



**APRC**  
Aromatic Plant Research Center



## LABORATORY REPORT

**SAMPLE NAME:** Geranium

**BOTANICAL NAME:** *Pelargonium graveolens*

**COMPANY NAME:** Gaea Royals

**COMPANY LOT #:** 1803000574

**Column:** ZB5 (60 m length × 0.25 mm inner diameter × 0.25 μm film thickness)

**Instrument:** Shimadzu GCMS-QP2010 Ultra

**Carrier gas:** Helium 80 psi

**Temperature ramp:** 2 degrees Celsius per minute up to 260-degree Celsius

**Split ratio:** 30:1

**Sample preparation:** 5% w/v solution with Dichloromethane

**Interpretation on sample:**

This oil meets the standard profile of *Pelargonium graveolens*.

**Analyzed by:** Dr. Prabodh Satyal

**Reviewed by:** Ambika Poudel

**Issued Date:** 9/28/2018

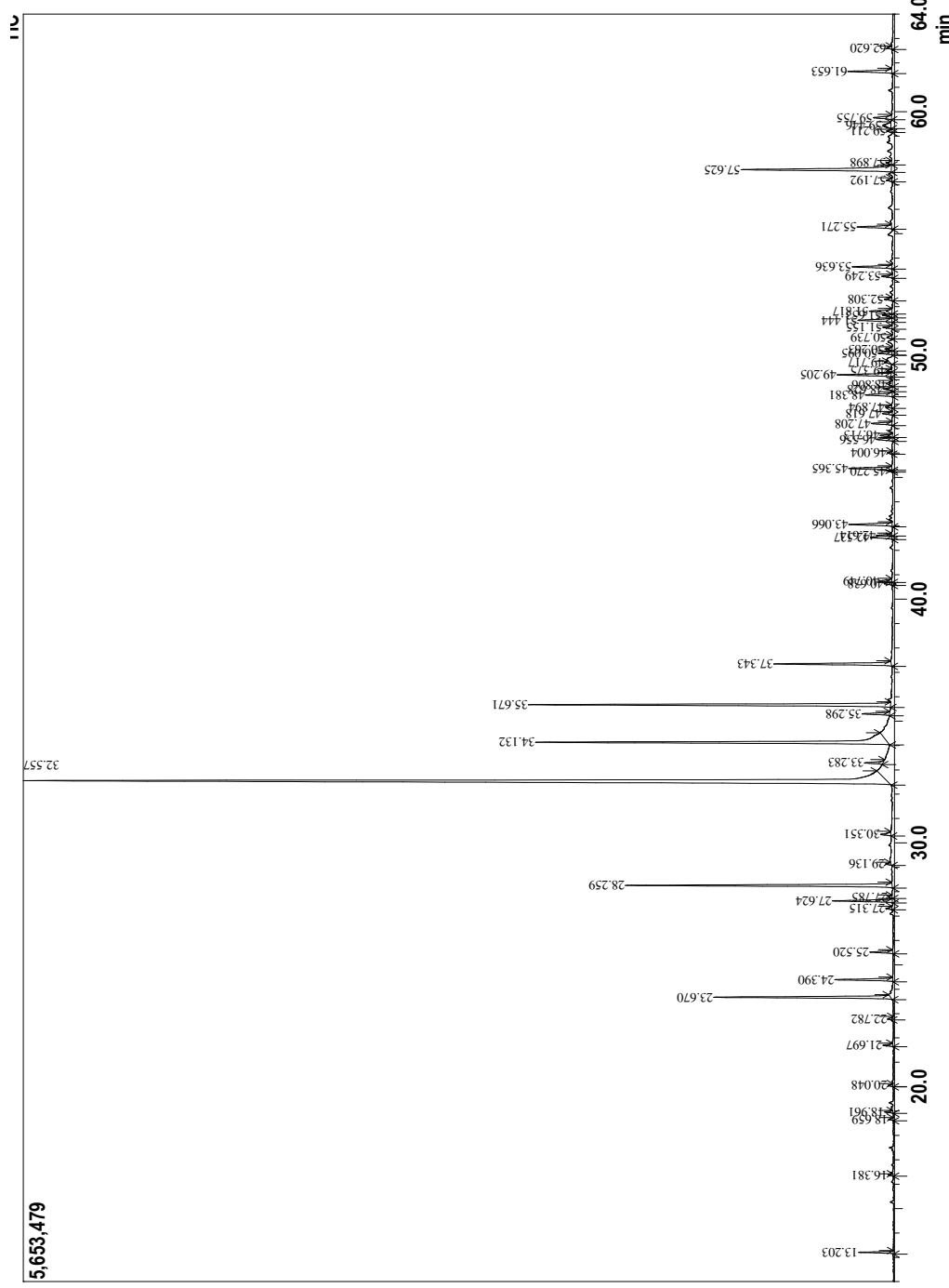
**Sample Information**

Analyzed by : Dr. Prabodh Satyal  
 Analyzed : 9/27/2018 7:31:44 AM  
 Sample Type : Essential Oil  
 Sample Name : Geranium  
 Lot# : 1803000574  
 Injection Volume : 0.10



**Peak Report TIC**

R.Time	Name	Area%
13.203	Pinene <alpha>	0.69
16.381	Myrcene	0.11
18.659	Cymene<para>	0.10
18.961	Limonene	0.19
20.048	Ocimene <E-beta>	0.12
21.697	Linalool oxide <cis> (furanoid)	0.25
22.782	Linalool oxide <trans>(furanoid)>	0.10
23.670	Linalool	4.45
24.390	Rose oxide <cis>	1.45
25.520	Rose oxide<trans>	0.57
27.315	Citronellal	0.15
27.624	Menthone	1.56
27.785	Isopulegol-iso-imp	0.11
28.259	Menthone<iso>	7.04
29.136	Menthyl	0.13
30.351	Terpineol <alpha>	0.31
32.557	Citronellol	33.50
33.283	Neral	0.48
34.132	Geraniol	11.37
35.298	Geraniol	0.73
35.671	Citronellyl formate	10.00
37.343	Geranyl formate	3.25
40.638	Cubebene <alpha>	0.20
40.749	Citronellyl acetate	0.34
42.537	Copaene <alpha>	0.66
42.614	Geranyl acetate	0.37
43.066	Bourbonene <alpha>	1.26
45.270	Ylangene <beta>	0.11
45.365	Caryophyllene <trans>	1.28
46.004	Copaene <beta>	0.10
46.556	Citronellyl propionate	0.47
46.713	Gualadiene<6,9->	0.37
47.208	Muroladiene <cis>	0.59
47.618	Humulene <alpha>	0.29
47.894	Alloaromadendrene	0.19
48.381	Geranyl propionate	0.82
48.628	Cadina-1(6),4-diene<cis>	0.26
48.806	Cadina-1(6),4-diene <trans->	0.21
49.205	Germacrene D	1.54
49.375	Selinadiene	0.13
49.717	Selinene <beta>	0.14
50.095	Bicyclogermacrene	0.43
50.263	Murolene <alpha>	0.21
50.739	Dihydroagaroturan <beta>	0.18
51.155	Amorphene <delta>	0.26
51.444	Cadinene <delta>	0.97
51.653	Calamenene<trans>	0.31
51.817	Citronellyl butyrate	0.84
52.308	Cadina-1,4-diene <E>	0.22
53.249	Agarofuran <alpha>	0.30
53.636	Geranyl butyrate	1.15
55.271	Phenyl ethyl tiglate	1.01
57.192	Cubanol<1, 10 di-epi>	0.15
57.625	Eudesmol <10-epi-gamma->	5.18
57.898	Cubanol<1-epi>	0.17
59.211	Geranyl valerate	0.12
59.446	Eudesmol <alpha>	0.46
59.755	Citronellyl tiglate	0.57
61.653	Geranyl tiglate	1.32
62.620	Geranyl caproate	0.15
		100.00



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**Reviewed by: Ambika Poudel**