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Note: This is a reference cited in AP 42, *Compilation of Air Pollutant Emission Factors, Volume I Stationary Point and Area Sources*. AP42 is located on the EPA web site at www.epa.gov/ttn/chief/ap42/

The file name refers to the reference number, the AP42 chapter and section. The file name "ref02_c01s02.pdf" would mean the reference is from AP42 chapter 1 section 2. The reference may be from a previous version of the section and no longer cited. The primary source should always be checked.

**Data Package for the MDI Samples Collected
at the LP/Dungannon Plant on
June 29, 1994 using the EPA Draft 1,2-PP Method**

Interpoll Laboratories Report No. 4-3252

Prepared by:

Gregg Holman on 8/19/94

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PREFACE

On June 29, 1994 Interpoll Laboratories collected MDI samples from the Louisiana Pacific (LP) Dungannon, Virginia plant. The MDI was collected using a series of two impingers containing 1-(2-pyridyl)piperazine (1,2-PP) in toluene (EPA Draft Method 1,2-PP). The impingers were combined and solvent exchanged to acetonitrile prior to analysis.

The samples were analyzed on a Waters Model 600MS High Performance Liquid Chromatograph equipped with a Waters Model 991 photodiodearray UV detector using a Zorbax ODS 250mm x 4.6mm dia. column. The mobile phase used was acetonitrile and the flow rate of the system was set at 2.0 mL/min. The system was calibrated by derivitizing a stock solution of MDI (Kodak) with 1,2-PP and then making five different standards by diluting different volumes of the derivitized MDI. Calibration check standards were made in the same manner but with a different lot of MDI (supplied by ICI).

The data package is divided into eight main parts. The first part is the final reported masses of MDI. The second part is the method parameters by which the samples were analyzed. The third part is the calibration data from the external standards. The fourth part is the calibration curve used to quantitate the samples. The fifth part is the continuing calibration response factors. The sixth part is the calculation of the number of theoretical plates. The seventh part is the sample prep sheet. The eighth part is the sample analytical data for each of the three press vent samples plus the field spike and sampling train biased field blank.

The data supplied for each sample includes the following:

- a. The chromatogram of the 254nm acquisition of the photodiodearray detector.
- b. The quantitation of the chromatograms.

FINAL RESULTS

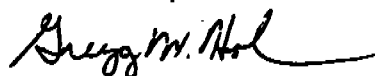
INTERPOLL LABORATORIES INC.

4,4-Methylenebis(phenyl isocyanate) Results Using The EPA 1,2-PP Draft Method
For Dept. 20/LP Dungannon Collected 6/29/94

Item	Field Spike			Test: 8		Source: Press Vent Stack	
	Actual	Found	% Rec.	Run 0	Run 1	Run 2	Run 3
Log #		3252-SPK		3252-29	3252-30	3252-31	3252-32
MDI (ug)*	296	282	95	< 2.5	206	202	132

* = Total Mass of MDI in the Sample in ug.

Reviewed By:



Gregg W. Holman

METHOD PARAMETERS

Instrument Method: ISOCYAN_INST

Millennium v2.00

Date Printed: 4:37:14 pm, August 19, 1994

Method Name: ISOCYAN_INST
Date Created: 19-JUL-94 11:34.17

Channel Information

Channel: 991M
Channel Type 3D
Channel Name 991M
Units AU
Description

Instrument Information

Instrument Type W717
Instrument Type W717
On On
Use Temp No
Setpoint 25
Instrument Type W600
Instrument Type W600
On On
Chan Name 600 PRESS
Description
Use Chan Off
Monitor PRESS
Chart 3A
Pump Type 600E
Pump Mode Gradient
Flow 2.00
Percent A 75.0
Percent B 0.0
Percent C 25.0
Percent D 0.0
High Press Limit 6000.0
Low Press Limit 0.0
Spurge Rate 100
Spurge Rate A On
Spurge Rate B Off
Spurge Rate C On
Spurge Rate D Off
Temp Setpoint 0.0
High Temp Limit 25.0
Switch 1 Off
Switch 2 Off
Switch 3 Off
Switch 4 Off
Use Events Off
Head Volume 100
MS Optimize % A 100.0
MS Optimize % B 0.0
MS Optimize % C 0.0
Optimizing Mass 194.0
Silk Off
Vacuum Degas Off

Table 'W600 Event Table' contains no data.

W600 Gradient Table

#	Time	Flow	3A	3B	3C	3D	Curve
1	0.00	2.00	75.0	0.0	25.0	0.0	0
2	2.00	2.00	75.0	0.0	25.0	0.0	6
3	19.50	2.00	40.0	0.0	60.0	0.0	6

W600 Gradient Table

#	Time	Flow	%A	%B	%C	%D	Curve
4	24.90	2.00	40.0	0.0	60.0	0.0	6
5	29.00	2.00	75.0	0.0	25.0	0.0	6
6	35.00	2.00	75.0	0.0	25.0	0.0	6

Instrument Type W991M

Instrument Type	991M
On	On
Start Wavelength	200.0
End Wavelength	440.0
Spec Resolution	1.3
Autoexposure	On
Exposure Time	21.0
Interpolate 656	Yes
Sample Rate	1.0
Lamp On	Yes
Spectral Filter	none
Use Analog One	Off
Use Analog Two	Off
Use Events	Off
Ch1 Output Mode	Off
Ch1 Offset	0.000
Ch1 Output WL	254.0
Ch1 Output SWN	5.2
Ch1 Ratio WL	254.0
Ch1 Ratio TH	0.001
Ch1 Low Ratio	0.001
Ch1 High Ratio	100.000
Ch1 Filter Type	Hamming
Ch1 Filt Resp	none
Ch2 Output Mode	Off
Ch2 Offset	0.000
Ch2 Output WL	254.0
Ch2 Output BW	4.8
Ch2 Output BWN	5.2
Ch2 Ratio WL	254.0
Ch2 Ratio TH	0.001
Ch2 Low Ratio	0.001
Ch2 High Ratio	100.000
Ch2 Filter Type	Hamming
Ch2 Filt Resp	none

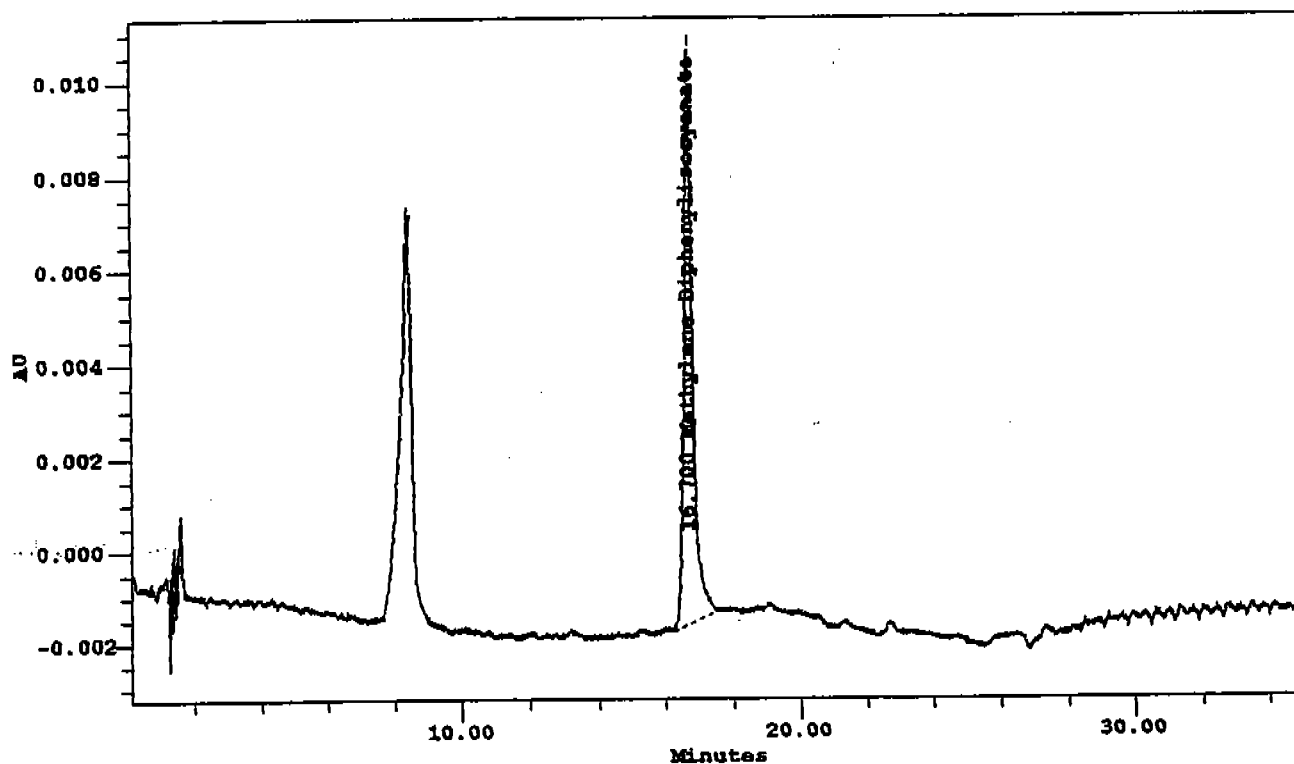
Table '991 Event Table' contains no data.

CALIBRATION STANDARDS

INTERPOLL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Chilco		
Project Name:	ISOCYANATES		
Log Number	3191	Sample Type:	Standard
Sample Name:	Standard5	Injection Volume (uL):	50.00
Date Acquired:	07/20/94 06:55 PM	Run Time:	35.0 min
Vial:	1	Date Processed:	08/19/94 04:35 PM
Injection:	1	Dilution:	1.00000
Channel:	991M	Date Due:	
Channel Name	UV_254	Set Name:	3191STD5
Acq Meth Set:	3191_MSET		
Processing Method:	3252M_PROC		



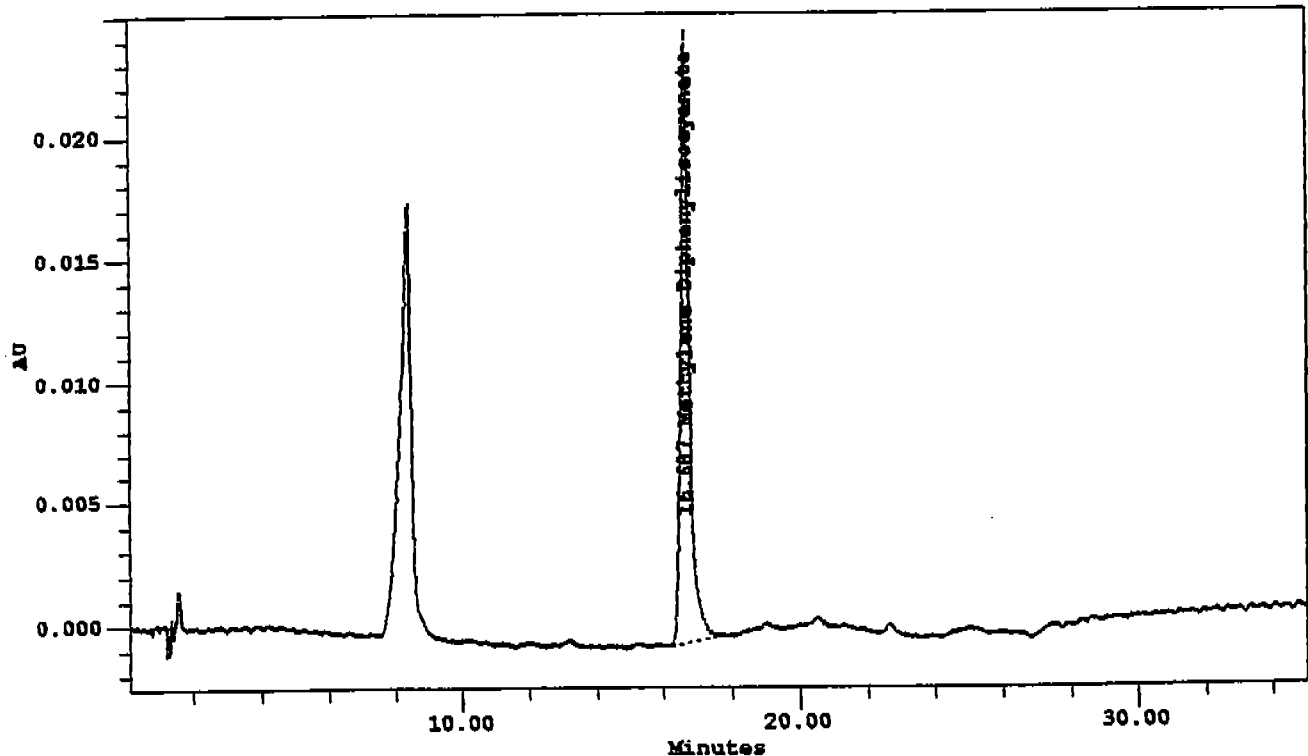
Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.700	212453	12266	0.505	BB

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Chilco		
Project Name:	ISOCYANATES	Sample Type:	Standard
Log Number	3191	Injection Volume (uL):	50.00
Sample Name:	Standard4	Run Time:	35.0 min
Date Acquired:	07/20/94 07:31 PM	Date Processed:	08/19/94 04:35 PM
Vial:	2	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3191STDS
Channel Name	UV_254		
Acq Meth Set:	3191_MSET		
Processing Method:	3252M_PROC		



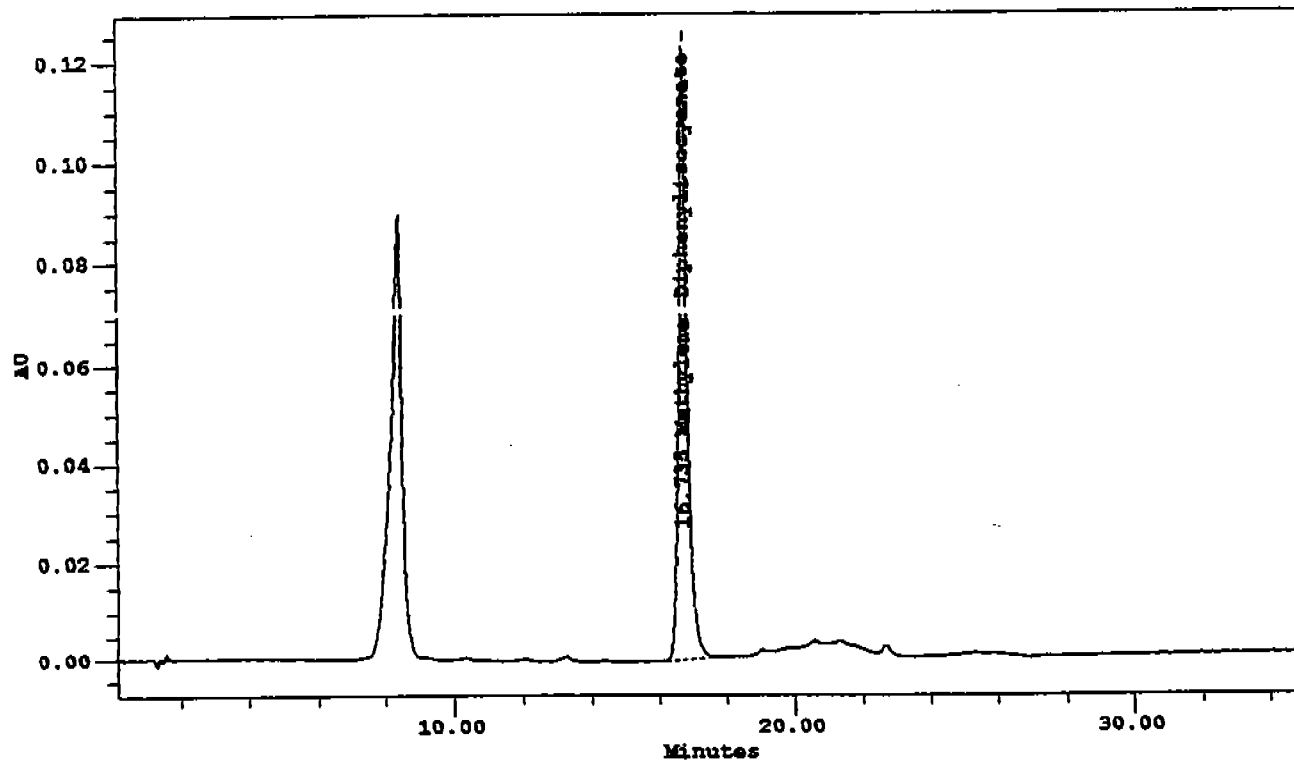
Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.687	419837	24577	1.010	BB

INTERPOLL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Chilco		
Project Name:	ISOCYANATES	Sample Type:	Standard
Log Number	3191	Injection Volume (uL):	50.00
Sample Name:	Standard3	Run Time:	35.0 min
Date Acquired:	07/20/94 08:08 PM	Date Processed:	08/19/94 04:34 PM
Vial:	3	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3191STDS
Channel Name	UV_254		
Acq Meth Set:	3191_MSET		
Processing Method:	3252M_PROC		



Peak Results

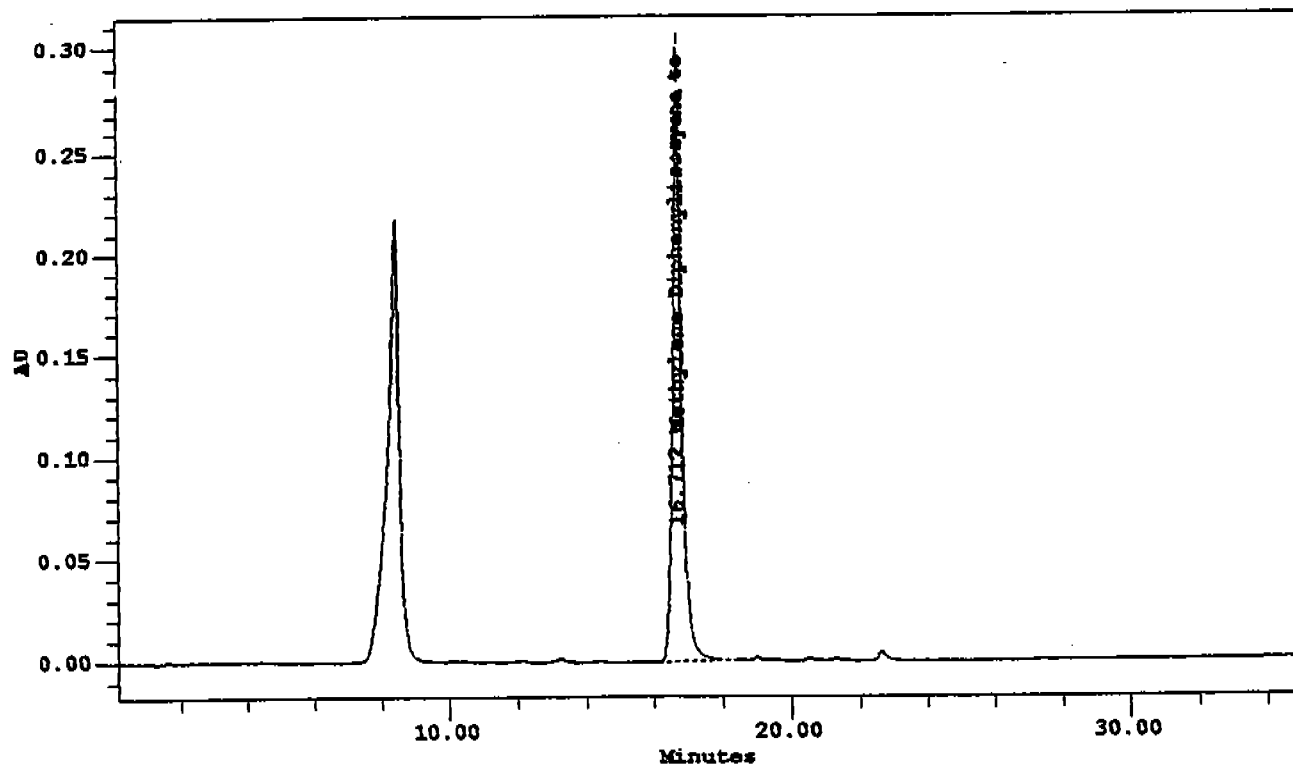
#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.735	2117343	123387	5.050	BB

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name Dept 020/LP Chilco

Project Name:	ISOCYANATES	Sample Type:	Standard
Log Number	3191	Injection Volume (uL):	50.00
Sample Name:	Standard2	Run Time:	35.0 min
Date Acquired:	07/20/94 08:44 PM	Date Processed:	08/19/94 04:32 PM
Vial:	4	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3191STD5
Channel Name	UV_254		
Acq Meth Set:	3191_MSET		
Processing Method:	3252M_PROC		



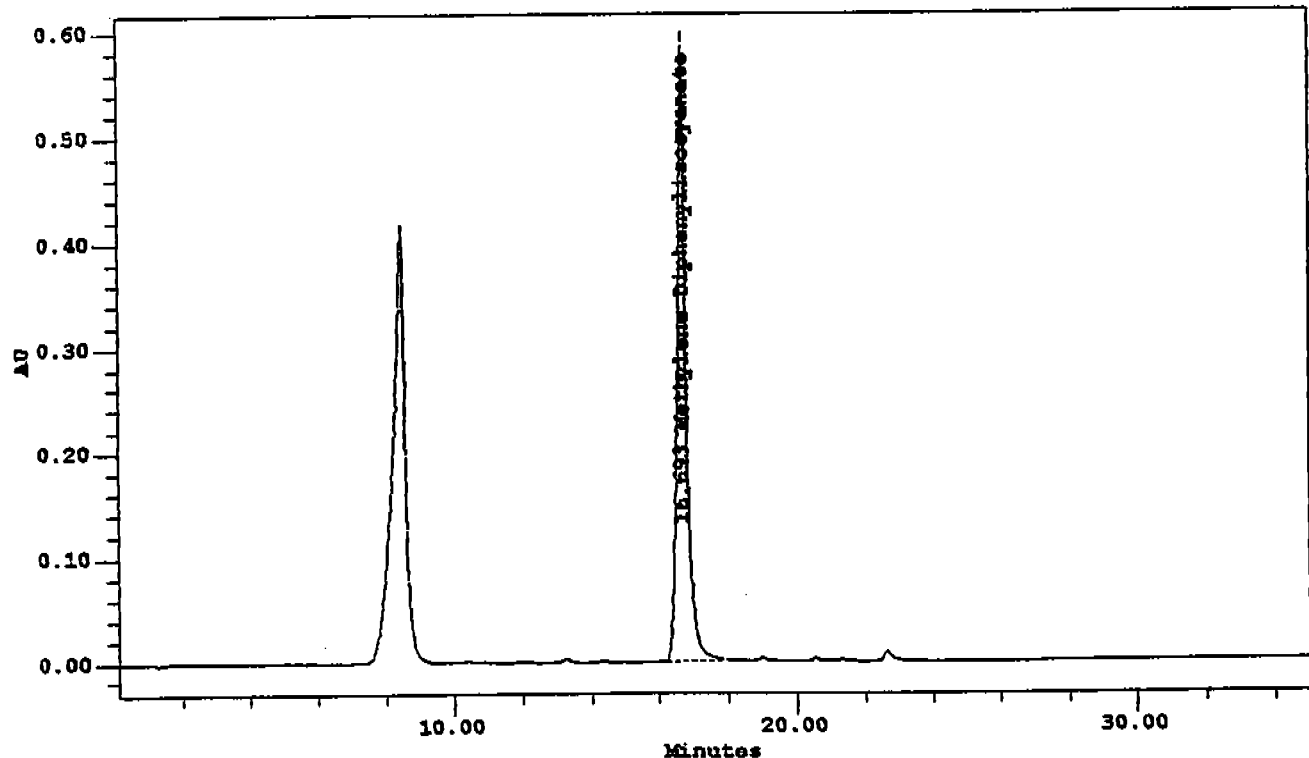
Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene diphenylisocyan	16.712	5313252	300167	12.620	SS

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Chilco		
Project Name:	ISOCYANATES		
Log Number	3191	Sample Type:	Standard
Sample Name:	Standard1	Injection Volume (uL):	50.00
Date Acquired:	07/20/94 09:21 PM	Run Time:	35.0 min
Vial:	5	Date Processed:	08/19/94 04:34 PM
Injection:	1	Dilution:	1.00000
Channel:	991M	Date Due:	
Channel Name	UV_254	Set Name:	3191STDs
Acq Meth Set:	3191_MSET		
Processing Method:	3252M_PROC		

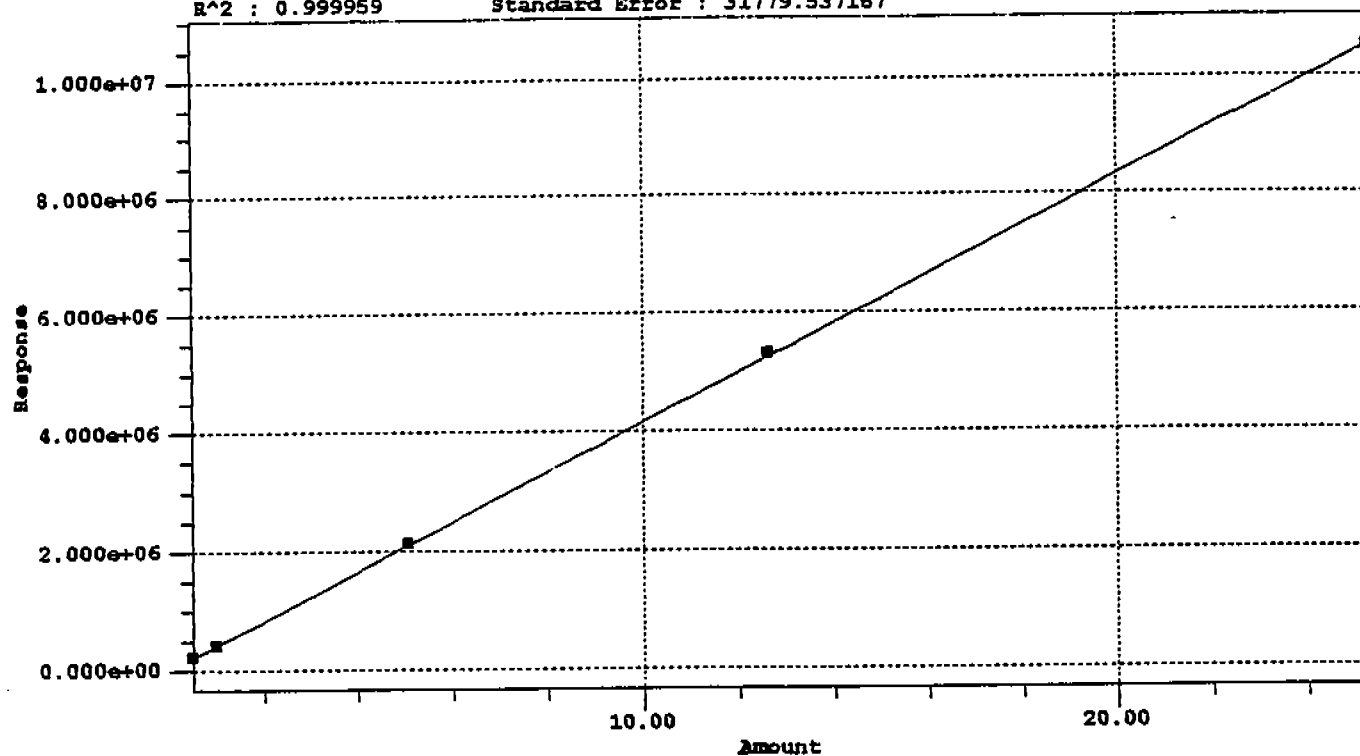


Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.693	10501002	586349	25.250	BB

CALIBRATION CURVE

Processing Method : 3252M_PROC System : 991M_FDA Channel : UV_254
 Date : 19-AUG-94 Type : LC Name : Methylene Diphenylisocyanate
 Retention Time : 16.700 Order : 1 A : 13580.561176
 B : 416248.781236 C : 0.000000 D : 0.000000
 E : 0.000000 F : 0.000000 R : 0.999980
 R^2 : 0.999959 Standard Error : 31779.537167



Point Table

#	Amount	Response	Manual	Ignore?
1	0.505000	212453.140625	No	No
2	1.010000	419836.781250	No	No
3	5.050000	2117343.000000	No	No
4	12.620000	5313282.500000	No	No
5	25.250000	10501002.000000	No	No

CONTINUING CALIBRATION RESPONSE FACTORS

INTERPOLL LABS

1,2-PP/MDI Standard Response Versus Time (2.0 mL/min flow rate)

Retent Time	Std Conc. (ug/mL)	Area of Standard	Injection Volume (uL)	Response Area/ng	Calibration Average Response	Acquisition Date	ILI Log #'s	Sampling Event	Instrument
	25.6	10900000	50	8516		12/9/93	1777	Intra-laboratory round robin	Waters
	12.8	5620000	50	8781		12/9/93	1777	Intra-laboratory round robin	Waters
	1.28	559500	50	8742	8680	12/9/93	1777	Intra-laboratory round robin	Waters
	21.96	9180000	50	8361		12/10/93	1777	Intra-laboratory round robin	Waters
	10.98	4670000	50	8506		12/10/93	1777	Intra-laboratory round robin	Waters
	5.49	2370000	50	8634		12/10/93	1777	Intra-laboratory round robin	Waters
	1.098	483000	50	8798		12/10/93	1777	Intra-laboratory round robin	Waters
	0.549	242000	50	8816	8623	12/10/93	1777	Intra-laboratory round robin	Waters
	23.4	9730000	50	8316		12/13/93	1777	Intra-laboratory round robin	Waters
	11.7	4950000	50	8462		12/13/93	1777	Intra-laboratory round robin	Waters
	5.86	2490000	50	8498		12/13/93	1777	Intra-laboratory round robin	Waters
	1.17	534000	50	9128		12/13/93	1777	Intra-laboratory round robin	Waters
	0.586	250000	50	8532	8587	12/13/93	1777	Intra-laboratory round robin	Waters
	25.9	10800000	50	8340		12/14/93	1777	Intra-laboratory round robin	Waters
	23.44	10250000	50	8746		1/4/94	1906	Dungannon/Dec93	Waters
19.12	0.518	210600	50	8131		4/24/94	2558	LP/Montrose	Waters
19.11	1.036	449900	50	8685		4/24/94	2558	LP/Montrose	Waters
19.08	5.18	2205000	50	8514		4/24/94	2558	LP/Montrose	Waters
19.04	12.95	5522000	50	8528		4/24/94	2558	LP/Montrose	Waters
19.08	25.9	10880000	50	8402	8452	4/24/94	2558	LP/Montrose	Waters
19.23	0.518	226300	50	8737		7/5/94	3097	LP/Hayward	Waters
19.21	1.036	436200	50	8421		7/5/94	3097	LP/Hayward	Waters
19.20	5.18	2223000	50	8583		7/5/94	3097	LP/Hayward	Waters
19.18	12.95	5591000	50	8635		7/5/94	3097	LP/Hayward	Waters
19.09	25.9	10600000	50	8185	8512	7/5/94	3097	LP/Hayward	Waters
16.70	0.505	214400	50	8491		7/21/94	3191	LP/Chilco	Waters2
16.69	1.01	419800	50	8313		7/21/94	3191	LP/Chilco	Waters2
16.73	5.05	2132000	50	8444		7/21/94	3191	LP/Chilco	Waters2
16.71	12.62	5328000	50	8444		7/21/94	3191	LP/Chilco	Waters2
16.69	25.25	10520000	50	8333	8368	7/21/94	3191	LP/Chilco	Waters2
16.59	4.9	2191000	50	8943	8943	7/29/94	3252	LP/Dungannon	Waters2

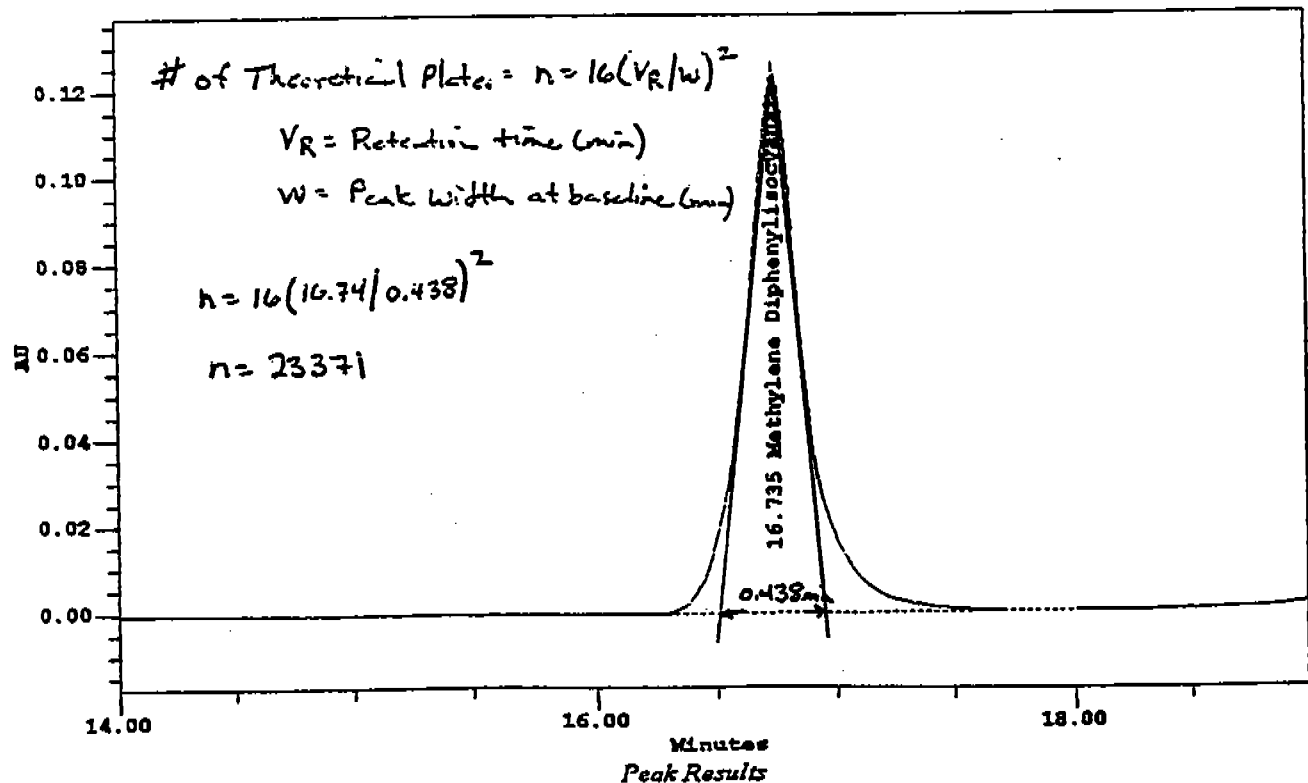
Average: 8547

CALCULATION OF THEORETICAL PLATES

INTERPOLL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Chilco		
Project Name:	ISOCYANATES		
Log Number	3191	Sample Type:	Standard
Sample Name:	Standard3	Injection Volume (uL):	50.00
Date Acquired:	07/20/94 08:08 PM	Run Time:	35.0 min
Vial:	3	Date Processed:	08/19/94 02:07 PM
Injection:	1	Dilution:	1.00000
Channel:	991M	Date Due:	
Channel Name UV_254		Set Name:	3191STD5
Acq Meth Set:	3191_MSET		
Processing Method:	ISOCYANM_PROC		



Peak Results						
#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.735	2132034	123463	5.050	MS

SAMPLE PREPARATION SHEETS

**Interpoll Laboratories
(612) 786-6020**

Match #1 3752

Project #1

Client: CP Quanganh

Drainage - General Provision
Sample Provision Worksheet

[illegible]

Sample Type

Prq

Clean Water Samples were

Dirty Water supersaturated to dryness *

Waste Water in a round bottom flask *

Boil
using a reflux condenser

Blundon

— single 100-120

Charcoal nm 100-120
The residues were taken

✓ Stack, Parts exp in Soud ACN

Impinger Catch

is Taken None

Other	Final Solvent

ACN

Comments, Prep: to Spike 10ml of MAT Stock at 25.9 g/gal Comments, Analysis: Nominal am.
in 200ml of Dry Toluene Date: 7/25/94 Initials: gpd/mrk

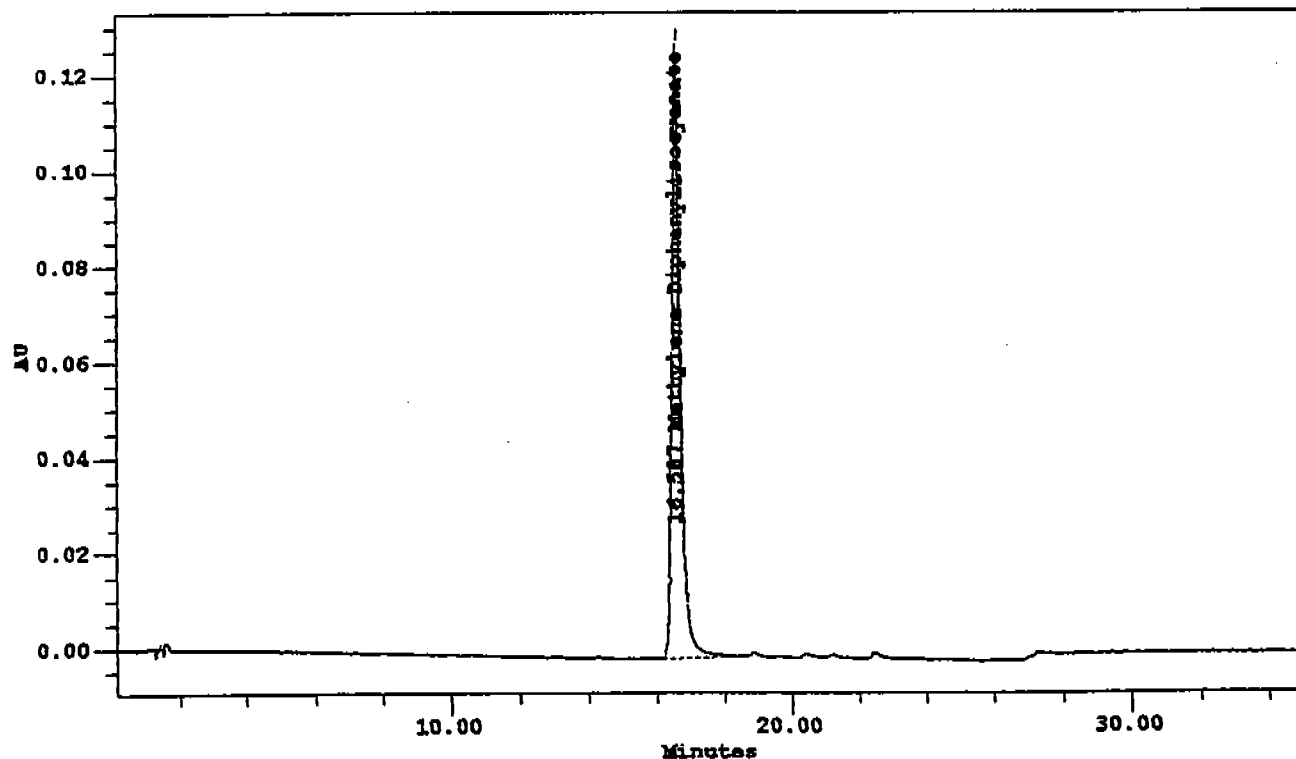
Comments, Analysis: Nominal run
Date: 7/22/94 Initials: mpd/rtc

SAMPLE ANALYSIS

INTERPOLL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	MDI Check	Run Time:	35.0 min
Date Acquired:	07/29/94 03:54 AM	Date Processed:	08/19/94 04:47 PM
Vial:	1	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



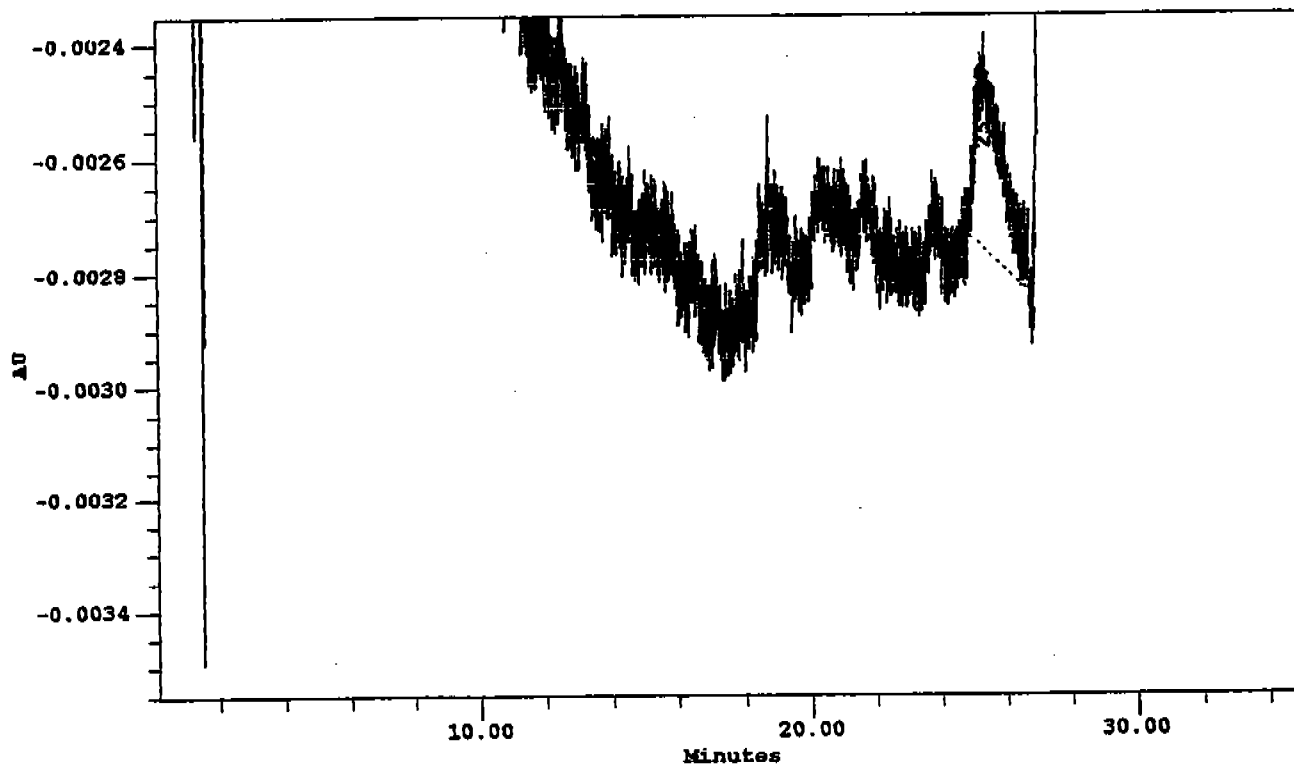
Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.587	2191369	128738	5.232	BB

INTERPOLL LABORATORIES
RESULTS REPORT

Millennium Sample Information

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	ACN Blank	Run Time:	35.0 min
Date Acquired:	07/29/94 04:30 AM	Date Processed:	08/19/94 04:46 PM
Vial:	2	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



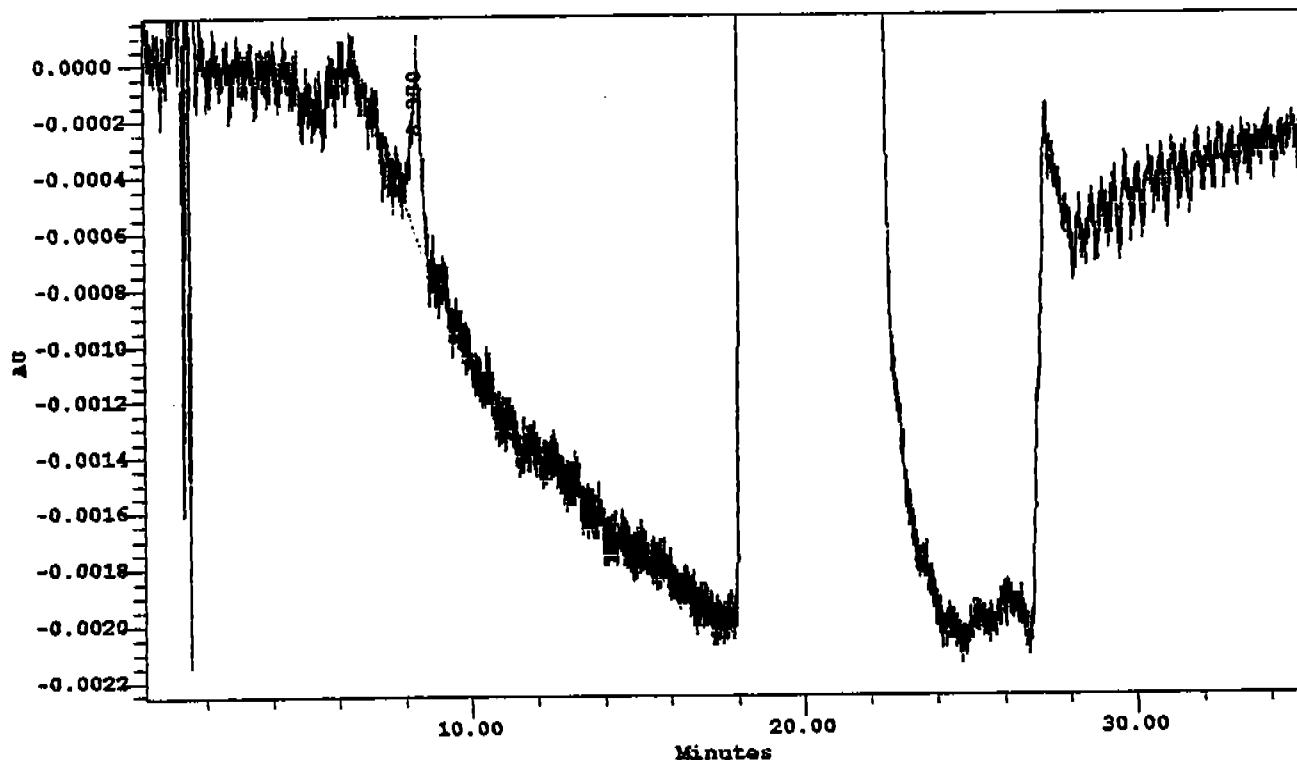
Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.700			BOL	Missing
2		25.317	19107	353		MM

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	3252 Blank	Run Time:	35.0 min
Date Acquired:	07/29/94 05:07 AM	Date Processed:	08/19/94 04:41 PM
Vial:	3	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



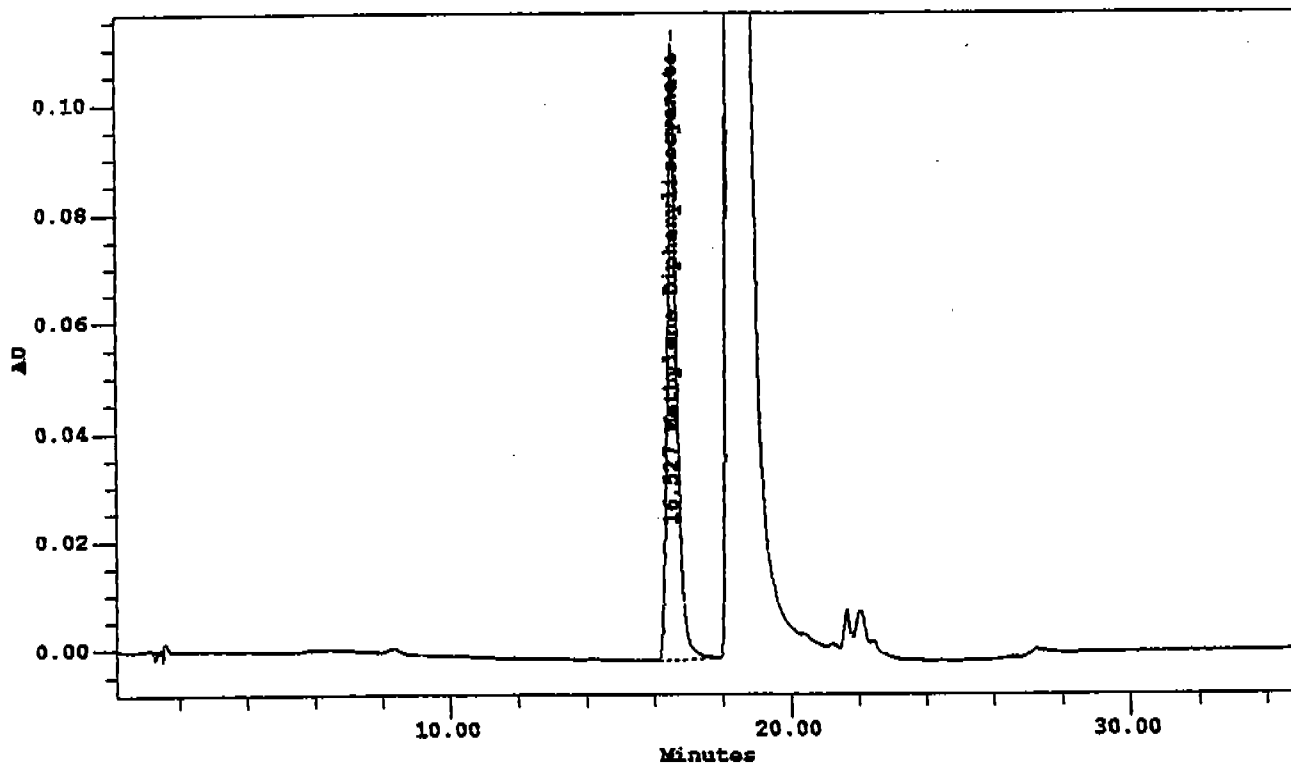
Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1		8.370	13910	678		MM
2	Methylene Diphenylisocyan	16.700			BOL	Missing

INTERPOLL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	3252 Spike1	Run Time:	35.0 min
Date Acquired:	07/29/94 05:43 AM	Date Processed:	08/19/94 04:41 PM
Vial:	4	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.527	2093330	112879	4.996	BB

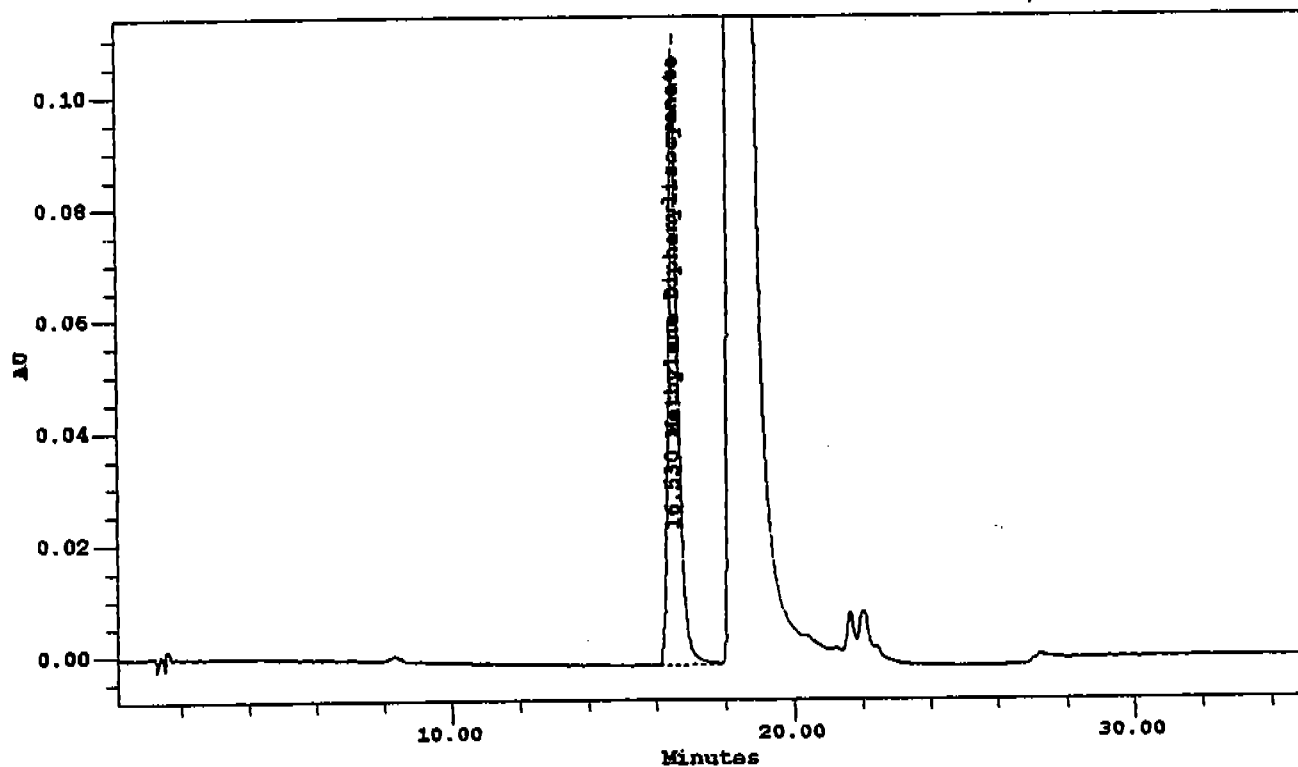
$\mu\text{g} \Rightarrow \text{MOI} \Rightarrow 4.996 \mu\text{g/ml} \times 50 \text{ ml} = 250 \mu\text{g}$
 SPIKE LEVEL $\Rightarrow 10 \text{ ml of MOI Stock at } 25.9 \mu\text{g/ml} \Rightarrow 259 \mu\text{g}$ 25

 $\frac{250}{259} \times 100 = 96.5\%$
Place

INTERPOLL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	3252 Spike2	Run Time:	35.0 min
Date Acquired:	07/29/94 06:19 AM	Date Processed:	08/19/94 04:42 PM
Vial:	5	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.530	2085441	110282	4.977	BB

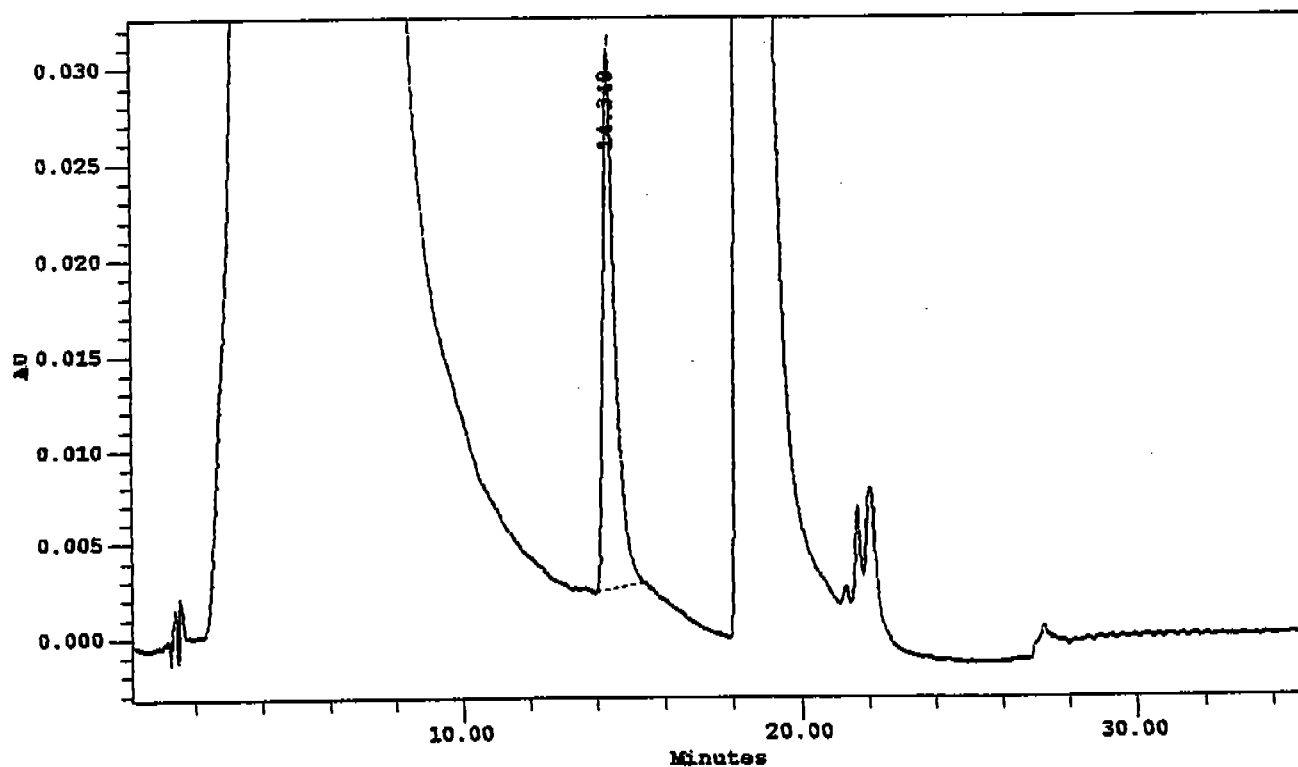
$$\mu\text{g} \Rightarrow \text{MDI} \Rightarrow 4.98 \mu\text{g/ml} \times 50 \text{ ml} = 249 \mu\text{g}$$

$$\frac{249}{255} \times 100\% = 96.1\%$$

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES		
Log Number	3253	Sample Type:	Unknown
Sample Name:	3252-29	Injection Volume (uL):	50.00
Date Acquired:	07/29/94 06:56 AM	Run Time:	35.0 min
Vial:	6	Date Processed:	08/19/94 04:42 PM
Injection:	1	Dilution:	1.00000
Channel:	991M	Date Due:	
Channel Name	UV_254	Set Name:	3252
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



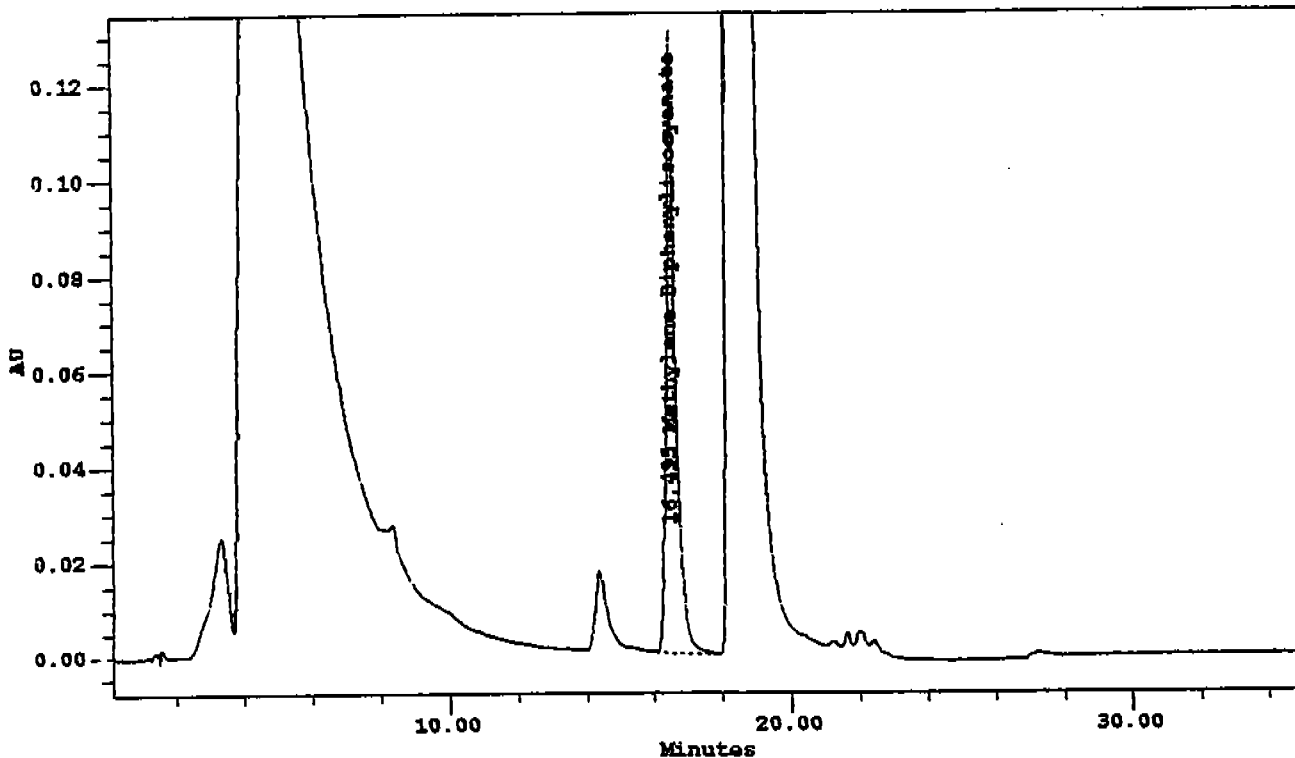
Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1		14.348	695490	28472		MM
2	Methylene Diphenylisocyan	16.700			BDL	Missing

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES		
Log Number	3253	Sample Type:	Unknown
Sample Name:	3252-29 Spk <i>Field Spike</i>	Injection Volume (uL):	50.00
Date Acquired:	07/29/94 07:32 AM	Run Time:	35.0 min
Vial:	7	Date Processed:	08/19/94 04:43 PM
Injection:	1	Dilution:	1.00000
Channel:	991M	Date Due:	
Channel Name	UV_254	Set Name:	3252
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

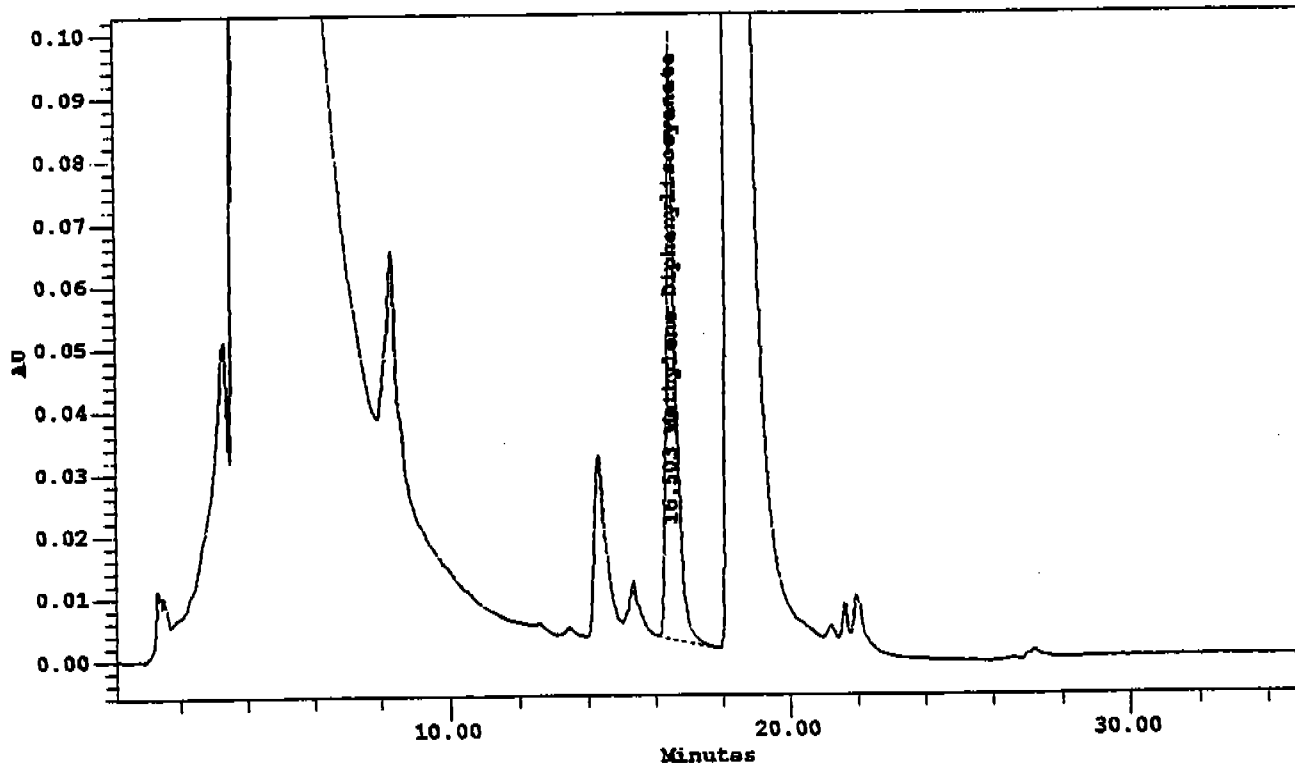
#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.495	2357270	127330	5.631	BB

$$\mu\text{g} \Rightarrow \text{MOT} \Rightarrow 5.63 \mu\text{g/ml} \times 50 \text{ ml} = 282 \mu\text{g}$$

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	3252-30	Run Time:	35.0 min
Date Acquired:	07/29/94 08:08 AM	Date Processed:	08/19/94 04:43 PM
Vial:	8	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

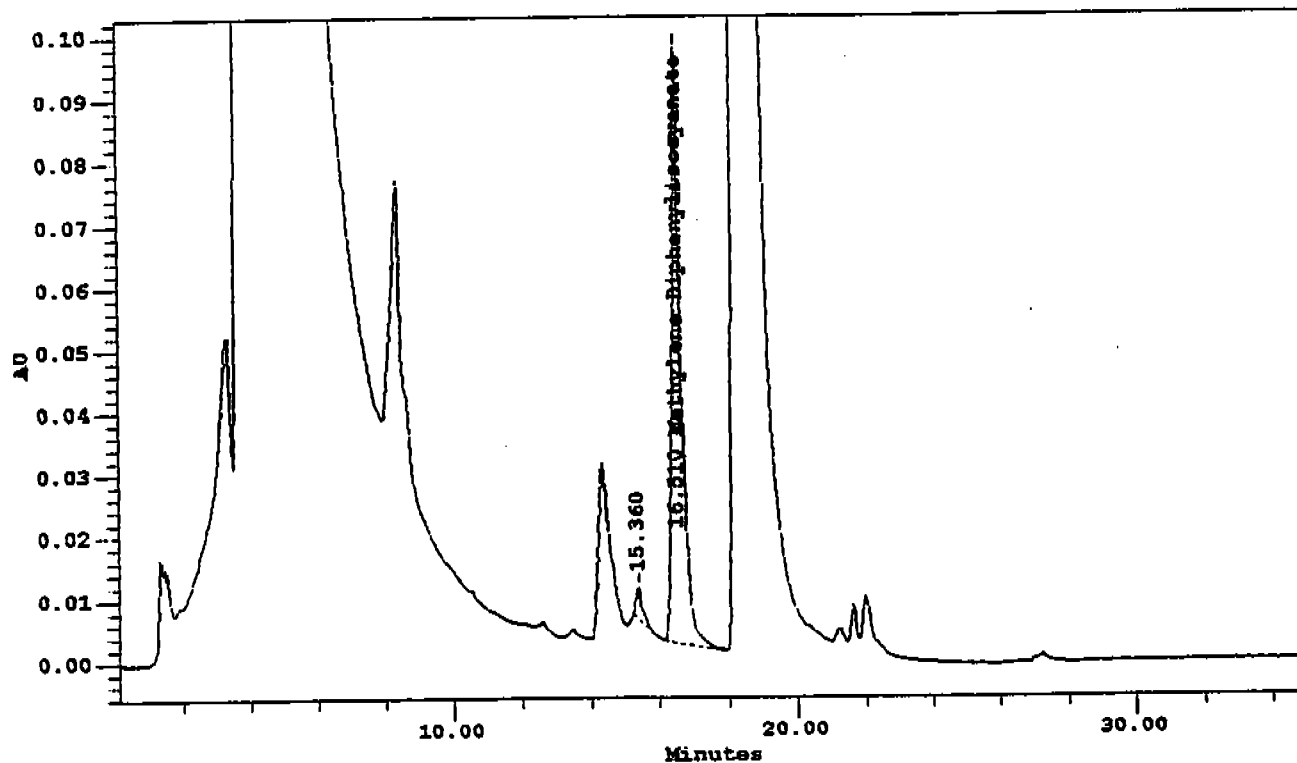
#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.503	1728168	95114	4.119	BB

$$\mu\text{g} \Rightarrow \text{MDI} \Rightarrow 4.12 \mu\text{g/ml} \times 50 \text{ ml} = 206 \mu\text{g}$$

INTERPOLL LABORATORIES
RESULTS REPORT

Millennium Sample Information

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	3252-31	Run Time:	35.0 min
Date Acquired:	07/29/94 08:45 AM	Date Processed:	08/19/94 04:45 PM
Vial:	9	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

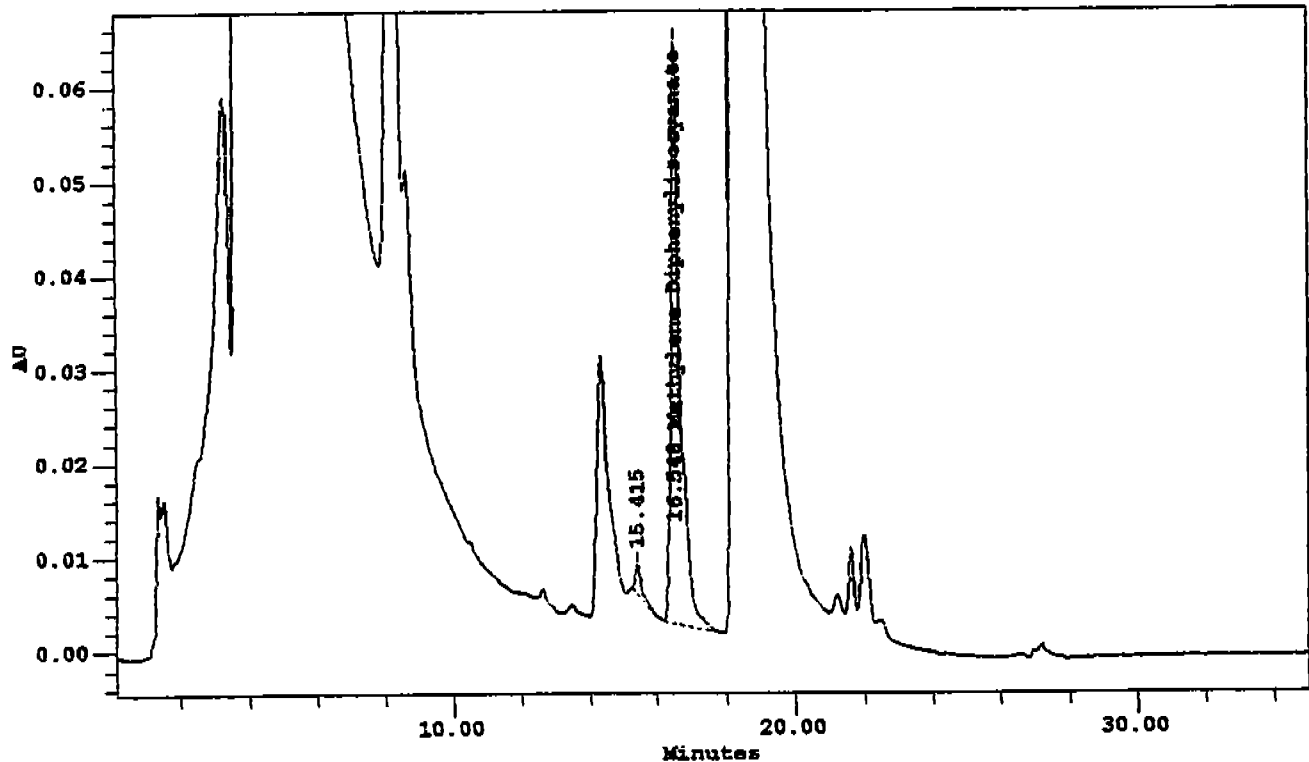
#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1		15.360	63320	4863		BB
2	Methylene Diphenylisocyan	16.510	1693364	95044	4.036	BB

$$\mu\text{g} \Rightarrow \text{MOI} \Rightarrow 4.036 \mu\text{g/ml} \times 50 \text{ ml} = 202 \mu\text{g}$$

INTERPOL LABORATORIES
RESULTS REPORT

Millennium Sample Information

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	3252-32	Run Time:	35.0 min
Date Acquired:	07/29/94 09:21 AM	Date Processed:	08/19/94 04:45 PM
Vial:	10	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

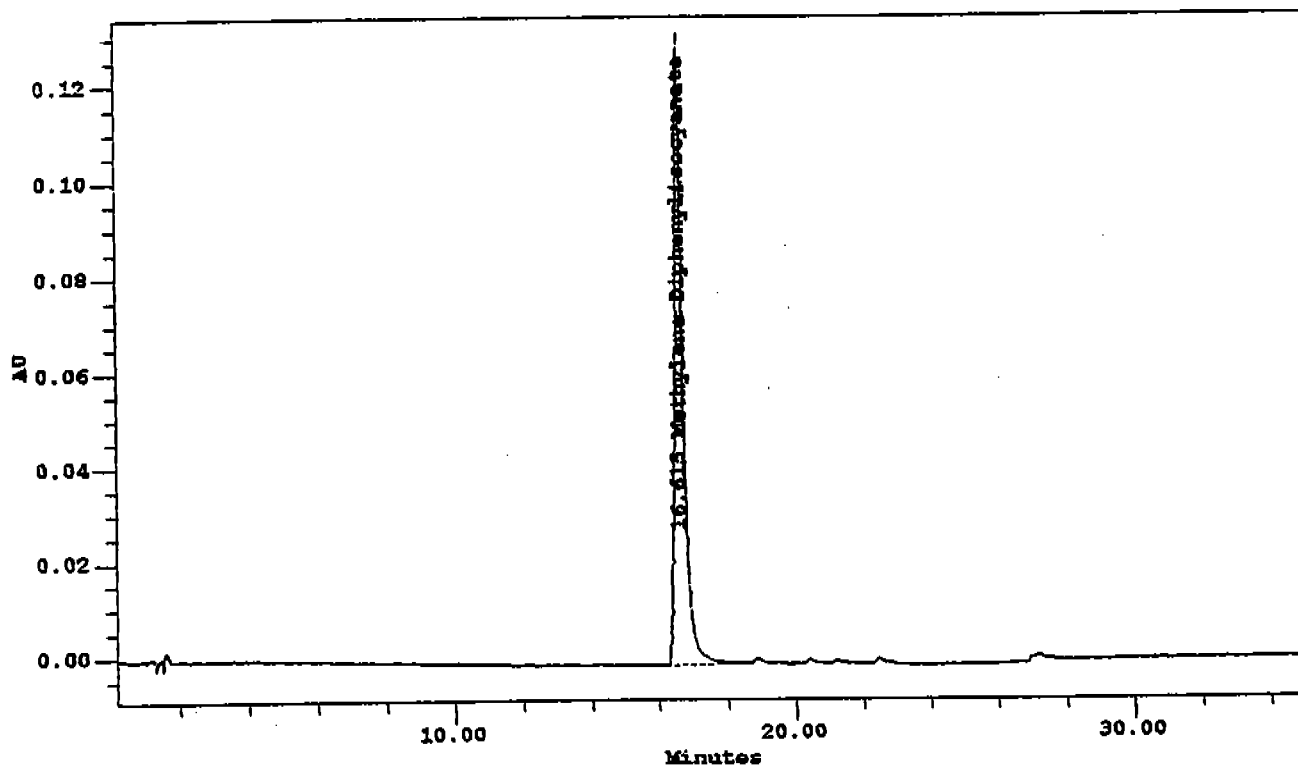
#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1		15.415	42931	3221		BB
2	Methylene Diphenylisocyan	16.548	1108376	61799	2.630	BB

$\mu\text{g} \Rightarrow \text{mRI} \Rightarrow 2.63 \mu\text{g/ml} \times 50 \text{ ml} = 132 \mu\text{g}$

INTERPOLL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	MDI Check Run2	Run Time:	35.0 min
Date Acquired:	07/29/94 09:57 AM	Date Processed:	08/19/94 04:47 PM
Vial:	1	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.615	2170913	129566	5.183	BB

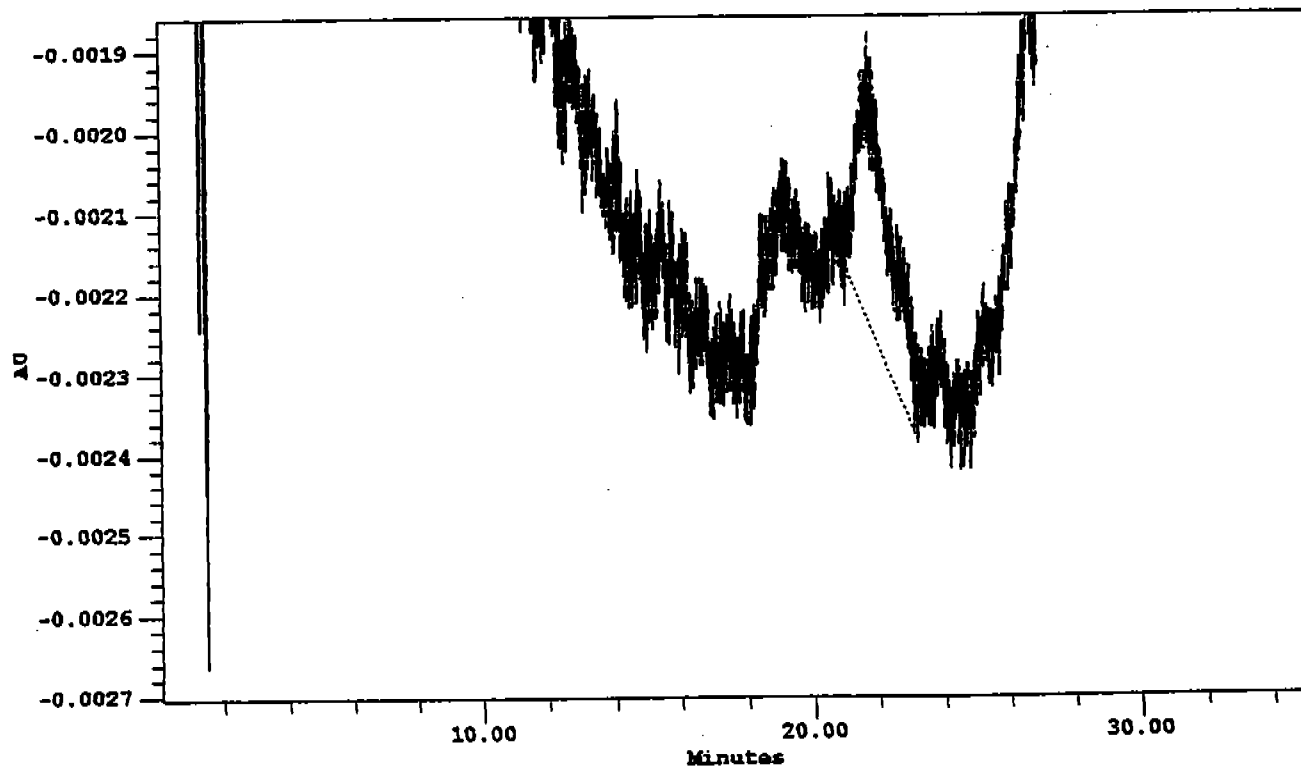
2 Rec

$$\frac{5.18}{4.90} \times 100\% = 106\%$$

INTERPOL LABORATORIES
RESULTS REPORT

M i l l e n n i u m S a m p l e I n f o r m a t i o n

Client Name	Dept 020/LP Dungannon		
Project Name:	ISOCYANATES	Sample Type:	Unknown
Log Number	3253	Injection Volume (uL):	50.00
Sample Name:	ACN Blank Run2	Run Time:	35.0 min
Date Acquired:	07/29/94 10:34 AM	Date Processed:	08/19/94 04:47 PM
Vial:	2	Dilution:	1.00000
Injection:	1	Date Due:	
Channel:	991M	Set Name:	3252
Channel Name	UV_254		
Acq Meth Set:	ISOCYAN_MSET		
Processing Method:	3252M_PROC		



Peak Results

#	Name	Ret Time (min)	Area (uV*sec)	Height (uV)	Amount in ug/ml	Int Type
1	Methylene Diphenylisocyan	16.700			BDL	Missing
2		21.683	24426	343		MM