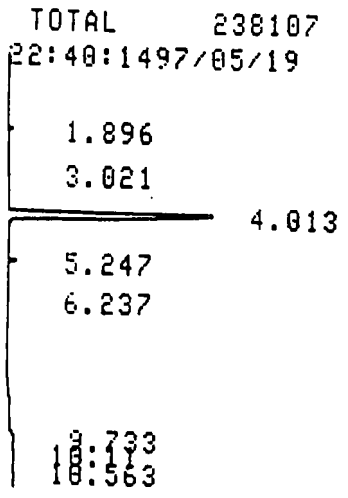
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 243

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.898	1431				
2	3.023	779				
3	4.011	212487		4	98.0988	CS2
4	5.245	3927				
5	6.236	286				
6	8.74	5352				
7	9.283	4489				
8	9.716	4118	V	1	1.9012	STYRENE
9	10.392	1473				
10	10.792	3766	V			

TOTAL 238107 100

22:40:1497/05/19 LASCO TUBES

BLK



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 244

FILE 0
METHOD 0002

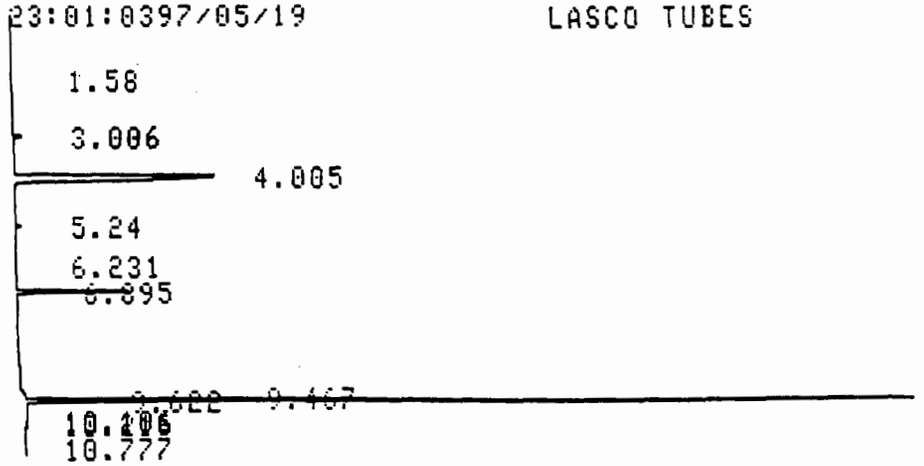
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	1723				
2	3.021	941				
3	4.013	238532		4	96.683	CS2
4	5.247	4818				
5	6.237	349				
6	9.733	4315		1	1.7488	STYRENE
7	10.11	3869		2	1.5681	CUMEME
8	10.563	3848				
	TOTAL	258395			100	

065

223-02037-02

AF-5-2
FH A

23:01:0397/05/19 LASCO TUBES



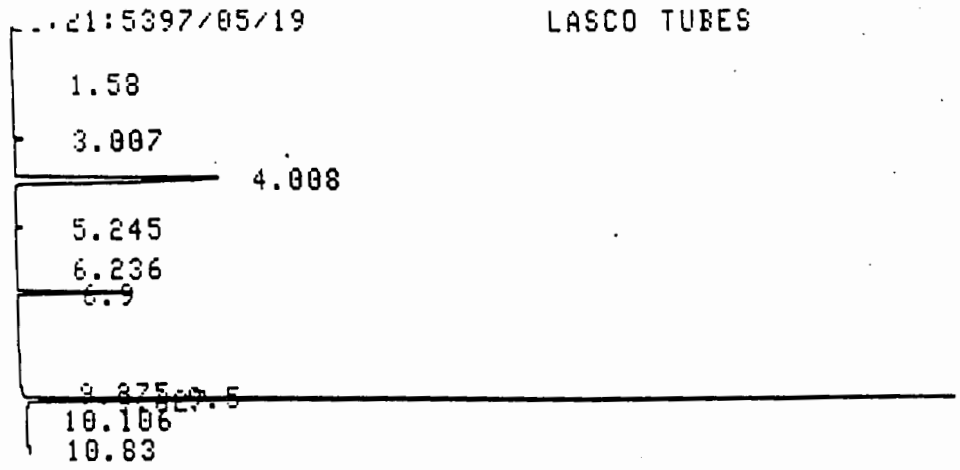
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 245

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.58	683				
2	3.006	5682				
3	4.005	205370		4	37.8485	CS2
4	5.24	3399				
5	6.231	278				
6	6.895	43376		3	7.9939	MMA
7	9.467	3482				
8	9.622	292067	V	1	53.8262	STYRENE
9	10.106	1087		2	0.2003	CUMEME
10	10.216	711	V	2	0.1311	CUMEME
11	10.777	4446				
	TOTAL	560580			100	

..21:5397/05/19 LASCO TUBES

AF-5-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 246

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.58	688				
2	3.007	5703				
3	4.008	208517		4	37.3087	CS2
4	5.245	3461				
5	6.236	285				
6	6.9	44832		3	8.0215	MMA
7	9.5	226	V			
8	9.627	305172	V	1	54.6026	STYRENE
9	10.106	375		2	0.0672	CUMEME
10	10.83	4784				

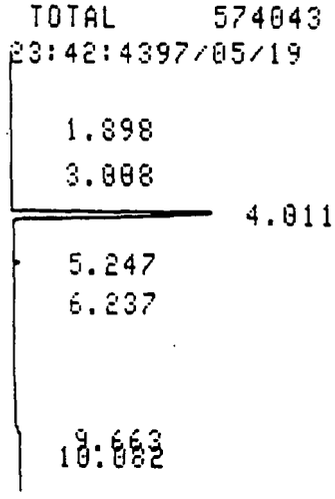
066

223-02037-02

TOTAL 574043 100
23:42:4397/05/19 LASCO TUBES

AF-5-2
BH A

Shimadzu



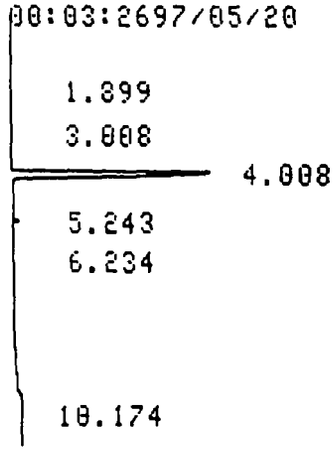
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 247

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.898	692				
2	3.008	685				
3	4.011	206905		4	96.7671	CS2
4	5.247	3754				
5	6.237	273				
6	9.663	3892		1	1.8202	STYRENE
7	10.082	3021	V	2	1.4127	CUMEME
	TOTAL	219222			100	

00:03:2697/05/20 LASCO TUBES

AF-5-2
BH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 248

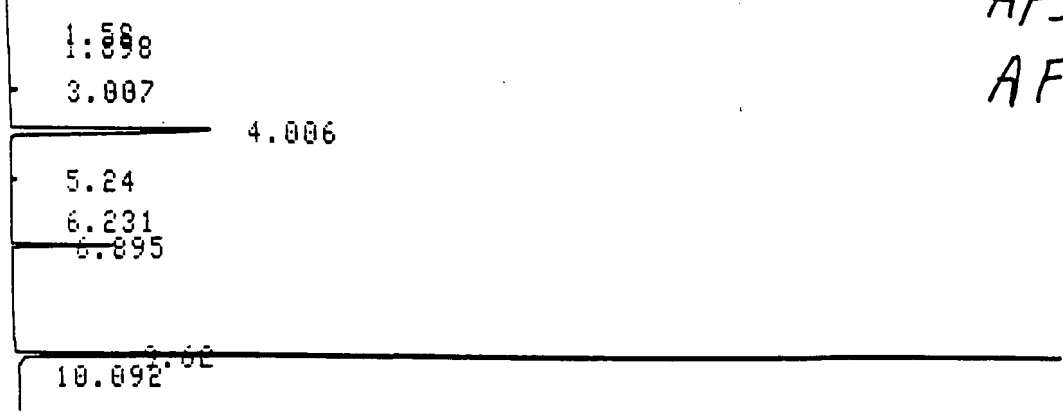
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.899	672				
2	3.008	681				
3	4.008	208826		4	99.2333	CS2
4	5.243	3810				
5	6.234	279				
6	10.174	1613		2	0.7667	CUMEME
	TOTAL	215881			100	

067

223-02037-02

00:24:0697/05/20 LASCO TUBES

AFS-5-2
AFH (SPIKE)



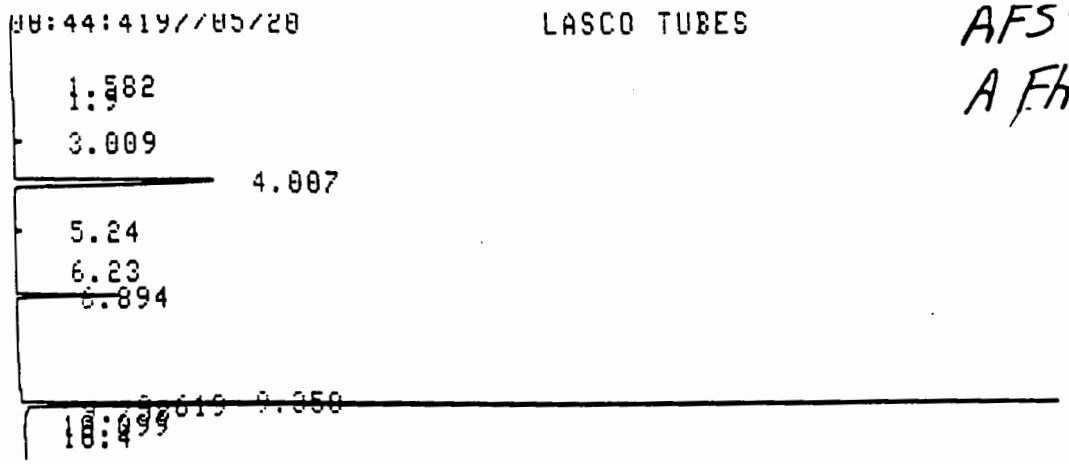
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 249

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.58	680				
2	1.898	334				
3	3.007	4992				
4	4.006	204382		4	26.899	CS2
5	5.24	3576				
6	6.231	274				
7	6.895	39937		3	5.2562	MMA
8	9.62	514847		1	67.7599	STYRENE
9	10.092	645		2	0.0849	CUMENE
	TOTAL	769667			100	

08:44:419//05/28 LASCO TUBES

AFS-J-2
A FH (SAKE)



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 250

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.582	687				
2	1.9	338				
3	3.009	5039				
4	4.007	205812		4	27.0898	CS2
5	5.24	3608				
6	6.23	276				
7	6.894	40377		3	5.3146	MMA
8	9.358	2006				
9	9.619	512703	V	1	67.484	STYRENE
10	9.758	3118	V			
11	10.099	848		2	0.1116	CUMEME
12	10.4	1169				

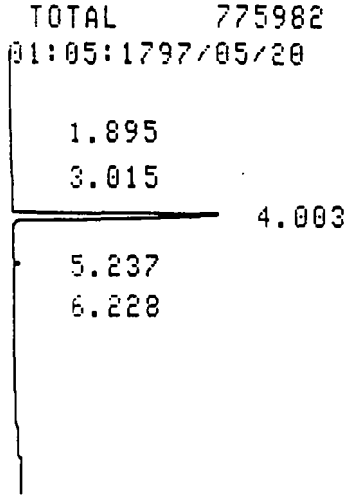
0 68

223-02037-02

⊕ Shin

TOTAL 775982 100
01:05:1797/05/20 LASCO TUBES

AFS-5-2
BH



CHROMATOGRAM 1 MEMORIZED

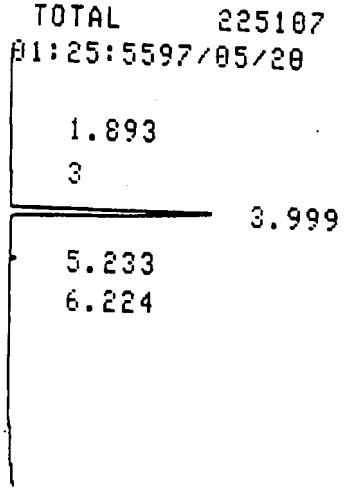
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 251

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.895	1093				
2	3.015	705				
3	4.003	218951		4	100	CS2
4	5.237	4064				
5	6.228	294				

TOTAL 225107
01:25:5597/05/20

100
LASCO TUBES

AFS-5-2
BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 252

FILE 0
METHOD 0002

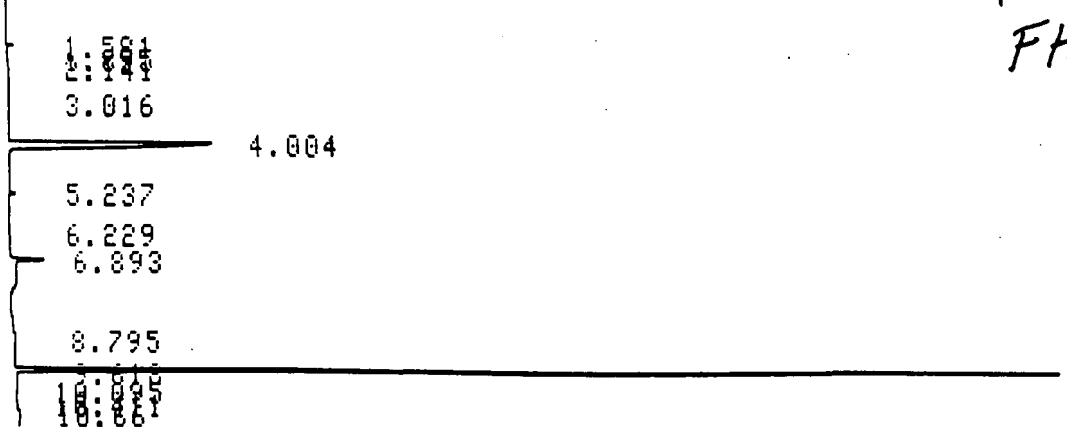
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.893	1024				
2	3	655				
3	3.999	206906		4	100	CS2
4	5.233	3740				
5	6.224	269				

223-02037-02

TOTAL 212595 100

01:46:3197/05/20 LASCO TUBES

10-5-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

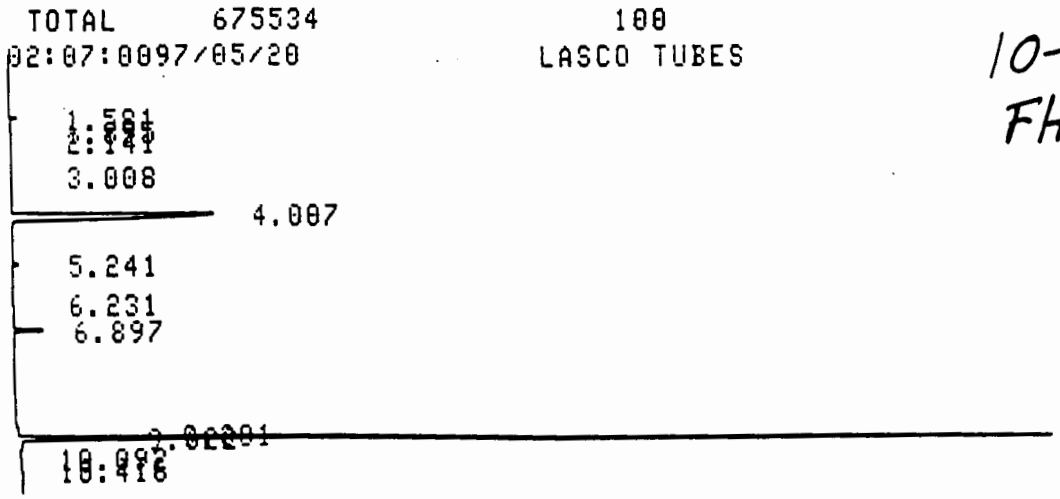
SAMPLE NO 0 METHOD 0002

REPORT NO 253

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.581	2006				
2	1.895	783				
3	2.141	495	V			
4	3.016	1200				
5	4.004	204501		4	31.6387	CS2
6	5.237	3487				
7	6.229	349				
8	6.893	11724		3	1.8138	MMA
9	8.795	12644				
10	9.618	426375		1	65.9649	STYRENE
11	10.095	3765	V	2	0.5826	CUMEME
12	10.411	910				
13	10.66	7296	V			

TOTAL 675534 100
02:07:0097/05/20 LASCO TUBES

10-5-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 254

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.581	2069				
2	1.895	808				
3	2.141	498	V			
4	3.008	1203				
5	4.007	205281		4	31.526	CS2
6	5.241	3501				
7	6.231	375				
8	6.897	11888		3	1.8257	MMA
9	9.381	1672				
10	9.622	431523	V	1	66.2711	STYRENE
11	10.092	2456	V	2	0.3772	CUMEME
12	10.416	677				

070

223-02037-02

Shim

02:27:3297/05/20 LASCO TUBES

BH

1.896
3
4
5.235
6.226

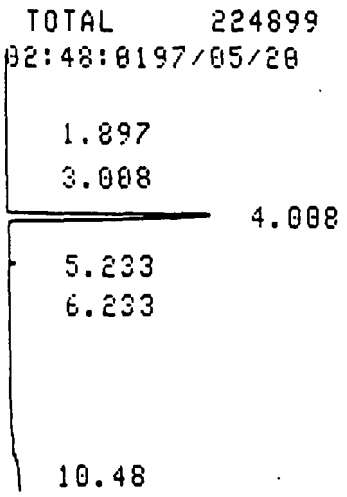
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 255

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	579				
2	3	708				
3	4	219353		4	100	CS2
4	5.235	3963				
5	6.226	296				

TOTAL 224899 100
02:48:0197/05/20 LASCO TUBES

10-5-2
BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 256

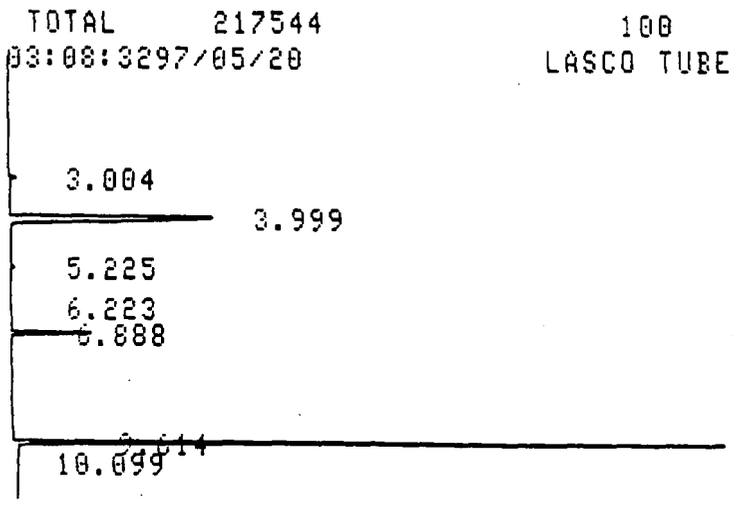
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.897	509				
2	3.008	654				
3	4.008	207029		4	100	CS2
4	5.233	3679				
5	6.233	273				
6	10.48	5399				

071

223-02037-02

TOTAL 217544 100
03:08:3297/05/20 LASCO TUBES

RE-5-1
FH A



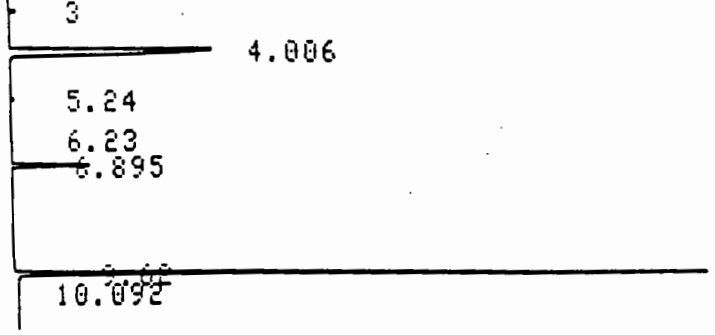
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 257

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.004	4180				
2	3.999	206646		4	43.7873	CS2
3	5.225	3129				
4	6.223	279				
5	6.888	31430		3	6.6599	MMA
6	9.614	232442		1	49.2535	STYRENE
7	10.099	1412		2	0.2993	CUMEME

TOTAL 479518 100
03:29:0297/05/20 LASCO TUBES

RE-5-1
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 258

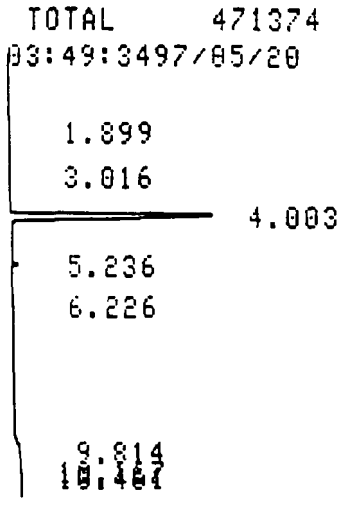
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3	4145				
2	4.006	205081		4	44.2086	CS2
3	5.24	3063				
4	6.23	273				
5	6.895	30702		3	6.6183	MMA
6	9.62	227643		1	49.0722	STYRENE
7	10.092	468		2	0.1009	CUMEME

223-02037-02

TOTAL 471374 100

03:49:3497/85/20 LASCO TUBES

RE-5-1
BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

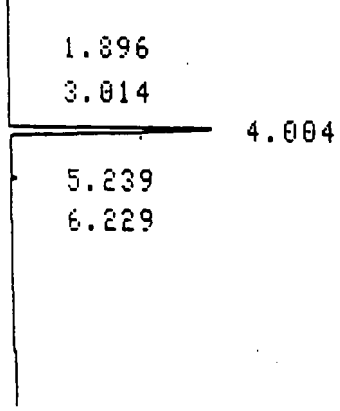
SAMPLE NO 0 METHOD 0002

REPORT NO 259

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.899	321				
2	3.016	625				
3	4.003	205525		4	98.3373	CS2
4	5.236	3599				
5	6.226	263				
6	9.814	6623				
7	10.167	3475	V	2	1.6627	CUMEME
8	10.461	3905	V			

TOTAL 224336 100
04:09:5797/05/20 LASCO TUBES

RE-5-1
BH



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 260

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.896	321				
2	3.014	644				
3	4.004	208911		4	100	CS2
4	5.239	3678				
5	6.229	271				

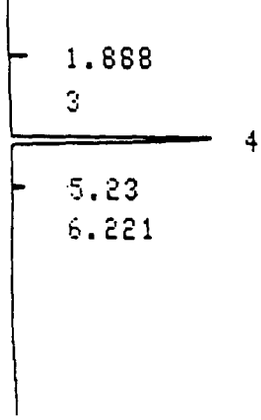
073

223-02037-02

TOTAL 213825 100

04:30:1997/05/20 LASCO TUBES

BLK



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002

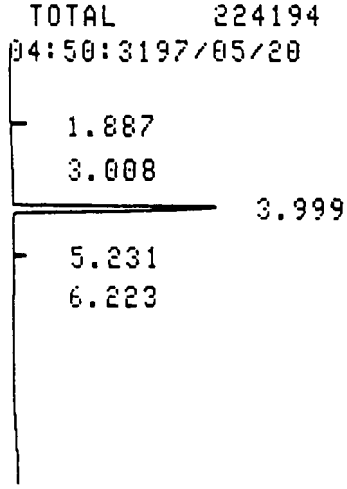
REPORT NO 261

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.888	4903				
2	3	1181				
3	4	211266		4	100	CS2
4	5.23	6568				
5	6.221	277				

Shimadzu

TOTAL 224194 100
04:50:3197/05/20 LASCO TUBES

BLK



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 262

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.887	4788				
2	3.008	1168				
3	3.999	209802		4	100	CS2
4	5.231	6498				
5	6.223	275				
	TOTAL	222531			100	

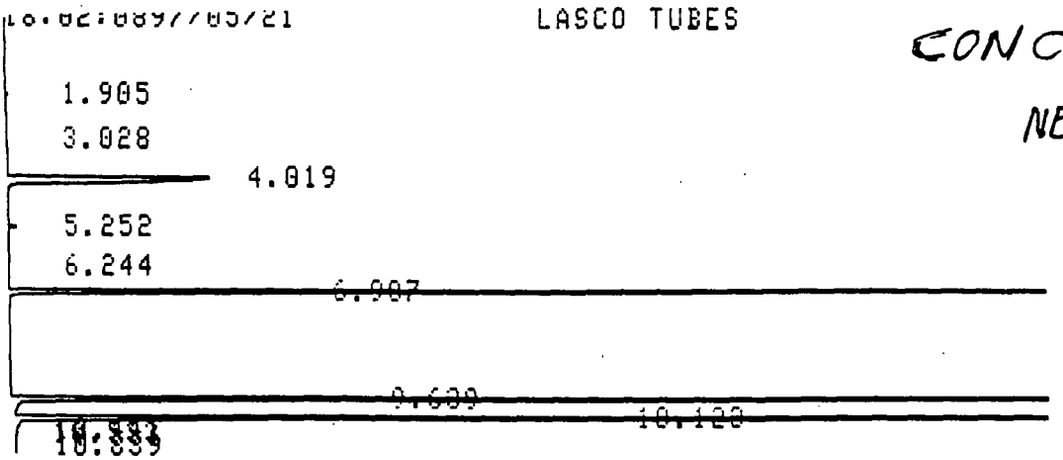
223-02037-02

10:02:08/7/05/21 LASCO TUBES

CONCAL

NEW SYRINGE

OK



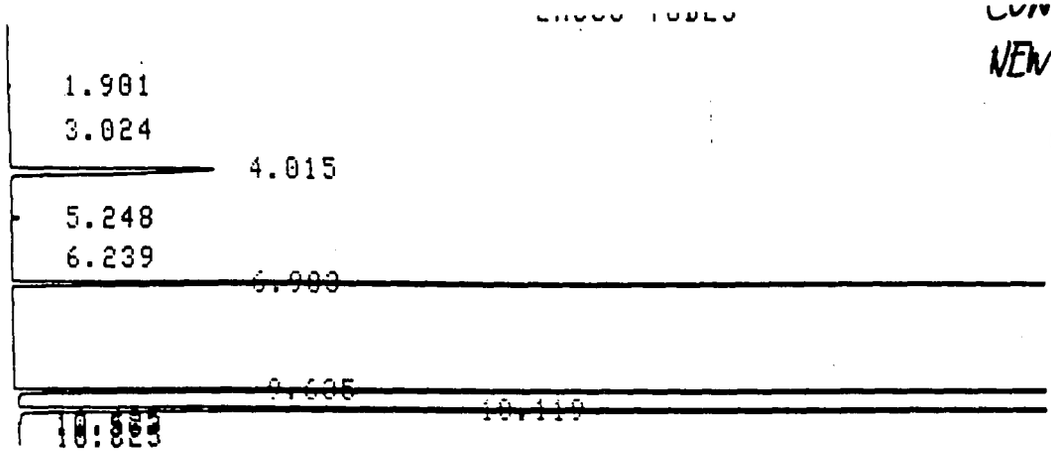
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 24

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.905	1587				
2	3.028	997				
3	4.019	218350		4	5.0399	CS2
4	5.252	4802				
5	6.244	299				
6	6.907	757277		3	17.4791	MMA
7	9.639	1749622		1	40.384	STYRENE
8	10.123	1607211	SV	2	37.097	CUMEME
9	10.533	159	T			
10	10.839	1152				
	TOTAL	4341456			100	

223-02037-02

CONCAT
NEW SYRINGE
OK



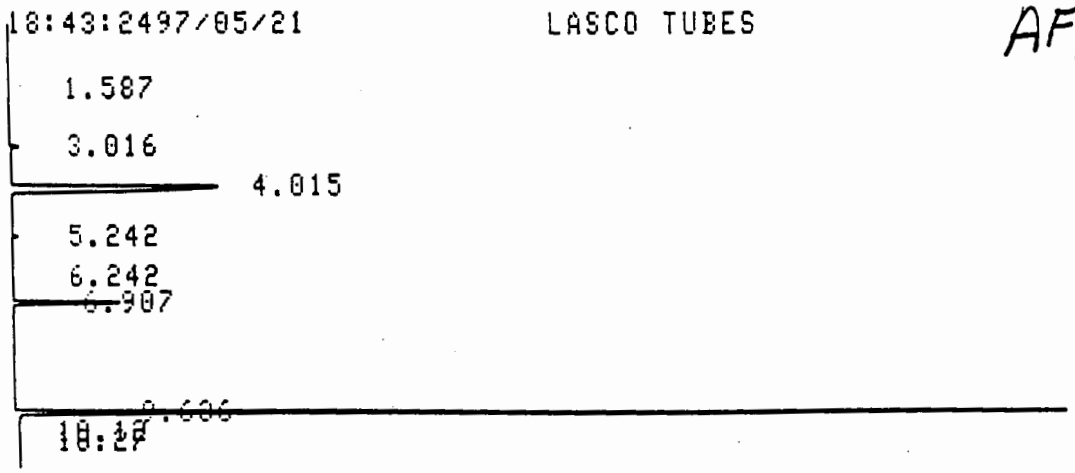
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 25

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.901	1615				
2	3.024	1043				
3	4.015	222699		4	4.9419	CS2
4	5.248	4966				
5	6.239	332				
6	6.903	787351		3	17.4721	MMA
7	9.635	1820856		1	40.4067	STYRENE
8	10.119	1675417	SV	2	37.1792	CUMEME
9	10.533	161	T			
10	10.825	1201				
	TOTAL	4515641			100	

18:43:2497/05/21 LASCO TUBES

AFS-5-2



223-02037-02

CHROMATOGRAM 1 MEMORIZED

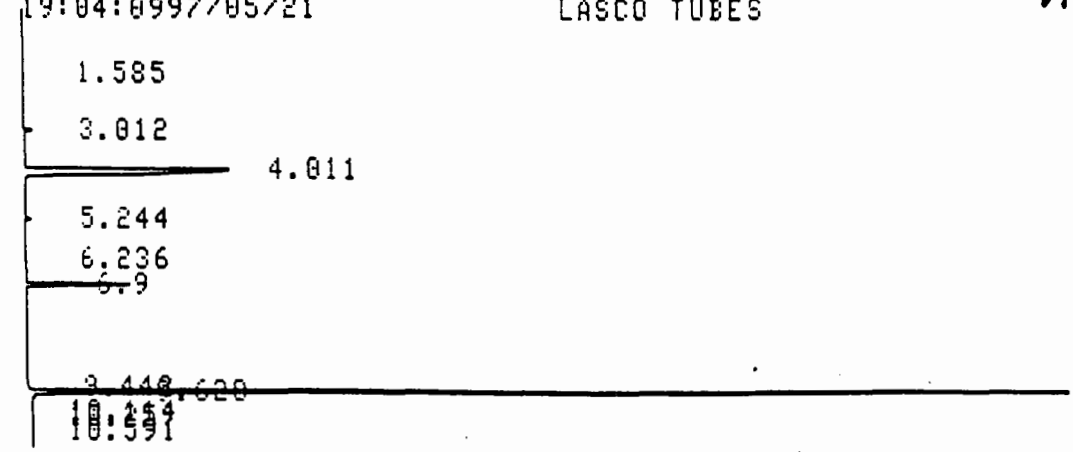
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 26

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.587	636				
2	3.016	4854				
3	4.015	213491		4	26.9712	CS2
4	5.242	3564				
5	6.242	282				
6	6.907	41161		3	5.2	MMA
7	9.636	535707		1	67.678	STYRENE
8	10.12	1194		2	0.1508	CUMEME
9	10.27	2614	V			
		---			---	

⊕ Shimadzu

AFS-5-2

TOTAL 803502 100
19:04:0997/05/21 LASCO TUBES



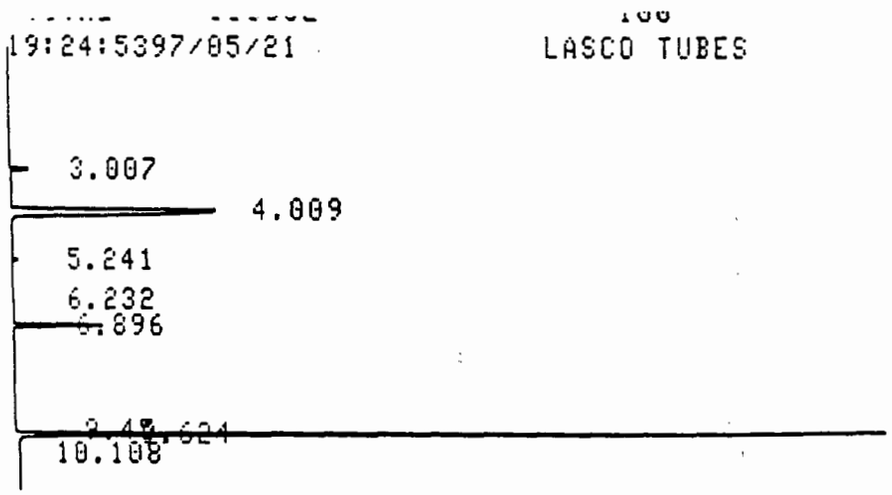
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 27

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.585	648				
2	3.012	4846				
3	4.011	212982		4	26.7781	CS2
4	5.244	3541				
5	6.236	283				
6	6.9	40733		3	5.1213	MMA
7	9.442	957				
8	9.628	536639	V	1	67.4713	STYRENE
9	10.114	2787	V	2	0.3505	CUMEME
10	10.25	2217	V	2	0.2787	CUMEME
11	10.591	2369	V			
		---			---	

RE-6-1

19:24:5397/05/21 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 28

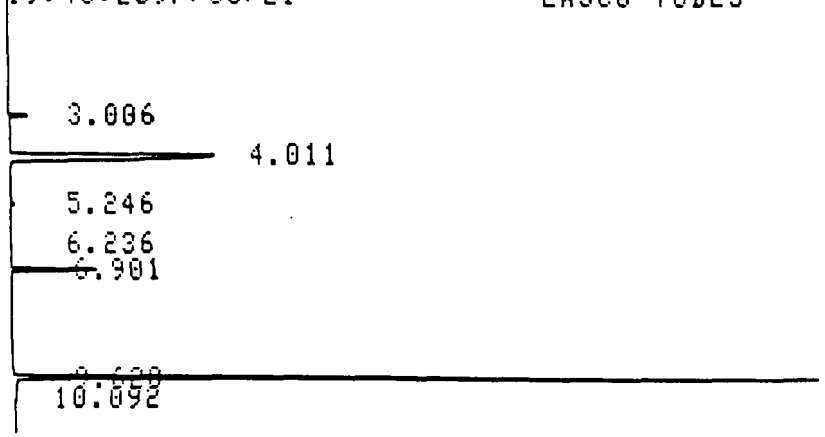
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.007	9618				
2	4.009	228082		4	40.9983	CS2
3	5.241	3564				
4	6.232	308				
5	6.896	36285		3	6.5224	MMA
6	9.45	1091				
7	9.624	290765	V	1	52.2657	STYRENE
8	10.108	1188		2	0.2136	CUMEME

223-02037-02

Shimadzu

TOTAL 570902 100
19:45:2597/05/21 LASCO TUBES

RE-6-1
FHA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 29

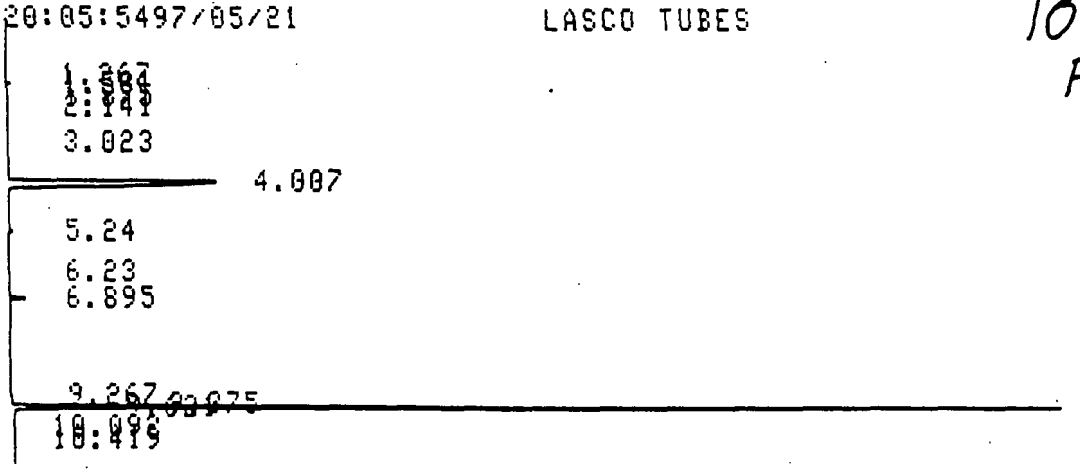
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.006	8833				
2	4.011	216399		4	41.3983	CS2
3	5.246	3290				
4	6.236	286				
5	6.901	33538		3	6.416	MMA
6	9.628	271797		1	51.9961	STYRENE
7	10.092	991	V	2	0.1896	CUMEME

TOTAL 535133 100

20:05:5497/05/21 LASCO TUBES

10-6-1
FH-A

223-02037-02



CHROMATOGRAM 1 MEMORIZED

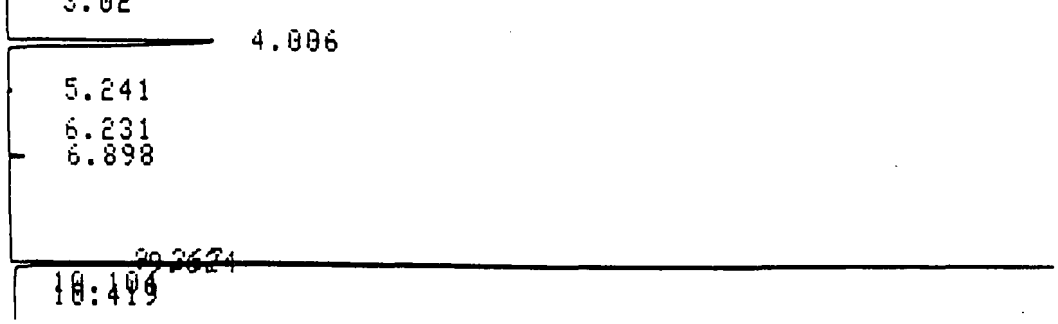
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 30

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.367	219				
2	1.581	1546				
3	1.875	546				
4	2.141	529	V			
5	3.023	726				
6	4.007	213140		4	35.9365	CS2
7	5.24	2836				
8	6.23	388				
9	6.895	7050		3	1.1886	MMA
10	9.267	415				
11	9.375	2196	V			
12	9.621	372292	V	1	62.7705	STYRENE
13	10.092	619		2	0.1044	CUMEME
14	10.419	327				
		---			---	

Shimadzu

TOTAL 602829 100
20:26:2197/05/21 LASCO TUBES

10-6-1
FH A



CHROMATOGRAM 1 MEMORIZED

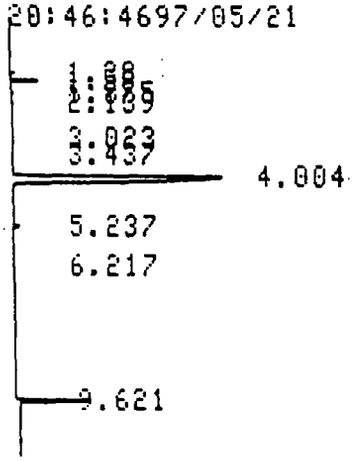
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 31

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.367	221				
2	1.577	1547				
3	1.883	539				
4	2.125	527	V			
5	3.02	741				
6	4.006	213633		4	36.4153	CS2
7	5.241	2818				
8	6.231	380				
9	6.898	6951		3	1.1849	MMA
10	9.367	252				
11	9.624	365549		1	62.3106	STYRENE
12	10.104	524		2	0.0893	CUMEME
13	10.419	301				
		---			---	

223-02037-02

20:46:4697/05/21 LASCO TUBES

9-4-2
FHA



⊕ Shimadzu

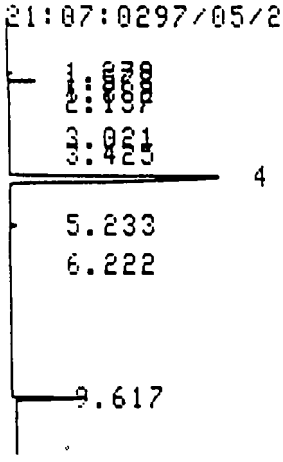
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 32

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.38	916				
2	1.58	6575				
3	1.875	1922				
4	2.139	1924	V			
5	3.023	1663				
6	3.437	790				
7	4.004	224232		4	90.1451	CS2
8	5.237	3821				
9	6.217	572				
10	9.621	24514		1	9.8549	STYRENE

TOTAL 266928 100
21:07:0297/05/21 LASCO TUBES

9-4-2
FHA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 33

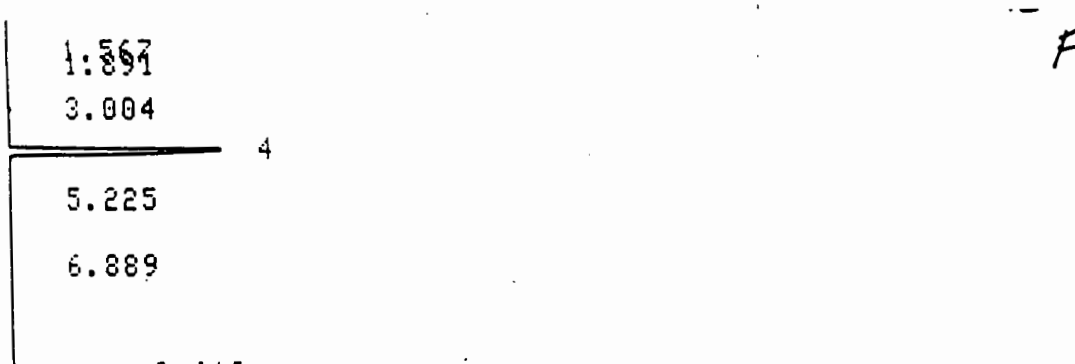
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.379	901				
2	1.578	6435				
3	1.882	1868				
4	2.137	1862	V			
5	3.021	1611				
6	3.425	755				
7	4	217027		4	90.459	CS2
8	5.233	3628				
9	6.222	546				
10	9.617	22890		1	9.541	STYRENE
		---			---	

10 8

223-02037-02

FHA

Shimadzu



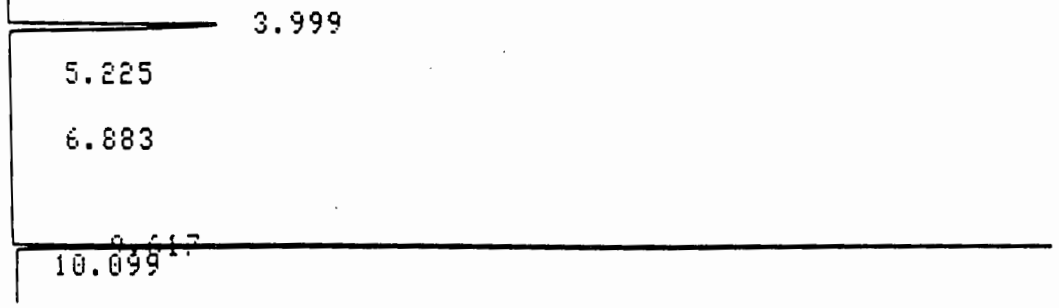
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 34

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.567	234				
2	1.891	896				
3	3.004	2514				
4	4	217622		4	31.2354	CS2
5	5.225	1850				
6	6.889	743		3	0.1066	MMA
7	9.613	477292		1	68.506	STYRENE
8	10.095	1059		2	0.152	CUMEME

ME-3-2

TOTAL 702210 100
21:47:2997/05/21 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

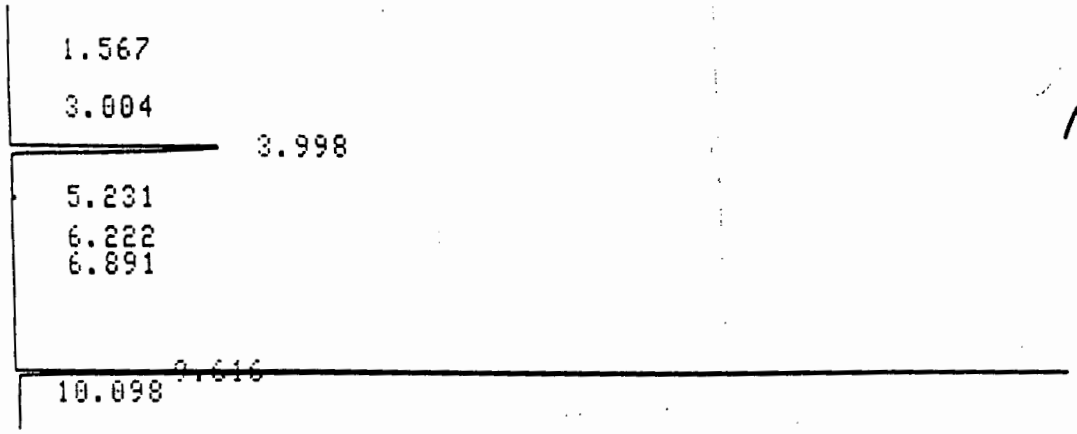
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 35

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.578	220				
2	1.894	837				
3	3.004	2364				
4	3.999	211048		4	31.9033	CS2
5	5.225	1737				
6	6.883	694		3	0.1049	MMA
7	9.617	448801		1	67.8435	STYRENE
8	10.099	982		2	0.1484	CUMEME
		---			---	

10 9

223-02037-02

FH A
ME-4-2



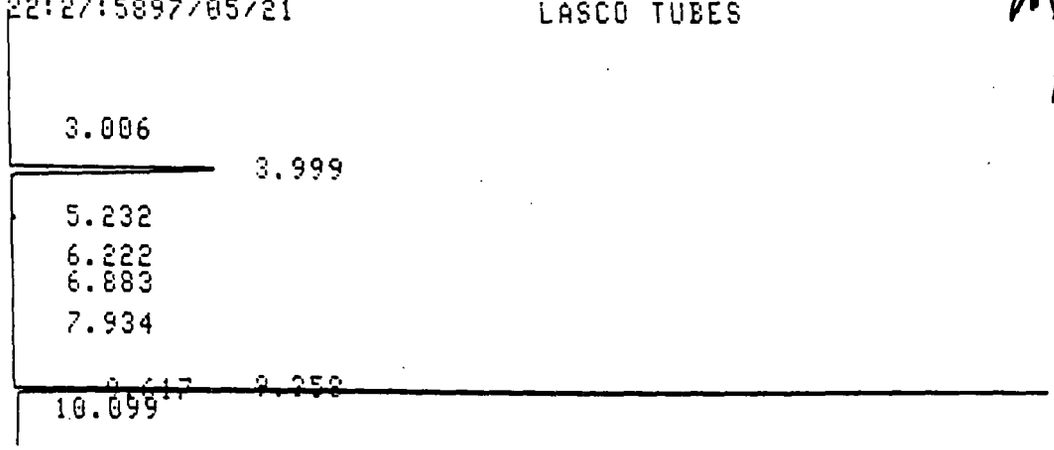
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 36

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.567	204				
2	3.004	1703				
3	3.998	217452		4	33.6031	CS2
4	5.231	3283				
5	6.222	401				
6	6.891	408		3	0.0631	MMA
7	9.616	428194		1	66.1692	STYRENE
8	10.098	1066		2	0.1647	CUMEME

TOTAL 652712 100
22:27:5897/05/21 LASCO TUBES

ME-4-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 37

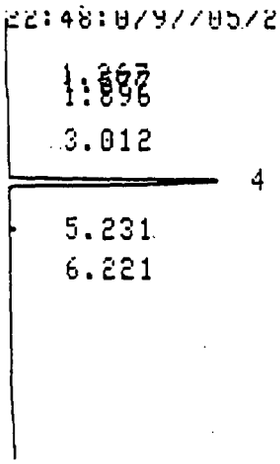
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.006	1671				
2	3.999	215931		4	33.7832	CS2
3	5.232	3232				
4	6.222	397				
5	6.883	411		3	0.0642	MMA
6	7.934	255				
7	9.617	421774		1	65.9882	STYRENE
8	10.099	1051		2	0.1644	CUMEME
		---			---	

110

223-02037-02

22:48:07/9/85/21 LASCO TUBES

10-4-1



Shimadzu

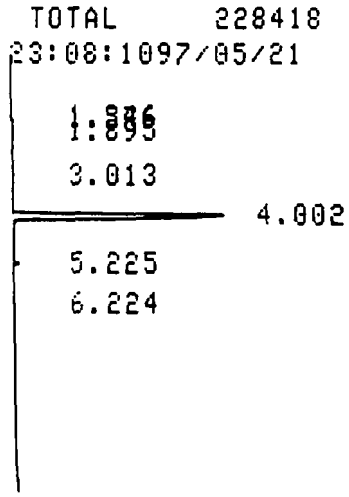
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 38

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.367	163				
2	1.577	808				
3	1.896	465				
4	3.012	428				
5	4	222423		4	100	CS2
6	5.231	3842				
7	6.221	289				

TOTAL 228418 100
23:08:1097/05/21 LASCO TUBES

10-4-1
FHA



CHROMATOGRAM 1 MEMORIZED

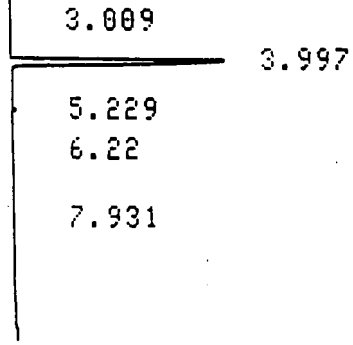
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 39

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.576	784				
2	1.895	453				
3	3.013	406				
4	4.002	215156		4	100	CS2
5	5.225	3638				
6	6.224	272				

223-02037-02

TOTAL 220708 100
23:28:1497/05/21 LASCO TUBES

NDB-4-2
FHA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 40

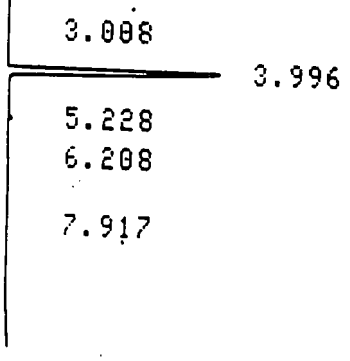
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.009	484				
2	3.997	216786		4	100	CS2
3	5.229	3469				
4	6.22	388				
5	7.931	390				
		---			---	

⊕ Shinadzu

TOTAL 221517
23:48:1397/05/21

100
LASCO TUBES

NDB-4-2



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 41

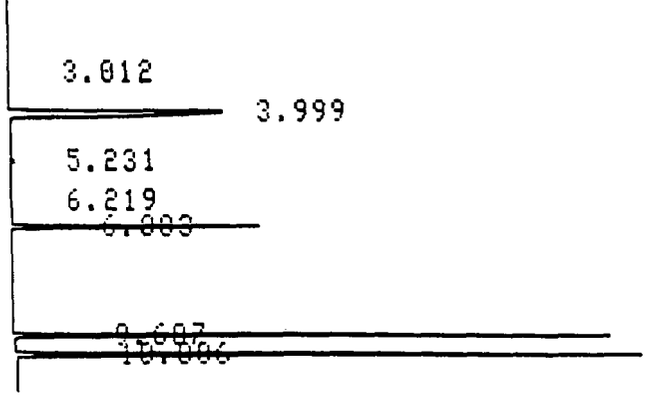
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.008	467				
2	3.996	214443		4	100	CS2
3	5.228	3397				
4	6.208	386				
5	7.917	388				

TOTAL 219080 100

00:08:1397/05/22 LASCO TUBES

DESORP STUDY
1 µl



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

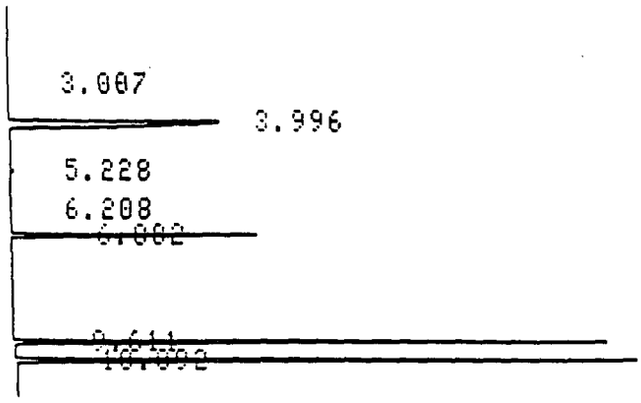
CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	42		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.012	379				
2	3.999	219146		4	28.9688	CS2
3	5.231	3384				
4	6.219	393				
5	6.883	93793		3	12.3984	MMA
6	9.607	196351		1	25.9555	STYRENE
7	10.086	247201		2	32.6773	CUMEME

22037-02

Shimadzu

STUDY
1 µl



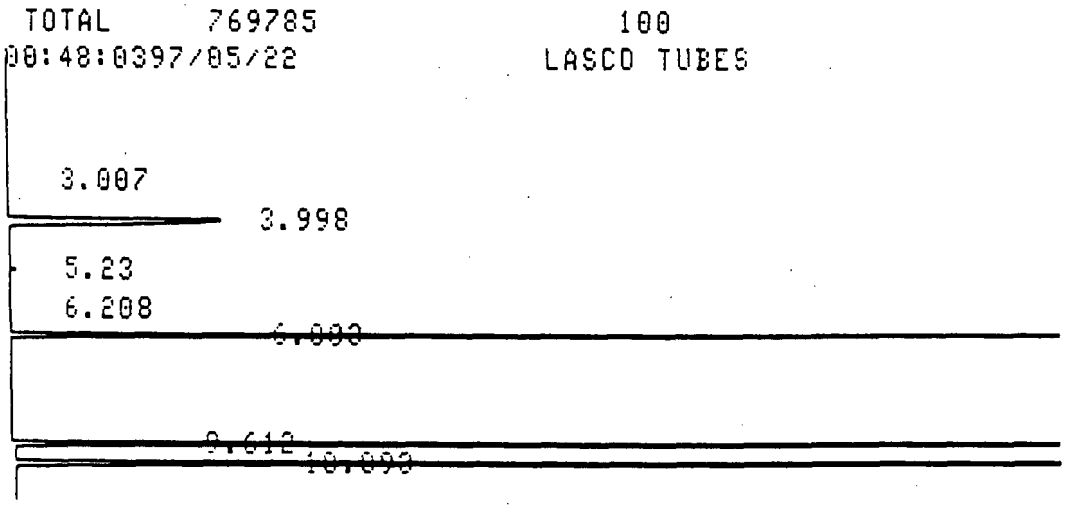
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 43

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.007	370				
2	3.996	220439		4	28.7931	CS2
3	5.228	3424				
4	6.208	395				
5	6.882	95070		3	12.4178	MMA
6	9.611	199217		1	26.0212	STYRENE
7	10.092	250869		2	32.7679	CUMEME

TOTAL 769785 100
00:48:0397/05/22 LASCO TUBES

5µl
DS



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 44

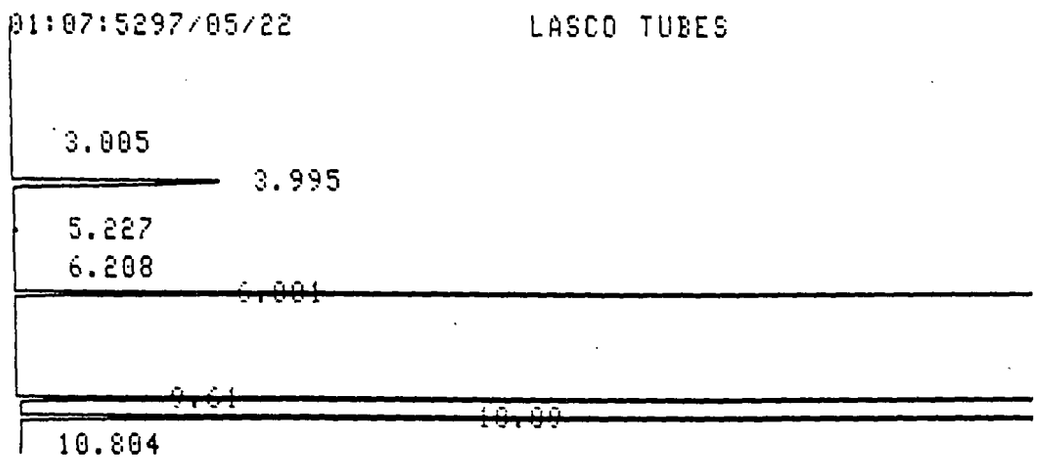
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.007	378				
2	3.998	223764		4	7.3843	CS2
3	5.23	3483				
4	6.208	468				
5	6.883	552721		3	18.2401	MMA
6	9.612	1053672		1	34.7717	STYRENE
7	10.093	1200100		2	39.6039	CUMEME
		---			---	

3-02037-02

Shimadzu

01:07:5297/05/22 LASCO TUBES

5 µl
DS



CHROMATOGRAM 1 MEMORIZED

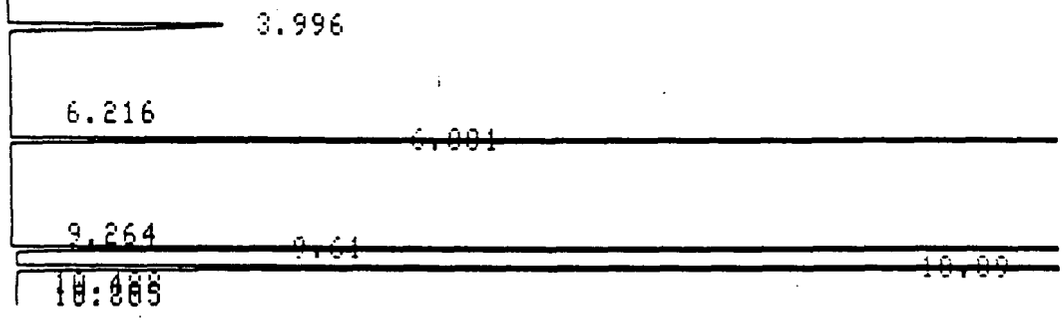
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 45

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.005	369				
2	3.995	220497		4	7.4487	CS2
3	5.227	3386				
4	6.208	458				
5	6.881	538699		3	18.1981	MMA
6	9.61	1027860		1	34.7228	STYRENE
7	10.09	1173132		2	39.6303	CUMEME
8	10.804	385				
		---			---	

TOTAL 2964786 100

01:27:4197/05/22 LASCO TUBES

10 µl
DS



CHROMATOGRAM 1 MEMORIZED

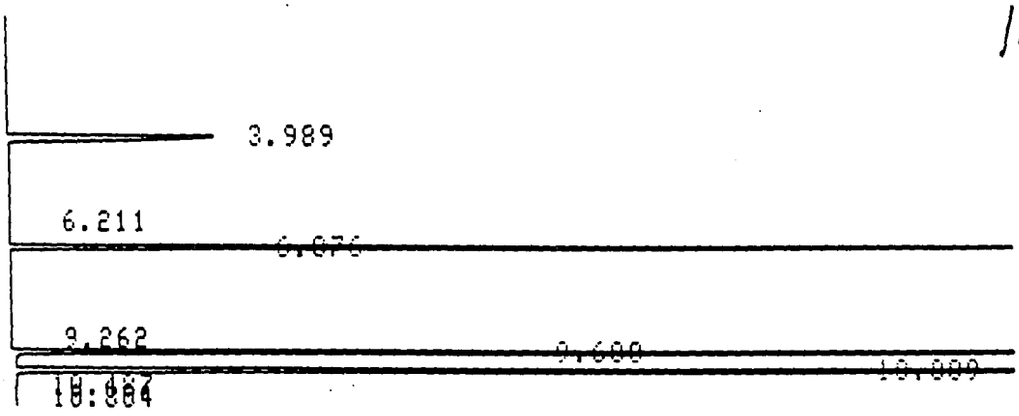
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 46

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.996	215931		4	3.7546	CS2
2	6.216	1161				
3	6.881	1117140		3	19.4249	MMA
4	9.264	269				
5	9.61	2104049		1	36.5853	STYRENE
6	10.09	2313958	V	2	40.2352	CUMEME
7	10.488	336				
8	10.805	602				
		---			---	

J-02037-02

Shimadzu

10 µl



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 47

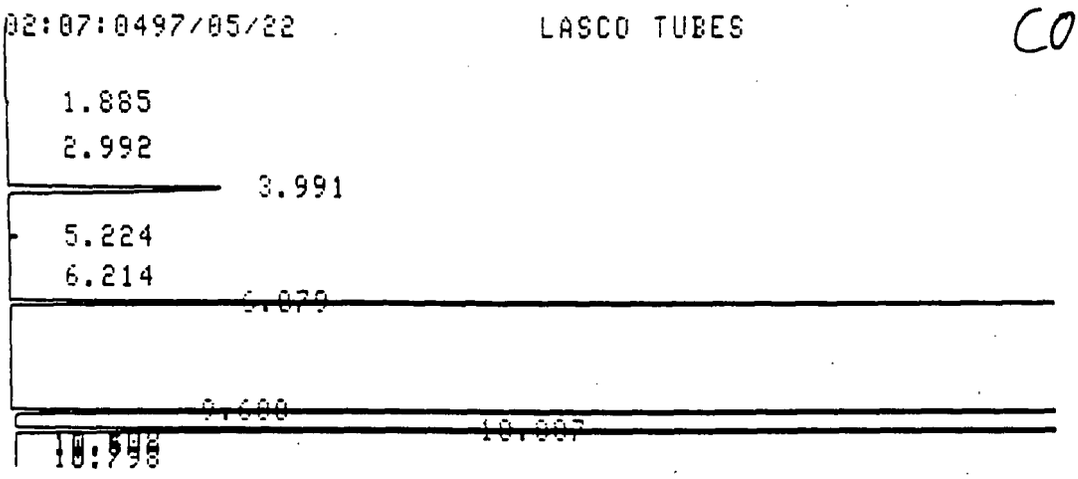
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.989	222711		4	3.6981	CS2
2	6.211	1223				
3	6.876	1175094		3	19.5124	MMA
4	9.262	273				
5	9.608	2203707		1	36.5925	STYRENE
6	10.089	2420783	V	2	40.197	CUMEME
7	10.487	359				
8	10.804	605				
	TOTAL	6024755			100	

223-02

02:07:0497/05/22 LASCO TUBES

CONCAL

037-02



CHROMATOGRAM 1 MEMORIZED

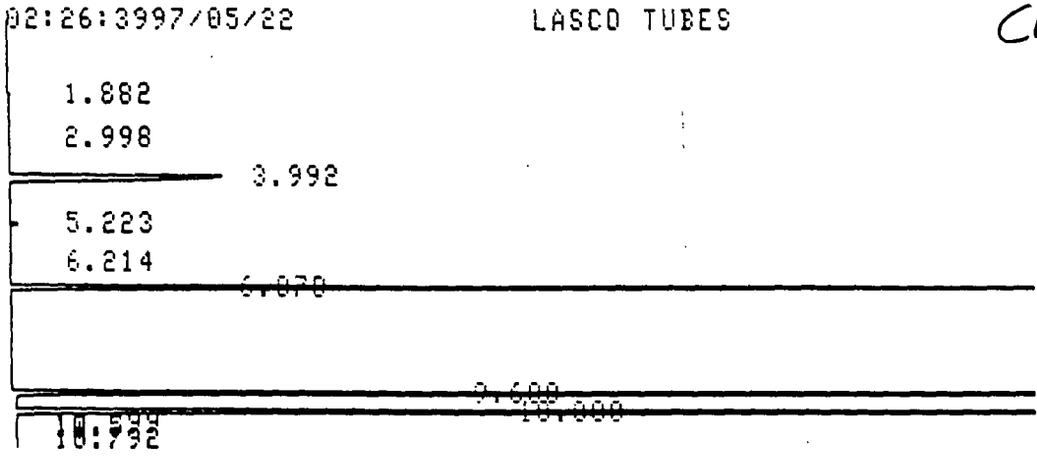
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 48

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.885	1392				
2	2.992	951				
3	3.991	217162		4	5.3024	CS2
4	5.224	4512				
5	6.214	282				
6	6.879	713704		3	17.4263	MMA
7	9.608	1650673		1	40.3041	STYRENE
8	10.087	1514010	V	2	36.9672	CUMEME
9	10.408	630	V			
10	10.5	298	V			
11	10.798	1111				
	TOTAL	4104723			100	

Shimadzu

02:26:3997/05/22 LASCO TUBES

CONCAL



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

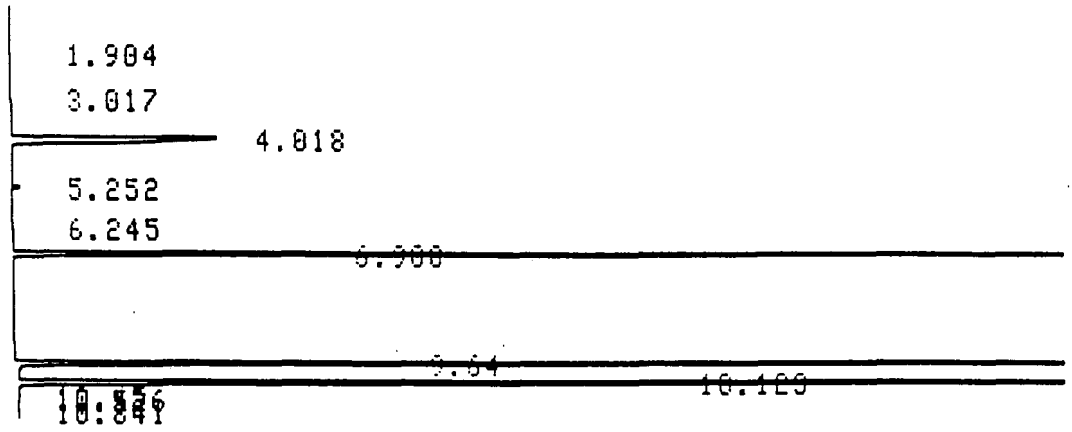
CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002

REPORT NO 49

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.882	1397				
2	2.998	971				
3	3.992	222473		4	5.1106	CS2
4	5.223	4725				
5	6.214	301				
6	6.878	754327		3	17.3283	MMA
7	9.608	1760397		1	40.4395	STYRENE
8	10.088	1615963	V	2	37.1216	CUMENE
9	10.399	584	V			
10	10.5	343	V			
11	10.792	1205				
	TOTAL	4362684			100	

223-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 36

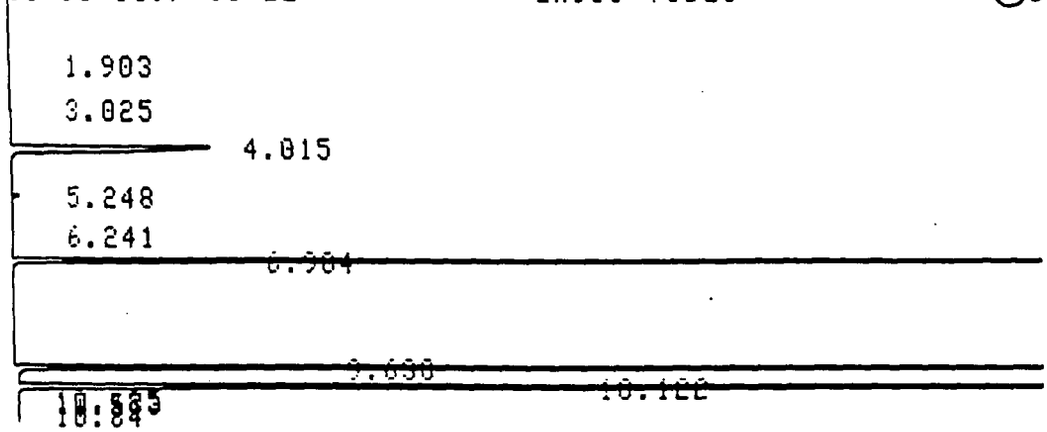
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.904	1086				
2	3.017	972				
3	4.018	214516		4	4.8119	CS2
4	5.252	4684				
5	6.245	301				
6	6.908	762476		3	17.1033	MMA
7	9.64	1813355		1	40.6759	STYRENE
8	10.123	1667710	V	2	37.4089	CUMEME
9	10.45	1020	V			
10	10.526	376	V			
11	10.841	1161				
	TOTAL	4467656			1AA	

Shimadzu

TOTAL 18789 100

16:13:5597/05/22 LASCO TUBES

CONCAL



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

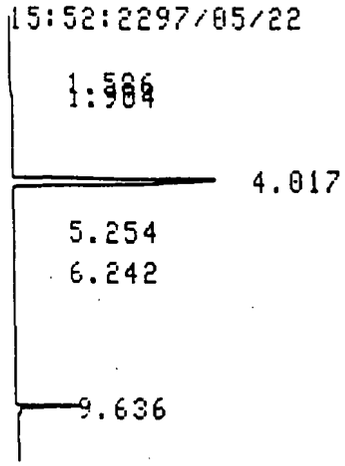
SAMPLE NO 0 METHOD 0002

REPORT NO 35

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.903	1099				
2	3.025	961				
3	4.015	214805		4	4.8989	CS2
4	5.248	4576				
5	6.241	299				
6	6.904	746430		3	17.0232	MMA
7	9.638	1781913		1	40.6387	STYRENE
8	10.122	1641625	V	2	37.4392	CUMEME
9	10.425	758	V			
10	10.533	447	V			
11	10.84	1132				
	TOTAL	4394042			100	

15:52:2297/05/22 LASCO TUBES

NDA-4-1
FH A



CHROMATOGRAM 1 MEMORIZED

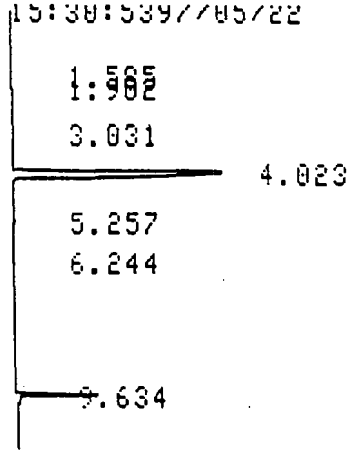
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 33

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.586	736				
2	1.904	650				
3	4.017	216649		4	98.9328	CS2
4	5.254	1806				
5	6.242	282				
6	9.636	21603		1	9.0672	STYRENE

223-02037-02

15:30:53977/05/22 LASCO TUBES

NUA-7-1
FH A



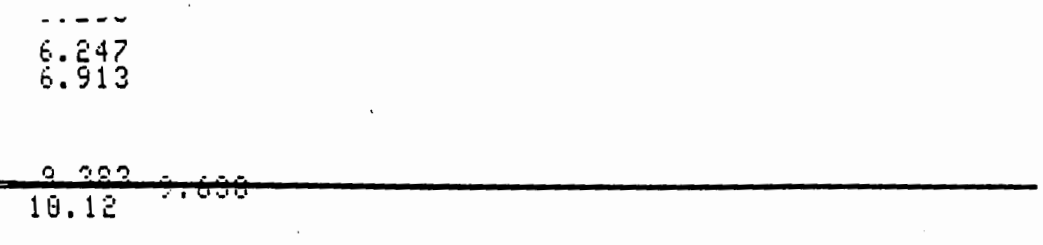
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 31

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.585	866				
2	1.902	788				
3	3.031	329				
4	4.023	243687		4	90.0541	CS2
5	5.257	2203				
6	6.244	347				
7	9.634	26914		1	9.9459	STYRENE
	TOTAL	275133			100	

223-02037-02

Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 29

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.903	1317				
2	3.019	5642				
3	4.023	233758		4	25.4611	CS2
4	5.258	2148				
5	6.247	303				
6	6.913	1254		3	0.1366	MMA
7	9.383	327				
8	9.638	681005	V	1	74.1757	STYRENE
9	10.12	2080	V	2	0.2266	CUMEME

Shimadzu

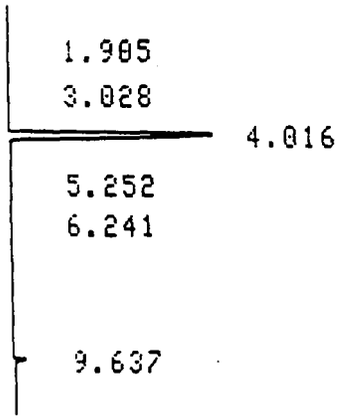
TOTAL 222001 100
14:47:5497/05/22 LASCO TUBES

ME-3-1
FHA

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 27

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.9	1325				
2	3.017	5705				
3	4.022	238302		4	25.6382	CS2
4	5.257	2165				
5	6.247	310				
6	6.913	1275		3	0.1371	MMA
7	9.383	300				
8	9.638	688527		1	74.0765	STYRENE
9	10.119	1377		2	0.1482	CUMEME



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 26

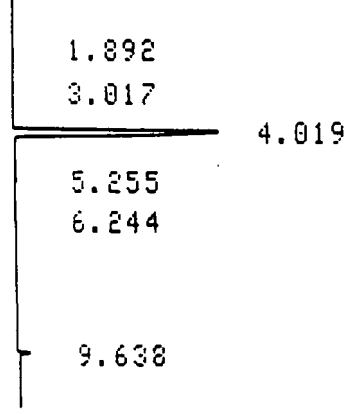
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.905	501				
2	3.028	482				
3	4.016	214553		4	98.1352	CS2
4	5.252	2014				
5	6.241	373				
6	9.637	4077		1	1.8647	STYRENE

223-02037-02

TOTAL 235124 100
14:05:1797/05/22 LASCO TUBES

NDB-3-3
FHA

Shimadzu

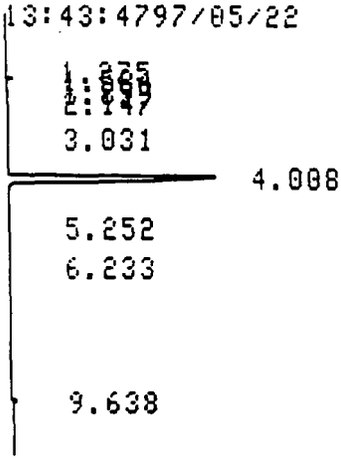


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 25

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.892	518				
2	3.017	521				
3	4.019	221147		4	98.0254	CS2
4	5.255	2138				
5	6.244	405				
6	9.638	4455		1	1.9746	STYRENE

13:43:4797/05/22 LASCO TUBES 10-2-2



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 24

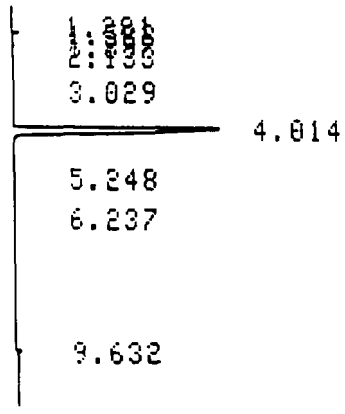
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	448				
2	1.584	2065				
3	1.899	1700				
4	2.147	609	V			
5	3.031	601				
6	4.008	225301		4	99.137	CS2
7	5.252	2031				
8	6.233	408				
9	9.638	1961		1	0.863	STYRENE
		---			---	

12 9

223-02037-02

FHA

⊕ Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 23

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.381	456				
2	1.582	2085				
3	1.897	1719				
4	2.133	618	V			
5	3.029	603				
6	4.014	225356		4	99.1821	CS2
7	5.248	2027				
8	6.237	411				
9	9.632	1858		1	0.8179	STYRENE
	TOTAL	235132			100	

13:00:3597/05/22 LASCO TUBES

10-3-1
FHA

1.898
3.026
4.019
5.253
6.243

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 22

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.898	2152				
2	3.026	418				
3	4.019	230879		4	100	CS2
4	5.253	2364				
5	6.243	302				
	TOTAL	236115			100	

12 8

223-02037-02

TOTAL 588433 100
12:38:2697/05/22 LASCO TUBES

10-3-1
FHA

Kimadzu

1.898
3.027
4.022
5.254
6.233

CHROMATOGRAM 1 MEMORIZED

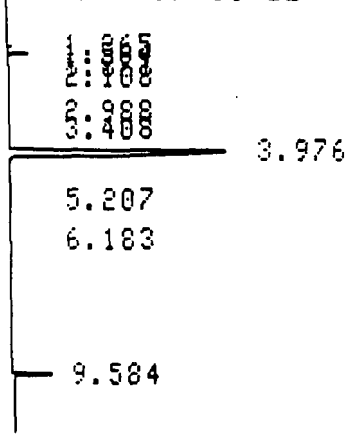
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 21

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.898	2356				
2	3.027	454				
3	4.022	249120		4	100	CS2
4	5.254	2667				
5	6.233	347				
	TOTAL	254944			100	

TOTAL 64117 100

08:47:4797/05/22 LASCO TUBES

9-3-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 56

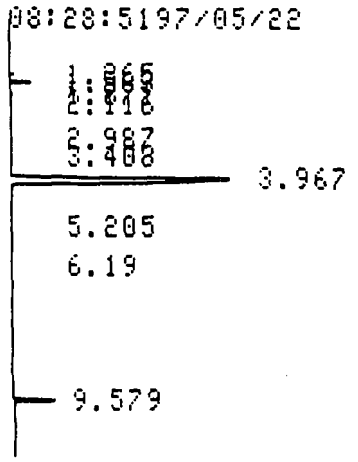
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.365	898				
2	1.564	5202				
3	1.871	1878				
4	2.108	1330	V			
5	2.988	1818				
6	3.408	418				
7	3.976	219716		4	94.0626	CS2
8	5.207	2007				
9	6.183	386				
10	9.584	13869		1	5.9374	STYRENE
	TOTAL	247522			100	

223-02037-02

⊕ Shimadzu

08:28:5197/05/22 LASCO TUBES

9-3-2
FHA



CHROMATOGRAM 1 MEMORIZED

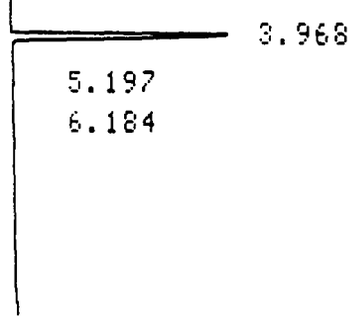
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 54

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.365	909				
2	1.563	5242				
3	1.871	1898				
4	2.116	1348	W			
5	2.987	1839				
6	3.408	414				
7	3.967	222193				
8	5.205	2031				
9	6.19	392				
10	9.579	13945		1	100	STYRENE
	TOTAL	250211			100	

Shimadzu

NDA-7-1

TOTAL 227467 0
08:09:3397/05/22 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

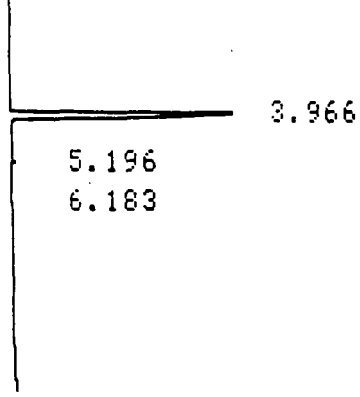
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 53

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.968	218684				
2	5.197	2511				
3	6.184	272				

223-02037-02

NDA-7-1

07:50:3397/05/22 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

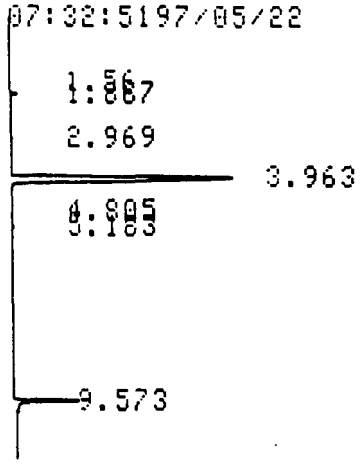
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 52

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.966	224575				
2	5.196	2602				
3	6.183	290				

TOTAL 256951 100

07:32:5197/05/22 LASCO TUBES

NDA-3-2



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002

REPORT NO 51

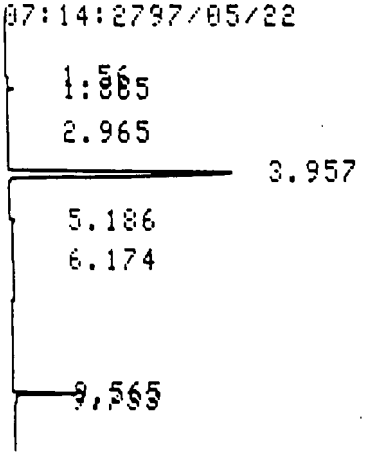
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.56	927				
2	1.867	2618				
3	2.969	2160				
4	3.963	223538				
5	4.805	319				
6	5.183	2220				
7	9.573	25205		1	100	STYRENE
	TOTAL	256987			100	

223-02037-02

Shimadzu

07:14:2797/05/22 LASCO TUBES

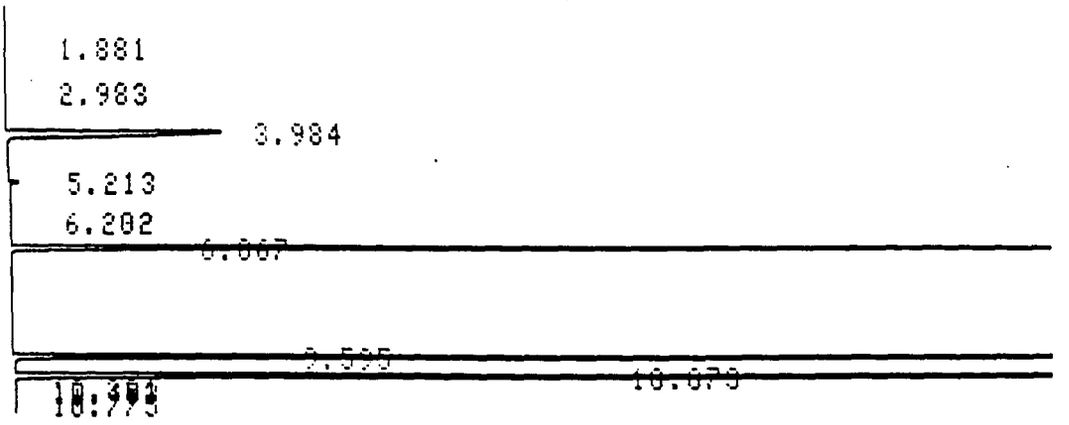
NDA-3-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 50

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.56	917				
2	1.865	2650				
3	2.965	2174				
4	3.957	223366				
5	5.186	2241				
6	6.174	275				
7	9.565	22629		1	89.3448	STYRENE
8	9.733	2699	V	1	10.6552	STYRENE
		---			---	



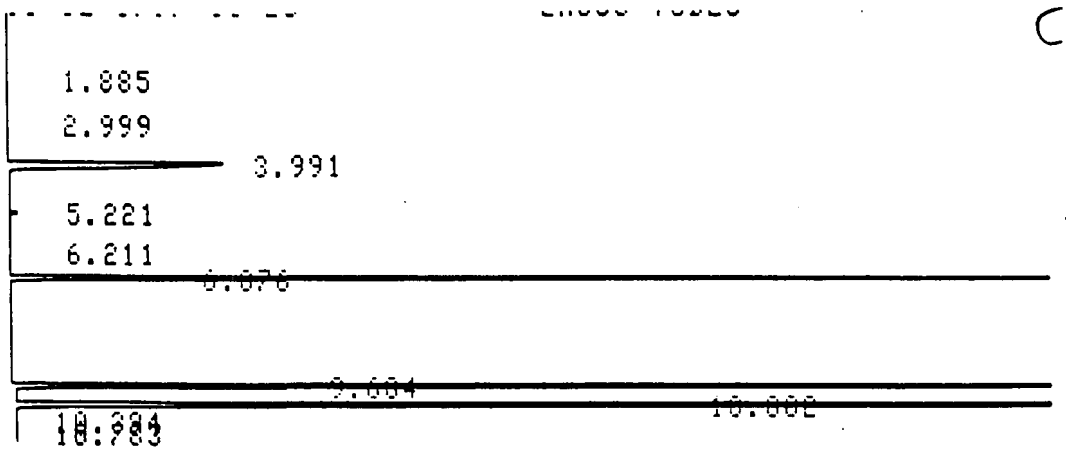
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 72

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.881	757				
2	2.983	930				
3	3.984	220819		4	4.9014	CS2
4	5.213	4628				
5	6.202	304				
6	6.867	760730		3	16.8853	MMA
7	9.595	1835350		1	40.7379	STYRENE
8	10.073	1688369	V	2	37.4754	CUMEME
9	10.381	628	V			
10	10.483	366	V			
11	10.775	1029				
	TOTAL	4513910			100	

CONCAL

12037-02



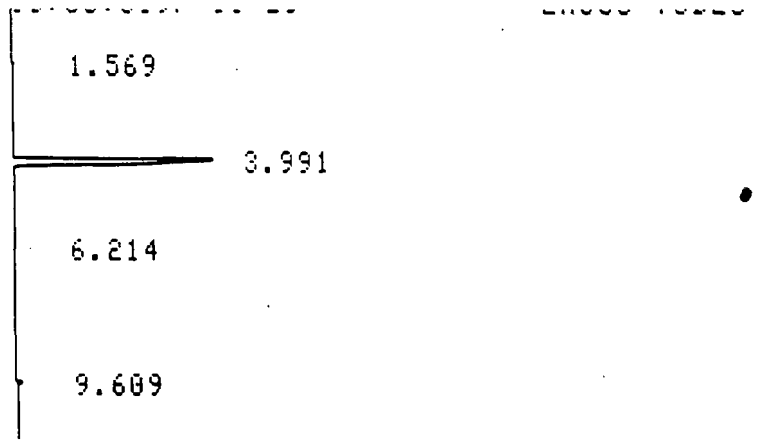
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 73

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.885	720				
2	2.999	897				
3	3.991	216214		4	4.8917	CS2
4	5.221	4370				
5	6.211	295				
6	6.876	735306		3	16.6358	MMA
7	9.604	1805627		1	40.851	STYRENE
8	10.082	1662881	V	2	37.6215	CUMEME
9	10.394	1470	V			
10	10.783	896				
	TOTAL	4428674			100	

Shimadzu

FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002
REPORT NO 71

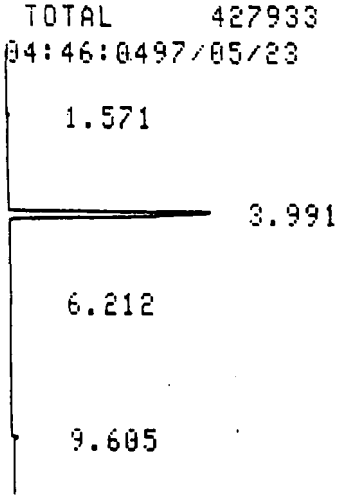
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.569	1196				
2	3.991	207417		4	98.968	CS2
3	6.214	1140				
4	9.609	2163		1	1.032	STYRENE
	TOTAL	211917			100	

223-02037-02

Shimadzu

TOTAL 427933 100
04:46:0497/05/23 LASCO TUBES

NDA-8-1



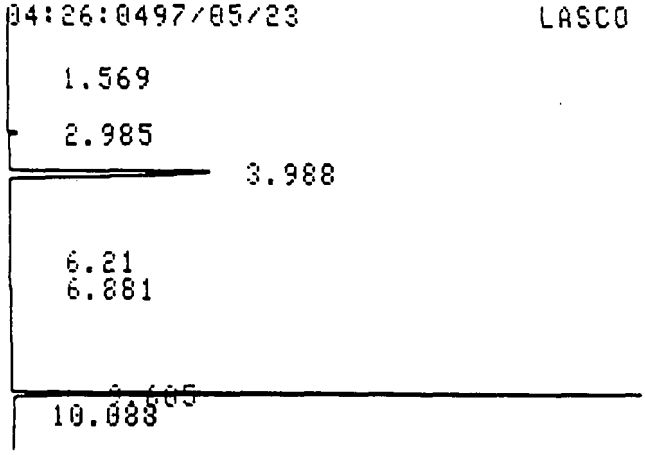
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 70

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.571	1203				
2	3.991	203794		4	99.0094	CS2
3	6.212	1105				
4	9.605	2039		1	0.9906	STYRENE

TOTAL 425880 100
04:26:0497/05/23 LASCO TUBES

RE-8-1
FHA



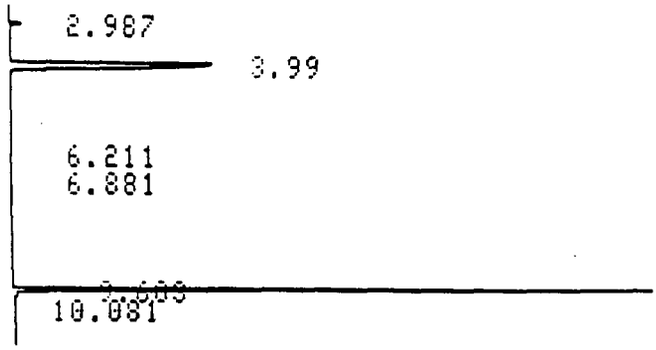
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 69

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.569	667				
2	2.985	6009				
3	3.988	207338		4	49.3527	CS2
4	6.21	1143				
5	6.881	296		3	0.0703	MMA
6	9.605	211971		1	50.4556	STYRENE
7	10.088	510		2	0.1214	CUMEME

223-02037-02

Shimadzu



CHROMATOGRAM 1 MEMORIZED

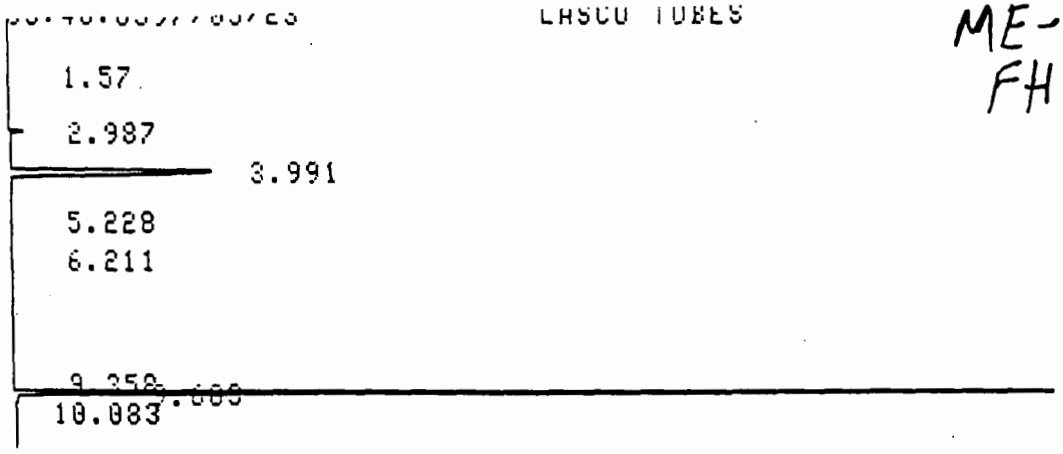
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 68

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.569	672				
2	2.987	6048				
3	3.99	206845		4	49.4824	CS2
4	6.211	1144				
5	6.881	300		3	0.0718	MMA
6	9.603	210373		1	50.3265	STYRENE
7	10.081	499		2	0.1194	CUMEME

LASCO TUBES

ME-8-1
FHA

223-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 67

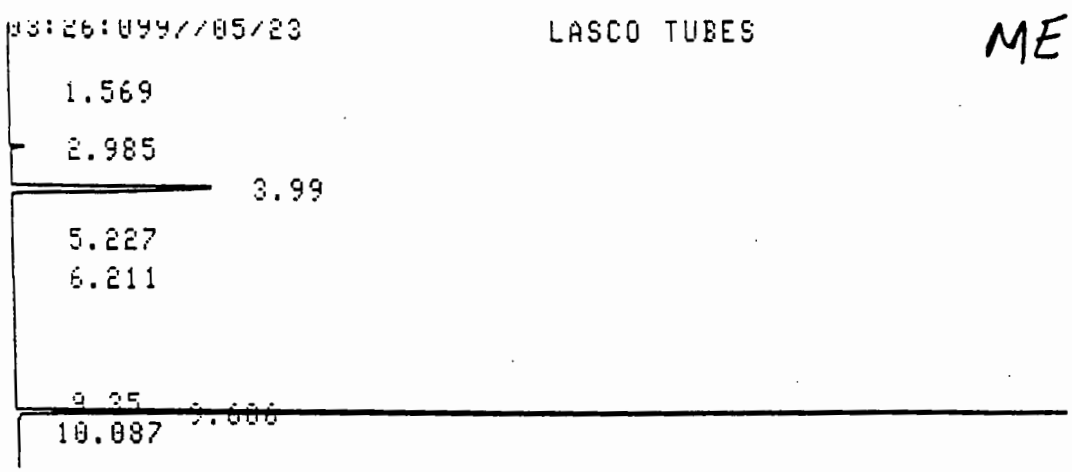
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.57	399				
2	2.987	7009				
3	3.991	206835		4	24.857	CS2
4	5.228	330				
5	6.211	1143				
6	9.358	351				
7	9.603	623337	V	1	74.9113	STYRENE
8	10.083	1928	V	2	0.2318	CUMEME
	TOTAL	841331			100	

Shimadzu

115

03:26:099//05/23 LASCO TUBES

ME-8-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002

REPORT NO 66

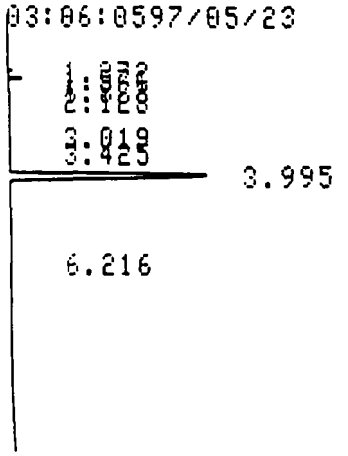
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.569	402				
2	2.985	7043				
3	3.99	207204		4	24.8467	CS2
4	5.227	330				
5	6.211	1144				
6	9.35	323				
7	9.606	625243	V	1	74.9753	STYRENE
8	10.087	1485	V	2	0.1781	CUMEME
	TOTAL	843173			100	

TOTAL 215442 100

03:06:0597/05/23 LASCO TUBES

9-7-1
FHA

223-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 65

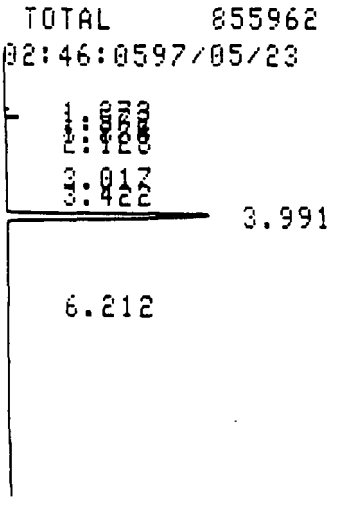
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.372	881				
2	1.571	3426				
3	1.873	1146				
4	2.128	1225	V			
5	3.019	752				
6	3.425	501				
7	3.995	206266		4	100	CS2
8	6.216	1257				
	TOTAL	215454			100	

Shimadzu

TOTAL 855962 100

02:46:0597/05/23 LASCO TUBES

9-7-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

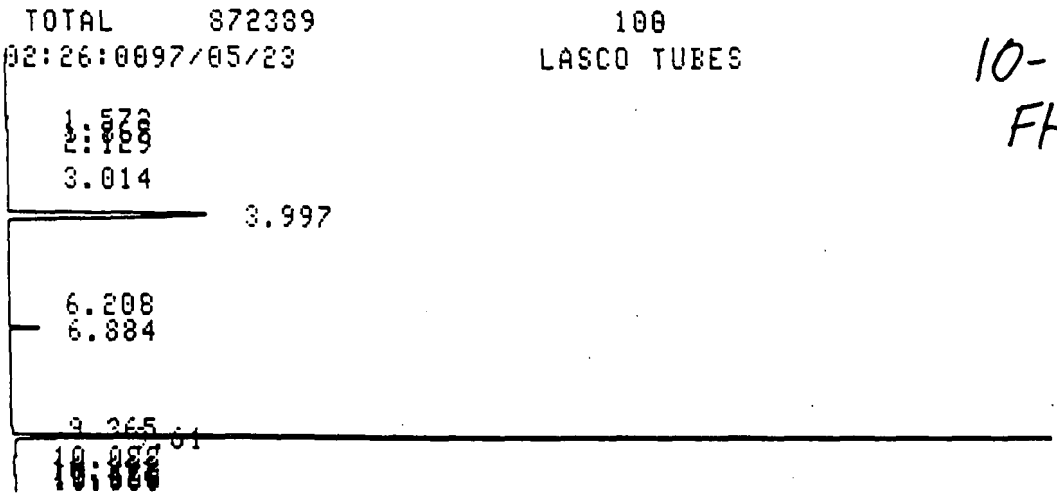
SAMPLE NO 0 METHOD 0002

REPORT NO 64

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.373	887				
2	1.572	3424				
3	1.874	1146				
4	2.128	1229	V			
5	3.017	752				
6	3.422	502				
7	3.991	206253		4	100	CS2
8	6.212	1248				

TOTAL 872389 100
02:26:0097/05/23 LASCO TUBES

10-7-2
FHA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 63

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.572	1439				
2	1.867	419				
3	2.129	384				
4	3.014	438				
5	3.997	206092		4	24.2818	CS2
6	6.208	1215				
7	6.884	12825		3	1.511	MMA
8	9.365	718				
9	9.61	628193		1	74.0136	STYRENE
10	10.088	1643		2	0.1936	CUMENE
11	10.392	538				
12	10.475	253	V			
13	10.558	1505	V			
14	10.666	299	V			

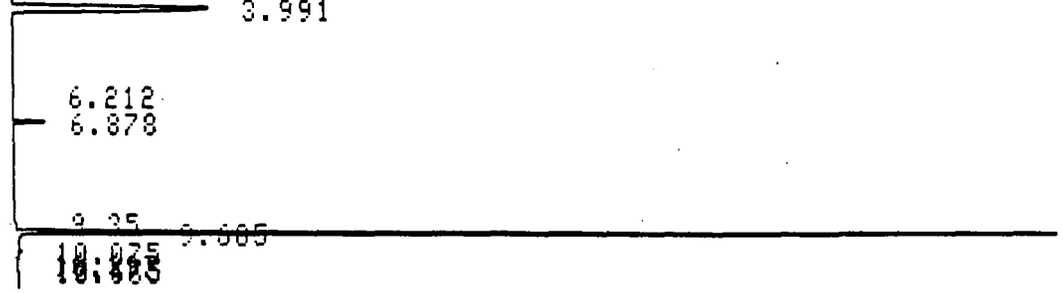
223-02037-02

Shimadzu

TOTAL 731283 100

02:05:5897/05/23 LASCO TUBES

10-7-2



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1 FILE 0

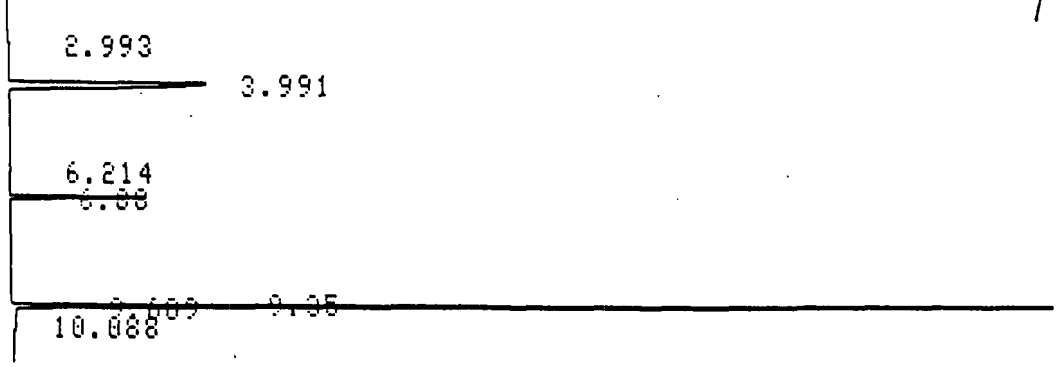
SAMPLE NO 0 METHOD 0002

REPORT NO 62

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.57	1448				
2	1.872	425				
3	2.117	386				
4	3.008	447				
5	3.991	208673		4	24.1222	CS2
6	6.212	1243				
7	6.878	13137		3	1.5186	MMA
8	9.35	713				
9	9.605	641363		1	74.1403	STYRENE
10	10.075	1894		2	0.2189	CUMENE
11	10.397	523				
12	10.475	259	V			
13	10.565	1878	V			
		---			---	

TOTAL 763384 100
01:45:4697/05/23 LASCO TUBES

ME-7-3
FHA



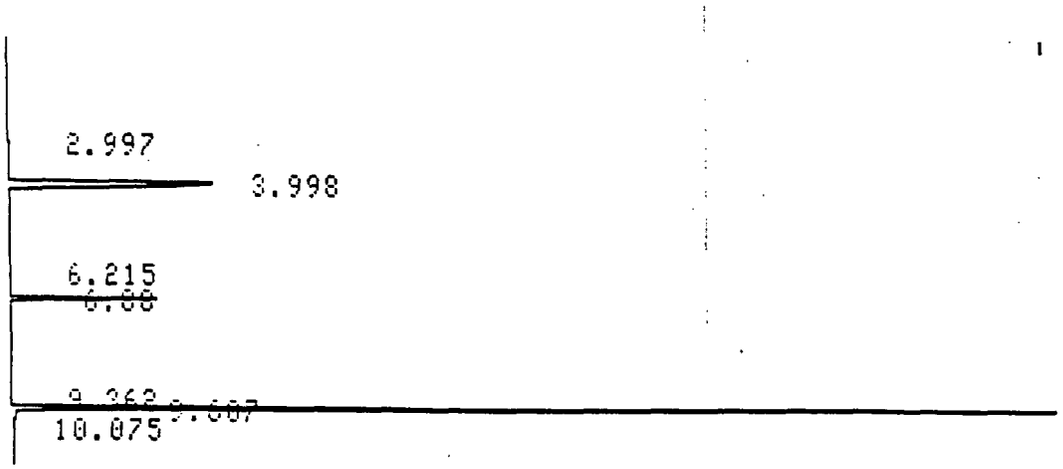
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 61

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.993	2130				
2	3.991	206119		4	28.3188	CS2
3	6.214	1133				
4	6.88	53320		3	7.3257	MMA
5	9.35	170				
6	9.609	467190		1	64.1877	STYRENE
7	10.088	1221		2	0.1678	CUMEME

223-02337-02

Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 60

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.997	2289				
2	3.998	212784		4	28.0105	CS2
3	6.215	1197				
4	6.88	56351		3	7.4179	MMA
5	9.362	237				
6	9.607	489359		1	64.418	STYRENE
7	10.075	1167		2	0.1536	CUMEME
		---			---	

01:05:3397/05/23 LASCO TUBES

ME-1-1
FH A

CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002

REPORT NO 59

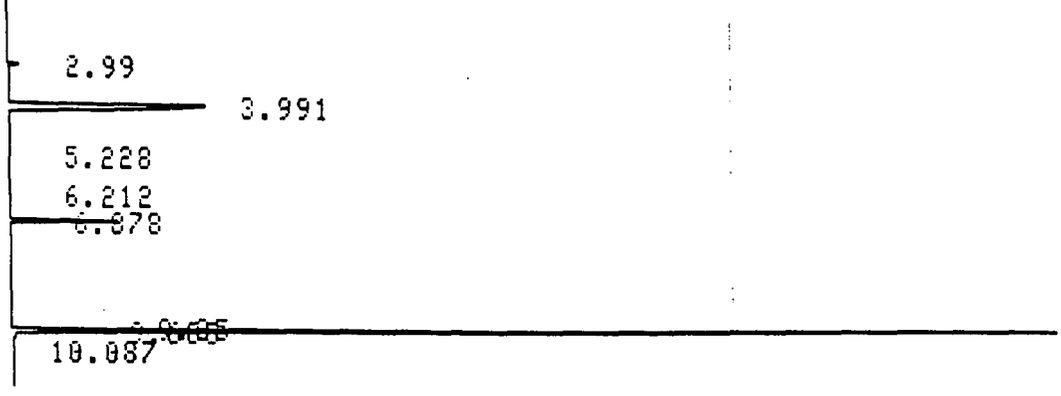
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.99	6240				
2	3.995	206584		4	32.2412	CS2
3	5.231	418				
4	6.215	1143				
5	6.88	43533		3	6.7942	MMA
6	9.607	389348		1	60.7651	STYRENE
7	10.075	1278		2	0.1994	CUMEME
		---			---	

223-02037-02

Shimadzu

00:45:2797/05/23 LASCO TUBES

ME-7-1

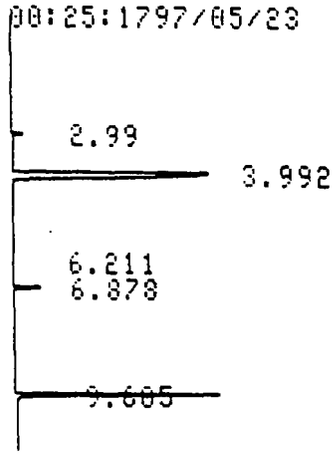


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 58

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.99	6100				
2	3.991	203853		4	32.4643	CS2
3	5.228	404				
4	6.212	1112				
5	6.878	42390		3	6.7508	MMA
6	9.35	207				
7	9.605	380856		1	60.6525	STYRENE
8	10.087	831	V	2	0.1324	CUMEME

00:25:1797/05/23 LASCO TUBES RE-7-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

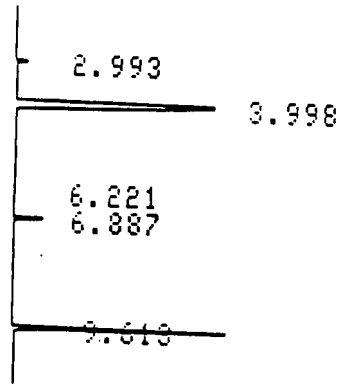
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 57

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.99	6110				
2	3.992	206769		4	72.0225	CS2
3	6.211	1138				
4	6.878	11406		3	3.9731	MMA
5	9.605	68914		1	24.0044	STYRENE
	TOTAL	294337			100	

223-02037-02

Shimadzu

RC 1 1
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 56

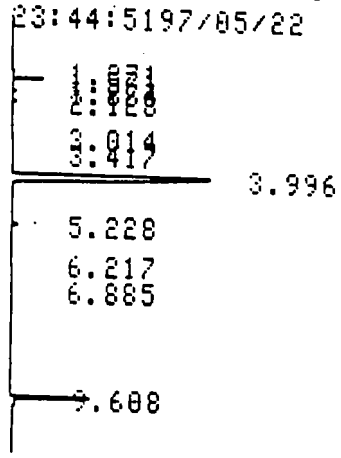
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.993	6147				
2	3.998	208152		4	71.8504	CS2
3	6.221	1154				
4	6.887	11634		3	4.0158	MMA
5	9.613	69916		1	24.1338	STYRENE
	TOTAL	297004			100	

TOTAL 252476 100

23:44:5197/05/22 LASCO TUBES

9-5-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002
REPORT NO 55

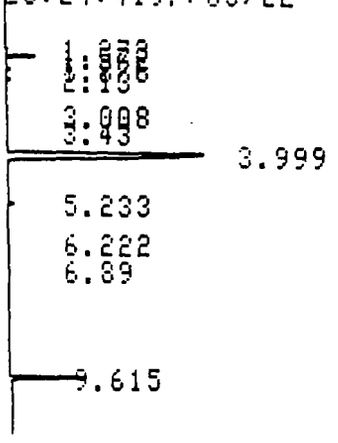
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.371	715				
2	1.571	6943				
3	1.874	2420				
4	2.128	2458	V			
5	3.014	2012				
6	3.417	985				
7	3.996	208073		4	88.3467	CS2
8	5.228	3724				
9	6.217	601				
10	6.885	1920		3	0.8153	MMA
11	9.608	25525		1	10.838	STYRENE
	TOTAL	255377			100	

223-02037-02

Shimadzu

9-5-1
FHA

TOTAL 215066 100
23:24:4197/05/22 LASCO TUBES



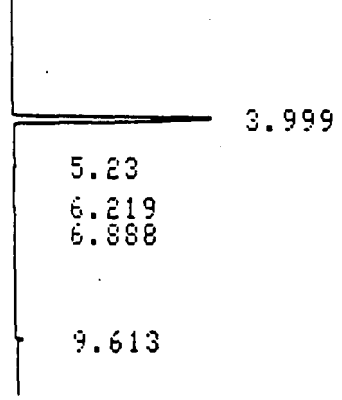
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 54

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.373	709				
2	1.572	6897				
3	1.876	2407				
4	2.13	2448	V			
5	3.008	1990				
6	3.43	994				
7	3.999	205825		4	88.423	CS2
8	5.233	3670				
9	6.222	589				
10	6.89	1882		3	0.8085	MMA
11	9.615	25066		1	10.7685	STYRENE

TOTAL 217587 100
23:04:2097/05/22 LASCO TUBES

NDB-7-2
FH A



CHROMATOGRAM 1 MEMORIZED

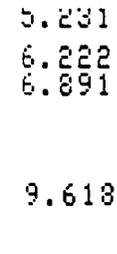
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002

REPORT NO 53

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.999	209552		4	98.6297	CS2
2	5.23	2321				
3	6.219	281				
4	6.888	421		3	0.1983	MMA
5	9.613	2490		1	1.1719	STYRENE

223-02037-02

Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 52

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.999	212004		4	98.6444	CS2
2	5.231	2381				
3	6.222	288				
4	6.891	432		3	0.2008	MMA
5	9.618	2482		1	1.1549	STYRENE

9.616

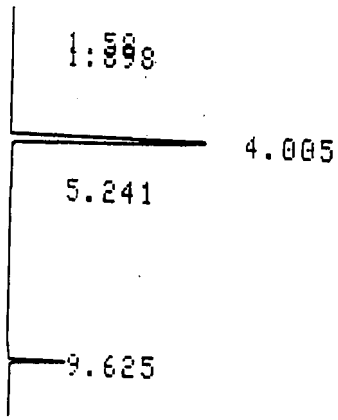
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 51

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.573	666				
2	1.89	533				
3	3.992	205024		4	91.1801	CS2
4	5.235	1664				
5	9.616	19832		1	8.8199	STYRENE
		---			---	

Shimadzu

NDA-4-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 50

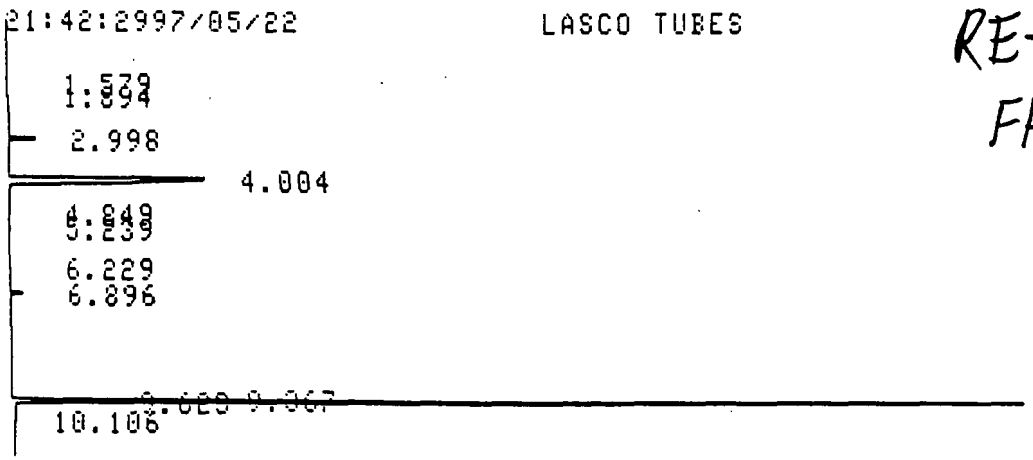
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.58	611				
2	1.898	492				
3	4.005	197832		4	91.2704	CS2
4	5.241	1545				
5	9.625	18922		1	8.7295	STYRENE

21:42:2997/05/22 LASCO TUBES

RE-3-1
FHA

2037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 49

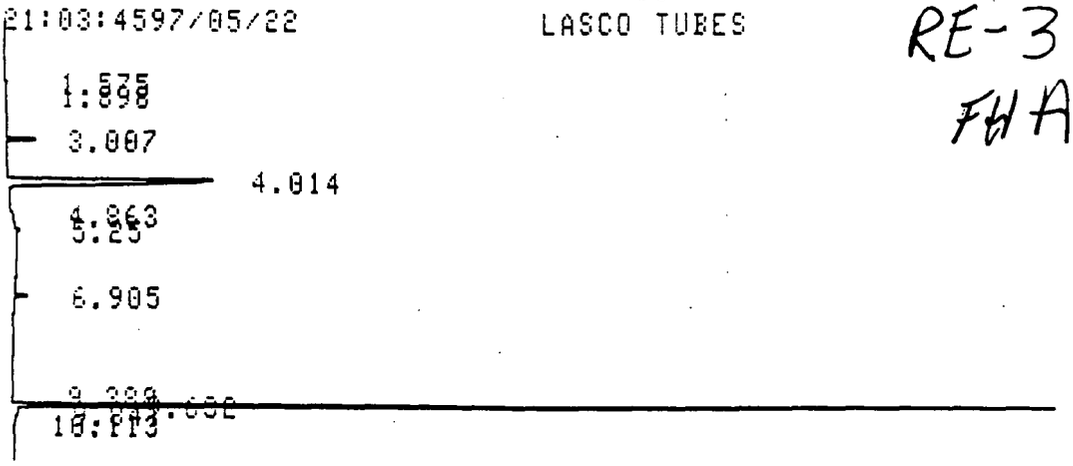
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.579	971				
2	1.894	920				
3	2.998	13231				
4	4.004	201869		4	36.99	CS2
5	4.849	639				
6	5.239	1856				
7	6.229	249				
8	6.896	5304		3	0.9719	MMA
9	9.367	185				
10	9.623	337788		1	61.8956	STYRENE
11	10.106	778		2	0.1425	CUMEME
	TOTAL	563789			100	

Shimadzu

21:03:4597/05/22 LASCO TUBES

RE-3-1
FHA

Shinadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 44

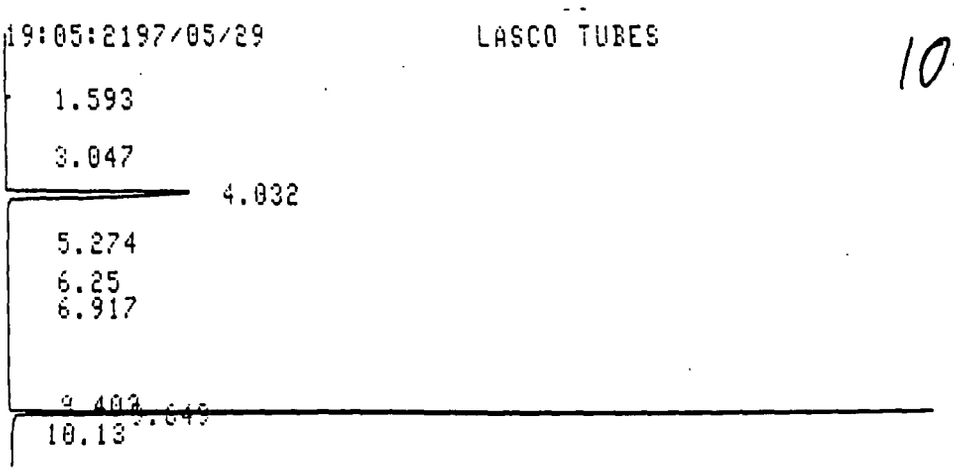
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.575	1079				
2	1.898	1052				
3	3.007	14642				
4	4.014	212532		4	35.8441	CS2
5	4.863	728				
6	5.25	2164				
7	6.905	5865		3	0.9892	MMA
8	9.388	306				
9	9.632	373486	V	1	62.9895	STYRENE
10	9.841	5686	V			
11	10.113	1050	V	2	0.1772	CUMENE
	TOTAL	618592			100	

CHROMATOGRAM 101 MEMORIZED

CR

19:05:2197/05/29 LASCO TUBES

10-12-1



CHROMATOGRAM 1 MEMORIZED

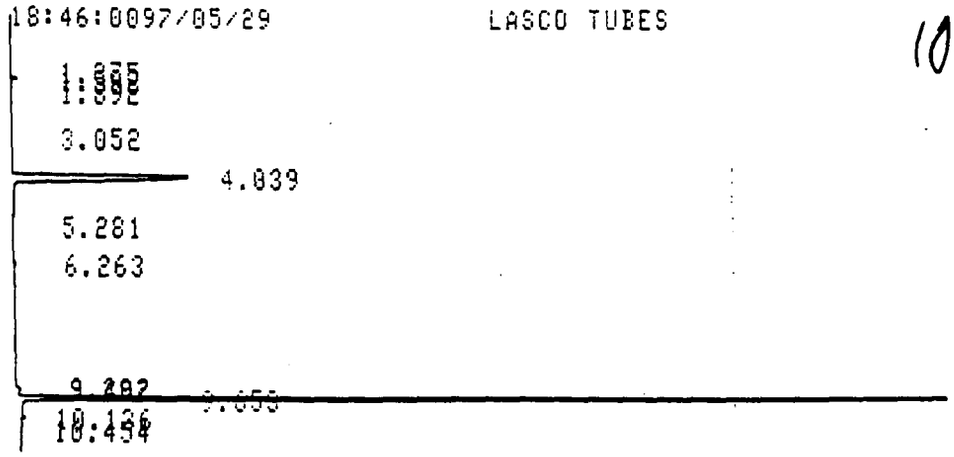
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 75

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.593	1518				
2	3.047	379				
3	4.032	233231		4	38.7628	CS2
4	5.274	500				
5	6.25	1596				
6	6.917	404		3	0.0672	MMA
7	9.403	246				
8	9.649	367320		1	61.0483	STYRENE
9	10.13	733		2	0.1217	CUMENE
	TOTAL	605928			100	

223-02037-02

18:46:0097/05/29 LASCO TUBES

10-12-4



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 73

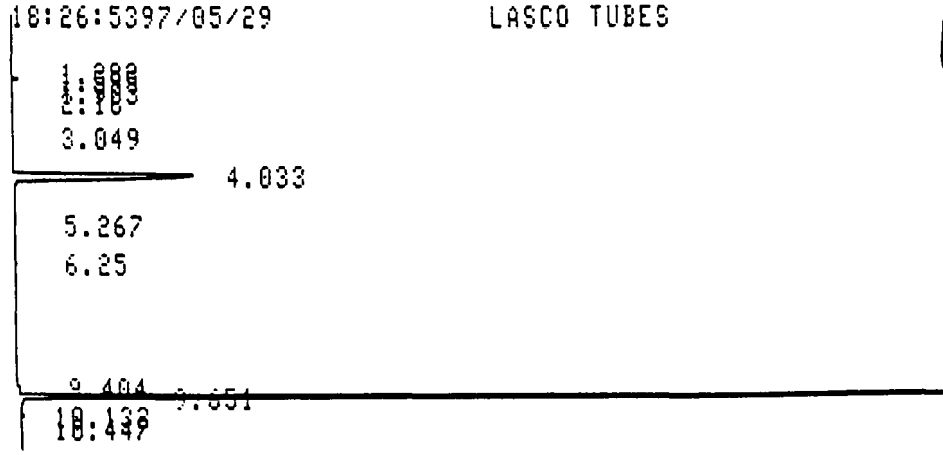
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	242				
2	1.592	2198				
3	1.892	359				
4	3.052	597				
5	4.039	212740		4	15.5087	CS2
6	5.281	541				
7	6.263	1566				
8	9.292	217				
9	9.407	976	V			
10	9.653	1156430		1	84.3036	STYRENE
11	10.136	2574		2	0.1876	CUMENE
12	10.454	650				
	TOTAL	1379090			100	

223-02037-02

Shimadzu

18:26:5397/05/29 LASCO TUBES

10-12-4



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO. 71

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.383	258				
2	1.595	2352				
3	1.903	393				
4	2.16	274				
5	3.049	646				
6	4.033	220338		4	15.2329	CS2
7	5.267	576				
8	6.25	1637				
9	9.404	977				
10	9.651	1223044	V	1	84.5542	STYRENE
11	10.132	3079	V	2	0.2129	CUMEME
12	10.447	839				
	TOTAL	1454411			100	

0 35

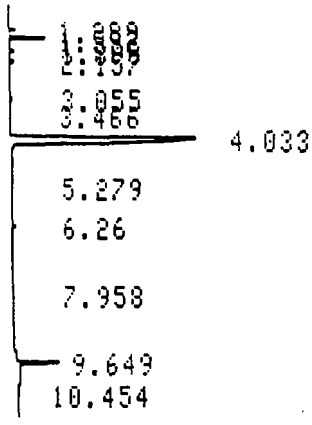
223-02037-02

Shimadzu

347

9-12-2

223-02037-02



CHROMATOGRAM 1 MEMORIZED

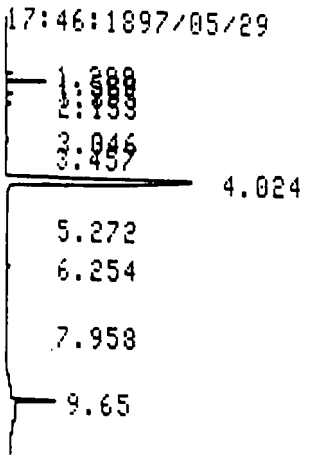
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 69

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.389	1208				
2	1.592	9563				
3	1.898	2617				
4	2.157	2664				
5	3.055	1960				
6	3.466	1115				
7	4.033	236059		4	93.7954	CS2
8	5.279	1135				
9	6.26	2002				
10	7.958	465				
11	9.649	15616		1	6.2046	STYRENE
12	10.454	388				
	TOTAL	274792			100	

Shimadzu

17:46:1897/05/29 LASCO TUBES

9-12-2



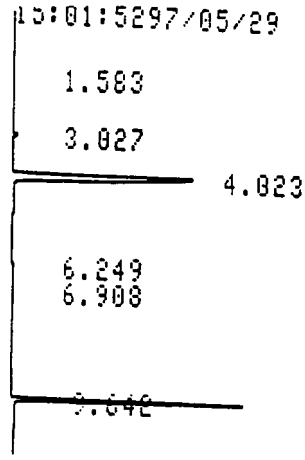
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 68

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.388	1309				
2	1.589	10275				
3	1.895	2798				
4	2.153	2841				
5	3.046	2038				
6	3.457	1168				
7	4.024	242126		4	93.8003	CS2
8	5.272	1172				
9	6.254	2060				
10	7.958	464				
11	9.65	16003		1	6.1997	STYRENE
	TOTAL	282253			100	

15:01:5297/05/29 LASCO TUBES

RE-11-1



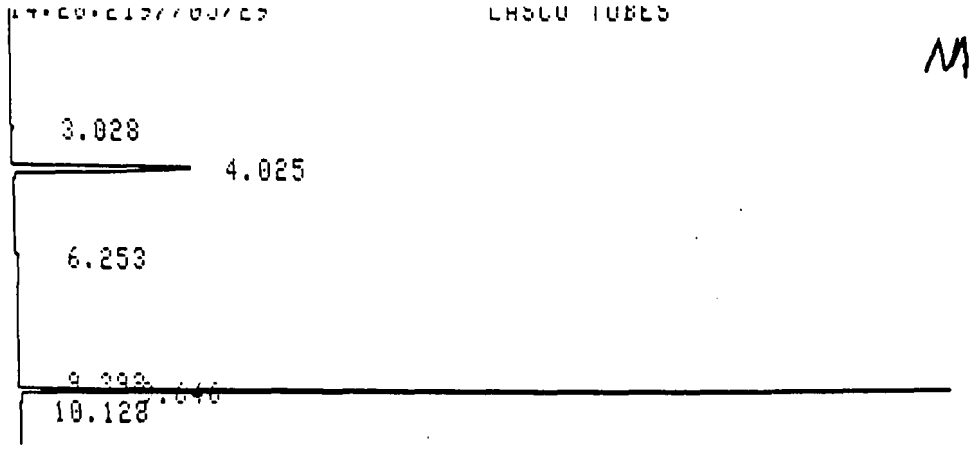
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 56

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.583	348				
2	3.027	3242				
3	4.023	211545		4	71.3459	CS2
4	6.249	1263				
5	6.908	383		3	0.1291	MMA
6	9.642	84579		1	28.5251	STYRENE
	TOTAL	301359			100	

ME-9-1



CHROMATOGRAM 1 MEMORIZED

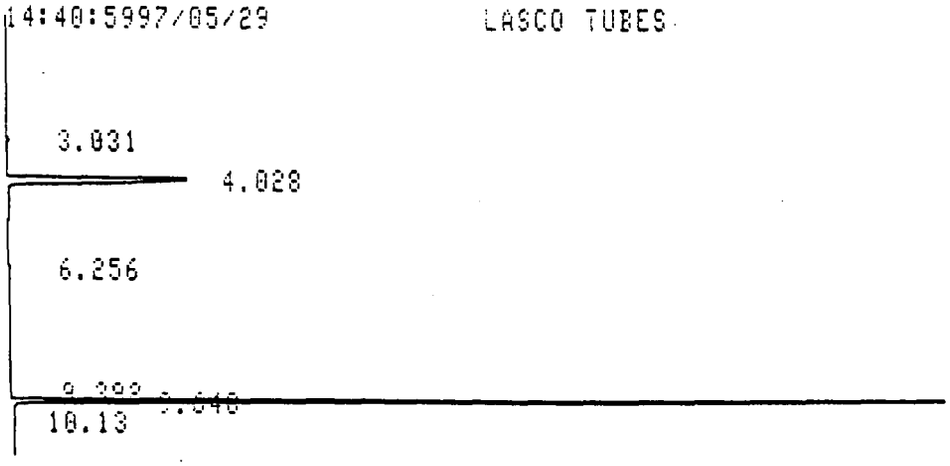
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 54

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.028	1891				
2	4.025	215493		4	27.6823	CS2
3	6.253	1343				
4	9.392	353				
5	9.646	561780		1	72.1665	STYRENE
6	10.128	1177		2	0.1512	CUMEME
	TOTAL	782038			100	

223-02037-02

14:40:5997/05/29 LASCO TUBES

ME-9-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 55

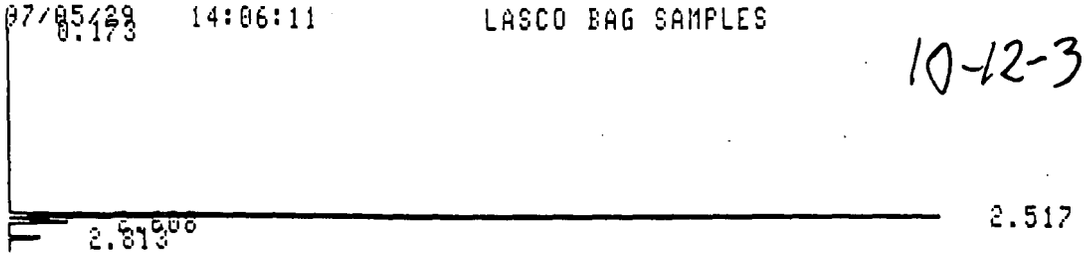
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.031	1837				
2	4.028	211219		4	28.1287	CS2
3	6.256	1264				
4	9.392	370				
5	9.648	538755		1	71.7478	STYRENE
6	10.13	927		2	0.1235	CUMEME
	TOTAL	754372			100	

CHROMATOGRAM 101 MEMORIZED

97/05/29 14:06:11 LASCO BAG SAMPLES

10-12-3

madin



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

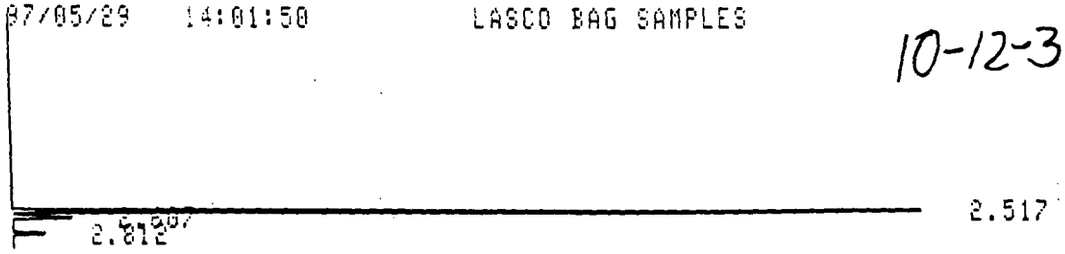
SAMPLE NO 0 METHOD 0002

REPORT NO 53

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	14820		1	92.4217	METHANE
2	2.608	1215	V	2	7.5783	ETHANE
3	2.813	471	V			
	TOTAL	16506			100	

CHROMATOGRAM 101 MEMORIZED
87/05/29 14:01:50 LASCO BAG SAMPLES

10-12-3



CR501 CHROMATOPAC

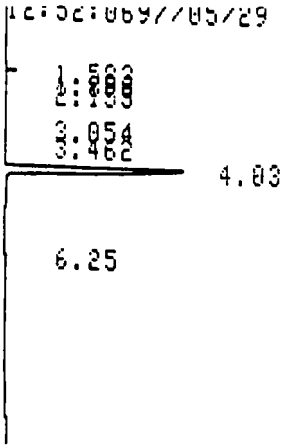
223-02037-02

CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 52

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	15369		1	92.401	METHANE
2	2.607	1264	V	2	7.599	ETHANE
3	2.812	510	V			
	TOTAL	17143			100	

12:52:069//05/29 LASCO TUBES

9-11-2



CHROMATOGRAM 1 MEMORIZED

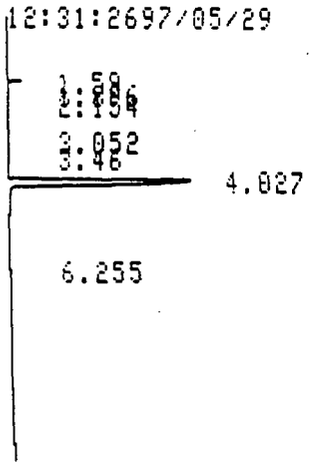
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 48

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.583	3192				
2	1.898	964				
3	2.155	949	V			
4	3.054	618				
5	3.462	395				
6	4.03	210059		4	100	CS2
7	6.25	1371				
	TOTAL	217548			100	

12:31:2697/05/29 LASCO TUBES

9-11-2



223-02037-02

CHROMATOGRAM 1 MEMORIZED

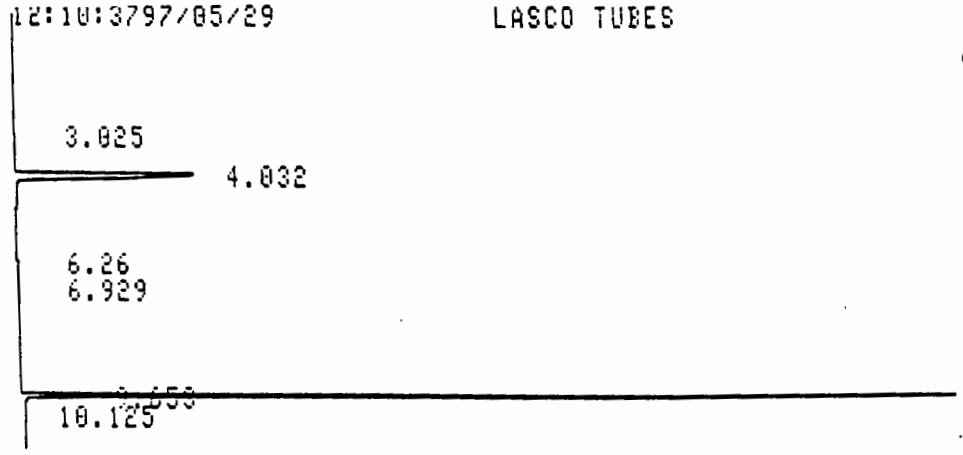
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 47

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.59	3231				
2	1.896	975				
3	2.154	954	V			
4	3.052	622				
5	3.46	405				
6	4.027	211020		4	100	CS2
7	6.255	1376				
	TOTAL	218584			100	

Shimadzu

12:10:3797/05/29 LASCO TUBES

ME-11-2



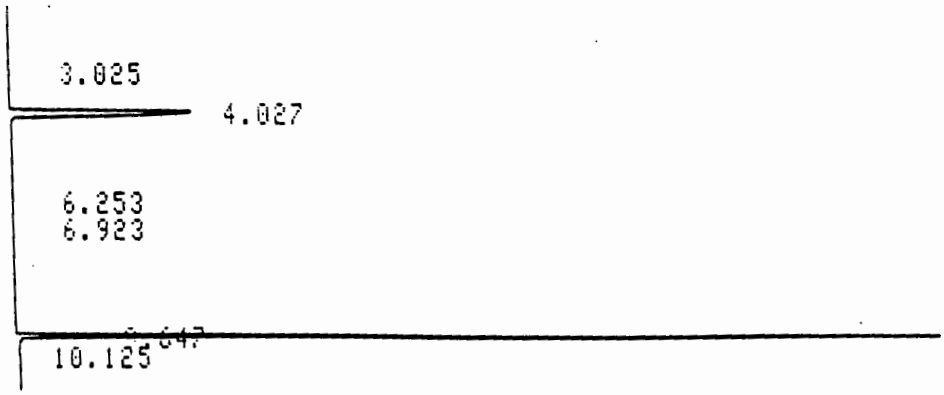
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 46

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.025	1342				
2	4.032	214302		4	37.7739	CS2
3	6.26	1309				
4	6.929	273		3	0.0481	MMA
5	9.653	351941		1	62.0347	STYRENE
6	10.125	813		2	0.1434	CUMEME
	TOTAL	569981			100	

ME-11-2

12037-02



CHROMATOGRAM 1 MEMORIZED

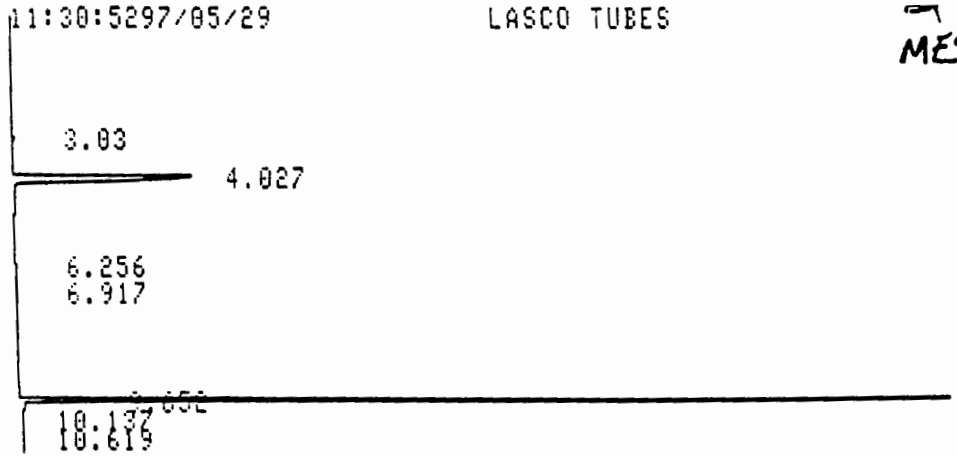
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 45

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.025	1264				
2	4.027	208615		4	38.1766	CO2
3	6.253	1063				
4	6.923	448		3	0.0819	MMA
5	9.647	336572		1	61.5927	STYRENE
6	10.125	813		2	0.1488	CUMEME
	TOTAL	548776			100	

⊕ Shimadzu

11:30:5297/05/29 LASCO TUBES

MES-11-2



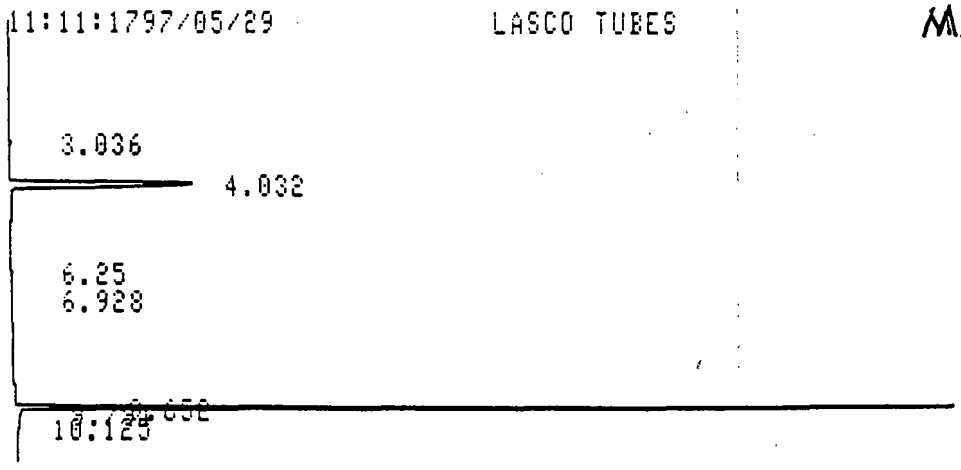
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 44

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.03	1650				
2	4.027	216909		4	27.1547	CS2
3	6.256	1331				
4	6.917	348		3	0.0435	MMA
5	9.652	580495		1	72.6718	STYRENE
6	10.137	1038	V	2	0.13	CUMEME
7	10.619	442				
	TOTAL	802212			100	

11:11:1797/05/29 LASCO TUBES

MES-11-2

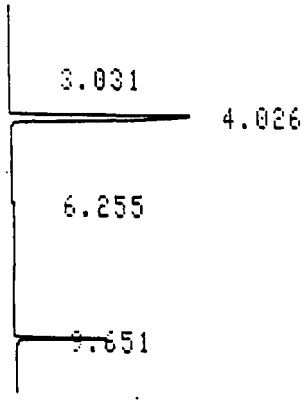


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 43

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.036	1583				
2	4.032	211457		4	27.4353	CS2
3	6.25	1271				
4	6.928	322		3	0.0417	MMA
5	9.652	557483		1	72.3299	STYRENE
6	9.791	4352	V			
7	10.125	1488	V	2	0.1931	CUMENE
	TOTAL	777956			100	

⊕ Shimadzu

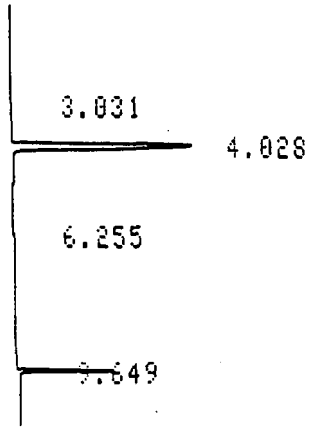


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 42

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.031	1340				
2	4.026	208796		4	85.848	CS2
3	6.255	1256				
4	9.651	34420		1	14.152	STYRENE
	TOTAL	245812			100	

223-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 37

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.031	1383				
2	4.028	213263		4	85.8411	CS2
3	6.255	1276				
4	9.649	35176		1	14.1589	STYRENE
	TOTAL	251098			100	

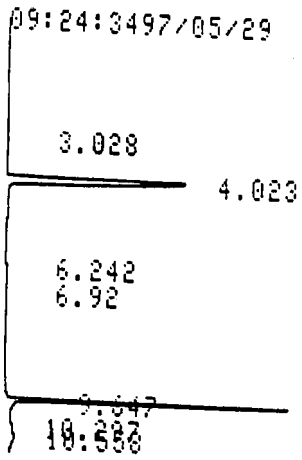
223-02037-02

Shimadzu

362

09:24:3497/05/29 LASCO TUBES

RES-11-3
SPIKE



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 36

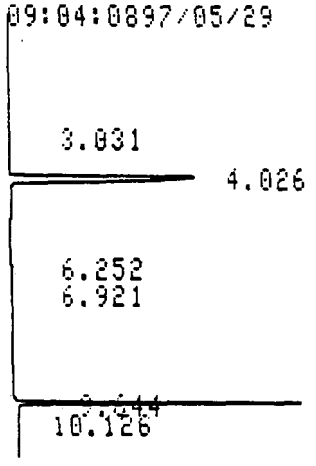
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.028	1247				
2	4.023	212730		4	64.7108	CS2
3	6.242	1262				
4	6.92	252		3	0.0766	MMA
5	9.647	115758		1	35.2126	STYRENE
6	10.297	9996	V			
7	10.558	16318	V			
	TOTAL	357562			100	

09:04:0897/05/29 LASCO TUBES

RES-11-3
SPIKE

223-02037-02



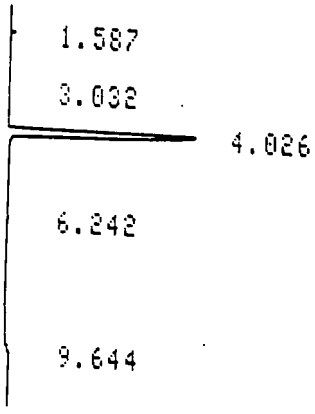
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 35

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.031	1269				
2	4.026	213531		4	66.4054	CS2
3	6.252	1261				
4	6.921	260		3	0.0808	MMA
5	9.644	106764		1	33.2023	STYRENE
6	10.126	1001		2	0.3114	CUMENE
	TOTAL	324086			100	

Shimadzu

NDA-11-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 34

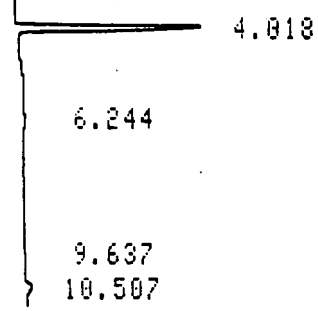
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.587	1521				
2	3.032	457				
3	4.026	240995		4	99.4227	CS2
4	6.242	1553				
5	9.644	1399		1	0.5773	STYRENE
	TOTAL	245925			100	

037-02

NDA-11-1

08:23:3497/05/29 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

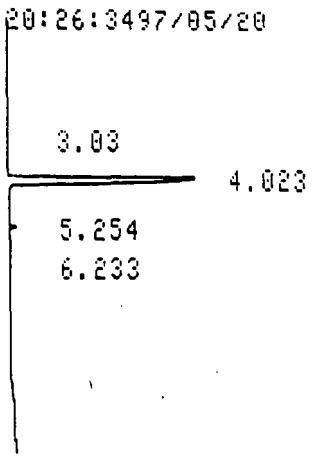
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 33

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.587	1327				
2	3.026	397				
3	4.018	215147		4	99.5232	CS2
4	6.244	1283				
5	9.637	1031		1	0.4768	STYRENE
6	10.507	10472				
	TOTAL	229658			100	

⊕ Shimadzu

20:26:3497/05/20 LASCO TUBES

NDA-6-3
FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 283

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.03	553				
2	4.023	245820		4	100	CS2
3	5.254	4322				
4	6.233	380				
TOTAL		251075			100	

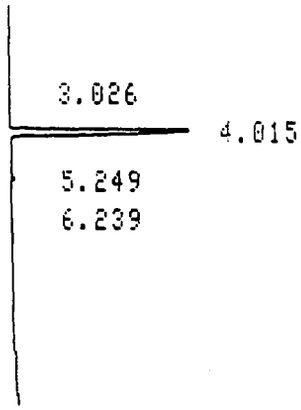
C7KL 02

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 282

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	17726		1	94.9886	METHANE
2	2.584	935	V	2	5.0114	ETHANE
3	2.787	442	V			
	TOTAL	19103			100	

Shimadzu

FH A



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 281

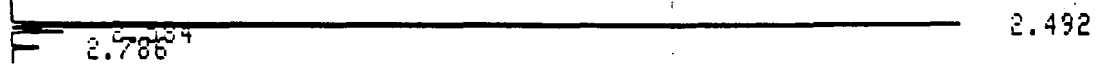
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.026	437				
2	4.015	209441		4	100	CS2
3	5.249	3272				
4	6.239	276				
	TOTAL	213426			100	

223-

269

97/05/20 19:56:16 LASCO BAG SAMPLES

OIU
C7R2

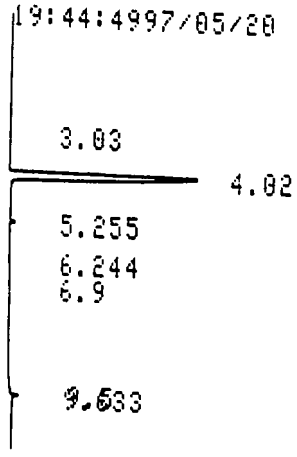


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 280

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	17505		1	94.9397	METHANE
2	2.584	933	V	2	5.0603	ETHANE
3	2.786	439	V			
	TOTAL	18877			100	

19:44:4997/05/20 LASCO TUBES

NDB-7-2
FH A



CHROMATOGRAM 1 MEMORIZED

CR50: CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 279

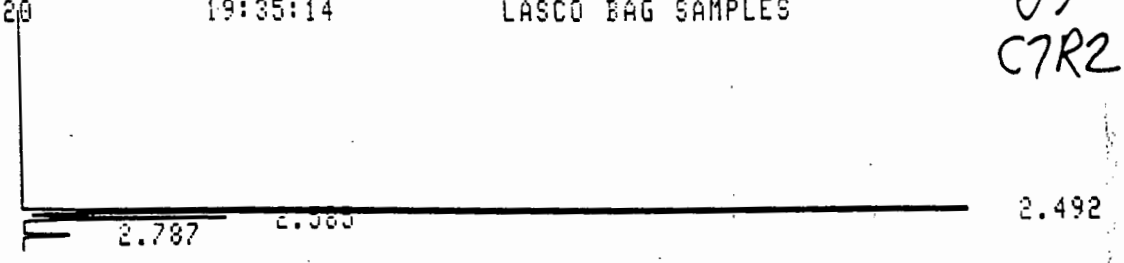
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.03	366				
2	4.02	244354		4	98.6094	CS2
3	5.255	3246				
4	6.244	365				
5	6.9	537		3	0.2165	MMA
6	9.5	434				
7	9.633	2909	V	1	1.1741	STYRENE
	TOTAL	252210			100	

223-02037-02

97/05/20 19:35:14 LASCO BAG SAMPLES

09
C7R2



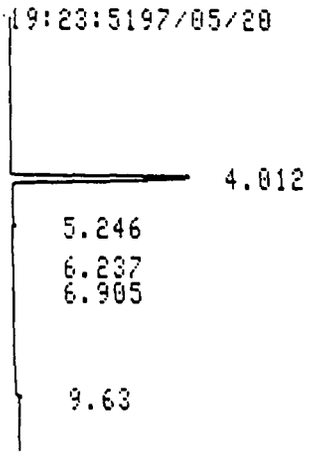
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 278

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	76569		1	96.0737	METHANE
2	2.585	3129	V	2	3.9263	ETHANE
3	2.787	733	V			
	TOTAL	80431			100	

19:23:5197/05/20 LASCO TUBES

NDB-7-2
FH A

223-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 277

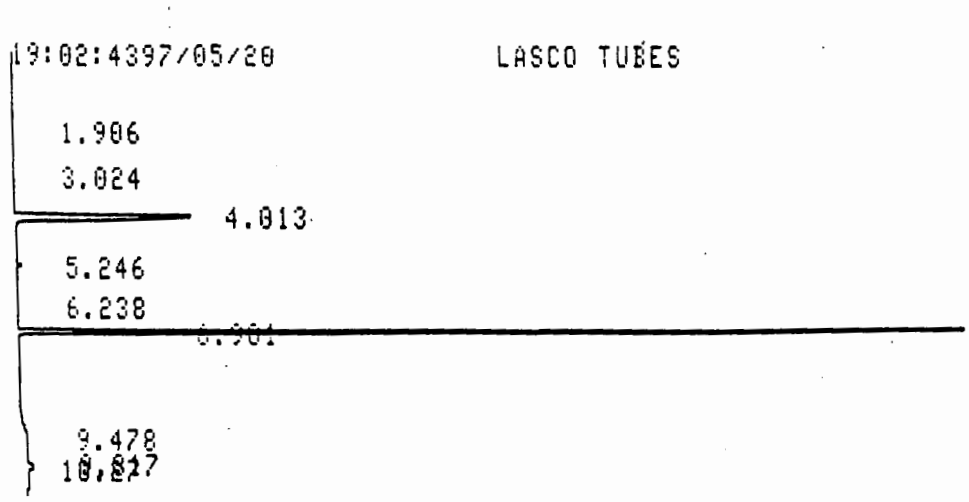
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.012	209973		4	98.7383	CS2
2	5.246	2503				
3	6.237	286				
4	6.905	405		3	0.1905	MMA
5	9.63	2278		1	1.0712	STYRENE
	TOTAL	215445			100	

Shinadru

19:02:4397/05/20 LASCO TUBES

MID
MMA

Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 275

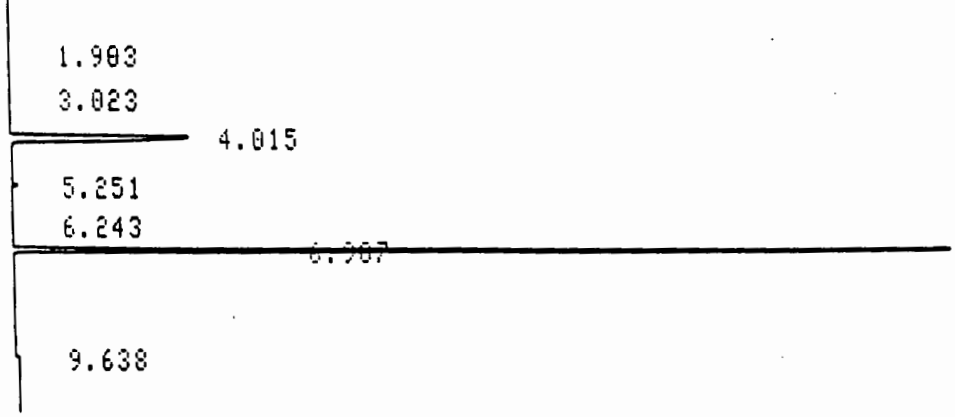
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.906	380				
2	3.024	698				
3	4.013	202796		4	20.5802	CS2
4	5.246	3719				
5	6.238	264				
6	6.901	782596		3	79.4198	MMA
7	9.478	10876				
8	9.817	9696	V			
9	10.27	12326	V			
	TOTAL	1023352			100	

[illegible] LASCO TUBES

CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK

18:41:3097/05/20 LASCO TUBES

MID
MMA



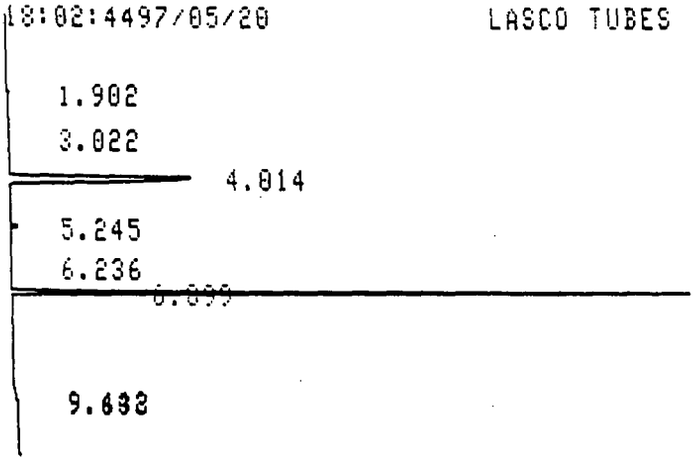
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 273

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.903	381				
2	3.023	740				
3	4.015	209356		4	20.0808	CS2
4	5.251	3962				
5	6.243	279				
6	6.907	832159		3	79.818	MMA
7	9.638	1055		1	0.1012	STYRENE
	TOTAL	1047932			100	

~~DMB~~
MMA

18:02:4497/05/20 LASCO TUBES



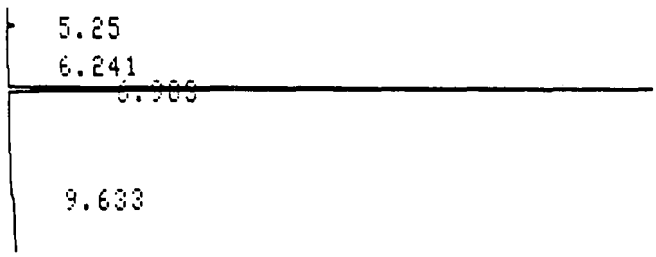
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 272

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.902	1192				
2	3.022	863				
3	4.014	213684		4	42.6915	CS2
4	5.245	4708				
5	6.236	285				
6	6.899	286402		3	57.2197	MMA
7	9.442	906				
8	9.633	444	V	1	0.0888	STYRENE
	TOTAL	508484			100	

223-02037-02

Shimadzu



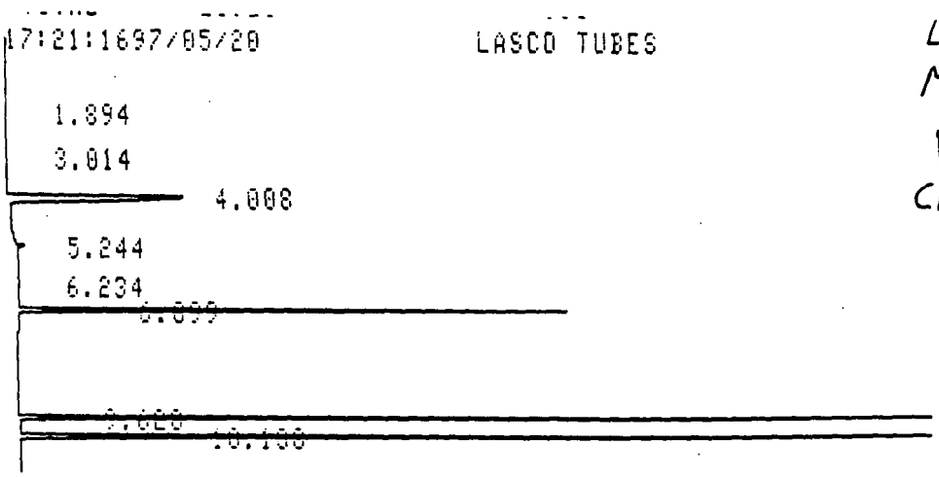
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 271

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.902	1175				
2	3.024	842				
3	4.008	209433		4	43.4246	CS2
4	5.25	4531				
5	6.241	280				
6	6.903	272527		3	56.5066	MMA
7	9.633	332		1	0.0688	STYRENE
		---			---	
	TOTAL	489120			100	

17:21:1697/05/20 LASCO TUBES

LOW MMA ✓ CHECK



223-02037-02

CHROMATOGRAM 1 MEMORIZED

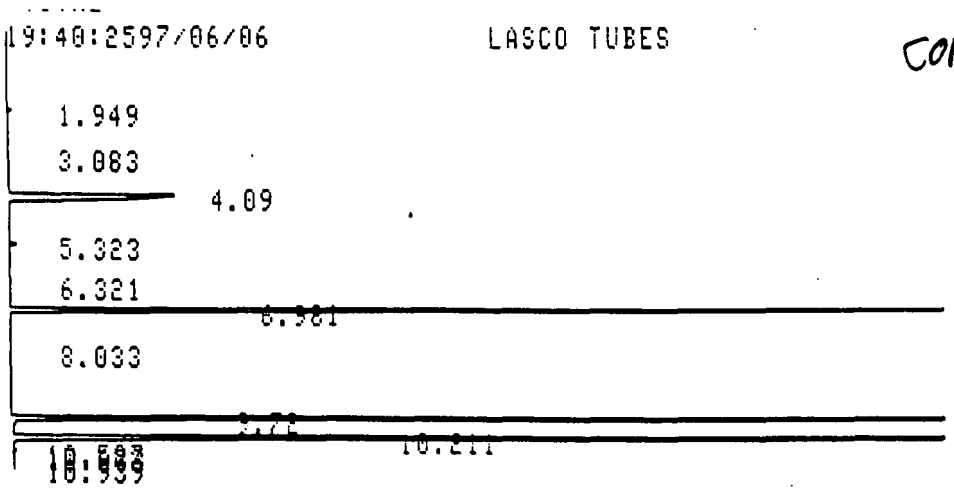
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 270

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.894	704				
2	3.014	735				
3	4.008	206567		4	16.855	CS2
4	5.244	4021				
5	6.234	280				
6	6.899	238043		3	19.4233	MMA
7	9.628	341646		1	27.8769	STYRENE
8	10.108	439299		2	35.8449	CUMENE
	TOTAL	1231295			100	

⊕ Shinadzu

19:40:2597/06/06 LASCO TUBES

CONCAL



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 18

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.949	1876				
2	3.083	994				
3	4.09	192483				
4	5.323	5315				
5	6.321	307				
6	6.981	696263		3	19.6343	MMA
7	8.033	365				
8	9.72	1474506		1	41.5804	STYRENE
9	10.211	1375390	V	2	38.7853	CUMEME
10	10.527	1840	V			
11	10.633	328	V			
12	10.939	231				
	TOTAL	3749896			100	

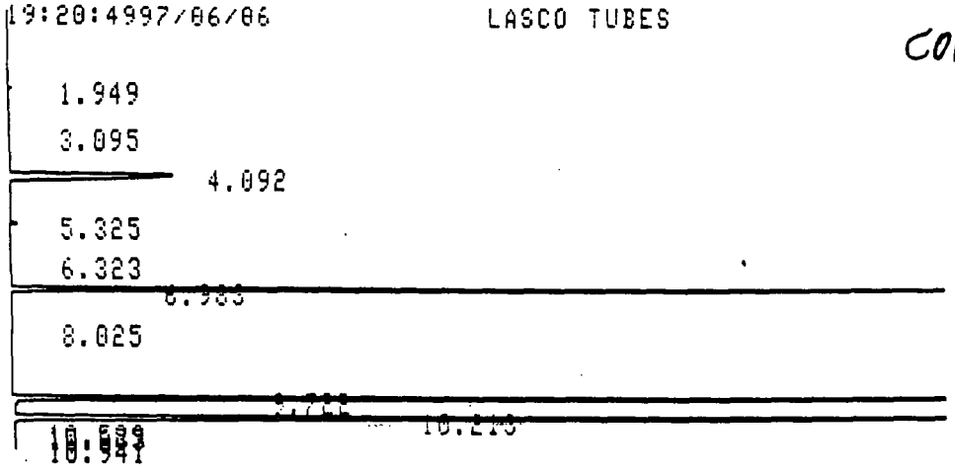
223-02037-02

Shimadzu

19:20:4997/06/06 LASCO TUBES

CONCAL

Shimadzu



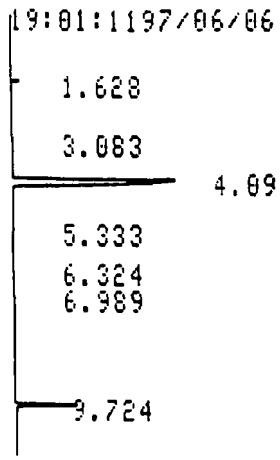
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 17

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.949	1937				
2	3.095	991				
3	4.092	190490				
4	5.325	5220				
5	6.323	295				
6	6.983	675646		3	19.7667	MMA
7	8.025	349				
8	9.722	1419567		1	41.5309	STYRENE
9	10.213	1322886	V	2	38.7024	CUMENE
10	10.529	1649	V			
11	10.633	263	V			
12	10.941	195				
	TOTAL	3619488			100	

19:01:1197/06/06 LASCO TUBES

NDA-13-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 16

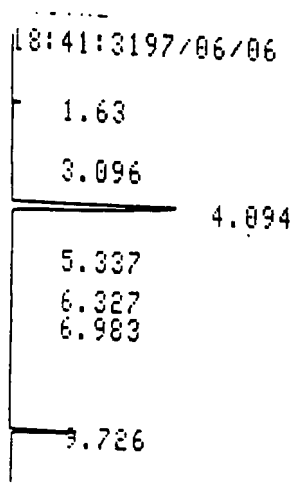
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.628	2903				
2	3.083	1506				
3	4.09	187917				
4	5.333	571				
5	6.324	1264				
6	6.989	1656		3	6.5996	MMA
7	9.724	23442		1	93.4004	STYRENE
	TOTAL	219260			10A	

223-02037-02

18:41:3197/06/06 LASCO TUBES

NDA-13-1

B Shinadzu



CHROMATOGRAM 1 MEMORIZED

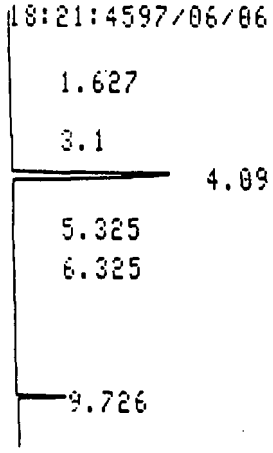
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 15

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.63	3001				
2	3.096	1579				
3	4.094	192312				
4	5.337	578				
5	6.327	1324				
6	6.983	1730		3	6.6295	MMA
7	9.726	24368		1	93.3705	STYRENE
	TOTAL	224893			100	

18:21:4597/06/86 LASCO TUBES

NDB-12-3



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 14

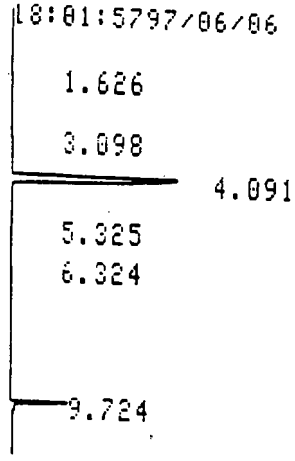
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.627	870				
2	3.1	343				
3	4.09	182701				
4	5.325	494				
5	6.325	1206				
6	9.726	18785		1	100	STYRENE
	TOTAL	204399			100	

223-02037-02

18:01:5797/06/06 LASCO TUBES

NDB-12-3

Kimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0

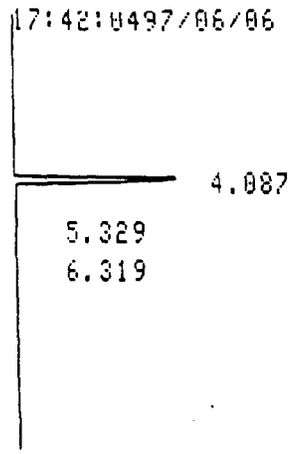
FILE 0
METHOD 0002

REPORT NO 13

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.626	954				
2	3.098	376				
3	4.091	193962				
4	5.325	542				
5	6.324	1345				
6	9.724	21106		1	100	STYRENE
	TOTAL	218284			100	

17:42:0497/06/06 LASCO TUBES

NDA-12-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 12

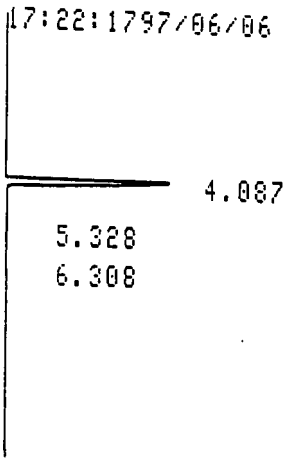
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.087	183216				
2	5.329	476				
3	6.319	1132				
	TOTAL	184825			0	

223-02037-02

5

17:22:1797/06/06 LASCO TUBES

NDA-12-1



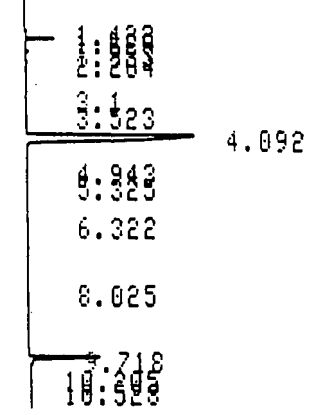
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 11

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.087	185153				
2	5.328	465				
3	6.308	1129				
	TOTAL	186747			0	

17:02:0097/06/06 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 10

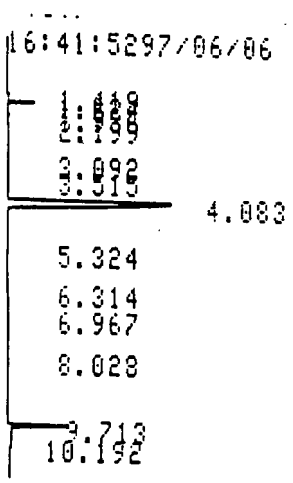
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.422	824				
2	1.629	8240				
3	1.933	2374				
4	2.204	2402				
5	3.1	1796				
6	3.523	1013				
7	4.092	212361				
8	4.943	288				
9	5.325	1674				
10	6.322	1872				
11	8.025	467				
12	9.718	27958		1	98.7884	STYRENE
13	10.205	343		2	1.2116	CUMEME
14	10.528	464				
	TOTAL	262077			100	

223-02037-02

⊕ Shimadzu

16:41:5297/06/06 LASCO TUBES

9-13-2



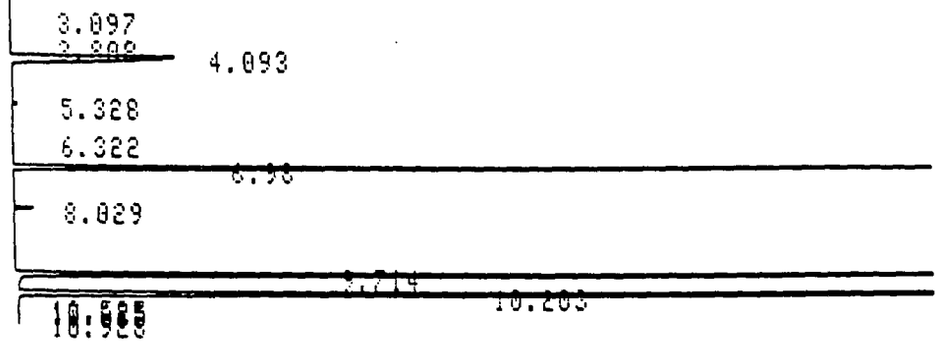
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002
REPORT NO 9

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.419	687				
2	1.624	6866				
3	1.936	1974				
4	2.199	2000				
5	3.092	1462				
6	3.515	830				
7	4.083	188673				
8	5.324	1378				
9	6.314	1556				
10	6.967	393		3	1.6479	MMA
11	8.028	360				
12	9.713	22684		1	95.0703	STYRENE
13	10.192	783		2	3.2818	CUMEME
	TOTAL	229645			100	

16:22:1597/06/06 LASCO TUBES



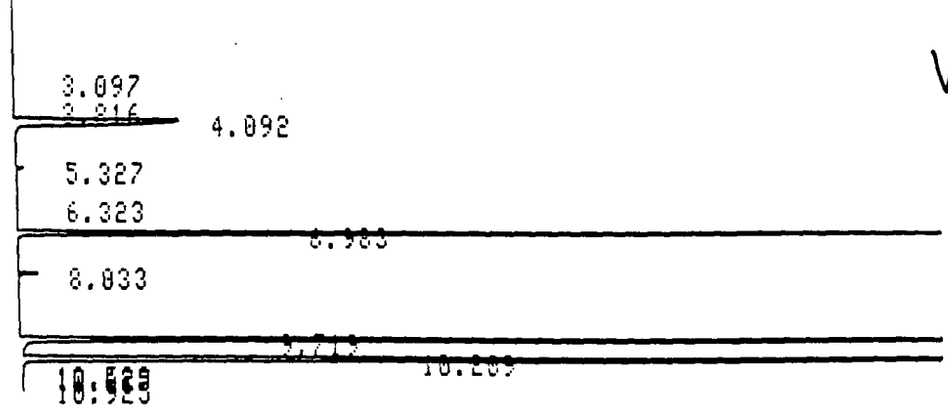
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 8

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.097	773				
2	3.808	527				
3	4.093	202811				
4	5.328	4389				
5	6.322	1515				
6	6.98	669425		3	16.2851	MMA
7	8.029	8437				
8	9.714	1778858		1	43.2741	STYRENE
9	10.203	1662389	V	2	40.4408	CUMEME
10	10.525	995	V			
11	10.625	318	V			
12	10.928	696				
	TOTAL	4331134			100	

223-02037-02

16:02:2797/06/06 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

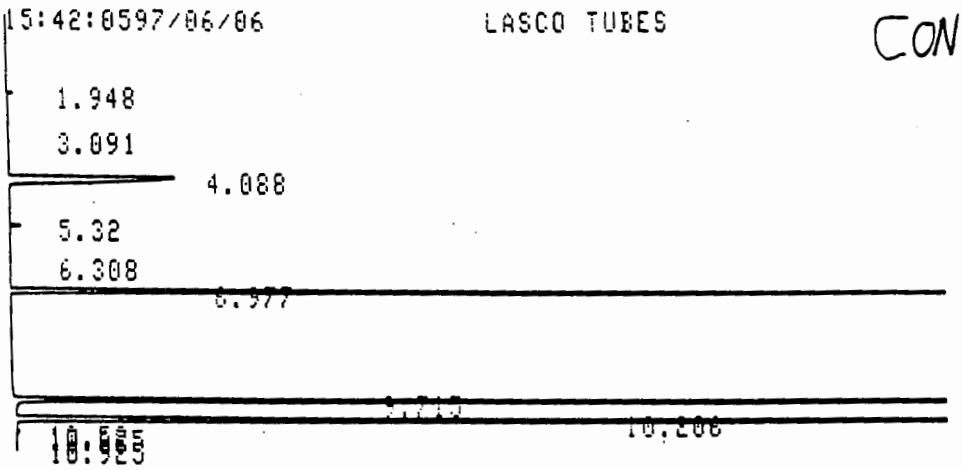
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 7

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.097	808				
2	3.816	554				
3	4.092	212297				
4	5.327	4614				
5	6.323	1589				
6	6.983	703764		3	16.2828	MMA
7	8.033	8867				
8	9.719	1869258		1	43.2486	STYRENE
9	10.209	1749100	V	2	40.4686	CUMENE
10	10.529	1006	V			
11	10.625	390	V			
12	10.925	718				
	TOTAL	4552963			100	

Shimadzu

15:42:0597/06/06 LASCO TUBES

CONCAL



CHROMATOGRAM 1 MEMORIZED

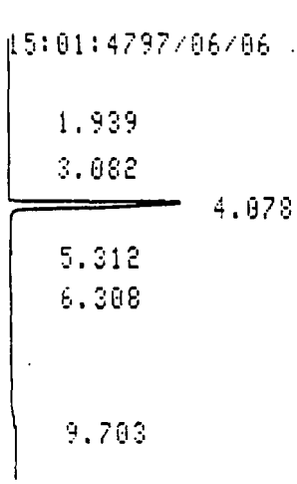
CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	6		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.948	2710				
2	3.091	1254				
3	4.088	218317				
4	5.32	6454				
5	6.308	372				
6	6.977	858023		3	19.8166	MMA
7	9.715	1797147		1	41.5063	STYRENE
8	10.206	1674652	V	2	38.6772	CUMEME
9	10.52	3502	V			
10	10.625	398	V			
11	10.925	864				
	TOTAL	4563692			100	

223-02037-02

15:01:4797/06/06 LASCO TUBES BLANK



CHROMATOGRAM 1 MEMORIZED

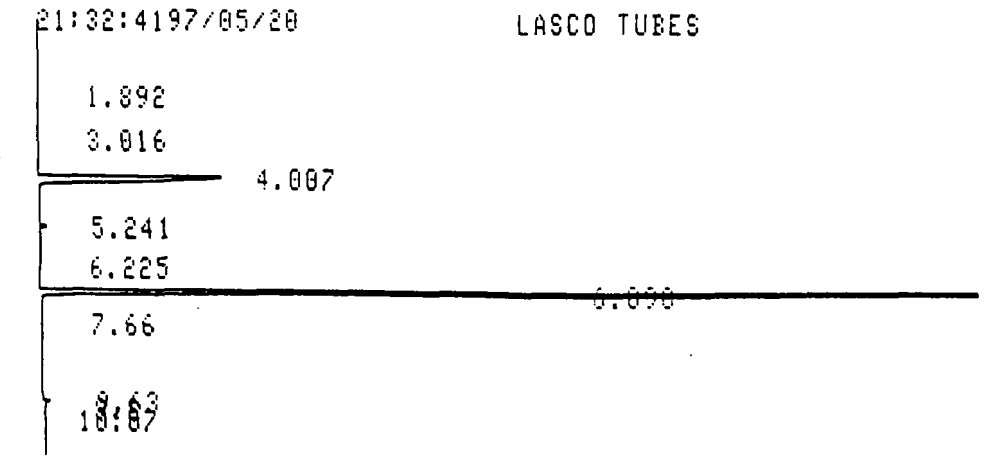
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 4

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.939	713				
2	3.082	485				
3	4.078	217828		4	99.3932	CS2
4	5.312	2277				
5	6.308	967				
6	9.703	1330		1	0.6068	STYRENE
	TOTAL	223599			100	

2234

21:32:4197/05/20 LASCO TUBES

MMA
HIGH
STD



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 289

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.892	395				
2	3.016	776				
3	4.007	211675		4	11.1542	CS2
4	5.241	4171				
5	6.225	289				
6	6.898	1682070		3	88.6367	MMA
7	7.66	411				
8	9.63	2660		1	0.1402	STYRENE
9	9.8	1293	V			
10	10.07	1307		2	0.0689	CUMEME
	TOTAL	1905045			100	

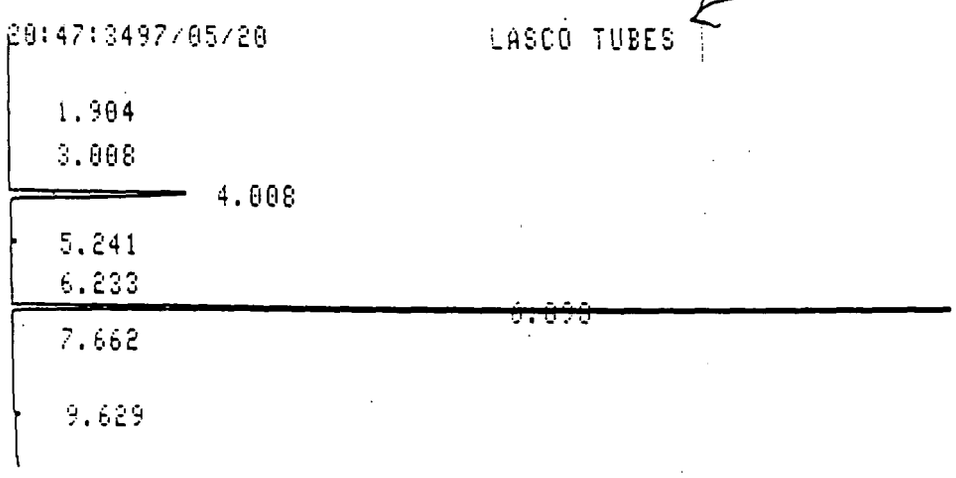
223-02037-02

Shimadzu

203

MMA HIGH

20:47:3497/05/20 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED

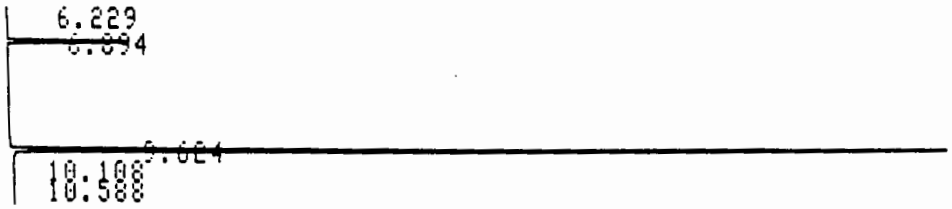
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 284

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.904	391				
2	3.008	742				
3	4.008	207276		4	11.3938	CS2
4	5.241	3985				
5	6.233	281				
6	6.898	1609638		3	88.4809	MMA
7	7.662	317				
8	9.629	2278		1	0.1252	STYRENE
	TOTAL	1824907			100	

21:11:1197/05/20 LASCO TUBES
CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED

223-02037-02

Shimadzu



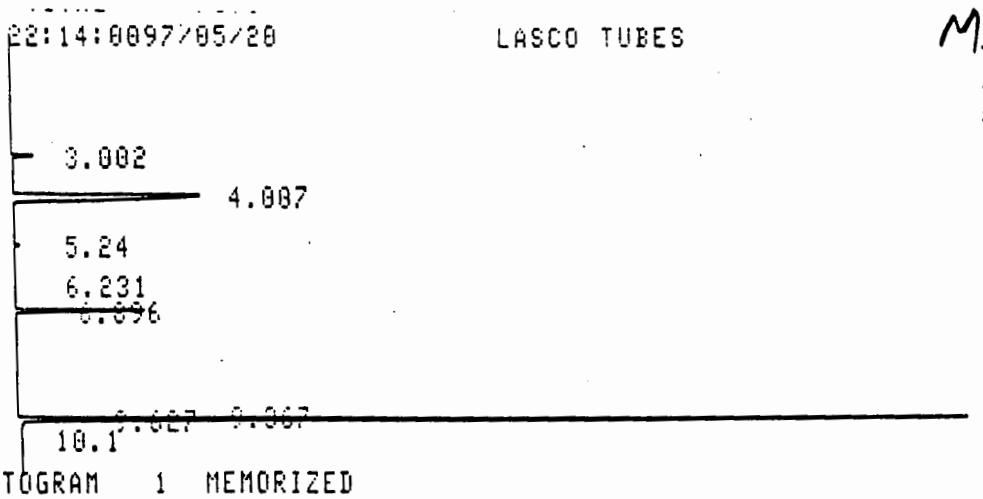
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 290

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.003	10830				
2	4.006	207994		4	30.3321	CS2
3	5.238	3364				
4	6.229	278				
5	6.894	51373		3	7.4918	MMA
6	9.624	425582		1	62.0634	STYRENE
7	10.108	773		2	0.1127	CUMENE
8	10.588	435				
	TOTAL	700628			100	

22:14:0097/05/20 LASCO TUBES

ME-6-2
FHA



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 291

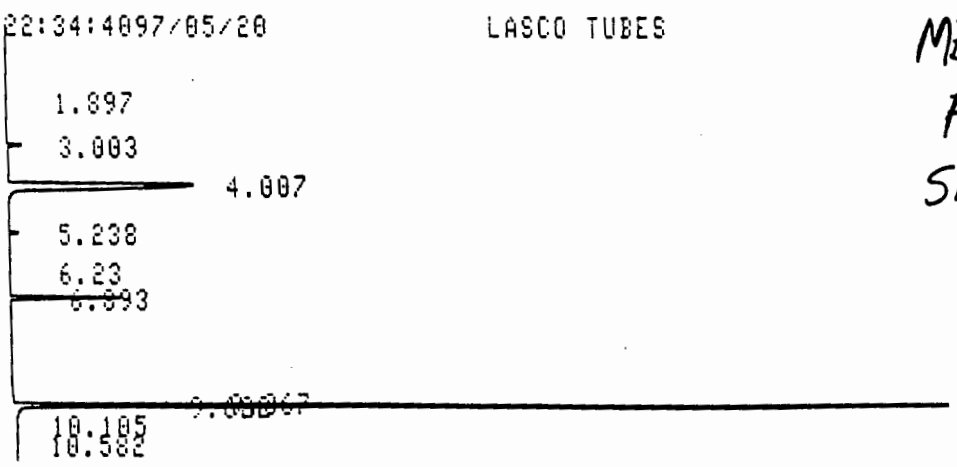
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.002	11157				
2	4.007	213098		4	29.4001	CS2
3	5.24	3499				
4	6.231	293				
5	6.896	54076		3	7.4606	MMA
6	9.367	242				
7	9.627	456713		1	63.0105	STYRENE
8	10.1	933		2	0.1288	CUMEME
	TOTAL	740011			100	

223-02037-02

Shimadzu

22:34:4097/05/20 LASCO TUBES

MES-6-2
FH A
SPIKE

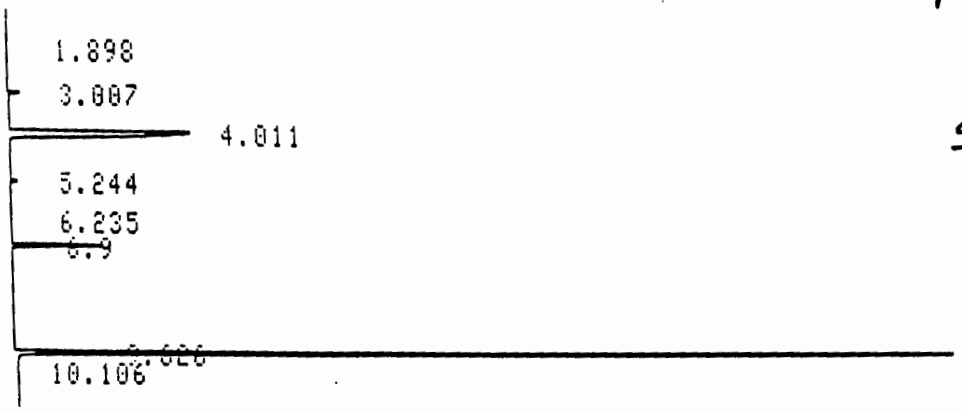


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 292

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.897	665				
2	3.003	8666				
3	4.007	238565		4	22.3766	CS2
4	5.238	5725				
5	6.23	332				
6	6.893	48487		3	4.5479	MMA
7	9.367	423				
8	9.622	778043	V	1	72.9778	STYRENE
9	10.105	1042	V	2	0.0978	CUMENE
10	10.582	351				
	TOTAL	1082300			100	

MKJ-6-2
FH A
SPIKE



CHROMATOGRAM 1 MEMORIZED

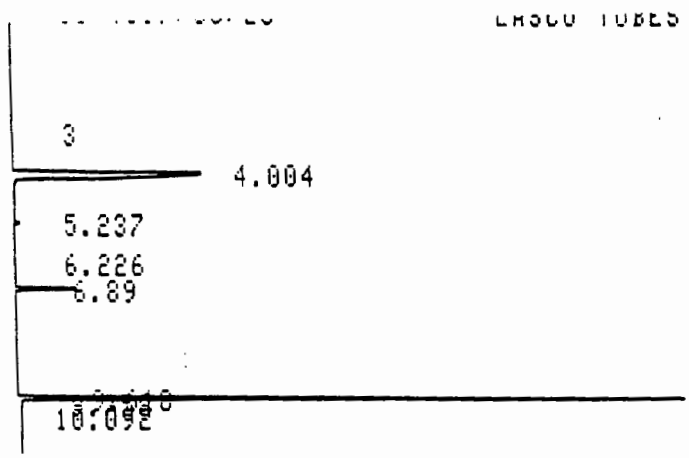
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 293

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.898	542				
2	3.007	7321				
3	4.011	210185		4	23.2794	CS2
4	5.244	4822				
5	6.235	281				
6	6.9	40705		3	4.5084	MMA
7	9.626	651103		1	72.1139	STYRENE
8	10.106	888		2	0.0983	CUMEME
	TOTAL	915848			100	

223-02037-02

Shimao

ME-5-1
FH A



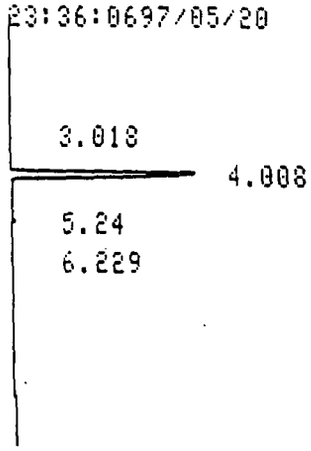
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 294

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3	1565				
2	4.004	235925		4	46.6865	CS2
3	5.237	3526				
4	6.226	341				
5	6.89	26924		3	5.3279	MMA
6	9.618	241938		1	47.8764	STYRENE
7	9.758	1190	V			
8	10.092	552		2	0.1092	CUMENE
	TOTAL	511961			100	

23:36:0697/05/20 LASCO TUBES

NDB-5-2
FHA

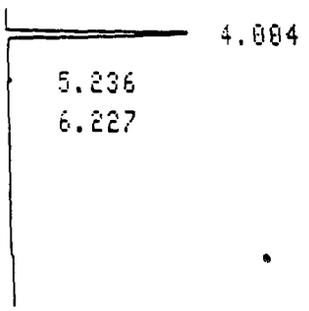


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 295

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.018	481				
2	4.008	211315		4	100	CS2
3	5.24	3214				
4	6.229	281				
	TOTAL	215290			100	

223-02037-02



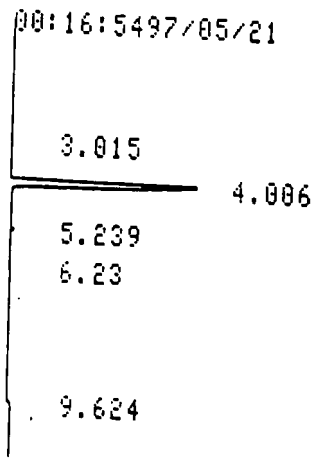
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 296

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.015	476				
2	4.004	211406		4	100	CS2
3	5.236	3185				
4	6.227	279				
	TOTAL	215347			100	

00:16:5497/05/21 LASCO TUBES

NDA-5-1
FHA



CHROMATOGRAM 1 MEMORIZED

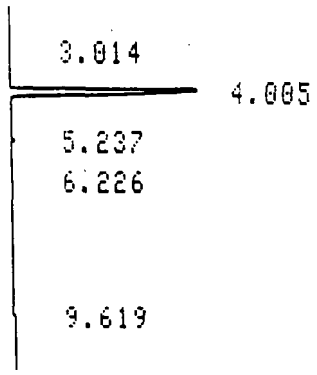
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 297

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.015	575				
2	4.006	214993		4	99.6769	CS2
3	5.239	3142				
4	6.23	291				
5	9.624	697		1	0.3231	STYRENE
	TOTAL	219698			100	

223-02037-02

TM M



CHROMATOGRAM 1 MEMORIZED

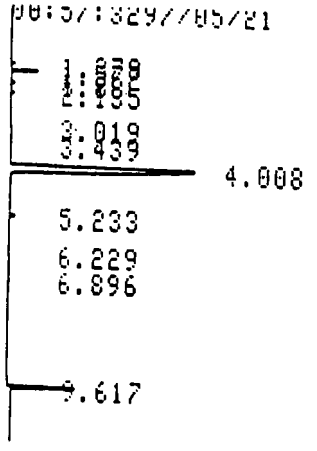
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 298

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.014	559				
2	4.005	211956		4	99.6934	CS2
3	5.237	3072				
4	6.226	280				
5	9.619	652		1	0.3066	STYRENE
	TOTAL	216519			100	

Shimadzu

08:57:32977/05/21 LASCO TUBES

7-6-L
FHA



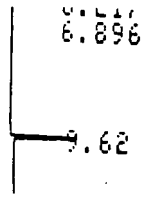
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 299

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.378	877				
2	1.577	6875				
3	1.88	2407				
4	2.135	2470	V			
5	3.019	2664				
6	3.439	1024				
7	4.008	215528		4	88.8622	CS2
8	5.233	4020				
9	6.229	610				
10	6.896	1860		3	0.7669	MMA
11	9.617	25154		1	10.3709	STYRENE
	TOTAL	263488			100	

223-02037-02

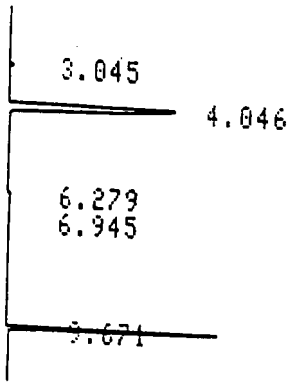


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 300

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.378	865				
2	1.577	6771				
3	1.881	2365				
4	2.137	2424				
5	3.008	2614				
6	3.437	990				
7	4.005	212915		4	89.1104	CS2
8	5.239	3901				
9	6.217	602				
10	6.896	1798		3	0.7524	MMA
11	9.62	24221		1	10.1372	STYRENE
	TOTAL	259465			100	

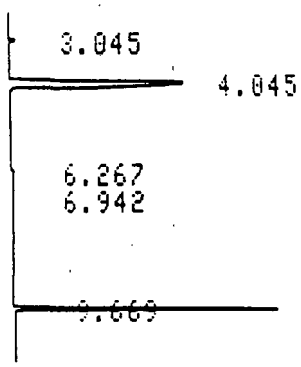


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 100

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.045	3128				
2	4.046	193984		4	71.3697	CS2
3	6.279	1148				
4	6.945	420		3	0.1547	MMA
5	9.671	77397		1	28.4757	STYRENE
TOTAL		276078			100	



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0

SAMPLE NO 0 METHOD 0002
REPORT NO 99

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.045	3818				
2	4.045	218948		4	69.2798	CS2
3	6.267	1428				
4	6.942	514		3	0.1627	MMA
5	9.669	96572		1	30.5575	STYRENE
	TOTAL	321280			100	

223-02037-02

5.287
6.278

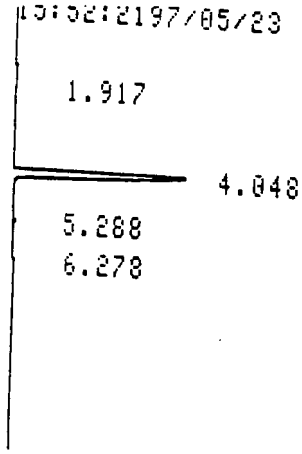
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0 FILE 0
REPORT NO 98 METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.917	247				
2	4.046	223085		4	100	CS2
3	5.287	1985				
4	6.278	1459				
	TOTAL	226775			100	

15:52:2197/05/23 LASCO TUBES

9-8-2



CHROMATOGRAM 1 MEMORIZED

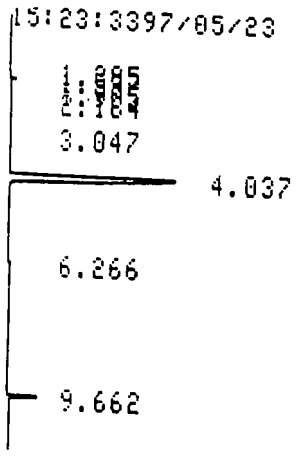
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 97

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.917	243				
2	4.048	222613		4	100	CS2
3	5.288	1962				
4	6.278	1442				
	TOTAL	226260			100	

223-02037-02

15:23:3397/05/23 LASCO TUBES 9-4-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 96

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.395	464				
2	1.597	2233				
3	1.905	668				
4	2.164	679	V			
5	3.047	1521				
6	4.037	191395		4	94.4004	CS2

9.664

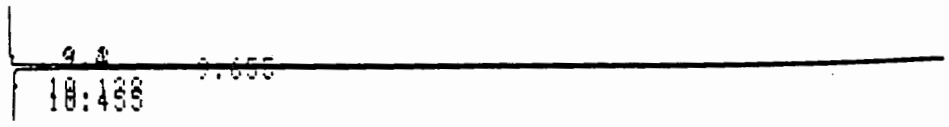
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 95

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.397	571				
2	1.6	2773				
3	1.908	831				
4	2.158	852				
5	3.042	1918				
6	4.045	220397		4	93.8544	CS2
7	6.274	1525				
8	9.664	14432		1	6.1455	STYRENE
	TOTAL	243298			10A	

'02

Shimadzu

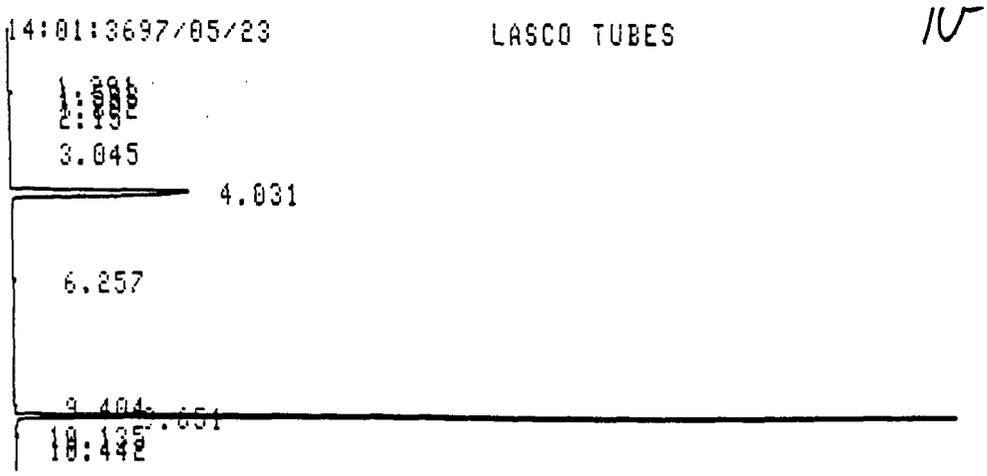


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 94

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.383	316				
2	1.597	1826				
3	1.906	407				
4	2.165	328				
5	3.056	556				
6	4.04	221040		4	20.2204	CS2
7	6.266	1564				
8	9.3	217				
9	9.4	1316	V			
10	9.655	868639	V	1	79.4616	STYRENE
11	10.138	3476	V	2	0.318	CUMENE
12	10.455	425				
	TOTAL	1100111			100	

14:01:3697/05/23 LASCO TUBES 10 10-1



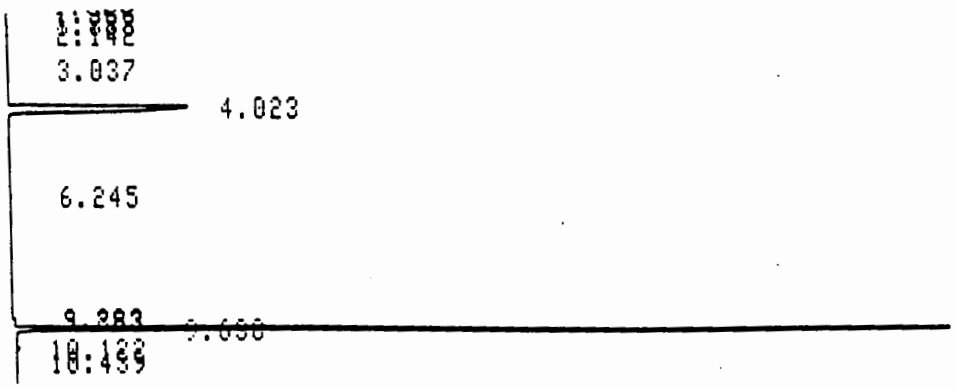
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 93

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.391	347				
2	1.593	2013				
3	1.892	451				
4	2.15	363				
5	3.045	580				
6	4.031	230909		4	20.0007	CS2
7	6.257	1664				
8	9.404	1229				
9	9.651	921317		1	79.802	STYRENE
10	10.135	2277		2	0.1973	CUMEME
11	10.442	484				
	TOTAL	1161635			100	

223-02037-02

Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 88

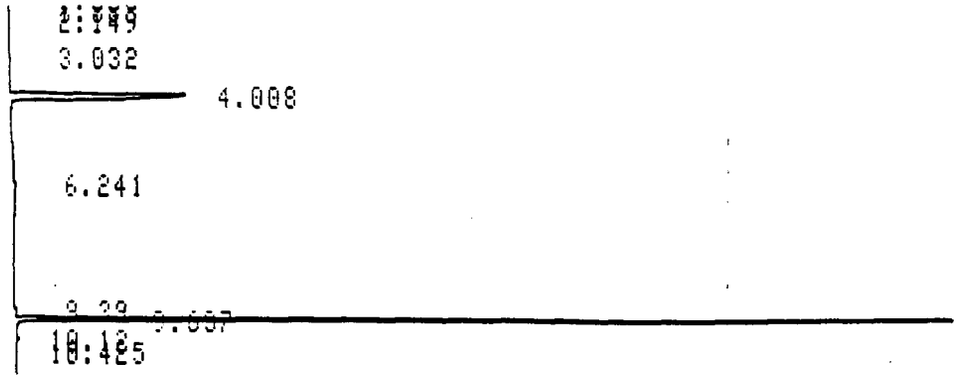
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	322				
2	1.588	1865				
3	1.883	418				
4	2.142	340				
5	3.037	542				
6	4.023	228725		4	20.4813	CS2
7	6.245	1588				
8	9.283	253				
9	9.383	1238	V			
10	9.638	885718		1	79.3122	STYRENE
11	10.122	2305		2	0.2064	CUMENE
12	10.439	421				
	TOTAL	1123735			100	

CHROMATOGRAM 101 MEMORIZED

RESET AUTOSAMPLER

13-02037-02

Shimadzu

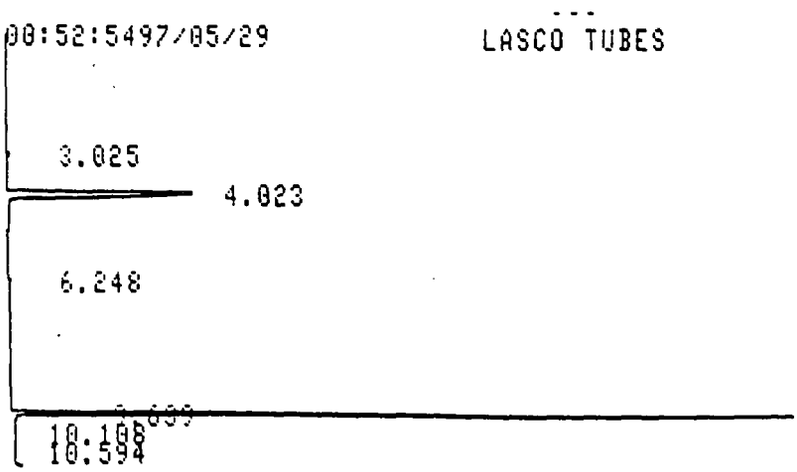


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 87

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	301				
2	1.586	1691				
3	1.883	369				
4	2.149	301				
5	3.032	467				
6	4.008	205785		4	21.7194	CS2
7	6.241	1328				
8	9.39	1284				
9	9.637	739473		1	78.0473	STYRENE
10	10.12	2211	V	2	0.2333	CUMEME
11	10.425	391				
	TOTAL	953599			100	

00:52:5497/05/29 LASCO TUBES ME-11-1

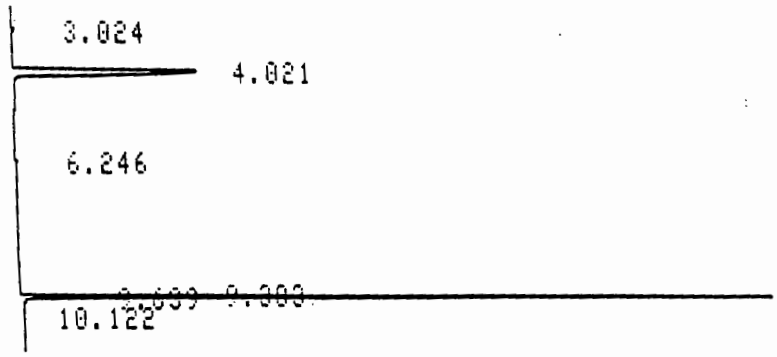


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 27

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.025	2300				
2	4.023	220085		4	42.9681	CS2
3	6.248	1346				
4	9.639	291489		1	56.9085	STYRENE
5	10.108	632		2	0.1233	CUMEME
6	10.594	2121				
	TOTAL	517972			100	

223-020

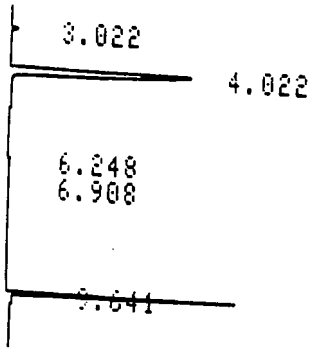


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 26

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.024	2234				
2	4.021	215080		4	43.7715	CS2
3	6.246	1280				
4	9.383	728				
5	9.639	275585	V	1	56.0852	STYRENE
6	10.122	704		2	0.1433	CUMEME
	TOTAL	495611			100	

Shimadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 25

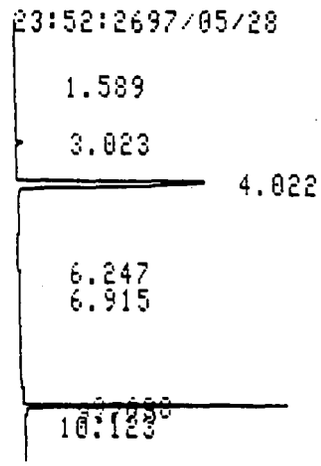
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.589	364				
2	3.022	3348				
3	4.022	215152		4	71.9755	CS2
4	6.248	1273				
5	6.908	387		3	0.1295	MMA
6	9.641	83385		1	27.895	STYRENE
	TOTAL	303910			100	

0 16
223-02

23:52:2697/05/28 LASCO TUBES

RE-11-1



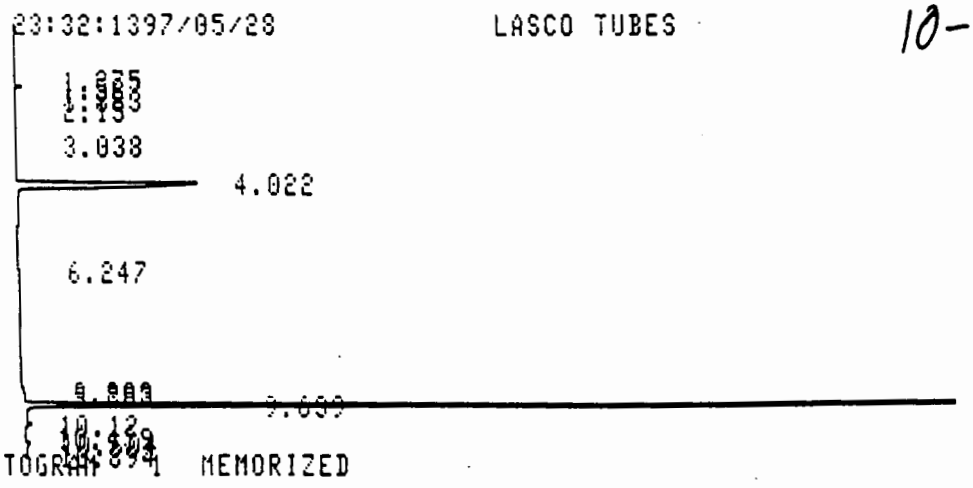
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 24

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.589	429				
2	3.023	3871				
3	4.022	233855		4	70.1836	CS2
4	6.247	1465				
5	6.915	441		3	0.1325	MMA
6	9.638	98446		1	29.5452	STYRENE
7	9.775	2755	V			
8	10.123	463		2	0.1388	CUMEME
	TOTAL	341725			100	

Shimadzu

23:32:1397/05/28 LASCO TUBES 10-11-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 23

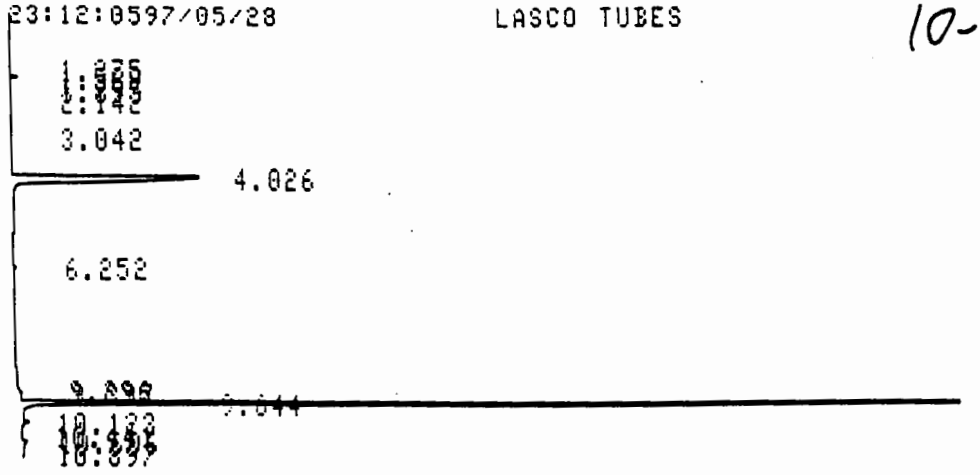
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	238				
2	1.587	2287				
3	1.883	502				
4	2.15	505	V			
5	3.038	560				
6	4.022	213467		4	15.0481	CS2
7	6.247	1439				
8	9.283	349				
9	9.383	1166	V			
10	9.639	1201618		1	84.7067	STYRENE
11	10.12	3478		2	0.2452	CUMEME
12	10.439	935				
13	10.604	6498	V			
14	10.894	922	V			
	TOTAL	1433965			100	

223-02037-02

23:12:0597/05/28 LASCO TUBES

10-11-1

223-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 22

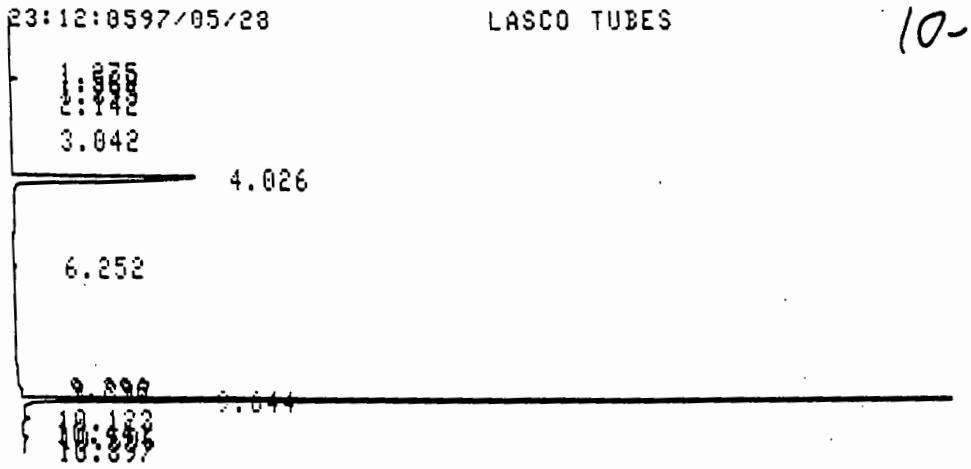
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	261				
2	1.589	2482				
3	1.895	542				
4	2.142	432				
5	3.042	610				
6	4.026	227879		4	14.6764	CS2
7	6.252	1557				
8	9.296	243				
9	9.397	1172				
10	9.644	1316659	V	1	84.7988	STYRENE
11	10.123	8147	V	2	0.5247	CUMENE
12	10.441	1380				
13	10.606	5545	V			
14	10.897	1027	V			
	TOTAL	1567936			100	

Shimadzu

23:12:0597/05/28 LASCO TUBES

10-11-1

223-02037-02

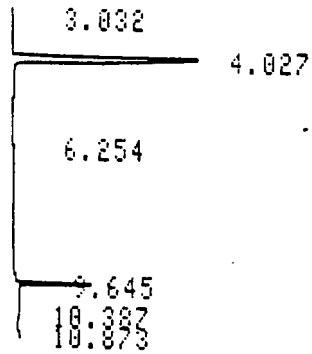


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 22

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	261				
2	1.589	2482				
3	1.895	542				
4	2.142	432				
5	3.042	610				
6	4.026	227879		4	14.6764	CS2
7	6.252	1557				
8	9.296	243				
9	9.397	1172				
10	9.644	1316659	V	1	84.7988	STYRENE
11	10.123	8147	V	2	0.5247	CUMEME
12	10.441	1380				
13	10.606	5545	V			
14	10.897	1027	V			
	TOTAL	1567936			100	

Shimadzu



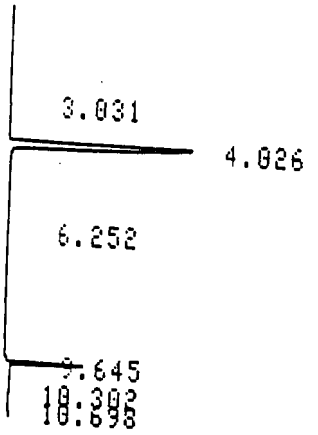
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 21

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.032	1378				
2	4.027	213990		4	88.1556	CS2
3	6.254	1250				
4	9.645	28751		1	11.8444	STYRENE
5	10.387	3606				
6	10.873	2290				
	TOTAL	251265			100	

RE-10-1



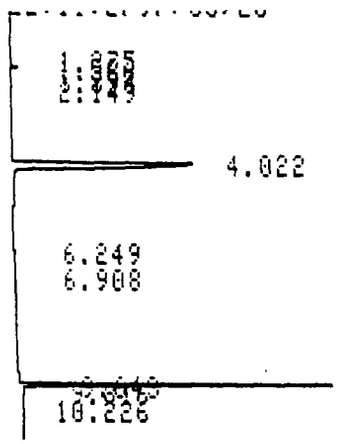
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 20

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.031	1398				
2	4.026	217881		4	88.2855	CS2
3	6.252	1276				
4	9.645	28910		1	11.7145	STYRENE
5	10.302	3370				
6	10.698	3891	V			
	TOTAL	256727			100	

10-8-1

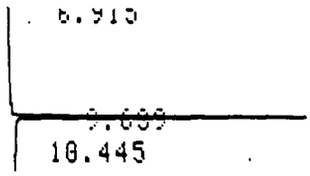


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 19

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	378				
2	1.586	2390				
3	1.894	388				
4	2.149	267				
5	4.022	216961		4	63.6526	CS2
6	6.249	1398				
7	6.908	362		3	0.1062	MMA
8	9.643	117551		1	34.4873	STYRENE
9	9.816	3825	V			
10	10.226	5978	V	2	1.7539	CUMEME
	TOTAL	349497			100	

223-02037

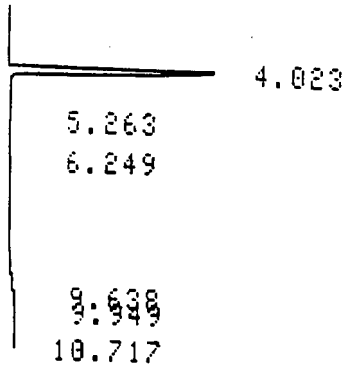


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 18

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	366				
2	1.587	2312				
3	1.895	367				
4	2.142	251				
5	4.019	209950		4	65.001	CS2
6	6.247	1299				
7	6.915	339		3	0.1048	MMA
8	9.639	112707		1	34.8942	STYRENE
9	10.445	3068				
	TOTAL	330660			100	

Shimadzu



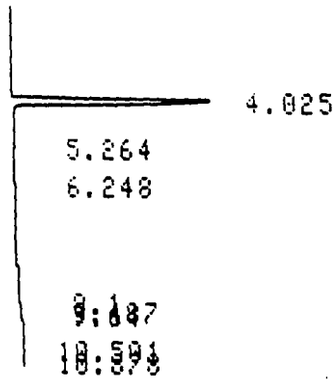
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 17

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.023	213119		4	98.482	CS2
2	5.263	323				
3	6.249	1237				
4	9.638	3285		1	1.518	STYRENE
5	9.949	5322	V			
6	10.717	1652				
	TOTAL	224938			100	

223-02037-02



CHROMATOGRAM 1 MEMORIZED

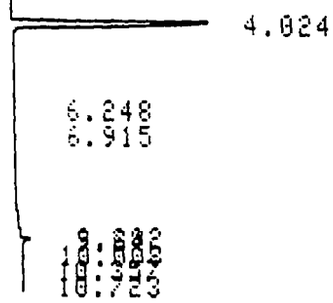
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 16

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.025	230150		4	99.7823	CS2
2	5.264	369				
3	6.248	1430				
4	9.1	2321				
5	9.487	2720				
6	9.64	502	V	1	0.2177	STYRENE
7	10.501	2319				
8	10.878	2265				
	TOTAL	242078			100	

Shimadzu

20:50:4397/05/28 LASCO TUBES

NDB-8-2



CHROMATOGRAM 1 MEMORIZED

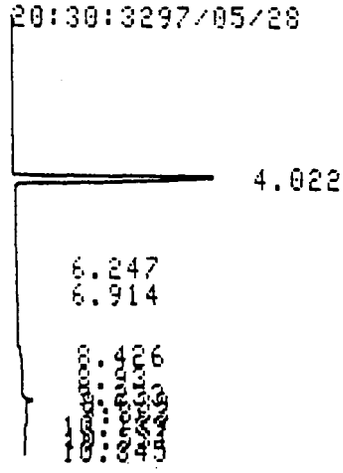
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 15

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.024	218646		4	96.3032	CS2
2	6.248	1274				
3	6.915	487		3	0.2147	MMA
4	9.392	2942				
5	9.64	7906	V	1	3.4822	STYRENE
6	10.008	7222	V			
7	10.357	3780				
8	10.723	2100	V			
	TOTAL	244357			100	

223-02037-02

20:30:3297/05/28 LASCO TUBES

NDB-8-2



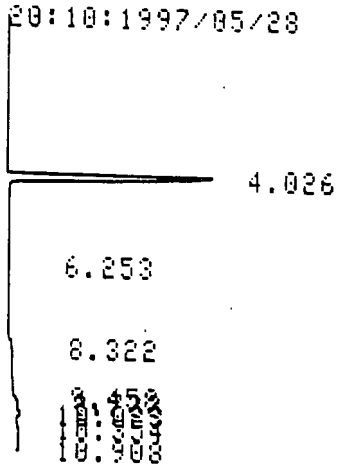
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 14

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.022	211942		4	92.7612	CS2
2	6.247	1224				
3	6.914	451		3	0.1972	MMA
4	8.426	3565				
5	8.93	4467				
6	9.233	5088	V			
7	9.639	10241	V	1	4.4822	STYRENE
8	9.863	9262	V			
9	10.189	5848	V	2	2.5594	CUMEME
10	10.531	4356	V			
11	10.845	1567	V			
	TOTAL	258009			100	

20:10:1997/05/28 LASCO TUBES

NDA-9-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 13

FILE 0
METHOD 0002

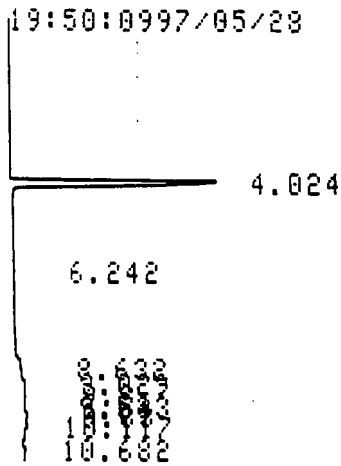
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.026	213314		4	93.5175	CS2
2	6.253	1245				
3	8.322	5382				
4	9.458	1925				
5	9.733	6136	V	1	2.6901	STYRENE
6	10.023	8650	V	2	3.7923	CUMEME
7	10.354	3730				
8	10.908	1489				
	TOTAL	241872			100	

C 1 0

223-02037-02

19:50:0997/05/28 LASCO TUBES

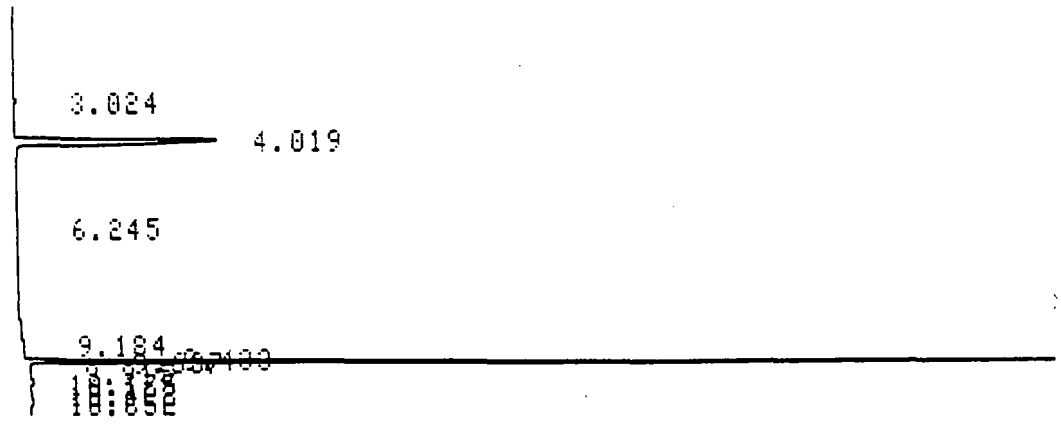
NDA-9-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 12

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.024	215093		4	93.1475	CS2
2	6.242	1270				
3	8.632	7805				
4	9.029	12722	V			
5	9.3	10668	V			
6	9.533	4830	V	1	2.0915	STYRENE
7	9.64	2765	V	1	1.1972	STYRENE
8	9.83	10510	V			
9	10.117	8229	V	2	3.5637	CUMEME
10	10.682	2755				
	TOTAL	276646			100	

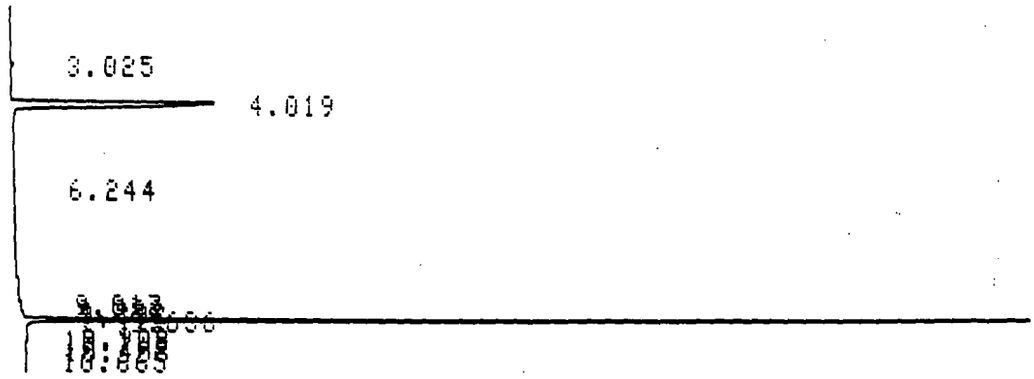


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 11

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.024	1768				
2	4.019	210767		4	36.5269	CS2
3	6.245	1235				
4	9.184	1059				
5	9.433	2075	V			
6	9.637	357146	V	1	61.8951	STYRENE
7	9.915	8053	V			
8	10.175	9106	V	2	1.5781	CUMENE
9	10.422	5121	V			
10	10.652	6750	V			
	TOTAL	603078			100	

223-02037-02



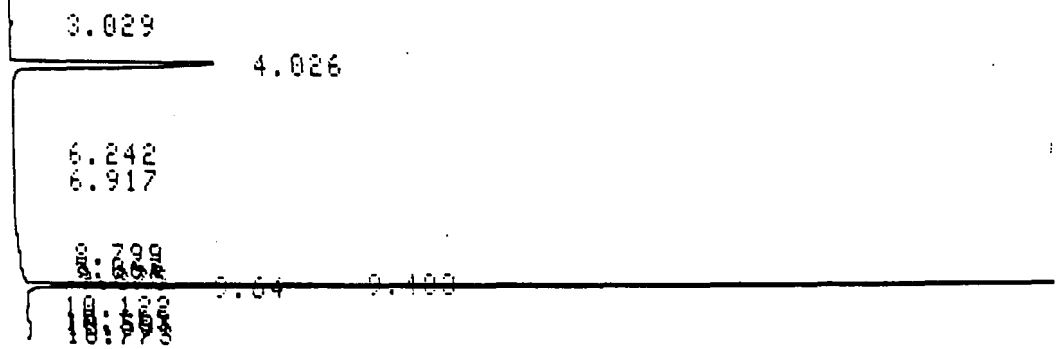
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 10

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.025	2062				
2	4.019	233263		4	35.2765	CS2
3	6.244	1420				
4	9.017	1780				
5	9.292	2006	V			
6	9.392	2023	V			
7	9.496	3969	V			
8	9.636	423253	V	1	64.0086	STYRENE
9	9.908	5605	V			
10	10.108	4727	V	2	0.7149	CUMEME
11	10.408	3858	V			
12	10.665	1841	V			
	TOTAL	685808			100	

18:49:3997/05/28 LASCO TUBES

ME-9-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 9

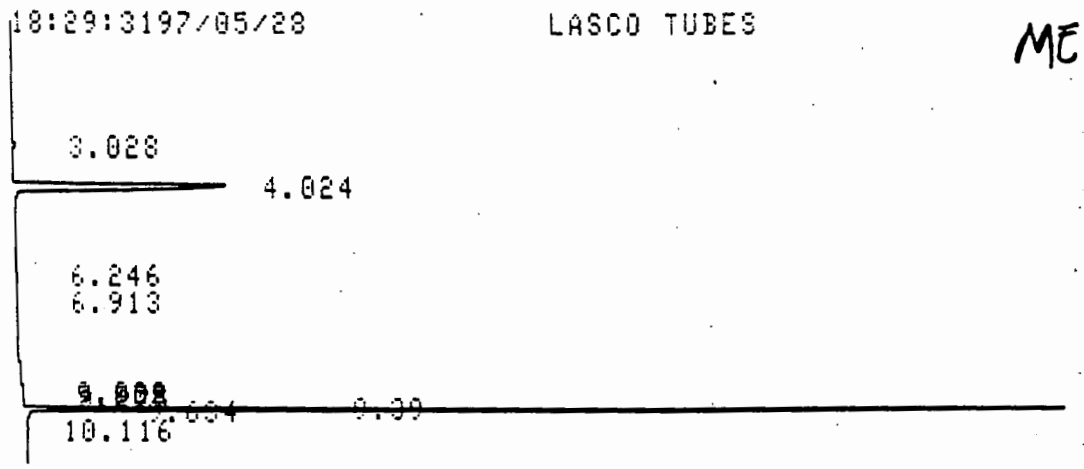
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.029	2044				
2	4.026	230312		4	28.7459	CS2
3	6.242	1338				
4	6.917	302		3	0.0377	MMA
5	8.799	1095				
6	9.067	563				
7	9.275	1591				
8	9.375	1091	V			
9	9.483	1325	V			
10	9.64	568827	V	1	70.9971	STYRENE
11	10.122	1757		2	0.2193	CUMEME
12	10.363	2102				
13	10.581	4047	V			
14	10.773	3948	V			
	TOTAL	820340			100	

223-02037-02

18:29:3197/05/28 LASCO TUBES

ME-9-1

223-02037-02



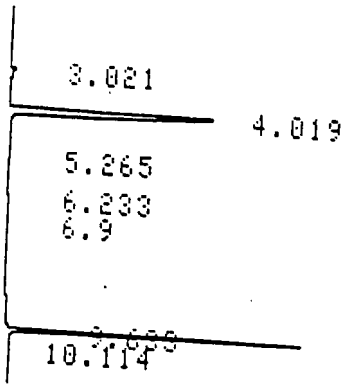
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 8

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.028	2308				
2	4.024	241882		4	27.236	CS2
3	6.246	1532				
4	6.913	358		3	0.0404	MMA
5	9.033	499				
6	9.208	330				
7	9.275	490	V			
8	9.39	1481	V			
9	9.634	644476	V	1	72.5684	STYRENE
10	10.116	1379		2	0.1552	CUMEME
	TOTAL	894735			100	

Shimadzu

RE-9-1

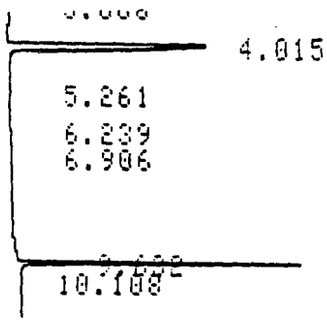


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 7

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.021	2837				
2	4.019	215505		4	67.8771	CS2
3	5.265	436				
4	6.233	1308				
5	6.9	779		3	0.2453	MMA
6	9.633	100765		1	31.7377	STYRENE
7	10.114	444		2	0.1399	CUMEME
	TOTAL	322074			100	



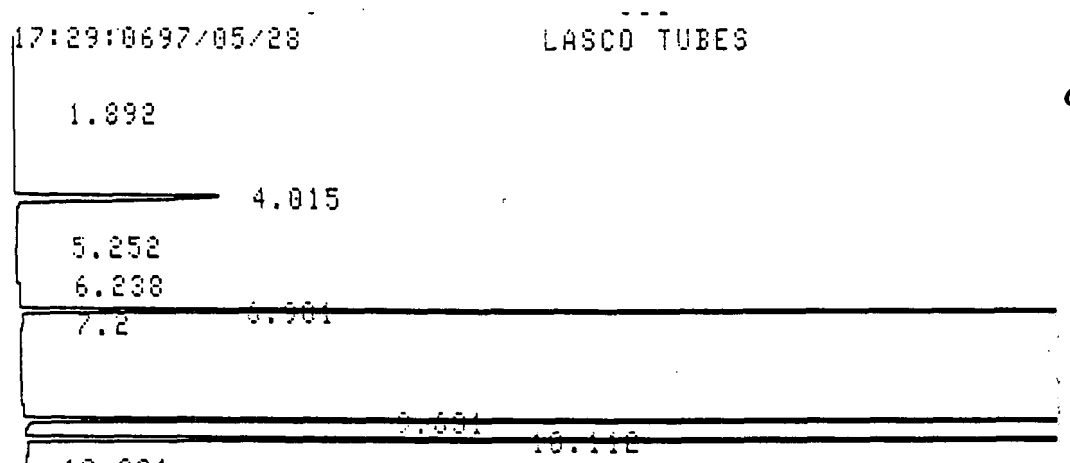
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 6

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.008	2853				
2	4.015	215773		4	67.3993	CS2
3	5.261	426				
4	6.239	1295				
5	6.906	972		3	0.3036	MMA
6	9.632	102095		1	31.8904	STYRENE
7	10.108	1302	V	2	0.4067	CUMENE
	TOTAL	324716			100	

17:29:0697/05/28 LASCO TUBES

NEW CONCAL



CHROMATOGRAM 1 MEMORIZED

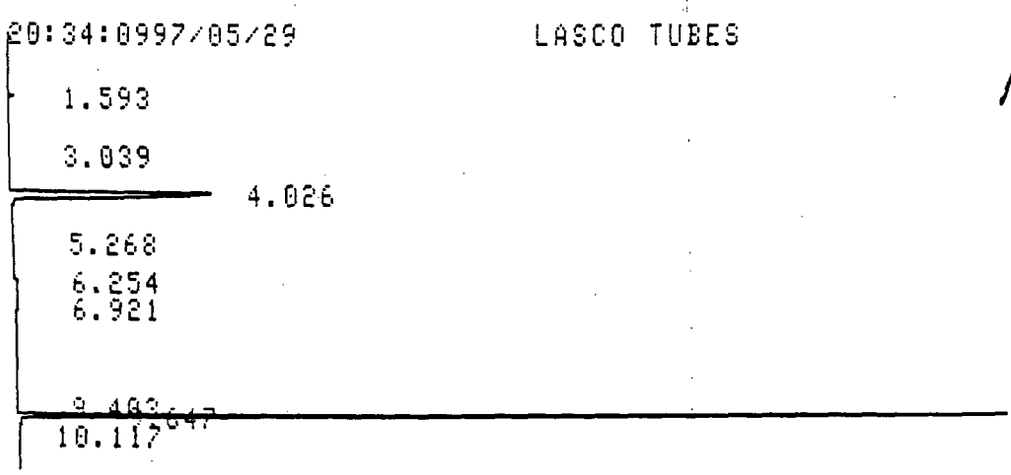
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 5

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.892	243				
2	4.015	218828		4	4.7784	CS2
3	5.252	457				
4	6.238	1304				
5	6.901	919220		3	20.0725	MMA
6	7.2	1098	V			
7	9.631	1791912		1	39.129	STYRENE
8	10.112	1649534	V	2	36.02	CUMEME
9	10.831	599				
	TOTAL	4583195			100	

223-020

20:34:0997/05/29 LASCO TUBES

10-12-1
LOW!

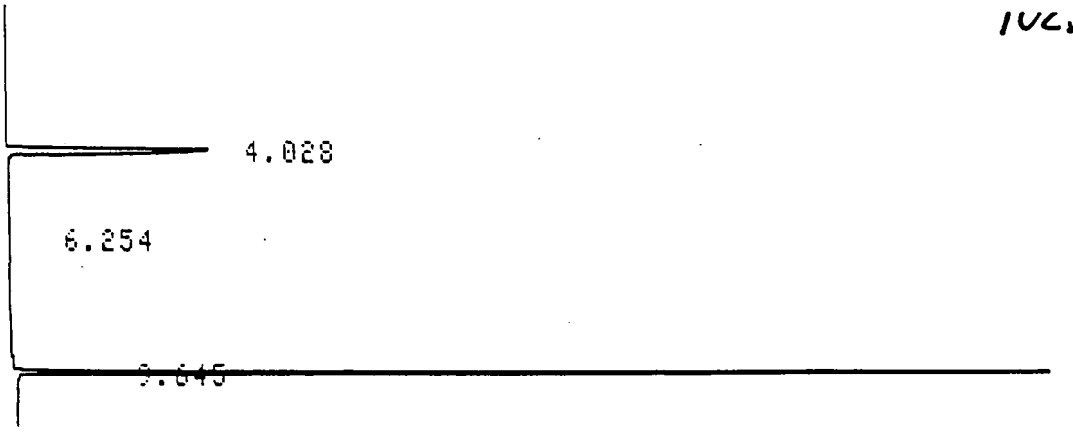


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 85

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.593	1338				
2	3.039	332				
3	4.026	217201		4	39.7511	CS2
4	5.268	452				
5	6.254	1471				
6	6.921	356		3	0.0652	MMA
7	9.403	287				
8	9.647	328285		1	60.0812	STYRENE
9	10.117	560		2	0.1025	CUMENE
	TOTAL	550281			100	

1UC/6L



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 86

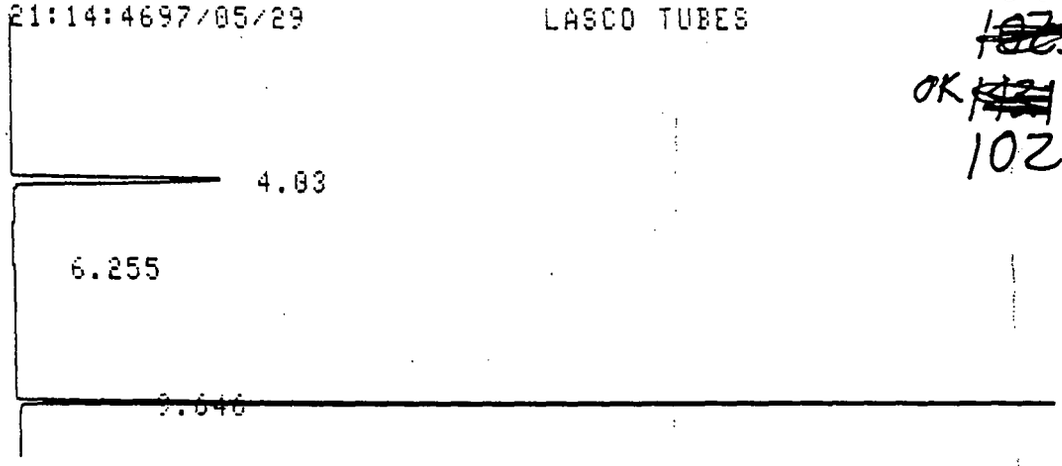
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.028	210741		4	31.3518	CS2
2	6.254	1277				
3	9.645	461442		1	68.6482	STYRENE
	TOTAL	673460			100	

223-02037-02

⊕ 5

21:14:4697/05/29 LASCO TUBES

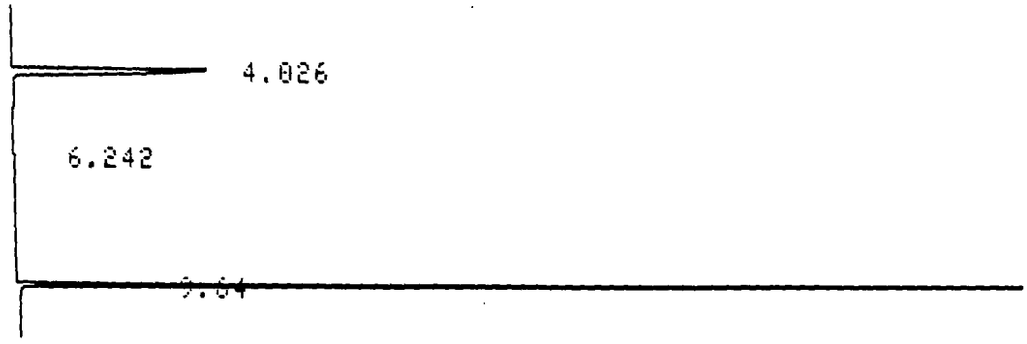
BR ~~1075~~ 6L
OK ~~[illegible]~~
102



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 87

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.03	235576		4	29.8615	CS2
2	6.255	1543				
3	9.646	553321		1	70.1385	STYRENE
	TOTAL	790440			100	



CHROMATOGRAM 1 MEMORIZED

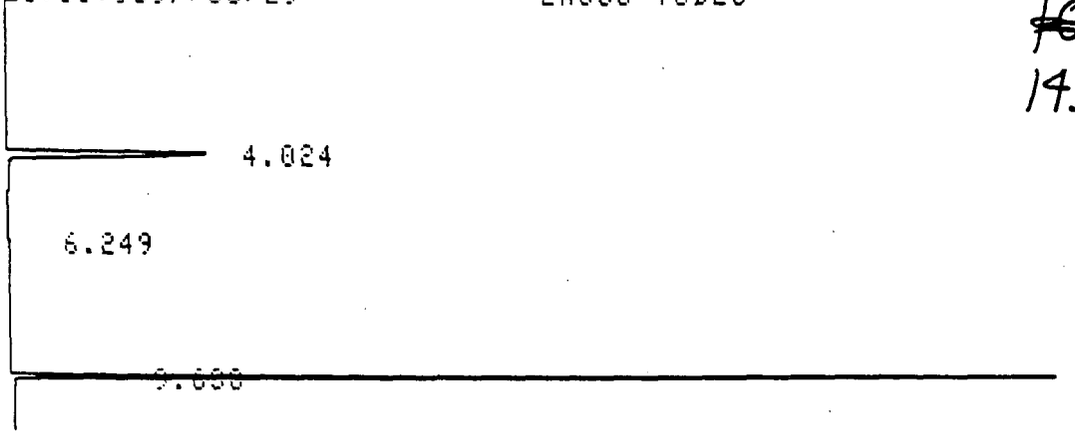
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 88

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.026	211534		4	28.2407	CS2
2	6.242	1277				
3	9.64	537505		1	71.7592	STYRENE
	TOTAL	750316			100	

0 4 2
223-02037-02

21:55:0597/05/29 LASCO TUBES

~~102~~ 2S6L
143.1



CHROMATOGRAM 1 MEMORIZED

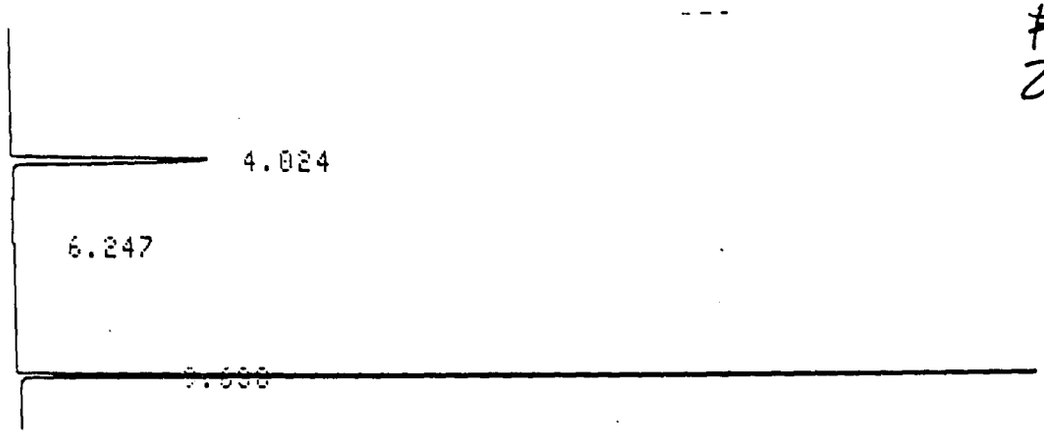
⊕ Shimadzu

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 89

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.024	209082		4	28.5988	CS2
2	6.249	1245				
3	9.638	522005		1	71.4012	STYRENE
	TOTAL	732331			100	

..63

~~149.7~~ 36L
250.7



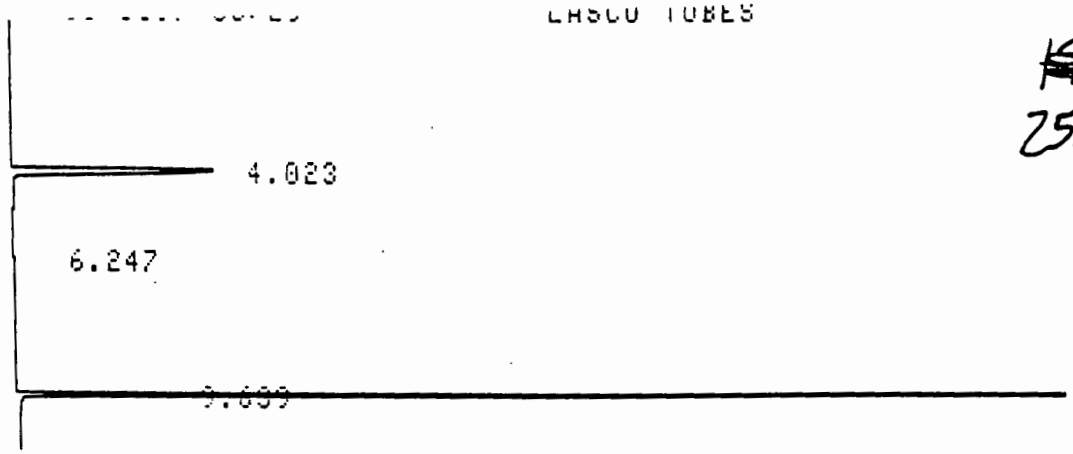
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 90

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.024	218642		4	22.396	CS2
2	6.247	1351				
3	9.638	757613		1	77.604	STYRENE
	TOTAL	977606			100	

LASCO TUBES

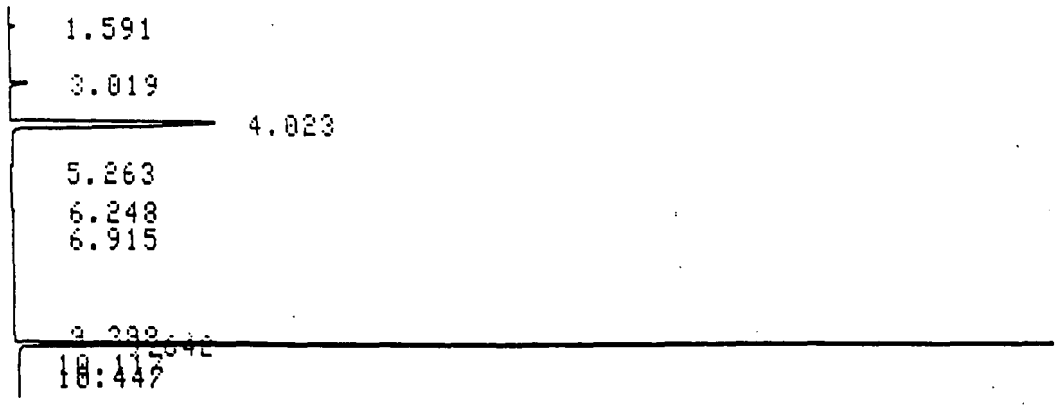
~~143~~ 156L
250.7



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 91

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.023	214071		4	22.2131	CS2
2	6.247	1317				
3	9.639	749641		1	77.7869	STYRENE
	TOTAL	965029			100	

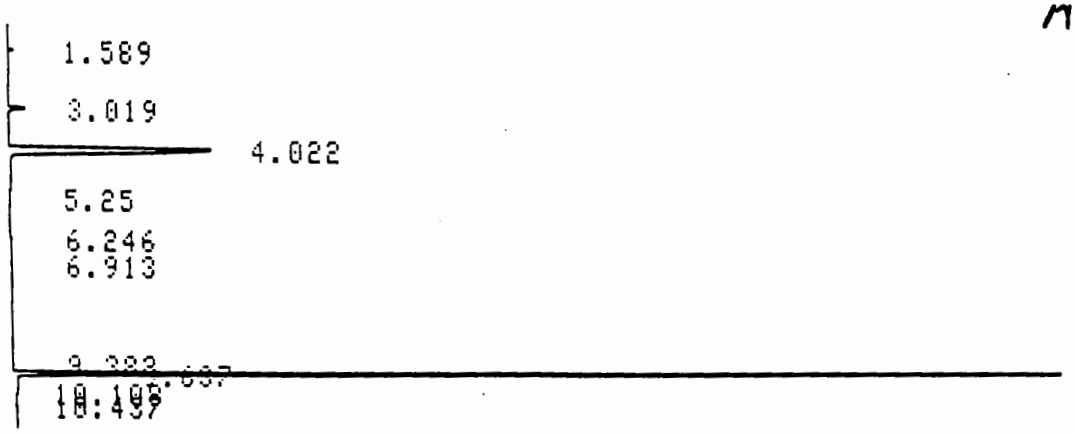


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	92		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.591	1422				
2	3.019	8733				
3	4.023	220040		4	28.0736	CS2
4	5.263	896				
5	6.248	1475				
6	6.915	702		3	0.0895	MMA
7	9.398	366				
8	9.642	560983	V	1	71.5726	STYRENE
9	10.117	2072	V	2	0.2643	CUMEME
10	10.447	337				
	TOTAL	797025			100	



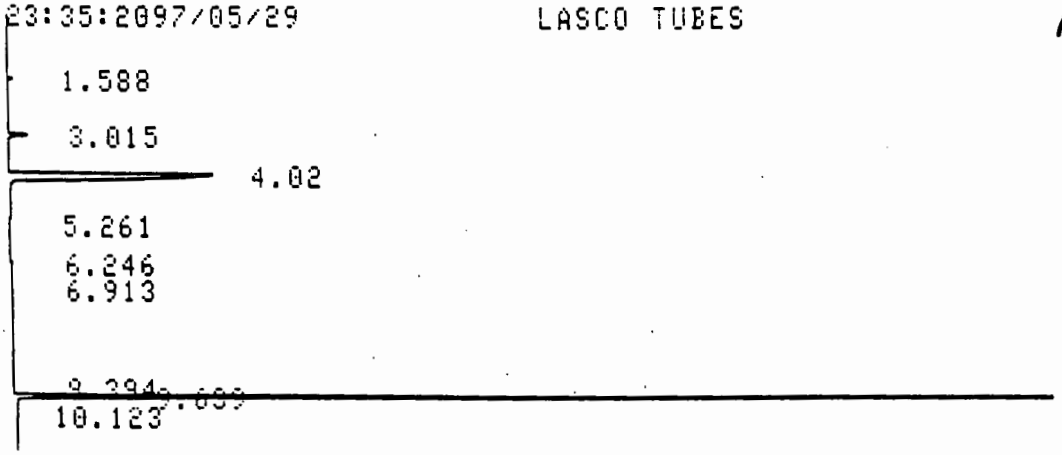
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 93

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.589	1361				
2	3.019	8250				
3	4.022	210210		4	28.8697	CS2
4	5.25	836				
5	6.246	1373				
6	6.913	644		3	0.0885	MMA
7	9.383	272				
8	9.637	516297		1	70.9067	STYRENE
9	10.108	984		2	0.1351	CUMEME
10	10.437	401				
	TOTAL	740629			100	

23:35:2097/05/29 LASCO TUBES

AF-12-4



CHROMATOGRAM 1 MEMORIZED

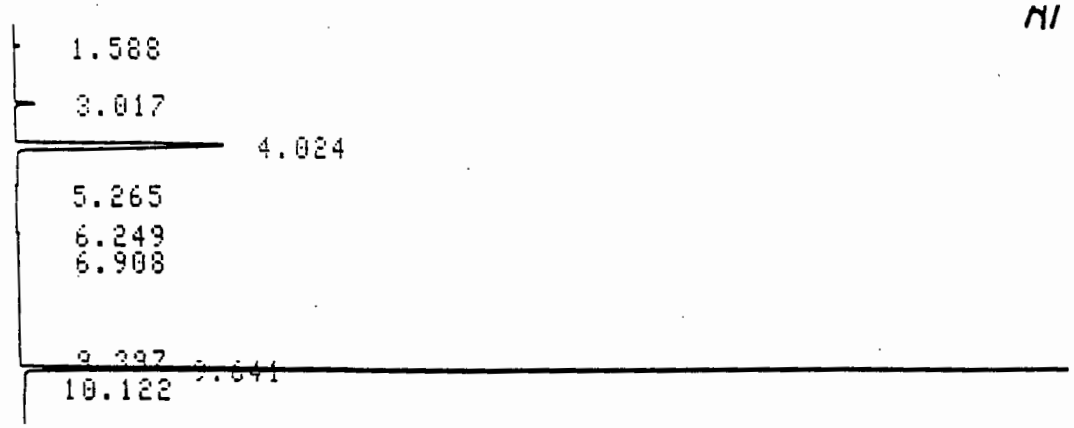
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 94

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.588	1502				
2	3.015	9280				
3	4.02	216749		4	31.8512	CS2
4	5.261	551				
5	6.246	1324				
6	6.913	685		3	0.1007	MMA
7	9.394	320				
8	9.639	461321	V	1	67.791	STYRENE
9	10.123	1750	V	2	0.2572	CUMEME
	TOTAL	693482			100	

045

M1-1C-4

223-02037-0



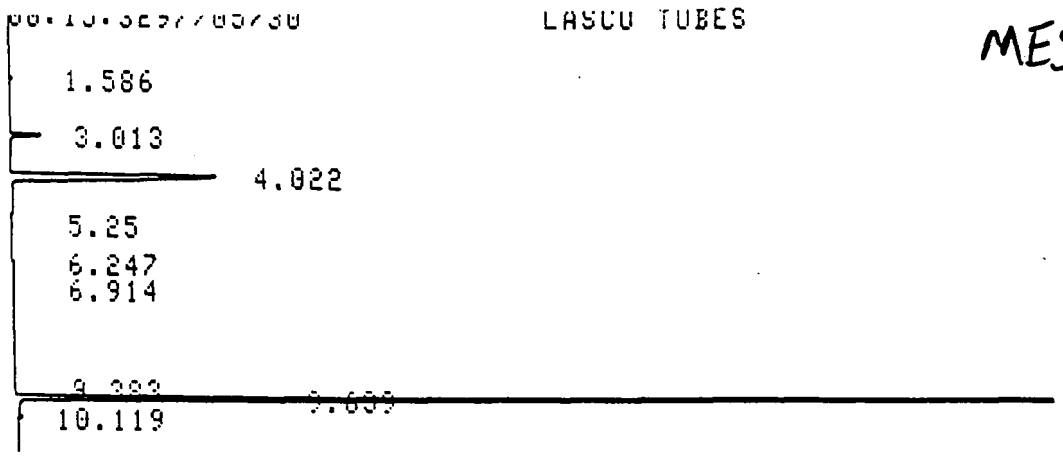
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 95

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.588	1497				
2	3.017	9292				
3	4.024	217233		4	31.9286	CS2
4	5.265	552				
5	6.249	1331				
6	6.908	695		3	0.1022	MMA
7	9.397	276				
8	9.641	461286		1	67.7992	STYRENE
9	10.122	1157		2	0.17	CUMEME
	TOTAL	693319			100	

Shimadzu

MES-12-3



CHROMATOGRAM 1 MEMORIZED

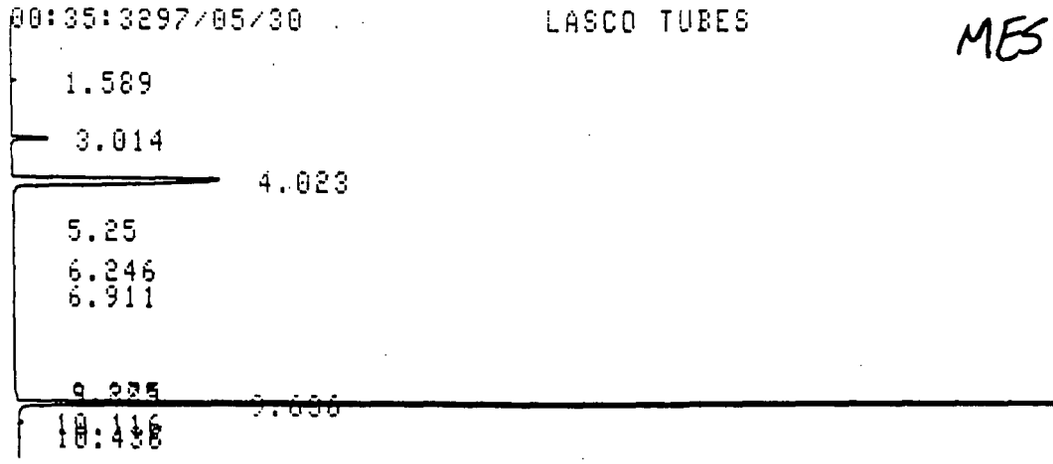
CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	96		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.586	1123				
2	3.013	14206				
3	4.022	215456		4	14.4702	CS2
4	5.25	931				
5	6.247	1336				
6	6.914	1267		3	0.0851	MMA
7	9.383	492				
8	9.639	1269876		1	85.2859	STYRENE
9	10.119	2365		2	0.1588	CUMENE
	TOTAL	1507052			100	

00:35:3297/05/30 LASCO TUBES

MES-12-3



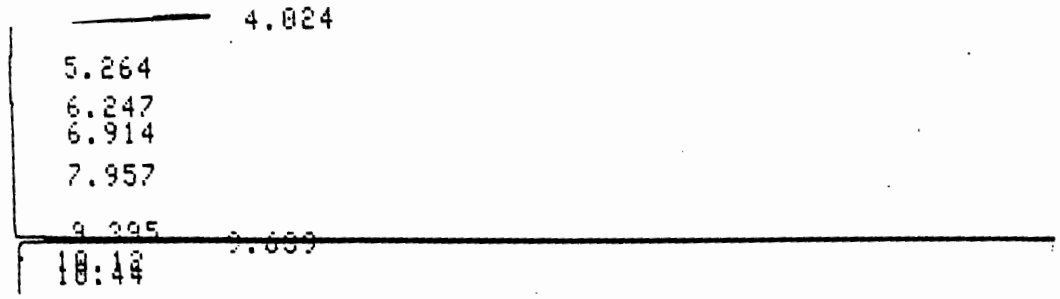
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 97

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.589	1358				
2	3.014	17250				
3	4.023	245613		4	13.5968	CS2
4	5.25	1141				
5	6.246	1626				
6	6.911	1549		3	0.0858	MMA
7	9.275	273				
8	9.389	808	V			
9	9.636	1555674	V	1	86.1202	STYRENE
10	10.116	3563	V	2	0.1972	CUMEME
11	10.436	280				
	TOTAL	1829134			100	

2037-02

Shimadzu

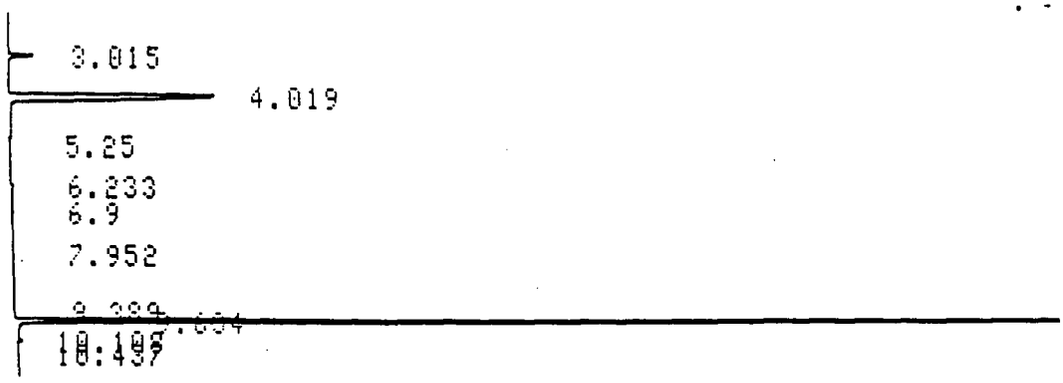


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 98

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.589	1088				
2	3.018	10554				
3	4.024	210908		4	20.2424	CS2
4	5.264	710				
5	6.247	1351				
6	6.914	1410		3	0.1353	MMA
7	7.957	250				
8	9.395	604				
9	9.639	827233	V	1	79.3954	STYRENE
10	10.12	2364		2	0.2269	CUMEME
11	10.44	502				
	TOTAL	1056975			100	

223-02037-02



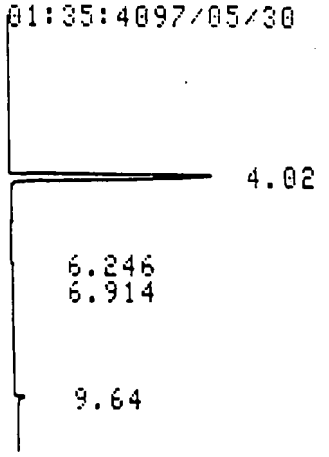
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 99

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.59	1090				
2	3.015	10648				
3	4.019	215086		4	19.5803	CS2
4	5.25	738				
5	6.233	1413				
6	6.9	1481		3	0.1348	MMA
7	7.952	263				
8	9.389	684				
9	9.634	878962	V	1	80.0161	STYRENE
10	10.108	2952	V	2	0.2688	CUMENE
11	10.437	444				
	TOTAL	1113760			100	

01:35:4097/05/30 LASCO TUBES

NDB-8-2



CHROMATOGRAM 1 MEMORIZED

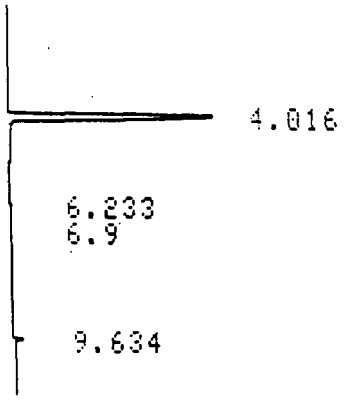
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 100

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.02	210614		4	98.2113	CS2
2	6.246	1237				
3	6.914	489		3	0.2279	MMA
4	9.64	3347		1	1.5608	STYRENE
	TOTAL	215687			100	

043

223-02037-02

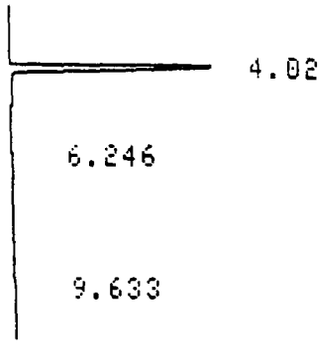
454



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 101

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.016	219458		4	98.1818	CS2
2	6.233	1322				
3	6.9	514		3	0.2298	MMA
4	9.634	3550		1	1.5884	STYRENE
	TOTAL	224844			100	



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 102

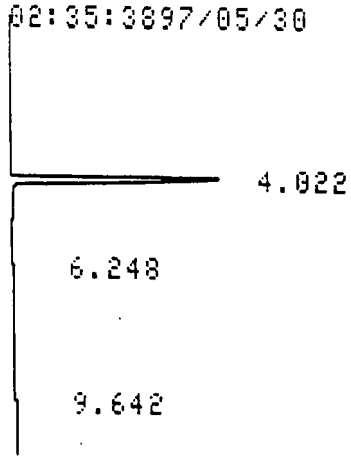
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.02	210309		4	99.7613	CS2
2	6.246	1229				
3	9.633	503		1	0.2387	STYRENE
	TOTAL	212041			100	

049

02:35:3897/05/30 LASCO TUBES

NDA-9-1

223-02037-02

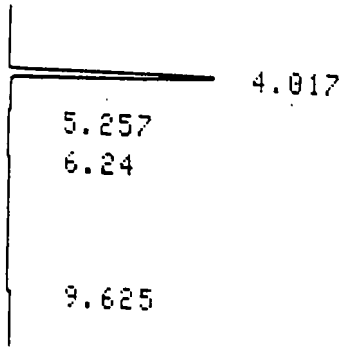


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 103

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.022	215489		4	99.7682	CS2
2	6.248	1278				
3	9.642	501		1	0.2318	STYRENE
	TOTAL	217267			100	

Shimadzu

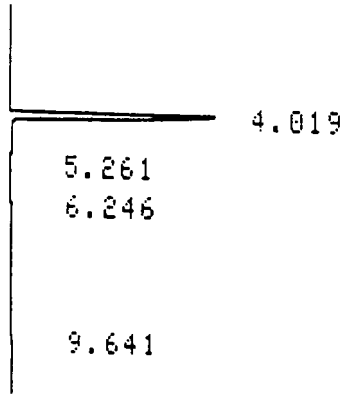


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 104

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.017	222685		4	99.7076	CS2
2	5.257	347				
3	6.24	1365				
4	9.625	653		1	0.2924	STYRENE
	TOTAL	225049			100	



CHROMATOGRAM 1 MEMORIZED

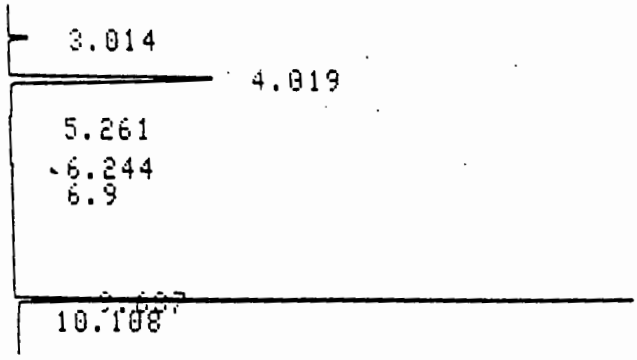
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 105

FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.019	210557		4	99.7355	CS2
2	5.261	314				
3	6.246	1233				
4	9.641	558		1	0.2645	STYRENE
	TOTAL	212662			100	

223-02037-02
Shimadzu

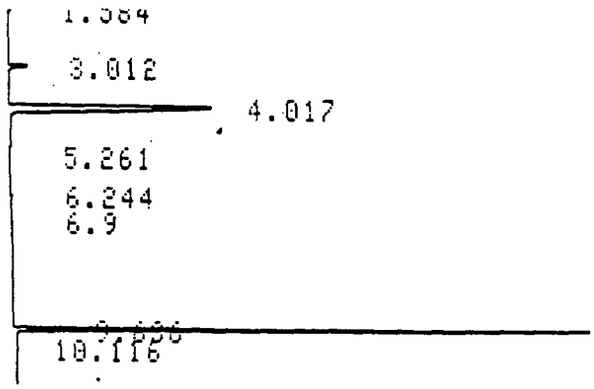
RE-13-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 106

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.589	874				
2	3.014	9365				
3	4.019	220773		4	51.4381	CS2
4	5.261	571				
5	6.244	1373				
6	6.9	602		3	0.1404	MMA
7	9.637	207215		1	48.2792	STYRENE
8	10.108	611		2	0.1424	CUMEME
	TOTAL	441384			100	



CHROMATOGRAM 1 MEMORIZED

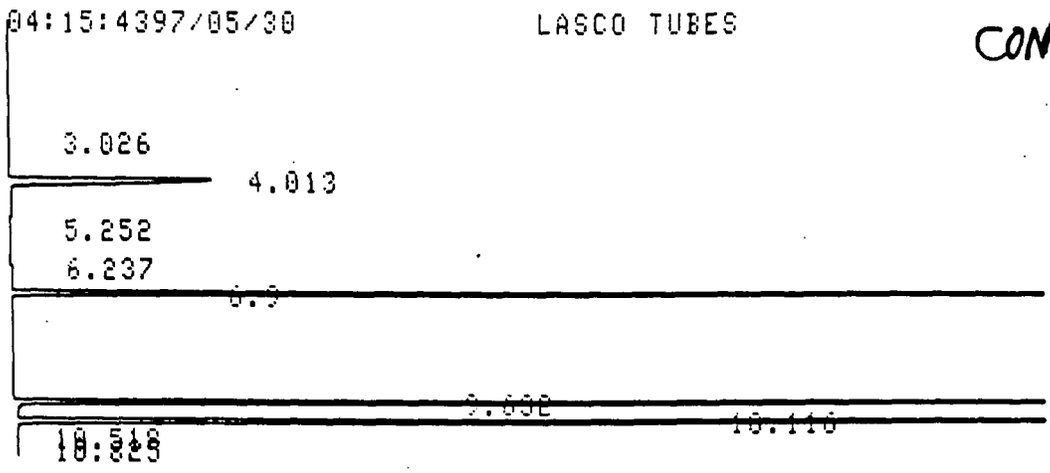
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 107

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.584	835				
2	3.012	8989				
3	4.017	213403		4	52.2967	CS2
4	5.261	541				
5	6.244	1294				
6	6.9	557		3	0.1366	MMA
7	9.636	193557		1	47.4333	STYRENE
8	10.116	545		2	0.1334	CUMEME
	TOTAL	419720			100	

04:15:4397/05/30 LASCO TUBES

CONCAL

Kimadzu



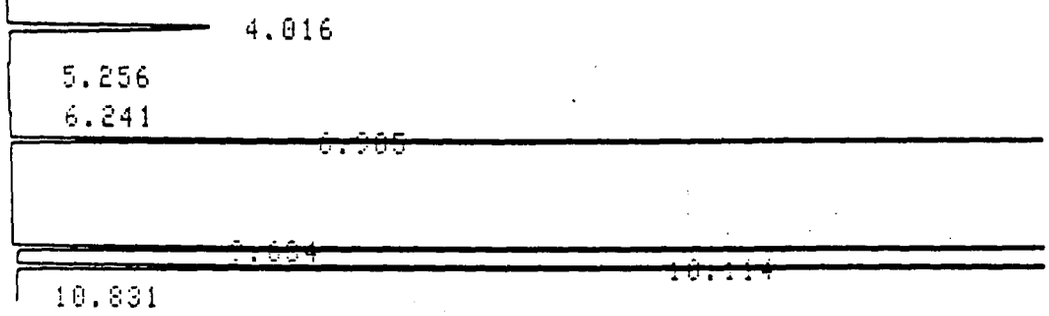
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 108

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.026	293				
2	4.013	217123		4	4.5157	CS2
3	5.252	443				
4	6.237	1354				
5	6.9	939936		3	19.5486	MMA
6	9.632	1897969		1	39.4735	STYRENE
7	10.116	1753181	V	2	36.4622	CUMEME
8	10.518	723	V			
9	10.825	680				
	TOTAL	4811701			100	

04:35:4597/05/30 LASCO TUBES

CONCAC



CHROMATOGRAM 1 MEMORIZED

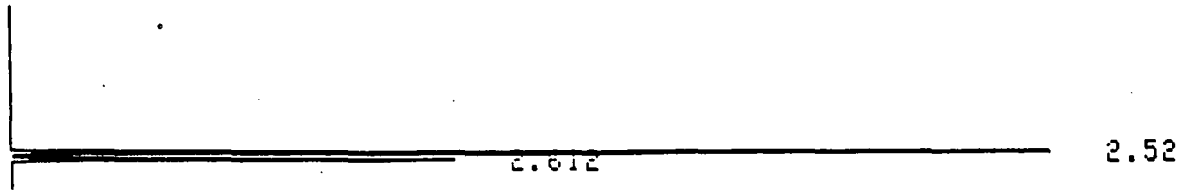
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 109

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.016	216267		4	4.5262	CS2
2	5.256	444				
3	6.241	1356				
4	6.905	935258		3	19.5739	MMA
5	9.634	1885682		1	39.4653	STYRENE
6	10.114	1740868	V	2	36.4345	CUMEME
7	10.831	649				
	TOTAL	4780523			100	

C52

223-02037-02

Shimadzu



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

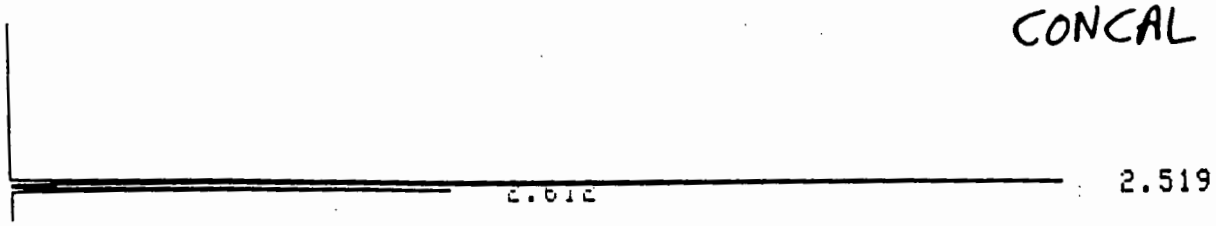
SAMPLE NO 0 METHOD 0002

REPORT NO 82

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.52	15069		1	74.3364	METHANE
2	2.612	5202	V	2	25.6636	ETHANE
	TOTAL	20272			100	

CHROMATOGRAM 101 MEMORIZED

CONCAL



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

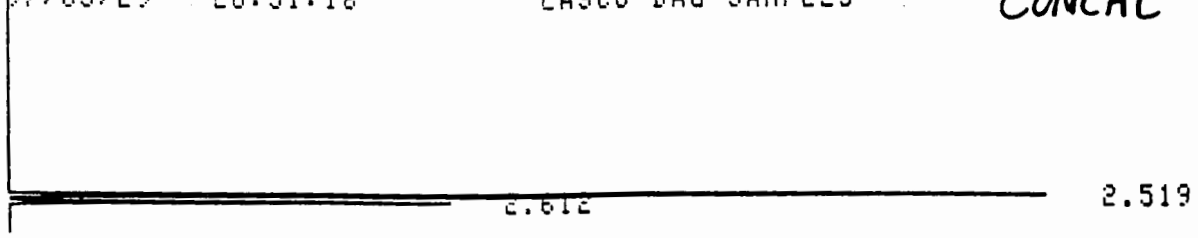
SAMPLE NO 0 METHOD 0002

REPORT NO 83

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.519	14427		1	74.2199	METHANE
2	2.612	5011	V	2	25.7801	ETHANE
	TOTAL	19438			100	

CHROMATOGRAM 101 MEMORIZED

87/05/29 20:31:18 LASCO BAG SAMPLES CONCAL

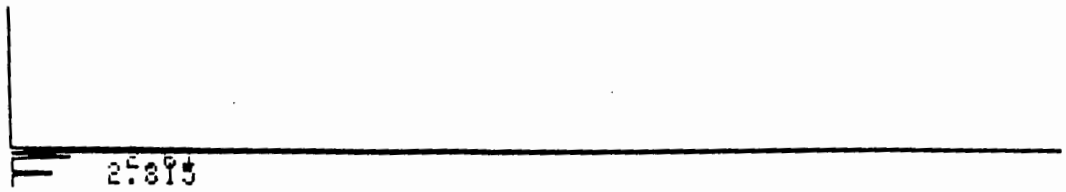


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 84

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.519	14515		1	74.275	METHANE
2	2.612	5027	V	2	25.725	ETHANE
	TOTAL	19542			100	

40

223-02037-02



CR501 CHROMATOPAC

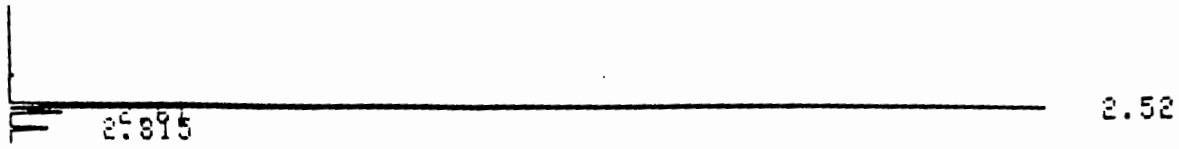
CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 81

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.52	13126		1	92.4257	METHANE
2	2.61	1076	V	2	7.5742	ETHANE
3	2.815	587	V			
	TOTAL	14789			100	

CHROMATOGRAM 101 MEMORIZED



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 80

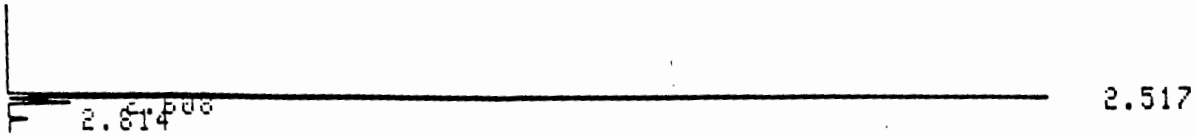
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.52	12497		1	92.5592	METHANE
2	2.61	1005	V	2	7.4408	ETHANE
3	2.815	547				
	TOTAL	14048			100	

CHROMATOGRAM 101 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 78

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.52	73908		1	95.6518	METHANE
2	2.612	3360	V	2	4.3482	ETHANE
3	2.815	791	V			
	TOTAL	78059			100	

223-02037-02



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 77

BAG EMPTY

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	14617		1	92.4346	METHANE
2	2.608	1196	V	2	7.5654	ETHANE
3	2.814	264				
	TOTAL	16077			100	

10-13-2

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

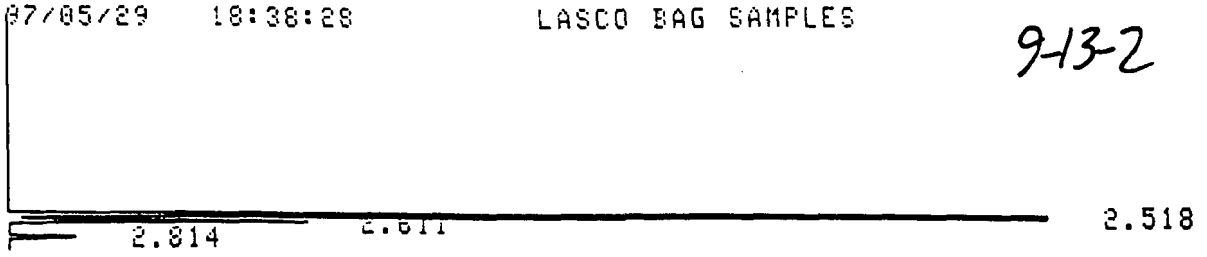
SAMPLE NO 0 METHOD 0002

REPORT NO 74

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.52	18758		1	92.4514	METHANE
2	2.61	1532	V	2	7.5486	ETHANE
3	2.808	336	V			
	TOTAL	20626			100	

87/05/29 18:38:28 LASCO BAG SAMPLES

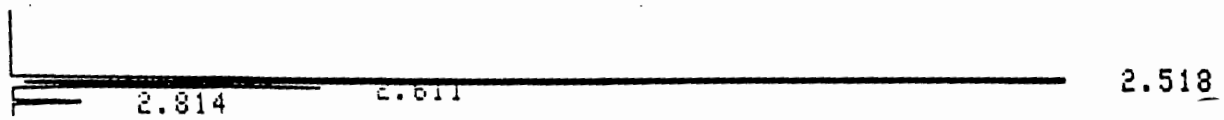
9-13-2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 72

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.518	90948		1	95.5824	METHANE
2	2.611	4203	V	2	4.4176	ETHANE
3	2.814	944				
TOTAL		96095			100	

472



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 70

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.518	91663		1	95.5676	METHANE
2	2.611	4251	V	2	4.4324	ETHANE
3	2.814	957				
	TOTAL	96872			100	

CHROMATOGRAM 101 MEMORIZED
87/05/29 17:03:42 LASCO BAG SAMPLES

10-13-1

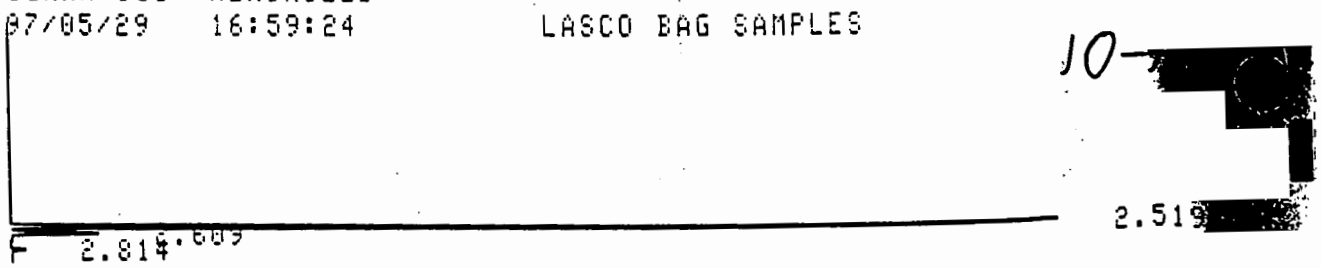
⊕ Shinadzu

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 65

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.514	19813		1	92.7133	METHANE
2	2.604	1557	V	2	7.2867	ETHANE
	TOTAL	21370			100	

CHROMATOGRAM 101 MEMORIZED
87/05/29 16:59:24 LASCO BAG SAMPLES

10-



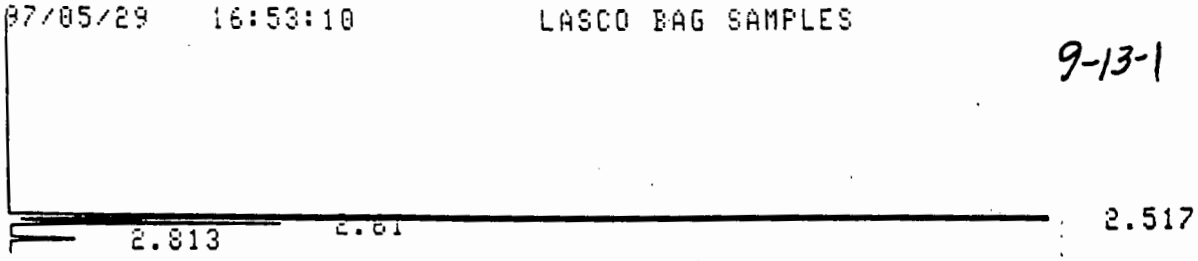
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 64

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.519	19900		1	92.4692	METHANE
2	2.609	1621	V	2	7.5308	ETHANE
3	2.814	218				
	TOTAL	21739			100	

223-02037-02

CHROMATOGRAM 101 MEMORIZED
87/05/29 16:53:10 LASCO BAG SAMPLES

9-13-1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 63

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	80318		1	95.5298	METHANE
2	2.61	3758	V	2	4.4702	ETHANE
3	2.813	897				
	TOTAL	84973			100	

CHROMATOGRAM 101 MEMORIZED
97/05/29 16:36:09 LASCO BAG SAMPLES

10-12-4

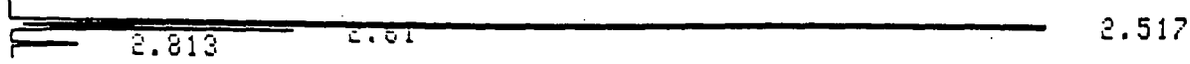
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 61

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.518	18906		1	92.4231	METHANE
2	2.609	1550	V	2	7.5769	ETHANE
3	2.814	318	V			
	TOTAL	20774			100	

223-02037-02

CHROMATOGRAM 101 MEMORIZED
87/05/29 16:44:04 LASCO BAG SAMPLES

9-13-1



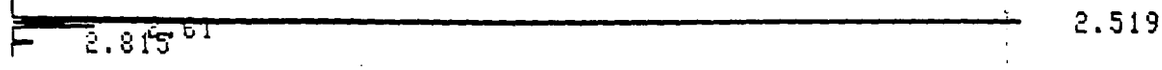
Shimadzu

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 62

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	87617		1	95.5534	METHANE
2	2.61	4077	V	2	4.4466	ETHANE
3	2.813	967				
	TOTAL	92661			100	

CHROMATOGRAM 101 MEMORIZED
97/05/29 16:05:37 LASCO BAG SAMPLES

10-12-4

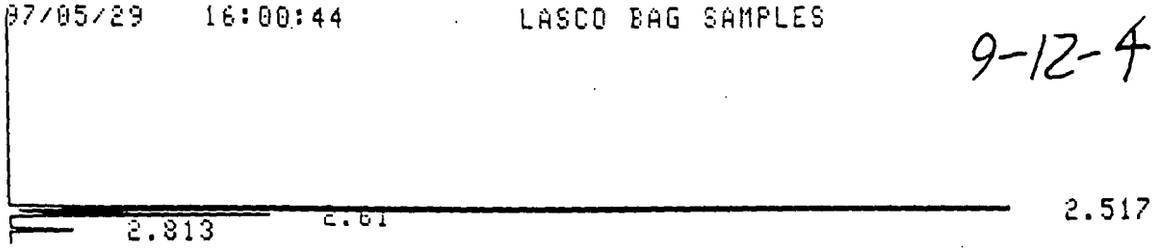


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 60

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.519	18933		1	92.3664	METHANE
2	2.61	1565	V	2	7.6335	ETHANE
3	2.815	336	V			
	TOTAL	20833			100	

CHROMATOGRAM 101 MEMORIZED
87/05/29 16:00:44 LASCO BAG SAMPLES

9-12-4



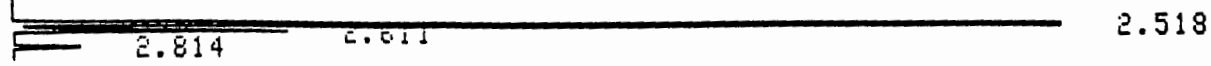
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 59

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	80787		1	95.5546	METHANE
2	2.61	3758	V	2	4.4454	ETHANE
3	2.813	941	V			
	TOTAL	85486			100	

Shimadzu

MEMORIZED
97/05/29 15:54:59 LASCO BAG SAMPLES

9-12-4



CR501 CHROMATOPAC

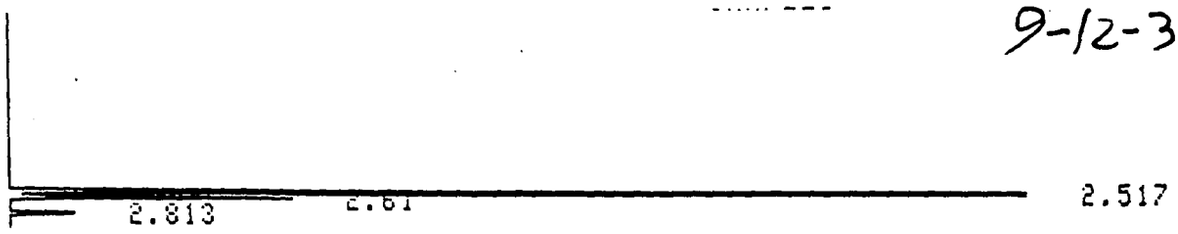
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 58

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.518	80294		1	95.5665	METHANE
2	2.611	3725	V	2	4.4335	ETHANE
3	2.814	925	V			
	TOTAL	84944			100	

030

223-02037-02

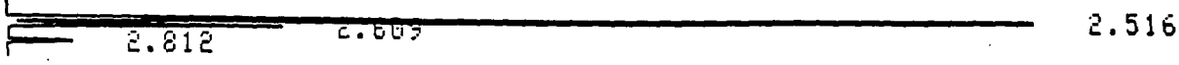
9-12-3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 50

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	88406		1	95.5827	METHANE
2	2.61	4086	V	2	4.4173	ETHANE
3	2.813	942				
	TOTAL	93433			100	

87/05/29 13:20:28 LASCO BAG SAMPLES 9-12-3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002

REPORT NO 49

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.516	87352		1	95.5848	METHANE
2	2.609	4035	V	2	4.4152	ETHANE
3	2.812	928				
	TOTAL	92314			100	

CHROMATOGRAM 101 MEMORIZED
87/05/29 10:44:18

LASCO BAG SAMPLES

9-12-1

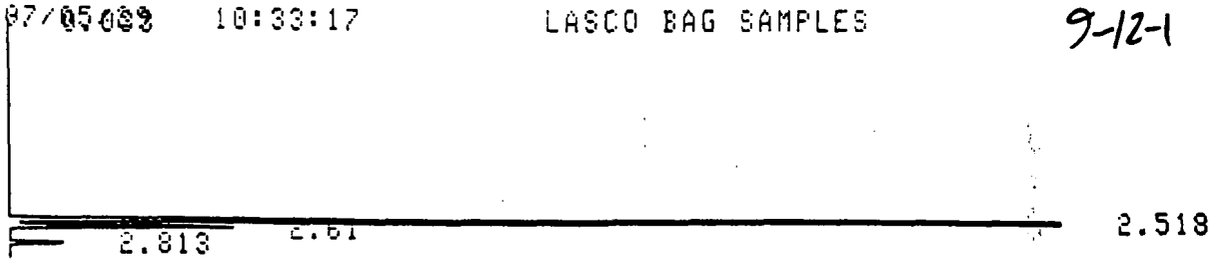
CR501 CHROMATOPAC
CHANNEL NO 2
SAMPLE NO 0
REPORT NO 41

FILE 9
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	64000		1	95.4621	METHANE
2	2.61	3042	V	2	4.5379	ETHANE
3	2.813	742	V			
	TOTAL	67784			100	

CHROMATOGRAM 101 MEMORIZED
07/05/88 10:33:17 LASCO BAG SAMPLES

9-12-1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 40

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.518	66302		1	95.4807	METHANE
2	2.61	3138	V	2	4.5193	ETHANE
3	2.813	765	V			
	TOTAL	70205			100	

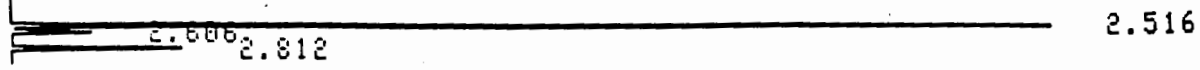
CHROMATOGRAM 101 MEMORIZED
87/05/29 10:28:48 LASCO BAG SAMPLES

10-12-1

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 39

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.517	16669		1	92.5534	METHANE
2	2.608	1341	V	2	7.4466	ETHANE
3	2.812	1850				
	TOTAL	19860			100	

9//05/29 10:23:14 LASCO BAG SAMPLES 10-12-1



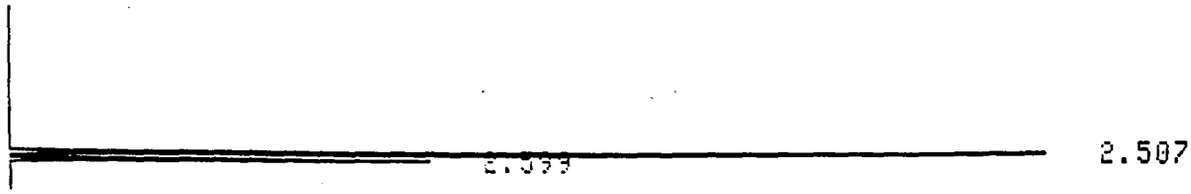
CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 38

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.516	18366		1	92.5626	METHANE
2	2.606	1476	V	2	7.4374	ETHANE
3	2.812	2327				
	TOTAL	22169			100	



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 31

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.507	14619		1	74.259	METHANE
2	2.599	5067	V	2	25.741	ETHANE
	TOTAL	19686			100	

CHROMATOGRAM 101 MEMORIZED

2.601 2.508

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 32

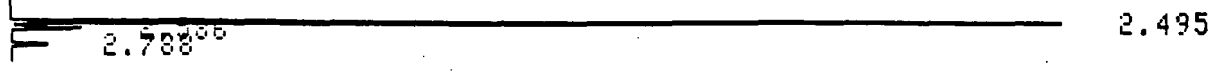
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.508	14922		1	74.2841	METHANE
2	2.601	5166	V	2	25.7159	ETHANE
	TOTAL	20087			100	

C 19

223-02

CHROMATOGRAM 101 MEMORIZED
87/05/20 16:55:23 LASCO BAG SAMPLES

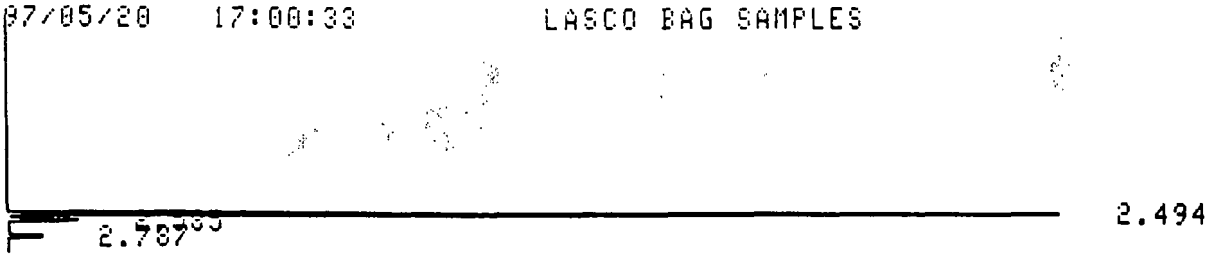
810
CTR1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 268

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	21062		1	94.9529	METHANE
2	2.586	1120	V	2	5.0471	ETHANE
3	2.788	506				
	TOTAL	22688			100	

CHROMATOGRAM 101 MEMORIZED
87/05/20 17:00:33 LASCO BAG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 269

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	20324		1	94.9189	METHANE
2	2.585	1088	V	2	5.0811	ETHANE
3	2.787	512	V			
	TOTAL	21923			100	

CHROMATOGRAM 101 MEMORIZED
97/05/20 16:44:55 LASCO BAG SAMPLES

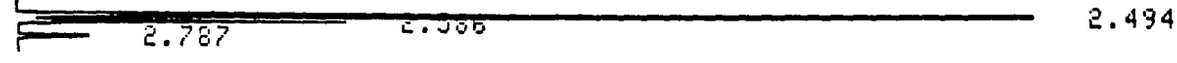
09
C7R1

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 266

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	112319		1	96.0931	METHANE
2	2.585	4567	V	2	3.9069	ETHANE
3	2.787	1057				
TOTAL		117942			100	

CHROMATOGRAM 101 MEMORIZED
97/05/20 16:49:51 LASCO BAG SAMPLES

09
C7R1



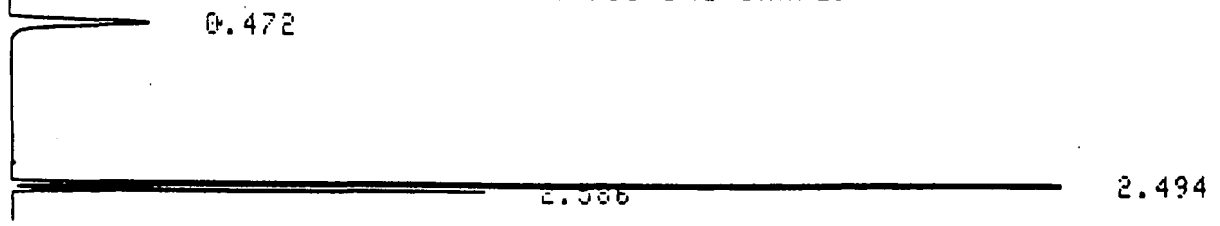
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 267

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	114910		1	96.1418	METHANE
2	2.586	4611	V	2	3.8582	ETHANE
3	2.787	1081	V			
TOTAL		120603			100	

CHROMATOGRAM 101 MEMORIZED

87/05/20 16:31:40 LASCO BAG SAMPLES

CONCAL



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 264

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	0.472	6116				
2	2.494	63187		1	91.6656	METHANE
3	2.586	5745	V	2	8.3344	ETHANE
	TOTAL	75048			100	

CHROMATOGRAM 101 MEMORIZED

87/05/20 16:36:47 LASCO BAG SAMPLES

CONCAL

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 265

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	0.937	6817				
2	2.495	64599		1	91.6725	METHANE
3	2.587	5868	V	2	8.3275	ETHANE
	TOTAL	77284			100	

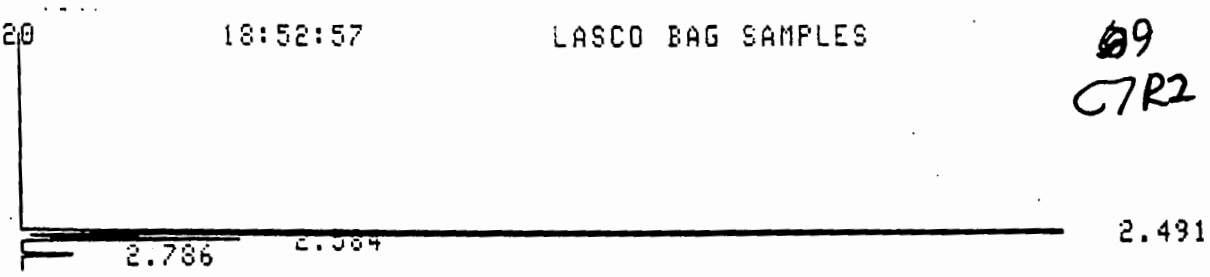
0.75

223-02037-02

⊕ Shimadzu

97/05/20 18:52:57 LASCO BAG SAMPLES

69
C7R2



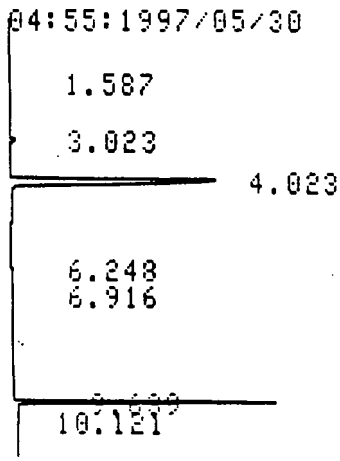
223-02037-02

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 274

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	75045		1	96.048	METHANE
2	2.584	3088	V	2	3.952	ETHANE
3	2.786	726	V			
	TOTAL	78858			100	

04:55:1997/05/30 LASCO TUBES

RE-11-1

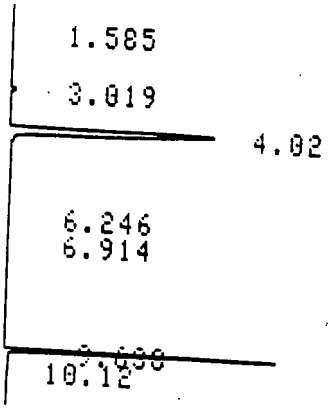


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 110

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.587	330				
2	3.023	3106				
3	4.023	214342		4	71.1795	CS2
4	6.248	1273				
5	6.916	459		3	0.1524	MMA
6	9.639	85960		1	28.546	STYRENE
7	10.121	368		2	0.1221	CUMEME
	TOTAL	305837			100	

RE-11-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 111

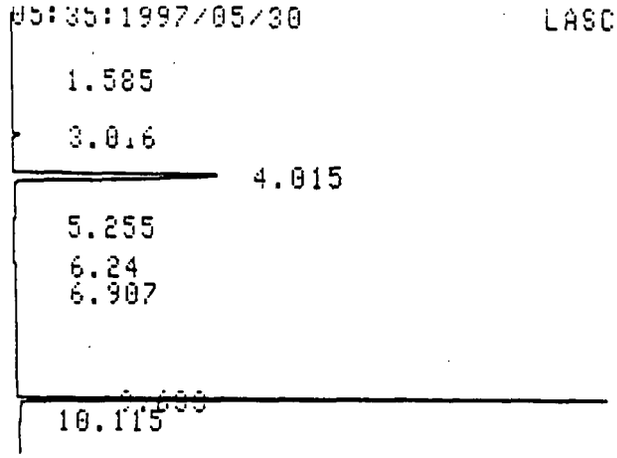
FILE 0
METHOD 0002

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.585	329				
2	3.019	3173				
3	4.02	221442		4	70.6779	CS2
4	6.246	1316				
5	6.914	485		3	0.1547	MMA
6	9.638	90963		1	29.0328	STYRENE
7	10.12	422		2	0.1345	CUMENE
	TOTAL	318129			100	

Shinadzu

05:35:1997/05/30 LASCO TUBES

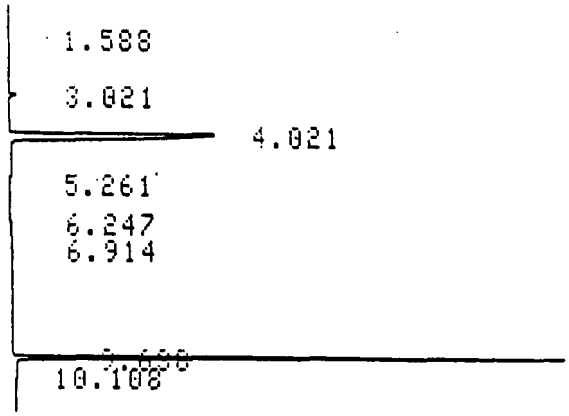
ME-12-1



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 112

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.585	476				
2	3.016	3410				
3	4.015	223144		4	52.8797	CS2
4	5.255	454				
5	6.24	1382				
6	6.907	1092		3	0.2589	MMA
7	9.633	197234		1	46.7396	STYRENE
8	10.115	514		2	0.1218	CUMEME
	TOTAL	427707			100	



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 113

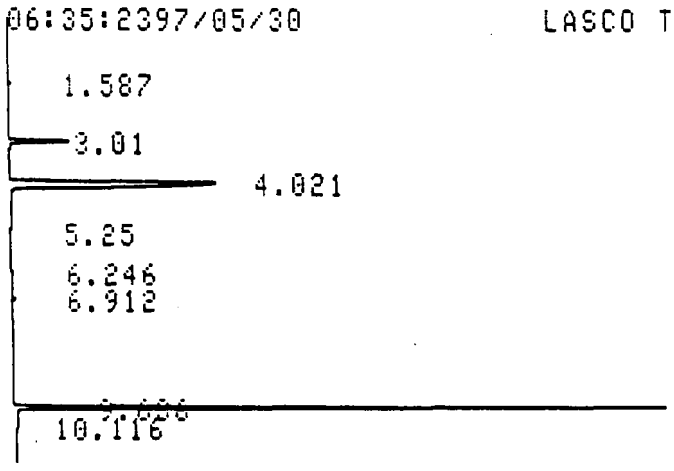
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.588	476				
2	3.021	3350				
3	4.021	217081		4	53.8848	CS2
4	5.261	436				
5	6.247	1308				
6	6.914	1036		3	0.2572	MMA
7	9.638	184270		1	45.7401	STYRENE
8	10.108	475		2	0.1178	CUMEME
	TOTAL	408432			100	

223-02037-02

Shimadzu

06:35:2397/05/30 LASCO TUBES

AF-12-1

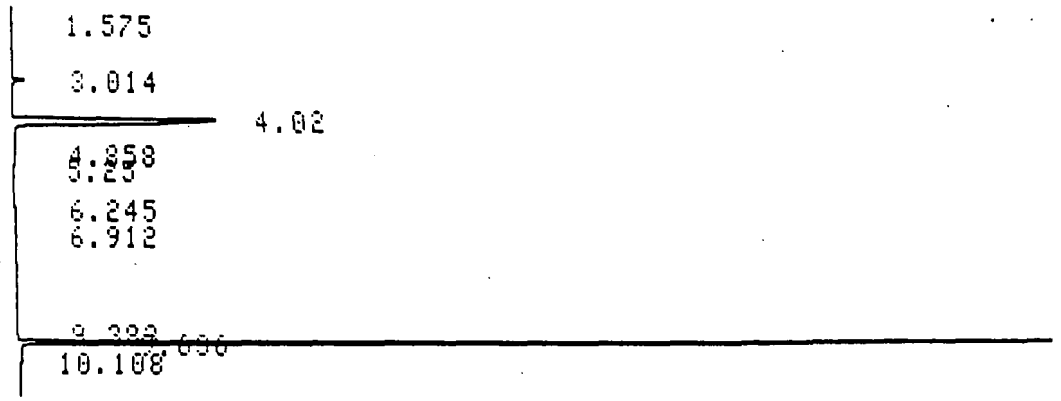


CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 115

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.587	870				
2	3.01	26457				
3	4.021	215672		4	49.7838	CS2
4	5.25	821				
5	6.246	1306				
6	6.912	1988		3	0.4588	MMA
7	9.636	215052		1	49.6407	STYRENE
8	10.116	506		2	0.1167	CUMENE
	TOTAL	462673			100	

223-02037-02



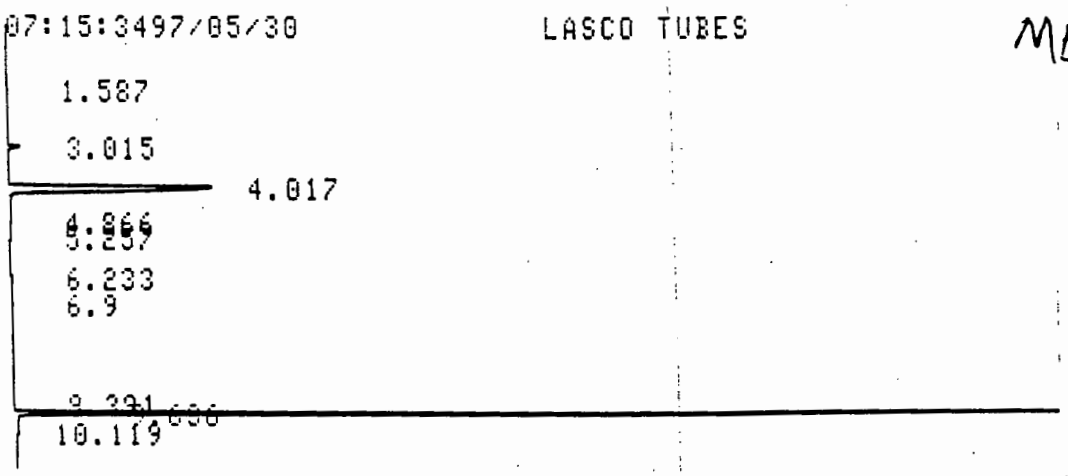
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 116

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.575	694				
2	3.014	6039				
3	4.02	220642		4	29.6042	CS2
4	4.858	528				
5	5.25	692				
6	6.245	1489				
7	6.912	1135		3	0.1522	MMA
8	9.383	360				
9	9.636	522127		1	70.0554	STYRENE
10	10.108	1402		2	0.1881	CUMEME
	TOTAL	755107			100	

07:15:3497/05/30 LASCO TUBES

ME-13-2



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 117

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.587	669				
2	3.015	5802				
3	4.017	215533		4	29.9671	CS2
4	4.866	507				
5	5.257	661				
6	6.233	1426				
7	6.9	1090		3	0.1516	MMA
8	9.391	340				
9	9.636	501291		1	69.698	STYRENE
10	10.119	1319		2	0.1834	CUMEME
	TOTAL	728638			100	

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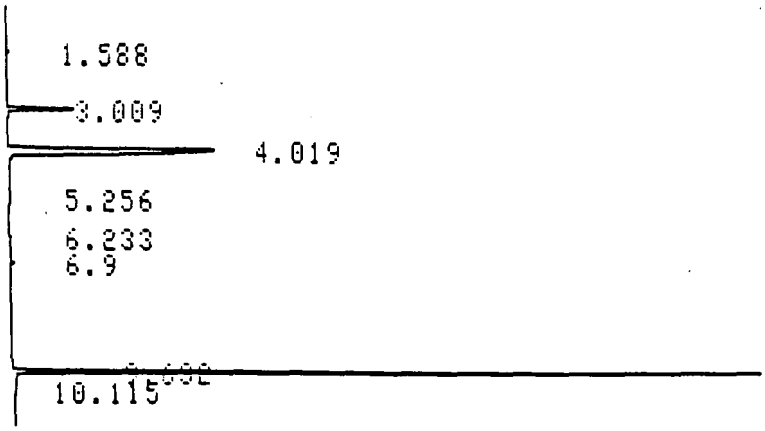
223-02037-02

Shimadzu

AF-12-1



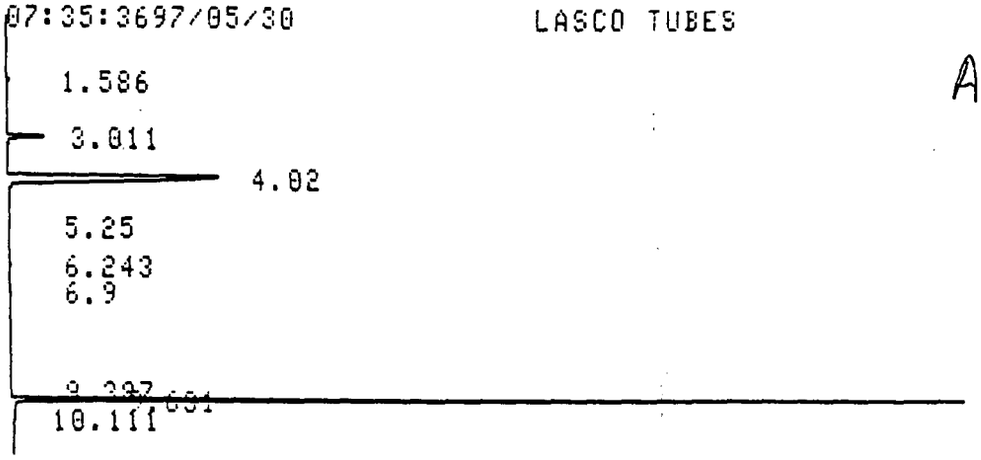
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 114

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.588	1021				
2	3.009	30623				
3	4.019	234821		4	48.3359	CS2
4	5.256	950				
5	6.233	1498				
6	6.9	2279		3	0.4692	MMA
7	9.632	248058		1	51.0606	STYRENE
8	10.115	653		2	0.1343	CUMENE
	TOTAL	519903			100	

07:35:3697/05/30 LASCO TUBES

AF-13-1



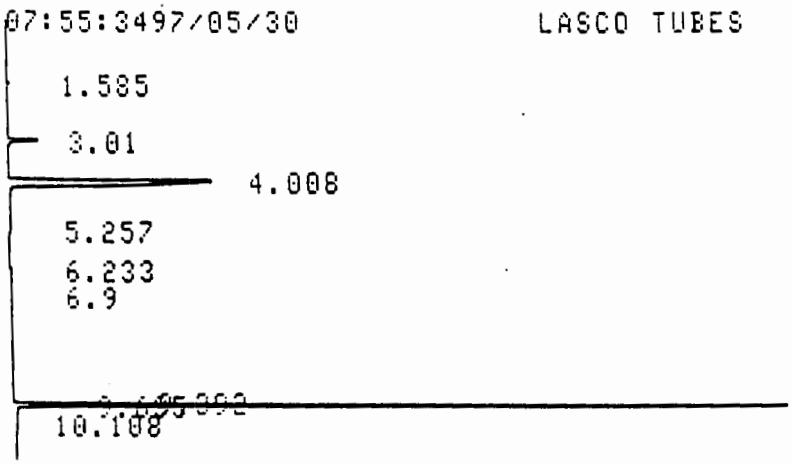
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 118

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.586	1072				
2	3.011	16740				
3	4.02	242563		4	43.1485	CS2
4	5.25	1034				
5	6.243	1729				
6	6.9	743		3	0.1321	MMA
7	9.387	252				
8	9.631	317929		1	56.5551	STYRENE
9	10.111	924		2	0.1643	CUMEME
	TOTAL	582985			100	

07:55:3497/05/30 LASCO TUBES

AF-13-1



CHROMATOGRAM 1 MEMORIZED

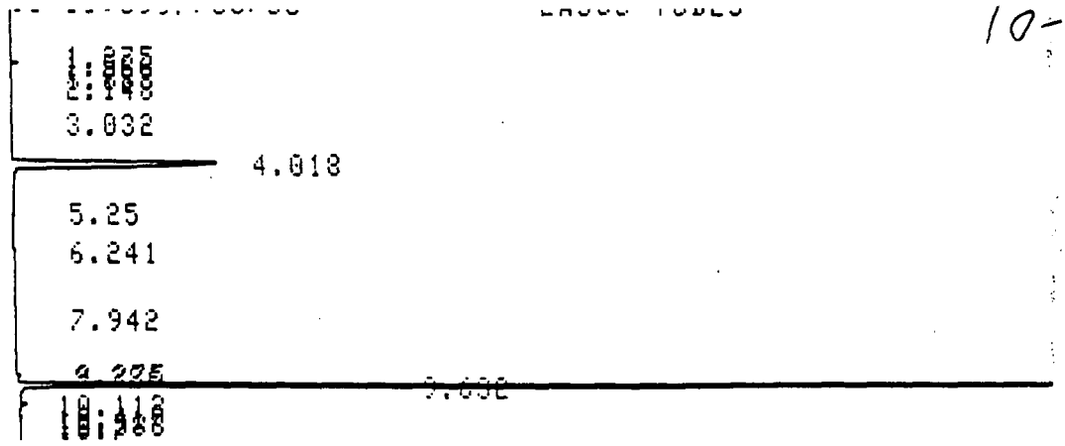
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 119

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.585	881				
2	3.01	13692				
3	4.008	213426		4	45.575	CS2
4	5.257	825				
5	6.233	1394				
6	6.9	594		3	0.1269	MMA
7	9.392	203				
8	9.635	253564		1	54.146	STYRENE
9	10.108	712		2	0.1521	CUMEME
	TOTAL	485290			100	

223-02037-02

⊕ Shinoa

10-13-1



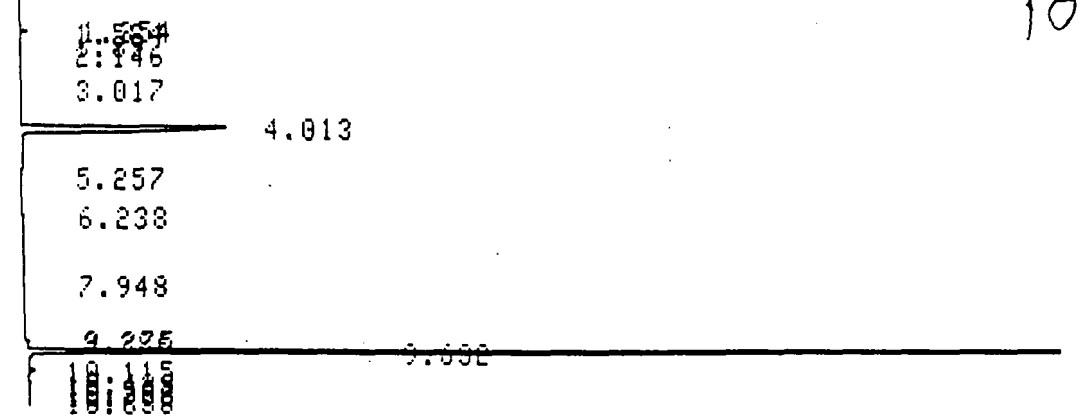
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 120

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.375	263				
2	1.586	1923				
3	1.883	385				
4	2.148	277				
5	3.032	743				
6	4.018	218112		4	12.2874	CS2
7	5.25	832				
8	6.241	1606				
9	7.942	274				
10	9.275	251				
11	9.386	1336	V			
12	9.632	1552161	V	1	87.4415	STYRENE
13	10.112	4812	V	2	0.2711	CUMEME
14	10.417	1613				
15	10.583	1077	V			
16	10.7	245	V			
	TOTAL	1785912			100	

08:35:4597/05/30 LASCO TUBES

10-13-1



CHROMATOGRAM 1 MEMORIZED

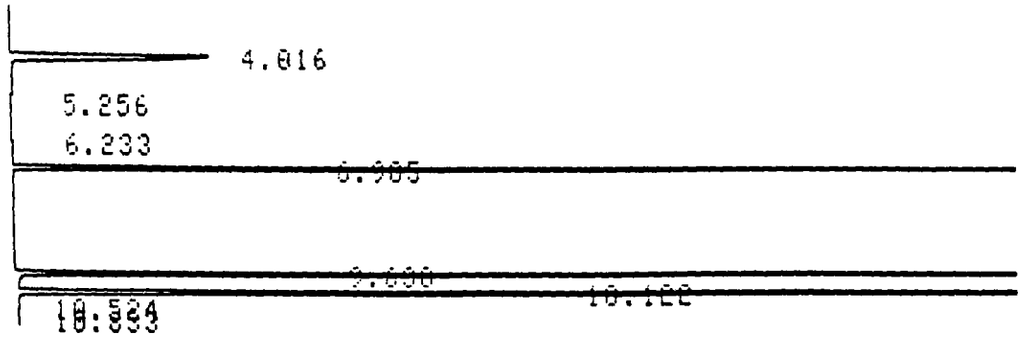
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 121

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.354	249				
2	1.584	1912	V			
3	1.89	381				
4	2.146	276				
5	3.017	722				
6	4.013	214245		4	12.2322	CS2
7	5.257	813				
8	6.238	1575				
9	7.948	270				
10	9.275	319				
11	9.386	1473	V			
12	9.632	1532526	V	1	87.4991	STYRENE
13	10.115	4706	V	2	0.2687	CUMENE
14	10.429	1566				
15	10.597	1141	V			
16	10.708	322	V			
17	10.838	712	V			
	TOTAL	1763207			100	

223-02037-02

Shimadzu

405



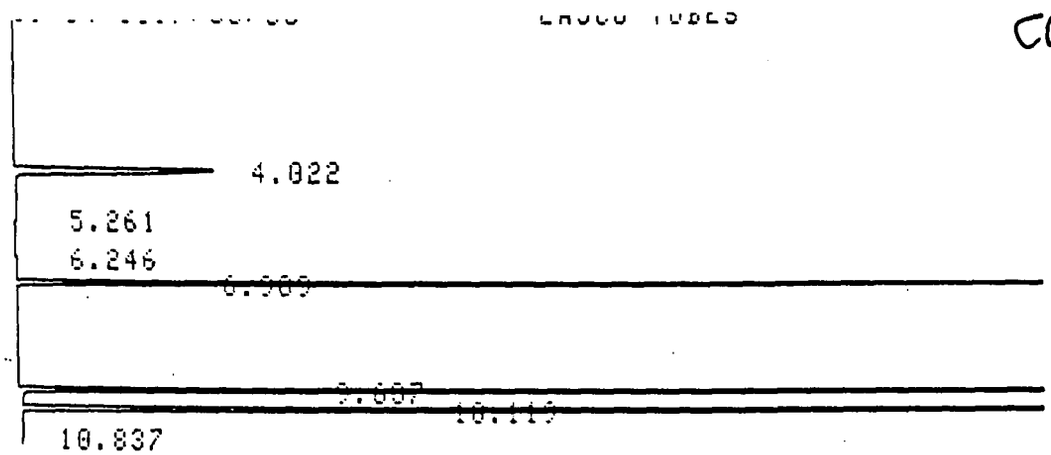
CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 122

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.016	214300		4	4.5251	CS2
2	5.256	428				
3	6.233	1332				
4	6.905	916432		3	19.3512	MMA
5	9.638	1874301		1	39.5773	STYRENE
6	10.122	1730764	V	2	36.5464	CUMEME
7	10.524	229				
8	10.833	678				
	TOTAL	4738464			100	

CONCAL

3-02037-02



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 123

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	4.022	213146		4	4.6152	CS2
2	5.261	437				
3	6.246	1328				
4	6.909	906916		3	19.6371	MMA
5	9.637	1819724		1	39.4017	STYRENE
6	10.119	1678605	V	2	36.3461	CUMENE
7	10.837	664				
	TOTAL	4620819			100	

Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/20 21:14:12 LASCO BAG SAMPLES

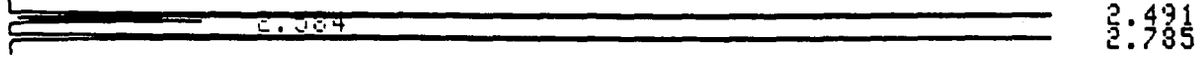
09
C7R3

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 285

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	71308		1	96.0956	METHANE
2	2.585	2897	V	2	3.9043	ETHANE
3	2.786	24778	V			
	TOTAL	98983			100	

CHROMATOGRAM 101 MEMORIZED
87/05/20 21:20:00 LASCO BAG SAMPLES

09
C7R3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 286

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	68186		1	96.1072	METHANE
2	2.584	2762	V	2	3.8928	ETHANE
3	2.785	19600				
	TOTAL	90548			100	

CHROMATOGRAM 101 MEMORIZED

C 34

223-02037-02

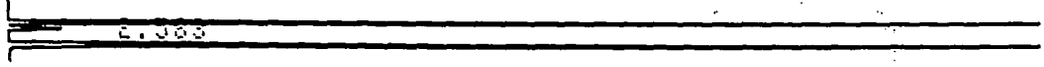
C7R3 Shimadzu

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 287

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	17249		1	94.8372	METHANE
2	2.584	939	V	2	5.1628	ETHANE
3	2.786	18279	V			
	TOTAL	36467			100	

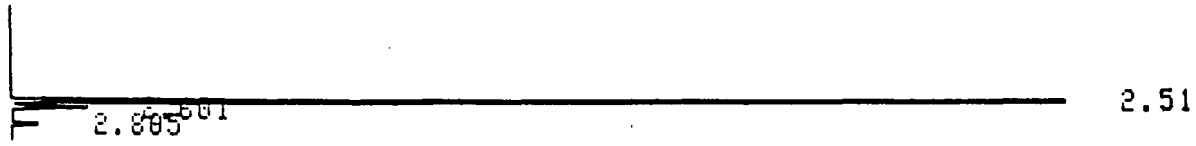
CHROMATOGRAM 101 MEMORIZED
97/05/20 21:30:17 LASCO BAG SAMPLES

Θ10
C7R3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 288

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	16656		1	94.9553	METHANE
2	2.583	885	V	2	5.0447	ETHANE
3	2.785	17661				
	TOTAL	35202			100	

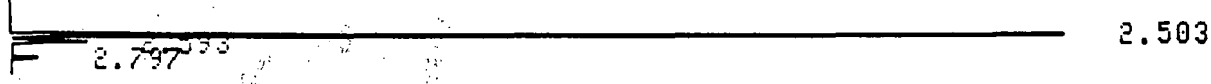


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 91

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.51	19854		1	94.0962	METHANE
2	2.601	1246	V	2	5.9038	ETHANE
3	2.805	371	V			
	TOTAL	21470			100	

CHROMATOGRAM 101 MEMORIZED
87/05/23 13:59:07 LASCO BAG SAMPLES

10-11-3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 92

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.503	20001		1	94.1285	METHANE
2	2.593	1248	V	2	5.8715	ETHANE
3	2.797	378	V			
	TOTAL	21627			100	

9-11-3

87/05/23 13:40:57 LASCO BAG SAMPLES

2.508

2.804 2.601

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 89

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.508	52973		1	95.8771	METHANE
2	2.601	2278	V	2	4.1229	ETHANE
3	2.804	912	V			
	TOTAL	56162			100	

CHROMATOGRAM 101 MEMORIZED

87/05/23 13:49:34 LASCO BAG SAMPLES

VOID BAG EMPTY

2.508

2.804 2.601

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 90

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.508	24684		1	95.8222	METHANE
2	2.601	1076	V	2	4.1778	ETHANE
3	2.804	428	V			
	TOTAL	26188			100	

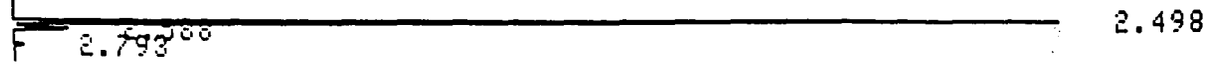
CHROMATOGRAM 101 MEMORIZED

223-02037-02

15 8

CHROMATOGRAM 101 MEMORIZED
87/05/23 12:29:01 LASCO BAG SAMPLES

10-11-2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 85

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	13808		1	93.6899	METHANE
2	2.588	930	V	2	6.3101	ETHANE
3	2.793	181				
	TOTAL	14919			100	

CHROMATOGRAM 101 MEMORIZED
87/05/23 12:33:38 LASCO BAG SAMPLES

10-11-2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 86

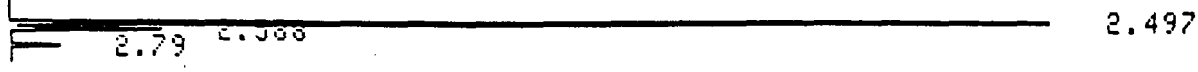
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	14298		1	93.7092	METHANE
2	2.589	960	V	2	6.2907	ETHANE
3	2.793	187	V			
	TOTAL	15445			100	

15 6

223-02037-02

Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/23 11:57:56 LASCO BAG SAMPLES 9-11-2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 82

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	48032		1	95.8076	METHANE
2	2.588	2102	V	2	4.1924	ETHANE
3	2.79	717	V			
	TOTAL	50851			100	

CHROMATOGRAM 101 MEMORIZED
87/05/23 12:02:14 LASCO BAG SAMPLES 9-11-2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 83

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	47098		1	95.7681	METHANE
2	2.589	2081	V	2	4.2319	ETHANE
3	2.791	698	V			
	TOTAL	49877			100	

15 5
223-02037-02
Shimadzu

CHROMATOGRAM 101 MEMORIZED

97/05/23 11:43:31 LASCO BAG SAMPLES 10-11-1

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 80

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.495	21969		1	93.6674	METHANE
2	2.585	1485	V	2	6.3326	ETHANE
3	2.788	345	V			
	TOTAL	23799			100	

CHROMATOGRAM 101 MEMORIZED

97/05/23 11:47:51 LASCO BAG SAMPLES 10-11-1

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 81

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	20647		1	93.6137	METHANE
2	2.587	1409	V	2	6.3863	ETHANE
3	2.79	320	V			
	TOTAL	22375			100	

CHROMATOGRAM 101 MEMORIZED

037-02 ⊕ Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/23 11:06:08 LASCO BAG SAMPLES 9-11-1

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 76

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	52339		1	95.7402	METHANE
2	2.581	2329	V	2	4.2598	ETHANE
3	2.783	578	V			
	TOTAL	55245			100	

CHROMATOGRAM 101 MEMORIZED
87/05/23 11:25:46 LASCO BAG SAMPLES 9-11-1

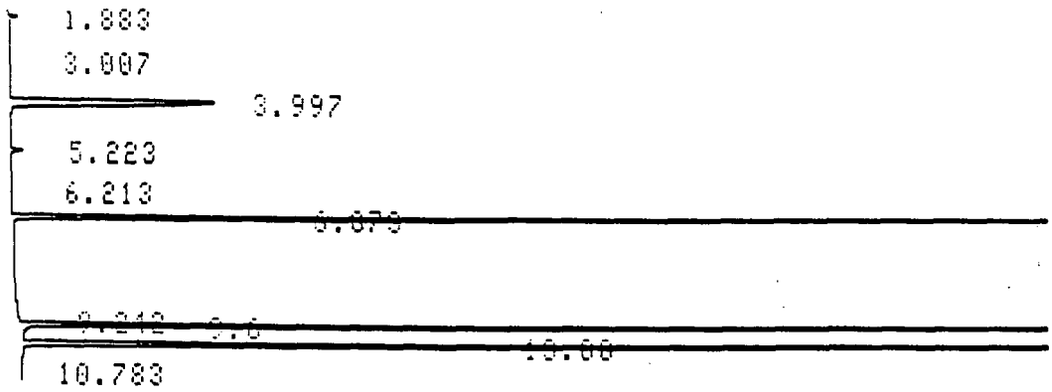
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 77

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	49733		1	95.7118	METHANE
2	2.582	2228	V	2	4.2882	ETHANE
3	2.785	562	V			
	TOTAL	52523			100	

15 3

223-02037-02

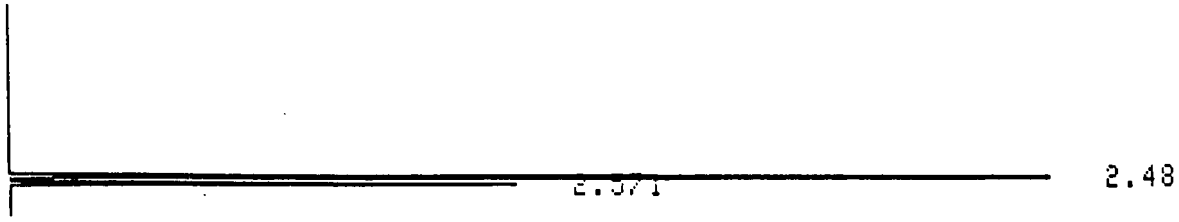
⊕ Shinadzu



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 2

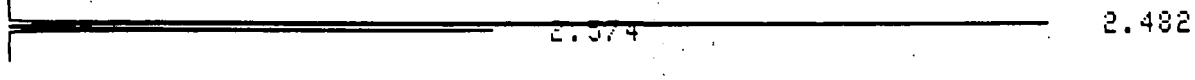
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.883	2658				
2	3.007	1050				
3	3.997	220479		4	5.5222	CS2
4	5.223	5593				
5	6.213	343				
6	6.873	737574		3	18.4737	MMA
7	9.242	1357				
8	9.6	1579553	V	1	39.5623	STYRENE
9	10.08	1454962	V	2	36.4417	CUMEME
10	10.783	602				
	TOTAL	4004171			100	



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 74

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.48	15638		1	72.8168	METHANE
2	2.571	5838	V	2	27.1831	ETHANE
	TOTAL	21476			100	

CHROMATOGRAM 101 MEMORIZED
87/05/23 09:27:33 LASCO BAG SAMPLES CONCAL

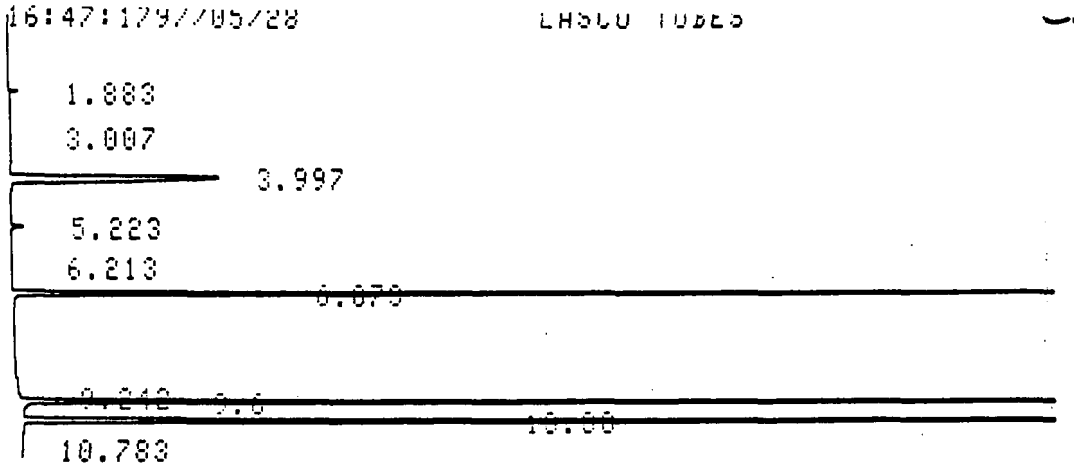


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 75

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	15578		1	72.769	METHANE
2	2.574	5830	V	2	27.231	ETHANE
	TOTAL	21408			100	

037-02
Shimadzu

16:47:179//05/28 [illegible]



CHROMATOGRAM 1 MEMORIZED

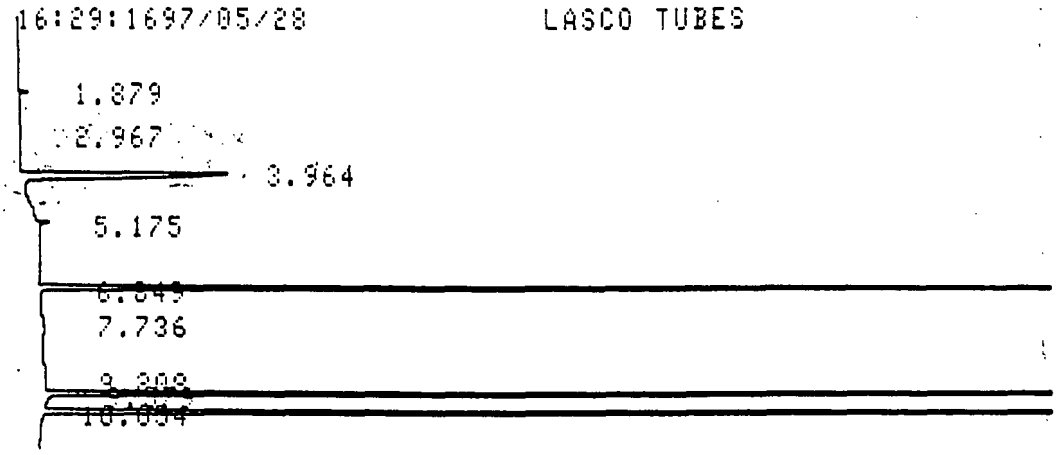
CR501 CHROMATOPAC

CHANNEL NO	1	FILE	0
SAMPLE NO	0	METHOD	0002
REPORT NO	2		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.883	2658				
2	3.007	1050				
3	3.997	220479		4	5.5222	CS2
4	5.223	5593				
5	6.213	343				
6	6.873	737574		3	18.4737	MMA
7	9.242	1357				
8	9.6	1579553	V	1	39.5623	STYRENE
9	10.08	1454962	V	2	36.4417	CUMEME
10	10.783	602				
	TOTAL	4004171			100	

16:29:1697/05/28 LASCO TUBES

CONCAL



CHROMATOGRAM 1 MEMORIZED

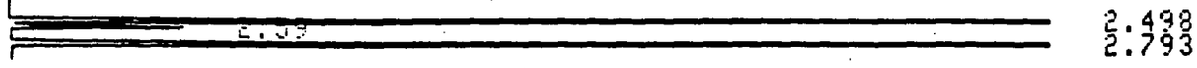
CR501 CHROMATOPAC
CHANNEL NO 1 FILE 0
SAMPLE NO 0 METHOD 0002
REPORT NO 1

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.879	2735				
2	2.967	1109				
3	3.964	214354				
4	5.175	7638				
5	6.849	758935				
6	7.736	8903				
7	9.208	26076				
8	9.579	1628690	V	1	52.2306	STYRENE
9	10.054	1489575	V	2	47.7693	CUMEME
	TOTAL	4138015			100	

00 4
223-02037-02

9-10-

87/05/22 21:26:49 LASCO BAG SAMPLES

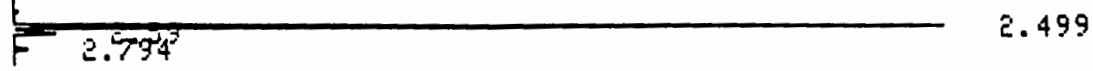


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 45

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	59090		1	96.0506	METHANE
2	2.59	2430	V	2	3.9494	ETHANE
3	2.793	32101	V			
	TOTAL	93621			100	

CHROMATOGRAM 101 MEMORIZED

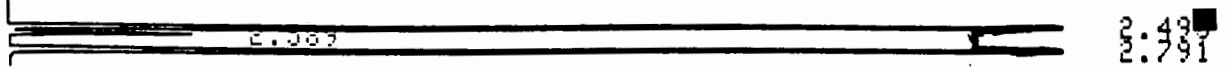
87/05/22 21:00:49 LASCO BAG SAMPLES 10-91



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 43

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	11044		1	93.8524	METHANE
2	2.59	723	V	2	6.1476	ETHANE
3	2.794	200	V			
	TOTAL	11967			100	

87/05/22 21:32:07 LASCO BAG SAMPLES 9-10-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 46

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	60892		1	96.0984	METHANE
2	2.589	2472	V	2	3.9016	ETHANE
3	2.791	31201	V			
	TOTAL	94565			100	

CHROMATOGRAM 101 MEMORIZED

CHROMATOGRAM 101 MEMORIZED
87/05/19 12:45:00 LASCO BAG SAMPLES

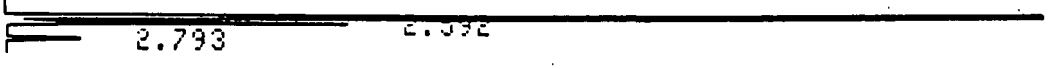
OPEN 9
C5R1

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 194

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	125902		1	96.0947	METHANE
2	2.59	5117	V	2	3.9053	ETHANE
3	2.791	1170	V			
	TOTAL	132189			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 13:12:52 LASCO BAG SAMPLES

OPEN 9
C5R1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 195

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	126728		1	96.0813	METHANE
2	2.592	5169	V	2	3.9187	ETHANE
3	2.793	1170	V			
	TOTAL	133066			100	

045

223-02037-02

Shimad

523

CHROMATOGRAM 101 MEMORIZED
87/05/19 13:32:53 LASCO BAG SAMPLES

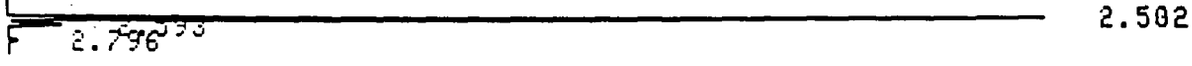
OPEN 10
CSR1

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 196

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.502	18342		1	94.5893	METHANE
2	2.593	1049	V	2	5.4106	ETHANE
3	2.796	181	V			
TOTAL		19572			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 13:48:02 LASCO BAG SAMPLES

OPEN 10
CSR1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 197

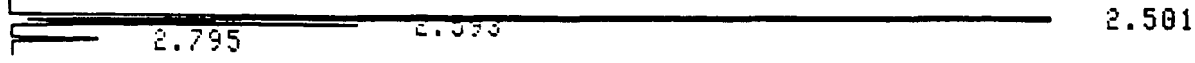
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.502	16781		1	94.5774	METHANE
2	2.593	962	V	2	5.4225	ETHANE
3	2.796	167	V			
TOTAL		17910			100	

046

524

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:07:35 LASCO BAG SAMPLES

OPEN9
C5R2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 199

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.501	117354		1	96.0663	METHANE
2	2.593	4805	V	2	3.9337	ETHANE
3	2.795	1249	V			
	TOTAL	123408			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:14:58 LASCO BAG SAMPLES

OPEN9
C5R2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 200

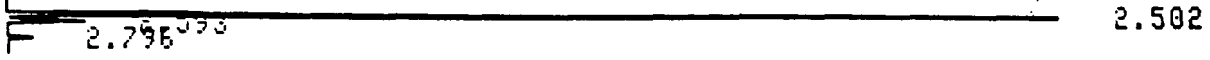
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.503	119232		1	96.0546	METHANE
2	2.595	4897	V	2	3.9454	ETHANE
3	2.796	1275	V			
	TOTAL	125404			100	

C-47

525

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:22:03 LASCO BAG SAMPLES

OPEN 10
R2 C3

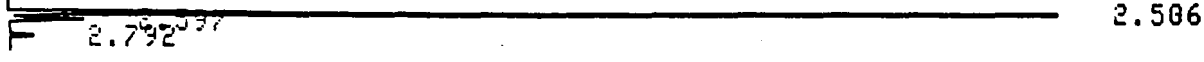


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 201

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.502	22818		1	94.7615	METHANE
2	2.593	1261	V	2	5.2385	ETHANE
3	2.796	381	V			
	TOTAL	24461			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 14:27:28 LASCO BAG SAMPLES

OPEN 10
R2 C5

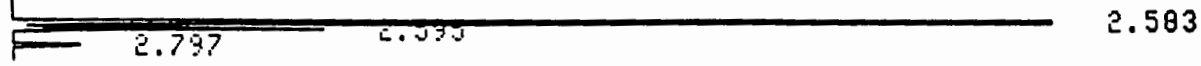


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 202

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.506	24500		1	94.8925	METHANE
2	2.597	1319	V	2	5.1075	ETHANE
3	2.792	406	V			
	TOTAL	26225			100	

97/05/19 15:35:47 LASCO BAG SAMPLES

OPEN 9
C5 R3
(9-5-3)

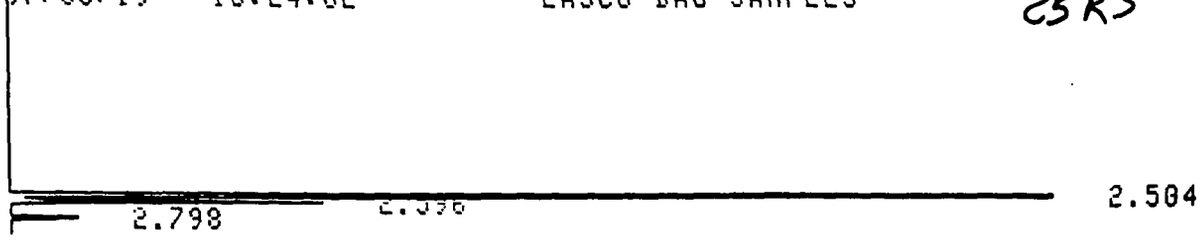


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 206

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.503	102146		1	96.1426	METHANE
2	2.595	4098	V	2	3.8574	ETHANE
3	2.797	979				
	TOTAL	107224			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 16:24:02 LASCO BAG SAMPLES

OPEN 9
C5 R3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 210

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.504	102868		1	96.1502	METHANE
2	2.596	4119	V	2	3.8498	ETHANE
3	2.798	967				
	TOTAL	107954			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 16:31:56 LASCO BAG SAMPLES

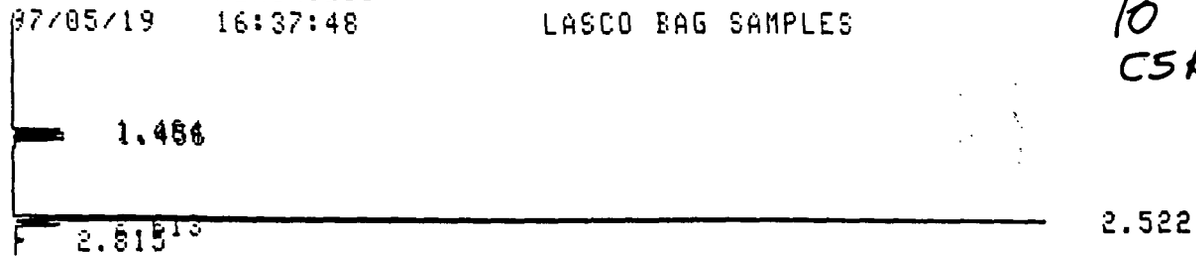
WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED

WARNING NO PEAK

CHROMATOGRAM 101 MEMORIZED

97/05/19 16:37:48 LASCO BAG SAMPLES

10
C5R3



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

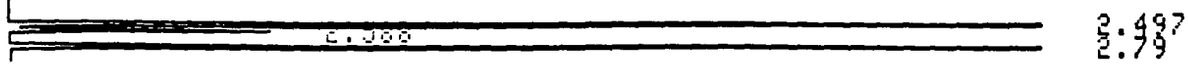
SAMPLE NO 0 METHOD 0002

REPORT NO 211

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	1.404	663				
2	1.456	1374	V			
3	2.522	13822		1	94.883	METHANE
4	2.613	745	V	2	5.117	ETHANE
5	2.815	126				
	TOTAL	16729			100	

97/05/19 17:49:27 LASCO BAG SAMPLES

OPEN 9
C6R1



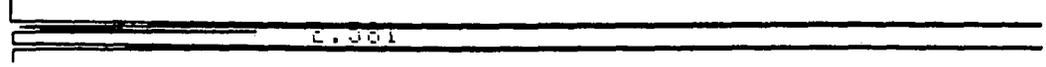
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 216

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	84288		1	96.0639	METHANE
2	2.588	3454	V	2	3.9361	ETHANE
3	2.79	16654	V			

C20

87/05/19 18:08:34 LASCO BAG SAMPLES

OVEN 7
C6R1



2.49
2.782

Shimadzu

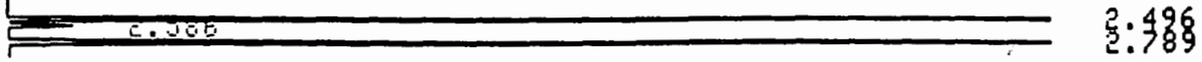
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 218

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.49	78405		1	96.0435	METHANE
2	2.581	3230	V	2	3.9565	ETHANE
3	2.782	15511	V			
	TOTAL	97146			100	

TOTAL 1264436 100

97/05/19 18:32:19 LASCO BAG SAMPLES

OPEN 10
RIC6



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

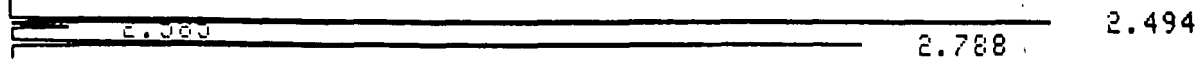
SAMPLE NO 0 METHOD 0002

REPORT NO 220

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	18311		1	94.7756	METHANE
2	2.586	1009	V	2	5.2244	ETHANE
3	2.789	15562	V			
	TOTAL	34883			100	

TOTAL 4921430 100
97/05/19 18:52:39 LASCO BAG SAMPLES

10
C6R1



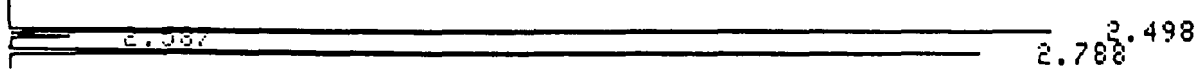
CR501 •CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 222

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	16205		1	94.7689	METHANE
2	2.585	895	V	2	5.2311	ETHANE
3	2.788	11603	V			
TOTAL		28703			100	

CHROMATOGRAM 101 MEMORIZED

97/05/19 19:01:49 LASCO BAG SAMPLES

10
C6R1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 223

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	16410		1	94.7831	METHANE
2	2.587	903	V	2	5.2169	ETHANE
3	2.788	13096				
TOTAL		30409			100	

CHROMATOGRAM 101 MEMORIZED

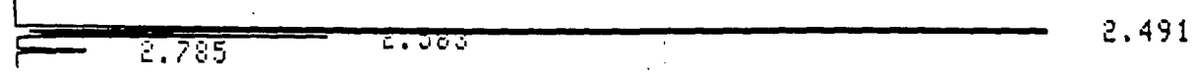
1037-02

Shimadzu

123

CHROMATOGRAM 101 MEMORIZED
97/05/19 19:55:38 LASCO BAG SAMPLES

OPEN 9
C6R2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 230

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	106894		1	96.0721	METHANE
2	2.583	4370	V	2	3.9278	ETHANE
3	2.785	1016	V			
	TOTAL	112280			100	

CHROMATOGRAM 101 MEMORIZED
97/05/19 20:00:10 LASCO BAG SAMPLES

OPEN 9
C6R2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 231

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.492	104139		1	96.0693	METHANE
2	2.584	4261	V	2	3.9307	ETHANE
3	2.785	985	V			
	TOTAL	109385			100	

059
223-02037-02
Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/19 20:12:34 LASCO BAG SAMPLES

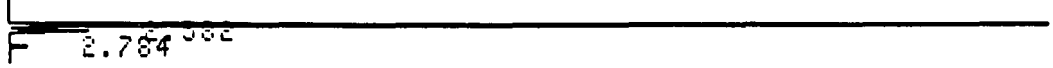
10
C6R2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 232

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	25129		1	94.8572	METHANE
2	2.582	1362	V	2	5.1428	ETHANE
3	2.784	276	V			
	TOTAL	26767			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 20:17:12 LASCO BAG SAMPLES

10
C6R2



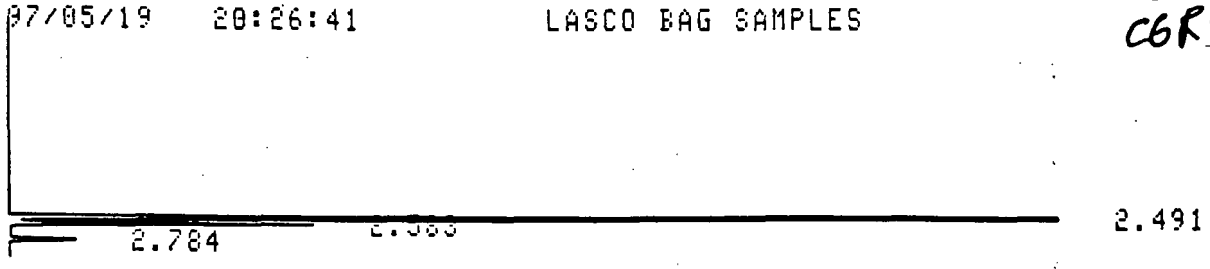
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002
REPORT NO 233

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	23202		1	94.8847	METHANE
2	2.582	1251	V	2	5.1153	ETHANE
3	2.784	262	V			
	TOTAL	24715			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 20:26:41 LASCO BAG SAMPLES

9
C6R3

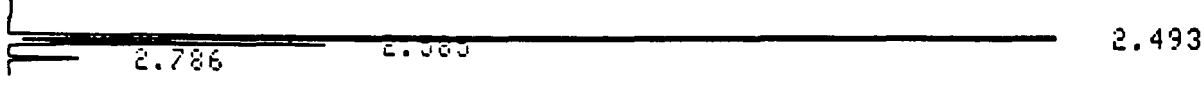


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 234

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	102608		1	96.1014	METHANE
2	2.583	4163	V	2	3.8986	ETHANE
3	2.784	969	V			
	TOTAL	107739			100	

CHROMATOGRAM 101 MEMORIZED
87/05/19 20:34:26 LASCO BAG SAMPLES

9
C6R3



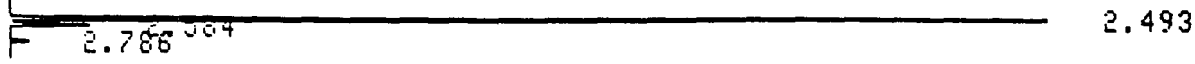
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 235

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	105189		1	96.1176	METHANE
2	2.585	4249	V	2	3.8824	ETHANE
3	2.786	981				
	TOTAL	110418			100	

Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/19 20:39:16 LASCO BAG SAMPLES

10
CGR3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 236

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.493	24219		1	94.9786	METHANE
2	2.584	1280	V	2	5.0214	ETHANE
3	2.786	290	V			
	TOTAL	25789			100	

C61

223-02037-02

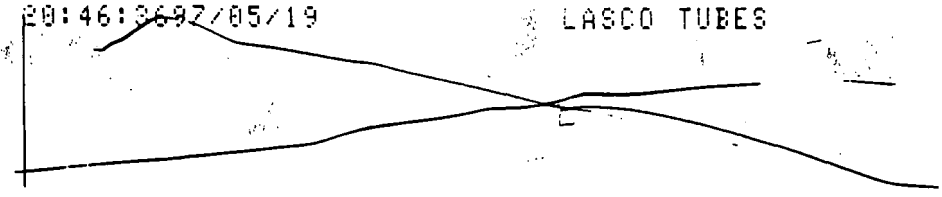
CHROMATOGRAM 101 MEMORIZED
97/05/19 20:43:50 LASCO BAG SAMPLES

10
C6R3

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 237

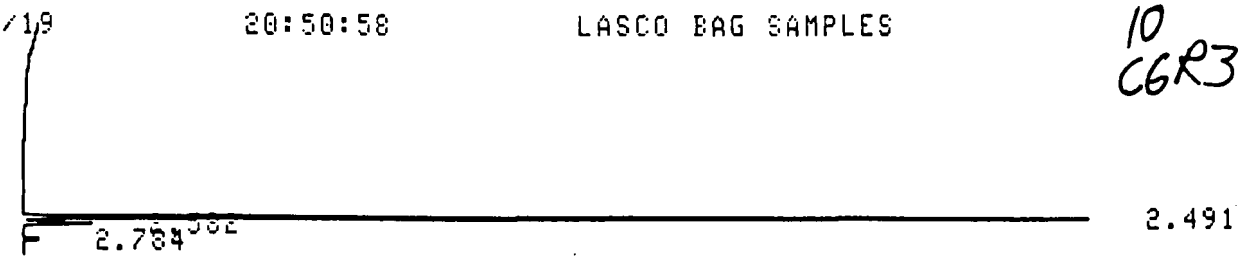
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.494	21997		1	95.0377	METHANE
2	2.585	1149	V	2	4.9622	ETHANE
3	2.787	249	V			
	TOTAL	23395			100	

20:46:36 97/05/19 LASCO TUBES



CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
97/05/19 20:50:58 LASCO BAG SAMPLES

10
C6R3



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 238

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.491	20500		1	94.9931	METHANE
2	2.582	1080	V	2	5.0069	ETHANE
3	2.784	225				
	TOTAL	21805			100	

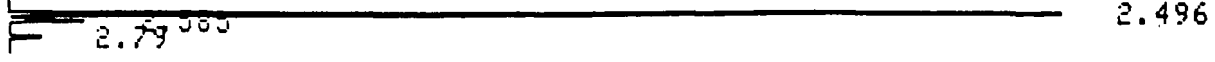
CHROMATOGRAM 101 MEMORIZED
87/05/22 17:00:29 LASCO BAG SAMPLES 10-8-3

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 37

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1					7344	METHANE
2					2656	ETHANE
3						
	TOTAL	18589				

TOTAL 241728 100
87/05/22 16:03:49 LASCO BAG SAMPLES

10-8-3

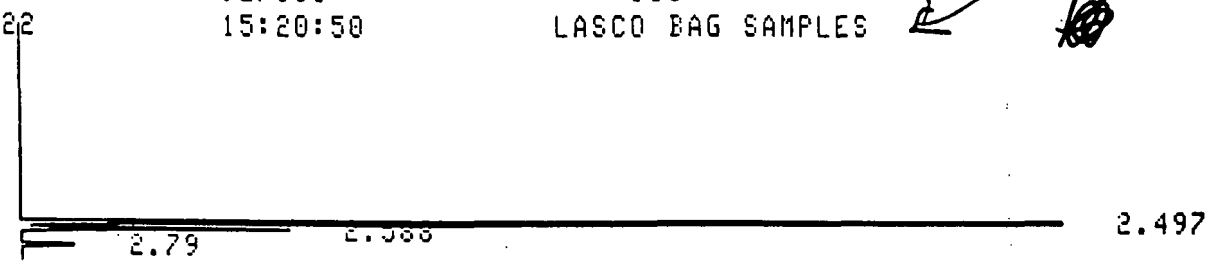


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 34

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	16968		1	92.6508	METHANE
2	2.585	1346	V	2	7.3492	ETHANE
3	2.79	475	V			

9-8-3

TOTAL	927835		100
97/05/22	15:20:50		LASCO BAG SAMPLES



CR501 CHROMATOPAC

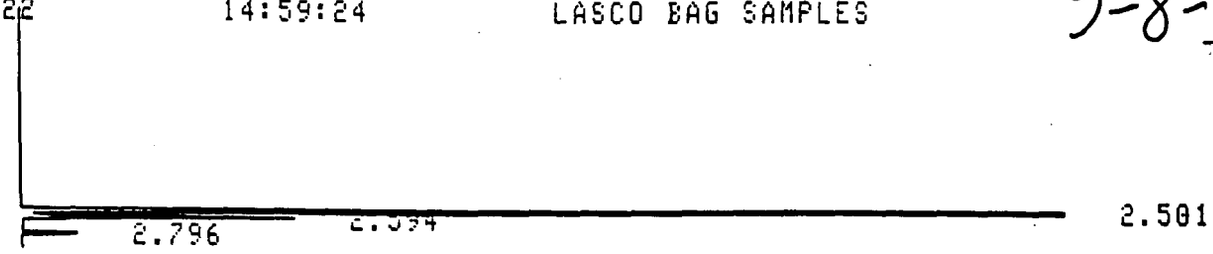
CHANNEL NO	2	FILE	9
SAMPLE NO	0	METHOD	0002
REPORT NO	30		

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	91681		1	96.2508	METHANE
2	2.588	3571	V	2	3.7492	ETHANE
3	2.79	800	V			

TOTAL 939286 100

97/05/22 14:59:24 LASCO BAG SAMPLES

9-8-3



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 28

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.501	90911		1	96.1895	METHANE
2	2.594	3601	V	2	3.8105	ETHANE
3	2.796	794	V			
	TOTAL	95306			1AA	

[redacted]

162

TOTAL 107584 100

CHROMATOGRAM 101 MEMORIZED

87/05/22 11:48:11 LASCO BAG SAMPLES

10-8-2

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

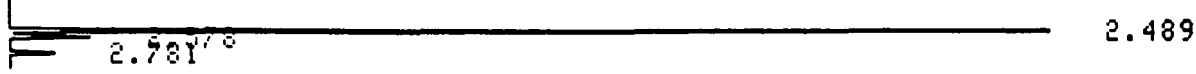
REPORT NO 17

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	19737		1	93.3484	METHANE
2	2.578	1406	V	2	6.6516	ETHANE
3	2.781	681	V			
	TOTAL	21825			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 11:52:41 LASCO BAG SAMPLES

10-8-2



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

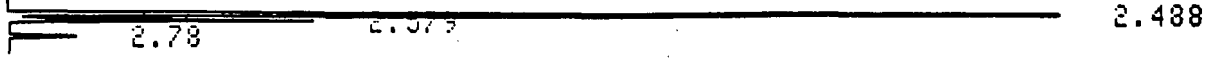
SAMPLE NO 0 METHOD 0002

REPORT NO 18

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	20239		1	93.4068	METHANE
2	2.578	1429	V	2	6.5932	ETHANE
3	2.781	668	V			
	TOTAL	22336			100	

223-02037-02

CHROMATOGRAM 101 MEMORIZED
87/05/22 11:39:35 LASCO BAG SAMPLES 9-8-2



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 15

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.488	101712		1	96.2422	METHANE
2	2.579	3971	V	2	3.7578	ETHANE
3	2.78	950	V			
	TOTAL	106633			100	

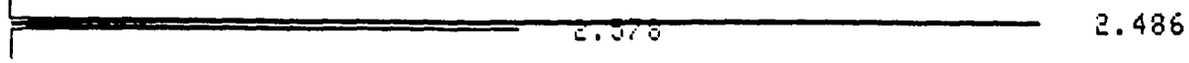
CHROMATOGRAM 101 MEMORIZED
87/05/22 11:43:59 LASCO BAG SAMPLES 9-8-2

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 16

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.489	102614		1	96.2381	METHANE
2	2.581	4011	V	2	3.7619	ETHANE
3	2.783	959	V			

CHROMATOGRAM 101 MEMORIZED
87/05/22 11:15:10 LASCO BAG SAMPLES

CONCAL

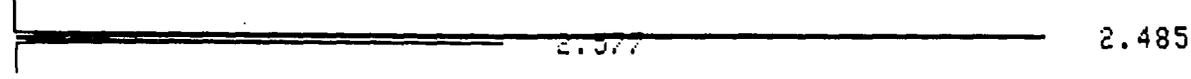


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 13

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.486	16365		1	72.9448	METHANE
2	2.578	6070	V	2	27.0552	ETHANE
	TOTAL	22435			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 11:23:23 LASCO BAG SAMPLES

CONCAL



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 14

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.485	15413		1	72.8251	METHANE
2	2.577	5751	V	2	27.1749	ETHANE
	TOTAL	21164			100	

CR

CHROMATOGRAM 101 MEMORIZED
97/05/22 10:49:11 LASCO BAG SAMPLES

MID/LOW
M E
STD

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 11

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.483	55987		1	94.4324	METHANE
2	2.574	3301	V	2	5.5676	ETHANE
	TOTAL	59288			100	

CHROMATOGRAM 101 MEMORIZED
97/05/22 10:55:33 LASCO BAG SAMPLES

MID/LOW
M E
STD

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002

REPORT NO 12

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.483	56299		1	94.4432	METHANE
2	2.575	3313	V	2	5.5568	ETHANE
	TOTAL	59612			100	

223-020370

87/05/22 10:31:50 LASCO BAG SAMPLES

9-8-1

2.483

2.775 2.575

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 9

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.483	103959		1	96.1028	METHANE
2	2.575	4216	V	2	3.8972	ETHANE
3	2.775	1057	V			
	TOTAL	109231			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 10:38:03 LASCO BAG SAMPLES

VOID

LOW BAG VOLUME

2.484

2.777 2.576

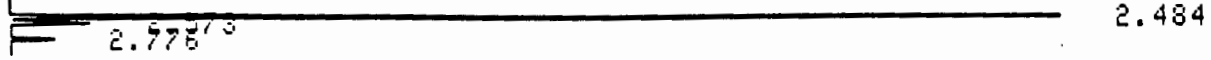
CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 10

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.484	45549		1	96.0425	METHANE
2	2.576	1877	V	2	3.9575	ETHANE
3	2.777	597	V			
	TOTAL	48024			100	

1 2 3
223-02037-02
⊕ Shimadzu

CHROMATOGRAM 101 MEMORIZED
87/05/22 10:20:02 LASCO BAG SAMPLES

10-8-1

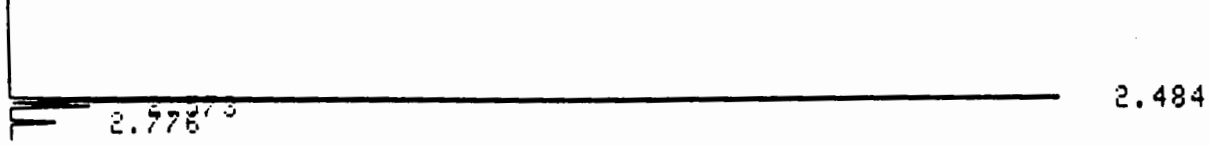


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 7

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.484	18811		1	92.7172	METHANE
2	2.573	1478	V	2	7.2828	ETHANE
3	2.776	674	V			
	TOTAL	20963			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 10:25:16 LASCO BAG SAMPLES

10-8-1



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 8

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.484	18879		1	92.743	METHANE
2	2.573	1477	V	2	7.257	ETHANE
3	2.776	672	V			
	TOTAL	21028			100	

CHROMATOGRAM 101 MEMORIZED

02037-0
Shimadzu

TOTAL 217850 100

CHROMATOGRAM 101 MEMORIZED

97/05/22 10:06:09 LASCO BAG SAMPLES

ETHANE MID STD

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

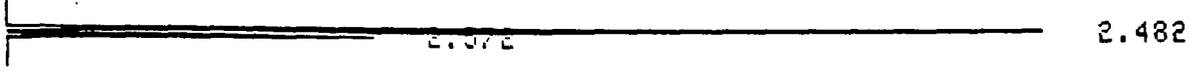
REPORT NO 5

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	24473		1	84.5306	METHANE
2	2.573	4479	V	2	15.4694	ETHANE
	TOTAL	28952			100	

CHROMATOGRAM 101 MEMORIZED

97/05/22 10:12:34 LASCO BAG SAMPLES

ETHANE MID STD



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 6

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.482	23572		1	84.6029	METHANE
2	2.572	4290	V	2	15.3971	ETHANE
	TOTAL	27862			100	

12 2

223

CHROMATOGRAM 101 MEMORIZED
87/05/22 09:45:46 LASCO BAG SAMPLES

HIGH STD

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 3

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.479	156054		1	74.6142	METHANE
2	2.566	53094	V	2	25.3858	ETHANE
TOTAL		209148			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 09:53:38 LASCO BAG SAMPLES

HIGH STD

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 4

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.481	162487		1	74.5868	METHANE
2	2.573	55363	V	2	25.4132	ETHANE

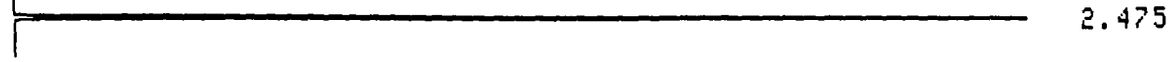
12 1

223-02037-02

Shimadzu

CHROMATOGRAM 1 MEMORIZED
WARNING NO PEAK
CHROMATOGRAM 101 MEMORIZED
87/05/22 09:20:35 LASCO BAG SAMPLES

LOW STD METHANE

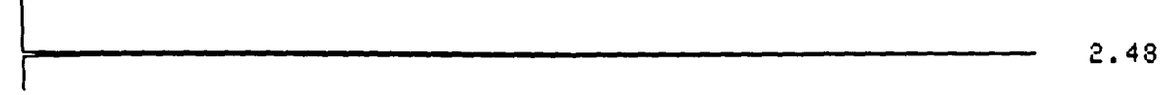


CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 1

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.475	15477		1	100	METHANE
	TOTAL	15477			100	

CHROMATOGRAM 101 MEMORIZED
87/05/22 09:29:06 LASCO BAG SAMPLES

LOW STD METHANE



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 2

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.48	15535		1	100	METHANE
	TOTAL	15535			100	

⊕ Shimadzu

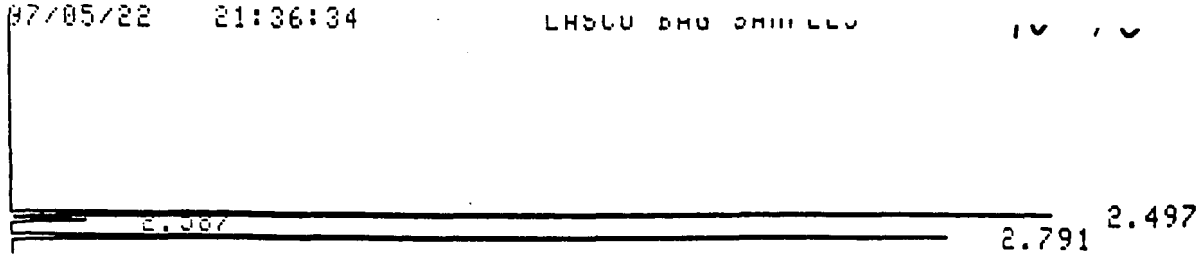
87/05/22 21:40:30 LASCO BAG SAMPLES

10-10-1

CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 48

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.496	18982		1	93.7146	METHANE
2	2.585	1273	V	2	6.2854	ETHANE
3	2.788	13322				
	TOTAL	33577			100	

87/05/22 21:36:34 LHSCU BHG SAMPLES



CR501 CHROMATOPAC
CHANNEL NO 2 FILE 9
SAMPLE NO 0 METHOD 0002
REPORT NO 47

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.497	19083		1	93.7042	METHANE
2	2.587	1282	V	2	6.2958	ETHANE
3	2.791	13402				
	TOTAL	33767			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 20:55:10 LASCO BAG SAMPLES 10-9-1

CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

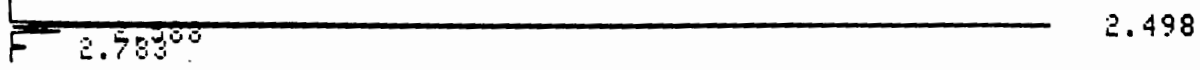
SAMPLE NO 0 METHOD 0002

REPORT NO 42

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	11779		1	93.8085	METHANE
2	2.589	777	V	2	6.1915	ETHANE
3	2.793	213				
	TOTAL	12769			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 20:47:52 LASCO BAG SAMPLES 10-9-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

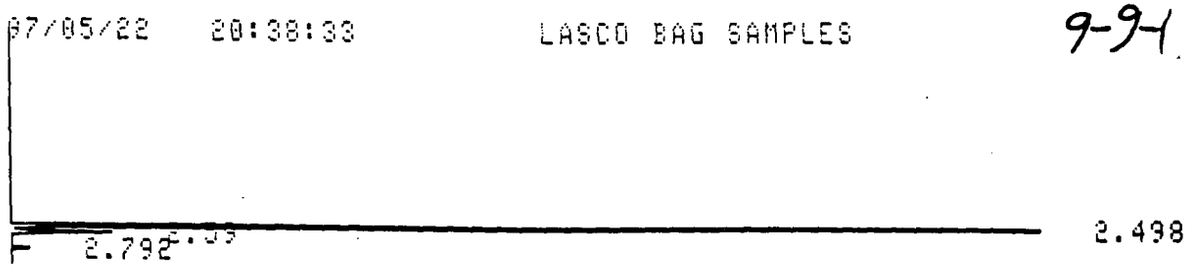
SAMPLE NO 0 METHOD 0002

REPORT NO 41

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	12469		1	93.8044	METHANE
2	2.588	824	V	2	6.1956	ETHANE
3	2.783	240	V			
	TOTAL	13532			100	

CHROMATOGRAM 101 MEMORIZED

87/05/22 20:38:33 LASCO BAG SAMPLES 9-9-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

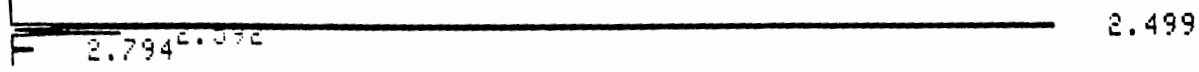
REPORT NO 40

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.498	32850		1	95.7582	METHANE
2	2.59	1455	V	2	4.2418	ETHANE
3	2.792	284	V			

TOTAL	34589	100

CHROMATOGRAM 101 MEMORIZED

97/05/22 20:32:14 LASCO BAG SAMPLES 9-9-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 0 METHOD 0002

REPORT NO 39

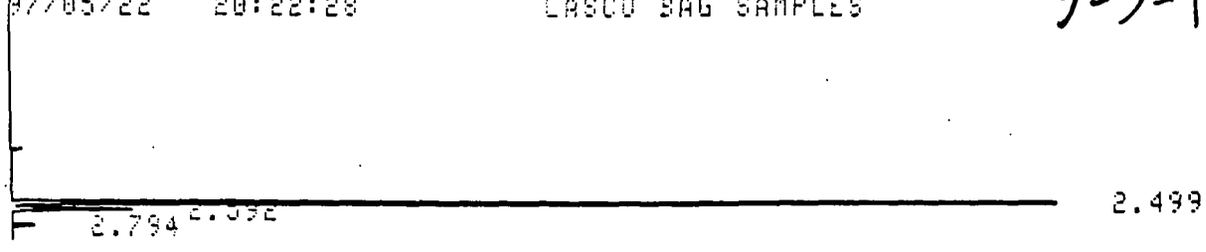
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	37234		1	95.764	METHANE
2	2.592	1647	V	2	4.2359	ETHANE
3	2.794	313	V			
	TOTAL	39194			100	

CHROMATOGRAM 101 MEMORIZED

CHROMATOGRAM 101 MEMORIZED

87/05/22 20:22:28 LASCO BAG SAMPLES

9-9-1



CR501 CHROMATOPAC

CHANNEL NO 2 FILE 9

SAMPLE NO 9 ETHOD 0002

REPORT NO 38

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.499	40419		1	95.7582	METHANE
2	2.592	1790	V	2	4.2418	ETHANE
3	2.794	347	V			
	TOTAL	42556			100	

CHROMATOGRAM 101 MEMORIZED

APPENDIX C

CALCULATIONS

Example Calculations for Pollutant Emissions

1. Volume of dry gas sampled corrected to standard conditions, ft^3. Note: Vm must be corrected for leakage if any leakage rates exceed La.

$$Vmstd = 17.647 \times Vm \times Y \left[\frac{Pbar + \frac{\Delta H}{13.6}}{Tm} \right]$$

2. Volume of water vapor at standard conditions, ft^3.

$$Vwstd = 0.04707 \times Vlc$$

3. Moisture content in stack gas, dimensionless.

$$Bws = \frac{Vwstd}{Vwstd + Vmstd}$$

4. Dry molecular weight of stack gas, lb/lb-mole.

$$Md = 0.44(\%CO_2) + 0.32(\%O_2) + 0.28(\%N_2 + \%CO)$$

5. Molecular weight of stack gas, lb/lb-mole.

$$Ms = Md(1 - Bws) + 18Bws$$

6. Stack velocity at stack conditions, f/s.

$$Vs = (85.49)(Cp)(avg\ \sqrt{\Delta P}) \sqrt{\frac{Ts}{(Ps)(Ms)}}$$

7. Stack gas volumetric flow rate at stack conditions, cfm.

$$Qs = 60 \times Vs \times As$$

8. Dry stack gas volumetric flow rate at standard conditions, cfm.

$$Qsstd = (17.647)\ (Qs) \left(\frac{Ps}{Ts}\right) (1 - Bws)$$

9. **Concentration in gr/dscf.**

$$Cs = (0.01543)\left(\frac{Mn}{Vmstd}\right)$$

10. **Pollutant mass emission rate, lb/h.**

$$pmr,\ lb/hr = \left(\frac{Cs}{7000}\right) x\ Qsstd\ x\ 60$$

11. **Pollutant mass emission rate, lb/mmbtu**

$$pmr,\ lb/mmbtu = \frac{(pmr, lb/hr)}{(mmbtu/hr)}$$

12. **F-factor (Fd)**

$$Fd = \frac{10^6(3.64x\%H) + (1.53x\%C) + (0.57x\%S) + (0.14x\%N) - (0.46x\%O_2)}{GCV(btu/lb)}$$

13. **F-factor, pollutant mass emission rate, lb/mmbtu**

$$= \frac{lb/dscf\ x\ F\ x\ 20.9}{(20.9 - \%\ O_2)}$$

14. **Heat input, mmbtu/hr fuel**

$$= \frac{GVC\ (btu/lb) * Feed\ Rate\ (lb/hr)}{10^6}$$

15. **Heat input, mmbtu/hr, F-factor.**

$$= \frac{Qsstd}{Fd}\ x\ ((20.9 - \%O_2) + 20.9)\ x\ 60$$

Nomenclature and Dimensions

An	=	Cross-sectional area of sampling nozzle, sq. ft.
As	=	Cross-sectional area of stack, sq.ft.
Bws	=	Proportion by volume of water vapor in the gas stream, dimensionless
Cp	=	Pitot tube coefficient, dimensionless
Cs	=	Concentration of pollutant matter in stack gas - dry basis, grains per standard cubic foot (gr/dscf)
% CO	=	Percent of carbon monoxide by volume, dry basis
$\%CO_2$	=	Percent of carbon dioxide by volume, dry basis
ΔH	=	Average pressure drop across the sampling meter flow orifice, inches of water (in. H2O)
GCV	=	Gross calorific value, btu/lb
	=	Percent of isokinetic sampling
La	=	Maximum acceptable leakage rate for either a pretest leak check or for a leak check following a component change; equal to 0.020 cubic foot per minute or 4% of the average sampling rate, whichever is less
Md	=	Dry molecular weight, lb/lb-mole
Mn	=	Total amount of pollutant matter collected, milligrams (mg)
Ms	=	Molecular weight of stack gas (wet basis), lb/lb-mole
%N2	=	Percent of nitrogen by volume, dry basis
%O2	=	Percent of oxygen by volume, dry basis
ΔP	=	Velocity head of stack gas, inches of water (in. H2O)
Pbar	=	Barometric pressure, inches of mercury (in.Hg)
Ps	=	Absolute stack gas pressure, inches of mercury (in.Hg)
Pstd	=	Gas pressure at standard conditions, inches of mercury (29.92 in.Hg)

pmr	=	Pollutant matter emission rate, pounds per hour (lb/h)
Qs	=	Volumetric flow rate - wet basis at stack conditions, actual cubic feet per minute (acfm)
Qsstd	=	Volumetric flow rate - dry basis at standard conditions, dry standard cubic feet per minute (dscfm)
Tm	=	Average temperature of dry gas meter, °R
Ts	=	Average temperature of stack gas, °R
Tstd	=	Temperature at standard conditions, (528°R)
Vlc	=	Total volume of liquid collected in impingers and silica gel, ml
Vm	=	Volume of dry gas sampled at meter conditions, cu. ft.
Vmstd	=	Volume of dry gas sampled at standard conditions, cu. ft.
Vs	=	Average stack gas velocity at stack conditions, ft/s
Vwstd	=	Volume of water vapor at standard conditions, scf
Y	=	Dry gas meter calibration factor, dimensionless
ø	=	Total sampling time, minutes

NOTE: Standard condition = 68°F and 29.92 in.Hg

EXAMPLE CALCULATIONS FOR POLLUTANT EMISSIONS

GASEOUS POLLUTANTS MEASURED BY CONTINUOUS EMISSIONS MONITORS (CEMs)

1) Concentration, part per million, dry basis:

$$ppm,\ dry = ppm,\ wet\ basis \div \left(1 - \frac{BWS,\ \%}{100}\right)$$

2) Pollutant Mass Emission Rate, pound per hour.

$$PMR,\ lb/hr = \frac{ppm,\ dry\ x\ Compound\ Molecular\ Weight}{(385.3\ x\ 10^{6})}\ x\ dscfm\ x\ 60$$

Molecular Weights of Target Compounds

TGO	=	Total Gaseous Organics	44.09
SO_2	=	Sulfur Dioxide	64.05
NO_2	=	Nitrogen Oxides	46.00
CO	=	Carbon Monoxide	28.01
BWS	=	Proportion by Volume of Water Vapor in the Gas Stream	
PMR	=	Pollutant Mass Emission Rate, Pound Per Hour	

EXAMPLE CALCULATIONS FOR POLLUTANT EMISSIONS

NIOSH/OSHA METHODS AND EPA METHOD 18

1) Sample Volume, Standard Liters (Evacuated Tank)

$$17.647 \; x \; T.V., \; liters \; x \left(\frac{Pf}{Tf} - \frac{Pi}{Ti} \right)$$

T.V.	=	Calibrated total tank volume, liters
Pf	=	Final tank pressure, in. Hg (Pbar, "Hg-Final tank vacuum, "Hg)
Pi	=	Initial tank pressure, in. Hg (Pbar, "Hg-Initial tank vacuum, "Hg)
Tf	=	Final tank temperature, ^{o}R
Ti	=	Initial tank temperature, ^{o}R

2) Sample Volume, Standard Liters (VOST Meter)

$$17.647 \; x \; Vm \; x \; Y \quad \frac{(Pbar, \; "Hg)}{(Tm, \; ^{0}R)}$$

Vm	=	Volume of gas metered, liters
Pbar, "Hg	=	Barometric pressure, inches of mercury
Tm, ^{o}R	=	Average meter temperature, ^{o}Rankin
Y	=	Gamma factor of Vost Meter

3) Concentration, micrograms per liter

$$ug/l = Total \; ug/sample \; \div \; Vmstd, \; liters$$

EXAMPLE CALCULATIONS FOR POLLUTANT EMISSIONS

NIOSH/OSHA METHODS AND EPA METHOD 18

4) Concentration, part per million, wet basis

$$ppm,\ wet = \frac{ug/liter \times 24.04\ liter/mole}{MW,\ analyte}$$

5) Concentration, part per million (ppm), dry basis

$$ppm,\ dry = ppm,\ wet/(1 - H_2O\%/100)$$

6) Mass Emission Rate, pound per hour

$$MR,\ lb/hr = \frac{ppm,\ dry \times MW,\ analyte}{(385.3 \times 10^6)} \times Qsstd,\ dscfm \times 60\ \text{min}$$

mg	=	Micrograms, total
MW	=	Molecular weight of target analyte
ppm	=	Part per million
Qsstd, dscfm	=	Volumetric stack gas flow rate, dry standard cubic feet per minute
MR, lb/hr	=	Mass emission rate, pound per hour
Molar volume	=	385.3 ft^3/lb mole
PPM by Volume	=	$\frac{ft^3}{10^6 ft^3}$, volume ratio

4

PACIFIC ENVIRONMENTAL SERVICES, INC.	Project No. 4532.020	Page 1 of 3
	Client: USEPA - Lasco Panel Products	
	Location: Florence, KY	
Prepared By: KEkas	Date: 8/15	Checked By:
Sheet Title: Sample Calculations		

Main Exhaust[1] - Condition 1, Run 1

1) Concentration, ppm, dry basis:

$$ppm_{dry} = \frac{ppm_{wet}}{1 - \frac{BWS,\%}{100}} \qquad ppm_{dry} = \frac{2965.4}{1 - \frac{1.6}{100}} = 3013.6\,ppm$$

2) Concentration as Styrene, ppm_{dry}

$$ppm_{styrene} = ppm_{dry} \times responsefactor_{styrene}$$

$$ppm_{styrene} = 3013.6 \times 0.4263 = 1284.7\,ppm_{styrene}$$

3) Styrene Mass Emission Rate (MR), lb/hr

$$MR_{stryene} = \frac{ppm_{dry} \times MolecularWeight_{compound}}{385 \times 10^6} \times flowrate_{dscfm} \times 60$$

$$MR_{stryene} = \frac{1284.7 \times 104.15}{385 \times 10^6} \times 3378 \times 60 = 70.44 \text{ lb/hr, as styrene}$$

Natural Draft Opening (NDO) Adjustment Calculations[2] - NDO_A, Condition 1, Run 1

1) Flow Factor, %

$$flowfactor = \frac{NDO_{A,cjm}}{(NDO_A + NDO_B + NDO_C + NDO_D)_{Cfm}}$$

$$flowfactor = \frac{7334}{(7334 + 138 + 665 + 531)} = 0.84 = 8.4\%$$

2) Adjusted Concentration (AC), ppm

[1] Note that the room exhaust, auxiliary exhaust and Natural Draft Opening (NDO) calculations are the same as the above examples for main exhaust.

[2] Note that the NDO adjustment calculations apply to NDO_A, NDO_B, NDO_C and NDO_D.

$$AC_{ppm} = \frac{\sum_{run1}^{totalruns} Concentration_{ppm}}{run_{total}} \times flowfactor$$

$$AC_{ppm} = \frac{(6.1 + 5.0 + 6.9)}{3} \times .84 = 5.0 ppm$$

3) Total NDO Adjusted Concentration, ppm_{wet}

$$NDO_{total} = \sum_{A}^{D} AC_{ppm}$$

$$NDO_{total} = 5.0 + 0.1 + 0.7 + 0.6 = 6.5 ppm_{wet}$$

<u>Concentration adjustment and conversion calculations</u>

1) Concentration as propane, ppm_{wet}

= Total ppm_{wet} - $NDO_{adj,\ ppm}$

= 2553.6-11.0 = 2542.6 ppm

2) Concentration conversion, propane to carbon, ppm

$C_c = C_p * K_p$ K_p=3 *(40 CFR Pt. 60, App A, Meth. 25A)*

C_c = 43.5 * 3 = 130.5 ppm

3) Concentration conversion, methane to carbon, ppm

$C_c = C_m * K_m$ K_m=1 *(40 CFR Pt. 60, App A, Meth. 25A)*

C_c = 83.1 * 1 = 83.1 ppm

4) Concentration conversion, ethane to carbon, ppm

$C_c = C_e * K_e$ K_e=2 *(40 CFR Pt. 60, App A, Meth. 25A)*

C_c = 3.1 * 2 = 6.2 ppm

PACIFIC ENVIRONMENTAL SERVICES, INC.	Project No. 4532.020	Page 3 of 3
	Client: USEPA - Lasco Panel Products	
	Location: Florence, KY	
Prepared By: BS/SAS	Date: 8/15	Checked By:
Sheet Title: Sample Calculations		

Total Overall Enclosure Exhaust, lb/hr as styrene - Condition 1, Run 1

$$MR_{overall} = (MR_{main\ exhaust} + MR_{room\ exhaust} + MR_{auxiliary\ exhaust} + MR_{NDO\ total}) \quad \text{lb/hr as styrene}$$

$$MR_{overall} = 70.44 + 13.11 + 0 - 0.38 = 83.17 \text{ lb/hr as styrene}$$

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page of
5405.003	
Client: EPA	
Location: LASCO PANEL	

Prepared By	Date	Checked By	Date	Sheet Title
Achilles	8			ENCLOSURE

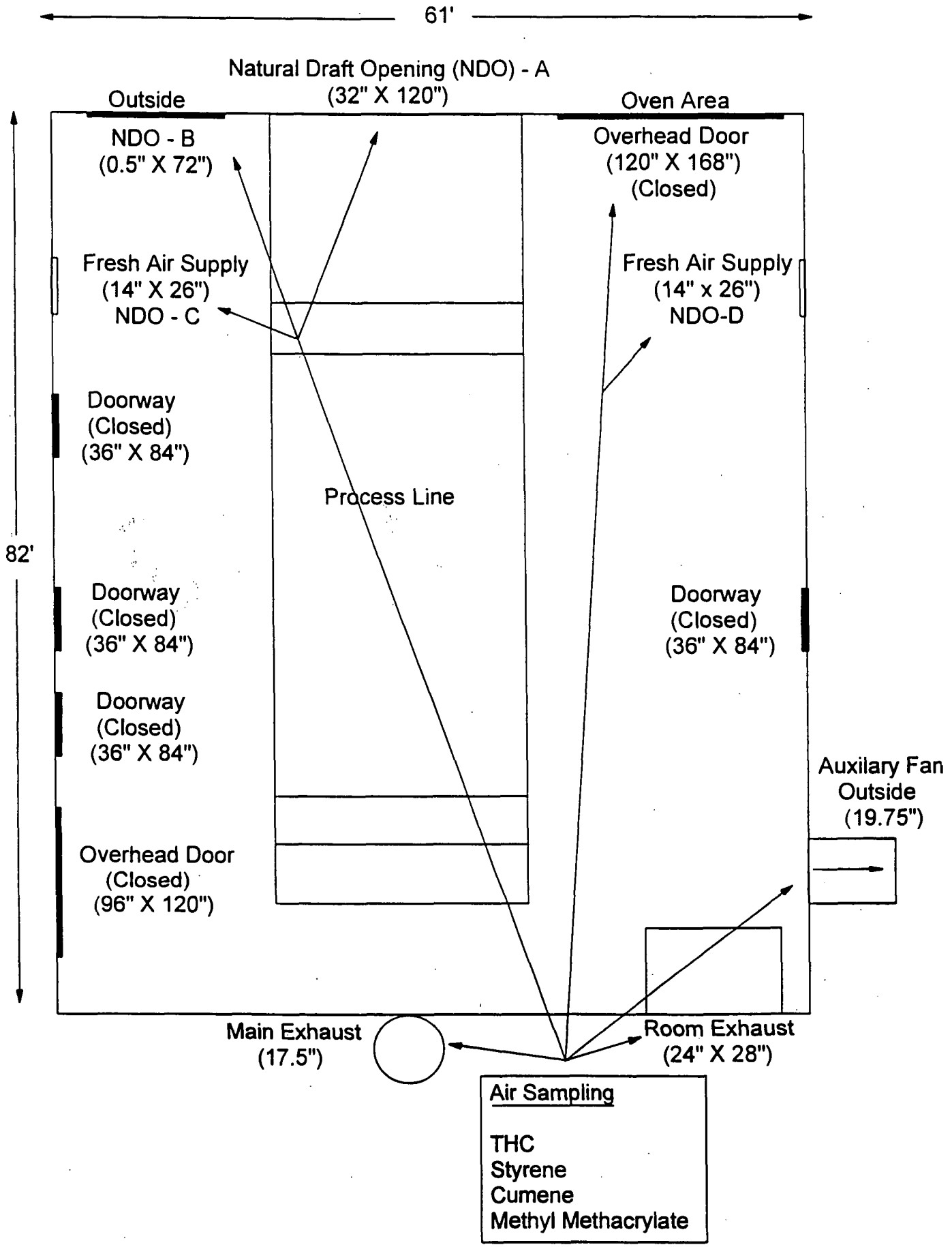
TEMPERARY TOTAL ENCLOSURE SURFACE AREA

Floor	61' × 82'	=	5002 ft²
Ceiling	61' × 82'	=	5002 ft²
Front Wall	61' × 16.7'	=	1018.7 ft²
Back Wall	61' × 16.7'	=	1018.7 ft²
L. Side Wall	82' × 16.7'	=	1368.4 ft²
R. Side Wall	82' × 16.7'	=	1368.4 ft²

TOTAL SURFACE AREA = 14,780.2 ft²

Natural Draft Openings				Equivalent Diameter
A	32" × 120"	=	26.67 ft²	5.83'
B	0.5" × 72"	=	0.25 ft²	0.56'
C	14" × 26"	=	2.53 ft²	1.80'
D	14" × 26"	=	2.53 ft²	1.80'

TOTAL NDU AREA = 31.98 ft


61'
Natural Draft Opening (NDO) - A
(32" X 120")
Outside
Oven Area
NDO - B
(0.5" X 72")
Overhead Door
(120" X 168")
(Closed)
Fresh Air Supply
(14" X 26")
NDO - C
Fresh Air Supply
(14" x 26")
NDO-D
Doorway
(Closed)
(36" X 84")
Process Line
82'
Doorway
(Closed)
(36" X 84")
Doorway
(Closed)
(36" X 84")
Doorway
(Closed)
(36" X 84")
Auxilary Fan
Outside
(19.75")
Overhead Door
(Closed)
(96" X 120")
Main Exhaust
(17.5")
Room Exhaust
(24" X 28")
Air Sampling
THC
Styrene
Cumene
Methyl Methacrylate

Condition	Run	M25A propane ppm	M25A propane to carbon ppm	GC methane ppm	GC methane to carbon ppm	GC ethane ppm	GC ethane to carbon ppm	Total carbon ppm	Total propane ppm	H2O %	Total propane dry ppm	Response factor to styrene	Total styrene ppm	M18 styrene ppm	Volumetric flow rate dscfm	Mass Rate lb/hr
1	1	118.7	356.1	282.7	282.7	7.1	14.2	59.2	19.7	1.8	20.1	0.4263	8.6		1907.0	0.27
1	2	132.3	396.9	313.3	313.3	7.7	15.4	68.2	22.7	1.8	23.2	0.4263	9.9		1924.0	0.31
1	3	128.2	384.6	307.6	307.6	7.7	15.4	61.6	20.5	1.8	20.9	0.4263	8.9		1927.0	0.28
Average		*126.4*	*379.2*	*301.2*	*301.2*	*7.5*	*15.0*	*63.0*	*21.0*	*1.8*	*21.4*	0.4263	9.1		*1919.3*	*0.28*
2	1	50.4	151.2	230.8	230.8	5.9	11.8	0.0	0.0	1.3	0.0	0.4263	0.0	0.3	1905.0	0.00
2	2	71.9	215.7	215.7	215.7	5.7	11.4	0.0	0.0	1.2	0.0	0.4263	0.0		1870.0	0.00
2	3	108.0	324.0	263.2	263.2	6.9	13.8	47.0	15.7	1.1	15.8	0.4263	6.8		1964.0	0.22
Average		*76.8*	*230.3*	*236.6*	*236.6*	*6.2*	*12.3*	*15.7*	*5.2*	*1.2*	*5.3*	0.4263	2.3		*1913.0*	*0.07*
3	1	87.9	263.7	154.9	154.9	4.2	8.4	100.4	33.5	1.1	33.8	0.4263	14.4		1855.0	0.43
3	2	118.9	356.7	276.3	276.3	6.7	13.4	67.0	22.3	1.1	22.6	0.4263	9.6	0.8	1886.0	0.29
3	3	106.4	319.2	240.9	240.9	5.9	11.8	66.5	22.2	1.1	22.4	0.4263	9.6		1894.0	0.29
Average		*104.4*	*313.2*	*224.0*	*224.0*	*5.6*	*11.2*	*78.0*	*26.0*	*1.1*	*26.3*	0.4263	11.2		*1878.3*	*0.34*
4	1	110.1	330.3	258.6	258.6	6.6	13.2	58.5	19.5	1.2	19.7	0.4263	8.4		1890.0	0.26
4	2	113.4	340.2	254.0	254.0	6.7	13.4	72.8	24.3	1.2	24.6	0.4263	10.5	12.5	1917.0	0.33
4	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average		*111.8*	*335.3*	*256.3*	*256.3*	*6.7*	*13.3*	*65.7*	*21.9*	*1.2*	*22.1*	0.4263	9.4		*1903.5*	*0.29*
5	1	149.8	449.4	339.4	339.4	9.1	18.2	91.8	30.6	2.8	31.5	0.4263	13.4	1.4	1821.0	0.40
5	2	164.1	492.3	317.4	317.4	8.6	17.2	157.7	52.6	2.5	53.9	0.4263	23.0		1934.0	0.72
5	3	139.8	419.4	274.1	274.1	7.2	14.4	130.9	43.6	2.2	44.6	0.4263	19.0		1958.0	0.60
Average		*151.2*	*453.7*	*310.3*	*310.3*	*8.3*	*16.6*	*126.8*	*42.3*	*2.5*	*43.4*	0.4263	18.5		*1904.3*	*0.57*
6	1	156.3	468.9	216.1	216.1	5.8	11.6	241.2	80.4	2.2	82.2	0.4263	35.0	1.5	1948.0	1.11
6	2	161.4	484.2	282.4	282.4	7.6	15.2	186.6	62.2	2.2	63.6	0.4263	27.1		1942.0	0.85
6	3	167.2	501.6	277.9	277.9	7.4	14.8	208.9	69.6	2.2	71.2	0.4263	30.4		1923.0	0.95
Average		*161.6*	*484.9*	*258.8*	*258.8*	*6.9*	*13.9*	*212.2*	*70.7*	*2.2*	*72.3*	0.4263	30.8		*1937.7*	*0.97*
7	1	146.3	438.9	304.6	304.6	8.1	16.2	118.1	39.4	1.2	39.8	0.4263	17.0	0.2	1905.0	0.53
7	2	121.8	365.4	200.9	200.9	5.4	10.8	153.7	51.2	1.6	52.1	0.4263	22.2		1898.0	0.68
7	3	109.9	329.7	184.3	184.3	4.8	9.6	135.8	45.3	1.9	46.1	0.4263	19.7		1905.0	0.61
Average		*126.0*	*378.0*	*229.9*	*229.9*	*6.1*	*12.2*	*135.9*	*45.3*	*1.6*	*46.0*	0.4263	19.6		*1902.7*	*0.61*
8	1	112.9	338.7	331.8	331.8	8.8	17.6	0.0	0.0	1.7	0.0	0.4263	0.0		1926.0	0.00
8	2	131.5	394.5	326.1	326.1	8.3	16.6	51.8	17.3	1.7	17.6	0.4263	7.5	0.2	1927.0	0.23
8	3	110.8	332.4	291.2	291.2	7.5	15.0	26.2	8.7	1.7	8.9	0.4263	3.8		1929.0	0.12
Average		*118.4*	*355.2*	*316.4*	*316.4*	*8.2*	*16.4*	*26.0*	*8.7*	*1.7*	*8.8*	0.4263	3.8		*1927.3*	*0.12*
9	1	67.0	201.0	123.1	123.1	3.4	6.8	71.1	23.7	4.5	24.8	0.4263	10.6	1.0	1839.0	0.32
10	1	110.9	332.7	190.9	190.9	4.9	9.8	132.0	44.0	0.2	44.1	0.4263	18.8		1909.0	0.58
11	1	59.2	177.6	162.2	162.2	4.5	9.0	6.4	2.1	0.5	2.1	0.4263	0.9		1979.0	0.03

Condition	Run	M25A propane ppm	M25A propane to carbon ppm	GC methane ppm	GC methane to carbon ppm	GC ethane ppm	GC ethane to carbon ppm	Total carbon ppm	Total propane ppm	H2O %	Total propane dry ppm	Response factor to styrene	Total styrene ppm	M18 styrene ppm	Volumetric flow rate dscfm	Mass Rate lb/hr
11	2	67.8	203.4	151.1	151.1	4.2	8.4	43.9	14.6	0.5	14.7	0.4263	6.3	0.2	2001.0	0.20
11	3	71.5	214.5	168.4	168.4	4.5	9.0	37.1	12.4	0.5	12.4	0.4263	5.3		1988.0	0.17
Average		*66.2*	*198.5*	*160.6*	*160.6*	*4.4*	*8.8*	*29.1*	*9.7*	*0.5*	*9.8*	0.4263	4.2		*1989.3*	*0.13*
12	1	103.5	310.5	207.4	207.4	6.1	12.2	90.9	30.3	3.0	31.2	0.4263	13.3		3482.0	0.75
12	3	130.3	390.9	280.3	280.3	8.4	16.8	93.8	31.3	3.0	32.2	0.4263	13.7	1.1	3511.0	0.78
12	4	112.9	338.7	256.8	256.8	7.8	15.6	66.3	22.1	3.0	22.8	0.4263	9.7		3474.0	0.55
Average		*115.6*	*346.7*	*248.2*	*248.2*	*7.4*	*14.9*	*83.7*	*27.9*	*3.0*	*28.8*	0.4263	12.3		*3489.0*	*0.69*
13	1	124.6	373.8	267.8	267.8	8.2	16.4	89.6	29.9	1.0	30.2	0.4263	12.9		3560.0	0.74
13	2	130.8	392.4	291.3	291.3	8.8	17.6	83.5	27.8	1.6	28.3	0.4263	12.1	1.4	3530.0	0.69
13	3	121.8	365.4	235.5	235.5	7.1	14.2	115.7	38.6	1.0	39.0	0.4263	16.6		3545.0	0.96
Average		*125.7*	*377.2*	*264.9*	*264.9*	*8.0*	*16.1*	*96.3*	*32.1*	*1.2*	*32.5*	0.4263	13.8		*3545.0*	*0.80*

Conversion Summary Sheet

Condition	Run	25A propane ppm	25A propane to carbon ppm	GC methane ppm	GC methane to carbon ppm	GC ethane ppm	GC ethane to carbon ppm	Total carbon ppm	Total propane ppm	H2O %	Total propane dry ppm	Response factor to styrene	Total styrene ppm	M18 styrene ppm	Volumetric flow rate dscfm	Mass Rate lb/hr
1	1	43.5	130.5	83.1	83.1	3.1	6.2	41.2	13.7	2.7	14.1	0.4263	6.0	0.0	1836.0	0.18
1	2	41.7	125.1	91.2	91.2	3.3	6.6	27.3	9.1	2.3	9.3	0.4263	4.0		1893.0	0.12
1	3	39.5	118.5	87.0	87.0	3.1	6.2	25.3	8.4	1.9	8.6	0.4263	3.7		1878.0	0.11
Average		*41.6*	*124.7*	*87.1*	*87.1*	*3.2*	*6.3*	*31.3*	*10.4*	*2.3*	*10.7*	0.4263	4.5		*1869.0*	*0.14*
2	1	43.5	130.5	81.4	81.4	3.0	6.0	43.1	14.4	1.4	14.6	0.4263	6.2		1825.0	0.18
2	2	38.1	114.3	77.0	77.0	9.9	19.8	17.5	5.8	1.4	5.9	0.4263	2.5	0.2	1769.0	0.07
2	3	34.6	103.8	85.0	85.0	3.2	6.4	12.4	4.1	1.4	4.2	0.4263	1.8		1807.0	0.05
Average		*38.7*	*116.2*	*81.1*	*81.1*	*5.4*	*10.7*	*24.3*	*8.1*	*1.4*	*8.2*	0.4263	3.5		*1800.3*	*0.10*
3	1	185.7	557.1	50.1	50.1	2.6	5.2	501.8	167.3	1.1	169.1	0.4263	72.1	0.2	1910.0	2.24
3	2	189.1	567.3	49.4	49.4	2.6	5.2	512.7	170.9	1.1	172.8	0.4263	73.7		1852.0	2.21
3	3	204.7	614.1	48.7	48.7	2.5	5.0	560.4	186.8	1.1	188.9	0.4263	80.5		1871.0	2.45
Average		*193.2*	*579.5*	*49.4*	*49.4*	*2.6*	*5.1*	*525.0*	*175.0*	*1.1*	*176.9*	0.4263	75.4		*1877.7*	*2.30*
4	1	231.0	693.0	55.3	55.3	2.7	5.4	632.3	210.8	1.1	213.1	0.4263	90.8	0.2	1897.0	2.80
4	2	226.6	679.8	58.9	58.9	3.0	6.0	614.9	205.0	1.2	207.5	0.4263	88.4		1850.0	2.66
4	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average		*228.8*	*686.4*	*57.1*	*57.1*	*2.9*	*5.7*	*623.6*	*207.9*	*1.2*	*210.3*	0.4263	89.6		*1873.5*	*2.73*
5	1	125.6	376.8	41.2	41.2	1.8	3.6	332.0	110.7	2.5	113.5	0.4263	48.4		1859.0	1.46
5	2	121.6	364.8	57.9	57.9	2.2	4.4	302.5	100.8	2.5	103.4	0.4263	44.1	23.6	1890.0	1.35
5	3	118.1	354.3	30.9	30.9	1.3	2.6	320.8	106.9	2.5	109.7	0.4263	46.8		1882.0	1.43
Average		*121.8*	*365.3*	*43.3*	*43.3*	*1.8*	*3.5*	*318.4*	*106.1*	*2.5*	*108.9*	0.4263	46.4		*1877.0*	*1.41*
6	1	111.7	335.1	37.8	37.8	1.6	3.2	294.1	98.0	2.3	100.3	0.4263	42.8	22.7	1814.0	1.26
6	2	139.9	419.7	59.3	59.3	2.3	4.6	355.8	118.6	2.1	121.1	0.4263	51.6		1835.0	1.54
6	3	131.0	393.0	51.3	51.3	1.9	3.8	337.9	112.6	1.9	114.8	0.4263	48.9		1837.0	1.46
Average		*127.5*	*382.6*	*49.5*	*49.5*	*1.9*	*3.9*	*329.3*	*109.8*	*2.1*	*112.1*	0.4263	47.8		*1828.7*	*1.42*
7	1	165.6	496.8	49.8	49.8	1.9	3.8	443.2	147.7	1.3	149.7	0.4263	63.8		1746.0	1.81
7	2	168.0	504.0	41.3	41.3	1.6	3.2	459.5	153.2	1.3	155.2	0.4263	66.2	34.1	1829.0	1.96
7	3	161.3	483.9	39.5	39.5	1.6	3.2	441.2	147.1	1.3	149.0	0.4263	63.5		1833.0	1.89
Average		*165.0*	*494.9*	*43.5*	*43.5*	*1.7*	*3.4*	*448.0*	*149.3*	*1.3*	*151.3*	0.4263	64.5		*1802.7*	*1.89*
8	1	62.4	187.2	59.0	59.0	2.9	5.8	122.4	40.8	1.3	41.3	0.4263	17.6	7.2	1918.0	0.55
8	2	64.4	193.2	62.7	62.7	2.8	5.6	124.9	41.6	3.1	43.0	0.4263	18.3		1883.0	0.56
8	3	101.1	303.3	53.0	53.0	2.7	5.4	244.9	81.6	4.9	85.8	0.4263	36.6		1854.0	1.10
Average		*76.0*	*227.9*	*58.2*	*58.2*	*2.8*	*5.6*	*164.1*	*54.7*	*3.1*	*56.4*	0.4263	24.1		*1885.0*	*0.74*
9	1	222.7	668.1	36.7	36.7	1.5	3.0	628.4	209.5	4.5	219.3	0.4263	93.5		1763.0	2.68
10	1	189.5	568.5	59.6	59.6	2.5	5.0	503.9	168.0	0.2	168.3	0.4263	71.7	48.6	1851.0	2.16
11	1	269.2	807.6	66.9	66.9	2.9	5.8	734.9	245.0	0.3	245.7	0.4263	104.7	18.9	1872.0	3.18

Condition	Run	25A propane ppm	25A propane to carbon ppm	GC methane ppm	GC methane to carbon ppm	GC ethane ppm	GC ethane to carbon ppm	Total carbon ppm	Total propane ppm	H2O %	Total propane dry ppm	Response factor to styrene	Total styrene ppm	M18 styrene ppm	Volumetric flow rate dscfm	Mass Rate lb/hr
11	2	283.6	850.8	45.2	45.2	1.9	3.8	801.8	267.3	0.5	268.6	0.4263	114.5		1823.0	3.39
11	3	273.3	819.9	62.5	62.5	2.5	5.0	752.4	250.8	1.2	253.8	0.4263	108.2		1843.0	3.24
Average		*275.4*	*826.1*	*58.2*	*58.2*	*2.4*	*4.9*	*763.0*	*254.3*	*0.7*	*256.1*	0.4263	109.2		*1846.0*	*3.27*
12	1	240.9	722.7	54.8	54.8	2.8	5.6	662.3	220.8	0.5	221.9	0.4263	94.6	22.5	1920.0	2.95
12	3	280.5	841.5	48.5	48.5	2.5	5.0	788.0	262.7	1.6	266.9	0.4263	113.8		1842.0	3.40
12	4	284.3	852.9	59.3	59.3	3.1	6.2	787.4	262.5	2.7	269.7	0.4263	115.0	68.2	1818.0	3.39
Average		*268.6*	*805.7*	*54.2*	*54.2*	*2.8*	*5.6*	*745.9*	*248.6*	*1.6*	*252.7*	0.4263	107.7		*1860.0*	*3.25*
13	1	331.8	995.4	62.3	62.3	3.2	6.4	926.7	308.9	2.2	315.8	0.4263	134.6	85.2	1804.0	3.94
13	2	340.3	1020.9	58.7	58.7	3.0	6.0	956.2	318.7	2.2	325.9	0.4263	138.9		1823.0	4.11
13	3	334.0	1002.0	41.2	41.2	2.1	4.2	956.6	318.9	2.2	326.0	0.4263	139.0		1814.0	4.09
Average		*335.4*	*1006.1*	*54.1*	*54.1*	*2.8*	*5.5*	*946.5*	*315.5*	*2.2*	*322.6*	0.4263	137.5		*1813.7*	*4.05*

Condition	Run	H2O %	Conc. propane wet ppm	Conc. propane dry ppm	Response factor to styrene	Conc. as styrene ppm	M18 styrene ppm	Volumetric flow rate dscfm	Mass Rate lb/hr
5	1	2.1	148.7	151.9	0.4263	64.8		4780.0	5.02
5	2	2.1	142.3	145.4	0.4263	62.0	34.5	4677.0	4.70
5	3	2.1	149.1	152.3	0.4263	64.9		4541.0	4.79
Average		*2.1*	*146.7*	*149.8*	0.4263	*63.9*		*4666.0*	*4.84*
12	1	1.7	183.0	186.2	0.4263	79.4	49.0	4694.0	6.05
12	3	1.6	147.1	149.5	0.4263	63.7		4731.0	4.89
12	4	1.6	147.4	149.8	0.4263	63.9	40.0	4547.0	4.71
Average		*1.6*	*159.2*	*161.8*	0.4263	*69.0*		*4657.3*	*5.22*
13	1	1.6	128.8	130.9	0.4263	55.8	30.5	4536.0	4.11
13	2	1.7	123.6	125.7	0.4263	53.6		4471.0	3.89
13	3	1.7	129.0	131.2	0.4263	55.9		4529.0	4.11
Average		*1.7*	*127.1*	*129.3*	0.4263	*55.1*		*4512.0*	*4.04*

Condition	Run	H2O %	Conc. propane wet ppm	Conc. propane dry ppm	Response factor to styrene	Conc. as styrene ppm	M18 styrene ppm	Volumetric flow rate dscfm	Mass Rate lb/hr
1	1	1.6	2965.4	3013.6	0.4263	1284.7		3378.0	70.44
1	2	3.5	2730.4	2829.4	0.4263	1206.2		3030.0	59.32
1	3	4.1	2798.6	2918.2	0.4263	1244.0	673.9	2804.0	56.62
Average		*3.1*	*2831.5*	2921.0	0.4263	*1245.0*		*3070.7*	*62.13*
2	1	1.5	2553.6	2592.5	0.4263	1105.2	510.9	3173.0	56.92
2	2	0.8	2562.8	2583.5	0.4263	1101.3		3105.0	55.50
2	3	0.9	2378.0	2399.6	0.4263	1022.9		3333.0	55.34
Average		*1.1*	*2498.1*	2525.1	0.4263	*1076.5*		*3203.7*	*55.92*
3	1	1.0	739.2	746.7	0.4263	318.3	189.4	3526.0	18.22
3	2	0.9	738.1	744.8	0.4263	317.5	176.0	3414.0	17.59
3	3	1.1	698.6	706.4	0.4263	301.1	129.2	3424.0	16.74
Average		*1.0*	*725.3*	732.6	0.4263	*312.3*		*3454.7*	*17.52*
4	1	0.9	682.8	689.0	0.4263	293.7		3846.0	18.34
4	2	1.0	687.6	694.5	0.4263	296.1	171.6	3823.0	18.37
4	3	NA	NA	NA	NA	NA	NA	NA	NA
Average		*1.0*	*685.2*	691.8	0.4263	*294.9*		*3834.5*	*18.35*
5	1	2.0	476.0	485.7	0.4263	207.1	111.3	3345.0	11.24
5	2	2.1	426.9	436.1	0.4263	185.9		3314.0	10.00
5	3	2.4	413.5	423.7	0.4263	180.6		3308.0	9.70
Average		*2.2*	*438.8*	448.5	0.4263	*191.2*		*3322.3*	*10.31*
6	1	2.2	861.0	880.4	0.4263	375.3		3513.0	21.40
6	2	2.3	868.0	888.4	0.4263	378.7	211.0	3449.0	21.20
6	3	1.9	877.6	894.6	0.4263	381.4		3488.0	21.59
Average		*2.1*	*868.9*	887.8	0.4263	*378.5*		*3483.3*	*21.40*
7	1	1.8	717.5	730.7	0.4263	311.5	143.3	3585.0	18.12
7	2	1.5	859.4	872.5	0.4263	371.9		3593.0	21.69
7	3	1.4	876.6	889.0	0.4263	379.0	174.7	3608.0	22.20
Average		*1.6*	*817.8*	830.8	0.4263	*354.1*		*3595.3*	*20.67*
8	1	1.2	612.8	620.2	0.4263	264.4	155.4	3724.0	15.98
8	2	1.5	622.3	631.8	0.4263	269.3		3679.0	16.08
8	3	1.5	667.9	678.1	0.4263	289.1		3661.0	17.18
Average		*1.4*	*634.3*	643.3	0.4263	*274.3*		*3688.0*	*16.41*
9	1	1.6	609.3	619.2	0.4263	264.0	158.6	3624.0	15.53
10	1	1.4	600.9	609.4	0.4263	259.8		3623.0	15.28
11	1	1.4	547.5	555.3	0.4263	236.7	124.0	3672.0	14.11
11	2	1.7	558.3	568.0	0.4263	242.1	114.9	3652.0	14.35
11	3	1.6	561.2	570.3	0.4263	243.1		3581.0	14.13
Average		*1.6*	*555.7*	564.5	0.4263	*240.7*		*3635.0*	*14.20*
12	1	1.7	368.0	374.4	0.4263	159.6	87.0	3459.0	8.96
12	3	1.6	313.5	318.6	0.4263	135.8	82.6	3364.0	7.42
12	4	1.1	304.9	308.3	0.4263	131.4		3305.0	7.05
Average		*1.5*	*328.8*	333.7	0.4263	*142.3*		*3376.0*	*7.81*
13	1	1.4	194.4	197.2	0.4263	84.0		3362.0	4.59
13	2	1.7	183.8	187.0	0.4263	79.7	47.5	3358.0	4.34
13	3	1.9	188.5	192.2	0.4263	81.9		3325.0	4.42
Average		*1.7*	*188.9*	192.1	0.4263	*81.9*		*3348.3*	*4.45*

Condition	Run	H2O %	Conc. propane wet ppm	Conc. propane dry ppm	Response factor to styrene	Conc. as styrene ppm	M18 styrene ppm	Volumetric flow rate dscfm	Mass Rate lb/hr
1	1	1.9	380.5	387.9	0.4263	165.3		4886.0	13.11
1	2	1.6	353.2	358.9	0.4263	153.0		4483.0	11.13
1	3	1.6	351.3	357.0	0.4263	152.2	52.8	4644.0	11.47
Average		*1.7*	*361.7*	*367.9*	0.4263	*156.9*		*4671.0*	*11.91*
2	1	1.1	324.1	327.7	0.4263	139.7	84.5	4637.0	10.51
2	2	1.0	433.9	438.3	0.4263	186.8		4983.0	15.11
2	3	1.1	419.4	424.1	0.4263	180.8		5062.0	14.85
Average		*1.1*	*392.5*	*396.7*	0.4263	*169.1*		*4894.0*	*13.49*
3	1	0.8	112.2	113.1	0.4263	48.2	24.3	4961.0	3.88
3	2	0.9	130.1	131.3	0.4263	56.0		4950.0	4.50
3	3	0.8	127.5	128.5	0.4263	54.8		4974.0	4.42
Average		*0.8*	*123.3*	*124.3*	0.4263	*53.0*		*4961.7*	*4.27*
4	1	0.9	109.2	110.2	0.4263	47.0	1.1	4846.0	3.69
4	2	0.9	118.4	119.5	0.4263	50.9		4886.0	4.04
4	3	NA	NA	Na	NA	NA	NA	NA	NA
Average		*0.9*	*113.8*	*114.8*	0.4263	*49.0*		*4866.0*	*3.87*
5	1	2.1	113.5	115.9	0.4263	49.4	29.6	4402.0	3.53
5	2	2.3	130.9	134.0	0.4263	57.1		4297.0	3.98
5	3	2.2	123.1	125.9	0.4263	53.7		4619.0	4.02
Average		*2.2*	*122.5*	*125.3*	0.4263	*53.4*		*4439.3*	*3.85*
6	1	2.2	164.2	167.9	0.4263	71.6	37.1	4663.0	5.42
6	2	2.2	146.0	149.3	0.4263	63.6		4868.0	5.03
6	3	1.9	113.6	115.8	0.4263	49.4		4920.0	3.94
Average		*2.1*	*141.3*	*144.3*	0.4263	*61.5*		*4817.0*	*4.80*
7	1	1.1	98.1	99.2	0.4263	42.3	14.5	4772.0	3.28
7	2	0.8	104.4	105.2	0.4263	44.9		4979.0	3.63
7	3	1.0	101.7	102.7	0.4263	43.8		4753.0	3.38
Average		*1.0*	*101.4*	*102.4*	0.4263	*43.6*		*4834.7*	*3.43*
8	1	1.0	185.0	186.9	0.4263	79.7	37.9	5144.0	6.65
8	2	1.0	174.9	176.7	0.4263	75.3		5272.0	6.44
8	3	1.0	143.1	144.5	0.4263	61.6		5013.0	5.01
Average		*1.0*	*167.7*	*169.4*	0.4263	*72.2*		*5143.0*	*6.04*
9	1	0.8	79.2	79.8	0.4263	34.0	21.0	4728.0	2.61
10	1	0.6	66.1	66.5	0.4263	28.3	5.5	4597.0	2.12
11	1	0.9	116.3	117.4	0.4263	50.0	18.0	4694.0	3.81
11	2	0.9	95.2	96.1	0.4263	41.0		4557.0	3.03
11	3	0.8	88.2	88.9	0.4263	37.9	8.4	4863.0	2.99
Average		*0.9*	*99.9*	*100.8*	0.4263	*43.0*		*4704.7*	*3.28*
12	1	1.6	152.1	154.6	0.4263	65.9		4541.0	4.86
12	3	1.6	133.2	135.4	0.4263	57.7		4610.0	4.32
12	4	1.7	129.6	131.8	0.4263	56.2		4350.0	3.97
Average		*1.6*	*138.3*	*140.6*	0.4263	*59.9*		*4500.3*	*4.38*
13	1	1.8	100.3	102.1	0.4263	43.5	23.1	4465.0	3.16
13	2	1.8	104.5	106.4	0.4263	45.4		4412.0	3.25
13	3	1.6	106.9	108.6	0.4263	46.3		4447.0	3.34
Average		*1.7*	*103.9*	*105.7*	0.4263	*45.1*		*4441.3*	*3.25*

NDO & Total Encl. Mass rts.

Condition	Run	Total NDO Adj. Conc. ppm, wet	Avg. H20 %	Total NDO Adj. Conc. ppm, dry	Total NDO as Styrene ppm	Total Flow data dscfm	NDO Mass rt. lb/hr, sty.	M. Exhaust Mass rt. lb/hr, sty.	R. Exhaust Mass rt. lb/hr, sty.	A. Exhaust Mass rt. lb/hr, sty.	Total Overall Encl. Exhaust lb/hr, sty.
1	1	6.5	1.9%	6.6	2.8	8264.0	0.38	70.44	13.11	NA	83.17
1	2	6.5	1.9%	6.6	2.8	7513.0	0.34	59.32	11.13	NA	70.11
1	3	6.5	1.9%	6.6	2.8	7448.0	0.34	56.62	11.47	NA	67.75
Average		*6.5*	*1.9%*	*6.6*	*2.8*	*7741.7*	*0.35*	*62.13*	*11.91*	*NA*	*73.68*
2	1	11.6	1.9%	11.8	5.1	7810.0	0.64	56.92	10.51	NA	66.79
2	2	11.6	1.9%	11.8	5.1	8088.0	0.66	55.50	15.11	NA	69.95
2	3	11.6	1.9%	11.8	5.1	8395.0	0.69	55.34	14.85	NA	69.50
Average		*11.6*	*1.9%*	*11.8*	*5.1*	*8097.7*	*0.66*	*55.92*	*13.49*	*NA*	*68.75*
3	1	10.8	1.9%	11.1	4.7	8487.0	0.65	18.22	3.88	NA	21.45
3	2	10.8	1.9%	11.1	4.7	8364.0	0.64	17.59	4.50	NA	21.45
3	3	10.8	1.9%	11.1	4.7	8398.0	0.64	16.74	4.42	NA	20.52
Average		*10.8*	*1.9%*	*11.1*	*4.7*	*8416.3*	*0.64*	*17.52*	*4.27*	*NA*	*21.14*
4	1	13.0	1.9%	13.3	5.7	8692.0	0.80	18.34	3.69	NA	21.23
4	2	13.0	1.9%	13.3	5.7	8709.0	0.80	18.37	4.04	NA	21.61
4	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average		*13.0*	*1.9%*	*13.3*	*5.7*	*8700.5*	*0.80*	*18.35*	*3.87*	*NA*	*21.42*
5	1	2.1	1.9%	2.1	0.9	12527.0	0.18	11.24	3.53	5.02	19.61
5	2	2.1	1.9%	2.1	0.9	12288.0	0.18	10.00	3.98	4.70	18.51
5	3	2.1	1.9%	2.1	0.9	12468.0	0.18	9.70	4.02	4.79	18.32
Average		*2.1*	*1.9%*	*2.1*	*0.9*	*12427.7*	*0.18*	*10.31*	*3.85*	*4.84*	*18.81*
6	1	3.4	1.9%	3.5	1.5	8176.0	0.20	21.40	5.42	NA	26.62
6	2	3.4	1.9%	3.5	1.5	8317.0	0.20	21.20	5.03	NA	26.03
6	3	3.4	1.9%	3.5	1.5	8408.0	0.20	21.59	3.94	NA	25.33
Average		*3.4*	*1.9%*	*3.5*	*1.5*	*8300.3*	*0.20*	*21.40*	*4.80*	*NA*	*25.99*
7	1	2.3	1.9%	2.3	1.0	8357.0	0.14	18.12	3.28	NA	21.26
7	2	2.3	1.9%	2.3	1.0	8572.0	0.14	21.69	3.63	NA	25.18
7	3	2.3	1.9%	2.3	1.0	8361.0	0.14	22.20	3.38	NA	25.44
Average		*2.3*	*1.9%*	*2.3*	*1.0*	*8430.0*	*0.14*	*20.67*	*3.43*	*NA*	*23.96*
8	1	7.5	1.9%	7.6	3.2	8868.0	0.47	15.98	6.65	NA	22.17
8	2	7.5	1.9%	7.6	3.2	8951.0	0.47	16.08	6.44	NA	22.06
8	3	7.5	1.9%	7.6	3.2	8674.0	0.46	17.18	5.01	NA	21.73
Average		*7.5*	*1.9%*	*7.6*	*3.2*	*8831.0*	*0.47*	*16.41*	*6.04*	*NA*	*21.99*

[redacted]NDO [redacted]al E[redacted]Mass

Condition	Run	Total NDO Adj. Conc. ppm, wet	Avg. H20 %	Total NDO Adj. Conc. ppm, dry	Total NDO as Styrene ppm	Total Flow data dscfm	NDO Mass rt. lb/hr, sty.	M. Exhaust Mass rt. lb/hr, sty.	R. Exhaust Mass rt. lb/hr, sty.	A. Exhaust Mass rt. lb/hr, sty.	Total Overall Encl. Exhaust lb/hr, sty.
9	1	3.1	1.9%	3.2	1.3	8352.0	0.18	15.53	2.61	NA	17.96
10	1	3.5	1.9%	3.6	1.5	8220.0	0.21	15.28	2.12	NA	17.19
								0.00	0.00		
11	1	4.7	1.9%	4.8	2.1	8366.0	0.28	14.11	3.81	NA	17.64
11	2	4.7	1.9%	4.8	2.1	8209.0	0.27	14.35	3.03	NA	17.11
11	3	4.7	1.9%	4.8	2.1	8444.0	0.28	14.13	2.99	NA	16.84
Average		*4.7*	*1.9%*	*4.8*	*2.1*	*8339.7*	*0.28*	*14.20*	*3.28*	*NA*	*17.20*
12	1	9.8	1.9%	10.0	4.3	12694.0	0.88	8.96	4.86	6.05	18.98
12	3	9.8	1.9%	10.0	4.3	12705.0	0.88	7.42	4.32	4.89	15.75
12	4	9.8	1.9%	10.0	4.3	12202.0	0.85	7.05	3.97	4.71	14.88
Average		*9.8*	*1.9%*	*10.0*	*4.3*	*12533.7*	*0.87*	*7.81*	*4.38*	*5.22*	*16.54*
13	1	8.8	1.9%	9.0	3.8	12363.0	0.77	4.59	3.16	4.11	11.08
13	2	8.8	1.9%	9.0	3.8	12241.0	0.76	4.34	3.25	3.89	10.72
13	3	8.8	1.9%	9.0	3.8	12301.0	0.77	4.42	3.34	4.11	11.11
Average		*8.8*	*1.9%*	*9.0*	*3.8*	*12301.7*	*0.77*	*4.45*	*3.25*	*4.04*	*10.97*

NDO Adjustments

		NDO - A			NDO - B			NDO - C			NDO - D			Total NDO
Condition	Run	flow factor	Avg. Conc ppm	Adj Conc ppm	flow factor	Avg. Con ppm	Adj Conc ppm	flow factor	Avg. Con ppm	Adj Conc ppm	flow factor	Avg. Con ppm	Adj Conc ppm	Adj. Conc. ppm, wet
1	1	0.84	6.0	5.0	0.02	6.0	0.1	0.08	9.5	0.7	0.07	9.5	0.6	6.5
2	1	0.82	13.4	11.0	0.02	4.4	0.1	0.09	3.3	0.3	0.08	3.3	0.3	11.6
3	1	0.81	12.8	10.4	0.02	7.5	0.2	0.08	1.7	0.1	0.09	1.7	0.1	10.8
4	1	0.82	15.6	12.7	0.02	1.6	0.0	0.08	1.7	0.1	0.08	1.7	0.1	13.0
5	1	0.87	2.3	2.0	0.01	1.3	0.0	0.07	0.6	0.0	0.05	0.6	0.0	2.1
6	1	0.84	3.4	2.8	0.01	14.1	0.1	0.07	3.4	0.2	0.08	3.4	0.3	3.4
7	1	0.83	2.4	2.0	0.01	2.9	0.0	0.08	1.6	0.1	0.09	1.6	0.1	2.3
8	1	0.78	8.3	6.5	0.01	2.5	0.0	0.10	4.6	0.5	0.11	4.6	0.5	7.5
9	1	0.78	3.2	2.5	0.01	2.7	0.0	0.09	2.7	0.2	0.12	2.7	0.3	3.1
10	1	0.79	3.8	3.0	0.01	2.6	0.0	0.10	2.6	0.3	0.10	2.6	0.3	3.5
11	1	0.77	5.6	4.3	0.01	1.8	0.0	0.11	1.7	0.2	0.11	1.7	0.2	4.7
12	1	0.86	11.3	9.7	0.02	0.6	0.0	0.05	0.7	0.0	0.07	0.7	0.1	9.8
13	1	0.85	10.1	8.5	0.02	2.9	0.0	0.07	1.8	0.1	0.07	1.8	0.1	8.8

		NDO - A			NDO - B			NDO - C			NDO - D		
		flow rate		Conc.	flow rate		Conc.	flow rate		Conc.	flow rate		Conc.
Condition	Run	fpm	cfm	ppm	fpm	cfm	ppm	fpm	cfm	ppm	fpm	cfm	ppm
1	1	275.0	7334.0	6.1	550.0	138.0	NA	263.0	665.0	15.9	210.0	531.0	15.9
1	2	235.0	6267.0	5.0	600.0	150.0	6.0	230.0	582.0	NA	200.0	506.0	NA
1	3	230.0	6134.0	6.9	600.0	150.0	6.0	240.0	607.0	3.0	200.0	506.0	3.0
Average		*246.7*	*6578.3*	*6.0*	*583.3*	*146.0*	*6.0*	*244.3*	*618.0*	*9.5*	*203.3*	*514.3*	*9.5*
2	1	225.0	6000.0	5.7	450.0	113.0	NA	265.0	670.0	1.6	200.0	506.0	1.6
2	2	235.0	6267.0	4.5	350.0	88.0	NA	260.0	658.0	2.9	210.0	531.0	2.9
2	3	225.0	6000.0	30.1	550.0	138.0	4.4	260.0	658.0	5.4	260.0	658.0	5.4
Average		*228.3*	*6089.0*	*13.4*	*450.0*	*113.0*	*4.4*	*261.7*	*662.0*	*3.3*	*223.3*	*565.0*	*3.3*
3	1	225.0	6000.0	12.0	650.0	163.0	12.3	245.0	620.0	0.6	260.0	658.0	0.6
3	2	240.0	6400.0	15.1	650.0	163.0	1.8	240.0	607.0	1.8	250.0	633.0	1.8
3	3	230.0	6134.0	11.3	650.0	163.0	8.3	240.0	607.0	2.8	260.0	658.0	2.8
Average		*231.7*	*6178.0*	*12.8*	*650.0*	*163.0*	*7.5*	*241.7*	*611.3*	*1.7*	*256.7*	*649.7*	*1.7*
4	1	250.0	6668.0	12.8	700.0	175.0	1.6	250.0	633.0	1.7	275.0	696.0	1.7
4	2	275.0	7334.0	18.3	700.0	175.0	NA	300.0	759.0	1.6	275.0	696.0	1.6
4	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Average		*262.5*	*7001.0*	*15.6*	*700.0*	*175.0*	*1.6*	*275.0*	*696.0*	*1.7*	*275.0*	*696.0*	*1.7*
5	1	325.0	8668.0	1.1	500.0	125.0	0.0	300.0	759.0	0.0	210.0	531.0	0.0
5	2	325.0	8668.0	4.7	400.0	100.0	0.5	275.0	696.0	0.9	200.0	506.0	0.9
5	3	325.0	8668.0	1.1	500.0	125.0	3.3	275.0	696.0	0.8	200.0	506.0	0.8
Average		*325.0*	*8668.0*	*2.3*	*466.7*	*116.7*	*1.3*	*283.3*	*717.0*	*0.6*	*203.3*	*514.3*	*0.6*
6	1	300.0	8001.0	3.9	250.0	62.5	3.0	250.0	633.0	2.7	250.0	633.0	2.7
6	2	250.0	6668.0	3.8	250.0	62.5	9.7	250.0	633.0	5.6	250.0	633.0	5.6
6	3	275.0	7334.0	2.4	200.0	50.0	29.6	250.0	633.0	1.9	350.0	886.0	1.9
Average		*275.0*	*7334.3*	*3.4*	*233.3*	*58.3*	*14.1*	*250.0*	*633.0*	*3.4*	*283.3*	*717.3*	*3.4*
7	1	250.0	6668.0	3.4	200.0	50.0	3.5	250.0	633.0	2.2	300.0	759.0	2.2
7	2	250.0	6668.0	2.0	200.0	50.0	3.8	250.0	633.0	1.5	300.0	759.0	1.5
7	3	300.0	8001.0	1.9	300.0	75.0	1.4	300.0	759.0	1.0	300.0	759.0	1.0
Average		*266.7*	*7112.3*	*2.4*	*233.3*	*58.3*	*2.9*	*266.7*	*675.0*	*1.6*	*300.0*	*759.0*	*1.6*
8	1	275.0	7334.0	11.0	550.0	138.0	NA	550.0	1392.0	6.2	450.0	1139.0	6.2
8	2	300.0	8001.0	5.6	400.0	100.0	2.5	350.0	886.0	3.0	400.0	1012.0	3.0
8	3	300.0	8001.0	NA	400.0	100.0	NA	300.0	759.0	NA	400.0	1012.0	NA
Average		*291.7*	*7778.7*	*8.3*	*450.0*	*112.7*	*2.5*	*400.0*	*1012.3*	*4.6*	*416.7*	*1054.3*	*4.6*

NDO Flow Data

		NDO - A			NDO - B			NDO - C			NDO - D		
		flow rate		Conc.	flow rate		Conc.	flow rate		Conc.	flow rate		Conc.
Condition	Run	fpm	cfm	ppm	fpm	cfm	ppm	fpm	cfm	ppm	fpm	cfm	ppm
9	1	250.0	6668.0	3.2	300.0	75.0	2.7	300.0	759.0	2.7	400.0	1012.0	2.70
10	1	300.0	8001.0	3.8	550.0	138.0	2.6	400.0	1012.0	2.6	400.0	1012.0	2.60
11	1	300.0	8001.0	8.0	525.0	131.0	1.5	400.0	1012.0	3.3	400.0	1012.0	3.30
11	2	300.0	8001.0	5.0	525.0	131.0	0.9	400.0	1012.0	1.0	400.0	1012.0	1.00
11	3	200.0	5334.0	3.9	525.0	131.0	3.1	400.0	1012.0	0.8	400.0	1012.0	0.78
Average		*266.7*	*7112.0*	*5.6*	*525.0*	*131.0*	*1.8*	*400.0*	*1012.0*	*1.7*	*400.0*	*1012.0*	*1.7*
12	1	450.0	12002.0	10.8	1000.0	250.0	1.4	250.0	633.0	1.5	350.0	886.0	1.5
12	3	450.0	12002.0	12.0	950.0	238.0	0.2	300.0	759.0	0.3	450.0	1139.0	0.3
12	4	450.0	12002.0	11.2	850.0	213.0	0.2	300.0	759.0	0.4	400.0	1012.0	0.4
Average		*450.0*	*12002.0*	*11.3*	*933.3*	*233.7*	*0.6*	*283.3*	*717.0*	*0.7*	*400.0*	*1012.3*	0.7
13	1	450.0	12002.0	11.7	950.0	238.0	4.2	300.0	759.0	1.8	400.0	1012.0	1.8
13	2	450.0	12002.0	10.1	950.0	238.0	1.5	400.0	1012.0	1.9	400.0	1012.0	1.9
13	3	450.0	12002.0	8.4	950.0	238.0	3.1	400.0	1012.0	1.8	400.0	1012.0	1.8
Average		*450.0*	*12002.0*	*10.1*	*950.0*	*238.0*	*2.9*	*366.7*	*927.7*	*1.8*	*400.0*	*1012.0*	1.8

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	1	2

Client: LASCO Panel Products - USEPA

Location: % Recovery Corrected RE=94%

Prepared By	Date	Checked By	Date	Sheet Title
Ron Kolde				Styrene M.18 Results - Oven No.s 9 and 10

Run No	Styrene Concentration ppm wet	ppm dry	Flowrate, dscfm	Mass Rate, lb/hr	% RE Corrected	% H_2O
10-1-1	0.01	0.01	1836	~~0.0003~~	.0003	2.7
9-2-1	0.3	0.3	1905	~~0.009~~	0.010	1.3
10-2-2	0.2	0.2	1769	~~0.006~~	0.006	1.4
9-3-2	0.8	0.8	1886	~~0.024~~	0.026	1.1
10-3-1	0.2	0.2	1910	~~0.006~~	0.006	1.1
9-4-2	12.0	12.1	1917	~~0.376~~	0.400	1.2
10-4-1	0.2	0.2	1897	~~0.006~~	0.006	1.1
9-5-1	1.4	1.4	1821	~~0.041~~	0.044	2.8
10-5-2	23.6	24.2	1890	~~0.742~~	0.789	2.5
9-6-2	1.5	1.5	1942	~~0.047~~	0.050	2.2
10-6-1	22.7	23.2	1814	~~0.683~~	0.727	2.3
9-7-1	0.2	0.2	1905	~~0.006~~	0.006	1.2
10-7-2	34.1	34.5	1829	~~1.023~~	1.088	1.3
9-8-2	0.2	0.2	1927	~~0.006~~	0.006	1.7
10-8-1	7.2	7.3	1918	~~0.227~~	0.241	1.3
9-9-1	1.0	1.0	1839	~~0.030~~	0.032	4.5
10-10-1	48.6	48.7	1851	~~1.462~~	1.555	0.2
9-11-2	0.2	0.2	2001	~~0.006~~	0.006	0.5
10-11-1	18.9	19.0	1872	~~0.577~~	0.614	0.3
9-12-3	1.1	1.1	3511	~~0.063~~	0.067	3.0
10-12-1	22.5	22.6	1920	~~0.704~~	0.749	0.5
10-12-4	68.2	70.1	1818	~~2.067~~	2.299	2.7
9-13-2	1.4	1.4	3530	~~0.080~~	0.085	1.6
10-13-1	85.2	87.1	1804	~~2.548~~	2.711	2.2

MW = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	2	2

Client: LASCO Panel Products - USEPA

Location: % RE = 79 %

Prepared By	Date	Checked By	Date	Sheet Title
[illegible]				Methyl Methacrylate Results - Ovens 9 and 10

Run No	MMA Concentration ppm wet	ppm dry	Flowrate dscfm	Mass Rate, lb/hr ~~% RE Corrected~~	% H_2O
9-2-1	0.8	0.8	1905	~~0.024~~ .030	1.3
10-2-2	4.2	4.3	1769	~~0.119~~ .151	1.4
9-4-2	1.5	1.5	1917	~~0.045~~ .057	1.2
10-5-2	1.0	1.0	1890	~~0.029~~ .037	2.5
10-6-1	1.1	1.1	1814	~~0.031~~ .039	2.3
10-7-2	3.2	3.3	1829	~~0.094~~ .119	1.3
9-12-3	0.9	0.9	3511	~~0.049~~ .062	3.0
9-13-2	4.8	4.9	3530	~~0.270~~ .342	1.6

MW = 100.12

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	1	2

Client: LASCO Panel Products - U.S. EPA

Location: % Recovery Eff = 94

Prepared By	Date	Checked By	Date	Sheet Title
R. Kolde	8/28			Styrene M.18 Results - TTE

Run No.	Styrene Concentration ppm, wet	ppm, dry	Flow rate, dscfm	Mass Rate, lb/hr.	% RE Corrected	% H_2O
ME-1-3	673.9	702.7	2804	~~31.96~~	34.00	4.1
RE-1-3	52.8	53.7	4644	~~4.04~~	4.30	1.6
ME-2-1	510.9	518.7	3173	~~26.69~~	28.39	1.5
RE-2-1	84.5	85.4	4637	~~6.43~~	6.84	1.1
ME-3-1	189.4	191.3	3526	~~10.94~~	11.64	1.0
RE-3-1	24.3	24.5	4961	~~1.97~~	2.10	0.8
ME-3-2	176.0	177.6	3414	~~9.83~~	10.46	0.9
ME-3-3	129.2	130.6	3424	~~7.25~~	7.71	1.1
RE-4-1	1.1	1.1	4846	~~0.09~~	0.10	0.9
ME-4-2	171.6	173.3	3823	~~10.75~~	11.44	1.0
ME-5-1	111.3	113.6	3345	~~6.16~~	6.55	2.0
RE-5-1	29.6	30.2	4402	~~2.16~~	2.30	2.1
AF-5-2	34.5	35.2	4677	~~2.67~~	2.84	2.1
RE-6-1	37.1	37.9	4663	~~2.87~~	3.05	2.2
ME-6-2	211.0	216.0	3449	~~12.08~~	12.85	2.3
ME-7-1	143.3	145.9	3585	~~8.48~~	9.02	1.8
RE-7-1	14.5	14.7	4772	~~1.13~~	1.20	1.1
ME-7-3	174.7	177.2	3608	~~10.37~~	11.03	1.4
ME-8-1	155.4	157.3	3724	~~9.50~~	10.11	1.2
RE-8-1	37.9	38.3	5144	~~3.19~~	3.39	1.0
ME-9-1	158.6	161.2	3624	~~9.47~~	10.07	1.6
RE-9-1	21.8	22.0	4728	~~1.69~~	1.80	0.8
RE-10-1	5.5	5.5	4597	~~0.41~~	0.44	0.6
ME-11-1	124.0	125.8	3672	~~7.49~~	7.97	1.4
RE-11-1	18.0	18.2	4694	~~1.38~~	1.47	0.9
ME-11-2	114.9	116.9	3652	~~6.92~~	7.36	1.7
RE-11-3	8.4	8.5	4863	~~0.67~~	0.71	0.8

MW = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	2	2

Client: LASCO Panel Products

Location:

Prepared By	Date	Checked By	Date	Sheet Title
R. Kolde	8/28			Styrene M.18 Results - TTE

Run No.	Styrene Concentration ppm, wet	ppm, dry	Flowrate dscfm	Mass Rate, lb/hr. ~~%RE~~ Corrected	% H_2O
ME-12-1	87.0	88.5	3459	~~4.97~~ 5.29	1.7
AF-12-1	49.0	49.8	4694	~~3.79~~ 4.03	1.7
ME-12-3	82.6	83.9	3364	~~4.58~~ 4.87	1.6
AF-12-4	40.0	40.7	4547	~~3.00~~ 3.19	1.6
RE-13-1	23.1	23.5	4465	~~1.70~~ 1.81	1.8
AF-13-1	30.5	31.0	4536.0	~~2.28~~ 2.43	1.6
ME-13-2	47.5	48.3	3358	~~2.63~~ 2.80	1.7

MW = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	1	1

Client: LASCO Panel Products - USEPA

Location: % Recovery Eff. = 79

Prepared By	Date	Checked By	Date	Sheet Title
R. Kolde	8/28			Methyl Methacrylate M.18 Results - TTE

Run No	MMA Concentration ppm, wet	ppm, dry	Flowrate, dscfm	Mass Rate, lb/hr. ~~%RE~~ Corrected	% H_2O
ME-1-3	245.6	256.1	2804	~~11.20~~ 14.18	4.1
RE-1-3	25.9	26.3	4644	~~1.97~~ 2.42	1.6
ME-2-1	227.9	231.4	3173	~~11.45~~ 14.49	1.5
RE-2-1	43.9	44.4	4637	~~3.21~~ 4.06	1.1
ME-3-1	6.7	6.8	3526	~~0.37~~ 0.47	1.0
ME-3-3	9.2	9.3	3424	~~0.50~~ 0.63	1.1
RE-5-1	2.2	2.2	4402	~~0.15~~ 0.19	2.1
ME-6-2	16.7	17.1	3449	~~0.92~~ 1.16	2.3
ME-7-1	31.0	31.6	3585	~~1.76~~ 2.23	1.8
ME-7-3	45.8	46.5	3608	~~2.61~~ 3.30	1.4
RE-9-1	2.9	2.9	4728	~~0.22~~ 0.28	0.8

MW = 100.12

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.	1	1

Client: LASCO Panel Products - USEPA

Location: Florence, Kentucky — % Recovery Eff. Corrected

Prepared By	Date	Checked By	Date	Sheet Title
R Kolde	8/28			NDO Styrene Conc. and Mass Rates

RE = .94

Run No.	Concentration, ppm wet	ppm dry*	Flowrate, cfm	Mass Rate, lb/hr %RE	Corrected
NDA-2-2	0.8	0.81	6,267	~~0.082~~	.087
NDA-3-2	1.5	1.53	6,400	~~0.159~~	.169
NDA-4-1	1.6	1.63	6,668	~~0.176~~	.187
NDA-13-1	1.7	1.73	12,002	~~0.337~~	.359

* PPM Dry correction based on air moisture content of 2%

Styrene Molecular Weight = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	1	2

Client: LASCO Panel Products - U.S. EPA

Location:

Prepared By	Date	Checked By	Date	Sheet Title
R. Kelde	8/28			Styrene M.18 Results - TTE

Run No.	Styrene Concentration ppm, wet	ppm, dry	Flow rate, dscfm	Mass Rate, lb/hr	% H_2O
ME-1-3	673.9	702.7	2804	31.96	4.1
RE-1-3	52.8	53.7	4644	4.04	1.6
ME-2-1	510.9	518.7	3173	26.69	1.5
RE-2-1	84.5	85.4	4637	6.43	1.1
ME-3-1	189.4	191.3	3526	10.94	1.0
RE-3-1	24.3	24.5	4961	1.97	0.8
ME-3-2	176.0	177.6	3414	9.83	0.9
ME-3-3	129.2	130.6	3424	7.25	1.1
RE-4-1	1.1	1.1	4846	0.09	0.9
ME-4-2	171.6	173.3	3823	10.75	1.0
ME-5-1	111.3	113.6	3345	6.16	2.0
RE-5-1	29.6	30.2	4402	2.16	2.1
AF-5-2	34.5	35.2	4677	2.67	2.1
RE-6-1	37.1	37.9	4663	2.87	2.2
ME-6-2	211.0	216.0	3449	12.08	2.3
ME-7-1	143.3	145.9	3585	8.48	1.8
RE-7-1	14.5	14.7	4772	1.13	1.1
ME-7-3	174.7	177.2	3608	10.37	1.4
ME-8-1	155.4	157.3	3724	9.50	1.2
RE-8-1	37.9	38.3	5144	3.19	1.0
ME-9-1	158.6	161.2	3624	9.47	1.6
RE-9-1	21.8	22.0	4728	1.69	0.8
RE-10-1	5.5	5.5	4597	0.41	0.6
ME-11-1	124.0	125.8	3672	7.49	1.4
RE-11-1	18.0	18.2	4694	1.38	0.9
ME-11-2	114.9	116.9	3652	6.92	1.7
RE-11-3	8.4	8.5	4863	0.67	0.8

MW = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	2	2

Client: LASCO Panel Products

Location:

Prepared By	Date	Checked By	Date	Sheet Title
R. Kolde	8/28			Styrene M. 18 Results - TTE

Run No.	Styrene Concentration ppm, wet	ppm, dry	Flowrate dscfm	Mass Rate, lb/hr.	% H_2O
ME-12-1	87.0	88.5	3459	4.97	1.7
AF-12-1	49.0	49.8	4694	3.79	1.7
ME-12-3	82.6	83.9	3364	4.58	1.6
AF-12-4	40.0	40.7	4547	3.00	1.6
RE-13-1	23.1	23.5	4465	1.70	1.8
AF-13-1	30.5	31.0	4536.0	2.28	1.6
ME-13-2	47.5	48.3	3358	2.63	1.7

MW = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	1	1

Client: LASCO Panel Products - USEPA

Location:

Prepared By	Date	Checked By	Date	Sheet Title
R. Kolde	9/28			Methyl Methacrylate M.18 Results - TTE

Run No	MMA Concentration ppm, wet	ppm, dry	Flowrate, dscfm	Mass Rate, lb/hr.	% H_2O
ME-1-3	245.6	256.1	2804	11.20	4.1
RE-1-3	25.9	26.3	4644	1.91	1.6
ME-2-1	227.9	231.4	3173	11.45	1.5
RE-2-1	43.9	44.4	4637	3.21	1.1
ME-3-1	6.7	6.8	3526	0.37	1.0
ME-3-3	9.2	9.3	3424	0.50	1.1
RE-5-1	2.2	2.2	4402	0.15	2.1
ME-6-2	16.7	17.1	3449	0.92	2.3
ME-7-1	31.0	31.6	3585	1.76	1.8
ME-7-3	45.8	46.5	3608	2.61	1.4
RE-9-1	2.9	2.9	4728	0.22	0.8

MW = 100.12

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.	1	1

Client: LASCO Panel Products - USEPA

Location: Florence, Kentucky

Prepared By	Date	Checked By	Date	Sheet Title
R Kolde	8/28			NDO Styrene Conc. and Mass Rates

Run No.	Concentration, ppm wet	ppm dry*	Flowrate, cfm	Mass Rate, lb/hr
NDA-2-2	0.8	0.81	6,267	0.082
NDA-3-2	1.5	1.53	6,400	0.159
NDA-4-1	1.6	1.63	6,668	0.176
NDA-13-1	1.7	1.73	12,002	0.337

* PPM Dry correction based on air moisture content of 2%

Styrene Molecular Weight = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page of
5405.005	1 2

Client: LASCO Panel Products - USEPA

Location:

Prepared By	Date	Checked By	Date	Sheet Title
Ron Kalchi				Styrene M.18 Results - Oven No.s 9 and 10

Run No	Styrene Concentration ppm wet	ppm dry	Flowrate, dscfm	Mass Rate, lb/hr	% H_2O
10-1-1	0.01	0.01	1836	0.0003	2.7
9-2-1	0.3	0.3	1905	0.009	1.3
10-2-2	0.2	0.2	1769	0.006	1.4
9-3-2	0.8	0.8	1886	0.024	1.1
10-3-1	0.2	0.2	1910	0.006	1.1
9-4-2	12.0	12.1	1917	0.376	1.2
10-4-1	0.2	0.2	1897	0.006	1.1
9-5-1	1.4	1.4	1821	0.041	2.8
10-5-2	23.6	24.2	1890	0.742	2.5
9-6-2	1.5	1.5	1942	0.047	2.2
10-6-1	22.7	23.2	1814	0.683	2.3
9-7-1	0.2	0.2	1905	0.006	1.2
10-7-2	34.1	34.5	1829	1.023	1.3
9-8-2	0.2	0.2	1927	0.006	1.7
10-8-1	7.2	7.3	1918	0.227	1.3
9-9-1	1.0	1.0	1839	0.030	4.5
10-10-1	48.6	48.7	1851	1.462	0.2
9-11-2	0.2	0.2	2001	0.006	0.5
10-11-1	18.9	19.0	1872	0.577	0.3
9-12-3	1.1	1.1	3511	0.063	3.0
10-12-1	22.5	22.6	1920	0.704	0.5
10-12-4	68.2	70.1	1818	2.067	2.7
9-13-2	1.4	1.4	3530	0.080	1.6
10-13-1	85.2	87.1	1804	2.548	2.2

MW = 104.15

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
S405.005	2	2

Client: LASCO Panel Products - USEPA

Location:

Prepared By	Date	Checked By	Date	Sheet Title
[illegible]				Methyl Methacrylate Results - Ovens 9 and 10

Run No	MMA Concentration ppm wet	MMA Concentration ppm dry	Flowrate dscfm	Mass Rate, lb/hr	% H_2O
9-2-1	0.8	0.8	1905	0.024	1.3
10-2-2	4.2	4.3	1769	0.119	1.4
9-4-2	1.5	1.5	1917	0.045	1.2
10-5-2	1.0	1.0	1890	0.029	2.5
10-6-1	1.1	1.1	1814	0.031	2.3
10-7-2	3.2	3.3	1829	0.094	1.3
9-12-3	0.9	0.9	3511	0.049	3.0
9-13-2	4.8	4.9	3530	0.270	1.6

MW = 100.12

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
5405.005	1	2

Client: LASCO PANEL PRODUCTS - EPA

Location:

Prepared By	Date	Checked By	Date	Sheet Title
P. SIEGEL	7-31			STYRENE METHOD 18 RESULTS

RUN	MAIN EXHAUST		ROOM EXHAUST		AUXILIARY FAN	
	mg	ppm	mg	ppm	mg	ppm
1-1						
1-2						
1-3	16.66	673.9	3.14	52.8		
2-1	18.55	510.9	5.1	84.5		
2-2						
2-3						
3-1	2.38	189.4	1.24	24.3		
3-2	1.61	176.0				
3-3	0.68	129.2				
4-1			0.08	1.1		
4-2	1.48	171.6				
4-3						
5-1	0.69	111.3	0.80	29.6		
5-2					1.04	34.5
5-3						
6-1			0.98	37.1		
-2	1.53	211.0				
-3						
7-1	1.34	143.3	0.25	14.5		
-2						
-3	1.66	174.7				
8-1	2.17	155.4	0.74	37.9		
-2						
-3						
9-1	1.91	158.6	0.36	21.8		
10-1	LOST SAMPLE		0.10	5.5		
11-1	0.99	124.0	0.31	18.0		
-2	1.20	114.9				
-3			0.13	8.4		

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
S405.005	2	2

Client: LASCO PANEL PRODUCTS - EPA

Location:

Prepared By	Date	Checked By	Date	Sheet Title
P. SIEGEL	7-31			STYRENE METHOD 18 RESULTS

RUN	MAIN EXHAUST		ROOM EXHAUST		AUXILIARY FAN	
12-1	0.67 mg	87.0 ppm	mg	ppm	0.81 mg	49.0 ppm
-2						
-3	2.96	82.6				
-4					1.60	40.0
13-1			0.70	23.1	1.00	30.5
-2	1.78	47.5				
-3						

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No. S405.005 | Page 1 of 2

Client: LASCO PANEL PRODUCTS - EPA

Location:

Sheet Title: STYRENE METHOD 18 RESULTS

Prepared By: P. SIEGEL | Date: 7-31 | Checked By: | Date:

RUN	OVEN 9 mg	OVEN 9 ppm	OVEN 10 mg	OVEN 10 ppm	NDA mg	NDA ppm	NDB mg	NDB ppm
1-1			0.00 DL	0.0	0.01 DL	0.1		
-2	LOST SAMPLE							
-3							0.00 DL	0.0
2-1	0.02	0.3						
-2			0.01 DL	0.2	0.05	0.8		
-3							0.01 DL	0.2
3-1			0.01 DL	0.2				
-2	0.05	~~1.5~~ 0.8			0.09	1.5		
-3							0.02	0.3
4-1			0.01 DL	0.2	0.09	1.6		
-2	0.77	12.0					0.01 DL	0.2
-3								
5-1	0.09	1.4			0.01 DL	0.2		
-2			1.49	23.6			0.01 DL	0.2
-3								
6-1			1.28	22.7	0.02	0.3		
-2	0.09	1.5						
-3					0.01 DL	0.3		
7-1	0.01 DL	0.2			0.01 DL	0.2		
-2			2.20	34.1			0.01 DL	0.2
-3								
8-1			0.40	7.2	0.01 DL	0.2		
-2	0.01 DL	0.2					0.02	0.3
-3								

WASHINGTON, DC

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
~~S45.05~~ 5405.005	2	2

Client: LASCO PANEL PRODUCTS - EPA

Location:

Prepared By	Date	Checked By	Date	Sheet Title
P. SIEGEL	7-31			STYRENE METHOD 18 RESULTS

RUN	OVEN 9 mg	OVEN 9 ppm	OVEN 10 mg	OVEN 10 ppm	NDA mg	NDA ppm	NDB mg	NDB ppm
9-1	0.05	1.0			0.01 DL	0.4		
10-1			3.11	~~48.5~~ 50.1	0.01 DL	0.3		
11-1	0.01 DL	0.2	4.37	18.9	0.01 DL	0.2		
-2								
-3								
12-1	1.1	1.1	1.28	22.5	0.01 DL	0.2	~~0.01~~ 0.07	1.2
-2	~~0.06~~ 0.06							
-3								
-4			4.13	68.2				
13-1	0.09	1.4	5.35	85.2	0.09	1.7		
-2								
-3								

Condition 1 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	15:40
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	16:05
ME-1-3	Initial volume	2268.33 Liters	Moisture	4.1%
	Final Volume	2274.54 Liters		
	Volume$_{meter}$	6.21 Liters		
	Volume $_{standard}$	5.71 Liters	Mass $_{Liquid}$	16.66 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 2.9194 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 673.9 ppm

	Y =	0.999		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	15:41
	Temperature$_{meter}$	74 ° Fahrenheit	Finish Time	16:41
RE-1-3	Initial volume	7664.32 Liters	Moisture	1.6%
	Final Volume	7678.92 Liters		
	Volume$_{meter}$	14.60 Liters		
	Volume $_{standard}$	13.72 Liters	Mass $_{Liquid}$	3.14 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.2289 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 52.8 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	12:35
	Temperature$_{meter}$	91 ° Fahrenheit	Finish Time	13:35
9-1-2	Initial volume	849.80 Liters	Moisture	1.8%
	Final Volume	865.59 Liters		
	Volume$_{meter}$	15.79 Liters		
	Volume $_{standard}$	15.11 Liters	Mass $_{Liquid}$	XXXX Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = ######## mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = ######## ppm

Condition 1 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	10:40
	Temperature$_{meter}$	84 ° Fahrenheit	Finish Time	11:40
10-1-1	Initial volume	834.18 Liters	Moisture	2.7%
	Final Volume	849.68 Liters		
	Volume$_{meter}$	15.50 Liters		
	Volume $_{standard}$	14.82 Liters	Mass $_{Liquid}$	0.00 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0001 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.0 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	2.0 inches of mercury	Start Time	10:35
	Temperature$_{meter}$	85 ° Fahrenheit	Finish Time	11:35
NDA-1-1	Initial Volume	1306.74 Liters	Moisture	1.0%
	Final Volume	1329.30 Liters		
	Volume$_{meter}$	22.56 Liters		
	Volume $_{standard}$	21.27 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0005 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.1 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	15:40
	Temperature$_{meter}$	88.4 ° Fahrenheit	Finish Time	16:40
NDB-1-3	Initial volume	1321.34 Liters	Moisture	0.9%
	Final Volume	1337.08 Liters		
	Volume$_{meter}$	15.74 Liters		
	Volume $_{standard}$	14.70 Liters	Mass $_{Liquid}$	0.00 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0001 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.0 ppm

Condition 2 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	28.84 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	20:23
	Temperature$_{meter}$	69 ° Fahrenheit	Finish Time	20:54
ME-2-1	Initial Volume	2275.08 Liters	Moisture	1.5%
	Final Volume	2283.95 Liters		
	Volume$_{meter}$	8.87 Liters		
	Volume $_{standard}$	8.38 Liters	Mass $_{Liquid}$	18.55 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 2.2135 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 510.9 ppm

	Y =	0.999		
	Pressure $_{barometric}$	28.84 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	20:20
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	21:22
RE-2-1	Initial Volume	7679.50 Liters	Moisture	1.1%
	Final Volume	7694.21 Liters		
	Volume$_{meter}$	14.71 Liters		
	Volume $_{standard}$	13.93 Liters	Mass $_{Liquid}$	5.1 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.3661 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 84.5 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	17:35
	Temperature$_{meter}$	85 ° Fahrenheit	Finish Time	18:38
9-2-1	Initial Volume	866.91 Liters	Moisture	1.3%
	Final Volume	881.20 Liters		
	Volume$_{meter}$	14.29 Liters		
	Volume $_{standard}$	13.89 Liters	Mass $_{Liquid}$	0.02 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0014 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.3 ppm

Condition 2 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	22:00
	Temperature$_{meter}$	87 ° Fahrenheit	Finish Time	23:00
10-2-2	Initial Volume	881.65 Liters	Moisture	1.5%
	Final Volume	897.00 Liters		
	Volume$_{meter}$	15.35 Liters		
				Detection Limit
	Volume $_{standard}$	14.78 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0007 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}} =$ 0.2 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.84 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	22:00
	Temperature$_{meter}$	87 ° Fahrenheit	Finish Time	23:00
NDA-2-2	Initial Volume	1337.15 Liters	Moisture	1.0%
	Final Volume	1351.81 Liters		
	Volume$_{meter}$	14.66 Liters		
	Volume $_{standard}$	13.73 Liters	Mass $_{Liquid}$	0.05 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0036 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}} =$ 0.8 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.84 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	23:30
	Temperature$_{meter}$	92 ° Fahrenheit	Finish Time	0:30
NDB-2-3	Initial Volume	1352.10 Liters	Moisture	1.1%
	Final Volume	1366.82 Liters		
	Volume$_{meter}$	14.72 Liters		
	Volume $_{standard}$	13.65 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0007 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}} =$ 0.2 ppm

Condition 3 Method 18 Sampling Results

Y =	0.997			
Pressure $_{barometric}$	28.90 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	14:25
Temperature$_{meter}$	64 ° Fahrenheit		Finish Time	14:55
ME-3-1 Initial Volume	2287.47 Liters		Moisture	1.0%
Final Volume	2290.49 Liters			
Volume$_{meter}$	3.02 Liters			
Volume $_{standard}$	2.90 Liters		Mass $_{Liquid}$	2.38 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.8204 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 189.4 ppm

Y =	0.997			
Pressure $_{barometric}$	28.90 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	16:00
Temperature$_{meter}$	58 ° Fahrenheit		Finish Time	16:20
ME-3-2 Initial Volume	2290.74 Liters		Moisture	0.9%
Final Volume	2292.91 Liters			
Volume$_{meter}$	2.17 Liters			
Volume $_{standard}$	2.11 Liters		Mass $_{Liquid}$	1.61 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.7627 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 176.0 ppm

Y =	0.997			
Pressure $_{barometric}$	29.10 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	17:35
Temperature$_{meter}$	57 ° Fahrenheit		Finish Time	17:50
ME-3-3 Initial Volume	2293.37 Liters		Moisture	1.1%
Final Volume	2294.61 Liters			
Volume$_{meter}$	1.24 Liters			
Volume $_{standard}$	1.21 Liters		Mass $_{Liquid}$	0.68 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.5599 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 129.2 ppm

Condition 3 Method 18 Sampling Results

	Y =	0.999		
	Pressure $_{barometric}$	28.90 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	14:25
	Temperature$_{meter}$	60 ° Fahrenheit	Finish Time	15:25
RE-3-1	Initial Volume	7694.32 Liters	Moisture	0.8%
	Final Volume	7706.45 Liters		
	Volume$_{meter}$	12.13 Liters		
	Volume $_{standard}$	11.79 Liters	Mass $_{Liquid}$	1.24 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1052 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 24.3 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.90 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	16:00
	Temperature$_{meter}$	86 ° Fahrenheit	Finish Time	17:00
9-3-2	Initial Volume	912.12 Liters	Moisture	1.1%
	Final Volume	926.48 Liters		
	Volume$_{meter}$	14.36 Liters		
	Volume $_{standard}$	13.96 Liters	Mass $_{Liquid}$	0.05 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0036 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.8 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.90 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	14:25
	Temperature$_{meter}$	82 ° Fahrenheit	Finish Time	15:25
10-3-1	Initial Volume	897.24 Liters	Moisture	1.1%
	Final Volume	911.91 Liters		
	Volume$_{meter}$	14.67 Liters		
				Detection Limit
	Volume $_{standard}$	14.36 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0007 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

Condition 3 Method 18 Sampling Results

Y =	1.017			
Pressure $_{barometric}$	29.10 inches of mercury		Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	15:57
Temperature$_{meter}$	87 ° Fahrenheit		Finish Time	16:49
NDA-3-2 Initial Volume	1367.17 Liters		Moisture	0.9%
Final Volume	1382.08 Liters			
Volume$_{meter}$	14.91 Liters			
Volume $_{standard}$	14.11 Liters		Mass $_{Liquid}$	0.09 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0064 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.5 ppm

Y =	1.017			
Pressure $_{barometric}$	29.10 inches of mercury		Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	17:35
Temperature$_{meter}$	93 ° Fahrenheit		Finish Time	18:38
NDB-3-3 Initial Volume	1382.16 Liters		Moisture	1.1%
Final Volume	1399.04 Liters			
Volume$_{meter}$	16.88 Liters			
Volume $_{standard}$	15.77 Liters		Mass $_{Liquid}$	0.02 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0013 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.3 ppm

Condition 4 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	21:30
	Temperature$_{meter}$	51 ° Fahrenheit	Finish Time	21:45
ME-4-2	Initial Volume	2296.54 Liters	Moisture	1.0%
	Final Volume	2298.54 Liters		
	Volume$_{meter}$	2.00 Liters		
	Volume $_{standard}$	1.99 Liters	Mass $_{Liquid}$	1.48 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.7435 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 171.6 ppm

	Y =	0.997		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	20:05
	Temperature$_{meter}$	55 ° Fahrenheit	Finish Time	20:20
RE-4-1	Initial Volume	2294.61 Liters	Moisture	0.9%
	Final Volume	2296.43 Liters		
	Volume$_{meter}$	1.82 Liters		
	Volume $_{standard}$	1.80 Liters	Mass $_{Liquid}$	0.08 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0444 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 10.3 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	21:40
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	22:30
9-4-2	Initial Volume	941.12 Liters	Moisture	1.2%
	Final Volume	956.55 Liters		
	Volume$_{meter}$	15.43 Liters		
	Volume $_{standard}$	14.82 Liters	Mass $_{Liquid}$	0.77 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0520 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 12.0 ppm

Condition 4 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	28.90 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	20:05
	Temperature$_{meter}$	84 ° Fahrenheit	Finish Time	21:05
10-4-1	Initial Volume	926.56 Liters	Moisture	1.1%
	Final Volume	941.10 Liters		
	Volume$_{meter}$	14.54 Liters		
				Detection Limit
	Volume $_{standard}$	14.18 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0007 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	20:05
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	21:05
NDA-4-1	Initial Volume	1399.28 Liters	Moisture	1.0%
	Final Volume	1413.68 Liters		
	Volume$_{meter}$	14.40 Liters		
	Volume $_{standard}$	13.40 Liters	Mass $_{Liquid}$	0.09 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0067 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.6 ppm

	Y =	1.017		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	21:30
	Temperature$_{meter}$	92 ° Fahrenheit	Finish Time	22:30
NDB-4-2	Initial Volume	1413.94 Liters	Moisture	1.1%
	Final Volume	1429.57 Liters		
	Volume$_{meter}$	15.63 Liters		
				Detection Limit
	Volume $_{standard}$	14.68 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0007 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

Condition 5 Method 18 Sampling Results

Y =	0.997			
Pressure $_{barometric}$	28.85 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	9:05
Temperature$_{meter}$	75 ° Fahrenheit		Finish Time	9:20
ME-5-1 Initial Volume	2298.73 Liters		Moisture	2.1%
Final Volume	2300.27 Liters			
Volume$_{meter}$	1.54 Liters			
Volume $_{standard}$	1.43 Liters		Mass $_{Liquid}$	0.69 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.4824 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 111.3 ppm

Y =	0.999			
Pressure $_{barometric}$	28.85 inches of mercury		Meter	VOST 1
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	9:04
Temperature$_{meter}$	79 ° Fahrenheit		Finish Time	9:49
RE-5-1 Initial Volume	7713.90 Liters		Moisture	2.1%
Final Volume	7720.65 Liters			
Volume$_{meter}$	6.75 Liters			
				Detection Limit
Volume $_{standard}$	6.24 Liters		Mass $_{Liquid}$	0.80 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1283 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 29.6 ppm

Y =	0.999			
Pressure $_{barometric}$	28.80 inches of mercury		Meter	VOST 1
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	11:08
Temperature$_{meter}$	93 ° Fahrenheit		Finish Time	12:08
AF-5-2 Initial Volume	7721.07 Liters		Moisture	2.1%
Final Volume	7728.80 Liters			
Volume$_{meter}$	7.73 Liters			
Volume $_{standard}$	6.95 Liters		Mass $_{Liquid}$	1.04 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1497 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 34.5 ppm

Condition 5 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	29.25 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	9:04
	Temperature$_{meter}$	82 ° Fahrenheit	Finish Time	10:04
9-5-1	Initial Volume	957.55 Liters	Moisture	2.8%
	Final Volume	972.61 Liters		
	Volume$_{meter}$	15.06 Liters		
	Volume $_{standard}$	14.67 Liters	Mass $_{Liquid}$	0.09 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0061 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.4 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.25 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	11:08
	Temperature$_{meter}$	91 ° Fahrenheit	Finish Time	12:08
10-5-2	Initial Volume	972.65 Liters	Moisture	2.5%
	Final Volume	987.82 Liters		
	Volume$_{meter}$	15.17 Liters		
	Volume $_{standard}$	14.58 Liters	Mass $_{Liquid}$	1.49 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1022 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 23.6 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.85 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	9:02
	Temperature$_{meter}$	84 ° Fahrenheit	Finish Time	10:02
NDA-5-1	Initial Volume	1429.79 Liters	Moisture	2.1%
	Final Volume	1445.29 Liters		
	Volume$_{meter}$	15.50 Liters		
				Detection Limit
	Volume $_{standard}$	14.44 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0007 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

Condition 5 Method 18 Sampling Results

	Y =	1.017		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	11:08
	Temperature$_{meter}$	97 ° Fahrenheit	Finish Time	12:08
NDB-5-2	Initial Volume	1445.42 Liters	Moisture	1.0%
	Final Volume	1459.99 Liters		
	Volume$_{meter}$	14.57 Liters		
				Detection Limit
	Volume $_{standard}$	13.39 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \dfrac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0007 mg/liter

Concentration, part per million (ppm) $= \dfrac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 0.2 ppm

Condition 6 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	28.78 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	17:33
	Temperature$_{meter}$	78 ° Fahrenheit	Finish Time	17:43
ME-6-2	Initial Volume	2308.46 Liters	Moisture	2.3%
	Final Volume	2310.28 Liters		
	Volume$_{meter}$	1.82 Liters		
	Volume $_{standard}$	1.67 Liters	Mass $_{Liquid}$	1.53 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.9142 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 211.0 ppm

	Y =	0.999		
	Pressure $_{barometric}$	28.78 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	16:06
	Temperature$_{meter}$	86 ° Fahrenheit	Finish Time	16:51
RE-6-1	Initial Volume	7729.04 Liters	Moisture	2.2%
	Final Volume	7735.75 Liters		
	Volume$_{meter}$	6.71 Liters		
	Volume $_{standard}$	6.10 Liters	Mass $_{Liquid}$	0.98 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1607 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 37.1 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	17:33
	Temperature$_{meter}$	96 ° Fahrenheit	Finish Time	18:33
9-6-2	Initial Volume	1001.46 Liters	Moisture	2.2%
	Final Volume	1016.29 Liters		
	Volume$_{meter}$	14.83 Liters		
	Volume $_{standard}$	14.14 Liters	Mass $_{Liquid}$	0.09 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0064 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.5 ppm

Condition 6 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	16:05
	Temperature$_{meter}$	93 ° Fahrenheit	Finish Time	16:58
10-6-1	Initial Volume	987.85 Liters	Moisture	2.3%
	Final Volume	1001.42 Liters		
	Volume$_{meter}$	13.57 Liters		
	Volume $_{standard}$	13.00 Liters	Mass $_{Liquid}$	1.28 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0985 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 22.7 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.78 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	16:05
	Temperature$_{meter}$	97 ° Fahrenheit	Finish Time	17:05
NDA-6-1	Initial Volume	1460.09 Liters	Moisture	2.2%
	Final Volume	1475.64 Liters		
	Volume$_{meter}$	15.55 Liters		
	Volume $_{standard}$	14.10 Liters	Mass $_{Liquid}$	0.02 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0014 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.3 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.84 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	19:37
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	20:17
NDA-6-3	Initial Volume	1475.69 Liters	Moisture	1.9%
	Final Volume	1485.63 Liters		
	Volume$_{meter}$	9.94 Liters		
				Detection Limit
	Volume $_{standard}$	9.18 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0011 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.3 ppm

Condition 7 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	14:49
	Temperature$_{meter}$	77 ° Fahrenheit	Finish Time	15:04
ME-7-1	Initial Volume	2310.34 Liters	Moisture	1.8%
	Final Volume	2312.66 Liters		
	Volume$_{meter}$	2.32 Liters		
	Volume $_{standard}$	2.16 Liters	Mass $_{Liquid}$	1.34 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.6207 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 143.3 ppm

	Y =	0.997		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	19:13
	Temperature$_{meter}$	66 ° Fahrenheit	Finish Time	19:28
ME-7-3	Initial Volume	2312.80 Liters	Moisture	1.4%
	Final Volume	2315.10 Liters		
	Volume$_{meter}$	2.30 Liters		
	Volume $_{standard}$	2.19 Liters	Mass $_{Liquid}$	1.66 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.7567 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 174.7 ppm

	Y =	0.999		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	14:49
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	15:19
RE-7-1	Initial Volume	7737.46 Liters	Moisture	1.1%
	Final Volume	7741.65 Liters		
	Volume$_{meter}$	4.19 Liters		
	Volume $_{standard}$	3.98 Liters	Mass $_{Liquid}$	0.25 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0628 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 14.5 ppm

Condition 7 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	14:49
	Temperature$_{meter}$	92 ° Fahrenheit	Finish Time	15:49
9-7-1	Initial Volume	16.32 Liters	Moisture	1.2%
	Final Volume	28.13 Liters		
	Volume$_{meter}$	11.81 Liters		
				Detection Limit
	Volume $_{standard}$	11.35 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0009 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 0.2 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	17:03
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	18:03
10-7-2	Initial Volume	28.15 Liters	Moisture	1.3%
	Final Volume	43.62 Liters		
	Volume$_{meter}$	15.47 Liters		
	Volume $_{standard}$	14.90 Liters	Mass $_{Liquid}$	2.20 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.1476 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 34.1 ppm

	Y =	1.017		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	14:50
	Temperature$_{meter}$	88 ° Fahrenheit	Finish Time	15:50
NDA-7-1	Initial Volume	1485.67 Liters	Moisture	1.1%
	Final Volume	1500.69 Liters		
	Volume$_{meter}$	15.02 Liters		
				Detection Limit
	Volume $_{standard}$	14.07 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0007 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 0.2 ppm

Condition 7 Method 18 Sampling Results

	Y =	1.017		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	17:03
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	18:03
NDB-7-2	Initial Volume	1500.77 Liters	Moisture	0.9%
	Final Volume	1515.80 Liters		
	Volume$_{meter}$	15.03 Liters		
				Detection Limit
	Volume $_{standard}$	14.06 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0007 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 0.2 ppm

26

Condition 8 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	29.50 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	7:58
	Temperature$_{meter}$	49 ° Fahrenheit	Finish Time	8:13
ME-8-1	Initial Volume	2315.23 Liters	Moisture	1.2%
	Final Volume	2318.43 Liters		
	Volume$_{meter}$	3.20 Liters		
	Volume $_{standard}$	3.22 Liters	Mass $_{Liquid}$	2.17 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.6731 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 155.4 ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.50 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	7:58
	Temperature$_{meter}$	49 ° Fahrenheit	Finish Time	8:28
RE-8-1	Initial Volume	7741.94 Liters	Moisture	1.0%
	Final Volume	7746.40 Liters		
	Volume$_{meter}$	4.46 Liters		
	Volume $_{standard}$	4.51 Liters	Mass $_{Liquid}$	0.74 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1640 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 37.9 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.50 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	9:21
	Temperature$_{meter}$	83 ° Fahrenheit	Finish Time	10:21
9-8-2	Initial Volume	56.36 Liters	Moisture	1.7%
	Final Volume	71.53 Liters		
	Volume$_{meter}$	15.17 Liters		
				Detection Limit
	Volume $_{standard}$	15.04 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0007 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

Condition 8 Method 18 Sampling Results

Y =	1.052			
Pressure $_{barometric}$	29.50 inches of mercury		Meter	ES-1
Vacuum $_{meter}$	0.0 inches of mercury		Start Time	7:54
Temperature$_{meter}$	73 ° Fahrenheit		Finish Time	8:46
10-8-1 Initial Volume	43.55 Liters		Moisture	1.3%
Final Volume	56.23 Liters			
Volume$_{meter}$	12.68 Liters			
Volume $_{standard}$	12.86 Liters		Mass $_{Liquid}$	0.40 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0311 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 7.2 ppm

Y =	1.017			
Pressure $_{barometric}$	29.50 inches of mercury		Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	7:55
Temperature$_{meter}$	78 ° Fahrenheit		Finish Time	8:45
NDA-8-1 Initial Volume	1515.89 Liters		Moisture	1.0%
Final Volume	1529.05 Liters			
Volume$_{meter}$	13.16 Liters			
				Detection Limit
Volume $_{standard}$	12.82 Liters		Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0008 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

Y =	1.017			
Pressure $_{barometric}$	29.50 inches of mercury		Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	9:21
Temperature$_{meter}$	84 ° Fahrenheit		Finish Time	10:21
NDB-8-2 Initial Volume	1529.14 Liters		Moisture	1.0%
Final Volume	1543.75 Liters			
Volume$_{meter}$	14.61 Liters			
Volume $_{standard}$	14.08 Liters		Mass $_{Liquid}$	0.02 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0014 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.3 ppm

Condition 9 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	18:03
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	18:18
ME-9-1	Initial Volume	2318.52 Liters	Moisture	1.6%
	Final Volume	2321.43 Liters		
	Volume$_{meter}$	2.91 Liters		
	Volume $_{standard}$	2.78 Liters	Mass $_{Liquid}$	1.91 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.6869 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 158.6 ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	18:03
	Temperature$_{meter}$	69 ° Fahrenheit	Finish Time	18:33
RE-9-1	Initial Volume	7746.60 Liters	Moisture	0.8%
	Final Volume	7750.54 Liters		
	Volume$_{meter}$	3.94 Liters		
	Volume $_{standard}$	3.81 Liters	Mass $_{Liquid}$	0.36 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0944 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 21.8 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.50 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	18:04
	Temperature$_{meter}$	87 ° Fahrenheit	Finish Time	18:50
9-9-1	Initial Volume	71.73 Liters	Moisture	4.5%
	Final Volume	83.34 Liters		
	Volume$_{meter}$	11.61 Liters		
	Volume $_{standard}$	11.11 Liters	Mass $_{Liquid}$	0.05 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0045 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.0 ppm

Condition 9 Method 18 Sampling Results

Y =	1.017		
Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury	Start Time	18:02
Temperature$_{meter}$	88 ° Fahrenheit	Finish Time	18:32
NDA-9-1 Initial Volume	1543.88 Liters	Moisture	0.8%
Final Volume	1550.65 Liters		
Volume$_{meter}$	6.77 Liters		
			Detection Limit
Volume $_{standard}$	6.44 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0016 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 0.4 ppm

Condition 10 Method 18 Sampling Results

	Y =	0.999		
	Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	19:36
	Temperature$_{meter}$	70 ° Fahrenheit	Finish Time	19:51
ME-10-1	Initial Volume	2321.57 Liters	Moisture	1.4%
	Final Volume	2323.45 Liters		
	Volume$_{meter}$	1.88 Liters		
	Volume $_{standard}$	1.81 Liters	Mass $_{Liquid}$	XXXX Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = ######## mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = ######## ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	19:36
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	20:06
RE-10-1	Initial Volume	7750.86 Liters	Moisture	0.6%
	Final Volume	7755.23 Liters		
	Volume$_{meter}$	4.37 Liters		
	Volume $_{standard}$	4.22 Liters	Mass $_{Liquid}$	0.10 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0237 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 5.5 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.50 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	20:00
	Temperature$_{meter}$	85 ° Fahrenheit	Finish Time	20:54
10-10-1	Initial Volume	83.47 Liters	Moisture	0.2%
	Final Volume	98.21 Liters		
	Volume$_{meter}$	14.74 Liters		
	Volume $_{standard}$	14.78 Liters	Mass $_{Liquid}$	3.11 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.2104 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 48.6 ppm

Condition 10 Method 18 Sampling Results

Y =	1.017		
Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury	Start Time	18:02
Temperature$_{meter}$	89 ° Fahrenheit	Finish Time	18:32
NDA-10-1 Initial Volume	1550.75 Liters	Moisture	0.8%
Final Volume	1558.39 Liters		
Volume$_{meter}$	7.64 Liters		
			Detection Limit
Volume $_{standard}$	7.25 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0014 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 0.3 ppm

Condition 11 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	29.48 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	9:13
	Temperature$_{meter}$	56 ° Fahrenheit	Finish Time	9:28
ME-11-1	Initial Volume	2323.57 Liters	Moisture	1.4%
	Final Volume	2325.43 Liters		
	Volume$_{meter}$	1.86 Liters		
	Volume $_{standard}$	1.84 Liters	Mass $_{Liquid}$	0.99 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.5370 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 124.0 ppm

	Y =	0.997		
	Pressure $_{barometric}$	29.48 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	10:39
	Temperature$_{meter}$	75 ° Fahrenheit	Finish Time	10:59
ME-11-2	Initial Volume	2325.50 Liters	Moisture	1.7%
	Final Volume	2328.03 Liters		
	Volume$_{meter}$	2.53 Liters		
	Volume $_{standard}$	2.41 Liters	Mass $_{Liquid}$	1.20 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.4977 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 114.9 ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.48 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	9:13
	Temperature$_{meter}$	58 ° Fahrenheit	Finish Time	9:45
RE-11-1	Initial Volume	7756.17 Liters	Moisture	0.9%
	Final Volume	7760.17 Liters		
	Volume$_{meter}$	4.00 Liters		
	Volume $_{standard}$	3.98 Liters	Mass $_{Liquid}$	0.31 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0779 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 18.0 ppm

Condition 11 Method 18 Sampling Results

	Y =	0.999		
	Pressure $_{barometric}$	29.25 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	12:01
	Temperature$_{meter}$	78 ° Fahrenheit	Finish Time	12:31
RE-11-3	Initial Volume	7762.90 Liters	Moisture	0.8%
	Final Volume	7766.65 Liters		
	Volume$_{meter}$	3.75 Liters		
	Volume $_{standard}$	3.57 Liters	Mass $_{Liquid}$	0.13 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0365 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 8.4 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.48 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	10:38
	Temperature$_{meter}$	86 ° Fahrenheit	Finish Time	11:20
9-11-2	Initial Volume	113.83 Liters	Moisture	0.5%
	Final Volume	125.18 Liters		
	Volume$_{meter}$	11.35 Liters		
				Detection Limit
	Volume $_{standard}$	11.32 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0009 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.48 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	9:12
	Temperature$_{meter}$	83 ° Fahrenheit	Finish Time	10:12
10-11-1	Initial Volume	98.30 Liters	Moisture	0.0%
	Final Volume	113.78 Liters		
	Volume$_{meter}$	15.48 Liters		
	Volume $_{standard}$	15.60 Liters	Mass $_{Liquid}$	1.28 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0821 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 18.9 ppm

Condition 11 Method 18 Sampling Results

Y =	1.017			
Pressure $_{barometric}$	29.48 inches of mercury		Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	9:14
Temperature$_{meter}$	82 ° Fahrenheit		Finish Time	10:14
NDA-11-1 Initial Volume	1558.44 Liters		Moisture	0.8%
Final Volume	1572.84 Liters			
Volume$_{meter}$	14.40 Liters			
				Detection Limit
Volume $_{standard}$	13.94 Liters		Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration $= \dfrac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0007 mg/liter

Concentration, part per million (ppm) $= \dfrac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 0.2 ppm

Condition 12 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	8:37
	Temperature$_{meter}$	59 ° Fahrenheit	Finish Time	8:52
ME-12-1	Initial Volume	2331.30 Liters	Moisture	1.7%
	Final Volume	2333.12 Liters		
	Volume$_{meter}$	1.82 Liters		
	Volume $_{standard}$	1.78 Liters	Mass $_{Liquid}$	0.67 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.3770 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 87.0 ppm

	Y =	0.997		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	11:05
	Temperature$_{meter}$	69 ° Fahrenheit	Finish Time	12:05
ME-12-3	Initial Volume	2335.59 Liters	Moisture	1.6%
	Final Volume	2344.22 Liters		
	Volume$_{meter}$	8.63 Liters		
	Volume $_{standard}$	8.28 Liters	Mass $_{Liquid}$	2.96 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.3577 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 82.6 ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	8:37
	Temperature$_{meter}$	59 ° Fahrenheit	Finish Time	9:07
AF-12-1	Initial Volume	7767.00 Liters	Moisture	1.7%
	Final Volume	7770.90 Liters		
	Volume$_{meter}$	3.90 Liters		
	Volume $_{standard}$	3.82 Liters	Mass $_{Liquid}$	0.81 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.2123 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 49.0 ppm

Condition 12 Method 18 Sampling Results

	Y =	0.997		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	12:31
	Temperature$_{meter}$	74 ° Fahrenheit	Finish Time	13:31
AF-12-4	Initial Volume	2344.42 Liters	Moisture	1.6%
	Final Volume	2354.13 Liters		
	Volume$_{meter}$	9.71 Liters		
	Volume $_{standard}$	9.22 Liters	Mass $_{Liquid}$	1.6 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1735 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 40.0 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	11:05
	Temperature$_{meter}$	84 ° Fahrenheit	Finish Time	12:04
9-12-3	Initial Volume	1142.01 Liters	Moisture	3.0%
	Final Volume	1155.51 Liters		
	Volume$_{meter}$	13.50 Liters		
	Volume $_{standard}$	13.09 Liters	Mass $_{Liquid}$	0.06 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0046 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.1 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	8:36
	Temperature$_{meter}$	83 ° Fahrenheit	Finish Time	9:36
10-12-1	Initial Volume	1125.18 Liters	Moisture	0.5%
	Final Volume	1138.34 Liters		
	Volume$_{meter}$	13.16 Liters		
	Volume $_{standard}$	13.12 Liters	Mass $_{Liquid}$	1.28 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0976 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 22.5 ppm

Condition 12 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	12:31
	Temperature$_{meter}$	84 ° Fahrenheit	Finish Time	13:31
10-12-4	Initial Volume	1155.52 Liters	Moisture	2.7%
	Final Volume	1169.89 Liters		
	Volume$_{meter}$	14.37 Liters		
	Volume $_{standard}$	13.98 Liters	Mass $_{Liquid}$	4.13 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.2954 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 68.2 ppm

	Y =	1.017		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	8:36
	Temperature$_{meter}$	86 ° Fahrenheit	Finish Time	9:36
NDA-12-1	Initial Volume	1573.00 Liters	Moisture	1.6%
	Final Volume	1587.74 Liters		
	Volume$_{meter}$	14.74 Liters		
				Detection Limit
	Volume $_{standard}$	13.97 Liters	Mass $_{Liquid}$	0.01 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0007 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.2 ppm

	Y =	1.017		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	12:31
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	13:31
NDB-12-4	Initial Volume	1587.83 Liters	Moisture	1.6%
	Final Volume	1602.30 Liters		
	Volume$_{meter}$	14.47 Liters		
	Volume $_{standard}$	13.61 Liters	Mass $_{Liquid}$	0.07 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0051 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.2 ppm

Condition 13 Method 18 Sampling Results

	Y =	0.999		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	16:37
	Temperature$_{meter}$	72 ° Fahrenheit	Finish Time	17:37
ME-13-2	Initial Volume	7800.15 Liters	Moisture	1.7%
	Final Volume	7809.24 Liters		
	Volume$_{meter}$	9.09 Liters		
	Volume $_{standard}$	8.65 Liters	Mass $_{Liquid}$	1.78 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.2059 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 47.5 ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	15:20
	Temperature$_{meter}$	67 ° Fahrenheit	Finish Time	16:20
RE-13-1	Initial Volume	7792.50 Liters	Moisture	1.8%
	Final Volume	7799.80 Liters		
	Volume$_{meter}$	7.30 Liters		
	Volume $_{standard}$	7.00 Liters	Mass $_{Liquid}$	0.70 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1000 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 23.1 ppm

	Y =	0.997		
	Pressure $_{barometric}$	29.50 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	15:20
	Temperature$_{meter}$	78 ° Fahrenheit	Finish Time	16:04
AF-13-1	Initial Volume	2354.21 Liters	Moisture	1.6%
	Final Volume	2362.18 Liters		
	Volume$_{meter}$	7.97 Liters		
	Volume $_{standard}$	7.57 Liters	Mass $_{Liquid}$	1.00 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1322 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 30.5 ppm

Condition 13 Method 18 Sampling Results

	Y =	1.052		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	16:37
	Temperature$_{meter}$	86 ° Fahrenheit	Finish Time	17:37
9-13-2	Initial Volume	1184.08 Liters	Moisture	1.6%
	Final Volume	1199.07 Liters		
	Volume$_{meter}$	14.99 Liters		
	Volume $_{standard}$	14.64 Liters	Mass $_{Liquid}$	0.09 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0061 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.4 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	15:20
	Temperature$_{meter}$	83 ° Fahrenheit	Finish Time	16:15
10-13-1	Initial Volume	1170.11 Liters	Moisture	2.2%
	Final Volume	1184.95 Liters		
	Volume$_{meter}$	14.84 Liters		
	Volume $_{standard}$	14.49 Liters	Mass $_{Liquid}$	5.35 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.3692 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 85.2 ppm

	Y =	1.017		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	18:20
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	19:16
NDA-13-1	Initial Volume	1602.48 Liters	Moisture	1.6%
	Final Volume	1615.74 Liters		
	Volume$_{meter}$	13.26 Liters		
	Volume $_{standard}$	12.43 Liters	Mass $_{Liquid}$	0.09 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0072 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.7 ppm

Condition 4 Method 18 Cumene Sampling Results

	Y =	1.017		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	20:05
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	21:05
NDA-4-1	Initial Volume	1399.28 Liters	Moisture	1.0%
	Final Volume	1413.68 Liters		
	Volume$_{meter}$	14.40 Liters		
	Volume $_{standard}$	13.40 Liters	Mass $_{Liquid}$	0.14 Milligrams

Charcoal tube sample Cumene concentration $= \dfrac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0104 mg/liter

Concentration, part per million (ppm) $= \dfrac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 2.1 ppm

Condition 8 Method 18 Cumene Sampling Results

Y =	1.017			
Pressure $_{barometric}$	29.50 inches of mercury		Meter	VOST 3
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	7:55
Temperature$_{meter}$	78 ° Fahrenheit		Finish Time	8:45
NDA-8-1 Initial Volume	1515.89 Liters		Moisture	1.0%
Final Volume	1529.05 Liters			
Volume$_{meter}$	13.16 Liters			
				Detection Limit
Volume $_{standard}$	12.82 Liters		Mass $_{Liquid}$	0.14 Milligrams

Charcoal tube sample Cumene concentration $= \dfrac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0109 mg/liter

Concentration, part per million (ppm) $= \dfrac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 2.2 ppm

Condition 10 Method 18 Cumene Sampling Results

	Y =	0.999		
	Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	19:36
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	20:06
RE-10-1	Initial Volume	7750.86 Liters	Moisture	0.6%
	Final Volume	7755.23 Liters		
	Volume$_{meter}$	4.37 Liters		
	Volume $_{standard}$	4.22 Liters	Mass $_{Liquid}$	0.13 Milligrams

Charcoal tube sample Cumene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.0308 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 6.2 ppm

Method 18 Styrene Spiked Sampling Results

	Y =	0.999		
	Pressure $_{barometric}$	29.10 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	17:36
	Temperature$_{meter}$	56 ° Fahrenheit	Finish Time	17:51
MES-3-3	Initial Volume	7707.97 Liters	Moisture	1.1%
	Final Volume	7710.02 Liters		
	Volume$_{meter}$	2.05 Liters		
	Volume $_{standard}$	2.02 Liters	Mass $_{Liquid}$	3.24 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 1.6074 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 371.0 ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	20:06
	Temperature$_{meter}$	51 ° Fahrenheit	Finish Time	20:21
RES-4-1	Initial Volume	7710.16 Liters	Moisture	0.9%
	Final Volume	7712.11 Liters		
	Volume$_{meter}$	1.95 Liters		
	Volume $_{standard}$	1.95 Liters	Mass $_{Liquid}$	0.52 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.2670 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 61.6 ppm

	Y =	0.997		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	11:08
	Temperature$_{meter}$	98 ° Fahrenheit	Finish Time	12:08
AFS-5-2	Initial Volume	2300.34 Liters	Moisture	2.1%
	Final Volume	2308.23 Liters		
	Volume$_{meter}$	7.89 Liters		
	Volume $_{standard}$	7.01 Liters	Mass $_{Liquid}$	1.86 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.2652 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 61.2 ppm

Method 18 Styrene Spiked Sampling Results

	Y =	0.999		
	Pressure $_{barometric}$	28.78 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	17:33
	Temperature$_{meter}$	82 ° Fahrenheit	Finish Time	17:43
MES-6-2	Initial Volume	7735.86 Liters	Moisture	2.3%
	Final Volume	7737.38 Liters		
	Volume$_{meter}$	1.52 Liters		
	Volume $_{standard}$	1.39 Liters	Mass $_{Liquid}$	2.48 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 1.7840 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 411.8 ppm

	Y =	0.999		
	Pressure $_{barometric}$	29.48 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	10:39
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	10:59
MES-11-2	Initial Volume	7760.25 Liters	Moisture	1.7%
	Final Volume	7762.87 Liters		
	Volume$_{meter}$	2.62 Liters		
	Volume $_{standard}$	2.52 Liters	Mass $_{Liquid}$	1.98 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.7855 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 181.3 ppm

	Y =	0.997		
	Pressure $_{barometric}$	29.25 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	12:01
	Temperature$_{meter}$	83 ° Fahrenheit	Finish Time	12:31
RES-11-3	Initial Volume	2328.02 Liters	Moisture	0.8%
	Final Volume	2331.22 Liters		
	Volume$_{meter}$	3.20 Liters		
	Volume $_{standard}$	3.01 Liters	Mass $_{Liquid}$	0.39 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.1296 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}} =$ 29.9 ppm

Method 18 Styrene Spiked Sampling Results

Y =	0.999			
Pressure $_{barometric}$	29.30 inches of mercury		Meter	VOST 1
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	11:05
Temperature$_{meter}$	65 ° Fahrenheit		Finish Time	12:05
MES-12-3 Initial Volume	7773.84 Liters		Moisture	1.6%
Final Volume	7782.78 Liters			
Volume$_{meter}$	8.94 Liters			
Volume $_{standard}$	8.66 Liters		Mass $_{Liquid}$	4.90 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.5661 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}} =$ 130.7 ppm

Y =	0.999			
Pressure $_{barometric}$	29.30 inches of mercury		Meter	VOST 1
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	12:31
Temperature$_{meter}$	68 ° Fahrenheit		Finish Time	13:31
AFS-12-4 Initial Volume	7783.41 Liters		Moisture	1.6%
Final Volume	7792.13 Liters			
Volume$_{meter}$	8.72 Liters			
Volume $_{standard}$	8.39 Liters		Mass $_{Liquid}$	1.87 Milligrams

Charcoal tube sample Styrene concentration $= \frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}} =$ 0.2228 mg/liter

Concentration, part per million (ppm) $= \frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}} =$ 51.4 ppm

Condition 1 Method 18 Sampling Results - Methyl Methacrylate

	Y =	0.997		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	15:40
	Temperature$_{meter}$	71 ° Fahrenheit	Finish Time	16:05
ME-1-3	Initial volume	2268.33 Liters	Moisture	4.1%
	Final Volume	2274.54 Liters		
	Volume$_{meter}$	6.21 Liters		
	Volume $_{standard}$	5.71 Liters	Mass $_{Liquid}$	5.02 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.8797 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 245.6 ppm

	Y =	0.999		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	15:41
	Temperature$_{meter}$	74 ° Fahrenheit	Finish Time	16:41
RE-1-3	Initial volume	7664.32 Liters	Moisture	1.6%
	Final Volume	7678.92 Liters		
	Volume$_{meter}$	14.60 Liters		
	Volume $_{standard}$	13.72 Liters	Mass $_{Liquid}$	1.27 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0926 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 25.9 ppm

Condition 2 Method 18 Sampling Results - Methyl Methacrylate

Y =	0.997			
Pressure $_{barometric}$	28.84 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	20:23
Temperature$_{meter}$	69 ° Fahrenheit		Finish Time	20:54
ME-2-1 Initial Volume	2275.08 Liters		Moisture	1.5%
Final Volume	2283.95 Liters			
Volume$_{meter}$	8.87 Liters			
Volume $_{standard}$	8.38 Liters		Mass $_{Liquid}$	6.84 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.8162 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 227.9 ppm

Y =	0.999			
Pressure $_{barometric}$	28.84 inches of mercury		Meter	VOST 1
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	20:20
Temperature$_{meter}$	71 ° Fahrenheit		Finish Time	21:22
RE-2-1 Initial Volume	7679.50 Liters		Moisture	1.1%
Final Volume	7694.21 Liters			
Volume$_{meter}$	14.71 Liters			
Volume $_{standard}$	13.93 Liters		Mass $_{Liquid}$	2.19 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1572 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 43.9 ppm

Y =	1.052			
Pressure $_{barometric}$	28.92 inches of mercury		Meter	ES-1
Vacuum $_{meter}$	0.0 inches of mercury		Start Time	17:35
Temperature$_{meter}$	85 ° Fahrenheit		Finish Time	18:38
9-2-1 Initial Volume	866.91 Liters		Moisture	1.3%
Final Volume	881.20 Liters			
Volume$_{meter}$	14.29 Liters			
Volume $_{standard}$	13.89 Liters		Mass $_{Liquid}$	0.04 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0029 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.8 ppm

Condition 1 Method 18 Sampling Results

	Y =	1.017		
	Pressure $_{barometric}$	28.84 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	22:00
	Temperature$_{meter}$	87 ° Fahrenheit	Finish Time	23:00
NDA-2-2	Initial Volume	1337.15 Liters	Moisture	1.0%
	Final Volume	1351.81 Liters		
	Volume$_{meter}$	14.66 Liters		
	Volume $_{standard}$	13.73 Liters	Mass $_{Liquid}$	0.04 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0029 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 0.8 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	22:00
	Temperature$_{meter}$	87 ° Fahrenheit	Finish Time	23:00
10-2-2	Initial Volume	881.65 Liters	Moisture	1.5%
	Final Volume	897.00 Liters		
	Volume$_{meter}$	15.35 Liters		
				Detection Limit
	Volume $_{standard}$	14.78 Liters	Mass $_{Liquid}$	0.22 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0149 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 4.2 ppm

Condition 2 Method 18 Sampling Results - Methyl Methacrylate

Y =	0.997			
Pressure $_{barometric}$	28.84 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	20:23
Temperature$_{meter}$	69 ° Fahrenheit		Finish Time	20:54
ME-2-1	Initial Volume	2275.08 Liters	Moisture	1.5%
	Final Volume	2283.95 Liters		
	Volume$_{meter}$	8.87 Liters		
	Volume $_{standard}$	8.38 Liters	Mass $_{Liquid}$	6.84 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.8162 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 227.9 ppm

Y =	0.999			
Pressure $_{barometric}$	28.84 inches of mercury		Meter	VOST 1
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	20:20
Temperature$_{meter}$	71 ° Fahrenheit		Finish Time	21:22
RE-2-1	Initial Volume	7679.50 Liters	Moisture	1.1%
	Final Volume	7694.21 Liters		
	Volume$_{meter}$	14.71 Liters		
	Volume $_{standard}$	13.93 Liters	Mass $_{Liquid}$	2.19 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1572 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 43.9 ppm

Y =	1.052			
Pressure $_{barometric}$	28.92 inches of mercury		Meter	ES-1
Vacuum $_{meter}$	0.0 inches of mercury		Start Time	17:35
Temperature$_{meter}$	85 ° Fahrenheit		Finish Time	18:38
9-2-1	Initial Volume	866.91 Liters	Moisture	1.3%
	Final Volume	881.20 Liters		
	Volume$_{meter}$	14.29 Liters		
	Volume $_{standard}$	13.89 Liters	Mass $_{Liquid}$	0.04 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0029 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 0.8 ppm

Condition 2 Method 18 Sampling Results - Methyl Methacrylate

	Y =	1.017		
	Pressure $_{barometric}$	28.84 inches of mercury	Meter	VOST 3
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	22:00
	Temperature$_{meter}$	87 ° Fahrenheit	Finish Time	23:00
NDA-2-2	Initial Volume	1337.15 Liters	Moisture	1.0%
	Final Volume	1351.81 Liters		
	Volume$_{meter}$	14.66 Liters		
	Volume $_{standard}$	13.73 Liters	Mass $_{Liquid}$	0.04 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0029 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 0.8 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	22:00
	Temperature$_{meter}$	87 ° Fahrenheit	Finish Time	23:00
10-2-2	Initial Volume	881.65 Liters	Moisture	1.5%
	Final Volume	897.00 Liters		
	Volume$_{meter}$	15.35 Liters		
				Detection Limit
	Volume $_{standard}$	14.78 Liters	Mass $_{Liquid}$	0.22 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0149 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 4.2 ppm

Condition 3 Method 18 Sampling Results - Methyl Methacrylate

Y =	0.997			
Pressure $_{barometric}$	28.90 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	14:25
Temperature$_{meter}$	64 ° Fahrenheit		Finish Time	14:55
ME-3-1	Initial Volume	2287.47 Liters	Moisture	1.0%
	Final Volume	2290.49 Liters		
	Volume$_{meter}$	3.02 Liters		
	Volume $_{standard}$	2.90 Liters	Mass $_{Liquid}$	0.07 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0241 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 6.7 ppm

Y =	0.997			
Pressure $_{barometric}$	29.10 inches of mercury		Meter	VOST 2
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	17:35
Temperature$_{meter}$	57 ° Fahrenheit		Finish Time	17:50
ME-3-3	Initial Volume	2293.37 Liters	Moisture	1.1%
	Final Volume	2294.61 Liters		
	Volume$_{meter}$	1.24 Liters		
	Volume $_{standard}$	1.21 Liters	Mass $_{Liquid}$	0.04 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0329 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 9.2 ppm

Condition 4 Method 18 Sampling Results - Methyl Methacrylate

	Y =	1.052		
	Pressure $_{barometric}$	28.80 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	21:40
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	22:30
9-4-2	Initial Volume	941.12 Liters	Moisture	1.2%
	Final Volume	956.55 Liters		
	Volume$_{meter}$	15.43 Liters		
	Volume $_{standard}$	14.82 Liters	Mass $_{Liquid}$	0.08 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0054 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 1.5 ppm

40

Condition 5 Method 18 Sampling Results - Methyl Methacrylate

Y =	0.999			
Pressure $_{barometric}$	28.85 inches of mercury		Meter	VOST 1
Vacuum $_{meter}$	1.0 inches of mercury		Start Time	9:04
Temperature$_{meter}$	79 ° Fahrenheit		Finish Time	9:49
RE-5-1	Initial Volume	7713.90 Liters	Moisture	2.1%
	Final Volume	7720.65 Liters		
	Volume$_{meter}$	6.75 Liters		
	Volume $_{standard}$	6.24 Liters	Mass $_{Liquid}$	0.05 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0080 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 2.2 ppm

Y =	1.052			
Pressure $_{barometric}$	29.25 inches of mercury		Meter	ES-1
Vacuum $_{meter}$	0.0 inches of mercury		Start Time	11:08
Temperature$_{meter}$	91 ° Fahrenheit		Finish Time	12:08
10-5-2	Initial Volume	972.65 Liters	Moisture	2.5%
	Final Volume	987.82 Liters		
	Volume$_{meter}$	15.17 Liters		
	Volume $_{standard}$	14.58 Liters	Mass $_{Liquid}$	0.05 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0034 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 1.0 ppm

Condition 6 Method 18 Sampling Results - Methyl Methacrylate

	Y =	0.997		
	Pressure $_{barometric}$	28.78 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	17:33
	Temperature$_{meter}$	78 ° Fahrenheit	Finish Time	17:43
ME-6-2	Initial Volume	2308.46 Liters	Moisture	2.3%
	Final Volume	2310.28 Liters		
	Volume$_{meter}$	1.82 Liters		
	Volume $_{standard}$	1.67 Liters	Mass $_{Liquid}$	0.10 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0598 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 16.7 ppm

	Y =	1.052		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	16:05
	Temperature$_{meter}$	93 ° Fahrenheit	Finish Time	16:58
10-6-1	Initial Volume	987.85 Liters	Moisture	2.3%
	Final Volume	1001.42 Liters		
	Volume$_{meter}$	13.57 Liters		
	Volume $_{standard}$	13.00 Liters	Mass $_{Liquid}$	0.05 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0038 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1.1 ppm

Condition 7 Method 18 Sampling Results - Methyl Methacrylate

	Y =	0.997		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	14:49
	Temperature$_{meter}$	77 ° Fahrenheit	Finish Time	15:04
ME-7-1	Initial Volume	2310.34 Liters	Moisture	1.8%
	Final Volume	2312.66 Liters		
	Volume$_{meter}$	2.32 Liters		
	Volume $_{standard}$	2.16 Liters	Mass $_{Liquid}$	0.29 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1343 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 31.0 ppm

	Y =	0.997		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	VOST 2
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	19:13
	Temperature$_{meter}$	66 ° Fahrenheit	Finish Time	19:28
ME-7-3	Initial Volume	2312.80 Liters	Moisture	1.4%
	Final Volume	2315.10 Liters		
	Volume$_{meter}$	2.30 Liters		
	Volume $_{standard}$	2.19 Liters	Mass $_{Liquid}$	0.36 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.1641 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 45.8 ppm

	Y =	1.052		
	Pressure $_{barometric}$	28.92 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	17:03
	Temperature$_{meter}$	90 ° Fahrenheit	Finish Time	18:03
10-7-2	Initial Volume	28.15 Liters	Moisture	1.3%
	Final Volume	43.62 Liters		
	Volume$_{meter}$	15.47 Liters		
	Volume $_{standard}$	14.90 Liters	Mass $_{Liquid}$	0.17 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0114 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 3.2 ppm

Condition 9 Method 18 Sampling Results - Methyl Methacrylate

	Y =	0.999		
	Pressure $_{barometric}$	29.28 inches of mercury	Meter	VOST 1
	Vacuum $_{meter}$	1.0 inches of mercury	Start Time	18:03
	Temperature$_{meter}$	69 ° Fahrenheit	Finish Time	18:33
RE-9-1	Initial Volume	7746.60 Liters	Moisture	0.8%
	Final Volume	7750.54 Liters		
	Volume$_{meter}$	3.94 Liters		
	Volume $_{standard}$	3.81 Liters	Mass $_{Liquid}$	0.04 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0105 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 2.9 ppm

Condition 12 Method 18 Sampling Results - Methyl Methacrylate

	Y =	1.052		
	Pressure $_{barometric}$	29.30 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	11:05
	Temperature$_{meter}$	84 ° Fahrenheit	Finish Time	12:04
9-12-3	Initial Volume	1142.01 Liters	Moisture	3.0%
	Final Volume	1155.51 Liters		
	Volume$_{meter}$	13.50 Liters		
	Volume $_{standard}$	13.09 Liters	Mass $_{Liquid}$	0.04 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0031 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 0.9 ppm

Condition 13 Method 18 Sampling Results - Methyl Methacrylate

	Y =	1.052		
	Pressure $_{barometric}$	29.20 inches of mercury	Meter	ES-1
	Vacuum $_{meter}$	0.0 inches of mercury	Start Time	16:37
	Temperature$_{meter}$	86 ° Fahrenheit	Finish Time	17:37
9-13-2	Initial Volume	1184.08 Liters	Moisture	1.6%
	Final Volume	1199.07 Liters		
	Volume$_{meter}$	14.99 Liters		
	Volume $_{standard}$	14.64 Liters	Mass $_{Liquid}$	0.25 Milligrams

Charcoal tube Methyl Methacrylate concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.0171 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter} \times 24.04 \text{ liter/mole}}{\text{molecular weight}}$ = 4.8 ppm

Method 18 Sampling Results of Styrene Cylinders

Y =	1.017		
Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 3
Vacuum $_{meter}$	1.5 inches of mercury	Start Time	17:12
Temperature$_{meter}$	88 ° Fahrenheit	Finish Time	17:19
250.7 ppm Initial Volume	20.10 Liters	Moisture	0.0%
Final Volume	26.10 Liters		
Volume$_{meter}$	6.00 Liters		
Volume $_{standard}$	5.74 Liters	Mass $_{Liquid}$	2.62 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.4562 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 105.3 ppm

Y =	1.017		
Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 3
Vacuum $_{meter}$	1.5 inches of mercury	Start Time	17:33
Temperature$_{meter}$	88 ° Fahrenheit	Finish Time	17:39
143.1 ppm Initial Volume	30.91 Liters	Moisture	0.0%
Final Volume	36.91 Liters		
Volume$_{meter}$	6.00 Liters		
Volume $_{standard}$	5.74 Liters	Mass $_{Liquid}$	1.84 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.3207 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 74.0 ppm

Y =	1.017		
Pressure $_{barometric}$	29.20 inches of mercury	Meter	VOST 3
Vacuum $_{meter}$	1.5 inches of mercury	Start Time	18:10
Temperature$_{meter}$	89 ° Fahrenheit	Finish Time	18:16
102 ppm Initial Volume	50.00 Liters	Moisture	0.0%
Final Volume	56.00 Liters		
Volume$_{meter}$	6.00 Liters		
Volume $_{standard}$	5.73 Liters	Mass $_{Liquid}$	1.76 Milligrams

Charcoal tube sample Styrene concentration = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.3073 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 70.9 ppm

LASCO

Styrene Bag Standards

Response Factors

BAG	Styrene Injection ppm Styrene	JUM 1 Response ppm Propane	Response Factor	JUM 5 Response ppm Propane	Response Factor
Run 1	67.7	161.1	0.4202	156.9	0.4315
Run 2	67.9	160.3	0.4236	157.8	0.4303
Run 3	134.6	319.0	0.4219	316.3	0.4255
Run 4	189.8	441.3	0.4301	431.4	0.4400
Run 5	362.2	855.9	0.4232	843.9	0.4292
Run 6	557.3	1266	0.4402	1250	0.4458
Run 7	1106.2	2636	0.4197	2642	0.4187
Run 8	1659.5	3983	0.4166	4103	0.4045
		Average	0.4244	Average	0.4282
Average	0.4263	Standard Deviation	0.75%	Standard Deviation	1.27%

Styrene Cylinders	JUM 1 Response ppm Propane	Response Factor	JUM 5 Response ppm Propane	Response Factor
102	253.3	0.4027	250.0	0.4080
143.1	293.2	0.4881	290.3	0.4929
250.7	411.0	0.6100	409.1	0.6128

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
S405.003	1	2

Client: LASCO

Location:

Prepared By	Date	Checked By	Date	Sheet Title
P. SIEGEL				BAG STANDARDS

Styrene $C_8H_5CH=CH_2$ 99 % +

FW = 104.15
d = 0.909
n_D^{20} = 1.5470
b.p. = 145°-6°
m.p. = -31°

Ambient Air flow through meter = 3 Liters per minute

Vost Box 2 γ = 0.980
Barometric Pressure = 29.05 inches of mercury
Meter Temperature = 81°F = 541°R
BAG Temperature = 131°F
Impinger temperature = 395°F (bath temperature)
Meter Pressure = 12.6 inches of water
Meter Volume = 3754.32 - 3674.32 = 80.000 Liters

$$V_{m_{STD}} = 17.647 \times V_m \times \gamma \left[\frac{P_{bar} + \frac{\Delta H}{13.6}}{T_m}\right]$$

$$= 17.647 \times 80.00 \times 0.980 \left[\frac{29.05 + 12.6/13.6}{541}\right]$$

$V_{m_{STD}}$ = 76.66 Liters = BAG VOLUME (B_V)

M_L = MASS of Styrene liquid injected into the bag, mg

16.6085 g
- 16.5860
22.5 mg injected

PACIFIC ENVIRONMENTAL SERVICES, INC.

Project No.	Page	of
S405.003	2	2

Client

Location

Prepared By	Date	Checked By	Date	Sheet Title
P. SIEGEL				

BAG SAMPLE VOC concentration (C_{VOC}) mg/Liter

$$C_{VOC} = \frac{M_L}{B_V} = \frac{22.5}{76.66} = 0.2935 \text{ mg/Liter}$$

Concentration, part per million (ppm)

$$C_{ppm} = \frac{\mu g/\text{Liter} \times 24.04 \text{ Liter/mole}}{MW, \text{ analyte}}$$

$$= \frac{293.5 \times 24.04}{104.15} = 67.7 \text{ ppm Styrene}$$

Analyzer Response = 161.8 ppm Propane
BACKGROUND = 0.8 ppm Propane
NET RESPONSE = 161.0 ppm Propane

$$\text{RESPONSE FACTOR} = \frac{67.7}{161.0} = 0.4205$$

1 ppm Styrene ⇒ 2.378 ppm Propane
1 ppm Propane ⇒ 0.4205 ppm Styrene

Styrene Bag Standards

	Y =	0.980			
	Pressure $_{barometric}$	29.05 inches of mercury			
	Pressure $_{meter}$	12.6 inches of water			
	Temperature$_{meter}$	81 ° Fahrenheit			
BAG 1	Initial volume	3674.32 Liters	**INJECTION 1**	Initial mass	16.6085 Grams
	Final Volume	3754.32 Liters		Final mass	16.586 Grams
	Volume$_{meter}$	80.00 Liters		Total mass	0.0225 Grams
	Volume $_{standard}$	76.66 Liters		Mass $_{Liquid}$	22.5 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.2935 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 67.7 ppm

	Y =	0.980			
	Pressure $_{barometric}$	28.99 inches of mercury			
	Pressure $_{meter}$	12.6 inches of water			
	Temperature$_{meter}$	81 ° Fahrenheit			
BAG 2	Initial volume	3892.85 Liters	**INJECTION 2**	Initial mass	16.6053 Grams
	Final Volume	3972.85 Liters		Final mass	16.5828 Grams
	Volume$_{meter}$	80.00 Liters		Total mass	0.0225 Grams
	Volume $_{standard}$	76.51 Liters		Mass $_{Liquid}$	22.5 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.2941 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 67.9 ppm

	Y =	0.980			
	Pressure $_{barometric}$	28.99 inches of mercury			
	Pressure $_{meter}$	12.6 inches of water			
	Temperature$_{meter}$	81 ° Fahrenheit	**INJECTION 3A**	Initial mass	16.6048 Grams
				Final mass	16.5825 Grams
BAG 3	Initial volume	3982.35 Liters	**INJECTION 3B**	Initial mass	16.6046 Grams
	Final Volume	4062.35 Liters		Final mass	16.5823 Grams
	Volume$_{meter}$	80.00 Liters		Total mass	0.0446 Grams
	Volume $_{standard}$	76.51 Liters		Mass $_{Liquid}$	44.6 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.5830 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 134.6 ppm

Styrene Bag Standards

Y =	0.980				
Pressure $_{barometric}$	28.99 inches of mercury				
Pressure $_{meter}$	12.6 inches of water				
Temperature$_{meter}$	86 ° Fahrenheit				
BAG 4	Initial volume	4172.85 Liters	**INJECTION 4**	Initial mass	15.0931 Grams
	Final Volume	4264.85 Liters		Final mass	15.0214 Grams
	Volume$_{meter}$	92.00 Liters		Total mass	0.0717 Grams
	Volume $_{standard}$	87.18 Liters		Mass $_{Liquid}$	71.7 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 0.8225 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 189.8 ppm

Y =	0.980				
Pressure $_{barometric}$	28.99 inches of mercury				
Pressure $_{meter}$	12.6 inches of water				
Temperature$_{meter}$	89.5 ° Fahrenheit				
BAG 5	Initial volume	4268.73 Liters	**INJECTION 5**	Initial mass	15.1478 Grams
	Final Volume	4353.73 Liters		Final mass	15.0222 Grams
	Volume$_{meter}$	85.00 Liters		Total mass	0.1256 Grams
	Volume $_{standard}$	80.03 Liters		Mass $_{Liquid}$	125.6 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 1.5694 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 362.2 ppm

Y =	0.980				
Pressure $_{barometric}$	28.99 inches of mercury				
Pressure $_{meter}$	12.6 inches of water				
Temperature$_{meter}$	91.5 ° Fahrenheit				
BAG 6	Initial volume	4366.7 Liters	**INJECTION 6**	Initial mass	15.2034 Grams
	Final Volume	4446.7 Liters		Final mass	15.0222 Grams
	Volume$_{meter}$	80.00 Liters		Total mass	0.1812 Grams
	Volume $_{standard}$	75.05 Liters		Mass $_{Liquid}$	181.2 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 2.4144 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 557.3 ppm

Styrene Bag Standards

Y =	0.980				
Pressure $_{barometric}$	28.99 inches of mercury				
Pressure $_{meter}$	12.6 inches of water				
Temperature$_{meter}$	91 ° Fahrenheit		**INJECTION 7A**	Initial mass	15.2018 Grams
				Final mass	15.0222 Grams
BAG 7	Initial volume	4456.2 Liters	**INJECTION 7B**	Initial mass	15.2028 Grams
	Final Volume	4536.2 Liters		Final mass	15.0224 Grams
	Volume$_{meter}$	80.00 Liters		Total mass	0.3600 Grams
	Volume $_{standard}$	75.12 Liters		Mass $_{Liquid}$	360 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 4.7924 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1106.2 ppm

Y =	0.980				
Pressure $_{barometric}$	28.99 inches of mercury		**INJECTION 8A**	Initial mass	15.2030 Grams
Pressure $_{meter}$	12.6 inches of water			Final mass	15.0228 Grams
Temperature$_{meter}$	92 ° Fahrenheit		**INJECTION 8B**	Initial mass	15.2022 Grams
				Final mass	15.0224 Grams
BAG 8	Initial volume	4550.4 Liters	**INJECTION 8C**	Initial mass	15.2016 Grams
	Final Volume	4630.4 Liters		Final mass	15.0225 Grams
	Volume$_{meter}$	80.00 Liters		Total mass	0.5391 Grams
	Volume $_{standard}$	74.98 Liters		Mass $_{Liquid}$	539.1 Milligrams

Bag sample VOC concentration (mg/Liter) = $\frac{\text{Mass}_{Liquid}}{\text{Volume}_{standard}}$ = 7.1897 mg/liter

Concentration, part per million (ppm) = $\frac{\text{ug/liter x 24.04 liter/mole}}{\text{molecular weight}}$ = 1659.5 ppm

LASCO

Styrene Bag Standards

JUM 1 Total Hydrocarbons (THC)

July 1, 1997

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.22%
84.1 ppm	85.7	0.22%
270.5 ppm	270.9	0.12%
463.3 ppm	461.8	0.11%

Correlation	0.999988
Slope	0.9959296
Intercept	0.9197352

15:57	**Run 1**	162.1		Corrected	161.1	ppm THC
Ambient Air		1.7	0.8			

16:10	Post Cal	-0.2	Drift	0.00%
		270.9		0.00%

July 2, 1997

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.22%
84.1 ppm	85.7	0.14%
270.5 ppm	272.8	0.24%
463.3 ppm	463.7	0.17%

Correlation	0.999985
Slope	1.0007648
Intercept	0.8811314

13:57	**Run 2**	162.1		Corrected	160.3	ppm THC
Ambient Air		1.7	0.8			

14:10	Post Cal	-0.2	Drift	0.00%
		272.8		0.00%

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.21%
84.1 ppm	85.7	0.07%
270.5 ppm	274.7	0.37%
463.3 ppm	465.6	0.23%

Correlation	0.9999772
Slope	1.0055999
Intercept	0.8425275

47

LASCO

Styrene Bag Standards

JUM 1 Total Hydrocarbons (THC)

15:21	**Run 3**	322.50		Corrected	319.0	ppm THC
Ambient Air		1.7	0.9			

15:40	Post Cal	-0.2	Drift	0.00%
		467.5		0.38%

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.14%
84.1 ppm	85.7	0.06%
270.5 ppm	274.7	0.22%
463.3 ppm	467.5	0.14%

Correlation	0.9999908
Slope	1.0094522
Intercept	0.5298777

102 ppm Styrene	255.6	Corrected	253.3	ppm THC
143.1 ppm Styrene	295.7	Corrected	293.2	ppm THC
250.7 ppm Styrene	414.1	Corrected	411.0	ppm THC

16:45	Post Cal	-0.20	Drift	0.00%
		274.70		0.00%

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.4	0.01%
270.5 ppm	270.7	0.05%
463.3 ppm	465.5	0.08%
886.7 ppm	889.3	0.03%

Correlation	0.9999988
Slope	1.0036288
Intercept	-0.3201208

17:42	**Run 4**	446.4		Corrected	441.3	ppm THC
Ambient Air		3.5	3.8			

17:53	Post Cal	-0.4	Drift	0.00%
		457.8		0.77%

18:39	**Run 5**	862.5		Corrected	855.9	ppm THC
Ambient Air		3.5	3.8			

LASCO

Styrene Bag Standards

JUM 1 Total Hydrocarbons (THC)

18:55	Post Cal	-0.4	Drift	0.00%
		457.8		0.77%

Calibration Gases	System Calibration	Calibration Error
0 ppm	-2	0.15%
1737 ppm	1755	0.11%
2418 ppm	2442	0.18%
4507 ppm	4523	0.14%

Correlation	0.9999895
Slope	1.0038526
Intercept	5.6571339

19:56	**Run 6**	1277	Corrected	1266	ppm THC

20:03	Post Cal	-2	Drift	0.00%
		2461		0.38%

20:52	**Run 7**	2652	Corrected	2636	ppm THC

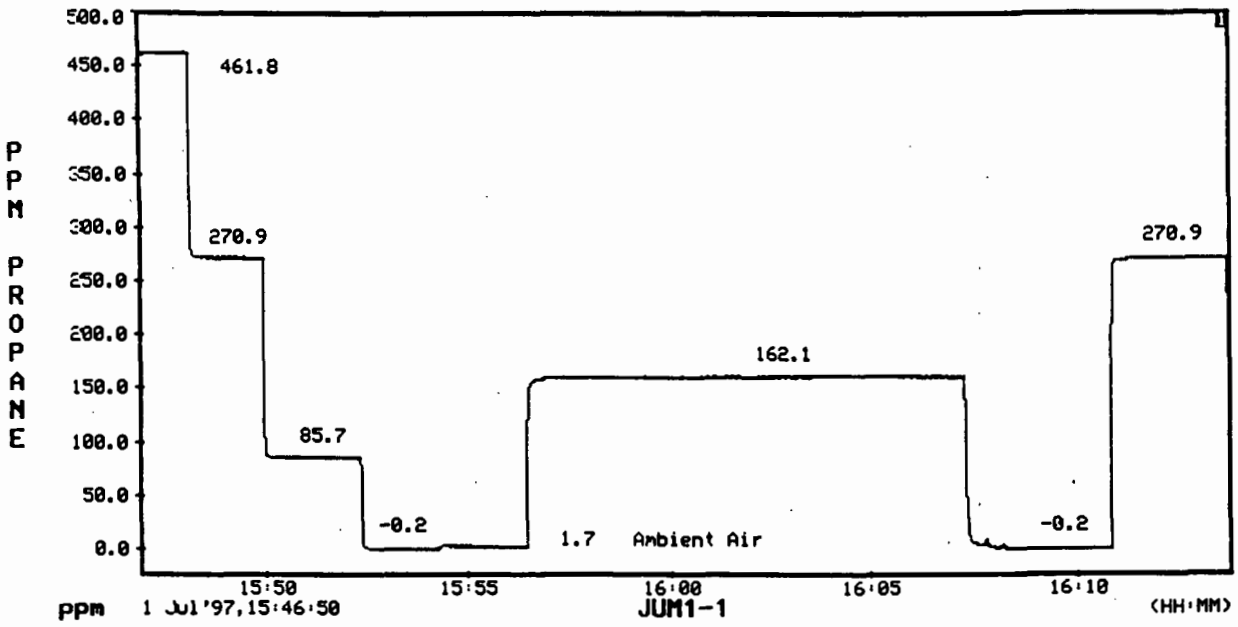
21:00	Post Cal	-2	Drift	0.00%
		2461		0.38%

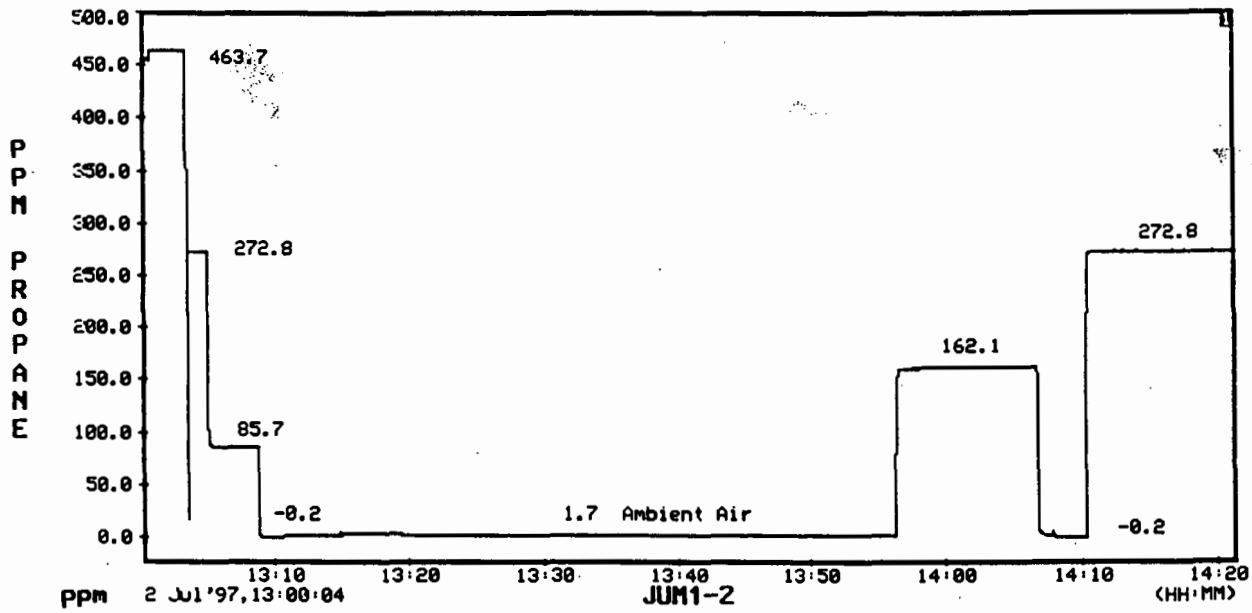
Calibration Gases	System Calibration	Calibration Error
0 ppm	-2	0.11%
1737 ppm	1735	0.12%
2418 ppm	2442	0.39%
4507 ppm	4504	0.16%

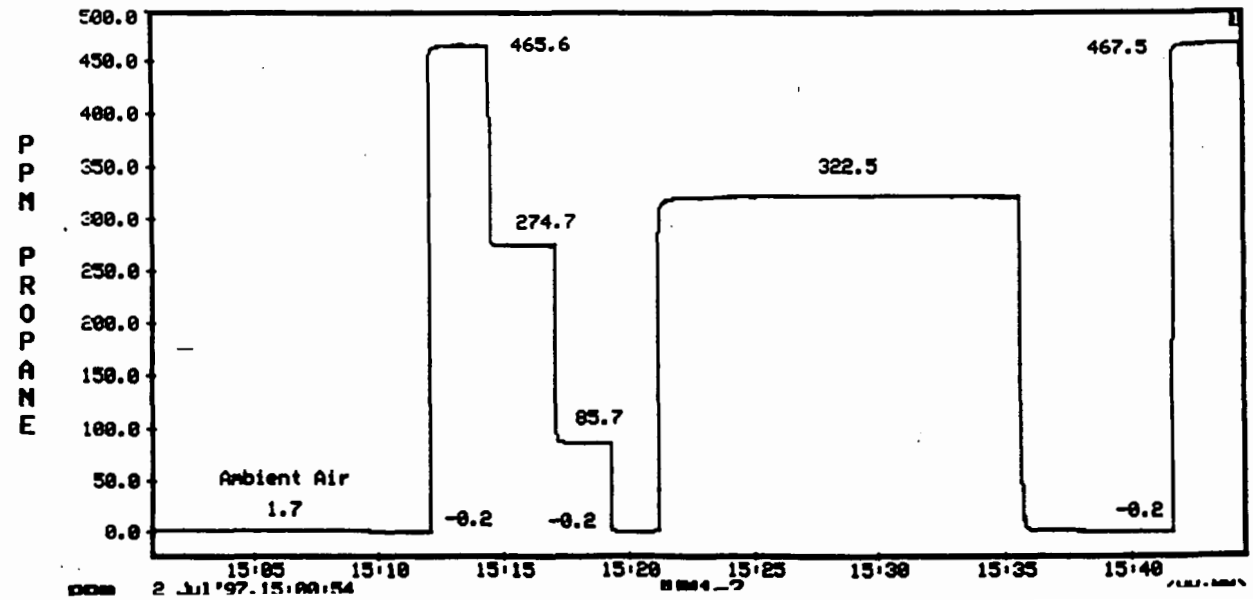
Correlation	0.9999751
Slope	1.0004054
Intercept	3.3722138

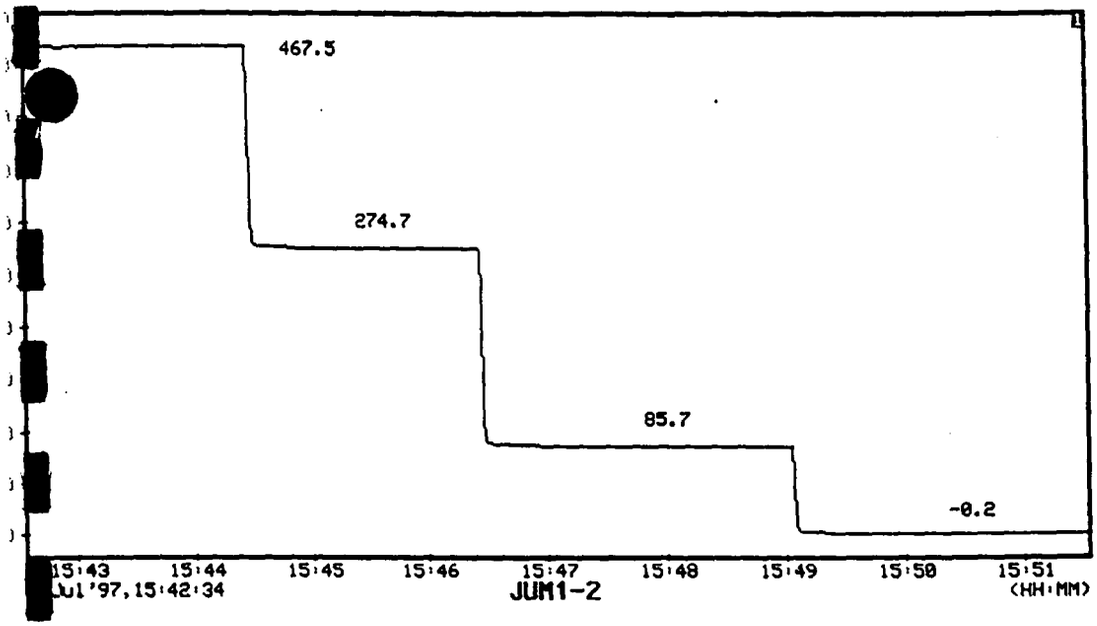
21:54	**Run 8**	3988	Corrected	3983	ppm THC

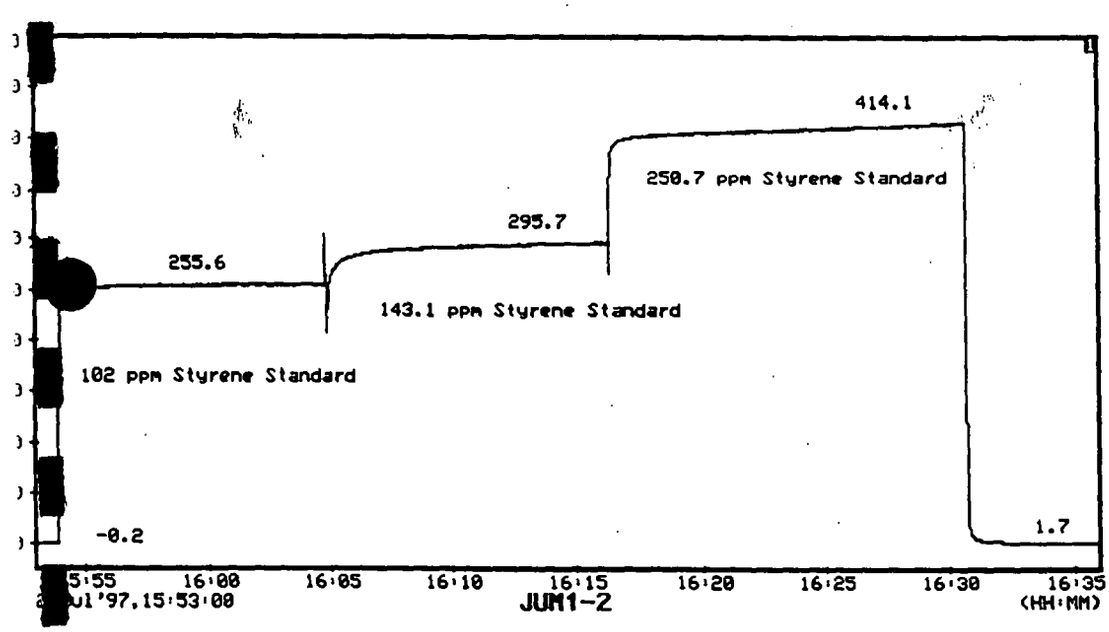
22:06	Post Cal	-2	Drift	0.00%
		4504		0.00%

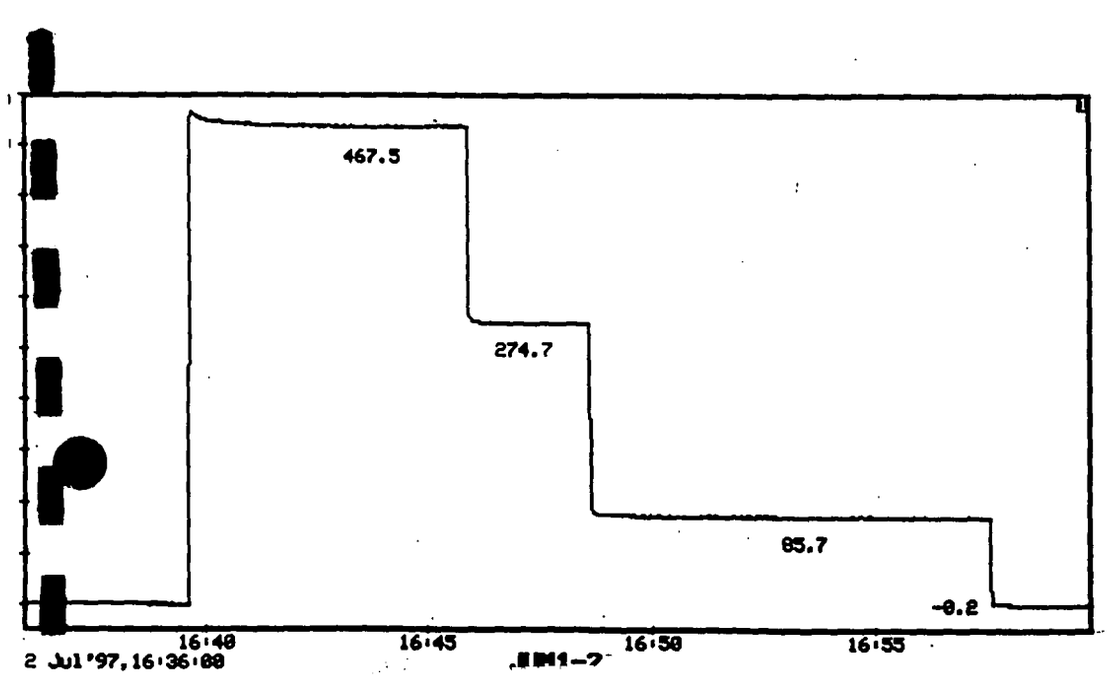

PPM PROPANE
500.0
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
461.8
270.9
85.7
-0.2
1.7 Ambient Air
162.1
-0.2
270.9
15:50
15:55
16:00
16:05
16:10
ppm 1 Jul'97,15:46:50
JUM1-1
(HH:MM)

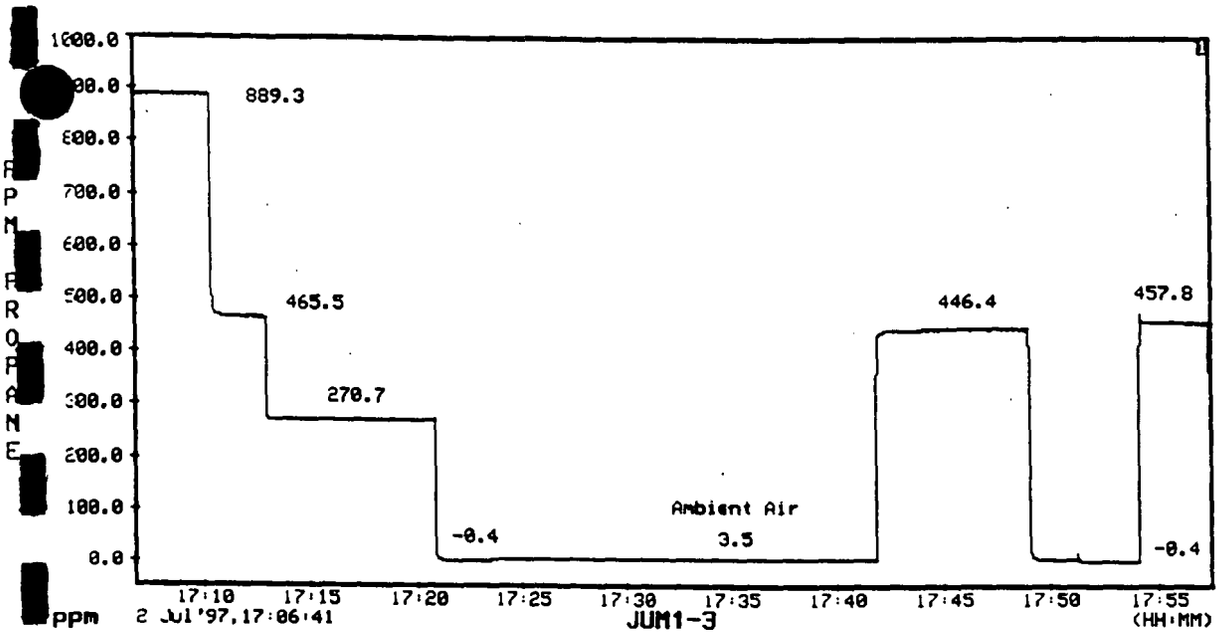

PPM PROPANE
500.0
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
463.7
272.8
85.7
-0.2
1.7 Ambient Air
162.1
-0.2
272.8
13:10
13:20
13:30
13:40
13:50
14:00
14:10
14:20
ppm 2 Jul'97,13:00:04
JUM1-2
(HH:MM)

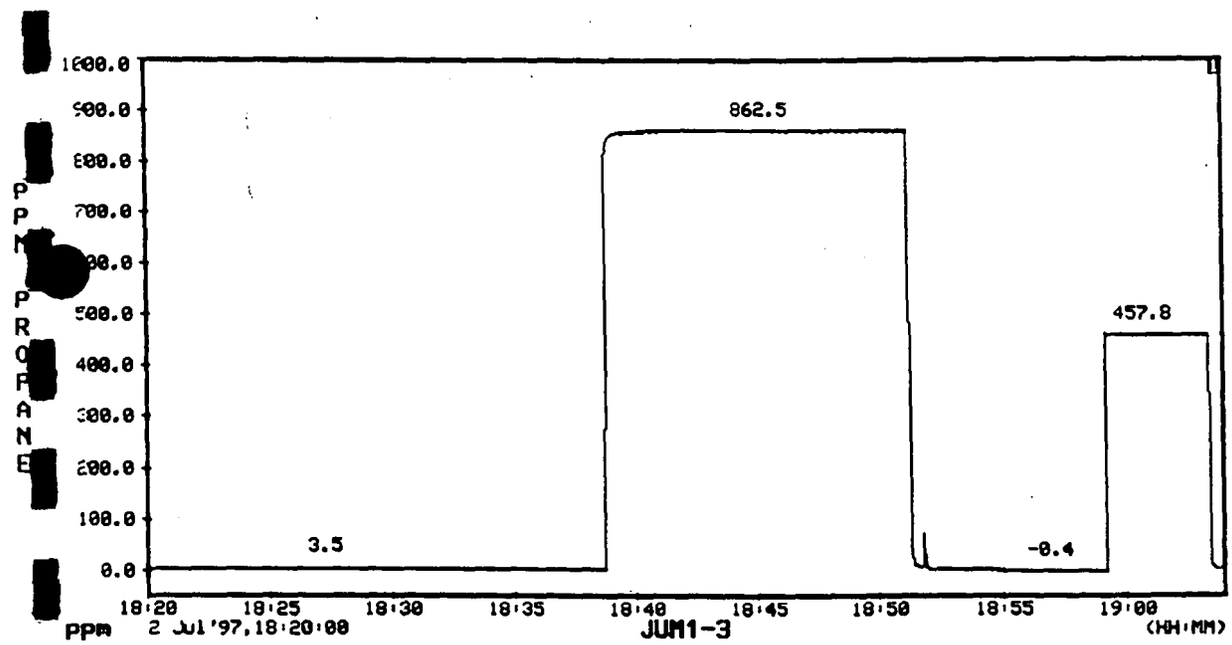

PPM PROPANE
500.0
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
Ambient Air
1.7
465.6
-0.2
274.7
-0.2
85.7
322.5
-0.2
467.5
15:05
15:10
15:15
15:20
15:25
15:30
15:35
15:40

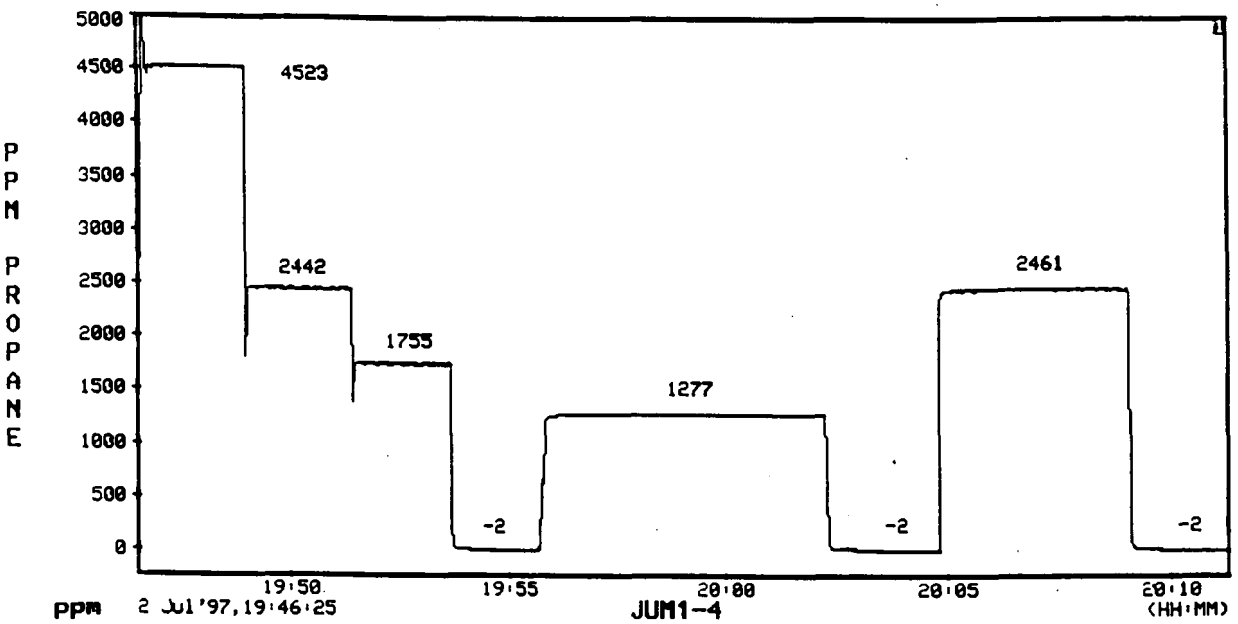

467.5
274.7
85.7
-0.2
15:43
15:44
15:45
15:46
15:47
15:48
15:49
15:50
15:51
Jul'97,15:42:34
JUM1-2
(HH:MM)

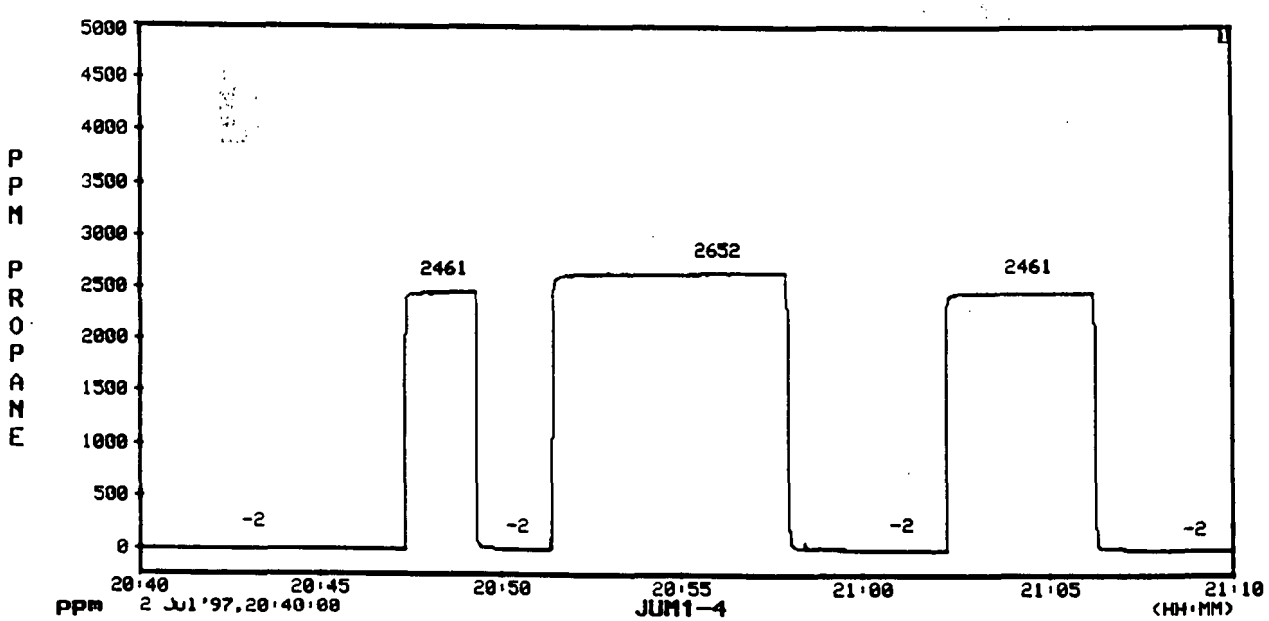

414.1
250.7 ppm Styrene Standard
295.7
255.6
143.1 ppm Styrene Standard
102 ppm Styrene Standard
-0.2
1.7
16:00
16:05
16:10
16:15
16:20
16:25
16:30
16:35
Jul'97,15:53:00
JUM1-2
(HH:MM)

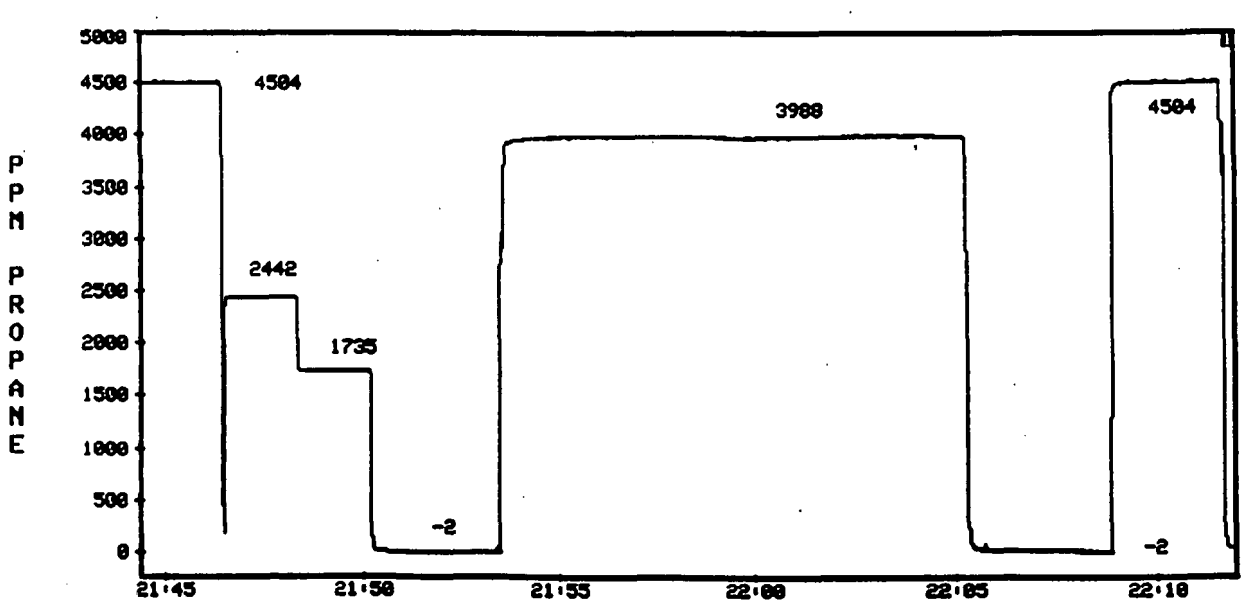

467.5
274.7
85.7
-0.2
16:40
16:45
16:50
16:55
2 Jul'97,16:36:00


PPM PROPANE
1000.0
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
889.3
465.5
270.7
-0.4
Ambient Air
3.5
446.4
457.8
-0.4
17:10
17:15
17:20
17:25
17:30
17:35
17:40
17:45
17:50
17:55
(HH:MM)
ppm
2 Jul'97,17:06:41
JUM1-3


PPM PROPANE
1000.0
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
862.5
457.8
3.5
-0.4
18:20
18:25
18:30
18:35
18:40
18:45
18:50
18:55
19:00
(HH:MM)
ppm
2 Jul'97,18:20:00
JUM1-3


PPM PROPANE
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
4523
2442
1755
-2
1277
-2
2461
-2
19:50
19:55
20:00
20:05
20:10
PPM 2 Jul'97,19:46:25
JUM1-4
(HH:MM)


PPM PROPANE
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-2
2461
-2
2652
-2
2461
-2
20:40
20:45
20:50
20:55
21:00
21:05
21:10
PPM 2 Jul'97,20:40:00
JUM1-4
(HH:MM)


PPM PROPANE
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
4504
2442
1735
-2
3988
4504
-2
21:45
21:50
21:55
22:00
22:05
22:10

LASCO

Styrene Bag Standards

JUM 5 Total Hydrocarbons (THC)

July 1, 1997

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.20%
84.1 ppm	85.7	0.01%
270.5 ppm	276.6	0.49%
463.3 ppm	467.5	0.28%

Correlation	0.9999647
Slope	1.010435
Intercept	0.8039237

15:57	**Run 1**	162.1		Corrected	156.9	ppm THC
Ambient Air		3.6	2.8			
16:10		Post Cal	-0.2	Drift	0.00%	
			274.7		0.38%	

July 2, 1997

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.15%
84.1 ppm	85.7	0.14%
270.5 ppm	272.8	0.10%
463.3 ppm	465.6	0.08%

Correlation	0.9999943
Slope	1.0046171
Intercept	0.5684815

13:57	**Run 2**	160.2		Corrected	157.8	ppm THC
Ambient Air		1.7	1.1			
14:10		Post Cal	-0.2	Drift	0.00%	
			272.8		0.00%	

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.22%
84.1 ppm	85.7	0.22%
270.5 ppm	270.9	0.12%
463.3 ppm	461.8	0.11%

Correlation	0.999988
Slope	0.9959296
Intercept	0.9197352

LASCO

Styrene Bag Standards

JUM 5 Total Hydrocarbons (THC)

15:21	**Run 3**	316.7		Corrected	316.3	ppm THC
Ambient Air		1.7	0.8			

15:40	Post Cal	-0.2	Drift	0.00%
		459.9		0.38%

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.2	0.12%
84.1 ppm	83.8	0.03%
270.5 ppm	270.9	0.34%
463.3 ppm	459.9	0.19%

Correlation	0.9999839
Slope	0.9938695
Intercept	0.3909664

102 ppm Styrene	249.9	Corrected	250.0	ppm THC
143.1 ppm Styrene	290.0	Corrected	290.3	ppm THC
250.7 ppm Styrene	408.4	Corrected	409.1	ppm THC

16:45	Post Cal	-0.20	Drift	0.00%
		270.90		0.00%

Calibration Gases	System Calibration	Calibration Error
0.0 ppm	-0.4	0.13%
270.5 ppm	266.9	0.19%
463.3 ppm	461.6	0.00%
886.7 ppm	885.5	0.06%

Correlation	0.9999934
Slope	0.9999279
Intercept	-1.6958077

17:42	**Run 4**	434.9		Corrected	431.4	ppm THC
Ambient Air		3.5	5.2			

17:53	Post Cal	-0.4	Drift	0.00%
		457.8		0.38%

18:39	**Run 5**	839.6		Corrected	843.9	ppm THC
Ambient Air		-4.2	-2.5			

LASCO

Styrene Bag Standards

JUM 5 Total Hydrocarbons (THC)

18:55	Post Cal	-8.0	Drift	0.76%
		434.9		2.67%

Calibration Gases	System Calibration	Calibration Error
0 ppm	-2	0.22%
1737 ppm	1697	0.59%
2418 ppm	2423	0.29%
4507 ppm	4504	0.07%

Correlation	0.9999419
Slope	1.0015077
Intercept	-13.264862

19:56	**Run 6**	1239	Corrected	1250	ppm THC

20:03	Post Cal	-2	Drift	0.00%
		2385		0.76%

20:52	**Run 7**	2633	Corrected	2642	ppm THC

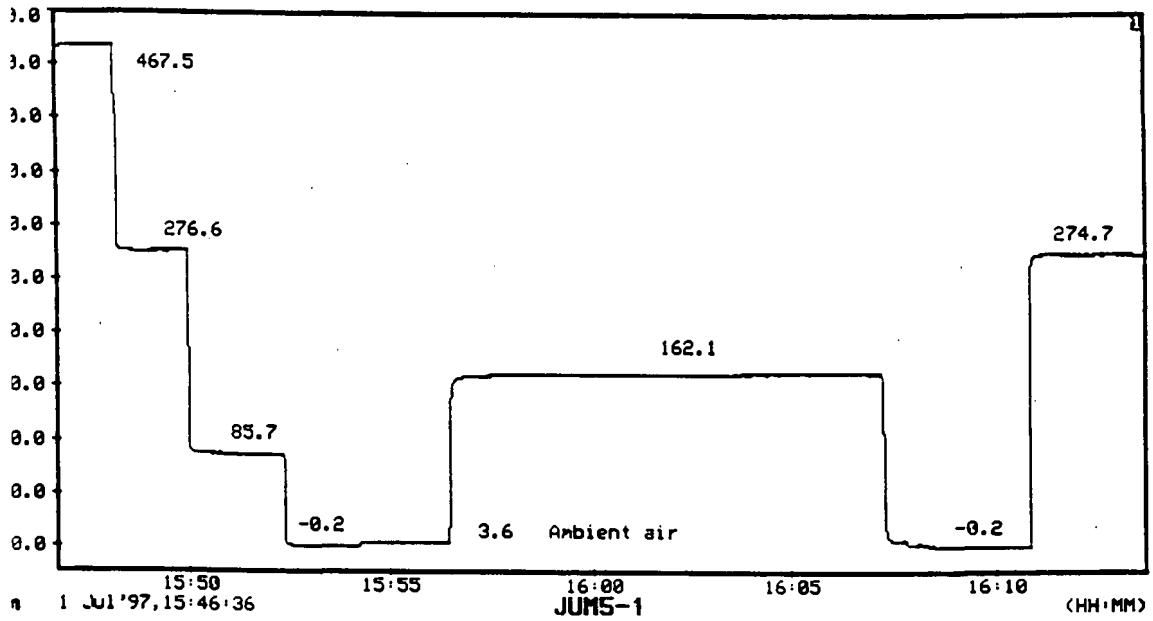
21:00	Post Cal	-2	Drift	0.00%
		2385		0.76%

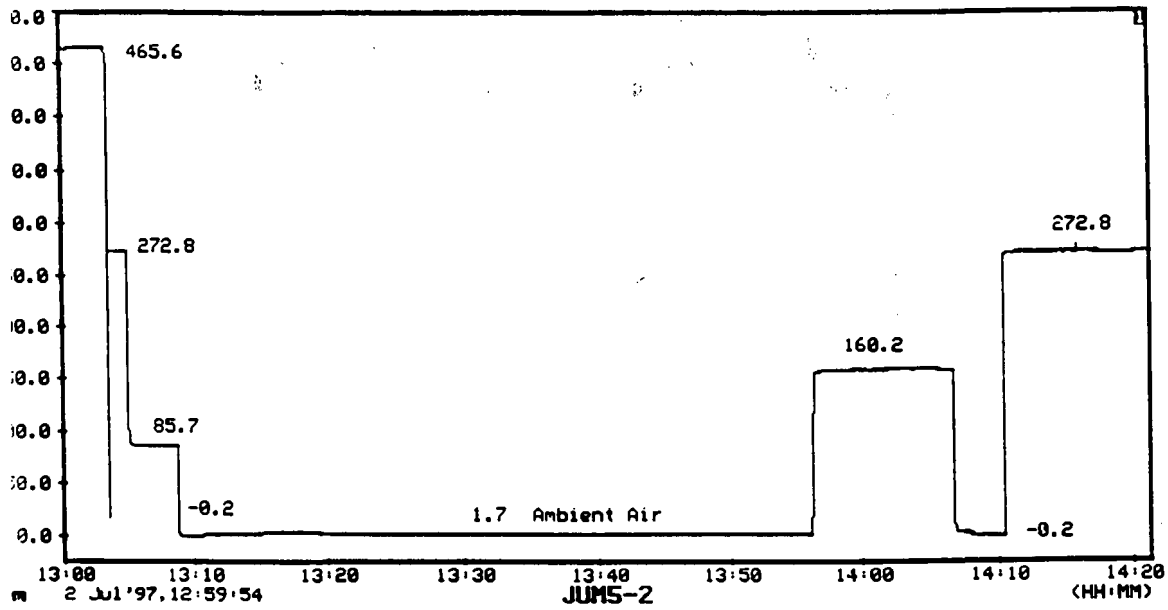
Calibration Gases	System Calibration	Calibration Error
0 ppm	-2	0.39%
1737 ppm	1697	0.55%
2418 ppm	2404	0.11%
4507 ppm	4523	0.27%

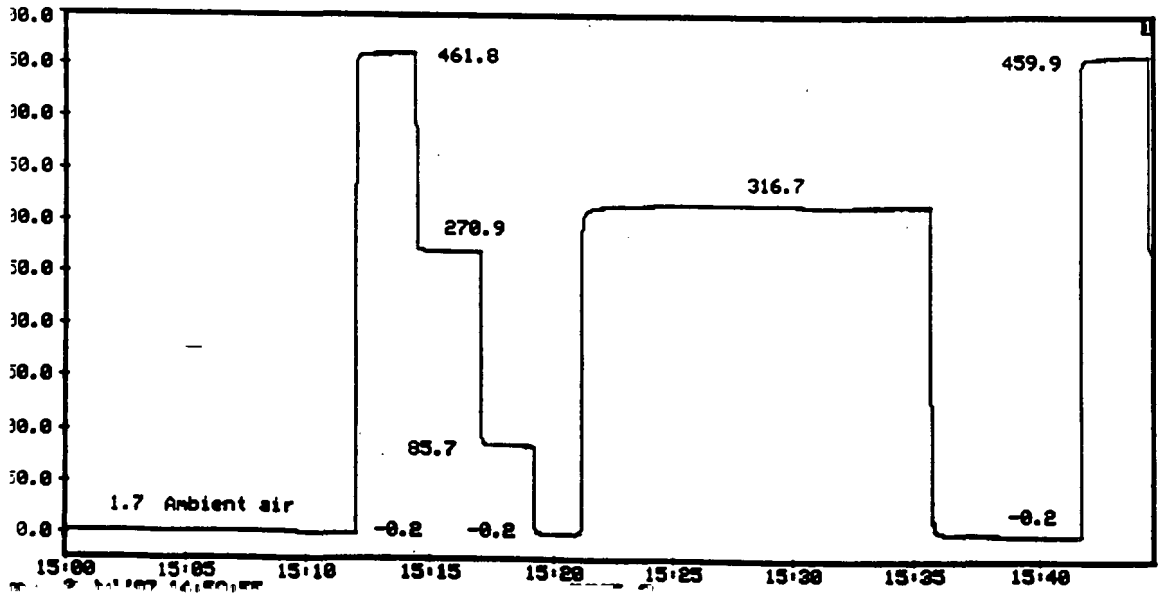
Correlation	0.9999354
Slope	1.005317
Intercept	-21.513995

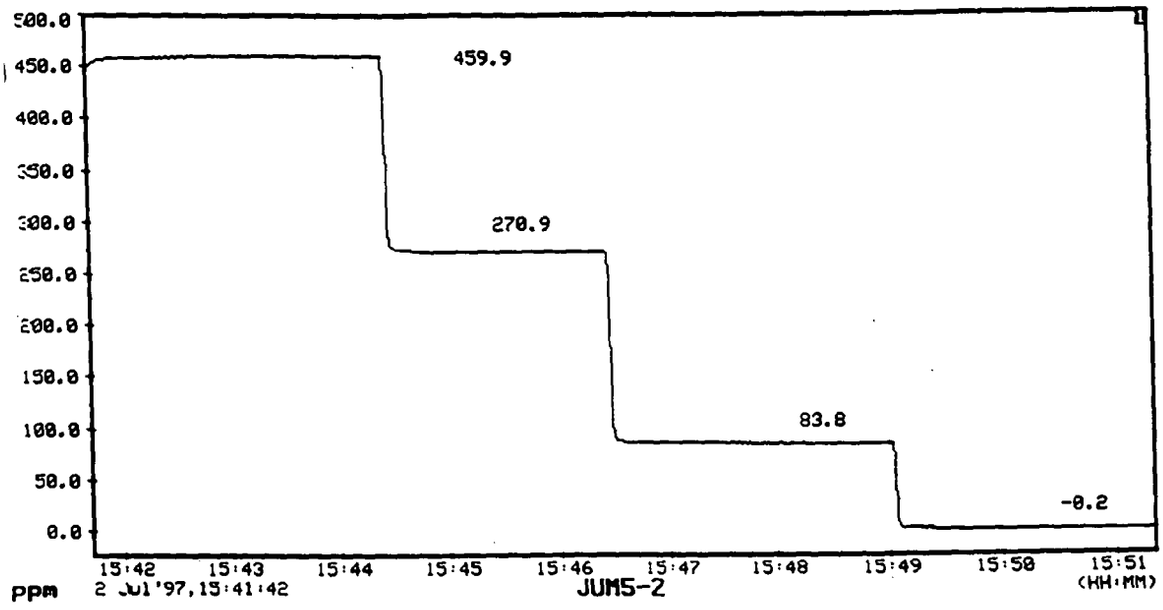
21:54	**Run 8**	4103	Corrected	4103	ppm THC

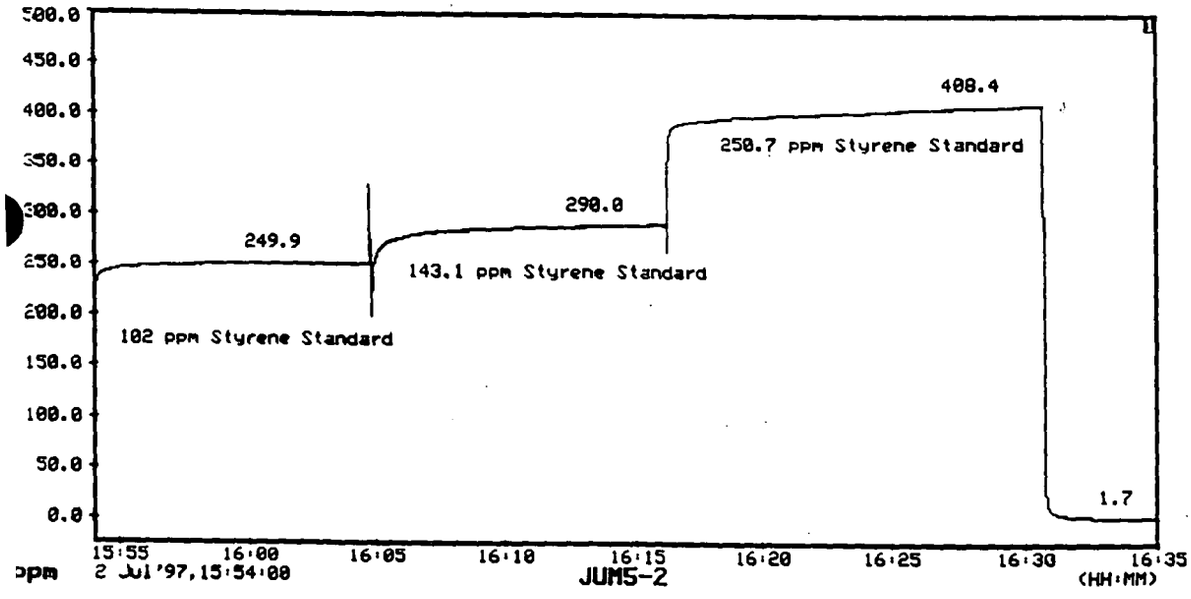
22:06	Post Cal	-2	Drift	0.00%
		4504		0.38%

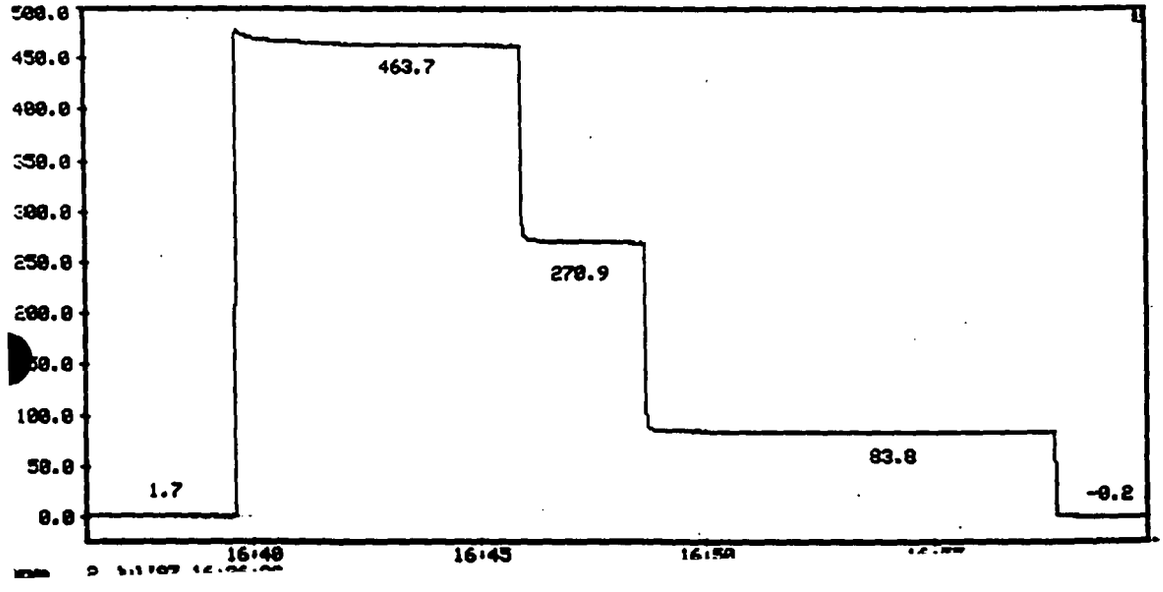

467.5
276.6
85.7
-0.2
3.6 Ambient air
162.1
-0.2
274.7
15:50
15:55
16:00
16:05
16:10
1 Jul'97,15:46:36
JUM5-1
(HH:MM)

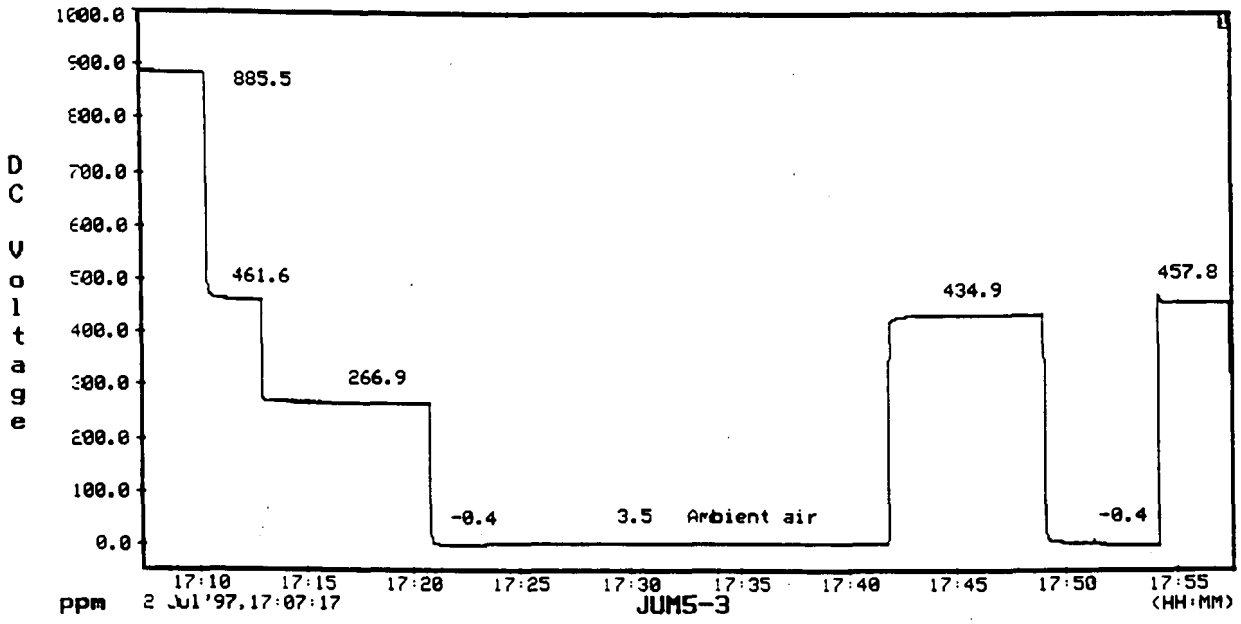

465.6
272.8
85.7
-0.2
1.7 Ambient Air
160.2
-0.2
272.8
13:00
13:10
13:20
13:30
13:40
13:50
14:00
14:10
14:20
2 Jul'97,12:59:54
JUM5-2
(HH:MM)

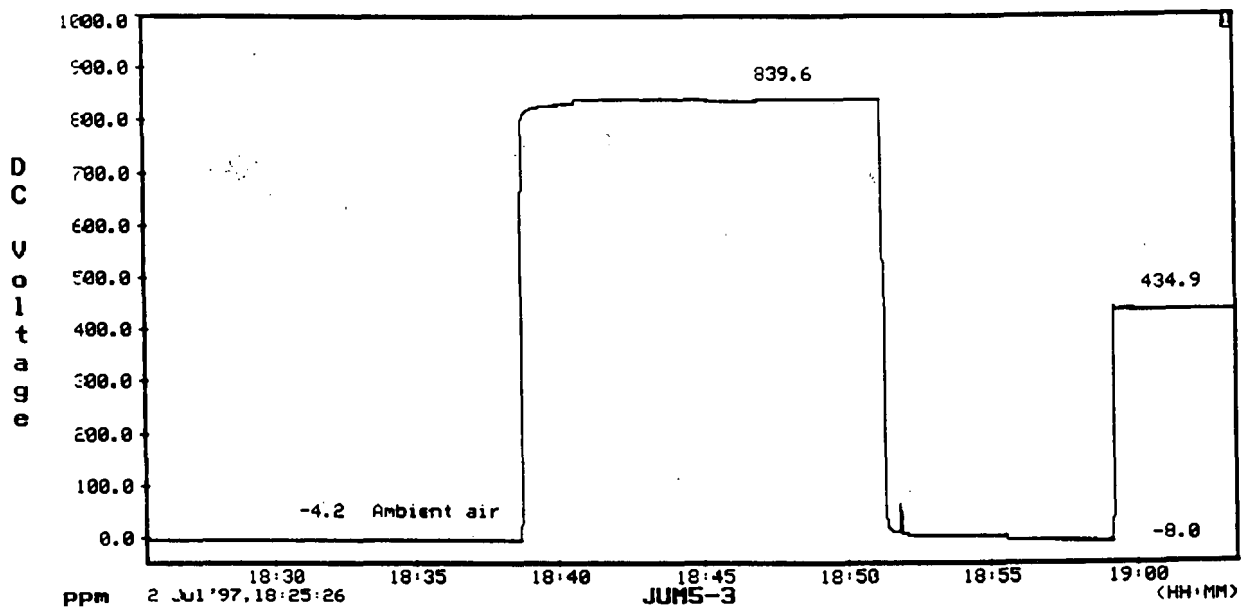

461.8
270.9
85.7
1.7 Ambient air
-0.2
-0.2
316.7
-0.2
459.9
15:00
15:05
15:10
15:15
15:20
15:25
15:30
15:35
15:40


500.0
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
459.9
270.9
83.8
-0.2
15:42
15:43
15:44
15:45
15:46
15:47
15:48
15:49
15:50
15:51
(HH:MM)
ppm
2 Jul'97,15:41:42
JUM5-2


500.0
450.0
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
408.4
250.7 ppm Styrene Standard
290.0
249.9
143.1 ppm Styrene Standard
102 ppm Styrene Standard
1.7
15:55
16:00
16:05
16:10
16:15
16:20
16:25
16:30
16:35
(HH:MM)
ppm
2 Jul'97,15:54:00
JUM5-2


500.0
450.0
400.0
350.0
300.0
250.0
200.0
100.0
50.0
0.0
463.7
270.9
83.8
1.7
-0.2
16:40
16:45


1000.0
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
DC Voltage
885.5
461.6
266.9
-0.4
3.5 Ambient air
434.9
-0.4
457.8
17:10
17:15
17:20
17:25
17:30
17:35
17:40
17:45
17:50
17:55
(HH:MM)
ppm
2 Jul'97,17:07:17
JUM5-3


1000.0
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
DC Voltage
839.6
434.9
-4.2 Ambient air
-8.0
18:30
18:35
18:40
18:45
18:50
18:55
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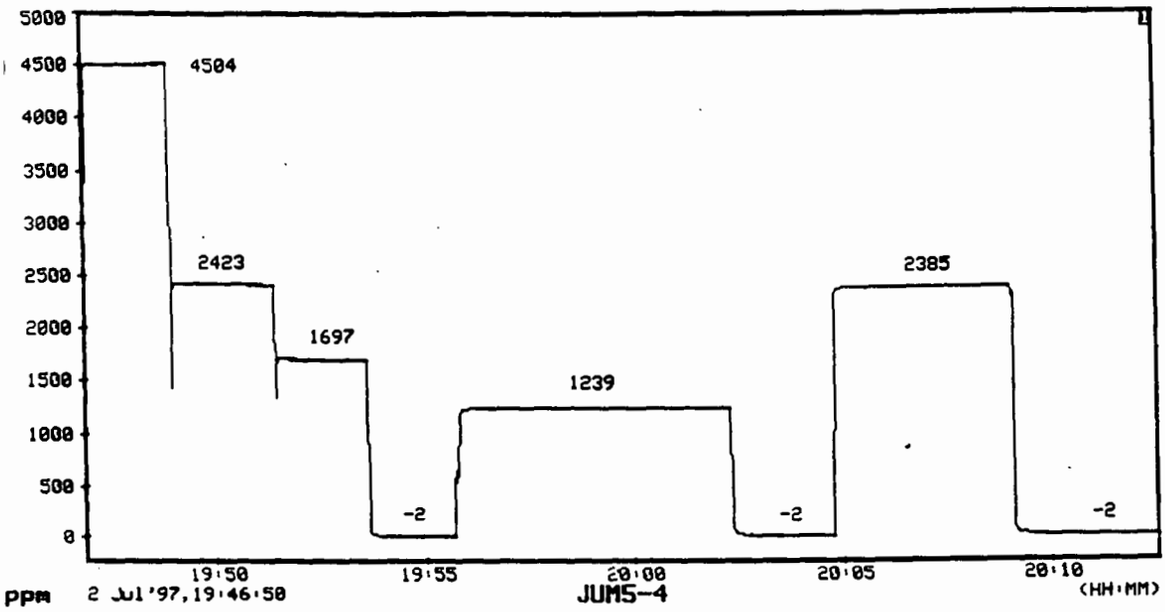
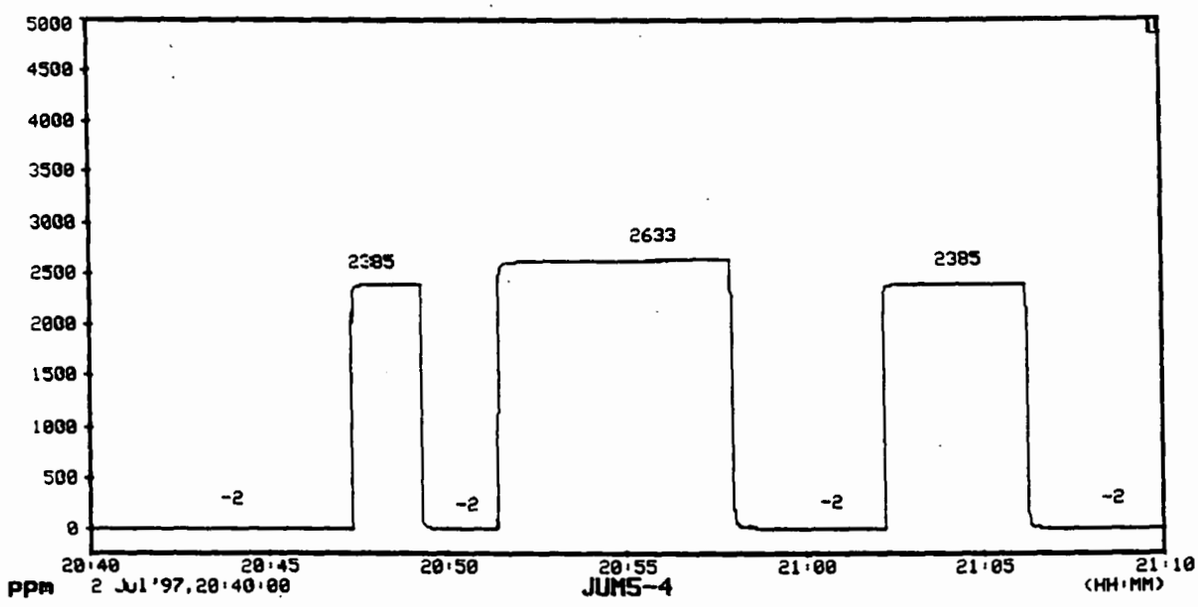
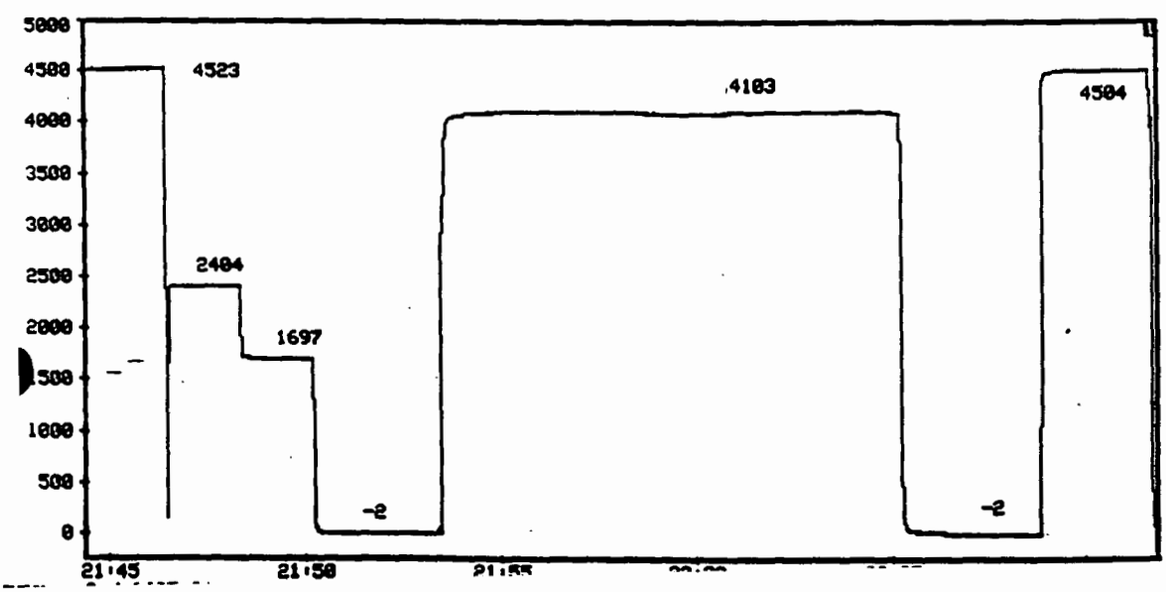
(HH:MM)
ppm
2 Jul'97,18:25:26
JUM5-3


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
4504
2423
1697
-2
1239
-2
2385
-2
19:50
19:55
20:00
20:05
20:10
ppm
2 Jul'97,19:46:50
JUM5-4
(HH:MM)


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
-2
2385
-2
2633
-2
2385
-2
20:40
20:45
20:50
20:55
21:00
21:05
21:10
ppm
2 Jul'97,20:40:00
JUM5-4
(HH:MM)


5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
4523
2484
1697
-2
4103
-2
4504
21:45
21:50

APPENDIX D

QA/QC DATA

CALIBRATION PROCEDURES AND RESULTS

All of the equipment used is calibrated in accordance with the procedures outlined in the Quality Assurance Handbook for Air Pollution Measurement Systems, Volume III.* The following pages describe these procedures and include the data sheets.

*EPA 600/4-77-027b

Pitot Tube Calibration

Each pitot tube used in sampling meets all requirements of EPA Method 2, Section 4.1.* Therefore, a baseline coefficient of 0.84 is assigned to each pitot tube. The following pages show the alignment requirements of Method 2 and the Pitot Tube Inspection Data Sheet(s) for each pitot tube used during the test program.

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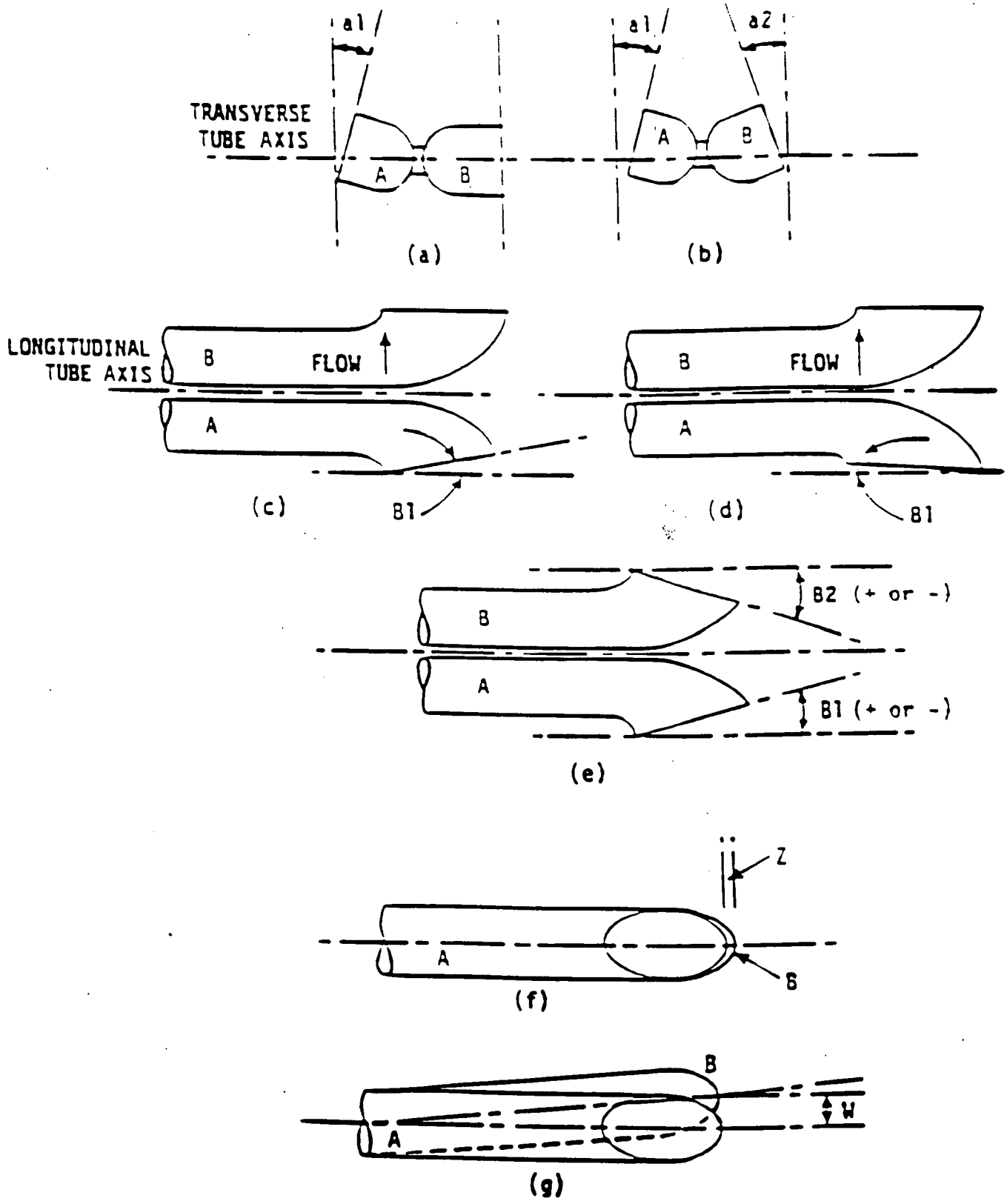
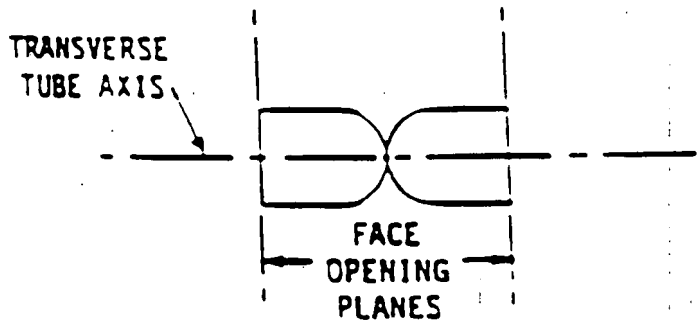
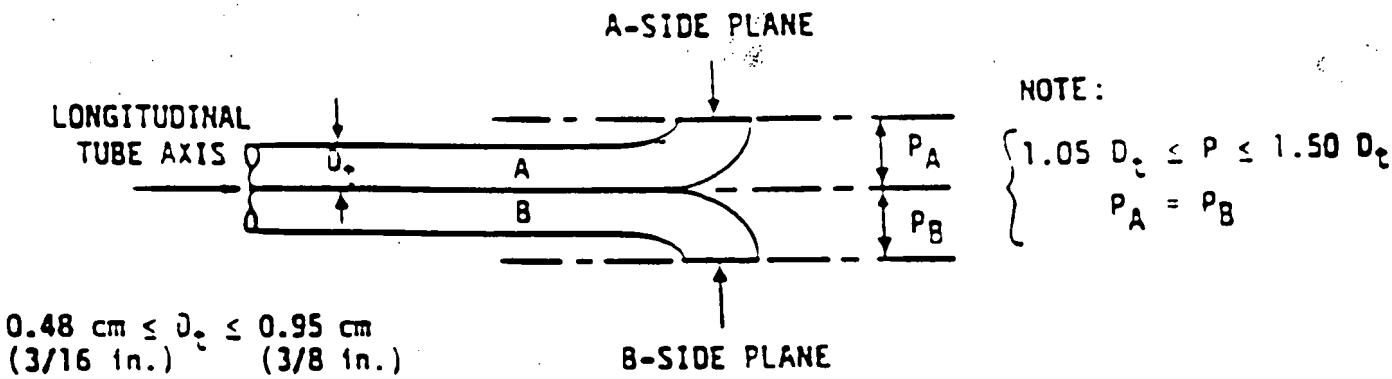
*40 CFR 60, Appendix A, July 1995



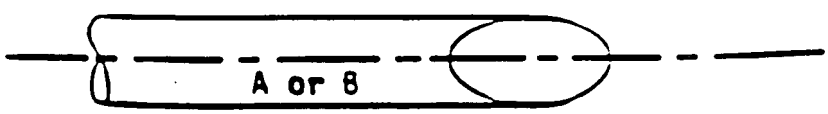
Types of face-opening misalignment that can result from field use or improper construction of Type S pitot tubes. These will not affect Cp as long as a_1, and a_2 are <10°, B_1 and B_2 are <5°, z is <0.32 (1/8 in.), and w is <0.08 cm (1/32 in.).



(a) ENDVIEW



(b)



(c)

Properly constructed Type S pitot tubes shown in: (a) end view, face opening planes perpendicular to transverse axis; (b) top view, face opening planes parallel to longitudinal axis; (c) side view, both legs equal length and centerlines coincident when viewed from both sides. Baseline coefficient values of 0.84 may be assigned to pitot tubes constructed this way.

Dry Gas Meter and Orifice Meter

Dry gas meters and orifices are calibrated in accordance with Section 3.3.2 of the QA Handbook. This procedure involves direct comparison of the dry gas meter to a reference dry test meter. The reference dry test meter is routinely calibrated using a liquid displacement technique. Before its initial use in the field, the metering system is calibrated over the entire range of operation. After each field use, the metering system is calibrated at a single intermediate setting based on the previous field test. Acceptable tolerances for the initial and final dry gas meter factors and orifice calibration factors are ± 0.02 and ± 0.20 from average, respectively.

POSTTEST DRY GAS METER CALIBRATION

MB #:	14	BAROMETRIC PRE	29.63	(in. hg.)
DATE:	5-30-97	PERFORMED BY:	g gay	
PLANT:	LASCO	PRETEST Y :	0.966	
		PRETEST H@:	1.862	

	RUN 1	RUN 2	RUN 3
VACUUM ("Hg)	3.00	3.00	3.00
H ("H2O)	1.80	1.80	1.80
INITIAL RTM	981.918	989.945	997.908
FINAL RTM	989.945	997.908	1007.591
INITIAL DGM	21.881	30.254	38.654
FINAL DGM	30.254	38.654	48.609
TEMP. RTM (F)	78.0	78.0	78.0
TEMP. DGM (F)	84.0	84.0	84.0
TEST TIME (MIN.)	11.0	11.0	13.0
NET VOLUME RT	8.027	7.963	9.683
NET VOLUME DG	8.373	8.400	9.955
Y	0.965	0.954	0.979
H@	1.924	1.955	1.847

PRIOR Y = 0.966
RECHECK Y = 0.966
% DIFFERENCE = 0.017

AVERAGE H@ = 1.909

Y = (Vw x Pb x (Td + 460)) / (Vd (Pb + (dHd / 13.6))x(Tw + 460)

H@ = 0.0317 x H / (Pb (Td + 460)) x ((Tw + 460) x time) / Vw)^2

DRY GAS AND ORFICE CALIBRATION

CONTROL BOX N MB-14 BAROMETRIC PRESS 29.43

DATE: 26DEC96 PERFORMED BY : B.FISHER

	RUN 1	RUN 2	RUN 3	RUN 4	RUN 5	RUN 6
Hd ("H2O)	0.50	0.75	1.00	1.50	2.00	4.00
VACUUM ("HG)	10	10	10	10	10	10
INITIAL WTM	421.973	434.239	446.842	458.765	470.449	483.036
FINAL WTM	433.978	445.767	458.269	470.085	481.847	494.839
INITIAL DGM	440.708	453.623	466.990	479.502	491.855	505.180
FINAL DGM	453.247	465.763	479.076	491.468	503.912	517.635
TEMP. WTM (F)	69.0	68.0	68.0	69.0	69.0	69.0
TEMP. DGM (F)	76.0	78.0	81.0	82.0	83.0	85.0
TEST TIME (MIN.)	30.0	24.0	21.0	17.0	15.0	11.0
NET VOLUME WT	12.005	11.528	11.427	11.320	11.398	11.803
NET VOLUME DG	12.539	12.140	12.086	11.966	12.057	12.455
Y	0.969	0.966	0.966	0.966	0.966	0.967
H@	1.756	1.814	1.875	1.881	1.923	1.922

AVERAGE Y = 0.966

ACCEPTABLE Y RANGE = 0.946 TO 0.986

AVERAGE H@ = 1.862

ACCEPTABLE dH@ RANGE = 1.662 TO 2.062

Y = (Vw x Pb x (Td + 460)) / (Vd (Pb + (dHd / 13.6)) x (Tw +460))

H@ = 0.0317 x Hd / (Pb (Td + 460)) x (((Tw + 460) x time) / Vw)^2

Pacific Environmental Services VOST Box Calibration

Date:	3JAN97	Flow Rate:	0.5 l/min
Vost Box Number:	V-1	Rotameter Setting:	0.6
		Bubble Meter Temp. :	70

Run 1

Bubble Meter			Meter Box	
0.4994		0.4996	Initial Volume	7512.5
0.4994		0.4997	Final Volume	7518.5
0.4995		0.4995	Initial Temp.	84
		0.4997	Final Temp.	85
	Average:	0.4995429	Average Temp.	84.5
			Time:	11.43
			QDGM =	0.5109554
			Y =	0.9776643

Run 2

Bubble Meter			Meter Box	
0.5		0.4998	Initial Volume	7519.5
0.4998		0.5003	Final Volume	7525.5
0.5002		0.4998	Initial Temp.	85
		0.5	Final Temp.	86
	Average:	0.4999857	Average Temp.	85.5
			Time:	11.38
			QDGM =	0.5122596
			Y =	0.9760397

Run 3

0.5		0.5003	Initial Volume	7526
0.5002		0.4998	Final Volume	7532
0.5002		0.5003	Initial Temp.	86
		0.5004	Final Temp.	87
	Average:	0.5001714	Average Temp.	86.5
			Time:	11.38
			QDGM =	0.5113223
			Y =	0.9781922
			Average Y =	0.9772987

=

Pacific Environmental Services VOST Box Calibration

Date:	6/9/97	Flow Rate:	150cc
Vost Box Number:	V-1	Rotameter Setting:	.20 L/min
		Bubble Meter Temp. :	70

Run 1

Bubble Meter			Meter Box	
146.5		146.1	Initial Volume	8049
146.4		146.2	Final Volume	8052
146.1		146.3	Initial Temp.	81
		146.3	Final Temp.	82
	Average:	146.27143	Average Temp.	81.5
			Time:	19.858
			QDGM=	0.1478642
			Y=	0.9892279

Run 2

Bubble Meter			Meter Box	
145.7		146.3	Initial Volume	8052
145.9		146.3	Final Volume	8056
145.2		146.3	Initial Temp.	82
		146.2	Final Temp.	83
	Average:	145.98571	Average Temp.	82.5
			Time:	27.445
			QDGM=	0.1423878
			Y=	1.0252682

Run 3

145.7		145.9	Initial Volume	8056
145.6		146	Final Volume	8059
145.7		146.1	Initial Temp.	83
		146.2	Final Temp.	84
	Average:	145.88571	Average Temp.	83.5
			Time:	19.68
			QDGM=	0.1486526
			Y=	0.981387

Average Y= 0.9986277

Pacific Environmental Services VOST Box Calibration

Date:	2JAN97	Flow Rate:	0.25/min
Vost Box Number:	V-2	Rotameter Setting:	0.19
		Bubble Meter Temp. :	68

Run 1

Bubble Meter			Meter Box	
0.2523		0.2515	Initial Volume	1754.7
0.2515		0.2511	Final Volume	1757.7
0.2505		0.2505	Initial Temp.	82
		0.2515	Final Temp.	84
	Average:	0.2512714	Average Temp.	83
			Time:	11.29
			QDGM =	0.2583815
			Y =	0.9724823

Run 2

Bubble Meter			Meter Box	
0.2517		0.2505	Initial Volume	1766.5
0.2502		0.2504	Final Volume	1769.5
0.2496		0.2503	Initial Temp.	87
		0.2504	Final Temp.	87
	Average:	0.2504429	Average Temp.	87
			Time:	11.03
			QDGM =	0.2625381
			Y =	0.9539296

Run 3

0.2513		0.2521	Initial Volume	1770.8
0.252		0.25	Final Volume	1773.8
0.251		0.2508	Initial Temp.	87
		0.251	Final Temp.	88
	Average:	0.2511714	Average Temp.	87.5
			Time:	11.25
			QDGM =	0.2571689
			Y =	0.9766787

Average Y = 0.9676968

Pacific Environmental Services VOST Box Calibration

Date:	6/9/97	Flow Rate:	150cc
Vost Box Number:	V-2	Rotameter Setting:	.25 L/min
		Bubble Meter Temp. :	70

Run 1

Bubble Meter			Meter Box	
149.4		149.4	Initial Volume	2491
150		149.1	Final Volume	2495
149.8		148.7	Initial Temp.	85.5
		148.5	Final Temp.	89
	Average:	149.27143	Average Temp.	87.25
			Time:	26.239
			QDGM=	0.1476396
			Y=	1.0110529

Run 2

Bubble Meter			Meter Box	
149.5		149.4	Initial Volume	2495
149.5		149.3	Final Volume	2501
149.4		149.2	Initial Temp.	89
		148.9	Final Temp.	90.5
	Average:	149.31429	Average Temp.	89.75
			Time:	38.58
			QDGM=	0.1499338
			Y=	0.9958678

Run 3

147.9		148.4	Initial Volume	2509
147.3		148.9	Final Volume	2514
147.6		149.4	Initial Temp.	90.5
		149.5	Final Temp.	92.5
	Average:	148.42857	Average Temp.	91.5
			Time:	31.833
			QDGM=	0.1509464
			Y=	0.9833197
			Average Y=	0.9967468

Pacific Environmental Services VOST Box Calibration

Date:	2JAN97	Flow Rate:	0.25/min
Vost Box Number:	V-3	Rotameter Setting:	0.22
		Bubble Meter Temp. :	68

Run 1

Bubble Meter			Meter Box	
0.2523		0.2513	Initial Volume	1034.3
0.2519		0.2516	Final Volume	1037.3
0.2514		0.2514	Initial Temp.	88
		0.2514	Final Temp.	89
	Average:	0.2516143	Average Temp.	88.5
			Time:	11.37
			QDGM =	0.2539909
			Y =	0.9906431

Run 2

Bubble Meter			Meter Box	
0.2489		0.2491	Initial Volume	1041.3
0.2492		0.2495	Final Volume	1044.32
0.2488		0.2492	Initial Temp.	90
		0.2491	Final Temp.	90
	Average:	0.2491143	Average Temp.	90
			Time:	11.56
			QDGM =	0.2507958
			Y =	0.9932951

Run 3

0.2478		0.2481	Initial Volume	1045.5
0.2479		0.2484	Final Volume	1048.5
0.2479		0.2482	Initial Temp.	90
		0.2482	Final Temp.	91
	Average:	0.2480714	Average Temp.	90.5
			Time:	11.41
			QDGM =	0.2521809
			Y =	0.9837042

Average Y = 0.9892141

Pacific Environmental Services VOST Box Calibration

Date:	6/9/97	Flow Rate:	.25 L/min
Vost Box Number:	V-3	Rotameter Setting:	.20
		Bubble Meter Temp. :	70

Run 1

Bubble Meter			Meter Box	
243		242.4	Initial Volume	4900
242.5		242.8	Final Volume	4905
242.4		242.6	Initial Temp.	86
		243	Final Temp.	88
	Average:	242.67143	Average Temp.	87
			Time:	20.2
			QDGM =	0.239832
			Y =	1.0118391

Run 2

Bubble Meter			Meter Box	
239.9		239.4	Initial Volume	4905
240.3		239.8	Final Volume	4910
240.1		240.1	Initial Temp.	88
		240.2	Final Temp.	90
	Average:	239.97143	Average Temp.	89
			Time:	20.6
			QDGM =	0.2343184
			Y =	1.0241256

Run 3

237.5		237.3	Initial Volume	4910
237.3		237.6	Final Volume	4915
237.4		237.5	Initial Temp.	90
		237.8	Final Temp.	90
	Average:	237.48571	Average Temp.	90
			Time:	20.57
			QDGM =	0.2342334
			Y =	1.0138848
			Average Y =	1.0166165

ENVIRONMENTAL SUPPLY COMPANY
2142 E. Geer Street, Durham, North Carolina 27704
(919) 956-9688 · FAX: (919) 682-0333

Date:	4/9/97
Model:	UNI-VOS-110
S/N:	1506
DGM S/N:	96205

Barometric Pressure (in Hg): 29.75

Reference Meter
Type: American
Model: DTM-115
Y_c: 1.000

Rotameter (lpm)	UNI-VOS CONSOLE DGM Initial (liters)	DGM Final (liters)	Volume Total (liters)	DGM Temp. Initial (°F)	DGM Temp. Final (°F)	Average Temp. (°F)	DGM Pressure (in H_2O)	REFERENCE METER Volume Initial (liters)	Volume Final (liters)	Volume Total (liters)	Temperature (°F)	Y_c	Y_c Avg	%deviation
2	663.550	672.825	9.275	63	63	63	2.8	1283.940	1293.935	9.995	66	1.064	1.049	-1.4%
	672.825	682.135	9.310	63	63	63	2.8	1293.935	1303.770	9.835	66	1.043		0.6%
	682.135	691.590	9.455	64	65	64.5	2.8	1303.770	1313.710	9.940	66	1.041		0.8%
1	692.290	700.985	8.695	64.5	65.5	65	1.4	1314.445	1323.715	9.270	66	1.060	1.058	-0.3%
	700.985	709.660	8.675	65	65	65	1.4	1323.715	1332.990	9.275	66	1.063		-0.6%
	709.660	718.470	8.810	66	66	66	1.4	1332.990	1342.263	9.273	66	1.049		0.8%
0.5	718.760	726.600	7.840	67	67.5	67.25	1	1342.625	1351.442	8.817	66	1.125	1.126	0.1%
	726.600	734.660	8.060	67.5	68	67.75	1	1351.442	1360.485	9.043	66	1.123		0.3%
	734.660	742.852	8.192	68	69	68.5	1	1360.485	1369.720	9.235	66	1.130		-0.4%

Calibration performed by: William H. Bakland

Pacific Environmental Services VOST Box Calibration

Date:	6/4/97	Flow Rate:	.25 l/min
Vost Box Number:	ES-1	Rotameter Setting:	0.5
		Bubble Meter Temp. :	72

Run 1

Bubble Meter			Meter Box	
244.4		245.8	Initial Volume	1200
244.5		246.2	Final Volume	1205
244.9		246.2	Initial Temp.	81
	Average:	245.33333	Final Temp.	82
			Average Temp.	81.5
			Time:	20.93
			QDGM=	234.70046
			Y=	1.045304

Run 2

Bubble Meter			Meter Box	
250.2		250.3	Initial Volume	1205
250		251.2	Final Volume	1210
251.5		250.2	Initial Temp.	82
	Average:	250.56667	Final Temp.	82
			Average Temp.	82
			Time:	20.74
			QDGM=	236.63207
			Y=	1.0588872

Run 3

259.6		259.5	Initial Volume	1210
258.9		260.1	Final Volume	1218
259.3		260.4	Initial Temp.	82
	Average:	259.63333	Final Temp.	82
			Average Temp.	82
			Time:	31.81
			QDGM=	246.85314
			Y=	1.0517724

Average Y= 1.0519879

Digital Indicators for Thermocouple Readout

A digital indicator is calibrated by feeding a series of millivolt signals to the input and comparing the indicator reading with the reading the signal should have generated. Error did not exceed 0.5 percent when the temperatures were expressed in degrees Rankine. Calibration data are included in the following Thermocouple Digital Indicator Calibration Data Sheet(s).

PACIFIC ENVIRONMENTAL SERVICES, INC.

THERMOCOUPLE DIGITAL INDICATOR
CALIBRATION DATA SHEET

DATE: 27-Dec-96 INDICATOR NO.: MB-14

OPERATOR: B.FISHER SERIAL NO.:

CALIBRATION DEVICE: Digital Calibrator MANUFACTURER: Omega

TEST POINT NO.	MILLIVOLT SIGINAL	EQUIVALENT TEMP °F	DIGITAL INDICATOR TEMP READING °F	DIFFERENCE %
1	-0.692	0	0	0
2	1.520	100	101	-0.18
3	3.819	200	203	-0.45
4	6.092	300	302	-0.26
5	8.314	400	399	0.12
6	10.560	500	499	0.10
7	22.251	1000	999	0.07
8	29.315	1300	1296	0.23
9	36.166	1600	1596	0.19
10	42.732	1900	1894	0.25

Percent difference must be less than or equal to 0.5 %

Percent difference: $\frac{(\text{Equivalent temp., °R - Digital indicator tem, °R}) * (100\%)}{(\text{Equivalent temp, °R})}$

Where °R = °F + 460

DIGITAL INDICATOR

Stack Thermocouples

Each thermocouple is calibrated by comparing it with an ASTM-3F thermometer at approximately 32°F, ambient temperature, 100°F, and 500°F. The thermocouple read within 1.5 percent of the reference thermometer throughout the entire range when expressed in degrees Rankine. The thermocouples may be checked at ambient temperature at the test site to verify the calibration. Calibration data are included in the following Thermocouple Calibration Data Sheet(s).

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR STACK THERMOCOUPLES

DATE: 10-Dec-96

THERMOCOUPLE NUMBER: T3A

AMBIENT TEMPERATURE: 70

BAROMETRIC PRES.(In.Hg): 29.09

CALIBRATOR: B.FISHER

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature, °F	Thermocouple Potentiometer Temperature, °F	Temperature Difference,[b] %
1	Ambient Air	70	70	0.00
2	Cold Bath	32	31	0.20
3	Hot Bath	182	182	0.00
4	Hot Oil	406	407	-0.12

[a]Type of calibration used.

[b]$\frac{(\text{ref. temp.}^{\circ}\text{F}+460)-(\text{test thermometer temp.}^{\circ}\text{F}+460)}{\text{ref temp.}^{\circ}\text{F}+460}$ X100 $100 \leq 1.5\%$

Comments:

STACK THERMOCOUPLE

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR STACK THERMOCOUPLES

DATE: 10-Dec-96

THERMOCOUPLE NUMBER: T3B

AMBIENT TEMPERATURE: 70

BAROMETRIC PRES.(In.Hg): 29.09

CALIBRATOR: B.FISHER

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature,°F	Thermocouple Potentiometer Temperature,°F	Temperature Difference,[b] %
1	Ambient Air	74	72	0.37
2	Cold Bath	33	31	0.41
3	Hot Bath	203	203	0.00
4	Hot Oil	414	410	0.46

[a]Type of calibration used.

[b]$\frac{(\text{ref. temp.}^{\circ}\text{F}+460)-(\text{test thermometer temp.}^{\circ}\text{F}+460)}{\text{ref temp.}^{\circ}\text{F}+460} \times 100$ $100 \leq 1.5\%$

Comments:

STACK THERMOCOUPLE

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR STACK THERMOCOUPLES

DATE: 10-Dec-96

AMBIENT TEMPERATURE: 70

CALIBRATOR: B.FISHER

THERMOCOUPLE NUMBER: T3C

BAROMETRIC PRES.(In.Hg): 29.09

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature,°F	Thermocouple Potentiometer Temperature,°F	Temperature Difference,[b] %
1	Ambient Air	70	70	0.00
2	Cold Bath	32	31	0.20
3	Hot Bath	183	184	-0.16
4	Hot Oil	398	400	-0.23

[a]Type of calibration used.

[b]$\frac{(\text{ref. temp.}^{\circ}\text{F}+460)-(\text{test thermometer temp.}^{\circ}\text{F}+460)}{\text{ref temp.}^{\circ}\text{F}+460} \times 100$ $100 \leq 1.5\%$

Comments:

STACK THERMOCOUPLE

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR STACK THERMOCOUPLES

DATE: 10-Dec-96

AMBIENT TEMPERATURE: 70

CALIBRATOR: B.FISHER

THERMOCOUPLE NUMBER: T4C

BAROMETRIC PRES.(In.Hg): 29.09

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature,°F	Thermocouple Potentiometer Temperature,°F	Temperature Difference,[b] %
1	Ambient Air	71	70	0.19
2	Cold Bath	38	37	0.20
3	Hot Bath	179	178	0.16
4	Hot Oil	385	390	-0.59

[a]Type of calibration used.

[b]$\frac{(\text{ref. temp.}^{\circ}\text{F}+460)-(\text{test thermometer temp.}^{\circ}\text{F}+460)}{\text{ref temp.}^{\circ}\text{F}+460} \times 100$ $100 \leq 1.5\%$

Comments:

STACK THERMOCOUPLE

Dry Gas Thermocouples and Impinger Thermocouples

The dry gas thermocouples are calibrated by comparing them with an ASTM-3F thermometer at approximately 32°F, ambient temperature, and a higher temperature between approximately 100° and 200°F. The thermocouples agreed within 5°F of the reference thermometer. The impinger thermocouples are checked in a similar manner at approximately 32°F and ambient temperature, and they agreed within 2°F. The thermocouples may be checked at ambient temperature prior to the test series to verify calibration. Calibration data are included in the following Dry Gas Thermometer and Impinger Thermocouple Calibration Data Sheet(s).

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR METER BOX

DATE: 27-Dec-96

THERMOCOUPLE NUMBER: MB-14

AMBIENT TEMPERATURE: 70 °F

BAROMETRIC PRES.(In.Hg): 29.4

CALIBRATOR: B.FISHER

REFERENCE:

Mercury-in-glass: ASTM 3F

Other: _____

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature,°F	Thermocouple Potentiometer Temperature,°F	Temperature Difference,[b] °F
INLET				
1	Ambient Air	74	75	1
2	Cold Bath	33	34	1
3	Hot Bath	128	129	1
OUTLET				
1	Ambient Air	70	71	1
2	Cold Bath	33	34	1
3	Hot Bath	149	150	1

[a]Type of calibration used.

[b]Allowable tolerance ±5°F

Comments:

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR SAMPLE HEAD

DATE: 10-Dec-96

AMBIENT TEMPERATURE: 70

CALIBRATOR: B.FISHER

THERMOCOUPLE NUMBER: SH-1

BAROMETRIC PRES.(In.Hg): 29.09

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature, °F	Thermocouple Potentiometer Temperature, °F	Temperature Difference,[b] °F
1	Ambient Air	70	72	-2.00
2	Cold Bath	32	32	0.00

[a]Type of calibration used.

[b]Allowable tolerance ±2°F

Comments:

SAMPLE HEAD

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR SAMPLE HEAD

DATE: 10-Dec-96

THERMOCOUPLE NUMBER: SH-2

AMBIENT TEMPERATURE: 70

BAROMETRIC PRES.(In.Hg): 29.09

CALIBRATOR: B.FISHER

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature, °F	Thermocouple Potentiometer Temperature, °F	Temperature Difference,[b] °F
1	Ambient Air	71	71	0.00
2	Cold Bath	33	33	0.00

[a]Type of calibration used.

[b]Allowable tolerance ±2°F

Comments:

SAMPLE HEAD

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR SAMPLE HEAD

DATE: 10-Dec-96

THERMOCOUPLE NUMBER: SH-3

AMBIENT TEMPERATURE: 70

BAROMETRIC PRES.(In.Hg): 29.09

CALIBRATOR: B.FISHER

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature,°F	Thermocouple Potentiometer Temperature,°F	Temperature Difference,[b] °F
1	Ambient Air	72	72	0.00
2	Cold Bath	32	32	0.00

[a]Type of calibration used.

[b]Allowable tolerance ±2°F

Comments:

SAMPLE HEAD

PACIFIC ENVIRONMENTAL SERVICES,INC.

TEMPERATURE SENSOR CALIBRATION DATA FORM FOR SAMPLE HEAD

DATE: 10-Dec-96

THERMOCOUPLE NUMBER: SH-4

AMBIENT TEMPERATURE: 70

BAROMETRIC PRES.(In.Hg): 29.09

CALIBRATOR: B.FISHER

REFERENCE:
Mercury-in-glass: ASTM 3F

Other:

Reference point number	Source[a] (Specify)	Reference Thermometer Temperature,°F	Thermocouple Potentiometer Temperature,°F	Temperature Difference,[b] °F
1	Ambient Air	71	71	0.00
2	Cold Bath	33	33	0.00

[a]Type of calibration used.

[b]Allowable tolerance ±2°F

Comments:

SAMPLE HEAD

Trip Balance

The trip balance is calibrated by comparing it with Class-S standard weights, and it agreed within 0.5g. Calibration data are shown in the following Trip Balance Calibration Data Sheet(s).

Cintron Scale Inc.

3-26 Whitney Drive. Milford, Ohio 45150 • 513-576-0700
3570 Intercity Drive. Dayton, Ohio 45424 • 937-236-6748
6314 Seeds Road. Grove City, Ohio 43123 • 614-871-4646

SERVICE ORDER

JOB NO. 11734

DATE 2/27/97 NAME OF PERSON CALLING _____ PERSON TO SEE GARY GAY PHONE # 398-255[illegible]

NAME PACIFIC ENVIRONMENTAL SVC'S CUSTOMER PURCHASE ORDER NO. GET 103-97-17[illegible]

ADDRESS 1700 DUKE DRIVE SUITE 150 CITY & STATE MASON OH ZIP CODE 150[illegible]

WHEN SERVICE WANTED _____ WHEN PROMISED _____ CALL TAKEN BY _____

SERVICE REQUEST _____

SERVICE AGREEMENT

EQUIPMENT TYPE: _____

CONDITION FOUND WHEN TECHNICIAN ARRIVED: Scale No. 0999 Location

	MANUFACTURER	MODEL-	SERIAL NUMBER	CAPACITY
1	ANI	ER-1200R	C0227334	
2	Ohaus	CT-1200S	5299	
3	American Scientific	SP-102	4500170	160 x .0001 [illegible]
4	[illegible]	CT-120[illegible]	CN 03282	1200 x .1 [illegible]

SERVICE PERFORMED/RECOMMENDATIONS:

1) [illegible] 1000 grams [illegible] 1200 % error shift +/- .1 [illegible]
2) Zero - 1200 grams Ø error shift Ø error at 500 operations okay
3) Zero - 160 grams - 1 division at 160 shift good +/- 2 division at 80 grams operations [illegible]
4) Zero - 1200 grams Ø error shift Ø error at 500 grams operations okay

TRACEMEC weight kit reflects same weighing results as Cintron kit K09.

DESCRIPTION OF PARTS USED

QUAN.	DESCRIPTION / PN	S/N	PRICE	QUAN.	DESCRIPTION / PN	S/N	PRICE

TIME { REGULAR: _____ HOURS X _____ MEN X $ _____ /HOUR
OVERTIME: _____ HOURS X _____ MEN X $ _____ /HOUR

TRUCK NUMBER(S) Pickup BEGINNING MILEAGE 5.3321 ENDING MILEAGE _____ TOTAL MILES _____

PARTS WILL BE ITEMIZED WITH INVOICE
JOB COMPLETE ☑ INCOMPLETE ☐
SERVICEMAN [illegible] CUSTOMER X
TERMS: NET: 30 DAYS

PARTS/MISC.
TOT. MILEAGE
TAXES
INVOICE

r [redacted]du[redacted]n[redacted]hemi[redacted]ls, [redacted]nc.[redacted]
SCIALTY GA[redacted]ARTMENT
722 S. WENTWORTH AVENUE
ICAGO, IL 60628

Certificate of Analysis - EPA Protocol Gas Standard

FORMED ACCORDING TO EPA TRACEABILITY PROTOCOL FOR ASSAY AND CERTIFICATION OF GASEOUS CALIBRATION STANDARDS (PROCEDURE #G1)

tomer:
IR PRODUCTS AND CHEMICALS, INC.
822 INDUSTRY LANE
DI BUSINESS PARK
URHAM NC 27709

Notes:

O: Rel:

Order No: 833-071747-01
Batch No: 861-30888

Cylinder No: SG9133829BAL
Cylinder Pressure*: 2000 psig
Certification Date: 02/27/96
Expiration Date: 02/27/99

Certified Concentration ***			********* Reference Standards *********		********** Analytical Instrumentation **********			
ponent	Certified Concentration	Cylinder #	Standard Number	Concentration	Instrument Make/Model	Serial Number	Last Calibration	Measurement Principal
PANE	31.4 ±0.25 PPM	SG9128572BAL	GMIS	30.4000 PPM	Gow-Mac 750	59405U	02/08/96	GC-FID

ance Gas: AIR
gen Concentration 19.9 %

Standard should not be used below 150 psig

yst: James Laas

Approved By: Richard Fry

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
ATTN: GARY GUY
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-97-0073
Scott Project # : 504488

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : ALM060872
Cylinder Pressure + : 2000 psig
Certificate Date : 11/14/96
Previous Certificate Date : None
Expiration Date : 11/14/99

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	49.37 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder pressure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
SRM2643A	7/24/99	SX20435	99.1 ppm Propane in Nitrogen

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
C3H8: Varian/1400/08982426	11/14/96	Gas Chromatography

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components
Propane

First Triad Analysis

Date: 11/14/96 Response Units: mv

Z1=0.00	R1=462.30	T1=229.40
R2=462.30	Z2=0.00	T2=229.40
Z3=0.00	T3=229.40	R3=462.30

Avg. Conc. of Cust. Cyl. 49.37 ppm

Second Triad Analysis

Calibration Curve

Concentration=A+Bx+Cx²+Dx³+Ex⁴

r=1.00000	SRM2643A
Constants:	A=0.391487300
B=0.213516200	C=0.000000000
D=0.000000000	E=0.000000000

Special Notes

Analyst

Scott Specialty Gases, Inc.
1750 EAST CLUB BOULEVARD, DURHAM, NC 27704 (919) 220-0803 FAX: (919) 220-0808

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
Mr. Bill Buynitzky
Deeco, Inc.
203 North Harrison Avenue
Cary, NC 27513

Assay Laboratory
Scott Specialty Gases, Inc.
1750 East Club Boulevard
Durham, NC 27704

Purchase Order 0221940930-WDB
Scott Project # 12-06571

ANALYTICAL INFORMATION

Certified to exceed the minimum specifications of EPA Protocol Procedure #G1, Section Number 3.0.4

Cylinder Number	ALM-031639	**Certification Date**	03-22-94	**Expiration Date**	03-22-97
Cylinder Pressure	2000 PSIG	**Previous Certification**	None		

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	49.8 PPM	+/- 1% NIST Directly Traceable
Air		Balance

*Analytical uncertainty is inclusive of usual known error sources which at least includes reference standard error & precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
GMIS	03-28-94	K003986	96.3 PPM Balance in Nitrogen

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
Varian /3400/0160	02-26-94	Gas Chromatography

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components	First Triad Analysis	Second Triad Analysis	Calibration Curve
Propane	Date: 03-22-94 Response Units: Area STD=630028 SPL=327477 SPL=328102 SPL=325008 STD=632703 STD=634833	Date: Response Units: STD= SPL= SPL= SPL= STD= STD=	Date: 02-26-94
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Alan C. Barber

Analyst A. Barber

Scott Specialty Gases, Inc.
1750 EAST CLUB BOULEVARD, DURHAM, NC 27704 (919) 220-0803 FAX: (919) 220-0808

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
Mr. Bill Buynitzky
Deeco, Inc.
203 North Harrison Avenue
Cary, NC 27513

Assay Laboratory
Scott Specialty Gases, Inc.
1750 East Club Boulevard
Durham, NC 27704

Purchase Order 0221940930-WDB
Scott Project # 12-06571

ANALYTICAL INFORMATION

Certified to exceed the minimum specifications of EPA Protocol Procedure #G1, Section Number 3.0.4

Cylinder Number	ALM-009890	**Certification Date**	03-21-94	**Expiration Date**	03-21-97
Cylinder Pressure	2000 PSIG	**Previous Certification**	None		

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	86.6 PPM	+/- 1% NIST Directly Traceable
Air		Balance

*Analytical uncertainty is inclusive of usual known error sources which at least includes reference standard error & precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
GMIS	03-28-94	K-003986	96.3 PPM Balance in Nitrogen

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
Varian /3400/0160	02-26-94	Gas Chromatography

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components	First Triad Analysis	Second Triad Analysis	Calibration Curve
Propane	Date: 03-21-94 Response Units: Area STD=630781 SPL=566170 SPL=567151 SPL=568689 STD=629913 STD=630913	Date: Response Units: STD= SPL= SPL= SPL= STD= STD=	Date: 02-26-94
	Date: Response Units: STD= SPL= SPL= SPL= STD= STD=	Date: Response Units: STD= SPL= SPL= SPL= STD= STD=	Date:
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A. Barber
Analyst A. Barber

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
ATTN: GARY GUY
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-97-0143
Scott Project # : 509412

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : ALM010756
Cylinder Pressure + : 1900 psig
Certificate Date : 3/31/97
Previous Certificate Date : None
Expiration Date : 3/31/2000

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	83.67 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder presssure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
NTRM1668	8/5/98	ALM032007	95.5 ppm Propane in Air

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
C3H8: Varian/1400/08982426	3/31/97	Gas Chromatography

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components	First Triad Analysis	Second Triad Analysis	Calibration Curve
Propane	Date: 3/31/97 Response Units: mv Z1=0.00 R1=4,734.00 T1=4,147.00 R2=4,734.00 Z2=0.00 T2=4,149.00 Z3=0.00 T3=4,147.00 R3=4,734.00 Avg. Conc. of Cust. Cyl. 83.67 ppm		Concentration=A+Bx+Cx^2+Dx^3+Ex^4 r=1.00000 NTRM1668 Constants: A=-0.000334868 B=0.020173290 C=0.000000000 D=0.000000000 E=0.000000000

Special Notes

Analyst

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
ATTN: GARY GUY
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-97-0073
Scott Project # : 504488

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : ALM028660 **Certificate Date :** 11/14/96 **Expiration Date :** 11/14/99
Cylinder Pressure + : 2000 psig **Previous Certificate Date :** None

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	84.08 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder presssure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
SRM2643A	7/24/99	SX20435	99.1 ppm Propane in Nitrogen

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
C3H8: Varian/1400/08982426	11/14/96	Gas Chromatography

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components: Propane

First Triad Analysis

Date: 11/14/96 Response Units: mv

Z1=0.00	R1=462.30	T1=392.90
R2=462.30	Z2=0.00	T2=392.90
Z3=0.00	T3=390.10	R3=462.30

Avg. Conc. of Cust. Cyl. 84.08 ppm

Second Triad Analysis

Calibration Curve

Concentration=A+Bx+Cx²+Dx³+Ex⁴

r=1.00000	SRM2643A
Constants:	A=0.891487300
B=0.213516200	C=0.000000000
D=0.000000000	E=0.000000000

Special Notes:

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
ATTN: GARY GUY
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-95-0238
Scott Project # : 578642

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : AAL710
Cylinder Pressure + : 1900 psig
Certificate Date : 3/17/95
Previous Certificate Date : None
Expiration Date : 3/17/98

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	270.5 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder presssure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
NTRM 1668	6/7/96	ALM-032015	95.5 ppm Propane in Air.

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
Prop:Beckman/400/1002059	2/22/95	Flame Ionization Detection

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components
Propane

First Triad Analysis

Date: 3/17/95 Response Units: mv

Z1=0.00	R1=14.40	T1=40.60
R2=14.40	Z2=0.00	T2=40.60
Z3=0.00	T3=40.60	R3=14.40

Avg. Conc. of Cust. Cyl. 270.5 ppm

Second Triad Analysis

Calibration Curve

Concentration=A+Bx+Cx^2+Dx^3+Ex^4

r=1.00000	NTRM 1668
Constants:	A=-0.237940000
B=6.669000000	C=0.000000000
D=0.000000000	E=0.000000000

Special Notes

Scott Specialty Gases, Inc.

6141 EASTON ROAD, P.O. BOX 310, PLUMSTEADVILLE, PA 18949-0310 (215) 766-8861 FAX: (215) 766-0320

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
Pacific Environmental Ser
C/O Virgin Island Waters
Power Auth, 18 Sub Base
St Thomas, 000000

Assay Laboratory
Scott Specialty Gases, Inc.
6141 Easton Road
P.O. Box 310
Plumsteadville, PA 18949-0310

Purchase Order 10396-0115
Scott Project # 01-75518-007

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; 1 Procedure #G1, Section Number 3.0.4; September, 1993.

Cylinder Number ALM007003 **Certification Date** 01-30-96 **Expiration Date** 01-30-99
Cylinder Pressure 2000 psig+ **Previous Certification Dates** None

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	279 ppm	±1% NIST Traceable
Balance Gas: Air		

+Do not use when cylinder is less than 150 psig.

*Analytical uncertainty is inclusive of usual known error sources which at least includes precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
SRM1669	02-04-96	CLM000691	464 ppm C_3H_8 in N_2

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
C3H8: Varian/VA3300/7945	01-04-96	FID

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components	First Triad Analysis	Second Triad Analysis	Calibration Curve
Propane	Date: 01-30-96 Response Units: Area Z1=000000 R1=471703 T1=283185 R2=471487 Z2=000000 T2=293234 Z3=000000 T3=283704 R3=472199 Avg. Conc. of Cust. Cyl. 279 ppm		Concentration=A+Bx+Cx^2+Dx^3+Ex^4 r=1.00000 NTRM2646 Constants: A=-3.6133E-01 B=9.3612E-03 C=0.0000E+00 D=0.0000E+00 E=0.0000E+00

Special Notes:

Analyst Burnell Lewis Jr.

Scott Specialty Gases, Inc.

6141 EASTON ROAD, P.O. BOX 310, PLUMSTEADVILLE, PA 18949-0310 (215) 766-8861 FAX: (215) 766-0320

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
Pacific Environmental Ser
C/O Virgin Island Waters
Power Auth, 18 Sub Base
St Thomas, 000000

Assay Laboratory
Scott Specialty Gases, Inc.
6141 Easton Road
P.O. Box 310
Plumsteadville, PA 18949-0310

Purchase Order 10396-0115
Scott Project # 01-75518-008

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay & Certification of Gaseous Calibration Standards; 1 Procedure #G1, Section Number 3.0.4; September, 1993.

Cylinder Number ALM056112 **Certification Date** 01-30-96 **Expiration Date** 01-30-99
Cylinder Pressure 2000 psig+ **Previous Certification Dates** None

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	451 ppm	±1% NIST Traceable
Balance Gas: Air		

+Do not use when cylinder is less than 150 psig.

*Analytical uncertainty is inclusive of usual known error sources which at least includes precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
SRM1669	02-04-96	CLM000691	464 ppm C_3H_8 in N_2

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
C3H8: Varian/VA3300/7945	01-04-96	FID

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components	First Triad Analysis	Second Triad Analysis	Calibration Curve
Propane	Date: 01-30-96 Response Units: Area Z1=000000 R1=471703 T1=458361 R2=471487 Z2=000000 T2=458222 Z3=000000 T3=458621 R3=472199 Avg. Conc. of Cust. Cyl. 451 ppm		Concentration=A+Bx+Cx^2+Dx^3+Ex^4 r=1.00000 NTRM2646 Constants: A=-3.6133E-01 B=9.3612E-03 C=0.0000E+00 D=0.0000E+00 E=0.0000E+00

Special Notes:

Analyst Burnell Lewis Jr.

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
ATTN: GARY GUY
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-95-0238
Scott Project # : 578642

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : AAL18513 **Certificate Date :** 3/17/95 **Expiration Date :** 3/17/98
Cylinder Pressure + : 1900 psig **Previous Certificate Date :** None

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	463.3 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder pressure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
NTRM 1668	6/7/96	ALM-032015	95.5 ppm Propane in Air.

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
Prop:Beckman/400/1002059	2/22/95	Flame Ionization Detection

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components
Propane

First Triad Analysis

Date: 3/17/95 Response Units: mv

Z1=0.00	R1=14.40	T1=69.50
R2=14.40	Z2=0.00	T2=69.50
Z3=0.00	T3=69.50	R3=14.40

Avg. Conc. of Cust. Cyl. 463.3 ppm

Second Triad Analysis

Calibration Curve

Concentration=A+Bx+Cx^2+Dx^3+Ex^4

r=1.00000	NTRM 1668
Constants:	A=0.237940000
B=6.669000000	C=0.000000000
D=0.000000000	E=0.000000000

Special Notes

[redacted]pau[redacted] a[redacted]:ne[redacted]ais[redacted]nc[redacted]
ECIALTY GA [redacted]PARTMENT
722 S. WENTWORTH AVENUE
ICAGO, IL 60628

Certificate of Analysis - EPA Protocol Gas Standard

RFORMED ACCORDING TO EPA TRACEABILITY PROTOCOL FOR ASSAY AND CERTIFICATION OF GASEOUS CALIBRATION STANDARDS (PROCEDURE #G1)

stomer:
ROCHESTER - APCI
77 DEEP ROCK RD.
ROCHESTER NY 14624-

Notes:

Order No: CSS-363029-01
Batch No: 861-30465

Cylinder No: SG9168208BAL
Cylinder Pressure*: 2000 psig
Certification Date: 02/05/96
Expiration Date: 02/05/99

PO: Rel:

* Certified Concentration ***			********* Reference Standards *********			********** Analytical Instrumentation **********			
mponent	Certified Concentration	Cylinder #	Standard Number	Concentration		Instrument Make/Model	Serial Number	Last Calibration	Measurement Principal
OPANE	464 ±2.9 PPM	SG9126635BAL	GMIS	503.6000 PPM		Gow-Mac 750	59405U	01/16/96	GC-FID

lance Gas: AIR
ygen Concentration 20.0 %

* Standard should not be used below 150 psig

lyst: Richard VanDyke
Richard VanDyke

Approved By: Richard Fry
Richard Fry

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
ATTN: GARY GUY
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-95-0238
Scott Project # : 578642

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : ALM028161 **Certificate Date :** 3/17/95 **Expiration Date :** 3/17/98
Cylinder Pressure + : 1900 psig **Previous Certificate Date :** None

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	886.7 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder pressure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
NTRM 1668	6/7/96	ALM 032015	95.5 ppm Propane in Air.

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
Prop:Beckman/400/1002059	2/22/95	Flame Ionization Detection

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components
Propane

First Triad Analysis

Date: 3/17/95 Response Units: mv

Z1=0.00	R1=14.40	T1=133.00
R2=14.40	Z2=0.00	T2=133.00
Z3=0.00	T3=133.00	R3=14.40

Avg. Conc. of Cust. Cyl. 886.7 ppm

Second Triad Analysis

Calibration Curve

Concentration=A+Bz+Cz²+Dz³+Ez⁴

r=1.00000 NTRM 1668
Constants: A=0.237940000
B=6.669000000 C=0.000000000
D=0.000000000 E=0.000000000

Special Notes

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-96-0206
Scott Project # : 96412

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : ALM005428
Cylinder Pressure + : 2000 psig
Certificate Date : 5/15/96
Previous Certificate Date : None
Expiration Date : 5/15/99

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	1737 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder presssure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
NTRM	6/7/96	ALM032007	95.5 ppm Propane in Air

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
C3H8: Varian/1400/08982426	5/16/96	Gas Chromatography

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components
Propane

First Triad Analysis

Date: 5/15/96 Response Units: mv

Z1=0.00	R1=525.00	T1=986.80
R2=525.00	Z2=0.00	T2=986.80
Z3=0.00	T3=987.10	R3=525.00

Avg. Conc. of Cust. Cyl. 1737 ppm

Second Triad Analysis

Calibration Curve

Concentration=A+Bx+Cx^2+Dx^3+Ex^4

r=1.00000	NTRM
Constants:	A=0.828867000
B=1.797437000	C=0.000000000
D=0.000000000	E=0.000000000

Special Notes:

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIRONMENTAL SER
ATTN: GARY GUY
4700 DUKE DRIVE, STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-97-0143
Scott Project # : 510863

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : ALM066778 **Certificate Date :** 4/28/97 **Expiration Date :** 4/28/2000
Cylinder Pressure + : 1900 psig **Previous Certificate Date :** None

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	2418 ppm	±1% NIST Directly Traceable

Balance Gas: Air

+Do not use when cylinder presssure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
NTRM2646	6/12/98	AAL18338	973 ppm Propane in Nitrogen

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
C3H8: Varian/1400/08982426	4/28/97	Gas Chromotography

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components
Propane

First Triad Analysis

Date: 4/28/97 Response Units: mv
Z1=0.00 R1=2,415.00
T1=5,997.00
R2=2,415.00 Z2=0.00 T2=5,974.00
Z3=0.00 T3=5,994.00
R3=2,415.00
Avg. conc. of Cust. Cyl. 2418 ppm

Second Triad Analysis

Calibration Curve

Concentration $A+Bx+Cx^2+Dx^3+Ex^4$
r=1.00000 NTRM2646
Constants: A=-3.307880000
B=0.404268300 C=0.000000000
D=0.000000000 E=0.000000000

Special Notes

Analyst

MBP/P-1

Scott Specialty Gases, Inc.

1290 COMBERMERE STREET, TROY, MI 48083 (810) 589-2950 FAX:(810) 589-2134

CERTIFICATE OF ANALYSIS: EPA PROTOCOL GAS

Customer
PACIFIC ENVIROMENTAL SER
4700 DUKE DRIVE
STE 150
MASON, OH 45040

Assay Laboratory
Scott Specialty Gases, Inc
1290 Combermere
Troy, MI 48083

Purchase Order : 103-94-0070
Scott Project # : 56864

ANALYTICAL INFORMATION

This certification was performed according to EPA Traceability Protocol For Assay and Certification of Gaseous Calibration Standards; Procedure G1; September, 1993.

Cylinder Number : AAL3345
Cylinder Pressure + : 1900 psig
Certificate Date : 7/22/94
Previous Certificate Date : None
Expiration Date : 7/22/97

ANALYZED CYLINDER

Components	Certified Concentration	Analytical Uncertainty*
Propane	4507 ppm	±1% NIST Directly Traceable

Balance Gas: Nitrogen

+Do not use when cylinder presssure is below 150 psig.
*Analytical accuracy is inclusive of usual known error sources which at least include precision of the measurement processes.

REFERENCE STANDARD

Type	Expiration Date	Cylinder Number	Concentration
GMIS*	1/2/96	ALM-030280	4981 ppm Propane in Air

INSTRUMENTATION

Instrument/Model/Serial #	Last Date Calibrated	Analytical Principle
Propane : Beckman/400/1002059	6/30/94	Flame Ionization Detector

ANALYZER READINGS (Z=Zero Gas R=Reference Gas T=Test Gas r=Correlation Coefficient)

Components
Propane

First Triad Analysis

Date: 7/22/94 Response Units: mv

Z1=0.00	R1=100.00	T1=90.60
R2=100.00	Z2=0.00	T2=90.60
Z3=0.00	T3=90.60	R3=100.00

Avg. Conc. of Cust. Cyl. 4507 ppm

Second Triad Analysis

Calibration Curve

Concentration=A+Bx+Cx^2+Dx^3+Ex^4

r=1.00000	SRM 16608
Constants:	A=0.000[illegible]280
B=49.112000000	C=0.00[illegible]76000
D=0.000000000	E=0.000000000

PACIFIC ENVIRONMENTAL SERVICES, INC.
RECEIVER: _____ OFFICE: _____
VENDOR NO.: _____ VOUCHER NO.: _____
G/L ACCT: _____ JOB NO.: _____
DATE PAID: _____ CHECK NO.: _____
APPROVED BY: _____

Special Notes:

APPENDIX E

PROJECT PARTICIPANTS

PROJECT PARTICIPANTS

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Kathy Weant

EPA/ESD
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Hilary North
Bruce L. Westbrook

Lasco Consultant
Robert Haberlein

Composites Institute
John Schweitzer

PES Air Sampling
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Paul Siegel
Troy Abernathy
Gary Gay

PES QA
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Kentucky Division of Air Quality
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Deeco Method 18 Analytical
Pete Zimmick
Barry Rayfield

Atlantic Technical Services -Air Sampling
Dave Savia

Enthalpy Analytical, Inc.
Todd Grosshandler
Bruce Rhodes

TECHNICAL REPORT DATA

Please read instructions on the reverse before completing

1. REPORT NO. EPA-454/R-99-024c	2.	3. RECIPIENT'S ACCESSION NO.
4. TITLE AND SUBTITLE Air Emissions From Reinforced Plastics Composite Manufacturing Process, LASCO Panel Products: Volume III Volume III of III		5. REPORT DATE August 1999 6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) Franklin Meadows Daniel F. Scheffel		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS Pacific Environmental Services, Inc. Post Office Box 12077 Research Triangle Park, North Carolina 27709-2077		10. PROGRAM ELEMENT NO. 11. CONTRACT/GRANT NO. 68-D-70069
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Emissions, Monitoring and Analysis Division Research Triangle Park, North Carolina 27711		13. TYPE OF REPORT AND PERIOD COVERED Final 14. SPONSORING AGENCY CODE

15. SUPPLEMENTARY NOTES

16. ABSTRACT

The United States Environmental Protection Agency (EPA) Emission Standards Division (ESD) requested that the EPA's Emissions Monitoring and Analysis Division (EMAD), Emission Measurement Center (EMC) provide testing support in the investigation of the reinforced plastics composite manufacturing source category to properly set the Maximum Achievable Control Technology (MACT) standards as required by the Clean Air Act Amendments of 1990. The reinforced plastics composite manufacturing process located at LASCO Panel Products in Florence, Kentucky was selected by the ESD as the host facility for this emissions testing program.

The sampling program was designed to support the following ESD objectives: 1) Identify and quantify the hazardous air pollutants (HAPs) emitted by reinforced plastic manufacturing, 2) Identify the sources of HAPs and the total HAPs mass emission rates from the wet application area and the oven area, 3) Evaluate three ventilation scenarios, 4) Depending on the effectiveness of the industry proposed "closed" system, develope a performance-based emission limitation achieved by the use of a wet area enclosed table system, 5) Assess the existing emission factors for volatile organic compound emissions from a continuous lamination process for the purposes of updating the information in AP-42 and determining cost effectiveness for MACT options involving emissions abatement, and 6) Determine the effect of various process paramenters such as line speed, laminate thickness, HAP content of raw material and the addition of a gel coat layer on the emission factor.

Sampling was performed during 13 process operating conditions. Measurements were made of the total hydrocarbons (THC), styrene, cumene, and methyl methacrylate (MMA), and the air flow rate at all enclosure exhausts. A secondary objective of the sampling program was to obtain the emissions of HAPs from the oven stacks.

This volume (Volume III) is comprised of 799 pages and consists of Appendices B (Analytical Data), C (Calculations), D (QA/QC Data), and E (Project Participants).

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTIONS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COASTI Field/Group
Cumene Emission Measurements Hazardous Air Pollutants Lamination Process Methyl Methacrylate Reinforced Plastics Manufacturing Styrene Total Hydrocarbons Volatile Organic Compounds		

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