

Sample Information

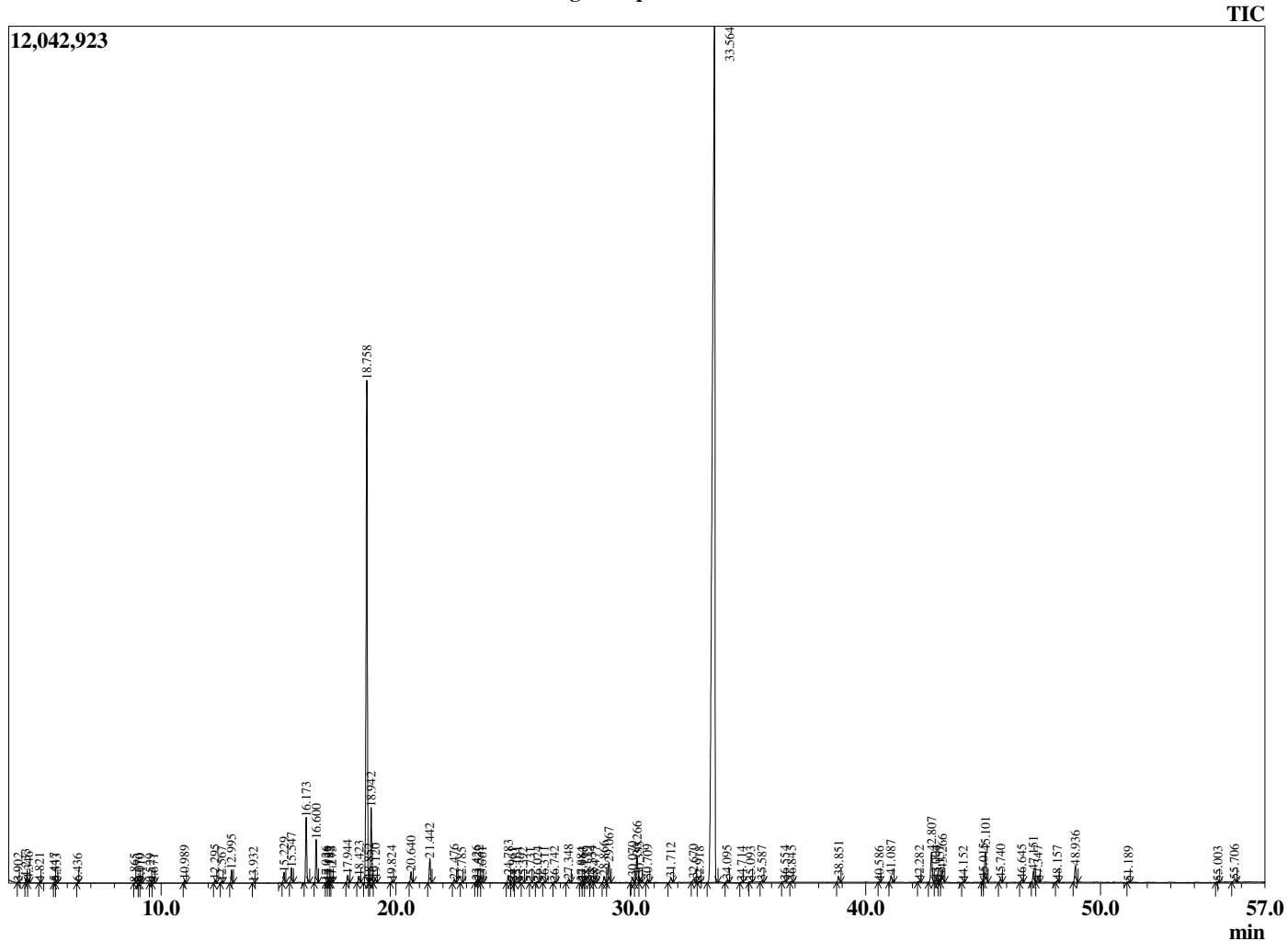
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 10/1/2020 3:22:41 AM  
 Sample Type : Essential Oil  
 Sample Name : Spearmint-Barefut  
 Sample ID : 0107  
 Injection Volume : 0.10  
 Instrument ID : GC-3



Peak Report TIC

R.Time	Name	Area%
3.902	Isobutyl alcohol	0.01
4.233	3-Methylbutanol	0.08
4.346	2-Methylbutanal	0.05
4.821	2-ethylfuran	0.02
5.447	1-Pentanol	0.02
5.533	2-Methyl butanol	0.02
6.436	Methyl 2-methylbutyrate	0.02
8.865	Ethyl 2-methylbutyrate	0.01
9.070	Hex-2(E)-enal	0.01
9.119	Hex-3(Z)-enol	0.02
9.529	Hex-2(E)-enol	0.01
9.671	Hexanol	0.01
10.989	2,5-Diethyltetrahydrofuran	0.08
12.295	Hashishene	0.09
12.567	alpha-Thujene	0.04
12.995	alpha-Pinene	0.38
13.932	Camphene	0.01
15.229	Sabinene	0.33
15.547	beta-Pinene	0.46
16.173	Myrcene	2.04
16.600	3-Octanol	1.33
17.026	Octanal	0.01
17.125	Pseudolimonene	0.03
17.182	Unidentified	0.01
17.275	alpha-Phellandrene	0.02
17.944	alpha-Terpinene	0.25
18.423	para-Cymene	0.23
18.758	Limonene	18.11
18.852	beta-Phellandrene	0.09
18.942	1,8-cineole	2.43
19.120	(Z)-beta-Ocimene	0.14
19.824	(E)-beta-Ocimene	0.05
20.640	gamma-Terpinene	0.38
21.442	trans-Sabinene hydrate	0.85
22.476	Terpinolene	0.10
22.785	para-Cymenene	0.02
23.426	Linalool	0.07
23.532	cis-Sabinene hydrate	0.07
23.661	2-Methylbutyl 2-methylbutyrate	0.02
24.783	3-Octyl acetate	0.28
24.961	trans-para-Mentha-2,8-dienol	0.03
25.161	cis-para-Mentha-2,8-dienol	0.05
25.392	Unidentified	0.02
25.731	cis-Limonene Oxide	0.01
26.024	trans-Limonene Oxide	0.04
26.311	trans-Pinocarveol	0.03
26.742	Camphor	0.04
27.348	Menthone	0.12
27.884	Unidentified	0.02
27.963	Unidentified	0.03
28.119	p-Mentha-1,5-dien-8-ol	0.04
28.334	delta-Terpineol	0.08
28.477	Borneol	0.03
28.866	Menthol	0.24
29.067	Terpinen-4-ol	0.80
30.070	alpha-Terpineol	0.23
30.266	cis-Dihydrocarvone	1.17
30.355	Dihydrocarveol	0.19
30.709	trans-Dihydrocarvone	0.11
31.712	trans-Carveol	0.21
32.670	cis-Carveol	0.15
32.918	cis-3-Hexenyl isovalerate	0.04

Chromatogram Spearmint-Barefut



Comments:

The analysis of this Spearmint batch sample meets the expected chemical profile for authentic essential oil of *Mentha spicata*. 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%
33.564	Carvone	62.10
34.095	Piperitone	0.09
34.714	Unidentified	0.03
35.093	Unidentified	0.02
35.587	Unidentified	0.06
36.554	Menthyl acetate	0.07
36.845	Dihydroedulan I	0.04
38.851	trans-Dihydrocarvyl acetate	0.23
40.586	Eugenol	0.01
41.087	cis-Carveyl acetate	0.27
42.282	alpha-Copaene	0.04
42.807	beta-Bourbonene	1.32
43.004	alpha-Bourbonene	0.09
43.157	beta-Elemene	0.07
43.266	(Z)-Jasmone	0.53
44.152	cis-beta-Caryophyllene	0.02
45.015	beta-Ylangene	0.08
45.101	trans-beta-Caryophyllene	1.32
45.740	beta-Copaene	0.12
46.645	cis-Murrola-3,5-diene	0.11
47.151	(E)-beta-Farnesene	0.45
47.347	alpha-Humulene	0.06
48.157	10-beta-H-Cadina1(6),4-diene	0.07
48.936	Germacrene D	0.68
51.189	delta-Cadinene	0.03
55.003	Unidentified	0.04
55.706	Viridiflorol	0.16
		100.00