



Essential Validation Services





Sample:

Client: | Nature's Fusions
Sample: | Copaiba (Copaifera officinalis)
Batch # | NF-COPA-18A
Cas Number | 8001-61-4
Type: | Essential Oil

Conclusion:

- No adulterants, diluents, or contaminants were detected via this method.
- This oil meets the expected profile for genuine essential oil of Copaiba (Copaifera officinalis).

X 

Validated By:



Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

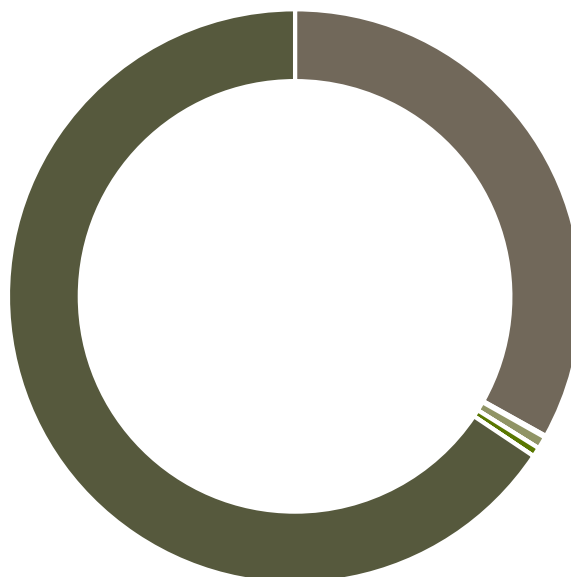
Phone: 317-361-5044 E-mail: Adam@essentialvalidationservices.com

Summary of Analyses

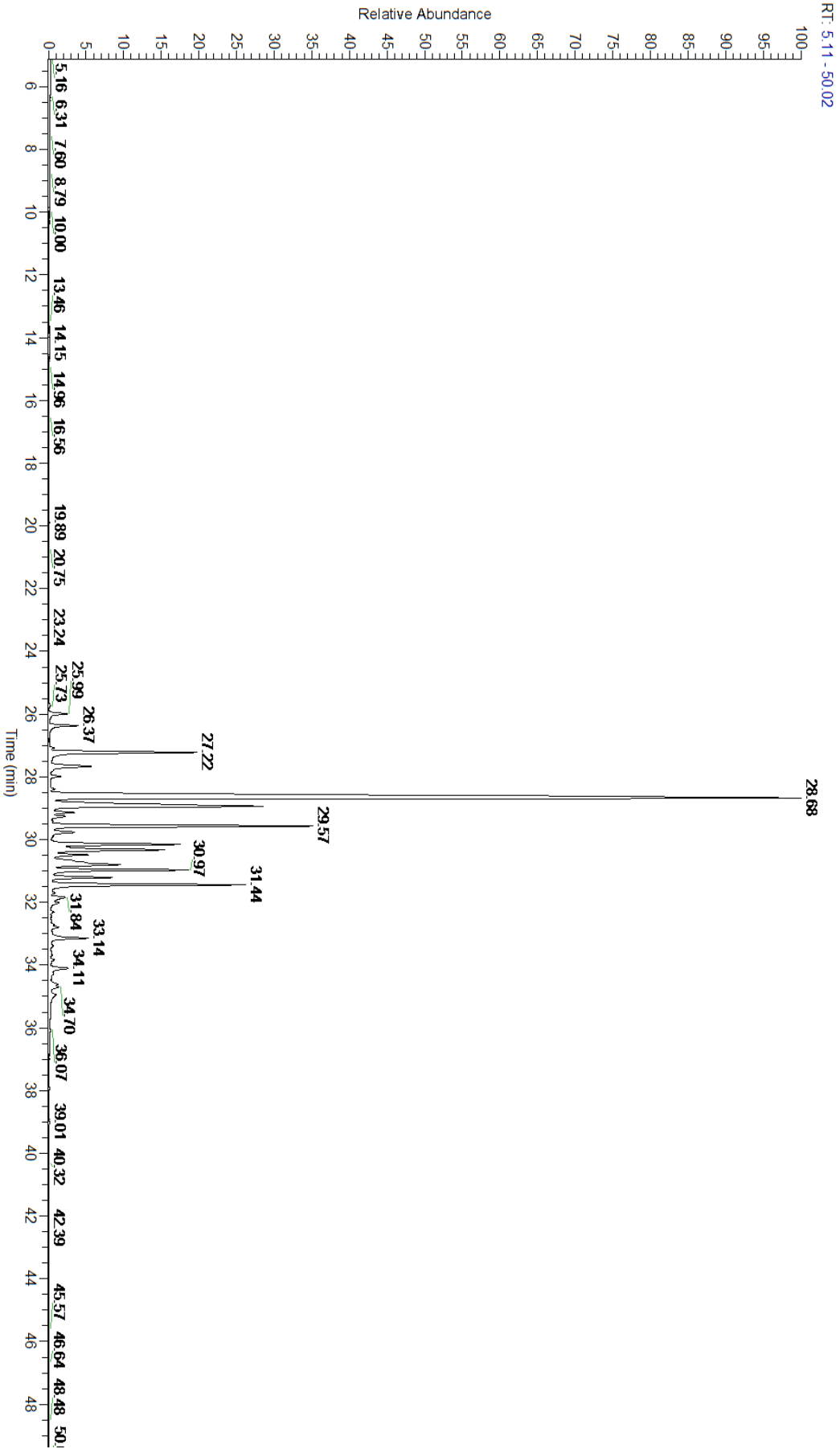
A fresh sample of Copaiba (Copaifera officinalis) Essential Oil (10 uL in .5 to .5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

Main Compounds	Percentages
beta-Caryophyllene	39.05%
trans-alpha-Bergamotene	9.75%
alpha-Humulene	8.38%
delta-Cadinene	6.06%
alpha-Copaene	4.85%
Germacrene D	4.15%
beta-Bisabolene	4.12%
gamma-Muurolene	4.01%
alpha-Muurolene	3.89%
beta-Elemene	1.78%
gamma-Cadinene	1.75%
Caryophyllene oxide	1.38%
beta-Selinene (Co-Eluting)	1.13%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
0.00%	94.29%	0.28%	1.97%	0.00%
Esters	Ethers	Aldehydes	Phenols	Other
0.00%	1.49%	0.00%	0.00%	1.97%



- Monoterpenes ■ Sesquiterpenes ■ Monoterpenols
- Sesquiterpenols ■ Ketones ■ Esters
- Ethers ■ Phenols ■ Other





Total Percentage		98.03%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	25.99	0.64%	delta- Elemene	1335.83	Sesquiterpene
2	26.37	0.99%	alpha- Cubebene	1355.71	Sesquiterpene
3	26.95	0.01%	Cyclosativene	1370.50	Sesquiterpene
4	27.07	0.13%	alpha- Ylangene	1371.33	Sesquiterpene
5	27.22	4.85%	alpha- Copaene	1379.00	Sesquiterpene
6	27.44	0.09%	alpha- Ylangene	1371.33	Sesquiterpene
7	27.67	1.78%	beta- Elemene	1389.20	Sesquiterpene
8	27.99	0.31%	Cyperene	1397.67	Sesquiterpene
9	28.40	0.11%	cis- alpha- Bergamotene	1411.50	Sesquiterpene
10	28.68	39.05%	beta- Caryophyllene	1427.14	Sesquiterpene
11	28.94	9.75%	trans- alpha- Bergamotene	1435.00	Sesquiterpene
12	29.14	0.70%	Aromadendrene	1449.80	Sesquiterpene
13	29.27	0.44%	beta- Copaene	1445.00	Sesquiterpene
14	29.42	0.03%	trans- Murrola- 3, 5- diene	1456.75	Sesquiterpene
15	29.57	8.38%	alpha- Humulene	1461.43	Sesquiterpene
16	29.77	0.82%	Alloaromadendrene	1471.00	Sesquiterpene
17	30.15	4.01%	gamma- Muurolene	1478.86	Sesquiterpene
18	30.33	4.15%	Germacrene D	1484.71	Sesquiterpene
19	30.49	1.13%	beta- Selinene	1487.57	Sesquiterpene
20	30.66	Co- Eluting	trans- Muurola- 4(14), 5- diene	1493.10	Sesquiterpene
21	30.80	3.89%	alpha- Muurolene	1500.25	Sesquiterpene
22	30.97	4.12%	beta- Bisabolene	1509.86	Sesquiterpene
23	31.21	1.75%	gamma- Cadinene	1515.29	Sesquiterpene
24	31.44	6.06%	delta- Cadinene	1524.14	Sesquiterpene
25	31.70	0.10%	trans- Cadina- 1, 4- diene	1462.50	Sesquiterpene
26	31.84	0.64%	alpha- Cadinene	1537.86	Sesquiterpene
27	32.02	0.34%	beta- Calacorene	1555.50	Sesquiterpene
28	32.31	0.09%	epi- Longipinanol		
29	32.44	0.02%	Germacrene B	1557.71	Sesquiterpene
30	32.71	0.09%	Maaliol	1565.00	Sesquiterpenol
31	32.80	0.28%	Caryophyllenyl alcohol	1570.00	Monoterpenol
32	32.96	0.06%	Spathulenol	1587.00	Sesquiterpenol
33	33.14	1.38%	Caryophyllene oxide	1594.86	Sesquiterpene Ether
34	33.38	0.10%	Viridiflorol	1596.00	Sesquiterpenol
35	33.84	0.11%	Humulene epoxide II	1606.43	Sesquiterpene Ether
36	34.11	0.73%	junenol	1625.00	Sesquiterpenol
37	34.27	0.10%	1- epi- Cubenol	1628.00	Sesquiterpenol
38	34.62	0.28%	T- Cadinol	1640.43	Sesquiterpenol
39	34.70	0.27%	alpha- Muurolol	1649.33	Sesquiterpenol
40	34.95	0.34%	alpha- Cadinol	1655.00	Sesquiterpenol
41	36.07	0.03%	Eudesm- 7(11)- en- 4- ol		