

Sample Information

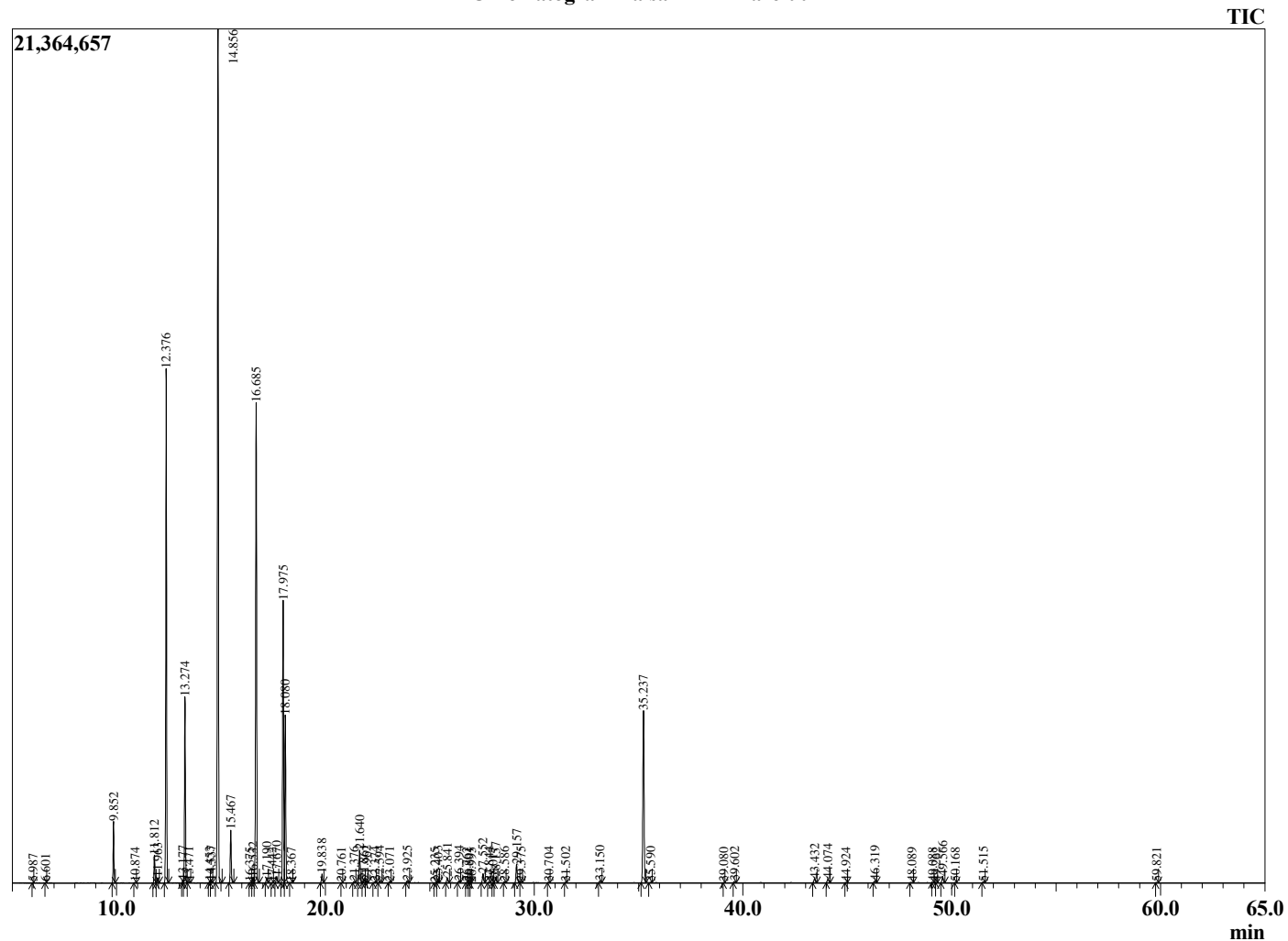
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 3/23/2021 5:00:22 PM
 Sample Type : Essential Oil
 Sample Name : Balsam Fir - Barefut
 Sample ID : 0105
 Injection Volume : 0.10
 Instrument ID : GC-4



Peak Report TIC

R.Time	Name	Area%
5.987	Toluene	0.01
6.601	1-Methoxyhexane	0.01
9.852	Santene	1.64
10.874	Unidentified	0.02
11.812	Tricyclene	0.82
11.963	alpha-Thujene	0.16
12.376	alpha-Pinene	15.20
13.177	alpha-Fenchene	0.07
13.274	Camphene	5.79
13.471	Thuja-2,4(10)diene	0.04
14.453	Unidentified	0.04
14.537	Sabinene	0.08
14.856	beta-Pinene	28.85
15.467	Myrcene	1.77
16.375	Pseudolimonene	0.02
16.532	alpha-Phellandrene	0.20
16.685	delta-3-Carene	16.65
17.190	alpha-Terpinene	0.19
17.442	Unidentified	0.01
17.670	para-Cymene	0.23
17.975	Limonene	9.99
18.080	beta-Phellandrene	5.86
18.367	Unidentified	0.01
19.838	gamma-Terpinene	0.33
20.761	Unidentified	0.00
21.376	Isoterpinolene	0.05
21.640	Terpinolene	1.24
21.861	Fenchone	0.12
21.962	para-Cymenene	0.06
22.374	Unidentified	0.05
22.594	Linalool	0.07
23.071	alpha-Thujone	0.03
23.925	alpha-Fenchol	0.08
25.235	Nopinone	0.01
25.403	trans-Pinocarveol	0.05
25.841	Camphor	0.20
26.394	trans-beta-Terpineol	0.06
26.762	trans-Pinocamphone	0.01
26.891	Pinocarvone	0.01
26.995	Unidentified	0.01
27.552	Borneol	0.36
27.844	Isopinocamphone	0.03
28.017	Unidentified	0.01
28.157	Terpinen-4-ol	0.23
28.586	Cryptone	0.04
29.157	alpha-Terpineol	0.78
29.375	Estragole	0.02
30.704	alpha-Fenchyl acetate	0.02
31.502	Thymol methyl ether	0.02
33.150	Piperitone	0.09
35.237	Bornyl acetate	7.43
35.590	Thymol	0.02
39.080	alpha-Terpinyl acetate	0.01
39.602	alpha-Longipinene	0.06
43.432	Junipene	0.19
44.074	trans-beta-Caryophyllene	0.18
44.924	trans-alpha-Bergamotene	0.01
46.319	alpha-Humulene	0.08
48.089	Unidentified	0.03
49.088	beta-Himachalene	0.01
49.262	delta-Amorphene	0.01
49.566	beta-Bisabolene	0.29

Chromatogram Balsam Fir - Barefut



Comments:

The analysis of this Balsam Fir batch sample meets the expected chemical profile for authentic essential oil of *Abies balsamea*. 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%
50.168	delta-Cadinene	0.01
51.515	(E)-alpha-Bisabolene	0.04
59.821	alpha-Bisabolol	0.01
		100.00