



# INDOFINE Chemical Company, Inc.

121 Stryker Lane, Bldg. 30, Suite 1 • Hillsborough, NJ 08844 • U.S.A.

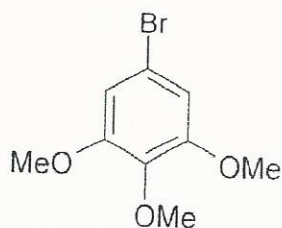
Phone: (908) 359-6778 • FAX: (908) 359-1179

website: [www.indofinechemical.com](http://www.indofinechemical.com)

e-mail: [chemical@indofinechemical.com](mailto:chemical@indofinechemical.com)

## CERTIFICATE OF ANALYSIS

<u>Catalog Number:</u>	19-578
<u>Product Name:</u>	<b>5-BROMO-1,2,3-TRIMETHOXYBENZENE</b>
<u>CAS Number:</u>	[2675-79-8]
<u>Lot Number:</u>	1510685
<u>Chemical Formula:</u>	C <sub>9</sub> H <sub>11</sub> BrO <sub>3</sub>
<u>Molecular Weight:</u>	247.09
<u>Appearance:</u>	White crystalline powder
<u>Moisture(KF):</u>	0.38%
<u>Solubility:</u>	Soluble in chloroform
<u>TLC:</u>	Hexane:Ethylacetate (9:1)
<u>NMR Spectrum:</u>	Enclosed (conforms to the structure)
<u>IR Spectrum:</u>	Enclosed (conforms to the structure)
<u>Storage:</u>	Store in a cool, dry place
<u>Titration by AgNo3:</u>	101.2%
<u>Purity(HPLC):</u>	99.56%
<u>Purity(GC):</u>	99.07%





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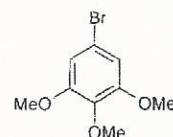
e-mail: [chemical@indofinechemical.com](mailto:chemical@indofinechemical.com)

## HPLC ANALYSIS

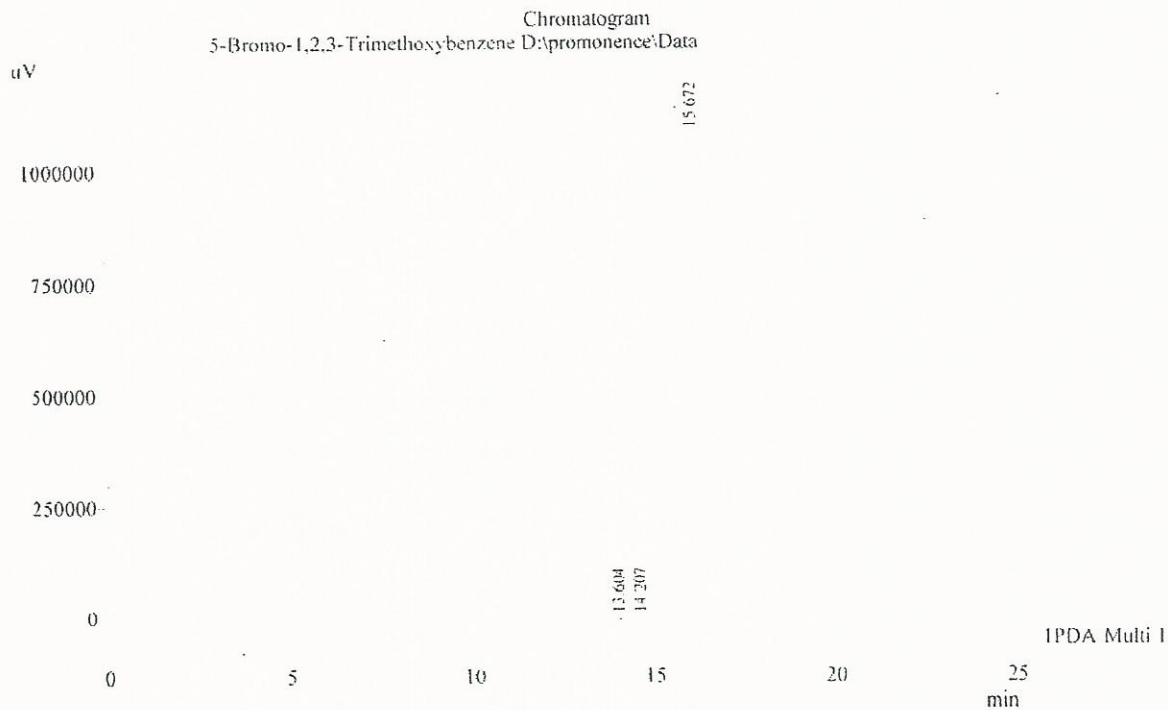
Acquired by : Admin  
 Sample Name : 5-Bromo-1,2,3-Trimethoxybenzene  
 Sample ID : 11.0 kg  
 Injection Volume : 20 uL  
 Data Filename : 051015E.lcd  
 Method Filename : Linear Gradient.M.lcm

Catalog No.: 19-578  
 Product Name: 5-Bromo-1,2,3-trimethoxybenzene  
 Lot No.: 1510685

Column : Gemini C-18, (250mm x4.6mm 5.0µ)  
 Flow : 1.000 mL/min.  
 Mobile Phase : A(0.05% TFA in Water) B(Acetonitrile)  
 0.01 90 10  
 12.0 10 90  
 20.0 10 90  
 23.0 90 10  
 25.0 90 10



Diluent : Acetonitrile



IPDA Multi 1 / 230nm 4nm

PDA Ch1 230nm 4nm

### Peak Table

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:13.604	13.604	33494	0.18	0.87
2	RT:14.207	14.207	49871	0.26	0.91
3	1-Br-3,4,5-TMB	15.672	18790618	99.56	1.00
Total			18873983	100.00	



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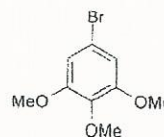
## GC ANALYSIS

User Name : Satyanarayana  
Sample Name : 5-Bromo-1,2,3-Trimethoxybenzene  
Sample ID : 11.0 kg  
Method Name : D:\Methods\General method.gcm

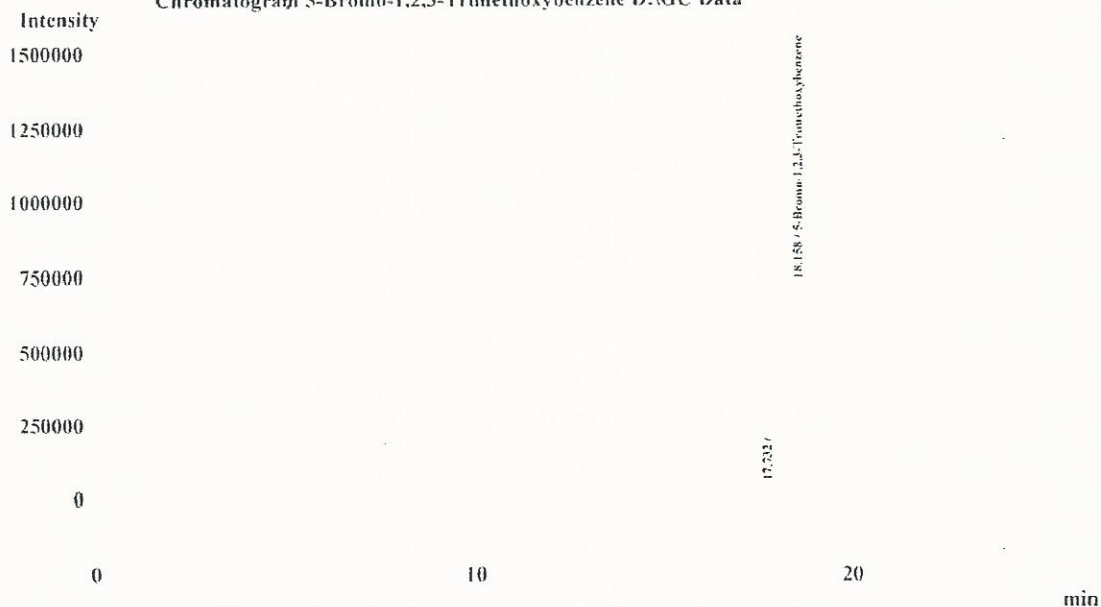
Catalog No.: 19-578  
Product Name: 5-Bromo-1,2,3-trimethoxybenzene  
Lot No.: 1510685

### Description

Column : EB-5 - (30M x 0,32mm x 0,10 um)  
Injector - 250°C  
Detector - 300°C  
Column temp - 50(5)-20-280(10)



Chromatogram 5-Bromo-1,2,3-Trimethoxybenzene D:\GC Data



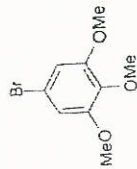
Peak Table - Channel 1

Peak#	Ret. Time	Area	Height	Area%	Name
1	17.732	39395	23865	0.93	
2	18.158	4177934	1394635	99.07	5-Bromo-1,2,3-Trimethoxybenzene
Total		4217329	1418500	100.00	



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Lot No.: 1510685



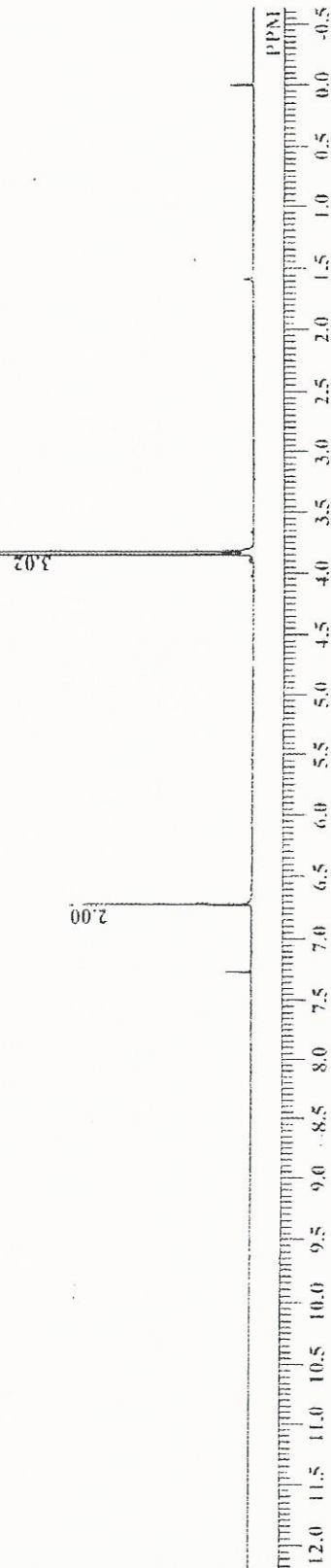
1-Br-3,4,5-TMB IH NMR CDCl3

Analysed By: GRY



DFILE 1-Br-3,4,5-TMB IH.als  
COMINT 1-Br-3,4,5-TMB IH NMR CDCl3

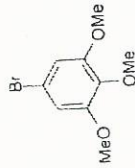
OBNUC 1H  
EXMOD NON  
OBFRQ 399.65 MHz  
OBSET 124.00 KHz  
OBFIN 10500.00 Hz  
POINT 16384  
FREQU 10000.00 Hz  
SCANS 17  
ACQTM 1.6384 sec  
PD 2.0000 sec  
PWI 6.00 usec  
IRNUC 1H  
CTEMP -22.3 c  
SLVNT CDCl3  
EXREF 0.00 ppm  
BF 0.30 Hz  
RGAIN 17





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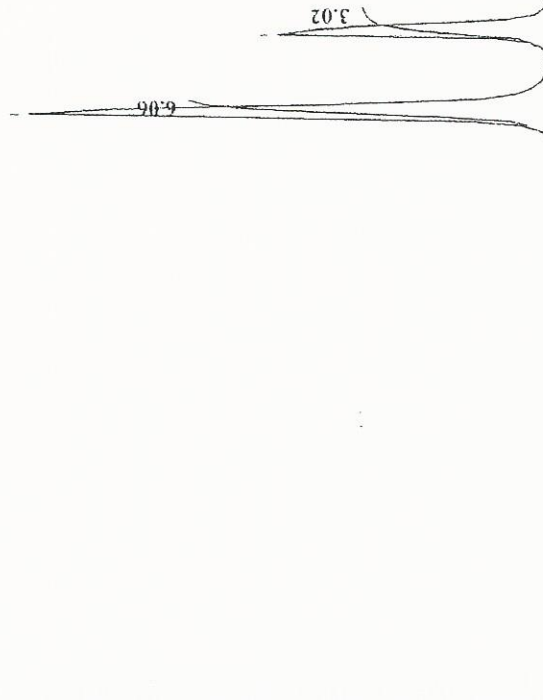
Catalog No.: 19-578  
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 Lot No.: 1510685



1-Br-3,4,5-TMB 1H NMR (CDCl3)

Analysed By: GRY

3.820  
 3.817



DFILE	1-Br-3,4,5-TMB 1H.nls
COMINT	1-Br-3,4,5-TMB 1H NMR CDCl
OBNUC	1H
EXMOD	NON
OBFRQ	399.65 MHz
OBSET	124.00 KHz
OBFIN	10500.00 Hz
POINT	16384
FREQU	10000.00 Hz
SCANS	17
ACQTM	1.6384 sec
PD	2.0000 sec
PWI	6.00 usec
IRNUC	1H
CTEMP	-22.3 c
SLVNT	CDCl3
EXREF	0.00 ppm
BF	0.30 Hz
RGAIN	17

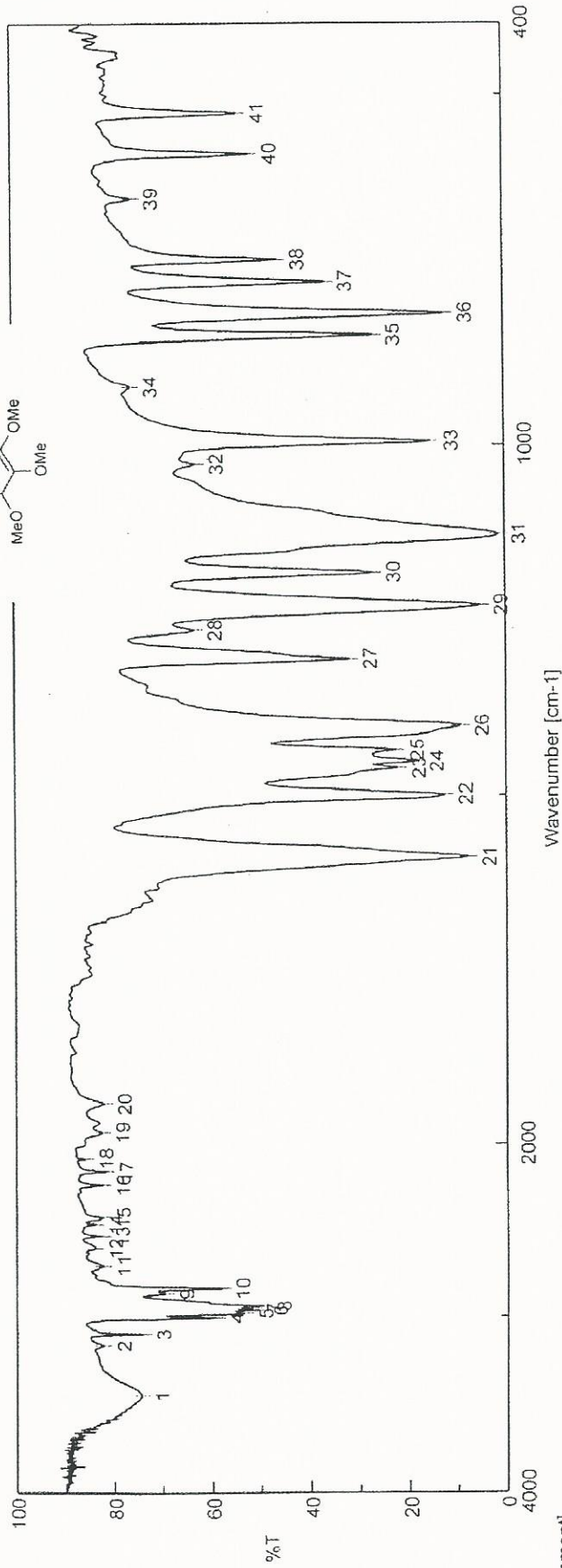
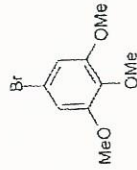
PPM

4.0



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 Product Name: 5-Bromo-1,2,3-trimethoxybenzene  
 Lot No.: 1510685



[Comment]  
 Sample Name 1-Br-3,4,5-TMB  
 Comment KBr Pellet  
 User DRNP  
 Division QC

[Data Information]

Data array type Linear data array  
 Horizontal Wavenumber [cm-1]  
 Vertical %T  
 Start 349.053 cm-1  
 End 7800.65 cm-1  
 Data pitch 0.964233 cm-1  
 Data points 7729

No	Position	Intensity
1	3437.5	74.190
6	2962.1	50.287
11	2705.6	82.103
16	2220.6	82.229
21	1589.1	7.538
26	1403.0	9.011
31	1128.2	1.233
36	813.8	11.854
41	526.5	53.666

No	Position	Intensity
2	3162.7	82.111
7	2949.6	51.745
12	2605.4	83.775
17	2146.4	81.631
22	1499.4	12.319
27	1305.6	31.542
32	1025.9	62.503
37	767.5	36.110

No	Position	Intensity
3	3099.0	73.936
8	2934.2	49.600
13	2531.1	82.422
18	2071.2	85.744
23	1462.7	21.727
28	1263.1	62.980
33	994.1	14.819
38	736.7	45.722

No	Position	Intensity
4	3005.5	59.104
9	2863.8	69.243
14	2456.9	83.804
19	1980.5	82.307
24	1453.1	18.063
29	1229.4	4.992
34	915.1	75.711
39	649.9	75.259

No	Position	Intensity
5	2982.4	53.329
10	2836.8	57.909
15	2413.5	82.172
20	1940.0	81.938
25	1437.7	22.172
30	1182.2	26.716
35	844.7	26.439
40	585.3	51.268