

Sample Information

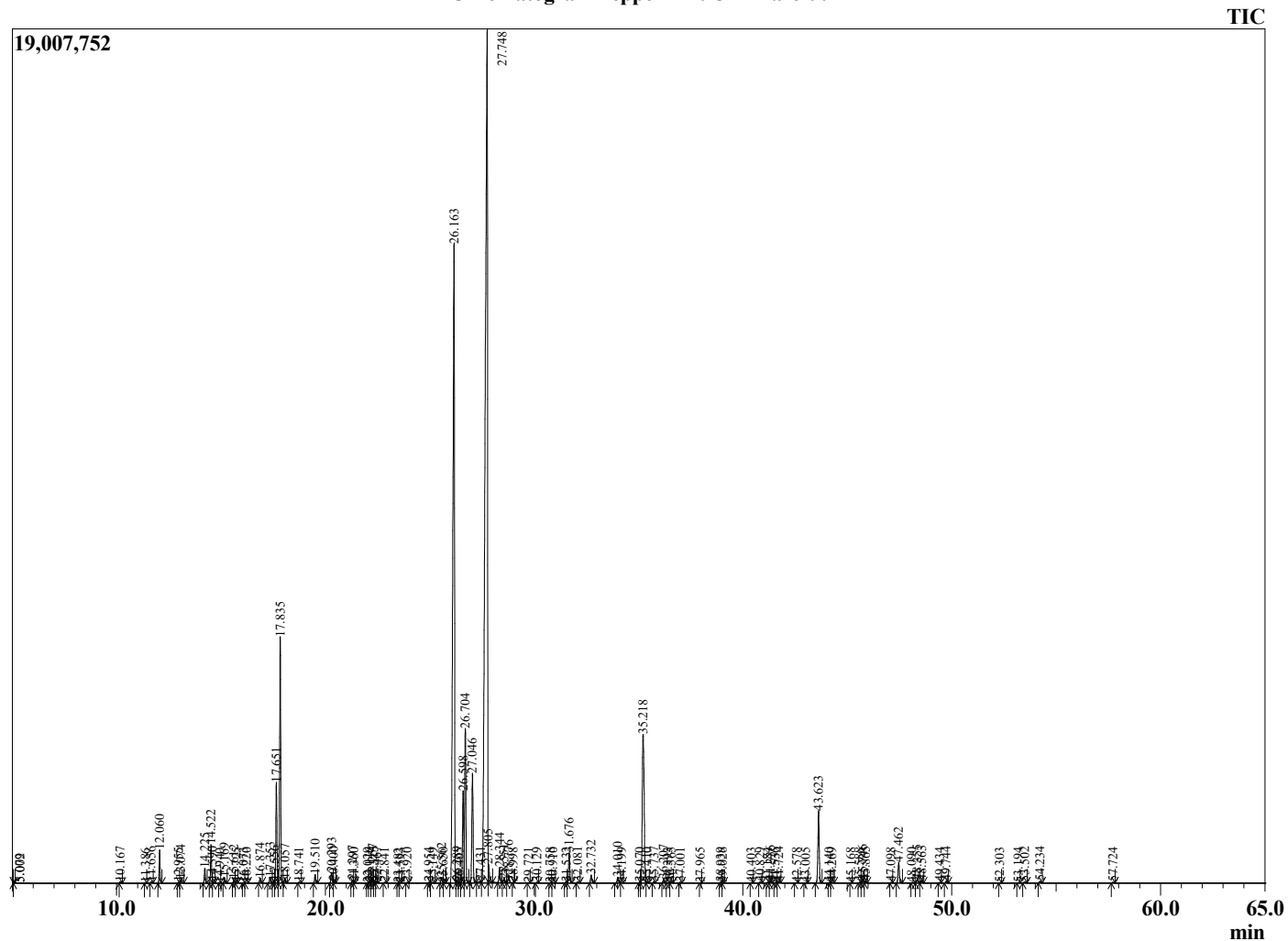
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 1/27/2022 12:26:50 AM
 Sample Type : Essential Oil
 Sample Name : Peppermint Oil - Barefut
 Sample ID : 0118
 Injection Volume : 0.10
 Instrument ID : GC-2



Peak Report TIC

R.Time	Name	Area%
3.887	3-Methylbutanal	0.01
3.993	2-Methylbutanal	0.01
5.002	3-Methyl-1-butanol	0.01
5.079	2-Methylbutanol	0.00
10.167	2,5-Diethyltetrahydrofuran	0.03
11.386	Hashishene	0.00
11.656	alpha-Thujene	0.03
12.060	alpha-Pinene	0.67
12.955	Camphene	0.01
13.074	3-Methylcyclohexanone	0.08
14.225	Sabinene	0.33
14.522	beta-Pinene	0.84
14.590	1-Octen-3-ol	0.02
14.940	Unidentified	0.00
15.169	Myrcene	0.12
15.612	3-Octanol	0.09
15.725	2,6-Dimethyl-3-heptanone	0.02
16.073	Pseudolimonene	0.01
16.220	alpha-Phellandrene	0.01
16.874	alpha-Terpinene	0.12
17.353	para-Cymene	0.15
17.556	2-Ethyl hexanol	0.05
17.651	Limonene	2.37
17.835	1,8-Cineole	5.78
18.057	cis-beta-Ocimene	0.10
18.741	trans-beta-Ocimene	0.03
19.510	gamma-Terpinene	0.20
20.293	trans-Sabinene hydrate	0.33
20.400	Unidentified	0.04
21.297	Terpinolene	0.07
21.360	trans-Linalool oxide (furanoid)	0.01
22.029	Unidentified	0.01
22.116	3-Nonanol	0.02
22.257	Linalool	0.12
22.315	cis-Sabinene hydrate	0.02
22.467	2-Methylbutyl-2-methylbutyrate	0.03
22.841	2-Methylbutyl-3-methylbutyrate	0.02
23.482	beta-Thujone	0.01
23.593	3-Octyl acetate	0.01
23.920	cis-para-Menth-2-en-1-ol	0.02
24.954	trans-Sabinol	0.02
25.149	trans-para-Menth-2-en-1-ol	0.02
25.562	Isopulegol	0.14
25.650	Unidentified	0.01
26.163	Menthone	22.93
26.289	para-Menthan-4-ol	0.04
26.405	trans-Pinocamphone	0.01
26.598	Menthofuran	2.48
26.704	Isomenthone	3.93
27.046	Neomenthol	2.98
27.431	trans-Isopulegone	0.06
27.748	Menthol	43.40
27.805	Terpinen-4-ol	0.39
28.344	Isomenthol	0.38
28.551	Neoisomenthol	0.10
28.776	alpha-Terpineol	0.21
28.998	Unidentified	0.01
29.721	trans-Piperitol	0.01
30.129	Unidentified	0.02
30.758	Nerol	0.01
30.910	Citronellol	0.01
31.532	cis-3-Hexenyl isovalerate	0.03

Chromatogram Peppermint Oil - Barefut



Comments:

The analysis of this Peppermint batch sample meets the expected chemical profile for authentic essential oil of *Mentha piperita*. 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%
31.676	Pulegone	0.81
32.081	Carvone	0.03
32.732	Piperitone	0.22
34.010	Neomenthyl acetate	0.18
34.199	Unidentified	0.01
35.070	Unidentified	0.02
35.218	Menthyl acetate	6.05
35.410	Dihydroedulan I	0.03
35.737	Unidentified	0.03
36.207	Isomenthyl acetate	0.10
36.393	Unidentified	0.01
36.565	Nonyl acetate	0.02
37.001	Menthyl acetate	0.02
37.965	Unidentified	0.01
38.939	Unidentified	0.02
39.026	Unidentified	0.01
40.403	alpha-Ylangene	0.01
40.829	alpha-Copaene	0.03
41.184	Unidentified	0.02
41.336	beta-Bourbonene	0.07
41.536	Unidentified	0.01
41.724	beta-Elemene	0.03
42.578	Unidentified	0.02
43.005	Unidentified	0.02
43.623	trans-beta-Caryophyllene	2.11
44.140	Unidentified	0.01
44.269	beta-Copaene	0.02
45.168	Isogermacrene D	0.01
45.588	trans-Murrola-3,5-diene	0.02
45.746	trans-beta-Farnesene	0.10
45.865	alpha-Humulene	0.05
47.098	gamma-Murolene	0.01
47.462	Germacrene D	0.59
48.090	Unidentified	0.01
48.355	Bicyclogermacrene	0.10
48.563	epsilon-Amorphene	0.07
49.434	gamma-Cadinene	0.01
49.744	delta-Cadinene	0.06
52.303	trans-Nerolidol	0.01
53.194	Spathulenol	0.01
53.502	Caryophyllene oxide	0.04
54.234	Viridiflorol	0.05
57.724	Unidentified	0.02
		100.00