

Sample Information

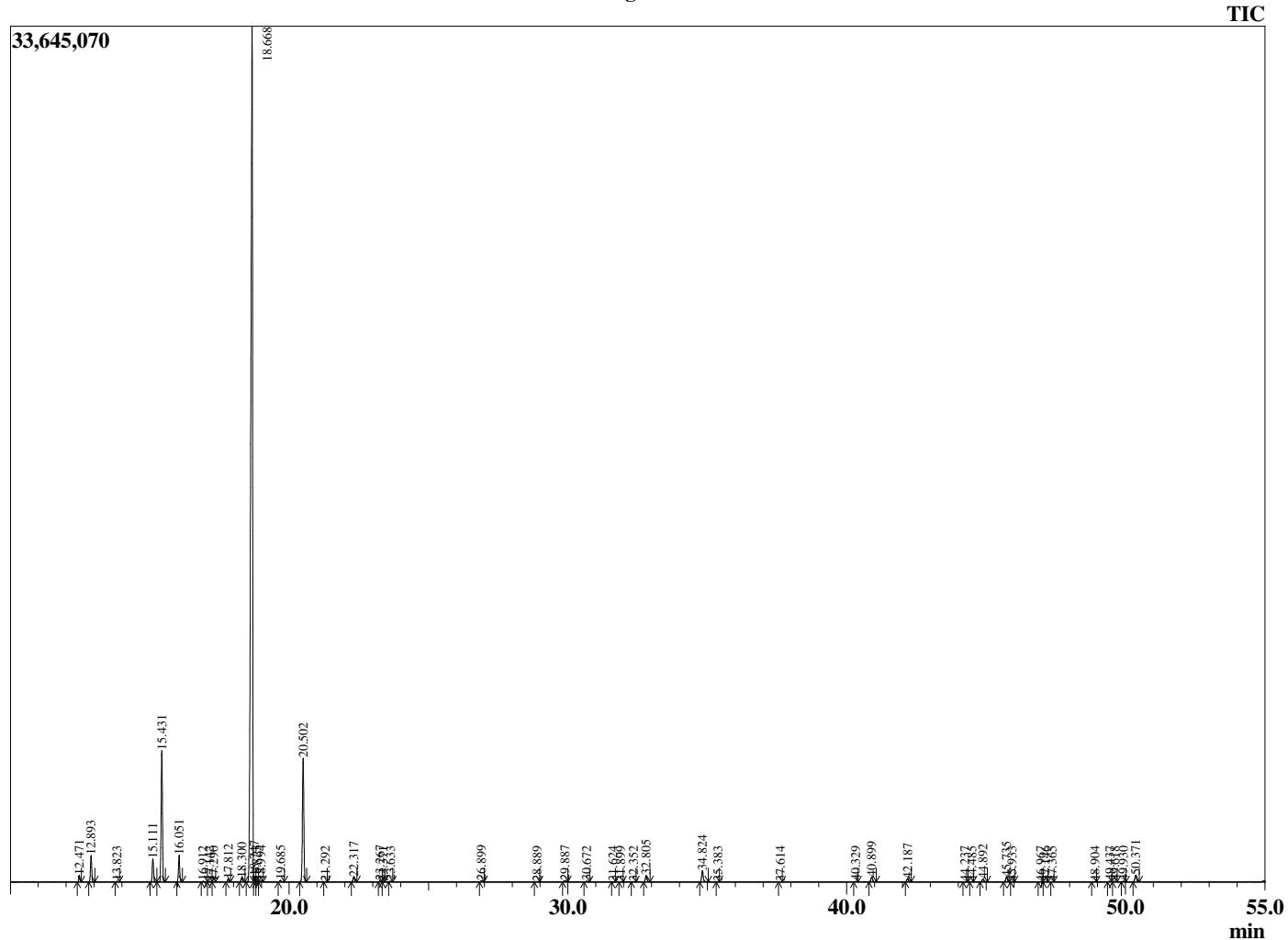
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 8/28/2018 7:25:54 PM  
 Sample Type : Essential Oil  
 Sample Name : Lemon  
 Sample ID : B0402E  
 Injection Volume : 0.10  
 Instrument ID: GC-4



Peak Report TIC

R.Time	Name	Area%
12.471	alpha-Thujene	0.37
12.893	alpha-Pinene	1.55
13.823	Camphene	0.04
15.111	Sabinene	1.46
15.431	beta-Pinene	8.13
16.051	Myrcene	1.62
16.912	Octanal	0.06
17.142	alpha-Phellandrene	0.04
17.290	delta-3-Carene	0.03
17.812	alpha-Terpinene	0.19
18.300	para-Cymene	0.30
18.668	Limonene	72.99
18.747	beta-Phellandrene	0.29
18.823	1,8-Cineole	0.06
18.994	cis-beta-Ocimene	0.06
19.685	trans-beta-Ocimene	0.11
20.502	gamma-Terpinene	8.37
21.292	trans-Sabinene hydrate	0.02
22.317	Terpinolene	0.37
23.267	Linalool	0.08
23.371	cis-Sabinene hydrate	0.01
23.633	Nonanal	0.05
26.899	Citronellal	0.08
28.889	Terpinen-4-ol	0.03
29.887	alpha-Terpineol	0.11
30.672	Decanal	0.05
31.624	Unidentified	0.01
31.899	Nerol	0.01
32.352	Unidentified	0.02
32.805	Neral	0.49
34.824	Geranial	0.88
35.383	Perillaldehyde	0.01
37.614	Undecanal	0.01
40.329	Citronellyl acetate	0.04
40.899	Neryl acetate	0.40
42.187	Geranyl acetate	0.26
44.237	Unidentified	0.01
44.485	cis-alpha-Bergamotene	0.02
44.892	beta-Cayophyllene	0.23
45.735	trans-alpha-Bergamotene	0.39
45.933	beta-Bisabolene	0.02
46.967	trans-beta-Farnesene	0.03
47.146	alpha-Humulene	0.02
47.365	epi-beta-Santalene	0.01
48.904	Farnesene isomer	0.02
49.437	Valencene	0.04
49.618	Bicyclogermacrene	0.04
49.930	alpha-Bisabolene	0.04
50.371	beta-Bisabolene	0.57
		100.00

Chromatogram Lemon



Comments:

The analysis of this Lemon, Italy batch sample meets the expected chemical profile for authentic essential oil of *Citrus limon*. No contamination or adulteration was detected.

The results provided in this GCMS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.