

Sample Information

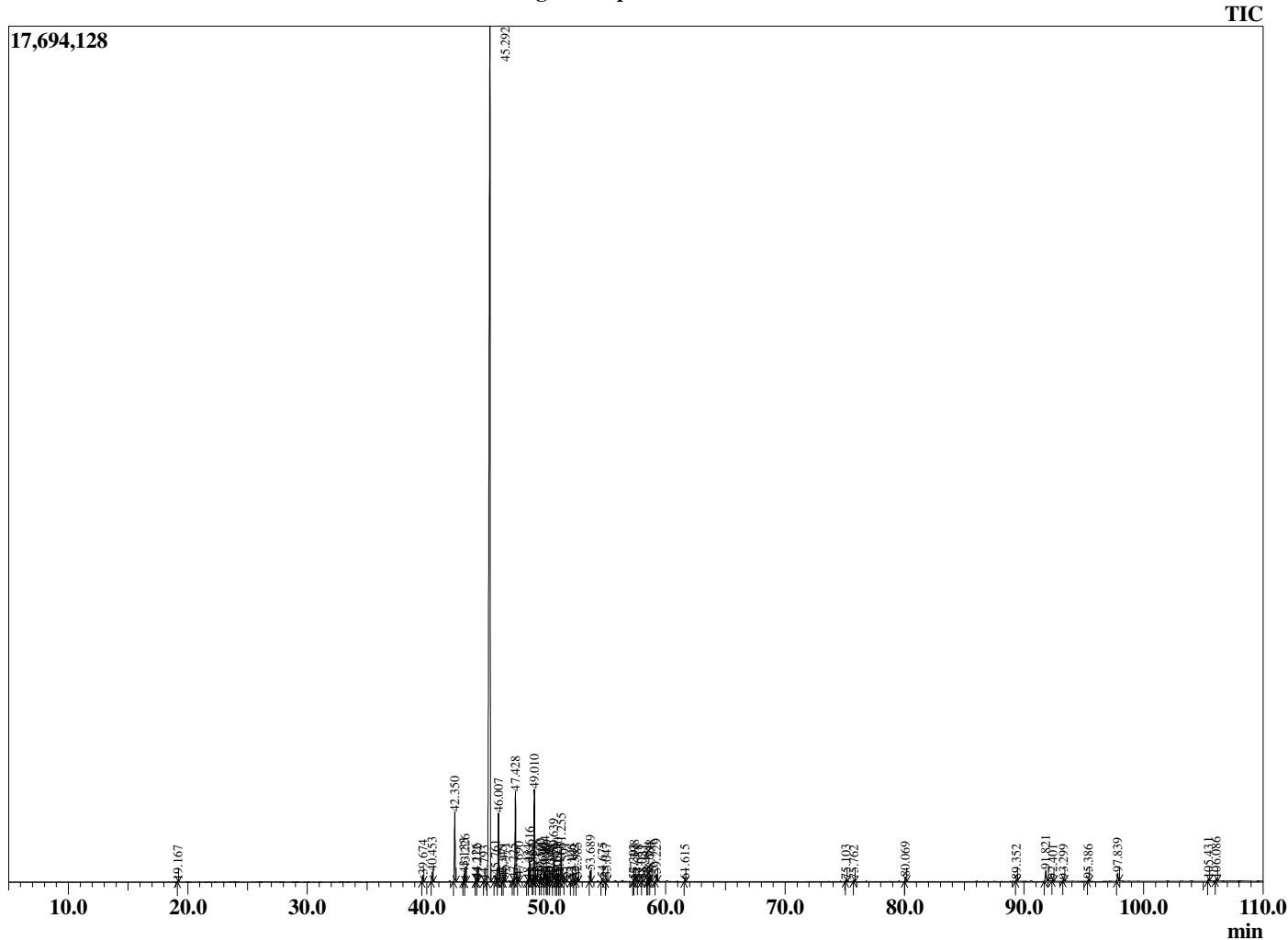
Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 5/15/2020 4:14:01 AM  
 Sample Type : Essential Oil  
 Sample Name : Copaiba Balsam - Barefut  
 Sample ID : 0107  
 Injection Volume : 0.10  
 Instrument ID : GC-3



Peak Report TIC

R.Time	Name	Area%
19.167	cis-beta-Ocimene	0.05
39.674	delta-Elemene	0.32
40.453	alpha-Cubebene	0.47
42.350	alpha-Copaene	3.54
43.133	beta-Cubebene	0.40
43.226	beta-Elemene	0.65
44.126	Cyperene	0.15
44.212	cis-beta-Caryophyllene	0.09
44.793	cis-alpha-Bergamotene	0.04
45.292	beta-Caryophyllene	67.94
45.761	gamma-Elemene	0.43
46.007	trans-alpha-Bergamotene	3.49
46.345	Aromadendrene	0.06
46.471	cis-beta-Farnesene	0.20
47.225	trans-beta-Farnesene	0.10
47.428	alpha-Humulene	4.63
47.690	Alloaromadendrene	0.23
48.434	10-beta-H-Cadina-1(6),4-diene	0.08
48.616	trans-Cadina-1(6),4-diene	1.00
48.884	alpha-Amorphene	0.05
49.010	Germacrene D	4.77
49.178	Unidentified	0.31
49.500	beta-Selinene	0.34
49.696	trans-Murrola-4(14),5-diene	0.17
49.904	Bicyclogermacrene	0.64
50.069	alpha-Murolene	0.31
50.189	cis-alpha-Bisabolene	0.09
50.348	Unidentified	0.09
50.639	beta-Bisabolene	1.51
50.829	Unidentified	0.13
50.950	gamma-Cadinene	0.41
51.111	Unidentified	0.07
51.255	delta-Cadinene	1.75
51.591	beta-Sesquiphellandrene	0.23
52.106	trans-Cadina-1,4-diene	0.10
52.362	alpha-Cadinene	0.13
52.585	trans-alpha-Bisabolene	0.22
53.689	Germacrene B	0.54
54.675	Caryophyllene alcohol	0.22
55.047	Caryophyllene oxide	0.20
57.303	Unidentified	0.07
57.398	Humulane-1,6-dien-3-ol	0.35
57.688	1-epi-Cubenol	0.05
58.031	Unidentified	0.06
58.481	tau-Cadinol	0.10
58.584	epi-alpha-Cadinol	0.25
58.738	delta-Cadinol	0.32
59.229	alpha-Cadinol	0.40
61.615	Juniper camphor	0.08
75.103	Kolavetool	0.08
75.762	Unidentified	0.05
80.069	Unidentified	0.24
89.352	Unidentified	0.09
91.821	Copalic acid	0.73
92.401	Kolavenol	0.07
93.299	Unidentified	0.09
95.386	Unidentified	0.11
97.839	Unidentified	0.49
105.431	Unidentified	0.08
106.086	Unidentified	0.13
		100.00

Chromatogram Copaiba Balsam - 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.