



Sample & Analysis Information

Sample Information

Sample Name: Frankincense Boswellia Carterri**Botanical Name:** Boswellia carterii**Lot Number:** 13004**Production Method:** Hydrodistillation**Sample Type:** EO - Single**Country of Origin:** Somaliland**Analysis Date:** 2/4/2025**Manufacture Date:** February 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

-7.88

1.47156

0.87090

Ret. Time	Component	Ret. Idx.	Conc. %	
5.814	Toluene	762	0.05%	IFRA
7.797	6,6-Dimethylhepta-2,4-diene	832	0.01%	
9.570	Unidentified	879	0.01%	
10.835	Unidentified	909	0.02%	
11.367	Hashishene	918	0.09%	
11.484	Tricyclene	921	0.1%	
11.638	alpha-Thujene	923	2.86%	
12.099	alpha-Pinene	932	47.97%	
12.560	Thujadiene isomer	940	0.04%	
12.824	alpha-Fenchene	945	0.02%	
12.917	Camphene	947	0.78%	
13.115	Thuja-2,4(10)-diene	951	0.21%	
14.100	Cymene isomer	969	0.06%	
14.172	Sabinene	970	4.35%	
14.469	beta-Pinene	976	4.15%	
15.091	Myrcene	987	2.83%	
15.505	Unidentified	995	0.01%	
15.985	Pseudolimonene	1003	0.02%	
16.070	Unidentified	1004	0.06%	
16.135	alpha-Phellandrene	1005	1.59%	
16.276	delta-3-Carene	1007	0.56%	
16.453	Hexyl acetate	1010	0.02%	
16.784	alpha-Terpinene	1015	0.13%	
17.271	para-Cymene	1023	2.74%	
17.387	Unidentified	1025	0.06%	
17.581	Limonene	1028	9.45%	IFRA
17.669	beta-Phellandrene	1029	0.38%	
17.736	1,8-Cineole	1030	0.17%	
17.955	cis-beta-Ocimene	1033	0.11%	
18.630	trans-beta-Ocimene	1044	0.07%	
18.819	Unidentified	1047	0.02%	
19.410	gamma-Terpinene	1056	0.75%	
20.194	1-Octanol	1068	0.26%	
20.309	Pinol	1070	0.03%	
21.205	Terpinolene	1083	0.11%	
21.520	para-Cymenene	1088	0.11%	
22.066	Perillene	1097	0.04%	
22.146	Linalool	1098	0.21%	IFRA
22.599	Isoamyl isovalerate	1105	0.03%	
22.789	Unidentified	1107	0.03%	

Ret. Time	Component	Ret. Idx.	Conc. %	
23.032	Unidentified	1111	0.02%	
23.384	beta-Thujone	1116	0.06%	IFRA
23.533	Myrcenol	1118	0.05%	
23.635	trans-para-Mentha-2,8-dienol	1120	0.03%	
23.821	cis-para-Menth-2-en-1-ol	1122	0.02%	
23.991	alpha-Campholenal	1125	0.16%	
24.153	Unidentified	1127	0.03%	
24.385	cis-Limonene oxide	1131	0.01%	
24.632	cis-para-Mentha-2,8-dienol	1134	0.04%	
24.933	trans-Pinocarveol	1139	0.41%	
25.009	cis-Verbenol	1140	0.1%	
25.259	trans-Verbenol	1143	0.45%	
25.366	Camphor	1145	0.02%	
25.599	alpha-Phellandrene-8-ol	1148	0.19%	
26.068	Sabina ketone	1155	0.02%	
26.205	Unidentified	1157	0.01%	
26.288	Unidentified	1158	0.06%	
26.419	Unidentified	1160	0.05%	
26.894	Unidentified	1167	0.05%	
27.055	Unidentified	1169	0.49%	
27.212	Unidentified	1172	0.02%	
27.538	Unidentified	1176	0.02%	
27.676	Terpinen-4-ol	1179	0.39%	
27.965	4'-Methylacetophenone	1183	0.01%	
28.108	para-Cymen-8-ol	1185	0.12%	
28.452	Myrtenol	1190	0.02%	
28.683	alpha-Terpineol	1193	0.71%	
29.013	cis-Piperitol	1198	0.04%	
29.216	alpha-Phellandrene epoxide	1201	0.1%	
29.470	Verbenone	1205	0.25%	
29.754	Octyl acetate	1209	3.33%	
30.303	trans-Carveol	1217	0.18%	
31.200	cis-Carveol	1230	0.05%	
31.746	Unidentified	1238	0.01%	
31.895	Cuminal	1240	0.04%	IFRA
31.993	Carvone	1242	0.12%	IFRA
32.327	Carvotanacetone	1247	0.03%	
33.467	3,5-Dimethoxytoluene	1263	0.03%	
34.285	Phellandral	1275	0.02%	
34.721	Bornyl acetate	1282	0.29%	

Ret. Time	Component	Ret. Idx.	Conc. %	
35.654	Carvacrol	1296	0.05%	
38.112	delta-Elemene	1333	0.01%	
38.874	alpha-Cubebene	1345	0.18%	
40.269	Cyclosativene	1366	0.03%	
40.744	alpha-Copaene	1373	0.54%	
40.926	Geranyl acetate	1376	0.02%	
41.155	Unidentified	1379	0.01%	
41.257	beta-Bourbonene	1381	0.06%	
41.435	Hexyl hexanoate	1384	0.01%	
41.530	beta-Cubebene	1385	0.04%	
41.641	beta-Elemene	1387	0.57%	
42.756	alpha-Gurjunene	1404	0.04%	
43.545	beta-Caryophyllene	1417	3.56%	
44.180	beta-Copaene	1427	0.02%	
44.399	trans-alpha-Bergamotene	1430	0.06%	
45.382	trans-Murrola-3,5-diene	1446	0.06%	
45.779	alpha-Humulene	1453	0.47%	
46.054	Alloaromadendrene	1457	0.11%	
46.817	trans-Cadina-1(6),4-diene	1469	0.07%	
46.885	Unidentified	1470	0.02%	
46.997	gamma-Murolene	1472	0.16%	
47.365	Germacrene D	1478	0.16%	
47.759	delta-Selinene	1484	0.05%	
47.860	beta-Selinene	1486	0.29%	
48.029	gamma-Amorphene	1489	0.1%	
48.283	alpha-Selinene	1493	0.35%	
48.458	alpha-Murolene	1495	0.11%	
49.330	gamma-Cadinene	1510	0.27%	
49.450	Cubebol	1512	0.24%	
49.642	delta-Cadinene	1515	0.69%	
49.815	cis-Calamenene	1518	0.02%	
49.907	Zonarene	1520	0.03%	
50.486	trans-Cadina-1,4-diene	1530	0.04%	
50.732	alpha-Cadinene	1534	0.02%	
50.993	alpha-Calacorene	1538	0.02%	
51.416	alpha-Elemol	1545	0.05%	
52.195	Unidentified	1558	0.06%	
52.910	Unidentified	1570	0.01%	
53.078	Spathulenol	1573	0.06%	
53.387	Caryophyllene oxide	1579	0.55%	



Ret. Time	Component	Ret. Idx.	Conc. %	
54.109	Viridiflorol	1591	0.09%	
54.707	Unidentified	1601	0.01%	
54.996	Humulene epoxide II	1606	0.15%	
55.236	10-epi-gamma-Eudesmol	1610	0.1%	
55.324	Unidentified	1612	0.05%	
56.038	Epicubenol	1625	0.06%	
56.842	tau-Cadinol	1639	0.4%	
57.092	delta-Cadinol	1643	0.02%	
57.460	Unidentified	1650	0.02%	
57.587	Unidentified	1652	0.11%	
57.740	Unidentified	1655	0.03%	
58.419	Unidentified	1667	0.03%	
65.093	Phellandrene dimer	1790	0.06%	
73.087	Neocembrene	1949	0.12%	
75.273	Unidentified	1994	0.02%	
75.839	Verticilla-4(20),7,11-triene	2006	0.05%	
81.537	Cembrenol	2130	0.06%	
82.015	Incensole	2141	0.29%	
82.120	Serratol	2143	0.45%	
82.865	Incensyl acetate	2160	0.12%	

Total Identified Compounds **98.67 %**

