



INDOFINE Chemical Company, Inc.

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

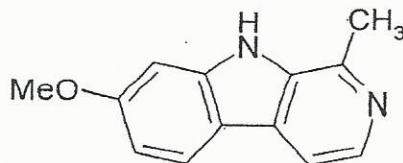
Phone: (908) 359-6778 • FAX: (908) 359-1179

website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

<u>Catalog Number:</u>	H-005
<u>Product Name:</u>	HARMINE (Banisterine)
<u>CAS Number:</u>	[442-51-3]
<u>Lot No.:</u>	1307356
<u>Molecular Formula:</u>	C ₁₃ H ₁₂ N ₂ O
<u>Molecular Weight:</u>	212.25
<u>Appearance:</u>	Deep Cream Powder
<u>Melting Point:</u>	260-262°C
<u>Moisture (KF):</u>	0.4%
<u>TLC:</u>	Chloroform:Methanol (9:1)
<u>Solubility:</u>	Soluble in DMSO
<u>NMR Spectrum:</u>	Enclosed (Confirms to the structure)
<u>MASS:</u>	Complies (M ⁺ -212.9)
<u>Assay (HPLC):</u>	99.19%





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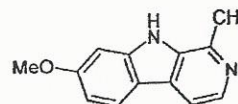
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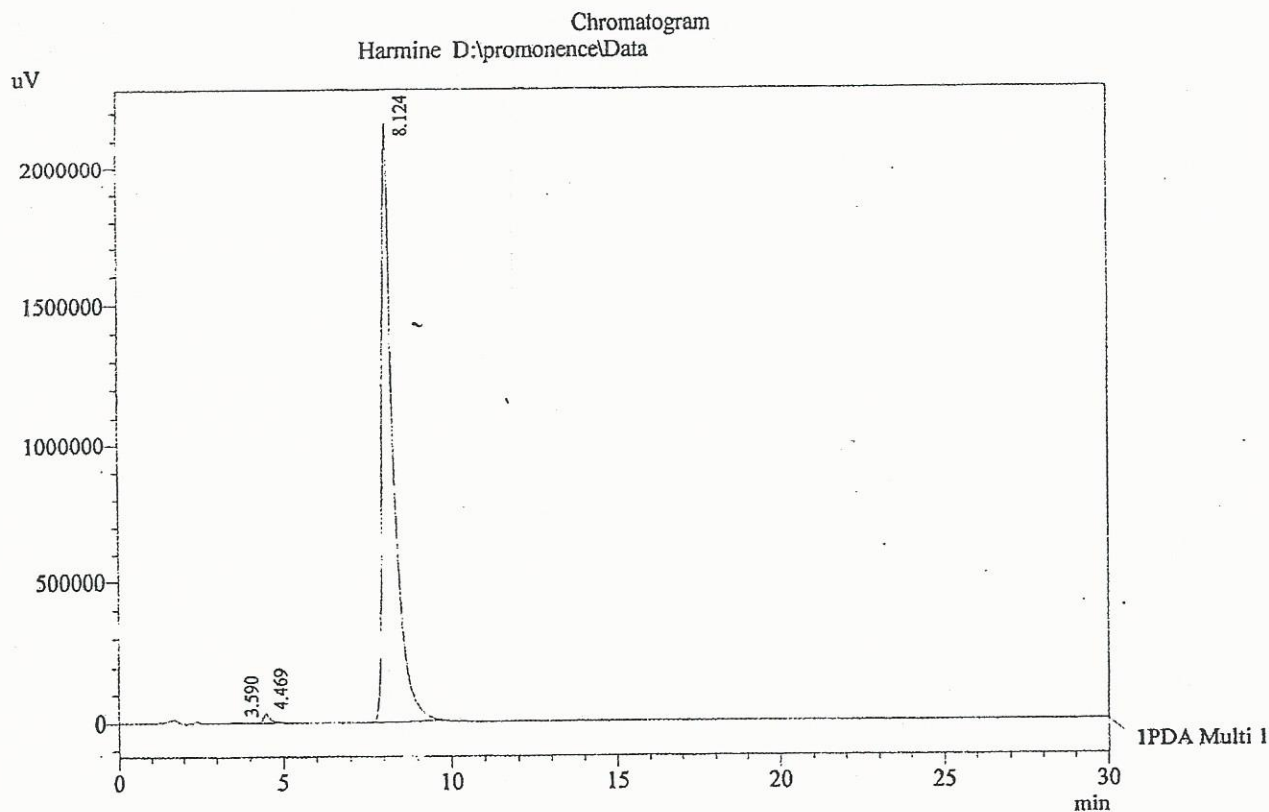
HPLC ANALYSIS

Acquired by : Sanjeev
Sample Name : Harmine
Sample ID : 850 gm Lot
Injection Volume : 20 uL
Data Filename : 1007131.lcd
Method Filename : Linear Isocratic.M.lcm

Catalog No.: H-005
Product Name: Harmine
Lot No.: 1307356



Column : Inertsil ODS, (250mm x4.6mm 5.0μ)
Flow : 1.500 mL/min.
Mobile Phase : Phosphate buffer:Acetonitrile(550:450)



1 PDA Multi 1 / 240nm 4nm

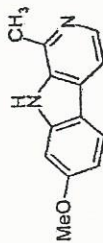
PeakTable

PDA Ch1 240nm 4nm

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:3.590	3.590	17504	0.04	0.44
2	Harmaline	4.469	386777	0.78	0.55
3	Harmine	8.124	49328060	99.19	1.00
Total			49732341	100.00	



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HILLSBOROUGH, NJ 08844



Catalog No.: H-005
Product Name: Harmine
Lot No.: 1307356

HRMN#850gm 1H NMR DMSO-d6

Analysed By : TJR



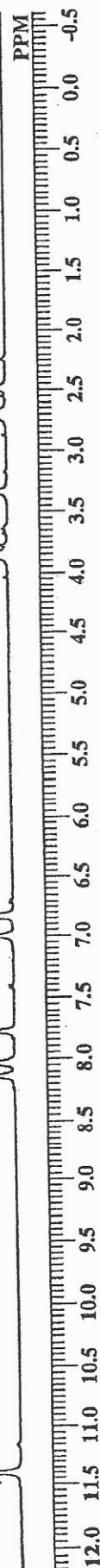
3.859
2.712

3.09
3.09

1.03
1.01
1.00
1.05
1.08

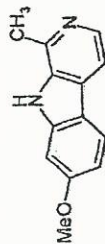
1.04

DFILE HRMN#850gm 1H.als
COMNT HRMN#850gm 1H NMR D
OBNUC 1H
EXMOD NON
OBFRQ 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
PW1 5.80 usec
IRNUC 1H
CTEMP 24.2 c
SLVNT DMSO
EXREF 2.49 ppm
BF 0.30 Hz
RGAIN 16





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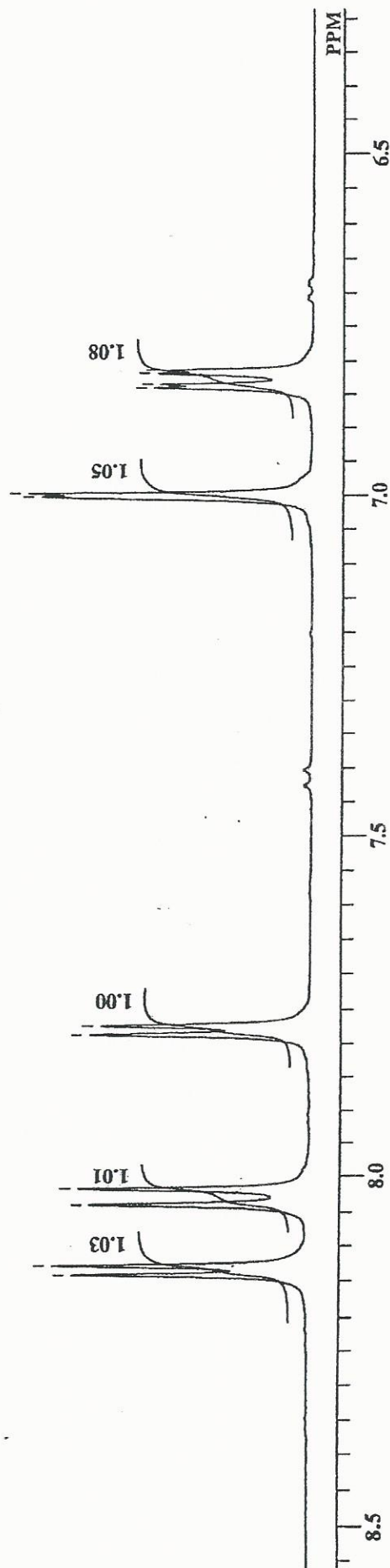
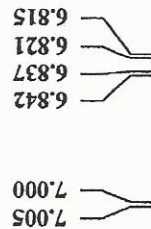


Catalog No.: H-005
Product Name: Harmine
Lot No.: 1307356

HR.MN#850gm 1H NMR DMSO-d6

Analysed By : TJR

DFILE	HRMN#850gm 1H.als
COMNT	HRMN#850gm 1H NMR
OBNUC	1H
EXMOD	NON
OBFRQ	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
PW1	5.80 usec
IRNUC	1H
CTEMP	24.2 c
SLVNT	DMSO
EXREF	2.49 ppm
BF	0.30 Hz
RGAIN	16





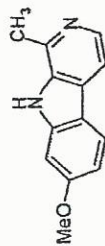
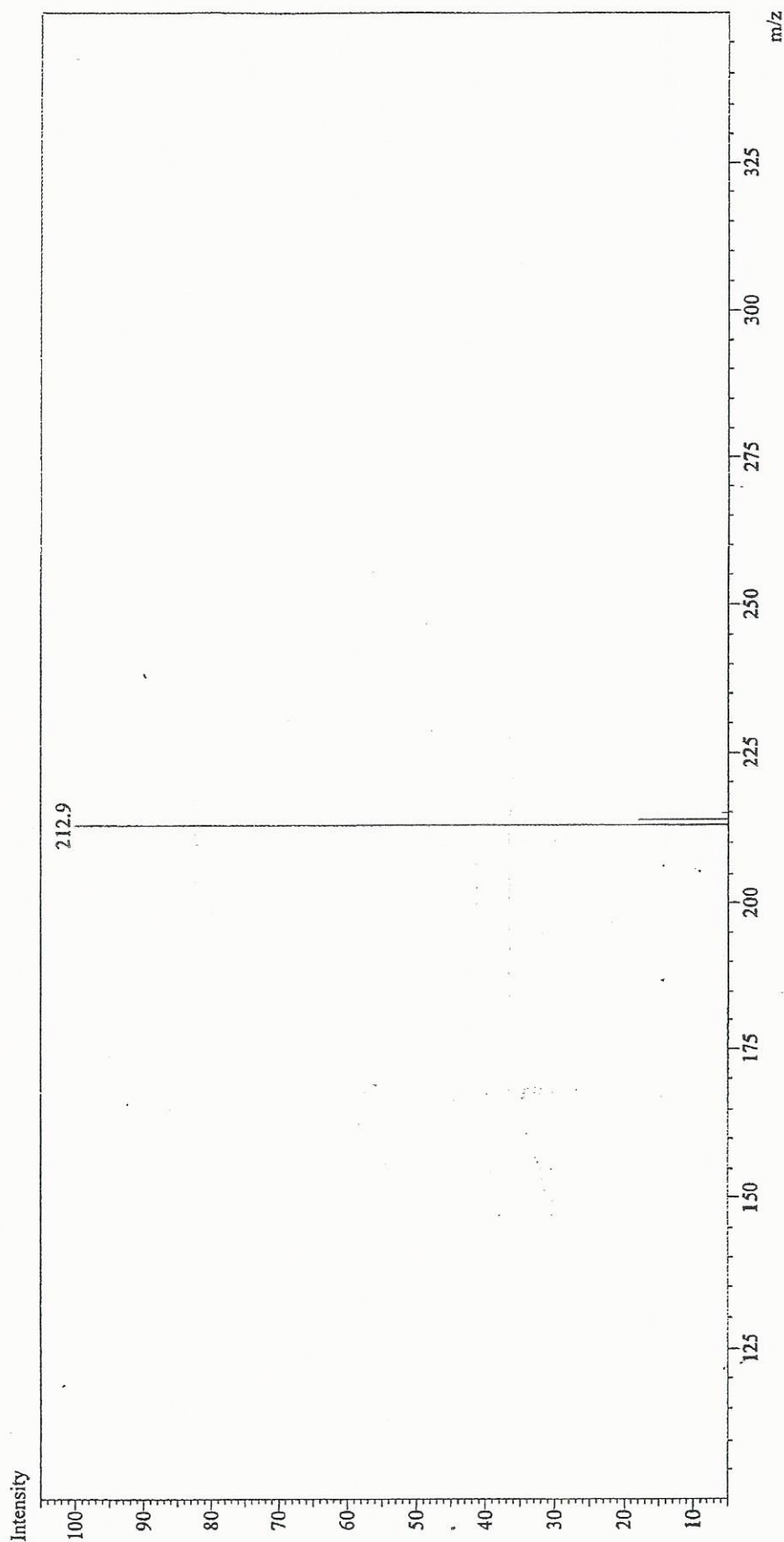
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Sample Information

Sample Name : HRMN
B.No : 850gm Lot
Data File : HRMN.lcd
Method File : Test1(APCI).lcm
Acquired by : KKiran

Probe : APCI
Polarity:Pos

MS Spectrum Graph



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