

Sample Information

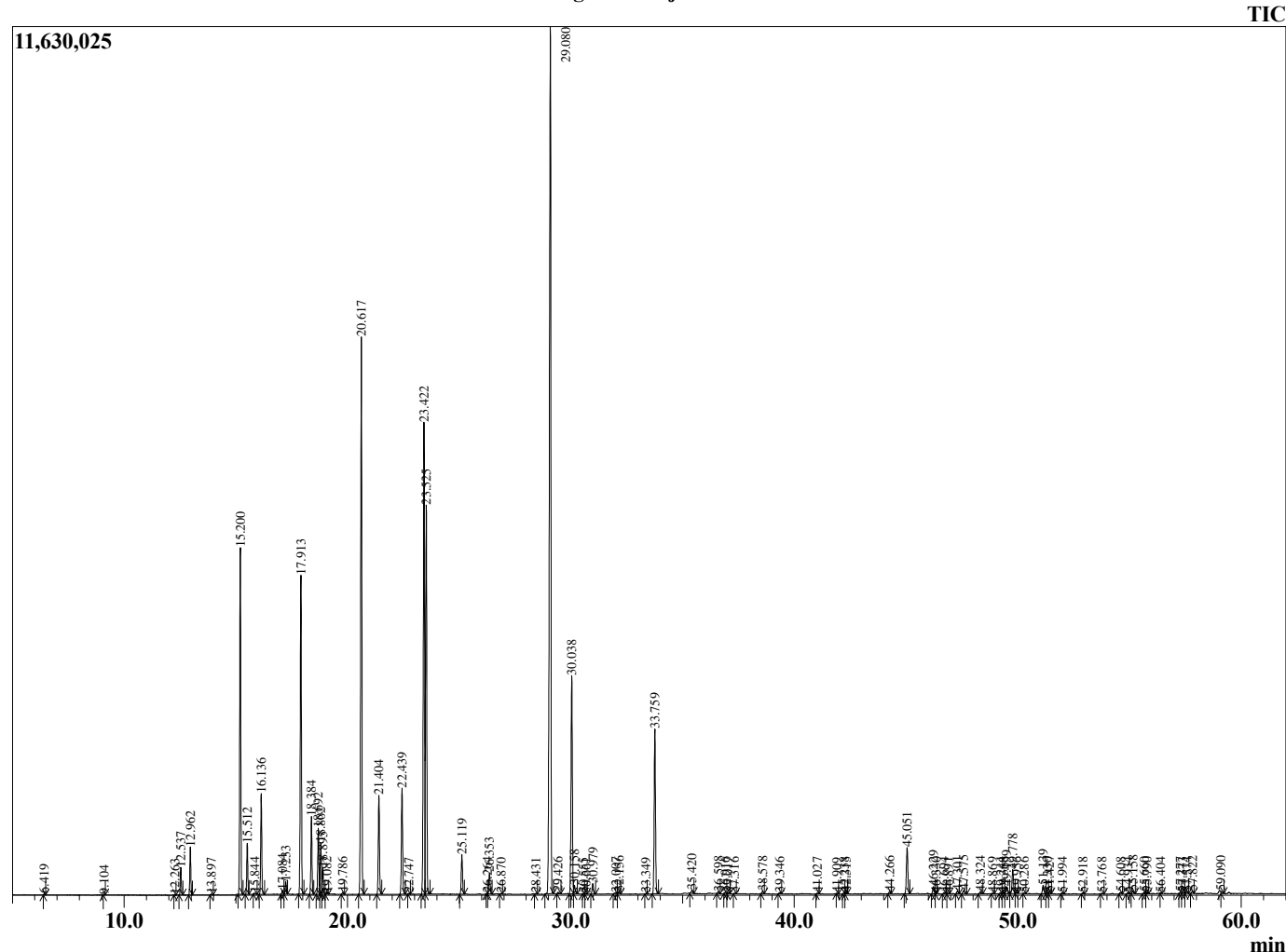
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 11/20/2020 3:28:56 AM  
 Sample Type : Essential Oil  
 Sample Name : Marjoram - Barefut  
 Sample ID : 0106  
 Injection Volume : 0.10  
 Instrument ID : GC-3



Peak Report TIC

R.Time	Name	Area%
6.419	Methyl 2-methylbutyrate	0.02
9.104	Hex-3(Z)-enol	0.01
12.263	Hashishene	0.01
12.537	alpha-Thujene	0.51
12.962	alpha-Pinene	0.92
13.897	Camphene	0.02
15.200	Sabinene	6.78
15.512	beta-Pinene	1.00
15.844	Unidentified+3-Octanone	0.03
16.136	Myrcene	2.01
17.084	Pseudolimonene	0.08
17.233	alpha-Phellandrene	0.26
17.913	alpha-Terpinene	6.79
18.384	para-Cymene	1.60
18.692	Limonene	1.42
18.802	beta-Phellandrene	1.09
18.895	1,8-Cineole	0.55
19.082	(Z)-beta-Ocimene	0.03
19.786	(E)-beta-Ocimene	0.04
20.617	gamma-Terpinene	12.17
21.404	trans-Sabinene hydrate	2.20
22.439	Terpinolene	2.41
22.747	para-Cymenene	0.01
23.422	Linalool	11.19
23.525	cis-Sabinene hydrate	9.13
25.119	cis-para-Menth-2-en-1-ol	0.91
26.264	Unidentified	0.01
26.353	trans-para-Menth-2-en-1-ol	0.51
26.870	Unidentified	0.01
28.431	Borneol	0.02
29.080	Terpinen-4-ol	24.23
29.426	para-Cymen-8-ol	0.04
30.038	alpha-Terpineol	5.39
30.158	cis-Piperitol	0.21
30.555	Unidentified	0.01
30.661	Unidentified	0.01
30.979	trans-Piperitol	0.26
32.007	Nerol	0.04
32.156	Citronellol	0.05
33.349	Carvone	0.01
33.759	Linalyl acetate	4.02
35.420	cis-Ascridol glycol	0.08
36.598	trans-Ascridol glycol	0.04
36.916	4-Terpinyl acetate	0.03
37.017	Unidentified	0.02
37.316	Unidentified	0.01
38.578	Unidentified	0.06
39.346	delta-Elementene	0.04
41.027	Neryl acetate	0.02
41.909	Unidentified	0.01
42.238	alpha-Copaene	0.04
42.313	Geranyl acetate	0.04
44.266	alpha-Gurjunene	0.06
45.051	trans-beta-Caryophyllene	1.26
46.229	Aromadendrene	0.19
46.330	Unidentified	0.01
46.694	Unidentified	0.03
46.891	trans-Murrola-3,5-diene	0.02
47.301	alpha-Humulene	0.07
47.575	Alloaromadendrene	0.11
48.324	10-beta-H-Cadina-1(6),4-diene	0.06
48.869	Germacrene D	0.02

Chromatogram Marjoram - Barefut



Comments:

The analysis of this Marjoram batch sample meets the expected chemical profile for authentic essential oil of *Origanum majorana*. 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%
49.244	Unidentified	0.03
49.368	beta-Selinene	0.03
49.499	Viridiflorene	0.20
49.778	Bicyclogermacrene	0.64
49.956	alpha-Murolene	0.02
50.286	(E,E)-Farnesene	0.01
51.139	delta-Cadinene	0.23
51.330	trans-Calamenene	0.02
51.427	Zonarene	0.05
51.994	trans-Cadina-1,4-diene	0.03
52.918	alpha-Elemol	0.03
53.768	Unidentified	0.02
54.608	Spathulenol	0.05
54.934	Caryophyllene oxide	0.03
55.158	Globulol	0.07
55.660	Viridiflorol	0.04
55.790	Guaiol	0.02
56.404	Unidentified	0.01
57.277	Unidentified	0.04
57.373	Unidentified	0.03
57.574	Unidentified	0.04
57.822	Unidentified	0.06
59.090	Unidentified	0.05
		100.00