



Essential Oil University

GC/MS Report

Item	Lot
Palo Santo (Wood) EO <i>Bursera graveolens</i>	3J
Date	Analyst
12/12/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Palo Santo (Wood) EO, meets the expected chemical profile for authentic essential oil of *Bursera graveolens*. 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: Palo Santo (Wood) EO
Botanical Name: Bursera graveolens
Lot Number: 3J
Production Method: Steam Distilled

Sample Type: EO - Single
Country of Origin: Ecuador
Analysis Date: 12/12/2025
Manufacture Date: December 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]	+43.80
Refractive Index @20°C	USP[831]	1.48007
Specific Gravity @20°C	USP[841]	0.89018



Ret. Time	Component	Ret. Idx.	Conc. %	
8.652	3-Methylcyclopentanone	836	0.02%	
12.536	alpha-Pinene	923	0.07%	ALLERGEN
13.554	3-Methylcyclohexanone	941	0.02%	
15.380	Unidentified	973	0.02%	
15.460	Unidentified	974	0.03%	
15.630	Myrcene	977	0.24%	PROP. 65
16.545	Unidentified	993	0.02%	
16.690	alpha-Phellandrene	996	0.15%	
17.355	alpha-Terpinene	1006	0.01%	ALLERGEN
17.830	para-Cymene	1014	1.11%	
18.152	Limonene	1018	64.24%	ALLERGEN IFRA
18.239	beta-Phellandrene	1020	0.02%	
18.322	1,8-Cineole	1021	0.03%	
19.991	gamma-Terpinene	1046	0.03%	
21.802	Terpinolene	1073	0.03%	ALLERGEN
22.110	para-Cymenene	1078	0.02%	
22.739	Linalool	1087	0.02%	ALLERGEN IFRA
24.238	trans-para-Mentha-2,8-dienol	1109	0.06%	
24.855	Unidentified	1118	0.01%	
25.003	cis-Limonene oxide	1120	0.04%	
25.233	cis-para-Mentha-2,8-dienol	1124	0.05%	
25.300	trans-Limonene oxide	1125	0.04%	
26.134	cis-beta-Terpineol	1137	0.06%	ALLERGEN
26.603	Menthone	1143	0.14%	
27.123	Menthofuran	1151	17.54%	
27.200	Isomenthone	1152	0.16%	
27.388	Unidentified	1154	0.02%	
27.575	delta-Terpineol	1157	0.05%	ALLERGEN
27.949	trans-Isopulegone	1163	0.03%	
28.095	Unidentified	1165	0.02%	
28.157	Unidentified	1165	0.03%	
28.300	Terpinen-4-ol	1168	0.03%	
29.296	alpha-Terpineol	1182	9.16%	ALLERGEN
29.496	cis-Dihydrocarvone	1185	0.12%	
29.628	Isopiperitenol isomer	1187	0.05%	
29.943	trans-Dihydrocarvone	1191	0.01%	
30.655	Unidentified	1201	0.04%	
30.915	trans-Carveol	1205	0.07%	
31.818	cis-Carveol	1218	0.04%	
32.237	Pulegone	1224	0.56%	PROP. 65



Ret. Time	Component	Ret. Idx.	Conc. %	
32.617	Carvone	1230	0.79%	ALLERGEN IFRA
33.200	Unidentified	1238	0.02%	
38.806	delta-Elemene	1321	0.04%	
39.395	Unidentified	1329	0.02%	
39.513	Menthafurolactone isomer I	1331	0.14%	
39.601	Menthafurolactone isomer II	1333	0.17%	
40.298	Neryl acetate	1343	0.03%	
41.043	alpha-Ylangene	1354	0.03%	
41.458	alpha-Copaene	1361	0.05%	
42.245	beta-Cubebene	1373	0.03%	
42.348	beta-Elemene	1374	0.08%	
44.169	beta-Ylangene	1402	0.05%	
44.285	Unidentified	1404	0.02%	
44.894	beta-Copaene	1413	0.04%	
45.228	cis-Thujopsene	1419	0.03%	
45.752	Unidentified	1427	0.04%	
46.105	Aromadendrene	1433	0.16%	
47.560	Unidentified	1456	0.02%	
47.715	gamma-Murolene	1458	0.19%	
48.091	Germacrene D	1464	2.48%	
48.574	beta-Selinene	1472	0.04%	
48.805	trans-Murrola-4(14),5-diene	1476	0.04%	
48.941	Menthallactone isomer	1478	0.24%	
49.175	alpha-Murolene	1481	0.07%	
49.541	trans,trans-alpha-Farnesene	1487	0.2%	
49.755	Unidentified	1491	0.03%	
50.047	gamma-Cadinene	1495	0.1%	
50.357	delta-Cadinene	1500	0.24%	
50.793	Menthallactone isomer	1508	0.03%	
50.940	Unidentified	1510	0.06%	
52.337	Unidentified	1534	0.03%	
56.437	Humulane-1,6-dien-3-ol	1602	0.07%	
57.642	Unidentified	1624	0.02%	
57.798	Unidentified	1626	0.01%	

Total Identified Compounds **99.56 %**



TIC
17,157,838

