



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: 06-016

Product Name: **GLYCYRRHIZIC ACID**
(Glycyrrhizin; (3B,20B)-20-carboxy-11-oxo-30-norolean-12-en-3-yl 2-o B -
d-glucopyranuronosyl-a-d-glucopyranosiduronic acid)

CAS Number: [1405-86-3]

Lot Number: 0406216

Chemical Formula: $C_{42}H_{62}O_{16}$

Molecular Weight: 822.95

Melting Point: 190-195°C (dec)

Appearance: Off white powder

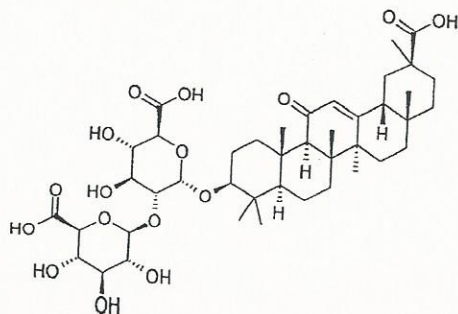
TLC: Chloroform: Methanol (2:8)

Solubility: Soluble in DMSO

NMR Spectrum: Conforms to the structure

Storage: Store in a cool, dry place

Purity(HPLC): 91.33%





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

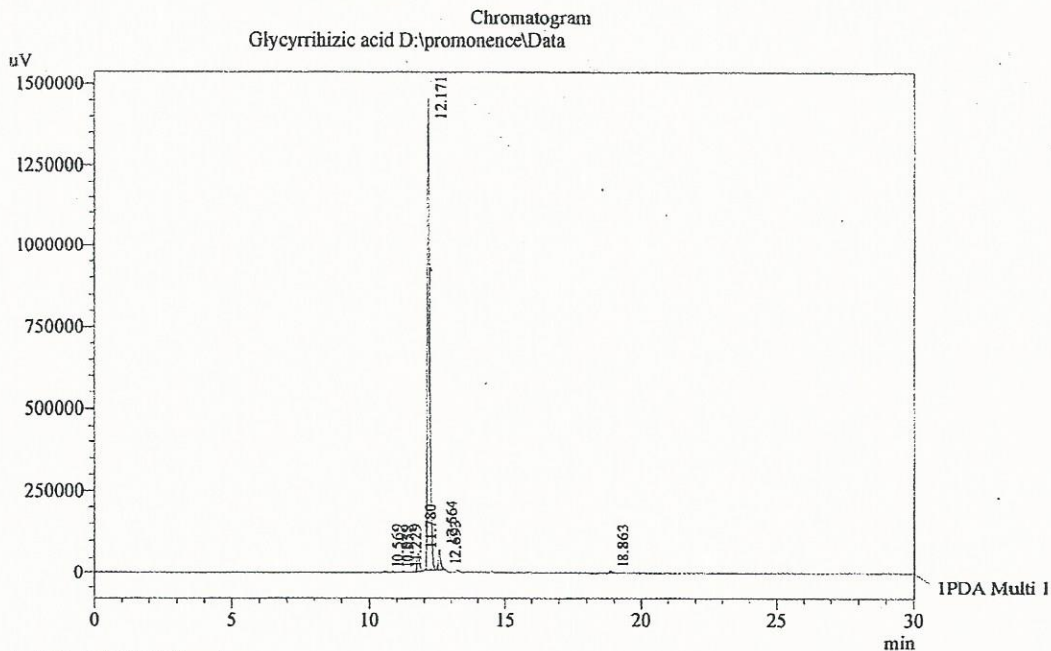
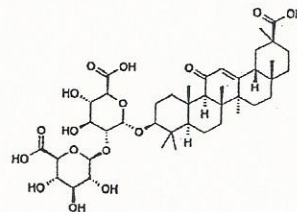
e-mail: chemical@indofinechemical.com

HPLC ANALYSIS

Acquired by : Sanjeev
Sample Name : Glycyrrhizic acid
Sample ID : Lot No: 0406216
Injection Volume : 20 uL
Data Filename : 210614B.lcd
Method Filename : Linear Gradient.M.lcm

Catalog No.: 06-016
Product Name: Glycyrrhizic acid
Lot No.: 0406216

Column : Gemini-C18 (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
30.0 90 10
Diluent : M.P-A : M.F-B (50:50)



1 PDA Multi 1 / 254nm 4nm

PeakTable

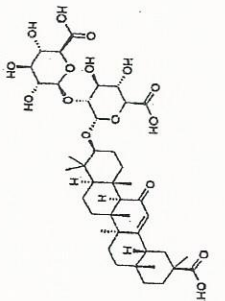
PDA Ch1 254nm 4nm

Peak#	Name	Ret. Time	Area	Area %	Relative Retention Time
1	RT:10.569	10.569	21139	0.22	0.87
2	RT:10.879	10.879	7275	0.08	0.89
3	RT:10.958	10.958	3678	0.04	0.90
4	RT:11.229	11.229	11485	0.12	0.92
5	RT:11.780	11.780	345890	3.60	0.97
6	Glycyrrhizic acid	12.171	8766737	91.33	1.00
7	RT:12.564	12.564	382659	3.99	1.03
8	RT:12.693	12.693	17099	0.18	1.04
9	RT:18.863	18.863	43071	0.45	1.55
Total			9599034	100.00	



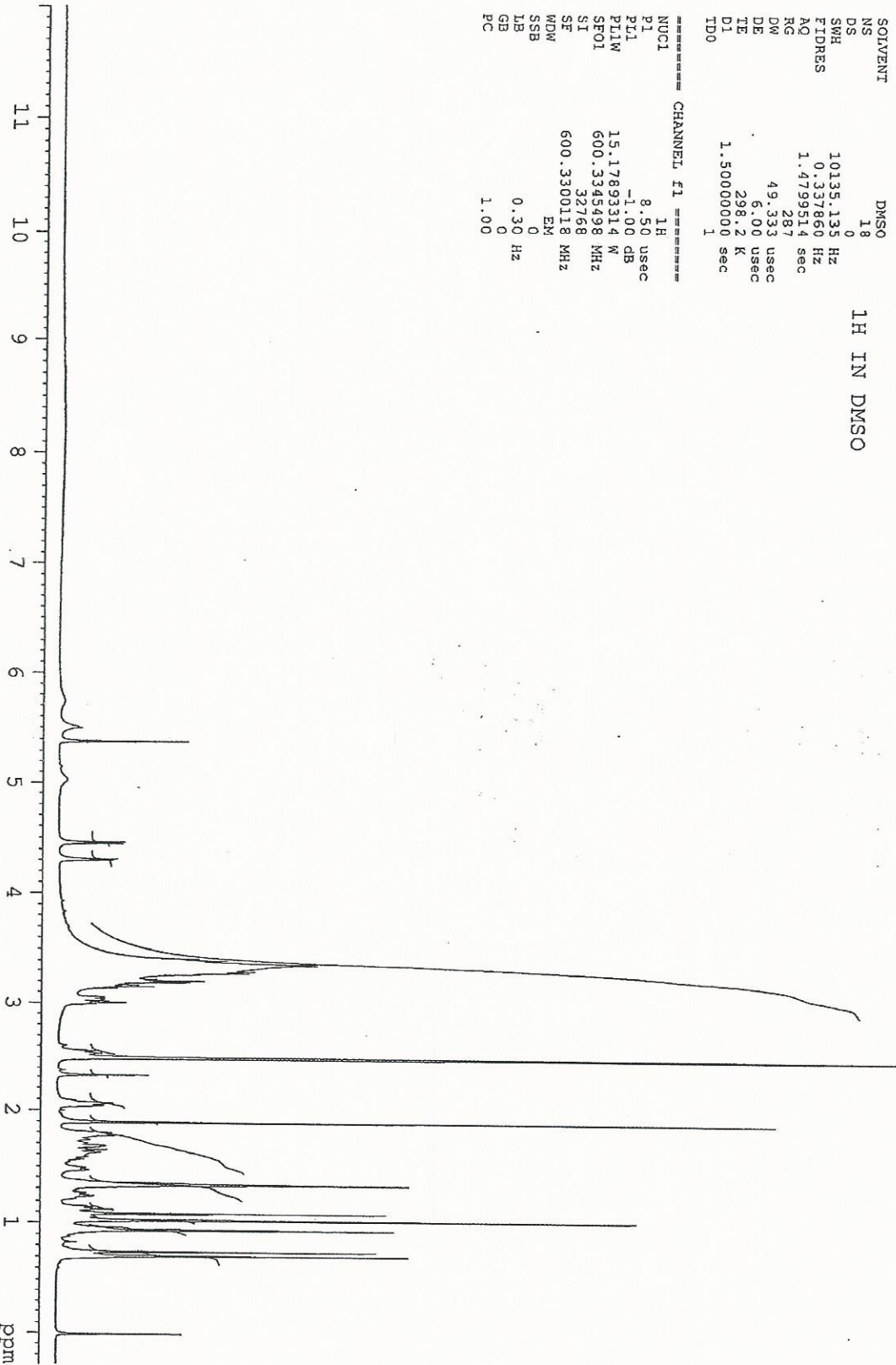
INDOFINE Chemical Company, Inc.
121 STRYKER LANE
BLDG. 30, SUITE 1
HILLSBOROUGH, NJ 08844

Catalog No.: 06-016
Product Name: Glycyrrhizic acid
Lot No.: 0406216



SOVENT DMSO
NS 18
DS 0
SWH 10135.135 Hz
FIDRES 0.337866 Hz
AQ 1.4739514 sec
RG 257
DM 49.333 usec
DE 6.00 usec
TE 298.2 K
D1 1.50000000 sec
TD0 1

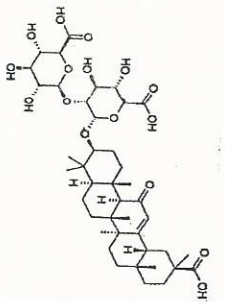
CHANNEL F1
NUC1 1H
P1 8.50 usec
PL1 -1.00 dB
PL1W 15.17693314 W
SF01 600.3345498 MHz
SI 32768
SF 600.3300118 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



- 0.766
- 0.843
- 34.410
- 1.111
- 0.785
- 1.535
- 3.000
- 6.849
- 6.749
- 1.092
- 2.330
- 4.675
- 4.310
- 5.767



INDOFINE Chemical Company, Inc.
 121 STRYKER LANE
 BLDG. 30, SUITE 1
 HILLSBOROUGH, NJ 08844



Catalog No.: 06-016
 Product Name: Glycyrrhizic acid
 Lot No.: 0406216

SOLVENT DMSO
 NS 18
 DS 0
 SRH 10135.135 HZ
 FIDRES 0.337860 HZ
 AQ 1.4799514 sec
 RG 287
 DM 49.333 usec
 DE 5.00 usec
 TE 298.2 K
 DI 1.5000000 sec
 TDO 1

===== CHANNEL F1 =====
 NUCL 1H
 PI 8.50 usec
 P1I -1.00 dB
 P1I1W 15.17893314 W
 SFO1 600.3345498 MHZ
 SI 32768
 SF 600.3300118 MHZ
 KDW EM
 SSB 0
 LB 0.30 HZ
 GB 0
 PC 1.00

1H IN DMSO

