

Sample Information

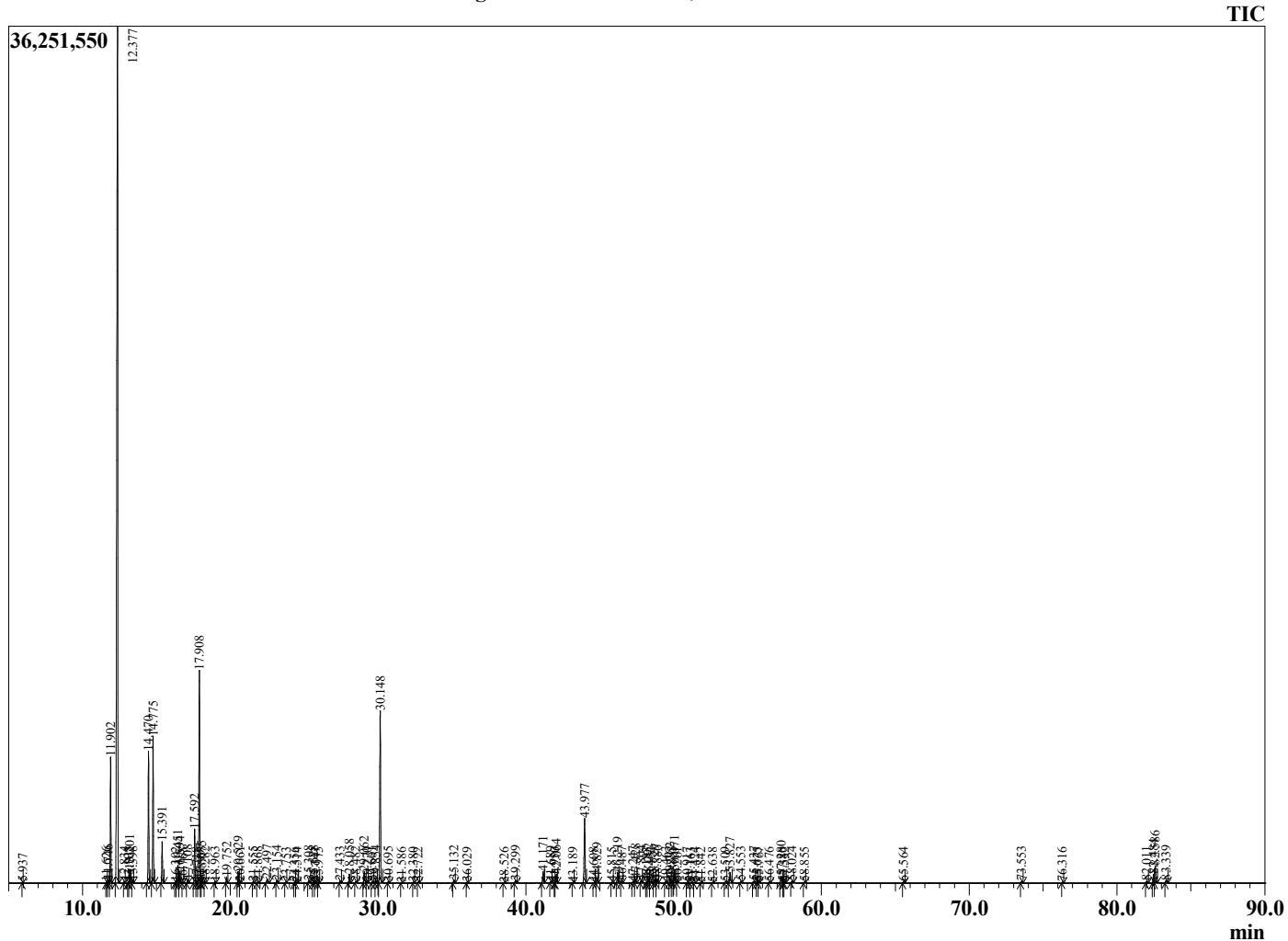
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 10/14/2021 6:46:02 PM  
 Sample Type : Essential Oil  
 Sample Name : *Boswellia carterii*, Somaliland - Barefut  
 Sample ID : 0110  
 Injection Volume : 0.10  
 Instrument ID : GC-4



Peak Report TIC

R.Time	Name	Area%
5.937	Toluene	0.02
11.626	Hashishene	0.05
11.746	Tricyclene	0.11
11.902	alpha-Thujene	4.44
12.377	alpha-Pinene	47.86
12.834	Thujadiene isomer	0.05
13.105	alpha-Fenchene	0.03
13.201	Camphene	0.46
13.398	Thuja-2,4(10)-diene	0.07
14.470	Sabinene	4.91
14.775	beta-Pinene	5.39
15.391	Myrcene	1.54
16.302	Pseudolimonene	0.05
16.451	alpha-Phellandrene	0.70
16.594	delta-3-Carene	0.45
16.768	Hexyl acetate	0.02
17.108	alpha-Terpinene	0.14
17.592	para-Cymene	2.14
17.718	Unidentified	0.03
17.908	Limonene	8.51
17.997	beta-Phellandrene	0.13
18.075	1,8-Cineole	0.27
18.282	cis-beta-Ocimene	0.05
18.963	trans-beta-Ocimene	0.06
19.752	gamma-Terpinene	0.25
20.529	1-Octanol	0.47
20.661	Pinol	0.06
21.555	Terpinolene	0.06
21.868	para-Cymenene	0.06
22.497	Linalool	0.21
23.154	Unidentified	0.11
23.753	beta-Thujone	0.03
24.356	alpha-Campholenal	0.03
24.514	Octyl formate	0.03
25.308	trans-Pinocarveol	0.11
25.628	trans-Verbenol	0.10
25.747	Camphor	0.03
25.975	Unidentified	0.05
27.433	alpha-Phellandrene-8-ol	0.09
28.058	Terpinen-4-ol	0.41
28.482	para-Cymen-8-ol	0.06
29.062	alpha-Terpineol	0.56
29.270	Unidentified	0.04
29.601	alpha-Phellandrene epoxide	0.06
29.854	Verbenone	0.10
30.148	Octyl acetate	8.18
30.695	trans-Carveol	0.06
31.586	cis-Carveol	0.03
32.380	Carvone	0.04
32.722	Carvotanacetone	0.04
35.132	Bornyl acetate	0.14
36.029	Carvacrol	0.04
38.526	delta-Elementene	0.02
39.299	alpha-Cubebene	0.13
41.171	alpha-Copaene	0.56
41.689	beta-Bourbonene	0.06
41.950	beta-Cubebene	0.02
42.064	beta-Elementene	0.42
43.189	alpha-Gurjunene	0.03
43.977	trans-beta-Caryophyllene	3.25
44.608	beta-Copaene	0.03
44.829	trans-alpha-Bergamotene	0.22

Chromatogram *Boswellia carterii*, Somaliland - Barefut



Comments:

The analysis of this Frankincense - *carterii* batch sample meets the expected chemical profile for authentic essential oil of *Boswellia carterii*. 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%
45.815	Cadina-3,5-diene	0.03
46.219	alpha-Humulene	0.53
46.487	Alloaromadendrene	0.09
47.247	trans-Cadina-1(6),4-diene	0.08
47.428	gamma-Murolene	0.21
47.804	Germacrene D	0.12
48.183	delta-Selinene	0.04
48.292	beta-Selinene	0.23
48.452	gamma-Amorphene	0.09
48.729	alpha-Selinene	0.20
48.886	alpha-Murolene	0.12
49.463	beta-Bisabolene	0.06
49.762	gamma-Cadinene	0.26
49.883	Cubebol	0.07
50.071	delta-Cadinene	0.60
50.261	trans-Calamenene	0.02
50.917	trans-Cadine-1,4-diene	0.03
51.163	alpha-Cadinene	0.03
51.424	alpha-Calacorene	0.03
51.842	alpha-Elemol	0.02
52.638	Unidentified	0.03
53.509	Spathulenol	0.05
53.827	Caryophyllene oxide	0.58
54.553	Viridiflorol	0.08
55.437	Humulene epoxide II	0.13
55.675	Eudesmol isomer	0.05
55.767	1,10-di-epi-Cubenol	0.05
56.476	Epicubenol	0.05
57.280	epi-alpha-Cadinol	0.39
57.380	alpha-epi-Murolol	0.02
57.532	alpha-Murolol	0.04
58.024	Cadin-4-en-10-ol	0.10
58.855	Unidentified	0.05
65.564	Phellandrene dimer	0.05
73.553	Neocembrene	0.08
76.316	Unidentified	0.04
82.011	Cembrenol	0.09
82.484	Incensole	0.46
82.586	Serratol	0.94
83.339	Incensyl acetate	0.16
		100.00