



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: 020105S

Product Name: GINSENOSEIDE Rb1 with HPLC

Chemical Family: Saponins

Cas Number: [41753-43-9]

Lot Number: 1309382

Chemical Formula: $C_{54}H_{92}O_{23}$

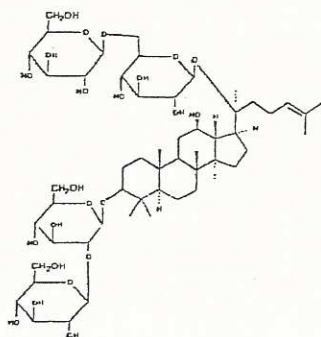
Molecular Weight: 1109.3

Appearance: White powder

NMR Spectrum: Enclosed

Storage: This product is stable at ambient temperature for several weeks. However, optimum long-term storage may require lower temperature ($<-18^{\circ}\text{C}$). Place in a desiccator under vacuum before use.

Purity(HPLC): 99.33%





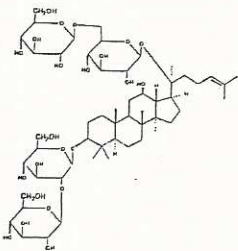
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HPLC Analysis

Catalog No.: 020105S

Product Name: Ginsenoside Rb1

Lot No.: 1309382

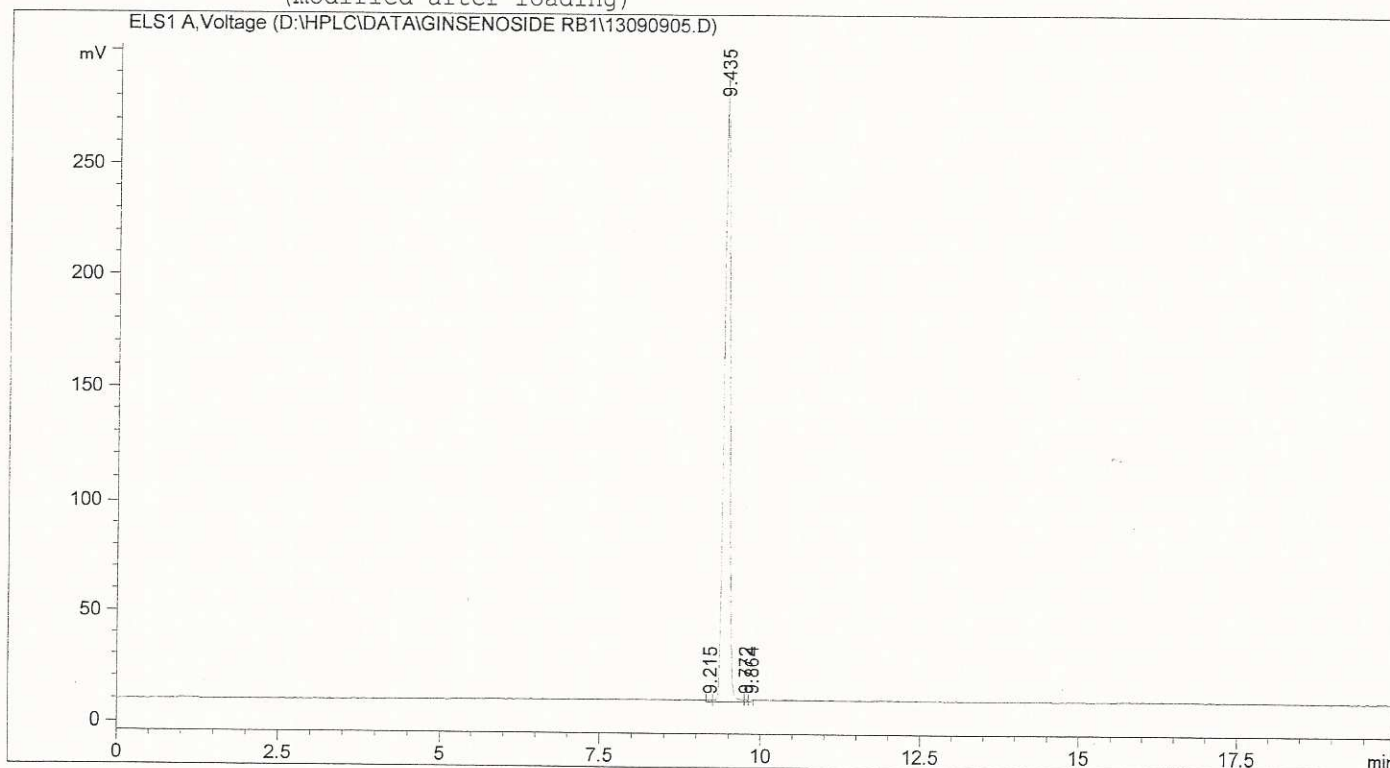
Acq. Operator : pm
Acq. Instrument : Instrument 1
Injection Date : 9/09/2013 1:40:26 PM

Location : Vial 43

Inj Volume : 10 µl

Acq. Method : D:\HPLC\METHOD\GINSENOSIDE RB1.M
Last changed : 9/09/2013 1:30:25 PM by pm
(modified after loading)

Analysis Method : D:\HPLC\METHOD\LIAOGEWANG.M
Last changed : 9/09/2013 2:11:09 PM by pm
(modified after loading)



Area Percent Report

Signal 1: ELS1 A, Voltage

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000
Use Multiplier & Dilution Factor with ISTDs

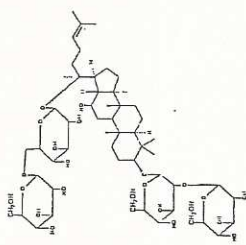
Peak #	RetTime [min]	Type	Width [min]	Area [mV*s]	Height [mV]	Area %
1	9.215	VV	0.0722	4.42403	7.79094e-1	0.2550
2	9.435	VV	0.0943	1723.00281	278.02332	99.3314
3	9.772	VV	0.0511	3.56810	9.22093e-1	0.2057
4	9.864	VV	0.0522	3.60546	9.09860e-1	0.2079

Totals :

1734.60040 280.63436



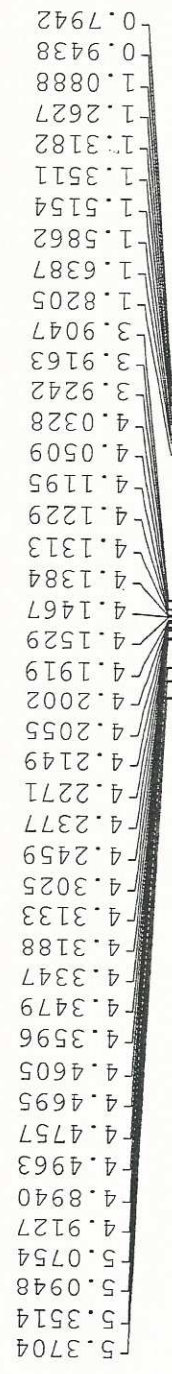
INDOFINE Chemical Company, Inc.
121 STRYKER LANE
BLDG. 30, SUITE 1
HILLSBOROUGH, NJ 08844



Catalog No.: 020105S
Product Name: Ginsenoside Rb1
Lot No.: 1309382

GRB1

PROTON Pyr {E:\nmrdata\lizeyun} lzy 8

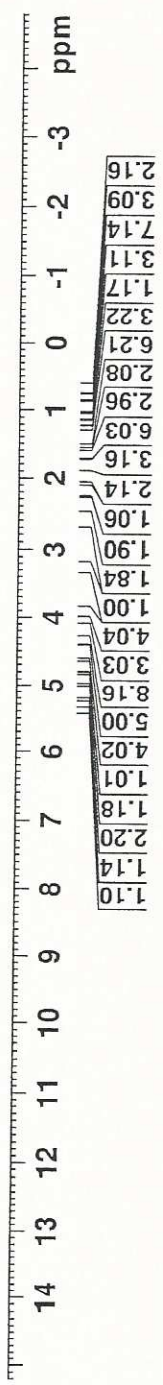


Current Data Parameters
NAME 09142013
EXPNO 28
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130914
Time 21.18
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg
TD 65536
SOLVENT pyr
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 71.8
DE 62.400 usec
TE 298.2 K
D1 1.00000000 sec
D12 0.00002000 sec
TD0 1

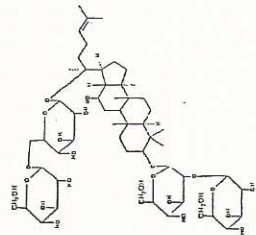
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SFO1 400.1320807 MHz
NUC1 1H
P1 12.95 usec
PLW1 15.0000000 W
PLW9 0.00001000 W

F2 - Processing parameters
SI 65536
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00





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BLDG. 30, SUITE 1
HILLSBOROUGH, NJ 08844

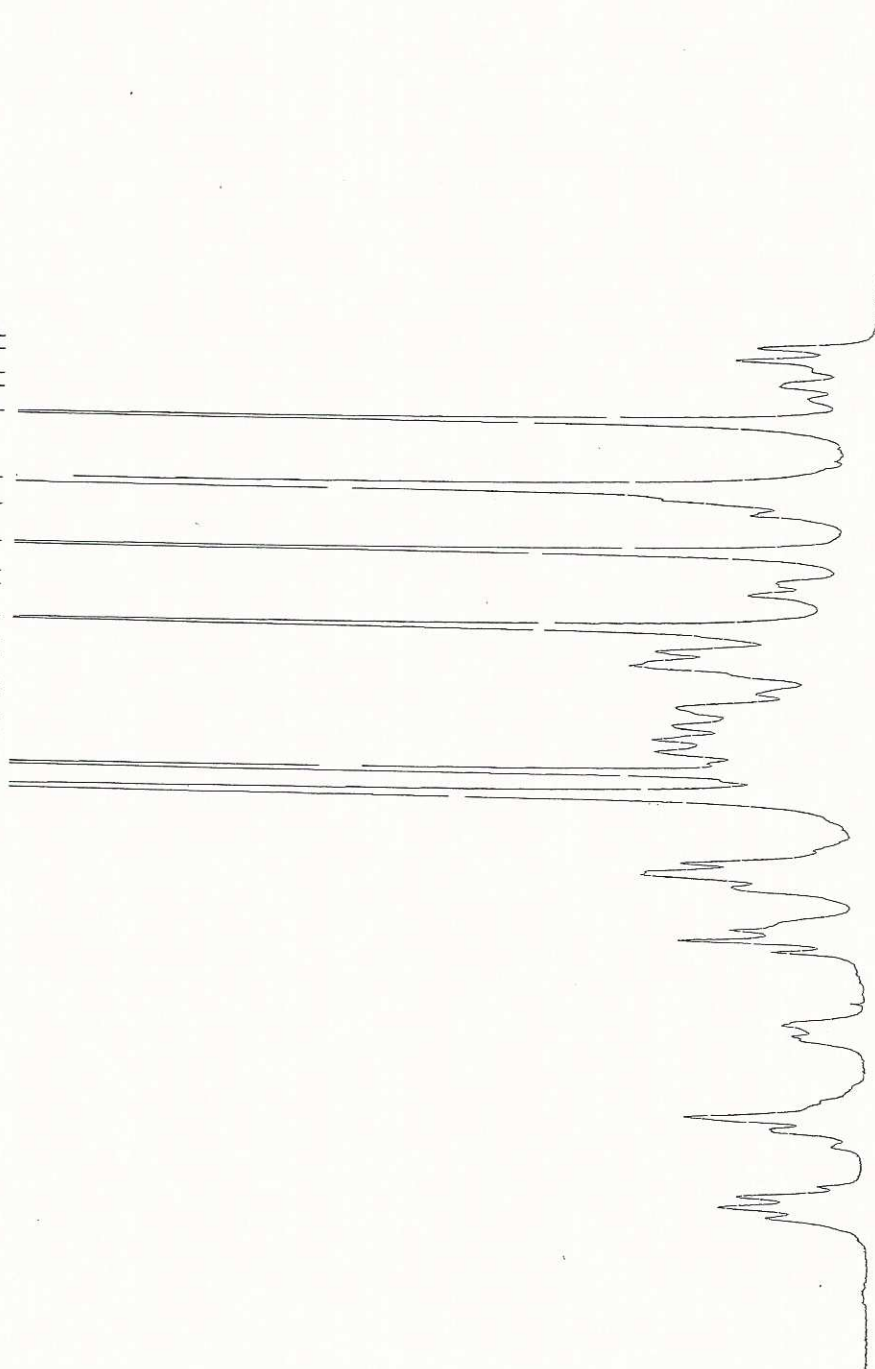


Catalog No.: 020105S
Product Name: Ginsenoside Rb1
Lot No.: 1309382

GRB1

PROTON Pyr {E:\nmrdata\lizeyun} lzy 8

2.6007
2.5775
2.5526
2.3979
2.3718
2.1920
2.1671
2.0017
1.9745
1.9492
1.8449
1.8205
1.7926
1.6387
1.5862
1.5655
1.5405
1.5154
1.4845
1.4442
1.4130
1.3511
1.3182
1.2627
1.1880
1.1583
1.0888
1.0019
0.9438
0.7942
0.7381
0.7112
0.6565
0.6279



2.8 2.6 2.4 2.2 2.0 1.8 1.6 1.4 1.2 1.0 0.8 0.6 0.4 0.2 ppm

1.84
1.90
1.06
2.14
3.16
6.03
2.96
2.08
6.21
3.22
1.17
3.11
7.14
3.09
2.16



Current Data Parameters
NAME 09142013
EXPNO 28
PROCNO 1

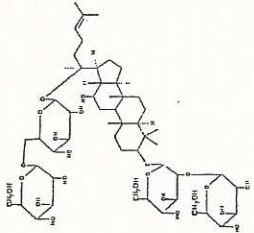
F2 - Acquisition Parameters
Date_ 20130914
Time 21.18
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpg
TD 65536
SOLVENT Pyr
NS 16
DS 2
SWH 8012.820 Hz
FIDRES 0.122266 Hz
AQ 4.0894465 sec
RG 71.8
DW 62.400 usec
DE 6.50 usec
TE 298.2 K
D1 1.00000000 sec
D12 0.00002000 sec
TD0 1

===== CHANNEL f1 =====
SF01 400.1320807 MHz
NUC1 1H
P1 12.95 usec
PLW1 15.00000000 W
PLW9 0.00001000 W

F2 - Processing parameters
SI 65536
SF 400.1300000 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



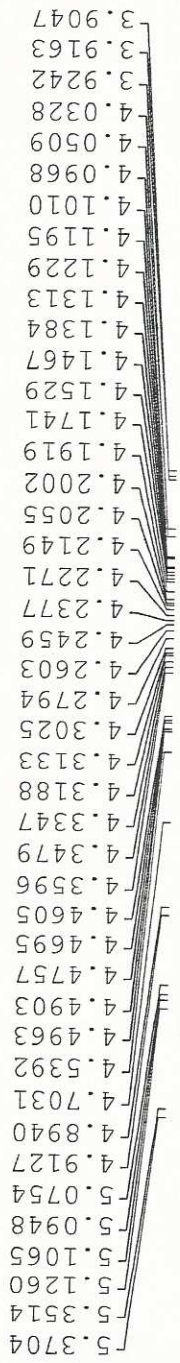
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GRB1

PROTON Pyr {E:\nmrdata\lizeyun} lzy 8



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INSTRUM spect
PROBHD 5 mm PABBO BB-
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===== CHANNEL f1 =====
SF01 400.1320807 MHz
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F2 - Processing parameters
SI 65536
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SSB 0
LB 0.30 Hz
GB 0
PC 1.00

