



**APRC**  
Aromatic Plant Research Center



## LABORATORY REPORT

**SAMPLE NAME:** Grapefruit Oil 2050

**BOTANICAL NAME:** *Citrus × paradisi*

**COMPANY NAME:** Gaea Royals

**COMPANY LOT #:** 1808001650

**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 *Citrus × paradisi*.

**Analyzed by:** Dr. Prabodh Satyal

**Reviewed by:** Ambika Poudel

**Issued Date:** 10/6/2018

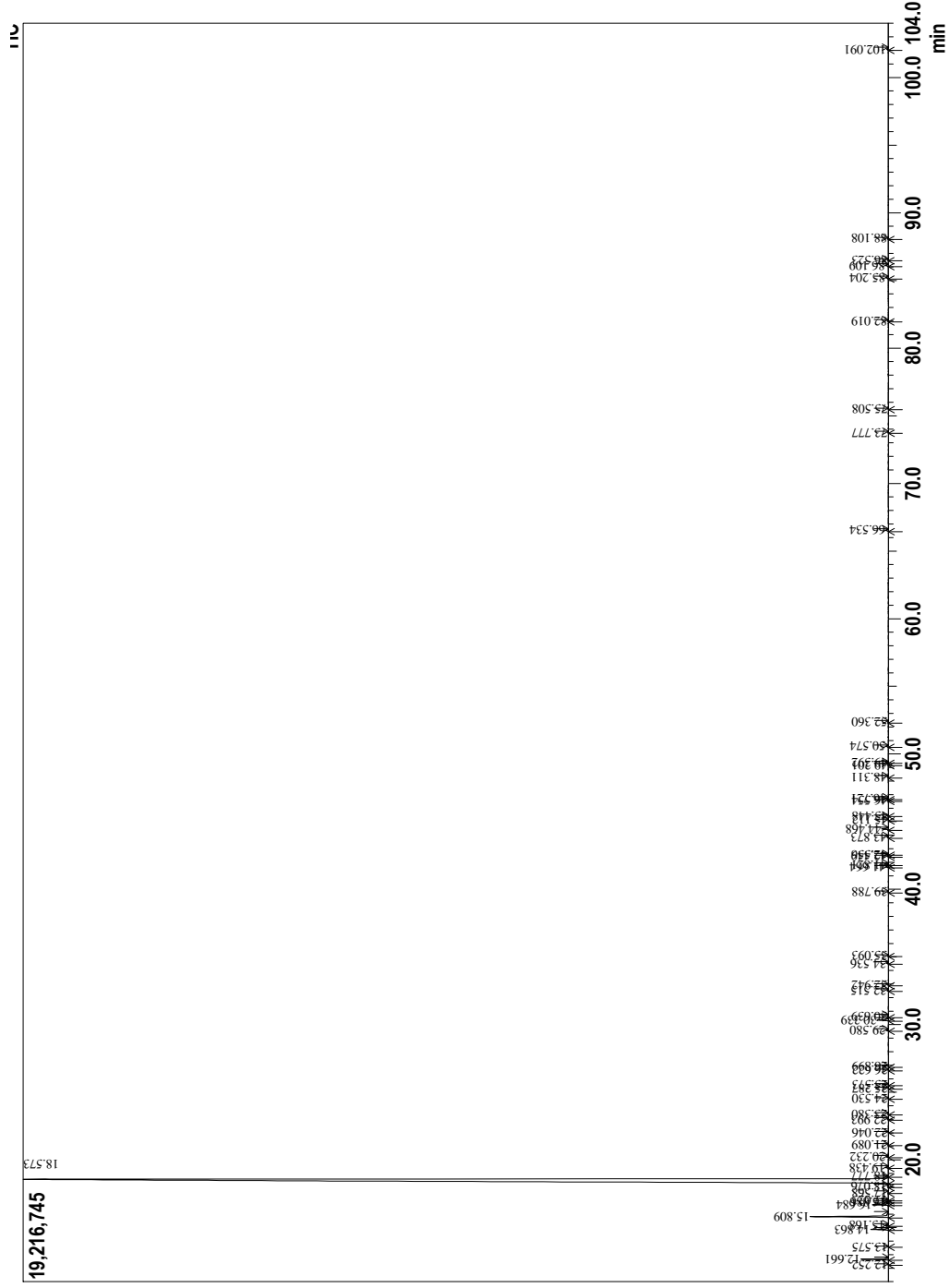
**Sample Information**

Analyzed by : Dr. Prabodh Satyal  
 Analyzed : 10/6/2018 2:42:37 AM  
 Sample Type : Essential Oil  
 Sample Name : Grapefruit Oil 2050  
 Lot# : 1808001650  
 Injection Volume : 0.20



**Peak Report TIC**

R.Time	Peak Name	Area%
12.252	Thujene<alpha>	0.01
12.661	Pinene <alpha>	0.85
13.575	Camphene	0.00
14.863	Sabinene	0.58
15.168	Pinene <beta>	0.09
15.809	Myrcene	2.79
16.684	Octan-1-ol	0.58
16.886	Phellandrene<alpha>	0.09
17.023	Carene<delta-3>	0.02
17.568	Terpinene <alpha>	0.02
18.076	Cymene<para>	0.07
18.573	Limonene	92.31
18.777	Ocimene<Z>-beta>	0.01
19.438	Ocimene <E>-beta>	0.10
20.232	Terpinene <gamma>	0.09
21.069	Octanol<1>	0.01
22.046	Terpinolene	0.01
22.993	Linalool	0.04
23.380	Nonanal	0.03
24.530	Mentha-2,8-dien-1-ol<trans-para>	0.01
25.287	Limonene oxide<cis>	0.01
25.573	Limonene oxide<trans>	0.01
26.622	Citronellal	0.01
26.899	Karathanaenone	0.02
29.580	Terpineol <alpha>	0.10
30.339	Decanal	0.47
30.639	Octyl acetate	0.04
32.515	Neral	0.07
32.942	Carvone	0.02
34.536	Geraniol	0.07
35.093	Perilaldehyde	0.01
39.788	Cubebene<alpha>	0.02
41.664	Copaene <alpha>	0.11
41.821	Geranyl acetate	0.05
42.449	Cubebene <beta>	0.05
42.556	Elemene <beta>	0.03
43.873	Dodecanal	0.08
44.468	Caryophyllene <trans>	0.30
45.112	Copaene <beta>	0.01
45.448	Grapefruit	0.01
46.554	Farnesene<E>-beta>	0.02
46.721	Humulene <alpha>	0.07
48.311	Germacrene D	0.05
49.201	Bicyclogermacrene	0.02
49.392	Murolene <alpha>	0.01
50.574	Cadinene <delta>	0.09
52.360	Elemol <alpha>	0.03
66.534	Nootkatone	0.13
73.777	Springene <alpha>	0.02
75.508	Geranyl linalool<E,Z>	0.01
82.019	Osthole	0.03
85.204	Suberosin epoxide cis	0.12
86.109	Geigerine	0.14
86.523	Suberosin epoxide trans	0.02
88.108	Auraptanol	0.03
102.091	Auraptene	0.07
		100.00



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**Reviewed by: Ambika Poudel**