

# Geranium Essential Oil

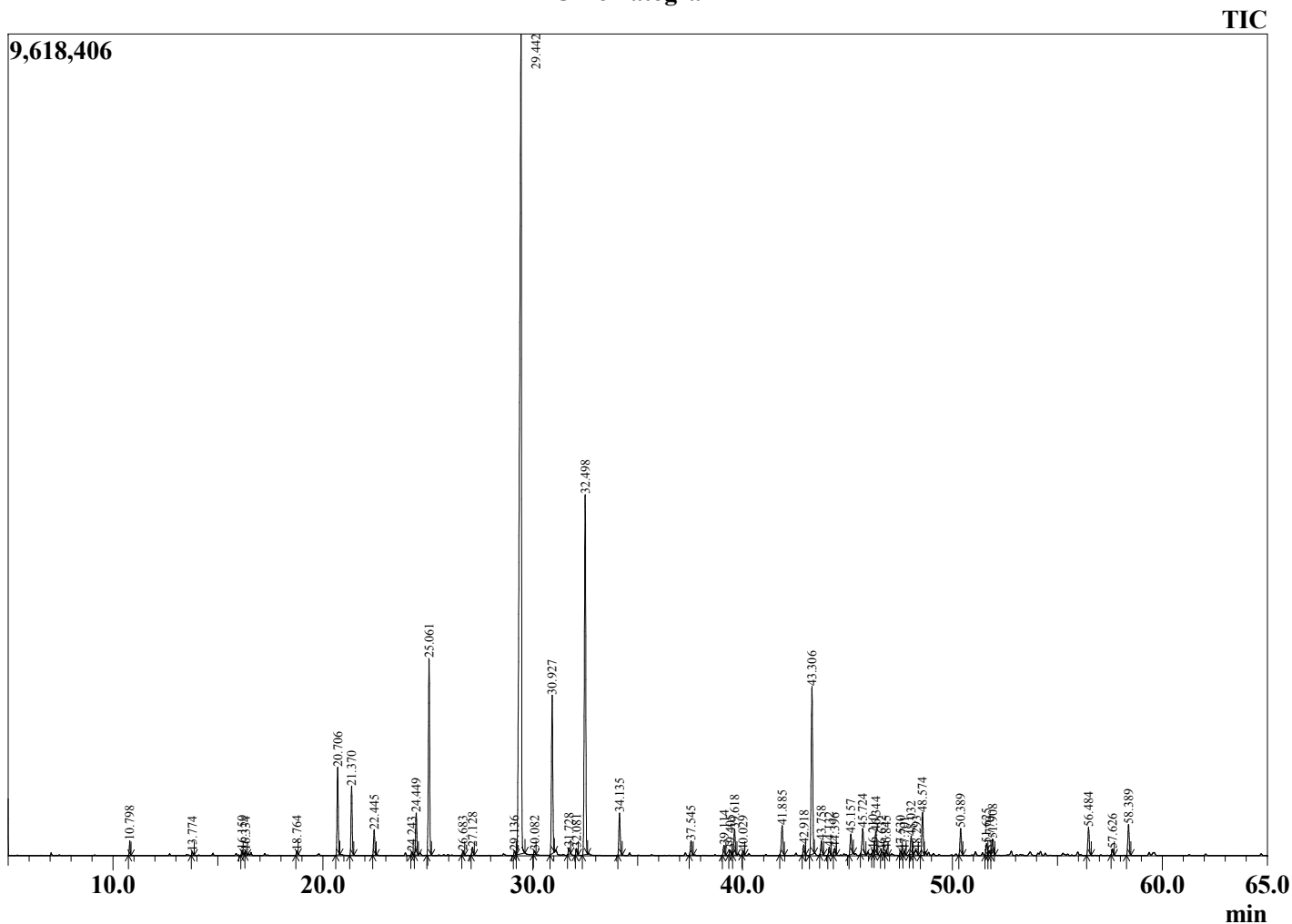


Lot Number: 161036  
Date Filled: 04/12/16  
Analyst: PS

## Peak Report

Ret. Time	Compound Name	Area %
10.798	alpha-Pinene	0.32
13.774	Myrcene	0.10
16.150	Limonene	0.12
16.334	1,8-Cineole	0.10
18.764	cis-Linalool oxide (furanoid)	0.11
20.706	Linalool	2.74
21.370	cis-Rose oxide	2.17
22.445	trans-Rose oxide	0.81
24.243	Citronellal	0.09
24.449	Menthone	1.38
25.061	Isomenthone	6.56
26.683	Neoisomenthol	0.13
27.128	alpha-Terpineol	0.26
29.136	Nerol	0.13
29.442	Citronellol	42.69
30.082	Neral	0.12
30.927	Geraniol	5.43
31.728	trans-Myrtanol	0.21
32.081	Geranial	0.21
32.498	Citronellyl formate	13.02
34.135	Geranyl formate	1.47
37.545	Citronellyl acetate	0.51
39.114	alpha-Copaene	0.35
39.405	Geranyl acetate	0.17
39.618	alpha-Bourbonene	0.96
40.029	beta-Elemene	0.13
41.885	beta-Caryophyllene	1.15
42.918	Aromadendrene	0.36
43.306	6,9-Guaiadiene	6.54
43.758	trans-Muurolo-3,5-diene	0.51
44.132	alpha-Humulene	0.29
44.396	Alloaromadendrene	0.25
45.157	Geranyl propionate	0.80
45.724	Germacrene D	1.07
46.210	beta-Selinene	0.13
46.344	Viridiflorene (Ledene)	0.84
46.632	Bicyclogermacrene	0.14
46.845	alpha-Muuroloene	0.16
47.530	Geranyl isobutyrate	0.14
47.701	gamma-Cadinene	0.13
48.032	delta-Cadinene	0.68
48.293	Zonarene	0.29
48.574	Citronellyl butyrate	1.61
50.389	Geranyl butyrate	0.98
51.625	Furopelargone	0.43
51.770	Spathulenol	0.19
51.908	2-Phenylethyl tiglate	0.61
56.484	Citronellyl tiglate	1.05
57.626	Citronellyl isohexanoate	0.22
58.389	Geranyl tiglate	1.15
		100.00

## Chromatogram



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

Approved:

*Dr. Robert S. Pappas*

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