



Essential Oil University

GC/MS Report

Item	Lot
Copaiba Balsam EO <i>Copaifera langsdorffii</i>	8B
Date	Analyst
7/25/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Copaiba Balsam EO, 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.



Sample Information

Company: Revive**Sample Name:** Copaiba Balsam EO**Botanical Name:** *Copaifera langsdorffii***Lot Number:** 8B**Production Method:** Extrusion**Sample Type:** EO - Single**Country of Origin:** Brazil**Analysis Date:** 7/25/2025**Manufacture Date:** July 2025

GC/MS

Inst. ID: Shimadzu GCMS-QP2010Ultra**Injection Type:** Split**Split Ratio:** 24.4**Column Type:** ZB-5**Injection Volume:** 0.1 µL**Temperature Program:** 2C/min

Physical Data

ANALYSIS

Optical Rotation @20°C

Refractive Index @20°C

Specific Gravity @20°C

METHOD

USP[781]

USP[831]

USP[841]

RESULTS

-15.24

1.50496

0.93028



Ret. Time	Component	Ret. Idx.	Conc. %	
17.132	Unidentified	1021	0.01%	
17.501	Limonene	1026	0.01%	IFRA
17.898	cis-beta-Ocimene	1032	0.08%	
24.008	allo-Ocimene	1125	0.02%	
37.801	delta-Elemene	1328	0.05%	
38.025	delta-Elemene	1332	0.38%	
38.800	alpha-Cubebene	1343	0.46%	
40.244	alpha-Ylangene	1366	0.1%	
40.678	alpha-Copaene	1372	4.13%	
41.084	Elemene isomer	1378	0.02%	
41.189	Unidentified	1380	0.01%	
41.459	beta-Cubebene	1384	0.27%	
41.568	beta-Elemene	1386	1.04%	
41.867	Unidentified	1390	0.02%	
42.407	Cyperene	1399	0.19%	
42.518	cis-beta-Caryophyllene	1400	0.06%	
42.684	alpha-Gurjunene	1403	0.03%	
43.155	cis-alpha-Bergamotene	1410	0.1%	
43.625	beta-Caryophyllene	1418	59.46%	
44.010	Unidentified	1424	0.05%	
44.093	gamma-Elemene	1425	0.85%	
44.342	trans-alpha-Bergamotene	1429	4%	
44.644	Aromadendrene	1434	0.07%	
44.803	Sesquisabinene	1437	0.19%	
44.951	Unidentified	1439	0.05%	
45.200	epi-beta-Santalene	1443	0.06%	
45.314	cis-Murrola-3,5-diene	1445	0.04%	
45.424	Isogermacrene D	1447	0.03%	
45.579	trans-beta-Farnesene	1449	0.16%	
45.722	alpha-Humulene	1452	3.96%	
45.849	Sesquisabinene	1454	0.04%	
45.980	Alloaromadendrene	1456	0.28%	
46.107	cis-Cadina-1(6),4-diene	1458	0.02%	
46.429	Unidentified	1463	0.04%	
46.741	trans-Cadina-1(6),4-diene	1468	0.1%	
46.939	gamma-Murolene	1471	1.14%	
47.107	Unidentified	1474	0.07%	
47.319	Germacrene D	1477	6.05%	
47.479	trans-beta-Bergamotene	1480	0.39%	
47.669	Unidentified	1483	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %
47.786	beta-Selinene	1485	0.59%
47.960	Valencene	1487	0.1%
48.002	trans-Murrola-4(14),5-diene	1488	0.16%
48.192	Bicyclogermacrene	1491	0.94%
48.383	alpha-Murolene	1494	0.38%
48.522	cis-alpha-Bisabolene	1497	0.16%
48.640	Cadinene isomer	1498	0.08%
48.751	Unidentified	1500	0.05%
48.964	beta-Bisabolene	1504	1.64%
49.131	cis-gamma-Bisabolene	1507	0.19%
49.254	gamma-Cadinene	1509	0.42%
49.375	Unidentified	1511	0.05%
49.574	delta-Cadinene	1514	1.86%
49.909	beta-Sesquiphellandrene	1520	0.36%
50.077	trans-gamma-Bisabolene	1523	0.04%
50.406	trans-Cadina-1,4-diene	1528	0.08%
50.657	Unidentified	1532	0.15%
50.906	trans-alpha-Bisabolene	1537	0.29%
51.072	Unidentified	1539	0.01%
51.718	Unidentified	1550	0.02%
51.947	Germacrene B	1554	1.05%
52.151	Unidentified	1558	0.03%
52.576	Unidentified	1565	0.06%
52.930	Caryophyllene alcohol	1571	0.25%
53.303	Caryophyllene oxide	1577	0.16%
53.530	Globulol	1581	0.08%
53.798	Unidentified	1585	0.02%
54.030	Viridiflorol	1589	0.08%
54.179	Cubeban-11-ol	1592	0.03%
54.526	Unidentified	1598	0.01%
54.632	Ledol	1600	0.07%
54.761	Rosifoliol	1602	0.01%
54.888	Unidentified	1604	0.02%
55.250	1,10-di-epi-Cubenol	1611	0.02%
55.570	Unidentified	1616	0.06%
55.638	Humulane-1,6-dien-3-ol	1617	0.39%
55.710	Unidentified	1619	0.04%
55.962	Epicubenol	1623	0.1%
56.355	Unidentified	1630	0.09%
56.772	epi-alpha-Cadinol	1638	0.17%



Ret. Time	Component	Ret. Idx.	Conc. %	
56.874	epi-alpha-Muurolol	1639	0.32%	
57.024	delta-Cadinol	1642	0.36%	
57.160	Unidentified	1645	0.01%	
57.517	Cadin-4-en-10-ol	1651	0.55%	
57.670	Intermedeol	1654	0.07%	
58.348	Unidentified	1666	0.07%	
58.430	Unidentified	1667	0.04%	
59.207	alpha-Bisabolol	1681	0.07%	IFRA
59.329	Unidentified	1683	0.02%	
59.870	Unidentified	1693	0.21%	
64.257	Unidentified	1774	0.01%	
72.685	Unidentified	1941	0.02%	
72.837	Unidentified	1944	0.04%	
73.961	Unidentified	1967	0.12%	
74.220	Unidentified	1972	0.04%	
76.945	Unidentified	2030	0.04%	
77.472	Unidentified	2041	0.03%	
77.705	Manool	2046	0.1%	
78.233	Unidentified	2057	0.52%	
84.184	Unidentified	2189	0.08%	
84.710	Unidentified	2201	0.02%	
84.872	Unidentified	2205	0.03%	
85.638	Unidentified	2223	0.07%	
86.250	Unidentified	2237	0.06%	
87.260	Unidentified	2261	0.02%	
87.458	Kolavelool analogue	2266	0.58%	
88.761	Unidentified	2296	0.09%	
89.670	Unidentified	2319	0.02%	
90.008	Copalol	2327	0.77%	
90.361	Unidentified	2336	0.05%	
90.553	Kolavelool	2340	0.16%	
91.492	Unidentified	2363	0.18%	
92.196	Unidentified	2380	0.05%	
93.534	Unidentified	2414	0.07%	
95.406	Unidentified	2461	0.02%	
95.895	Unidentified	2474	0.03%	
96.007	Unidentified	2477	0.39%	
97.688	Unidentified	2520	0.02%	
98.819	Unidentified	2550	0.02%	
102.088	Unidentified	2638	0.02%	



Ret. Time	Component	Ret. Idx.	Conc. %	
103.591	Unidentified	2679	0.12%	
104.204	Unidentified	2696	0.08%	
104.452	Unidentified	2703	0.02%	

Total Identified Compounds **96.46 %**

