



INDOFINE Chemical Company, Inc.

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

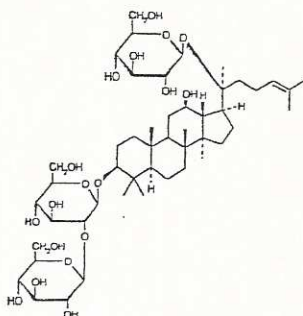
Phone: (908) 359-6778 • FAX: (908) 359-1179

website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

<u>Catalog Number:</u>	020102S
<u>Product Name:</u>	GINSENOSIDE Rd with HPLC
<u>Chemical Family:</u>	Saponins
<u>Cas Number:</u>	[52705-93-8]
<u>Lot Number:</u>	1309385
<u>Chemical Formula:</u>	$C_{48}H_{82}O_{18}$
<u>Molecular Weight:</u>	947.18
<u>Appearance:</u>	White powder
<u>NMR Spectrum:</u>	Enclosed
<u>Storage:</u>	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.
<u>Purity(HPLC):</u>	99.20%





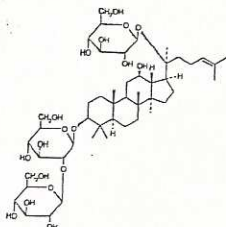
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HPLC ANALYSIS

Catalog No.: 020102S

Product Name: Ginsenoside Rd

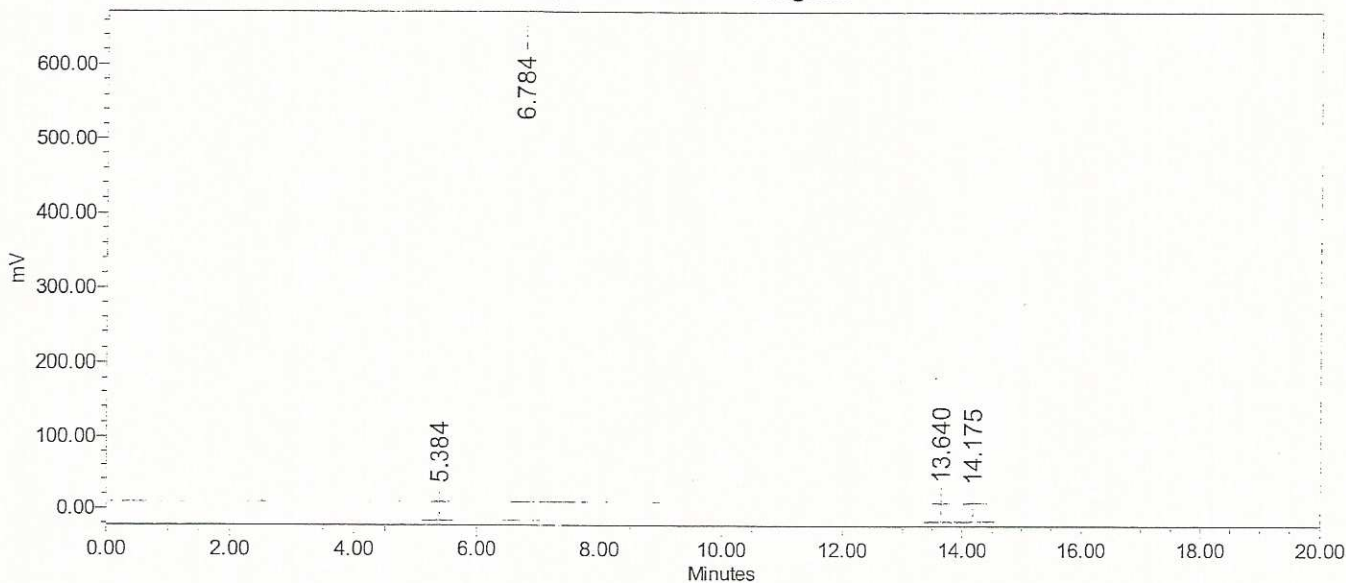
Lot No.: 1309385

SAMPLE INFORMATION

Sample Name: Ginsenoside Rd
Sample Type: Unknown
Vial: 1:C,1
Injection #: 1
Injection Volume: 10.00 ul
Run Time: 20.0 Minutes

Sample Set Name:
Acq. Method Set: Ginsenoside Rd
Processing Method: Samples
Channel Name: SATIN
Proc. Chnl. Descr.:

Auto-Scaled Chromatogram

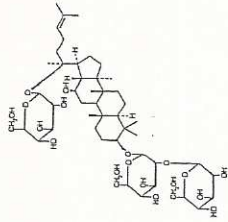


Peak Results

	Name	RT	Area	% Area	USP Plate Count	USP Resolution
1		5.384	1991	0.05	38274.94	
2		6.784	3614286	99.20	31370.80	10.07
3		13.640	20577	0.56	121713.01	44.34
4		14.175	6497	0.18	73992.64	2.88



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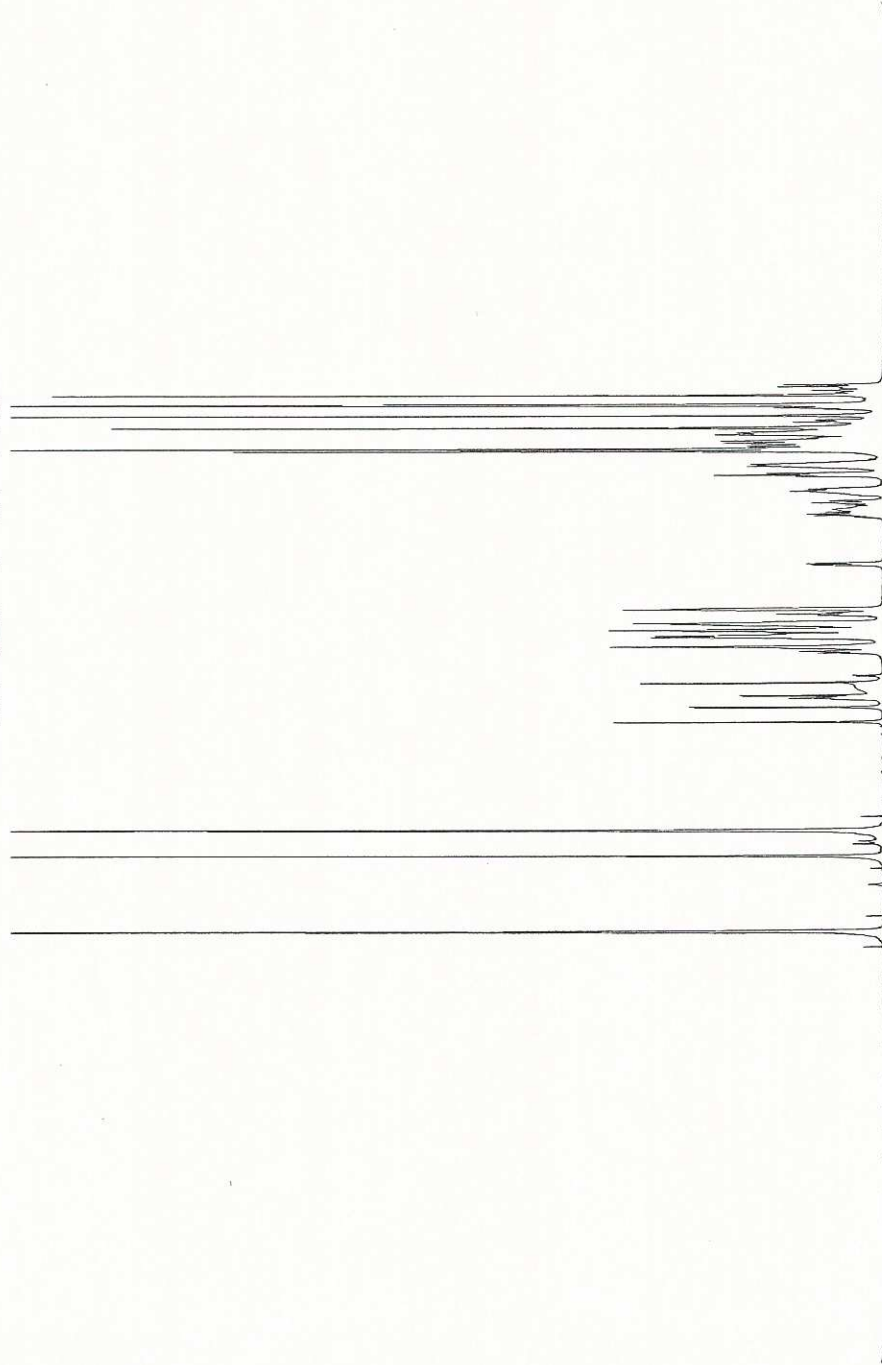


Catalog No.: 020102S
Product Name: Ginsenoside Rd
Lot No.: 1309385

GRD

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

0.7881
0.9268
0.9376
1.0922
1.2659
1.5745
1.6105
2.1705
2.2040
2.3821
2.5399
2.5631
2.2321
2.2430
2.2615
2.2720
3.9046
3.9195
3.9280
3.9368
3.9949
4.1013
4.1233
4.1376
4.1588
4.1822
4.2107
4.2183
4.2332
4.2403
4.2528
4.2632
4.2878
4.3115
4.3354
4.4715
4.5419
5.0026
5.1741
5.1935
5.2265
5.3580
5.3770
5.792



14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 -1 -2 -3 ppm

0.96
0.95
0.99
1.01
2.85
3.90
2.95
4.03
1.15
1.00
2.15
1.12
2.17
2.14
3.21
3.05
6.23
4.91
3.17
3.14
1.25
3.02
1.11
5.90
2.95
0.93
0.27
1.11

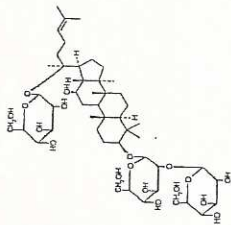
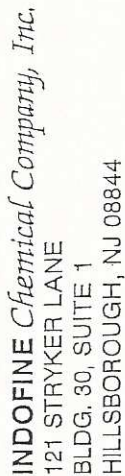


Current Data Parameters
NAME 09142013
EXPNO 29
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130914
Time 15.47
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpr
TD 65536
SOLVENT Pyr
NS 32
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 =====
SFO1 400.1319910 MHz
NUC1 1H
P1 12.95 usec
PLW1 15.00000000 W
PLW9 0.00010062 W

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



Catalog No.: 020102S
Product Name: Ginsenoside Rd
Lot No.: 1309385

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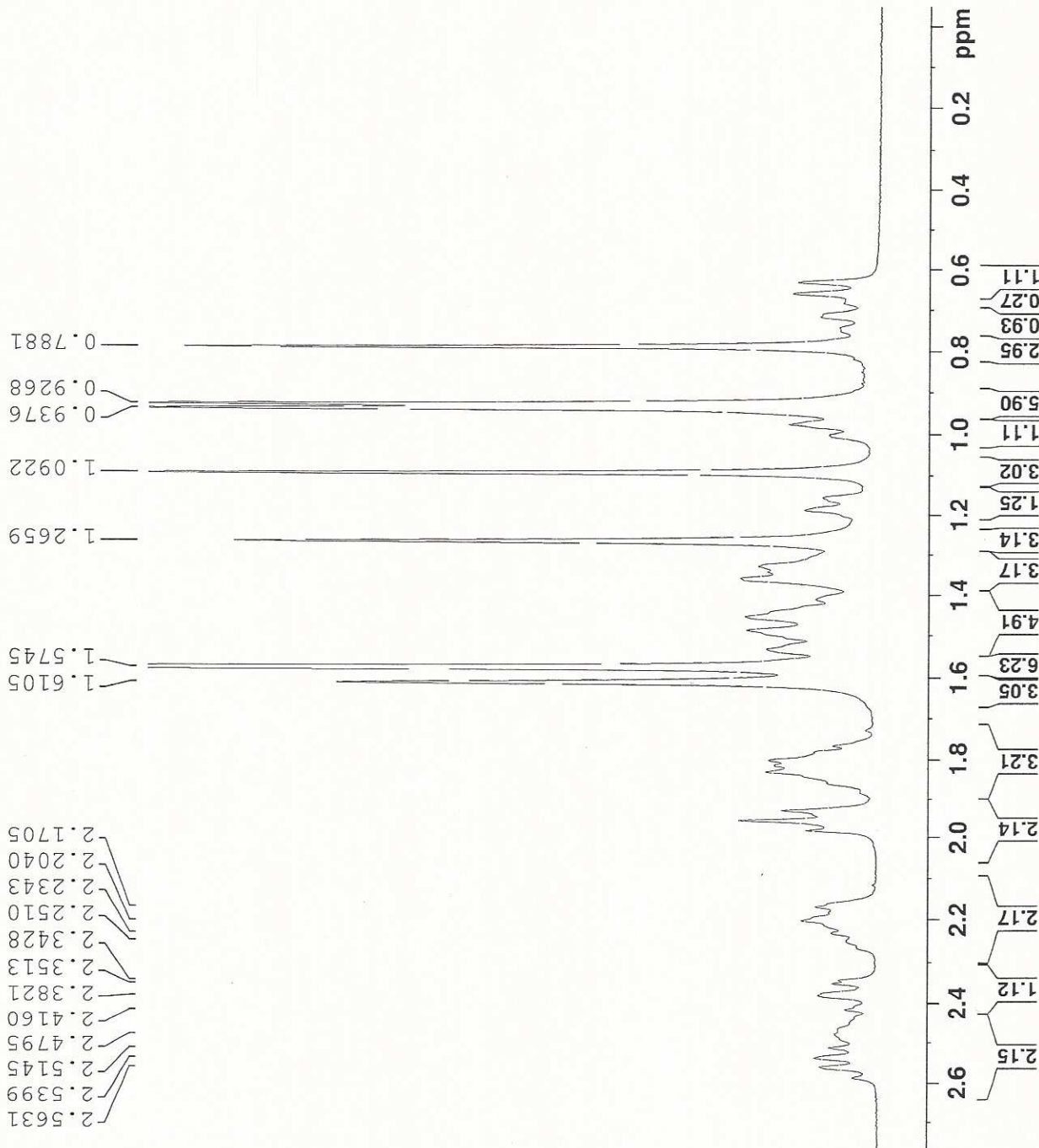


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Current Data Parameters
NAME          09142013
EXPNO         29
PROCNO        1
```

F2 - Acquisition Parameters	
Date_	20130914
Time	15.47
INSTRUM	spect
PROBHD	5 mm PABBO BB-
PULPROG	zgpr
TD	65536
SOLVENT	Pyr
NS	32
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	1.0000000 sec
D12	0.0002000 sec
TD0	1

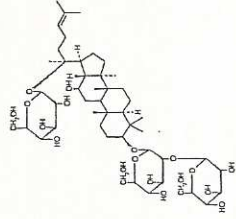
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===== CHANNEL f1 =====
SF01 400.131910 MHz
NUC1 1H
P1 12.95 usec
PLW1 15.0000000 W
PLW9 0.00010062 W
```

F2 - Processing parameters	
SSI	65536
SF	400.130000 MHz
WDW	EM
SSB	0
ILB	0.30 Hz
GB	0
PC	1.00





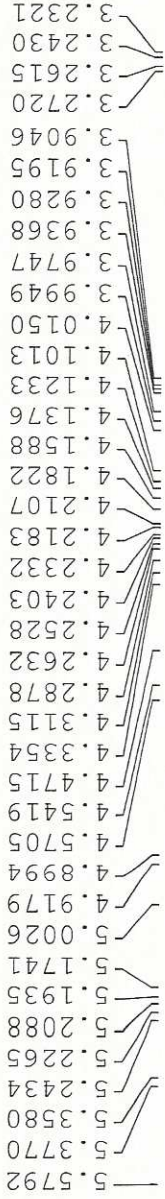
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GRD

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



Current Data Parameters
NAME 09142013
EXPNO 29
PROCNO 1

F2 - Acquisition Parameters
Date_ 20130914
Time 15.47
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zgpr
TD 65536
SOLVENT Pyr
NS 32
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 =====
SFO1 400.1319910 MHz
NUC1 1H
P1 12.95 usec
PLW1 15.00000000 W
PLW9 0.00010062 W

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

