

Sample Information

Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 8/29/2019 9:26:15 PM  
 Sample Type : Essential Oil  
 Sample Name : Geranium - Barefut  
 Sample ID : 0108  
 Injection Volume : 0.10  
 Instrument ID : GC-4

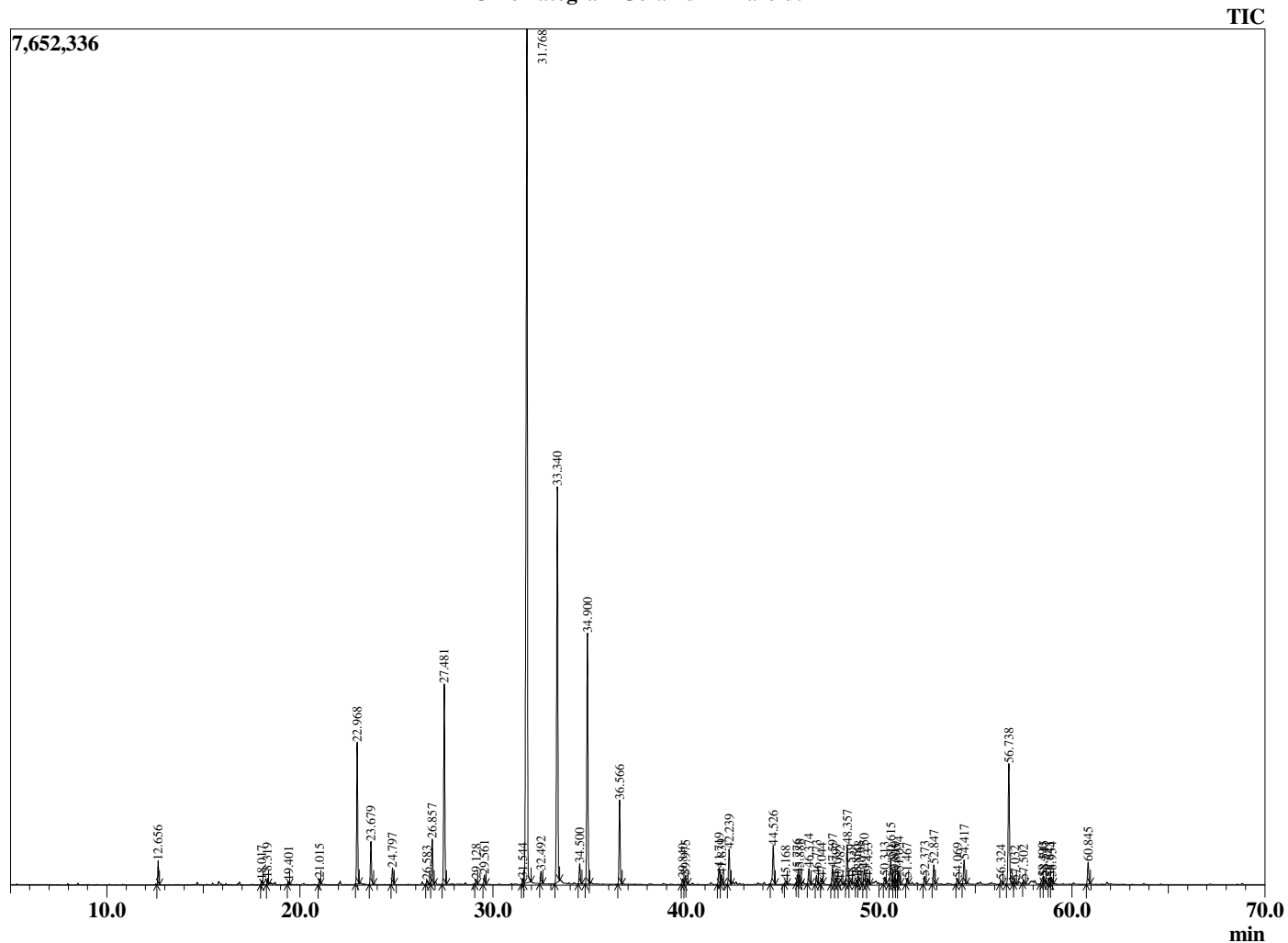


Peak Report TIC

R.Time	Name	Area%
12.656	alpha-Pinene	0.59
18.017	para-Cymene	0.12
18.319	Limonene	0.18
19.401	trans-beta-Ocimene	0.09
21.015	cis-Linalool oxide (furanoid)	0.18
22.968	Linalool	4.33
23.679	cis-Rose oxide	1.39
24.797	trans-Rose oxide	0.54
26.583	Citronellal	0.15
26.857	Menthone	1.46
27.481	Isomenthone	6.69
29.128	Isomenthol	0.16
29.561	alpha-Terpineol	0.31
31.544	Nerol	0.18
31.768	Citronellol	35.53
32.492	Neral	0.41
33.340	Geraniol	14.11
34.500	Geranial	0.69
34.900	Citronellyl formate	8.59
36.566	Geranyl formate	2.85
39.840	alpha-Cubebene	0.20
39.975	Citronellyl acetate	0.33
41.719	alpha-Copaene	0.62
41.839	Geranyl acetate	0.35
42.239	beta-Bourbonene	1.28
44.526	beta-Caryophyllene	1.52
45.168	beta-Copaene	0.12
45.776	Citronellyl propionate	0.28
45.888	Unidentified	0.34
46.374	6,9-Guaiadiene	0.57
46.773	alpha-Humulene	0.32
47.044	Alloaromadendrene	0.17
47.597	Neryl propionate	0.56
47.797	10-beta-H-Cadina-1(6),4-diene	0.27
47.982	trans-Cadina-1(6),4-diene	0.23
48.357	Germacrene D	1.43
48.539	Unidentified	0.15
48.850	beta-Selinene	0.14
48.968	Viridiflorene (Ledene)	0.36
49.250	Bicyclogermacrene	0.60
49.433	alpha-Murolene	0.22
50.313	gamma-Cadinene	0.25
50.615	delta-Cadinene	0.99
50.810	cis-Calamenene	0.26
50.895	Zonarene	0.18
51.034	Citronellyl butyrate	0.47
51.467	trans-Cadina-1,4-diene	0.20
52.373	Unidentified	0.29
52.847	Geranyl butyrate	0.65
54.069	Spathulenol	0.20
54.417	Phenylethyl tiglate	0.92
56.324	1,10-di-epi-Cubanol	0.15
56.738	10-epi-gamma-Eudesmol	4.77
57.032	1-epi-Cubanol	0.11
57.502	Hinesol	0.11
58.490	Unidentified	0.30
58.545	alpha-Eudesmol	0.29
58.843	Unidentified	0.23
58.954	Citronellyl tiglate	0.24
60.845	Geranyl tiglate	0.81
		100.00

This report is valid for 1 year from the analyzed date.

Chromatogram Geranium - Barefut



Comments:

The analysis of this Geranium, Egypt batch sample meets the expected chemical profile for authentic essential oil of *Pelargonium graveolens*. No contamination or adulteration was detected.