

Sample Information

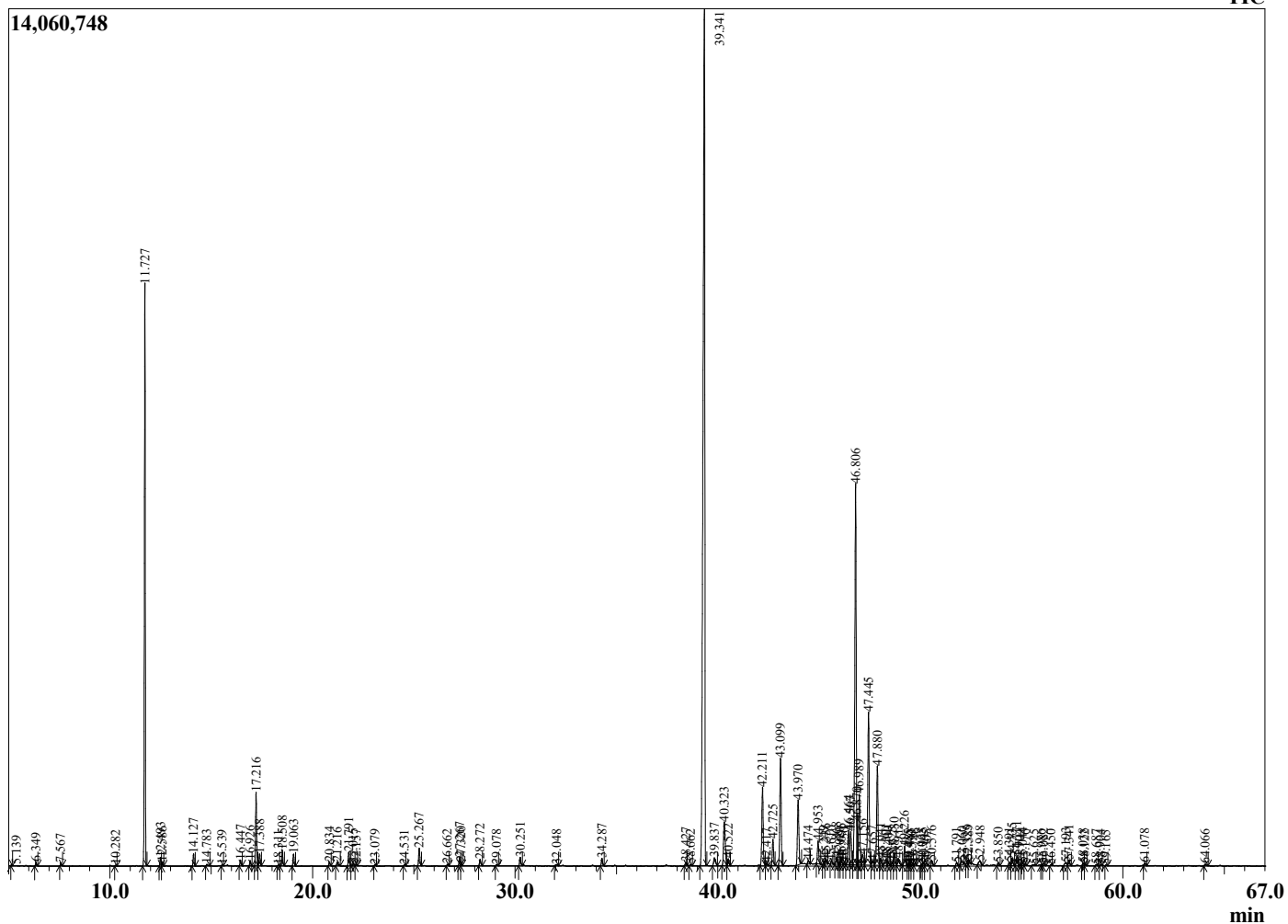
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 4/5/2022 8:56:50 PM  
 Sample Type : Essential Oil  
 Sample Name : Helichrysum, France - Barefut  
 Sample ID : 0106  
 Injection Volume : 0.10  
 Instrument ID: GC-3



Peak Report TIC

R.Time	Name	Area%
5.139	Isopropyl ethyl ketone	0.02
6.349	2-Methyl-2-heptene	0.07
7.567	4-Methyl-3-hexanone	0.06
10.282	Bornylene	0.02
11.727	alpha-Pinene	12.72
12.493	alpha-Fenchene	0.19
12.586	Camphene	0.09
14.127	beta-Pinene	0.28
14.783	Myrcene	0.06
15.539	Isobutyl 2-methylbutyrate	0.02
16.447	alpha-Terpinene	0.14
16.926	para-Cymene	0.13
17.216	Limonene	1.78
17.388	1,8-cineole	0.31
18.311	trans-beta-Ocimene	0.02
18.508	Isobutyl angelate	0.38
19.063	gamma-Terpinene	0.30
20.834	Terpinolene	0.11
21.216	Isobutyl tiglate	0.12
21.791	Linalool	0.36
22.015	2-Methylbutyl-2-methylbutyrate	0.07
22.157	Nonanal	0.04
23.079	alpha-Fenchol	0.03
24.531	trans-Pinocarveol	0.03
25.267	Isoamyl tiglate	0.48
26.662	Borneol	0.04
27.267	Terpinen-4-ol	0.25
27.320	Unidentified	0.08
28.272	alpha-Terpineol	0.18
29.078	Decanal	0.03
30.251	Nerol	0.25
32.048	Unidentified	0.05
34.287	Hexyl angelate	0.21
38.427	alpha-Terpinyl acetate	0.11
38.662	Citronellyl acetate	0.05
39.341	Neryl acetate	35.49
39.837	Unidentified	0.37
40.323	alpha-Copaene	1.83
40.522	Geranyl acetate	0.19
42.211	Italicene	2.52
42.417	Italicene isomer	0.08
42.725	cis-alpha-Bergamotene	0.79
43.099	beta-Caryophyllene	3.36
43.970	4,6,9-Trimethyldec-8-en-3,5-dione + trans-alf	2.22
44.474	6,9-Guaiadiene	0.10
44.953	Neryl propionate	0.70
45.249	trans-beta-Farnesene	0.09
45.336	alpha-Humulene	0.17
45.610	Unidentified	0.09
45.868	alpha-Acoradiene	0.21
46.020	Unidentified	0.05
46.096	beta-Acoradiene	0.17
46.250	4,5-di-epi-aristolochene	0.05
46.464	Selina-4,11-diene	1.11
46.567	Unidentified	1.09
46.806	gamma-Curcumene	12.68
46.870	Unidentified	0.85
46.989	Ar-Curcumene	2.20
47.156	trans-beta-Bergamotene	0.42
47.445	beta-Selinene	5.38
47.657	gamma-Murolene	0.20
47.880	alpha-Selinene	3.31

Chromatogram Helichrysum, France - Barefut



Comments:

The analysis of this Helichrysum batch sample meets the expected chemical profile for authentic essential oil of *Helichrysum italicum*. 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.

R.Time	Name	Area%
48.041	alpha-Murolene	0.25
48.301	Unidentified	0.27
48.400	Unidentified	0.14
48.625	beta-Bisabolene	0.11
48.730	beta-Curcumene	0.42
48.912	gamma-Cadinene	0.29
49.226	delta-Cadinene	0.62
49.415	cis-Calamenene	0.03
49.488	Zonarene	0.06
49.590	Unidentified	0.02
49.746	trans-gamma-Bisabolene	0.06
50.065	trans-Cadina-1,4-diene	0.05
50.145	Unidentified	0.11
50.305	alpha-Cadinene	0.09
50.576	trans-alpha-Bisabolene	0.15
51.791	trans-Nerolidol	0.09
52.060	Italidione isomer	0.15
52.325	Italidione isomer	0.10
52.389	Italidione isomer	0.13
52.948	Caryophyllene oxide	0.21
53.850	Guaiol	0.10
54.391	Unidentified	0.11
54.535	Copaborneol	0.26
54.771	Rosifoliol	0.31
54.904	Unidentified	0.03
55.044	Unidentified	0.09
55.176	Neryl tiglate	0.05
55.625	Epicubenol	0.05
55.986	Unidentified	0.03
56.082	beta-Eudesmol	0.07
56.450	tau-Cadinol	0.02
57.193	alpha-Eudesmol	0.15
57.341	Unidentified	0.19
58.038	beta-Bisabolol	0.08
58.122	Unidentified	0.04
58.687	Unidentified	0.04
58.904	epi-alpha-Bisabolol	0.03
59.165	Unidentified	0.02
61.078	Geraniol hexanoate	0.08
64.066	Unidentified	0.07
		100.00