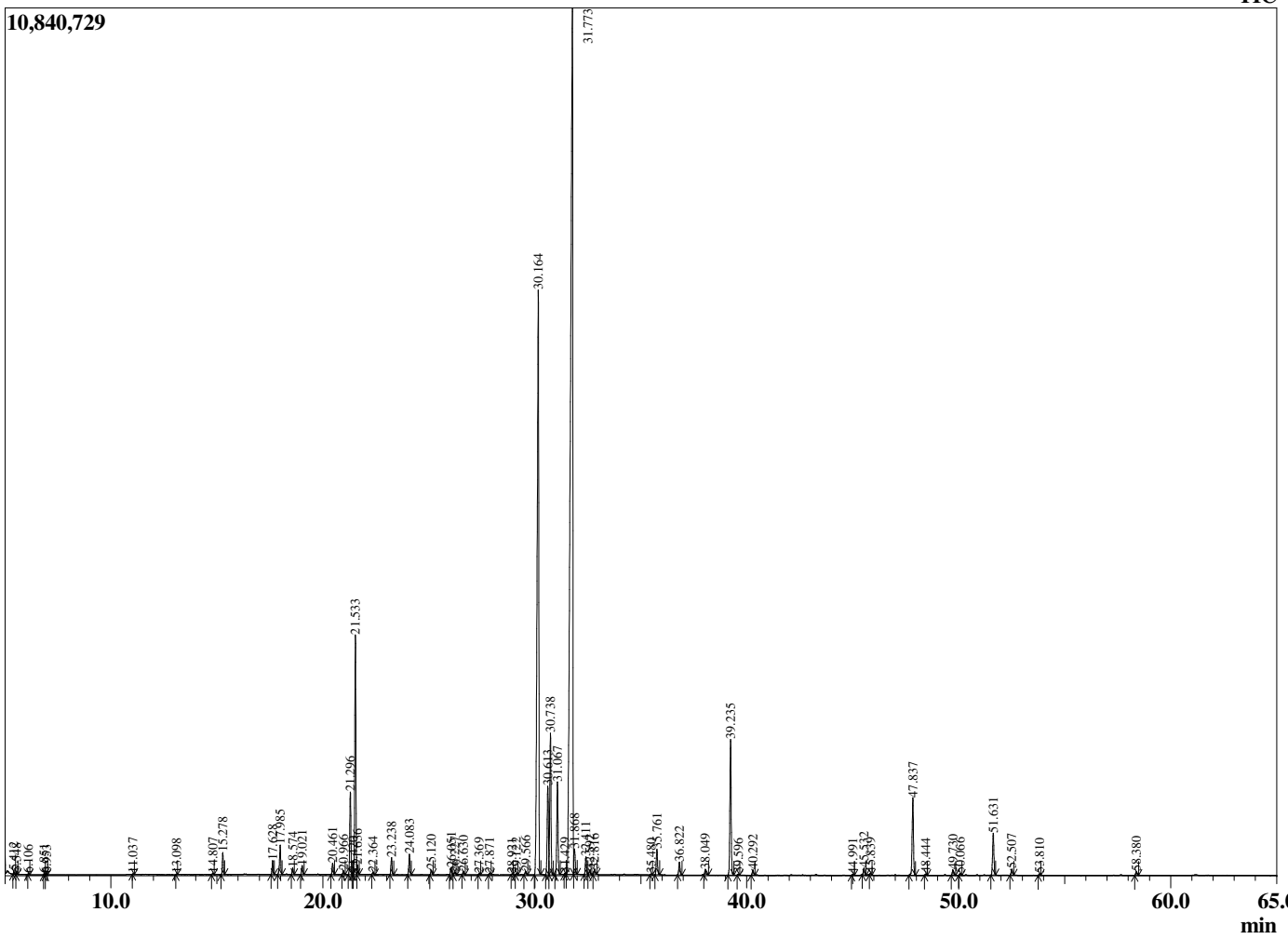
Sample Information

Analyzed by : Dr. Robert S. Pappas
Analyzed : 9/26/2018 8:15:07 AM
Sample Type : Essential Oil
Sample Name : Peppermint
Sample ID : D0B59655
Injection Volume : 0.10
Instrument ID: : GC-2

Chromatogram MenPip4



Peak Report TIC

R.Time	Name	Area%
5.412	Isovaleraldehyde	0.04
5.548	2-Methylbutanal	0.03
6.106	Unidentified	0.02
6.851	Isoamyl alcohol	0.02
6.953	2-Methylbutanol	0.02
11.037	3-cis-Hexenol	0.01
13.098	2,5-Diethyltetrahydrofuran	0.01
14.807	alpha-Thujene	0.03
15.278	alpha-Pinene	0.48
17.628	Sabinene	0.32
17.985	beta-Pinene	0.78
18.574	Myrcene	0.15
19.021	3-Octanol	0.21
20.461	alpha-Terpinene	0.28
20.966	para-Cymene	0.09
21.296	Limonene	2.09
21.420	beta-Phellandrene	0.04
21.533	1,8-Cineole	6.03
21.636	cis-beta-Ocimene	0.21
22.364	trans-beta-Ocimene	0.06
23.238	gamma-Terpinene	0.42
24.083	trans-Sabinene hydrate	0.52
25.120	Terpinolene	0.12
26.051	Linalool	0.18
26.227	cis-Sabinene hydrate	0.08
26.630	2-Methylbutyl isovalerate	0.09
27.369	3-Octyl acetate	0.03
27.871	cis-para-Menth-2-en-1-ol	0.04
28.921	trans-Sabinol	0.02
29.122	trans-para-Menth-2-en-1-ol	0.02
29.566	Isopulegol	0.09
30.164	Menthone	21.13
30.613	Menthofuran	2.52
30.738	Isomenthone	3.82
31.067	Neomenthol	2.61
31.429	trans-Isopulegone	0.02
31.773	Menthol	46.18
31.868	Terpinen-4-ol	0.72
32.411	Isomenthol	0.47
32.592	Neoisomenthol	0.12
32.816	alpha-Terpineol	0.14
35.480	3-Hexenyl isovalerate	0.02
35.761	Pulegone	0.71
36.822	Piperitone	0.36
38.049	Neomenthyl acetate	0.14
39.235	Menthyl acetate	3.87
39.596	Dihydroedulan I	0.03
40.292	Isomenthyl acetate	0.15
44.991	alpha-Copaene	0.03
45.532	alpha-Bourbonene	0.20
45.839	beta-Elemene	0.04
47.837	beta-Caryophyllene	2.34
48.444	beta-Copaene	0.03
49.730	trans-beta-Farnesene	0.16
50.066	alpha-Humulene	0.05
51.631	Germacrene D	1.25
52.507	Bicyclogermacrene	0.18
53.810	delta-Cadinene	0.04
58.380	Viridiflorol	0.11
		100.00

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.