



# 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

Catalog Number: 020695

ProductName: **(+)-SPARTEINE**

Cas Number: [492-08-0]

Lot Number: 1105133

Chemical Formula: C<sub>15</sub>H<sub>26</sub>N<sub>2</sub>

Molecular Weight: 234.39

Appearance: Dark yellow color liquid

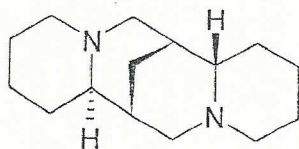
Solubility: Soluble in Chloroform

TLC: Chloroform : Methanol (7:3), Iodine dip

NMR Spectrum: Enclosed (Confirms to the structure)

Storage: Store at 2-8°C, dry

Purity(GC): 98.09%





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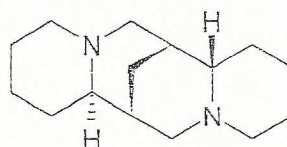
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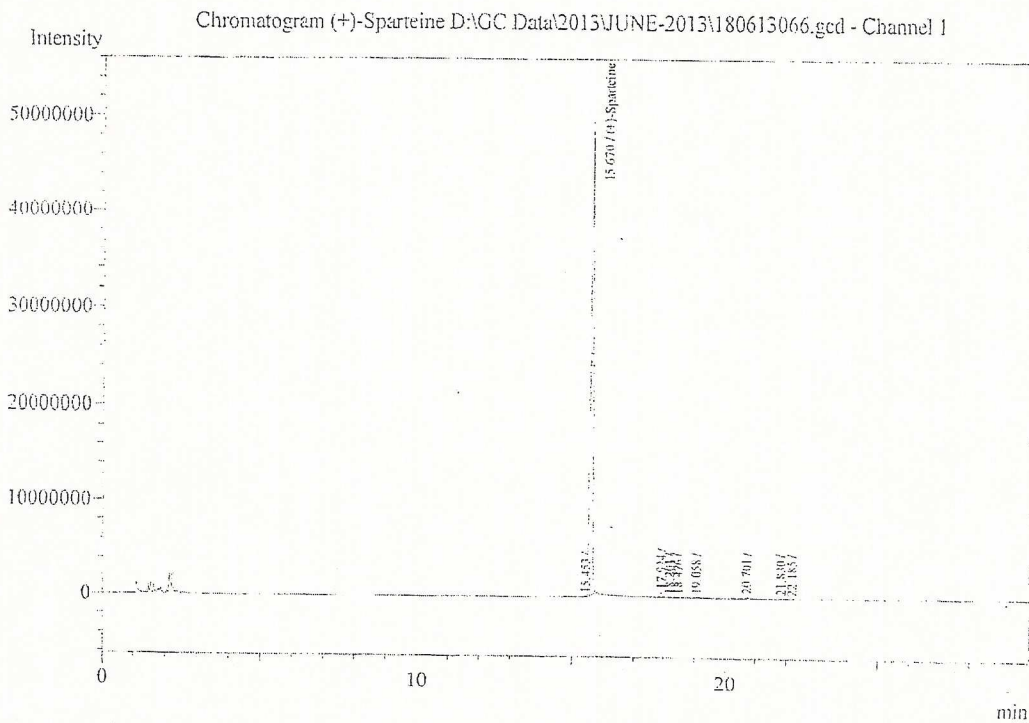
## GC ANALYSIS

Catalog No.: 020695  
Product name: (+)-Sparteine  
Lot No.: 1105133

User Name : Sanjeev  
Sample Name : (+)-Sparteine  
Sample ID : Lot No:1105133  
Method Name : D:\Methods\BRC Method-II.gcm  
Data File Name : D:\GC Data\2013\JUNE-2013\180613066.gcd  
Report File Name : D:\Reports\General-01.gcr



Description  
Injector - 250°C  
Detector - 300°C  
Column temp - 60(5)-20-280(14)



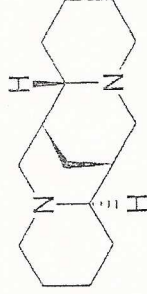
Peak Table - Channel 1

Peak#	Ret.Time	Area	Height	Area%	Name
1	15.453	199008	43520	0.0687	
2	15.670	284188962	49509945	98.0903	(+)-Sparteine
3	17.924	1926436	515967	0.6649	
4	18.201	94266	26085	0.0325	
5	18.362	218470	55073	0.0754	
6	18.476	81420	22944	0.0281	
7	19.058	900045	79771	0.3107	
8	20.701	1337134	204712	0.4615	
9	21.830	553303	52248	0.1910	
10	22.185	222606	21133	0.0768	
Total		289721650	50531398	100.0000	

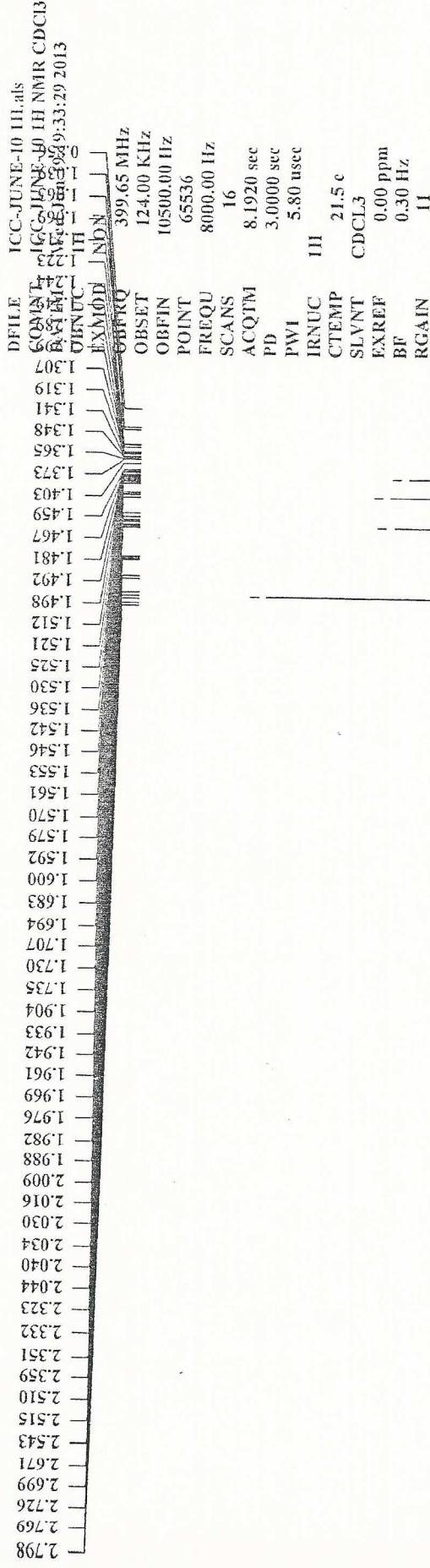


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HILLSBOROUGH, NJ 08844

Catalog No.: 020695  
Product name: (+)-Sparteine  
Lot No.: 1105133



ICC-JUNE-10 1H NMR CDCB  
Analysed By : TJR

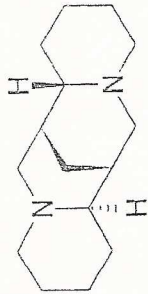


ICC-JUNE-10 1H NMR CDCB  
Analysed By : TJR  
DFFILE ICC-JUNE-10 1H.als  
60MIN 12.44  
EXPT 3.00  
CHEN TC 1H  
EXMOD NONE  
OBPKQ 399.65 MHz  
OBSET 124.00 KHz  
OBFIN 10500.00 Hz  
POINT 65536  
FREQU 8000.00 Hz  
SCANS 16  
ACQTM 8.1920 sec  
PD 3.0000 sec  
PWI 5.80 usec  
IRNUC III  
CTEMP 21.5 c  
SLVNT CDCL3  
EXREF 0.00 ppm  
BF 0.30 Hz  
RGAIN 11

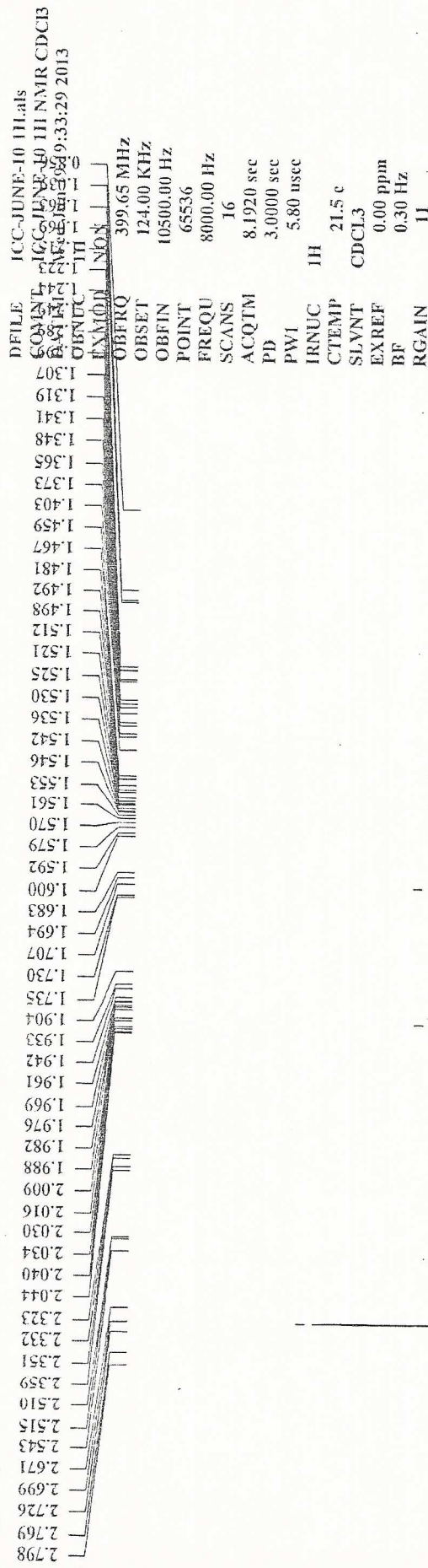


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ICC-JUNE-10 1H NMR CDCl3  
Analysed By: TJR



ICC-JUNE-10 1H NMR CDCl3  
399.65 MHz  
124.00 KHz  
10500.00 Hz  
65536  
8000.00 Hz  
16  
8.1920 sec  
3.0000 sec  
5.80 uscc  
1H  
21.5 c  
CDCl3  
0.00 ppm  
0.30 Hz  
11