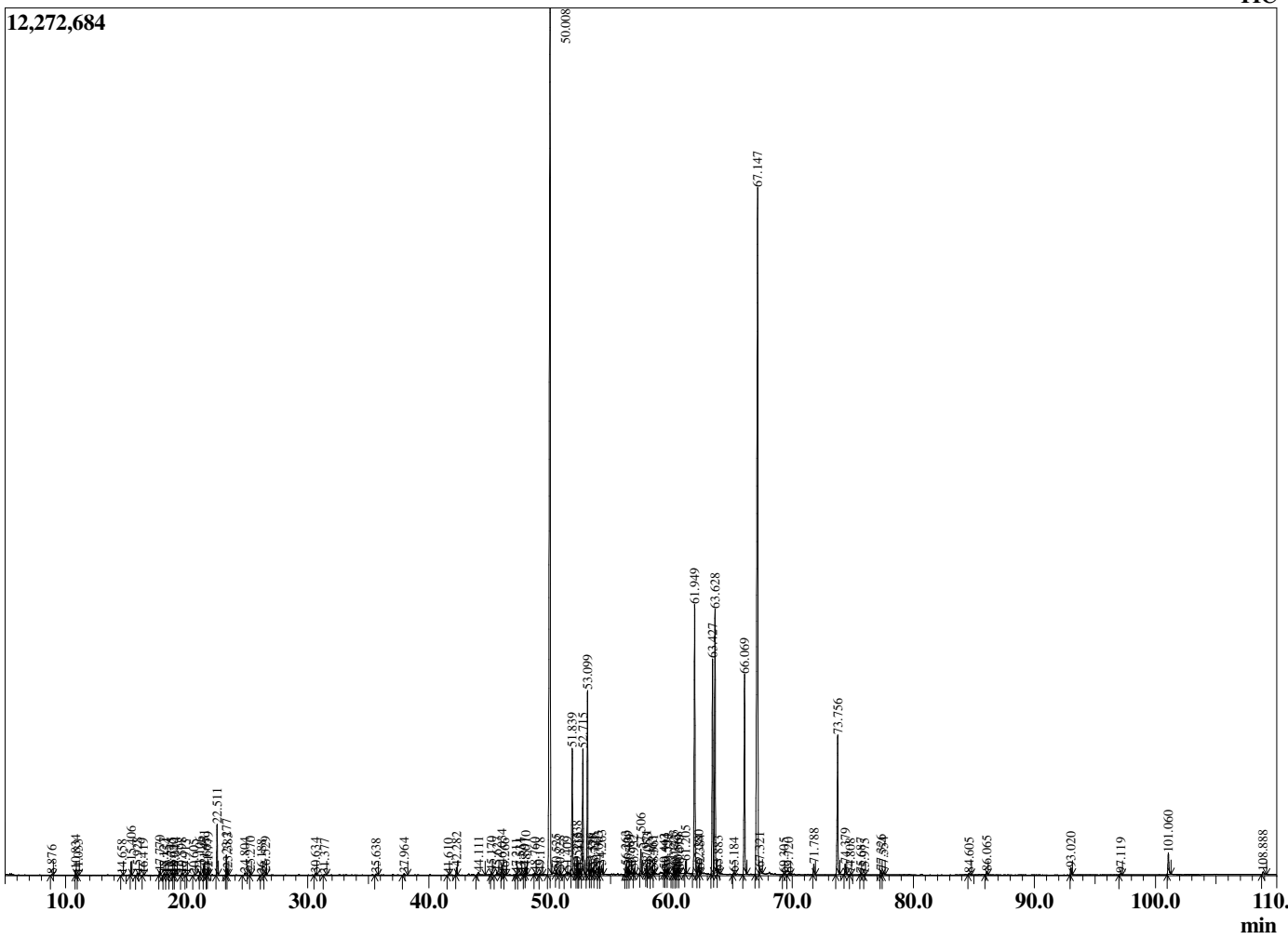
Sample Information

Analyzed by : Dr. Robert S. Pappas
Analyzed : 7/17/2018 9:26:40 PM
Sample Type : Essential Oil
Sample Name : Chamomile Oil, German (Blue)
Sample ID : D0B0717E
Injection Volume : 0.10
Instrument ID: : GC-3

Chromatogram Chamomile Oil, German (Blue)



Comments:

The analysis of this Chamomile Oil, German (Blue) batch sample meets the expected chemical profile for authentic essential oil of *Matricaria chamomillia*. 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.

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Peak Report TIC

R.Time	Name	Area%
8.876	Hexanal	0.01
10.834	Ethyl-2-methylbutyrate	0.07
11.033	Ethyl isovalerate	0.01
14.658	Santolinatriene	0.01
15.406	alpha-Pinene	0.23
15.928	Propyl-2-methylbutyrate	0.05
16.419	Camphene	0.01
17.770	Sabinene	0.07
18.127	beta-Pinene	0.03
18.354	6-Methyl-5-hepten-2-one	0.02
18.745	2-Pentylfuran	0.07
18.920	E-beta-Ocimene	0.02
19.044	Yomogi alcohol	0.04
19.598	Octanal	0.04
19.913	alpha-Phellandrene	0.01
20.605	alpha-Terpinene	0.01
21.106	para-Cymene	0.06
21.431	Limonene	0.19
21.665	1,8-Cineole	0.02
21.779	Z-beta-Ocimene	0.14
22.511	E-beta-Ocimene	0.98
23.277	Artemesia ketone	0.40
23.383	gamma-Terpinene	0.13
24.804	Artemisia alcohol	0.05
25.270	Terpinolene	0.06
26.188	Linalool	0.01
26.529	Nonanal	0.06
30.634	beta-Artemesia acetate	0.04
31.377	Borneol	0.02
35.638	cis-3-Hexenyl isovalerate	0.03
37.964	4,8-Dimethyl-nona-3,8-dien-2-one	0.05
41.610	Elemene isomer	0.02
42.282	delta-Elemene	0.17
44.111	Decanoic acid	0.15
45.170	alpha-Copane	0.06
45.627	Modheph-2-ene	0.09
46.034	alpha-Isocomene	0.24
46.266	Unidentified	0.03
47.211	Unidentified	0.02
47.531	Unidentified	0.04
47.897	beta-Ylangene	0.03
48.010	beta-Caryophyllene	0.15
48.760	trans-alpha-Bergamotene	0.06
49.178	Aromadendrene	0.06
50.008	E-beta-Farnesene	26.91
50.525	Alloaromadendrene	0.08
50.828	dehydro-Sesquicineole	0.08
51.409	trans-Cadina-1(6),4-diene	0.12
51.839	Germacrene D	3.02
52.238	Farnesene isomer	0.44
52.335	beta-Selinene	0.11
52.419	Viridiflorene	0.14
52.715	Bicyclogermacrene	3.01
53.099	E,E-alpha-Farnesene	4.23
53.356	beta-Bisabolene	0.13
53.528	3,6-Dihydrochamazulene	0.22
53.721	gamma-Cadinene	0.10
54.003	delta-Cadinene	0.20
54.263	Undientified	0.28
56.263	Unidentified	0.20
56.439	trans-Nerolidol	0.21
56.589	7-Hydroxyfarnesene	0.11

R.Time	Name	Area%
56.932	Dendalarasin	0.09
57.506	Spathulenol	0.60
57.971	Unidentified	0.18
58.053	Unidentified	0.12
58.463	Unidentified	0.08
58.561	Viridiflorol	0.08
59.442	Unidentified	0.10
59.594	5,6-Dihydrochamazulene	0.11
59.772	Unidentified	0.14
60.223	Unidentified	0.22
60.373	Dihydrochamazulene isomer	0.09
60.568	Unidentified	0.15
60.679	Unidentified	0.08
61.205	epi-alpha-Cadinol	0.28
61.949	alpha-Bisabolol oxide B	7.31
62.280	Unidentified	0.28
62.384	Unidentified	0.09
63.427	alpha-Bisabolone oxide	5.51
63.628	alpha-Bisabolol	7.01
63.883	Unidentified	0.08
65.184	Pentadecanal	0.05
66.069	Chamazulene	5.19
67.147	alpha-Bisabolol oxide A	22.68
67.321	Bisabolol oxide isomer	0.25
69.305	Unidentified	0.04
69.720	Unidentified	0.04
71.788	Phytone	0.27
73.756	cis-Spiroether	3.57
74.379	trans-Spiroether	0.25
74.808	Eicosane	0.02
75.687	Unidentified	0.03
75.975	Methyl palmitate	0.01
77.326	Unidentified	0.10
77.554	Palmitic acid	0.08
84.605	Phytol	0.07
86.065	Linoleic acid	0.09
93.020	Tricosane	0.19
97.119	Tetracosane	0.05
101.060	Pentacosane	0.66
108.888	Heptacosane	0.13
		100.00