



INDOFINE Chemical Company, Inc.

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

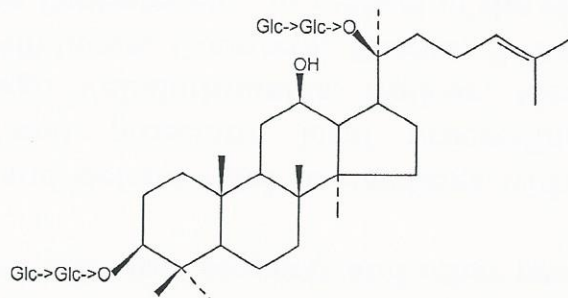
Phone: (908) 359-6778 • FAX: (908) 359-1179

website: www.indofinechemical.com

e-mail: chemical@indofinechemical.com

CERTIFICATE OF ANALYSIS

<u>Catalog Number:</u>	020105S
<u>Product:</u>	GINSENOSIDE Rb1 with HPLC
<u>Cas Number:</u>	[41753-43-9]
<u>Lot Number:</u>	20030330
<u>Chemical Formula:</u>	$C_{54}H_{92}O_{23}$
<u>Molecular Weight:</u>	1109.3
<u>Melting point:</u>	245-247°C
<u>Appearance:</u>	White crystalline powder
<u>TLC:</u>	Hexane : Ethyl acetate (7:3)
<u>Solubility:</u>	Soluble in DMF
<u>Storage:</u>	Cool dry place, to be kept in dessicator
<u>Assay(HPLC):</u>	99.19%





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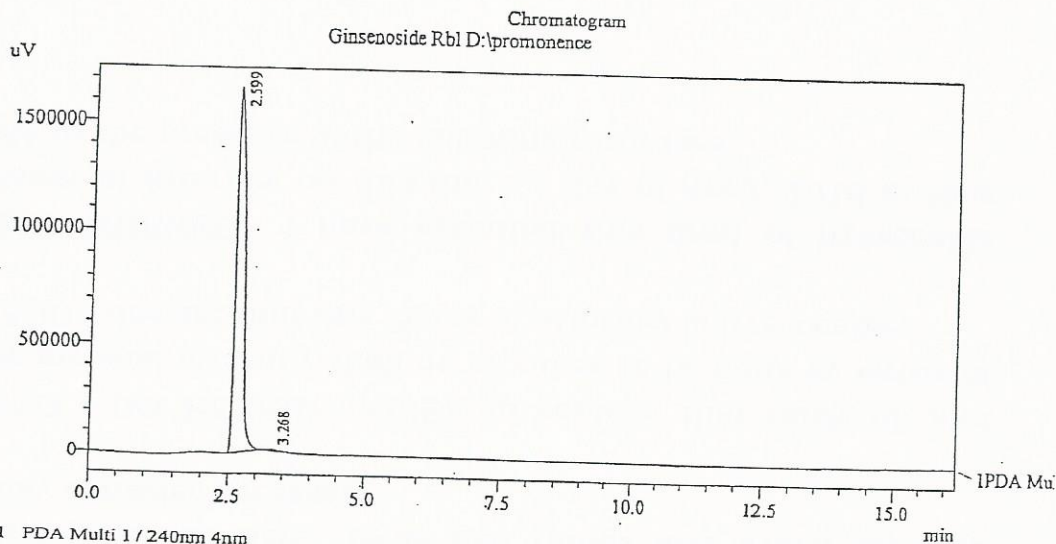
e-mail: chemical@indofinechemical.com

HPLC ANALYSIS

Acquired by : Rama krishna
Sample Name : Ginsenoside Rb1
Sample ID :
Injection Volume : 20 uL
Data Filename : 101011C.lcd
Method Filename : Linear Isocratic.M.lcm

Catalog No.: 020105S
Product Name: Ginsenoside Rb1
Lot No.: 20030330

Description:
Column : Phenomenex C-18, 250X4.6mm 5.0µm
Flow : 1.000ML/min.
Mobile Phase : A(30% of 0.05% TFA in water) B(70% of Acetonitrile)



1 PDA Multi 1 / 240nm 4nm

PeakTable

PDA Ch1 240nm 4nm

Peak#	Ret. Time	Area	Height	Area %
1	2.599	17881481	1656648	99.197
2	3.268	144736	8254	0.803
Total		18026217	1664901	100.000



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CERTIFICATE OF ANALYSIS

Catalog Number: 020104S

Product Name: GINSENOSIDE Rb2 with HPLC

Cas Number: [11021-13-9]

Lot Number: 1501537

Chemical Formula: $C_{53}H_{90}O_{22}$

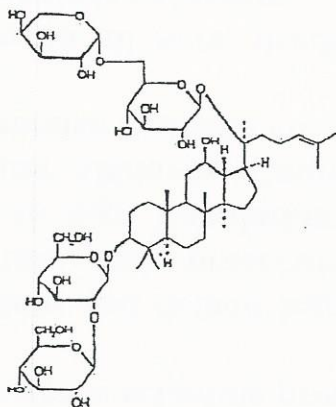
Molecular Weight: 1079.29

Appearance: White powder

Loss on drying: 1.3%

Storage: This product is stable at ambient temperature for several weeks. However, optimum long-term storage may require lower temperature (<-18°C). Place in a desiccator under vacuum before use. Protect from light.

Purity(HPLC): 99.75%





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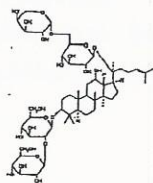
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HPLC ANALYSIS



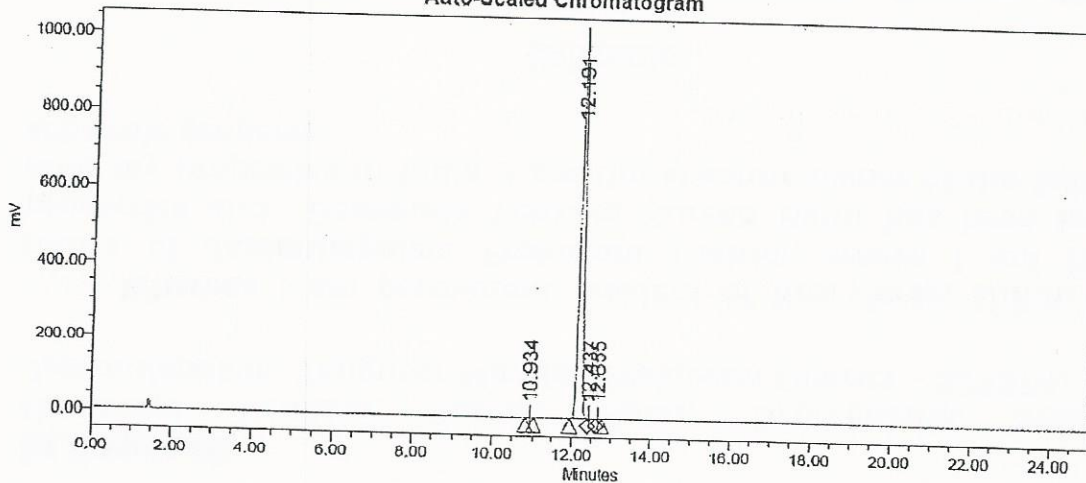
Catalog No.: 020104S
Product Name: Ginsenoside Rb2
Lot No.: 1501537

SAMPLE INFORMATION

Sample Name: Ginsenoside Rb2
Sample Type: Unknown
Vial: 1:E,1
Injection #: 1
Injection Volume: 10.00 μ l
Run Time: 25.0 Minutes

Acquired By: System
Sample Set Name:
Acq. Method Set: Ginsenoside Rb2
Processing Method: Samples
Channel Name: SATIN
Proc. Chnl. Descr.:

Auto-Scaled Chromatogram



Peak Results

	Name	RT	Area	% Area	USP Plate Count	USP Resolution
1		10.934	3112	0.04	109665.85	
2		12.191	7100217	99.75	70989.48	8.11
3		12.437	12651	0.18		1.32
4		12.655	1848	0.03	178222.14	



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CERTIFICATE OF ANALYSIS

Catalog Number: 020106S
Product Name: GINSENOSIDE Rc with HPLC

Chemical Family: Saponins

Cas Number: [11021-14-0]

Lot Number: 1603743

Chemical Formula: $C_{53}H_{90}O_{22}$

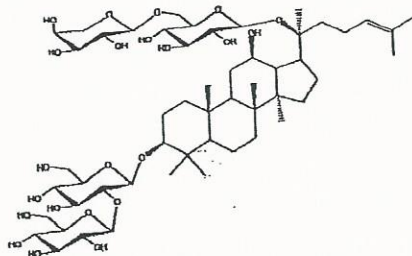
Molecular Weight: 1079.29

Appearance: White powder

Loss on drying: 0.91%

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. Protect from light.

Purity(HPLC): 99.2%





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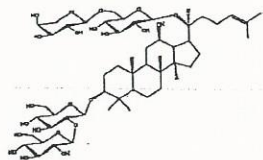
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HPLC ANALYSIS

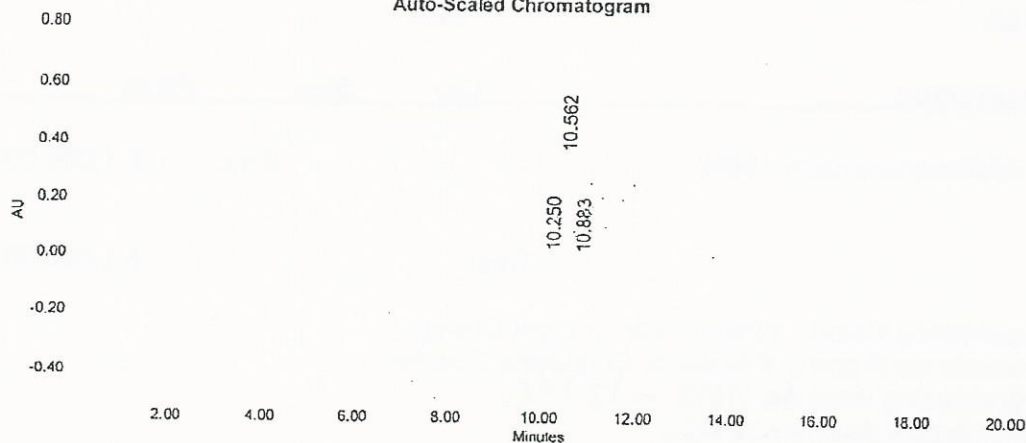


Catalog No.: 020106S
Product Name: Ginsenoside Rc
Lot No.: 1603743

SAMPLE INFORMATION

Sample Name:	Ginsenoside Rc	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	
Vial:	69	Acq. Method Set:	Ginsenoside Rc
Injection #:	1	Processing Method:	Samples
Injection Volume:	10.00 μ l	Channel Name:	205.0nm
Run Time:	20.0 Minutes	Proc. Chnl. Descr.:	PDA 205.0 nm

Auto-Scaled Chromatogram



Peak Results

Name	RT	Area	% Area	USP Plate Count	USP Resolution
1	10.250	30659	0.45		
2	10.562	6739431	99.22	24203.46	
3	10.883	22211	0.33		1.16



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CERTIFICATE OF ANALYSIS

Catalog Number: 020102S

Product Name: GINSENOSEIDE Rd with HPLC

Chemical Family: Saponins

Cas Number: [52705-93-8]

Lot Number: 1603744

Chemical Formula: $C_{48}H_{82}O_{18}$

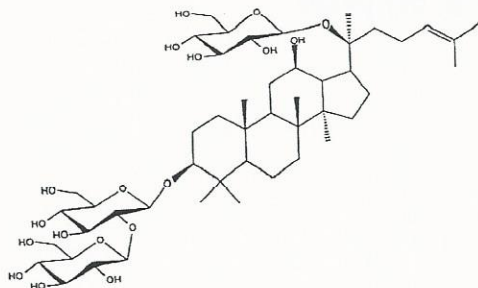
Molecular Weight: 947.17

Appearance: White powder

Loss on drying: 1.4%

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. Protect from light.

Purity(HPLC): 99.31%





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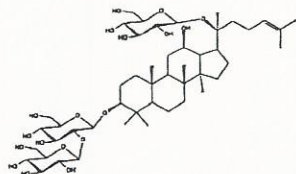
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HPLC ANALYSIS

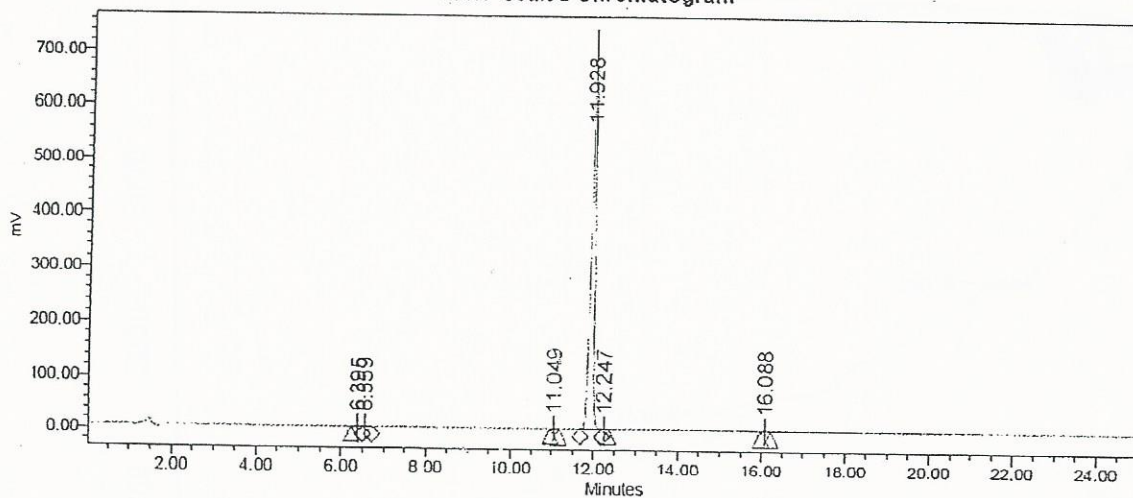


Catalog No.: 020102S
Product Name: Ginsenoside Rd
Lot No.: 1603744

SAMPLE INFORMATION

Sample Name:	Ginsenoside Rd	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	
Vial:	99	Acq. Method Set:	Ginsenoside Rd
Injection #:	1	Processing Method:	Samples
Injection Volume:	10.00 μ l	Channel Name:	SATIN
Run Time:	25.0 Minutes	Proc. Chnl. Descr.:	

Auto-Scaled Chromatogram



Peak Results

	Name	RT	Area	% Area	USP Plate Count	USP Resolution
1		6.395	9605	0.21	10108.21	
2		6.559	6114	0.14		
3		11.049	4274	0.09	105289.53	
4		11.928	4490062	99.31	85347.27	5.21
5		12.247	3699	0.08	230454.36	2.17
6		16.088	7466	0.17	141553.14	26.20



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CERTIFICATE OF ANALYSIS

Catalog Number: 020103S

Product Name: **GINSENOSIDE Re with HPLC**

Chemical Family: Saponins

Cas Number: [52286-59-6]

Lot Number: 1603745

Chemical Formula: $C_{48}H_{82}O_{18}$

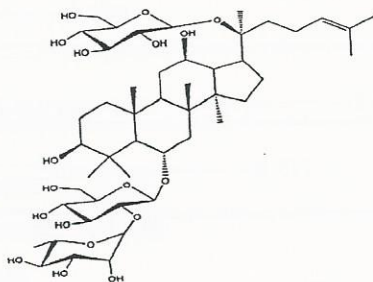
Molecular Weight: 947.17

Appearance: White powder

Loss on drying: 1.7%

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. Protect from light.

Purity(HPLC): 99.7%





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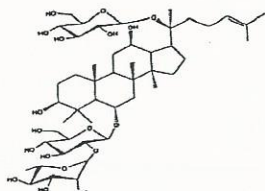
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HPLC ANALYSIS

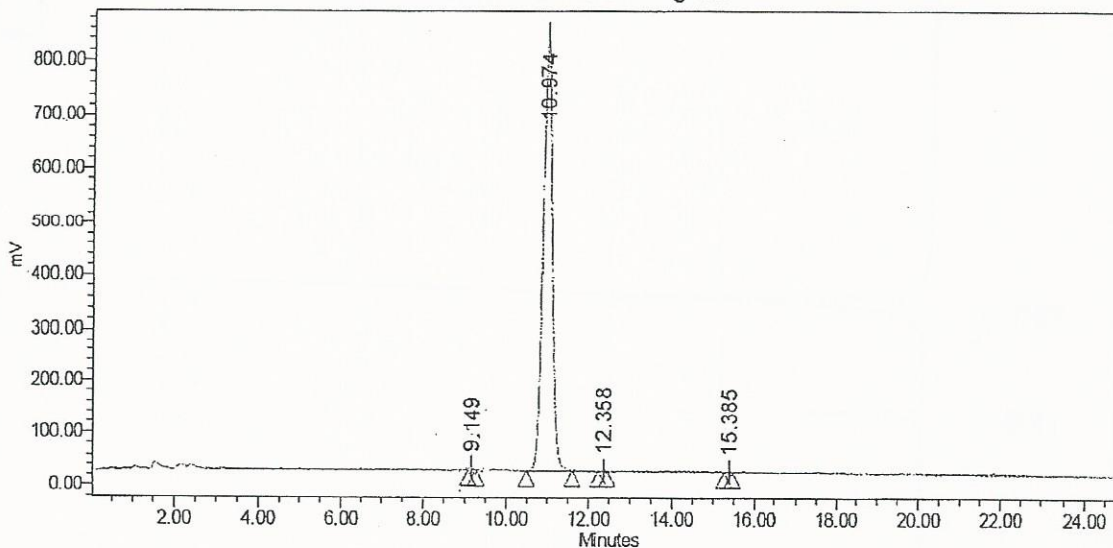


Catalog No.: 020103S
Product Name: Ginsenoside Re
Lot No.: 1603745

SAMPLE INFORMATION

Sample Name:	Ginsenoside Re	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	
Vial:	7	Acq. Method Set:	Ginsenoside Re
Injection #:	1	Processing Method:	Samples
Injection Volume:	10.00 ul	Channel Name:	SATIN
Run Time:	25.0 Minutes	Proc. Chnl. Descr.:	

Auto-Scaled Chromatogram



Peak Results

	Name	RT	Area	% Area	USP Plate Count	USP Resolution
1		9.149	17375	0.13	279863.54	
2		10.974	12841080	99.66	11762.51	7.62
3		12.358	14488	0.11	360610.94	5.65
4		15.385	11575	0.09	620745.36	38.43



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CERTIFICATE OF ANALYSIS

Catalog Number: 020101S

Product Name: GINSENOSIDE Rg1 with HPLC

Chemical Family: Saponins

Cas Number: [22427-39-0]

Lot Number: 1603746

Chemical Formula: $C_{42}H_{72}O_{14}$

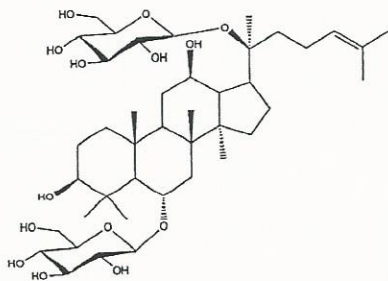
Molecular Weight: 801.02

Appearance: White powder

Loss on drying: 1.5%

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. Protect from light.

Purity(HPLC): 98.88%





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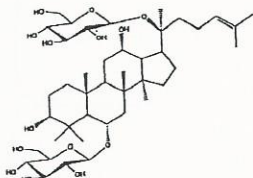
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HPLC ANALYSIS

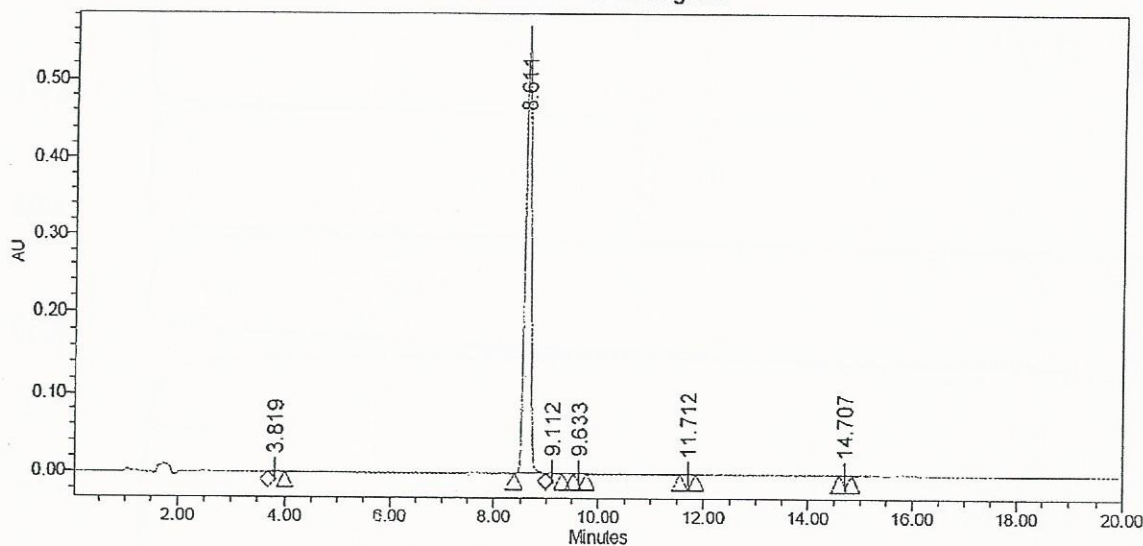


Catalog No.: 020101S
Product Name: Ginsenoside Rg1
Lot No.: 1603746

SAMPLE INFORMATION

Sample Name:	Ginsenoside Rg1	Acquired By:	System
Sample Type:	Unknown	Sample Set Name:	
Vial:	90	Acq. Method Set:	Ginsenoside Rg1
Injection #:	1	Processing Method:	Samples
Injection Volume:	7.00 ul	Channel Name:	205.0nm
Run Time:	20.0 Minutes	Proc. Chnl. Descr.:	PDA 205.0 nm

Auto-Scaled Chromatogram



Peak Results

	Name	RT	Area	% Area	USP Plate Count	USP Resolution
1		3.819	16557	0.38	5915.37	
2		8.611	4261977	98.88	28685.30	23.54
3		9.112	13851	0.32		2.45
4		9.633	7777	0.18	38295.66	2.59
5		11.712	7140	0.17	42274.77	9.88
6		14.707	2989	0.07	71029.78	14.08