

Sample Information

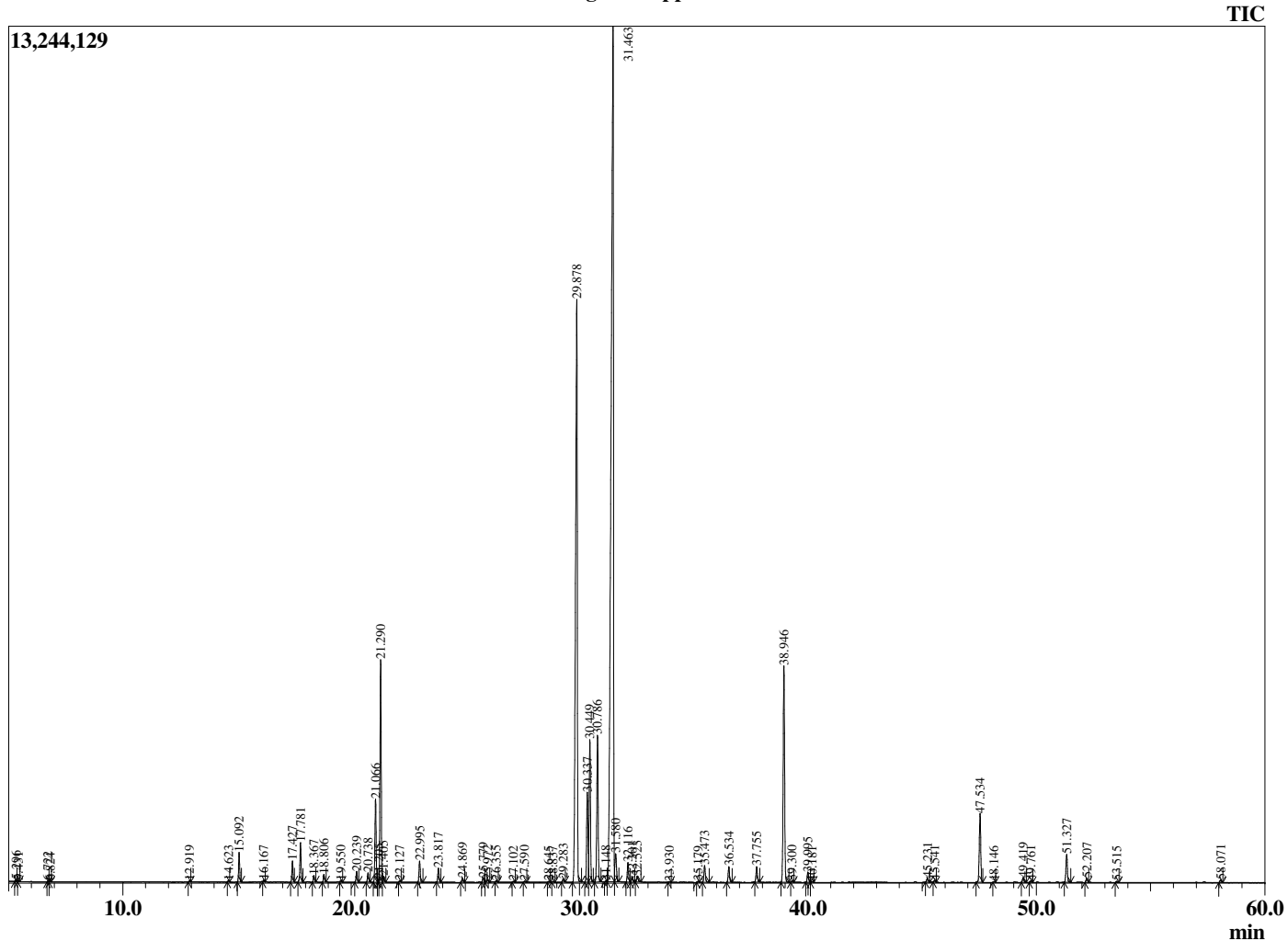
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 12/4/2019 5:03:31 PM  
 Sample Type : Essential Oil  
 Sample Name : Peppermint Oil  
 Sample ID : G0C1101G  
 Injection Volume : 0.10  
 Instrument ID : GC-3



Peak Report TIC

R.Time	Name	Area%
5.296	3-Methylbutanal	0.02
5.431	2-Methylbutanal	0.01
6.722	1-Pentanol	0.02
6.824	2-Methylbutanol	0.01
12.919	2,5-Diethyltetrahydrofuran	0.03
14.623	alpha-Thujene	0.03
15.092	alpha-Pinene	0.66
16.167	3-Methylcyclohexanone	0.04
17.427	Sabinene	0.49
17.781	beta-Pinene	0.98
18.367	Myrcene	0.16
18.806	3-Octanol	0.19
19.550	alpha-Phellandrene	0.04
20.239	alpha-Terpinene	0.27
20.738	para-Cymene	0.24
21.066	Limonene	2.10
21.205	beta-Phellandrene	0.05
21.290	1,8-cineole	5.54
21.405	cis-beta-Ocimene	0.15
22.127	trans-beta-Ocimene	0.03
22.995	gamma-Terpinene	0.55
23.817	trans-Sabinene hydrate	0.36
24.869	Terpinolene	0.11
25.779	Linalool	0.12
25.972	2-Methylbutyl 2-methylbutyrate	0.08
26.355	2-Methylbutyl isovalerate	0.04
27.102	3-Octyl acetate	0.03
27.590	cis-para-Menth-2-en-1-ol	0.03
28.645	trans-Sabinol	0.02
28.837	trans-para-Menth-2-en-1-ol	0.02
29.283	Neoisopulegol	0.09
29.878	Menthone	21.11
30.337	Menthofuran	2.54
30.449	Isomenthone	3.83
30.786	Neomenthol	4.13
31.148	trans-Isopulegone	0.02
31.463	Menthol	42.27
31.580	Terpinen-4-ol	0.86
32.116	Isomenthol	0.53
32.301	Neoisomenthol	0.16
32.523	alpha-Terpineol	0.19
33.930	Unidentified	0.02
35.179	Hex-(3Z)-enyl isovalerate	0.02
35.473	Pulegone	0.49
36.534	Piperitone	0.45
37.755	Neomenthyl acetate	0.45
38.946	Menthyl acetate	6.46
39.300	Dihydroedulan I	0.04
39.995	Isomenthyl acetate	0.29
40.181	Unidentified	0.02
45.231	beta-Bourbonene	0.12
45.541	beta-Elemene	0.04
47.534	beta-Caryophyllene	2.11
48.146	beta-Copaene	0.02
49.419	trans-beta-Farnesene	0.15
49.761	alpha-Humulene	0.04
51.327	Germacrene D	0.86
52.207	Bicyclogermacrene	0.13
53.515	delta-Cadinene	0.04
58.071	Viridiflorol	0.09
		100.00

Chromatogram Peppermint Oil



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.