

Sample Information

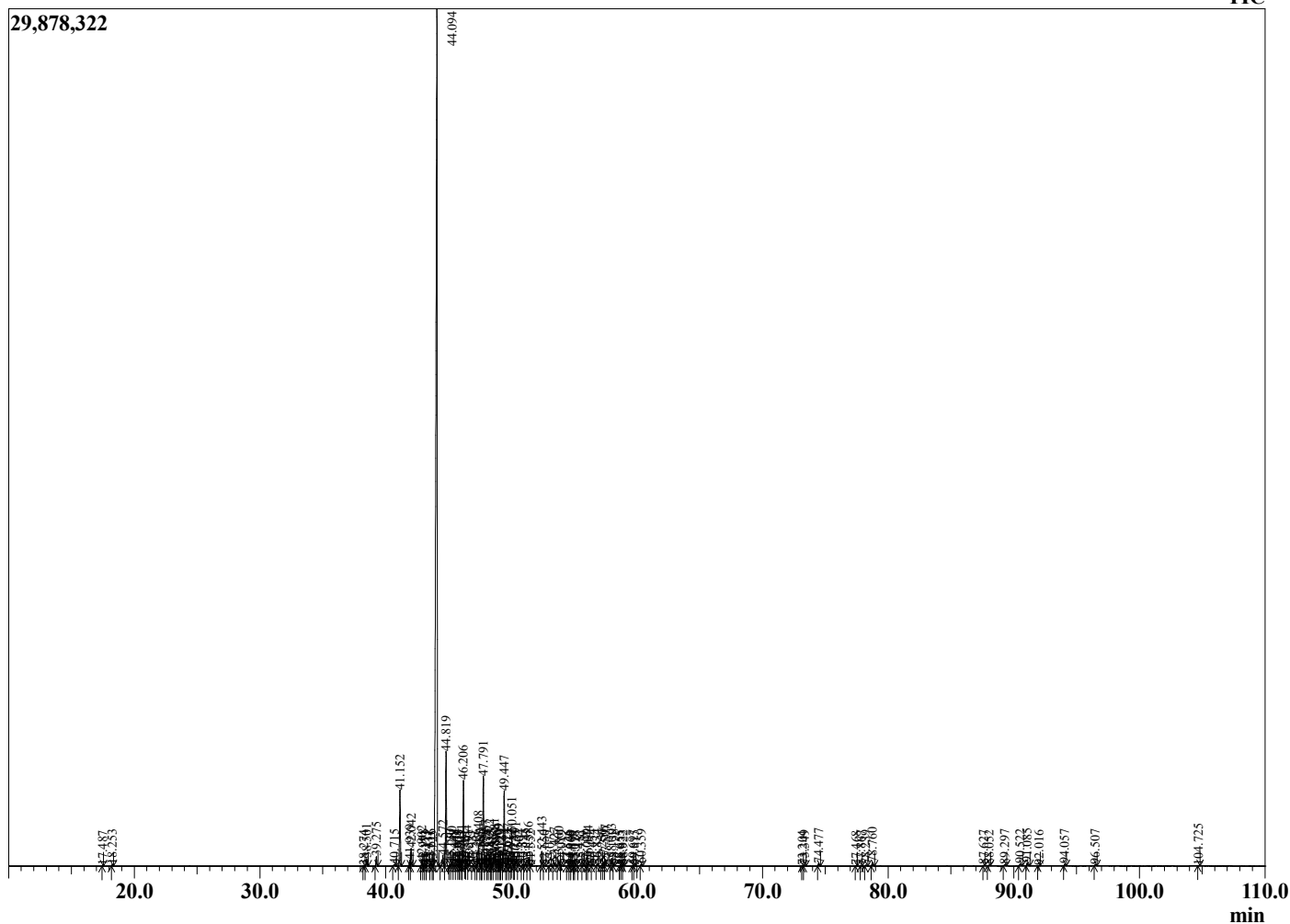
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 10/6/2021 5:00:52 PM
 Sample Type : Essential Oil
 Sample Name : Copaiba Balsam Oil - Barefut
 Sample ID : 0108
 Injection Volume : 0.10
 Instrument ID : GC-4



Peak Report TIC

R.Time	Name	Area%
17.487	Unidentified	0.01
18.253	cis-beta-Ocimene	0.05
38.274	Elemene isomer	0.03
38.501	delta-Elemene	0.33
39.275	alpha-Cubebene	0.41
40.715	alpha-Ylangene	0.09
41.152	alpha-Copaene	3.50
41.939	beta-Cubebene	0.25
42.042	beta-Elemene	0.82
42.902	Cyperene	0.25
42.998	cis-beta-Caryophyllene	0.06
43.173	alpha-Gurjunene	0.02
43.411	Unidentified	0.04
43.616	cis-alpha-Bergamotene	0.09
43.725	Unidentified	0.01
44.094	trans-beta-Caryophyllene	63.68
44.572	gamma-Elemene	0.59
44.819	trans-alpha-Bergamotene	5.32
45.130	beta-Copaene	0.06
45.280	cis-beta-Farnesene	0.19
45.448	beta-Humulene	0.05
45.674	epi-beta-Santalene	0.09
45.801	trans-Murrola-3,5-diene	0.03
45.905	Unidentified	0.01
46.051	trans-beta-Farnesene	0.16
46.206	alpha-Humulene	4.11
46.331	Sesquisabinene	0.01
46.464	Alloaromadendrene	0.21
46.591	Unidentified	0.01
46.927	Unidentified	0.03
47.226	cis-Cadina-1(6),4-diene	0.08
47.408	trans-Cadina-1(6),4-diene	1.02
47.585	gamma-Curcumene	0.07
47.680	alpha-Amorphene	0.08
47.791	Germacrene D	4.18
47.967	(cis,trans)-alpha-Farnesene	0.54
48.154	delta-Selinene	0.04
48.272	beta-Selinene	0.55
48.415	Unidentified	0.05
48.485	trans-Murrola-4(14),5-diene	0.16
48.681	Bicyclgermacrene	0.76
48.864	alpha-Murolene	0.31
48.999	cis-alpha-Bisabolene	0.34
49.129	delta-Amorphene	0.06
49.229	Unidentified	0.07
49.447	beta-Bisabolene	3.45
49.624	cis-gamma-Bisabolene	0.14
49.737	gamma-Cadinene	0.36
49.914	Unidentified	0.12
50.051	delta-Cadinene	1.58
50.244	cis-Calamenene	0.03
50.391	beta-Sesquiphellandrene	0.46
50.562	trans-gamma-Bisabolene	0.04
50.893	trans-Cadina-1,4-diene	0.07
51.145	Unidentified	0.12
51.386	trans-alpha-Bisabolene	0.43
51.552	Unidentified	0.02
52.443	Germacrene B	0.68
52.650	Unidentified	0.03
53.072	Unidentified	0.05
53.427	Caryolan-8-ol	0.19
53.800	Caryophyllene oxide	0.23

Chromatogram Copaiba Balsam Oil - Barefut



Comments:

The analysis of this Copaiba Balsam batch sample meets the expected chemical profile for authentic essential oil of *Copaifera langsdorffii*. 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%
54.019	Globulol	0.04
54.526	Viridiflorol	0.04
54.663	Unidentified	0.02
54.800	Unidentified	0.01
55.018	Unidentified	0.01
55.127	Ledol	0.05
55.482	Unidentified	0.08
55.739	1-10-di-epi-Cubenol	0.03
56.049	Unidentified	0.08
56.144	Humulane-1,6-dien-3-ol	0.28
56.454	Epicubenol	0.06
56.834	Unidentified	0.05
57.256	tau-Cadinol	0.09
57.356	epi-alpha-Muurolol	0.21
57.507	delta-Cadinol	0.32
58.003	alpha-Cadinol	0.44
58.158	Unidentified	0.06
58.655	trans-Bisabolol-11-ol	0.01
58.833	Unidentified	0.03
58.922	epi-beta-bisabolol	0.04
59.697	cis-alpha-Bisabolol	0.04
59.815	trans-alpha-Bisabolol	0.03
60.359	Juniper camphor	0.09
73.204	Unidentified	0.01
73.349	Unidentified	0.04
74.477	Kolaveolol	0.12
77.468	Unidentified	0.01
77.867	Kaurene	0.02
78.239	Manool analogue	0.06
78.760	Unidentified	0.16
87.627	Unidentified	0.03
88.052	Unidentified	0.05
89.297	Unidentified	0.08
90.522	Copalol	0.12
91.085	Kolavenol	0.17
92.016	Unidentified	0.02
94.057	Unidentified	0.09
96.507	Unidentified	0.07
104.725	Unidentified	0.01
		100.00