

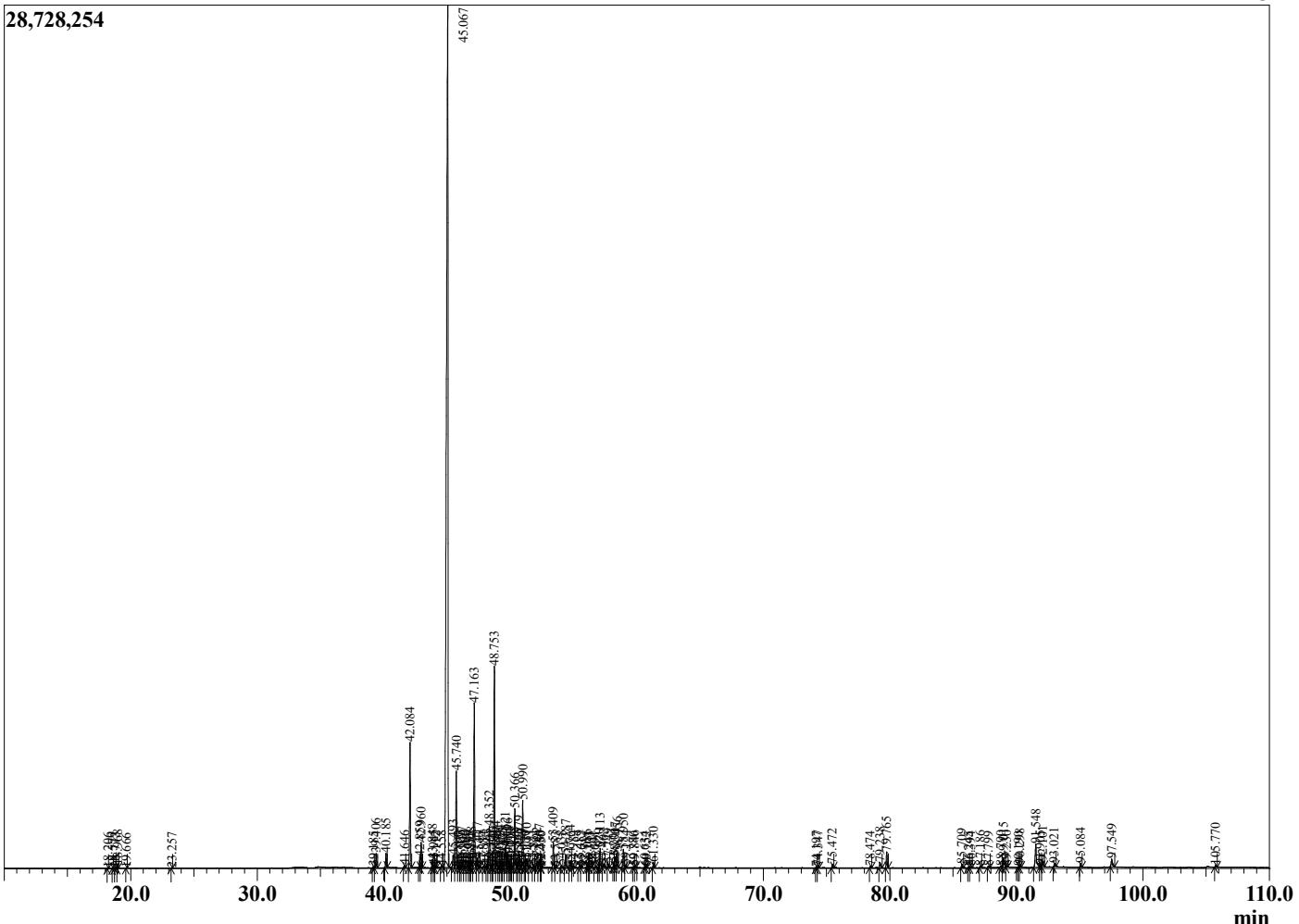
Sample Information

Analyzed by : Dr. Robert S. Pappas
 Analyzed : 2/21/2022 10:13:36 PM
 Sample Type : Essential Oil
 Sample Name : Copaiba balsam - Revive
 Sample ID : 2017
 Injection Volume : 0.10
 Instrument ID: : GC-3



Peak Report TIC

R.Time	Name	Area%
18.206	para-Menth-1-ene	0.01
18.579	Limonene	0.01
18.773	1,8-Cineole	0.01
18.968	cis-beta-Ocimene	0.07
19.666	trans-beta-Ocimene	0.01
23.257	Linalool	0.01
39.185	delta-Elemene isomer	0.04
39.406	delta-Elemene	0.47
40.185	alpha-Cubebene	0.45
41.646	alpha-Ylangene	0.08
42.084	alpha-Copaene	4.13
42.859	beta-Cubebene	0.37
42.960	beta-Elemene	0.84
43.848	Cyperene	0.29
43.945	cis-beta-Caryophyllene	0.07
44.112	alpha-Gurjunene	0.03
44.558	cis-alpha-Bergamotene	0.04
45.067	trans-beta-Caryophyllene	55.22
45.493	gamma-Elemene	0.54
45.740	trans-alpha-Bergamotene	3.25
45.890	Unidentified	0.02
46.075	Aromadendrene	0.07
46.197	cis-beta-Farnesene	0.17
46.390	beta-Humulene	0.08
46.609	epi-beta-Santalene	0.07
46.739	Cadina-3,5-diene	0.05
46.855	Unidentified	0.02
46.948	trans-beta-Farnesene	0.19
47.163	alpha-Humulene	5.66
47.417	Alloaromadendrene	0.33
47.543	cis-Muurola-4(14),5-diene	0.03
47.884	Unidentified	0.04
48.163	Cadina-1(6),4-diene	0.12
48.352	gamma-Muurolene	1.51
48.501	gamma-Curcumene	0.09
48.640	alpha-Amorphene	0.13
48.753	Germacrene D	7.01
48.894	trans-beta-Bergamotene	0.40
49.094	delta-Selinene	0.06
49.224	beta-Selinene	0.26
49.375	Viridiflorene	0.09
49.423	trans-Murrola-4(14),5-diene	0.21
49.621	Bicyclogermacrene	0.84
49.796	alpha-Muurolene	0.49
49.914	cis-alpha-Bisabolene	0.21
50.070	delta-Amorphene	0.10
50.118	Unidentified	0.09
50.366	beta-Bisabolene	1.99
50.549	cis-gamma-Bisabolene	0.14
50.679	gamma-Cadinene	0.54
50.824	Unidentified	0.14
50.990	delta-Cadinene	2.23
51.170	trans-Calamenene	0.05
51.310	beta-Sesquiphellandrene	0.40
51.493	trans-gamma-Bisabolene	0.04
51.831	trans-Cadina-1,4-diene	0.10
52.092	alpha-Cadinene	0.16
52.307	trans-alpha-Bisabolene	0.31
52.385	Selina-3,7(11)-diene	0.04
52.450	Unidentified	0.01
53.409	Germacrene B	0.84
53.583	Unidentified	0.02



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%
54.038	Maaliol	0.08
54.387	Caryophyllene alcohol	0.46
54.764	Caryophyllene oxide	0.27
54.984	Globulol	0.08
55.489	Viridiflorol	0.08
55.612	Cubeban-11-ol	0.02
56.086	Ledol	0.08
56.203	Rosifoliol	0.01
56.333	Cedrol	0.05
56.691	1,10-di-epi-Cubenol	0.02
57.020	Unidentified	0.09
57.113	Humulane-1,6-dien-3-ol	0.73
57.402	Epicubenol	0.13
57.749	Unidentified	0.12
58.201	epi-alpha-Cadinol	0.16
58.307	epi-alpha-Muurolol	0.39
58.456	alpha-Muurolol	0.50
58.950	Cadin-4-en-10-ol	0.69
59.124	Intermedeol	0.06
59.780	Unidentified	0.04
59.846	epi-beta-Bisabolol	0.05
60.634	epi-alpha-Bisabolol	0.03
60.752	alpha-Bisabolol	0.02
61.330	Juniper camphor	0.17
74.197	Unidentified	0.02
74.347	Unidentified	0.06
75.472	Unidentified	0.13
78.474	Kolavelool analogue	0.05
79.238	Manool	0.22
79.765	Kolavelool analogue	0.56
85.709	Unidentified isomer I	0.13
86.245	Unidentified isomer I	0.03
86.394	Unidentified isomer I	0.03
87.186	Manool analogue	0.06
87.799	Unidentified	0.07
88.790	Unidentified	0.06
89.015	Kolavelool analogue	0.47
89.230	Unidentified	0.04
90.190	Unidentified	0.03
90.298	Methyl copalate analogue	0.11
91.548	Copalol	1.24
91.905	Unidentified	0.09
92.101	Kolavenol analogue	0.23
93.021	Kolavelool analogue	0.12
95.084	Unidentified	0.13
97.549	Unidentified	0.38
105.770	Unidentified	0.08
		100.00