



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

Catalog Number: H-002

Product Name: **HARMALINE HYDROCHLORIDE DIHYDRATE**

CAS Number: [6027-98-1]

Lot Number: 0604037

Chemical Formula: $C_{13}H_{14}N_2O \cdot HCl \cdot 2H_2O$

Molecular Weight: 286.76

Melting Point: 230-234°C

Appearance: Fluorescent Yellow powder

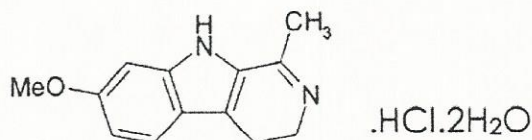
Solubility: Soluble in DMSO

TLC: Chloroform : Methanol (9:1)

NMR Spectrum: Enclosed (Confirms to the structure)

Storage: Cool dry place

Purity (HPLC): 96.40%





INDOFINE Chemical Company, Inc.

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

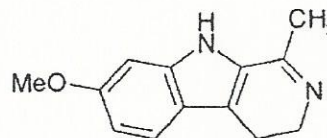
Phone: (908) 359-6778 • Fax: (908) 359-1179

Website: www.indofinechemical.com

E-mail: chemical@indofinechemical.com

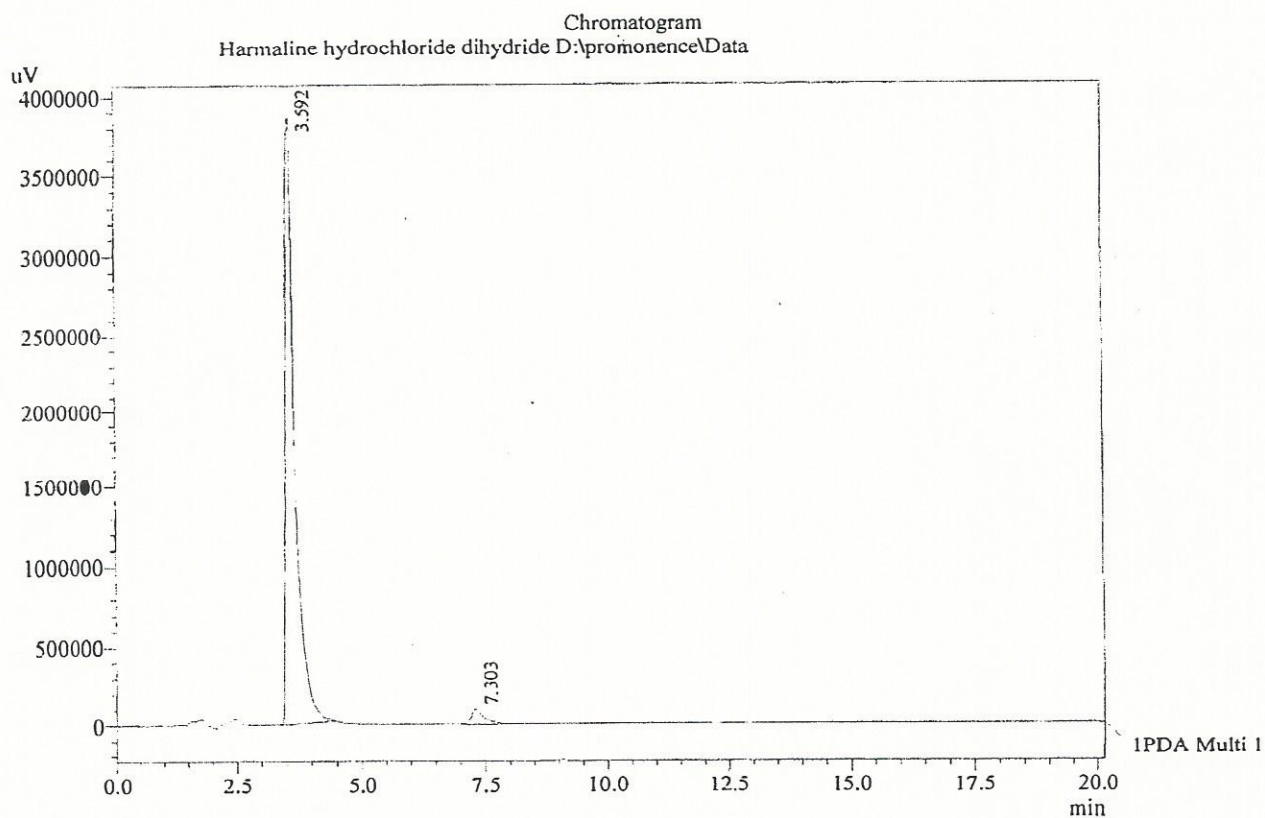
HPLC ANALYSIS

Acquired by : Sanjeev
 Sample Name : Harmaline hydrochloride dihydride
 SampleID : Lot No: 0604037
 Injection Volume : 20 uL
 Data Filename : 160513L.lcd
 Method Filename : Linear Isocratic.V1.lcm
 Column : Inertsil ODS, (250mm x4.6mm 5.0μ)
 Flow : 1.500 mL/min.
 Mobile Phase : Phosphate buffer:Acetonitrile(550:450)



.HCl.2H₂O

Catalog No.: H-002
 Product name: Harmaline hydrochloride dihydrate
 Lot No.: 0604037



1 PDA Multi 1 / 210nm 4nm

PeakTable

PDA Ch1 210nm 4nm

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	Harmaline HCl.2H ₂ O	3.592	51189927	96.40	1.00
2	Harmine	7.303	1910348	3.60	2.03
Total			53100276	100.00	



INDOFINE Chemical Company, Inc.

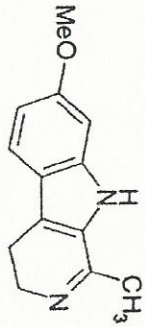
121 Stryker Lane, Bldg. 30, Suite 1
Hillsborough, NJ 08844

Catalog No.: H-002
Product name: Harmaline hydrochloride dihydrate
Lot No.: 0604037

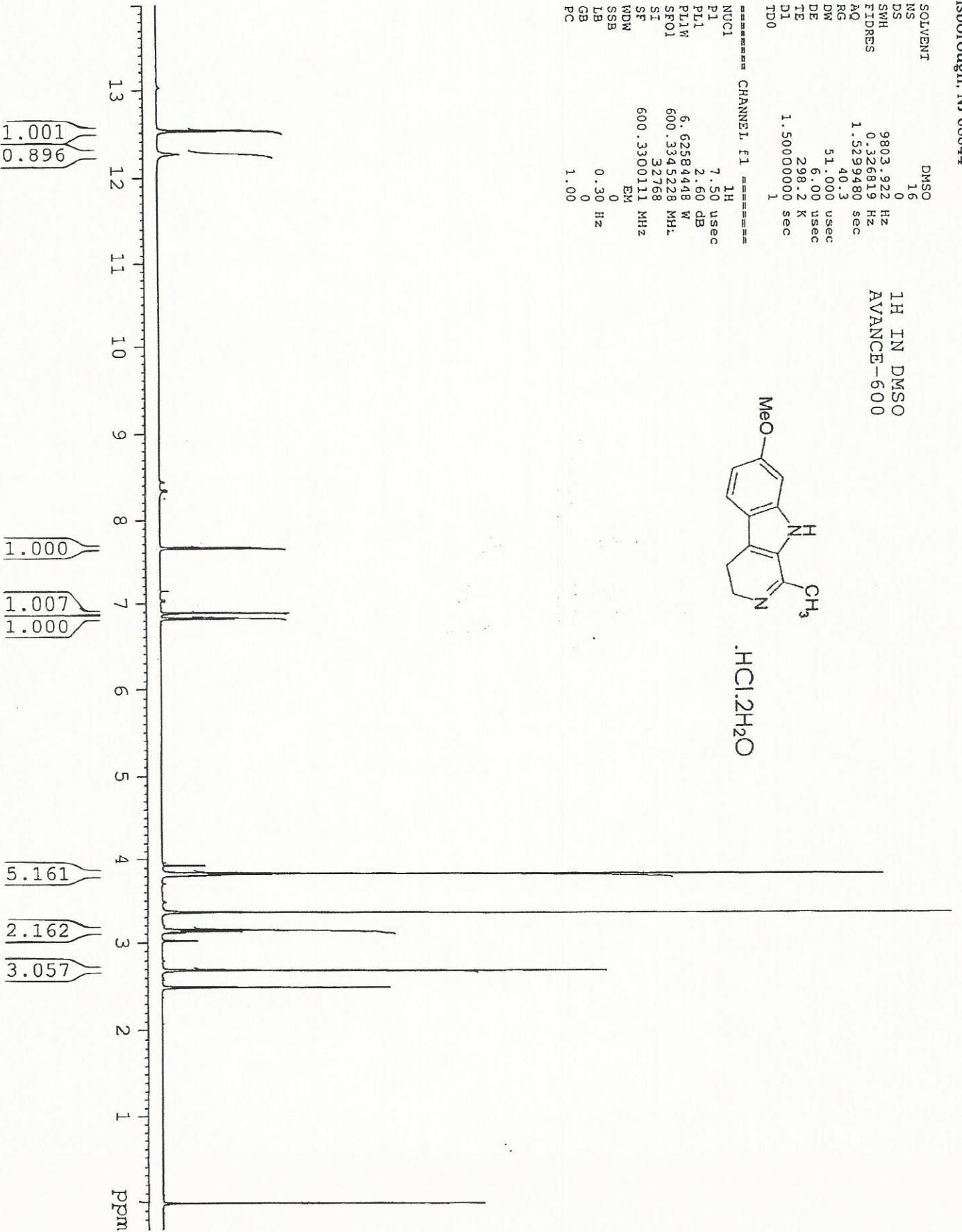
1H IN DMSO
AVANCE-600

SOLVENT DMSO
NS 16
DS 0
SWH 9803.922 Hz
FIDRES 0.326819 Hz
AQ 1.5299480 sec
RG 40.3
DW 51.000 usec
DE 6.00 usec
TE 298.2 K
D1 1.50000000 sec
TD0 1

===== CHANNEL F1 =====
NUC1 1H
P1 7.50 usec
PL1 2.60 dB
PL1W 6.62584448 W
SFO1 600.3345228 MHz
SI 32768
SF 600.3300111 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

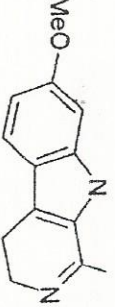


.HCl.2H₂O





INDOFINE Chemical Company, Inc.
 121 Stryker Lane, Bldg. 50, Suite 1
 Hillsborough, NJ 08844



.HCl.2H₂O

Catalog No.: H-002
 Product name: Harmaline hydrochloride dihydrate
 Lot No.: 0604037

SOLVENT DMSO
 NS 16
 DS 0
 SMH 9803.922 Hz
 FIDRES 0.326819 Hz
 AQ 1.5299480 sec
 RG 40.3
 DW 51.000 usec
 DE 6.00 usec
 TE 298.2 K
 D1 1.50000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 7.50 usec
 P1L 2.60 dB
 P1LW 6.62584448 W
 SFO1 600.3345228 MHz
 SI 327.68
 SF 600.3300111 MHz
 WDM EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

