



Essential Oil University

GC/MS Report

Item	Lot
Frankincense EO, Carterii <i>Boswellia carterii</i>	6T
Date	Analyst
12/5/2024	Dr. Robert S. Pappas

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The analysis of this batch sample, Frankincense EO, Carterii, meets the expected chemical profile for authentic essential oil of *Boswellia carterii*. 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:** Frankincense EO, Carterii**Botanical Name:** Boswellia carterii**Lot Number:** 6T**Production Method:** Hydrodistillation**Sample Type:** EO - Single**Country of Origin:** Somaliland**Analysis Date:** 12/5/2024**Manufacture Date:** December 2024

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

-5.56

1.47012

0.86842



Ret. Time	Component	Ret. Idx.	Conc. %	
3.017	1-Pentanol	550	0.01%	
4.282	3-Penten-2-ol	678	0.01%	
4.950	2,3-Dimethyl-cyclohexa-1,3-diene	721	0%	
5.811	Toluene	762	0.05%	IFRA
7.793	6,6-Dimethylhepta-2,4-diene	831	0.01%	
9.567	Unidentified	879	0.01%	
10.833	trans-2,6-dimethyl-4-octene	909	0.02%	
11.365	Hashishene	918	0.11%	
11.483	Tricyclene	921	0.09%	
11.637	alpha-Thujene	923	3.67%	
12.119	alpha-Pinene	932	51.88%	
12.559	Thujadiene isomer	940	0.04%	
12.820	alpha-Fenchene	945	0.02%	
12.916	Camphene	947	0.85%	
13.112	Thuja-2,4(10)-diene	951	0.22%	
14.171	Sabinene	970	4.3%	
14.470	beta-Pinene	976	4.4%	
14.952	para-Menth-3-ene	984	0.01%	
15.088	Myrcene	987	2.46%	
15.504	Unidentified	995	0.01%	
15.985	Pseudolimonene	1003	0.01%	
16.065	Menthatriene isomer	1004	0.05%	
16.133	alpha-Phellandrene	1005	1.98%	
16.273	delta-3-Carene	1007	0.31%	
16.444	Hexyl acetate	1010	0.02%	
16.780	alpha-Terpinene	1015	0.09%	
16.939	ortho-Cymene	1018	0.01%	
17.268	para-Cymene	1023	2.79%	
17.382	Unidentified	1024	0.03%	
17.583	Limonene	1028	8.39%	IFRA
17.671	beta-Phellandrene	1029	0.42%	
17.738	1,8-Cineole	1030	0.16%	
17.954	cis-beta-Ocimene	1033	0.15%	
18.623	trans-beta-Ocimene	1044	0.09%	
18.814	Unidentified	1047	0.01%	
19.406	gamma-Terpinene	1056	0.71%	
20.187	1-Octanol	1068	0.26%	
20.303	Pinol	1069	0.02%	
21.201	Unidentified	1083	0.11%	
21.507	para-Cymenene	1088	0.09%	



Ret. Time	Component	Ret. Idx.	Conc. %	
22.055	Perillene	1096	0.03%	
22.138	Linalool	1098	0.23%	IFRA
22.591	Isoamyl isovalerate	1104	0.02%	
22.784	Thujol	1107	0.04%	
23.377	beta-Thujone	1116	0.04%	IFRA
23.523	Myrcenol	1118	0.03%	
23.628	trans-para-Mentha-2,8-dienol	1120	0.03%	
23.815	cis-para-Menth-2-en-1-ol	1122	0.01%	
23.981	alpha-Campholenal	1125	0.22%	
24.144	Unidentified	1127	0.03%	
24.627	Unidentified	1134	0.03%	
24.680	Unidentified	1135	0.01%	
24.925	trans-Pinocarveol	1138	0.43%	
24.997	cis-Verbenol	1140	0.11%	
25.250	trans-Verbenol	1143	0.5%	
25.370	Unidentified	1145	0.01%	
25.590	alpha-Phellandrene-8-ol	1148	0.19%	
26.060	Sabina ketone	1155	0.01%	
26.190	Unidentified	1157	0.01%	
26.279	trans-Pinocamphone	1158	0.06%	
26.405	Pinocarvone	1160	0.04%	
26.887	trans-Sabinol	1167	0.03%	
27.046	para-Mentha-1,5-dien-8-ol	1169	0.49%	
27.201	Unidentified	1172	0.02%	
27.529	Unidentified	1176	0.01%	
27.666	Terpinen-4-ol	1178	0.27%	
27.951	4'-Methylacetophenone	1183	0.01%	
28.097	para-Cymen-8-ol	1185	0.11%	
28.225	Unidentified	1187	0.01%	
28.447	Myrtenol	1190	0.01%	
28.676	alpha-Terpineol	1193	0.71%	
29.005	cis-Piperitol	1198	0.03%	
29.209	alpha-Phellandrene epoxide	1201	0.09%	
29.464	Verbenone	1205	0.21%	
29.751	Octyl acetate	1209	3.42%	
30.297	trans-Carveol	1217	0.15%	
31.194	cis-Carveol	1230	0.04%	
31.744	alpha-Phellandrene epoxide isomer	1238	0.01%	
31.888	Cuminal	1240	0.03%	IFRA
31.985	Carvone	1242	0.08%	IFRA



Ret. Time	Component	Ret. Idx.	Conc. %
32.318	Unidentified	1247	0.02%
33.452	3,5-Dimethoxytoluene	1263	0.04%
34.282	Phellandral	1275	0.01%
34.716	Bornyl acetate	1282	0.33%
35.643	Carvacrol	1295	0.03%
38.095	delta-Elemene	1333	0.01%
38.861	alpha-Copaene	1344	0.11%
39.630	Neryl acetate	1356	0.01%
40.041	3,4-Dimethoxy styrene	1362	0.01%
40.262	Cyclosativene	1366	0.02%
40.738	alpha-Copaene	1373	0.32%
40.916	Geranyl acetate	1376	0.01%
41.254	beta-Bourbonene	1381	0.03%
41.434	Hexyl hexanoate	1384	0.01%
41.520	beta-Cubebene	1385	0.02%
41.635	beta-Elemene	1387	0.42%
42.585	cis-beta-Caryophyllene	1401	0.01%
42.753	alpha-Gurjunene	1404	0.03%
43.543	beta-Caryophyllene	1417	3.13%
44.179	beta-Copaene	1427	0.01%
44.394	trans-alpha-Bergamotene	1430	0.04%
45.373	trans-Murrola-3,5-diene	1446	0.03%
45.771	alpha-Humulene	1452	0.29%
46.046	Alloaromodendrene	1457	0.07%
46.811	trans-Cadina-1(6),4-diene	1469	0.03%
46.895	Unidentified	1470	0.01%
46.988	gamma-Murolene	1472	0.09%
47.359	Germacrene D	1478	0.11%
47.744	delta-Selinene	1484	0.03%
47.849	beta-Selinene	1486	0.2%
48.022	gamma-Amorphene	1488	0.05%
48.275	alpha-Selinene	1493	0.24%
48.453	alpha-Murolene	1495	0.07%
49.324	gamma-Cadinene	1510	0.19%
49.443	Cubebol	1512	0.14%
49.636	delta-Cadinene	1515	0.39%
50.476	trans-Cadina-1,4-diene	1529	0.02%
50.727	alpha-Cadinene	1534	0.02%
50.990	alpha-Calacorene	1538	0.01%
51.406	alpha-Elemol	1545	0.04%



Ret. Time	Component	Ret. Idx.	Conc. %	
52.188	Unidentified	1558	0.04%	
52.910	Unidentified	1570	0.01%	
53.069	Spathulenol	1573	0.05%	
53.381	Caryophyllene oxide	1578	0.35%	
54.106	Viridiflorol	1591	0.07%	
54.989	Humulene epoxide II	1606	0.09%	
55.232	10-epi-gamma-Eudesmol	1610	0.06%	
55.319	1,10-di-epi-Cubenol	1612	0.03%	
56.032	Epicubenol	1624	0.03%	
56.837	tau-Cadinol	1639	0.25%	
57.567	alpha-Eudesmol	1652	0.05%	
57.740	Unidentified	1655	0.01%	
58.419	Unidentified	1667	0.01%	
65.095	Phellandrene dimer	1790	0.05%	
73.084	Neocembrene	1949	0.06%	
75.272	Unidentified	1994	0.01%	
75.838	Verticilla-4(20),7,11-triene	2006	0.02%	
81.525	Cembrenol	2130	0.02%	
82.005	Incensole	2140	0.17%	
82.113	Serratol	2143	0.22%	
82.863	Incensyl acetate	2160	0.09%	

Total Identified Compounds **99.61 %**

