

Sample Information

Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 7/26/2019 11:25:16 PM  
 Sample Type : Essential Oil  
 Sample Name : Orange - Helias  
 Sample ID : B0514B  
 Injection Volume : 0.10  
 Instrument ID : GC-4

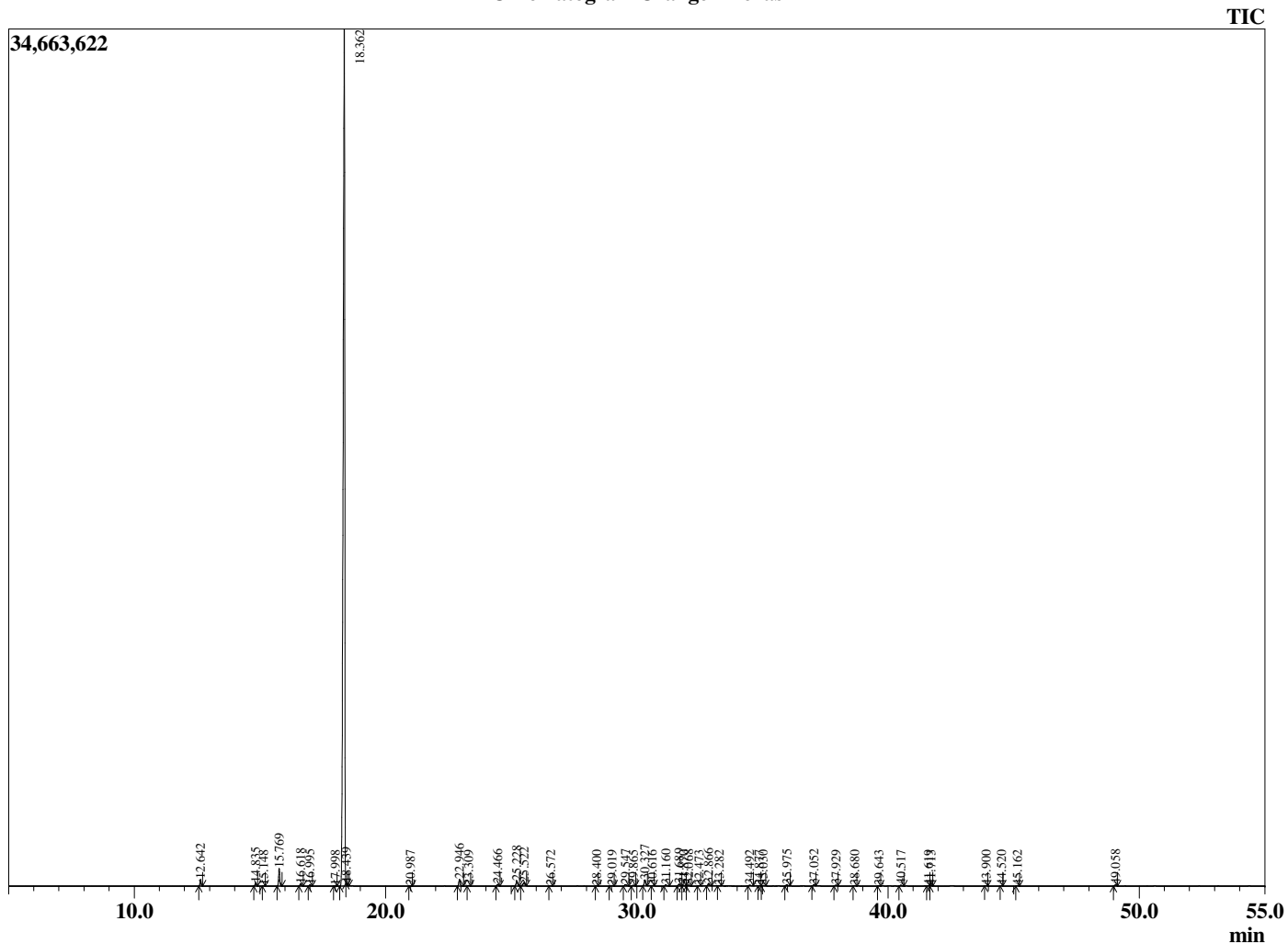


Peak Report TIC

R.Time	Name	Area%
12.642	alpha-Pinene	0.49
14.835	Sabinene	0.26
15.148	beta-Pinene	0.03
15.769	Myrcene	1.39
16.618	Octanal	0.19
16.995	delta-3-Carene	0.11
17.998	para-Cymene	0.04
18.362	Limonene	92.95
18.439	beta-Phellandrene	0.03
20.987	n-Octanol	0.02
22.946	Linalool	0.62
23.309	Nonanal	0.06
24.466	trans-para-Mentha-2,8-dien-1-ol	0.15
25.228	cis-Limonene oxide	0.50
25.522	trans-Limonene oxide	0.43
26.572	Citronellal	0.03
28.400	Unidentified	0.02
29.019	Unidentified	0.06
29.547	alpha-Terpineol	0.19
29.865	Unidentified	0.08
30.327	Decanal	0.56
30.616	Octyl acetate	0.01
31.160	trans-Carveol	0.12
31.689	Citronellol	0.20
31.870	Unidentified	0.08
32.068	Unidentified	0.10
32.473	Neral	0.02
32.866	Carvone	0.25
33.282	Linalyl acetate	0.02
34.492	Geranial	0.09
34.877	Citronellyl formate	0.02
35.030	Perillaldehyde	0.04
35.975	Thymol	0.14
37.052	Unidentified	0.13
37.929	Unidentified	0.08
38.680	Unidentified	0.05
39.643	Unidentified	0.02
40.517	Unidentified	0.09
41.619	Unidentified	0.05
41.713	alpha-Copaene	0.04
43.900	Dodecanal	0.02
44.520	beta-Caryophyllene	0.01
45.162	beta-Copaene	0.05
49.058	Valencene	0.12
		100.00

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

Chromatogram Orange - Helias



Comments:

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