



GC/MS Report

GC2

Item	Lot
98401-52	13538
<i>Copaifera langsdorffii</i> Copaiba Balsam EO	
Date	Analyst
9/16/2025	K. S

Sample Information

Sample Name: Copaiba

Botanical Name: Copaifera langsdorffii

Lot Number: 13538

Production Method: Extrusion

Sample Type: EO - Single

Country of Origin: Brazil

Analysis Date: 9/16/2025

Manufacture Date: September 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	METHOD	RESULTS
Optical Rotation @20°C	USP[781]	-14.28
Refractive Index @20°C	USP[831]	1.50302
Specific Gravity @20°C	USP[841]	0.92972

Ret. Time	Component	Ret. Idx.	Conc. %	
17.949	Unidentified	1015	0.01%	
18.319	Limonene	1021	0.01%	IFRA
18.715	cis-beta-Ocimene	1027	0.07%	
24.930	allo-Ocimene	1119	0.01%	
38.891	Elemene isomer	1322	0.04%	
39.113	delta-Elemene	1325	0.34%	
39.892	alpha-Cubebene	1337	0.48%	
40.101	Eugenol	1340	0.02%	IFRA
41.352	alpha-Ylangene	1359	0.1%	
41.788	alpha-Copaene	1366	4.09%	
42.184	Elemene isomer	1372	0.02%	
42.305	Unidentified	1373	0.02%	
42.568	beta-Cubebene	1377	0.31%	
42.670	beta-Elemene	1379	1.04%	
42.987	Copaene isomer	1384	0.02%	
43.552	Cyperene	1392	0.21%	
43.641	cis-beta-Caryophyllene	1394	0.05%	
43.815	beta-Maaliene	1396	0.03%	
44.102	alpha-Gurjunene	1401	0.02%	
44.253	cis-alpha-Bergamotene	1403	0.08%	
44.385	alpha-Cedrene	1405	0.01%	IFRA
44.746	beta-Caryophyllene	1411	57.43%	
45.206	gamma-Elemene	1418	0.92%	
45.454	trans-alpha-Bergamotene	1422	4.53%	
45.783	Aromadendrene	1427	0.09%	
45.915	cis-beta-Farnesene	1430	0.22%	
46.106	beta-Humulene	1433	0.06%	
46.326	epi-beta-Santalene	1436	0.08%	
46.450	trans-Murrola-3,5-diene	1438	0.05%	
46.563	Isogermacrene D	1440	0.03%	
46.678	trans-beta-Farnesene	1442	0.17%	
46.863	alpha-Humulene	1445	4.64%	
47.125	Alloaromodendrene	1449	0.33%	
47.252	cis-Muurolo-4(14),5-diene	1451	0.03%	
47.593	Unidentified	1456	0.04%	
47.877	trans-Cadina-1(6),4-diene	1461	0.12%	
48.064	gamma-Muurolene	1464	1.31%	
48.227	gamma-Curcumene	1466	0.09%	
48.365	alpha-Amorphene	1469	0.17%	
48.458	Germacrene D	1470	6.4%	

Ret. Time	Component	Ret. Idx.	Conc. %	
48.617	trans-beta-Bergamotene	1473	0.47%	
48.809	delta-Selinene	1476	0.05%	
48.935	beta-Selinene	1478	0.68%	
49.100	Viridiflorene	1480	0.11%	
49.140	trans-Murrola-4(14),5-diene	1481	0.2%	
49.344	Bicyclogermacrene	1484	1.05%	
49.517	alpha-Muurolene	1487	0.45%	
49.640	cis-alpha-Bisabolene	1489	0.18%	
49.785	delta-Amorphene	1491	0.1%	
49.860	Caparratriene	1492	0.06%	
50.089	beta-Bisabolene	1496	2%	
50.271	cis-gamma-Bisabolene	1499	0.19%	
50.398	gamma-Cadinene	1501	0.51%	
50.540	Cubebol	1503	0.07%	
50.708	delta-Cadinene	1506	2.19%	
50.896	cis-Calamenene	1509	0.04%	
51.035	beta-Sesquiphellandrene	1512	0.37%	
51.216	trans-gamma-Bisabolene	1515	0.04%	
51.554	trans-Cadina-1,4-diene	1520	0.1%	
51.812	alpha-Cadinene	1525	0.18%	
52.038	trans-alpha-Bisabolene	1529	0.36%	
53.124	Germacrene B	1547	1.2%	
53.304	beta-Calacorene	1550	0.03%	
53.752	Unidentified	1557	0.06%	
54.100	Caryophyllene alcohol	1563	0.26%	
54.481	Caryophyllene oxide	1569	0.2%	
54.696	Globulol	1573	0.08%	
54.956	Unidentified	1577	0.02%	
55.205	Viridiflorol	1582	0.08%	
55.340	Guaiol	1584	0.03%	
55.682	Unidentified	1590	0.01%	
55.805	Ledol	1592	0.07%	
55.936	Rosifoliol	1594	0.01%	
56.097	Unidentified	1597	0.03%	
56.418	1,10-di-epi-Cubenol	1602	0.03%	
56.765	Unidentified	1608	0.07%	
56.828	Humulane-1,6-dien-3-ol	1609	0.45%	
57.025	Unidentified	1613	0.01%	
57.127	1-Epicubenol	1615	0.11%	
57.488	Unidentified	1621	0.09%	

Ret. Time	Component	Ret. Idx.	Conc. %	
57.651	alpha-Acorenol	1624	0.02%	
57.926	tau-Cadinol	1629	0.15%	
58.032	epi-alpha-Cadinol	1631	0.36%	
58.184	delta-Cadinol	1633	0.39%	
58.345	Unidentified	1636	0.01%	
58.676	alpha-Cadinol	1642	0.57%	
58.843	Unidentified	1645	0.08%	
59.187	Unidentified	1651	0.03%	
59.327	Unidentified	1653	0.05%	
59.568	epi-beta-Bisabolol	1658	0.2%	
59.734	cis-alpha-Santalol	1661	0.1%	
60.370	epi-alpha-Bisabolol	1672	0.03%	IFRA
60.498	alpha-Bisabolol	1674	0.04%	IFRA
61.058	Unidentified	1684	0.21%	
62.018	Santalol isomer	1701	0.04%	
73.934	Unidentified	1930	0.02%	
74.082	Unidentified	1933	0.02%	
75.213	Unidentified	1956	0.08%	
75.466	Unidentified	1961	0.02%	
78.213	Unidentified	2018	0.03%	
78.740	Unidentified	2030	0.03%	
78.979	Manool isomer	2035	0.08%	
79.507	Kolavelool isomer	2046	0.42%	
85.456	Unidentified	2176	0.05%	
86.139	Unidentified	2192	0.02%	
86.936	Manool isomer	2210	0.04%	
87.546	Unidentified	2224	0.03%	
88.759	Kolavelool isomer	2253	0.28%	
90.000	Unidentified	2281	0.02%	
90.060	Unidentified	2283	0.06%	
90.988	Unidentified	2305	0.01%	
91.287	Copalol isomer	2312	0.19%	
91.864	Kolavelool isomer	2326	0.17%	
92.784	Kolavelool isomer	2348	0.03%	
93.501	Kolavelool isomer	2366	0.05%	
94.851	Unidentified	2398	0.07%	
97.314	Unidentified	2461	0.03%	
99.020	Unidentified	2504	0.02%	
103.427	Unidentified	2620	0.01%	

Total Identified Compounds 98.73 %

GC/MS Report: Chromatogram

TIC
41,001,959

