

Sample Information

Sample Name: Rosemary (ct. Verbenone) EO

Botanical Name: Rosmarinus officinalis

Lot Number: ITP15-RN

Production Method: Steam distilled

Sample Type: EO - Single

Country of Origin: Italy

Analysis Date: 11/10/2025

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 μ L

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

+14.68

1.47175

0.91980

Ret. Time	Component	Ret. Idx.	Conc. %	
6.557	Isobutenyl methyl ketone	797	0.01%	
9.583	Cyclofenchene	879	0.03%	
10.524	Unidentified	903	0.01%	
10.595	Bornylene	904	0.01%	
10.625	Unidentified	905	0%	
10.830	2,6-Dimethyl 4-octene	909	0.02%	
11.362	Hashishene	918	0.01%	
11.479	Tricyclene	921	0.76%	
11.629	alpha-Thujene	923	0.1%	
12.066	alpha-Pinene	931	23.22%	
12.347	beta-Fenchene	937	0.03%	
12.820	alpha-Fenchene	945	0.11%	
12.920	Camphene	947	4.61%	
13.110	Thuja-2,4(10)diene	951	0.01%	
14.159	Sabinene	970	0.03%	
14.458	beta-Pinene	975	1.35%	
14.510	1-Octen-3-ol	976	0.04%	
14.835	3-Octanone	982	0.02%	
15.082	Myrcene	987	0.9%	
15.513	3-Octanol	995	0.05%	
15.984	Pseudolimonene	1003	0.05%	
16.129	alpha-Phellandrene	1005	0.04%	
16.270	delta-3-Carene	1007	0.08%	
16.780	alpha-Terpinene	1015	0.1%	
17.264	para-Cymene	1023	1.3%	
17.570	Limonene	1027	4.64%	IFRA
17.680	beta-Phellandrene	1029	0.09%	
17.765	1,8-Cineole	1030	13.8%	
17.955	cis-beta-Ocimene	1033	0.02%	
18.629	trans-beta-Ocimene	1044	0.01%	
19.403	gamma-Terpinene	1056	0.17%	
20.183	trans-Sabinene hydrate	1068	0.02%	
21.193	Terpinolene	1083	0.11%	
21.405	Fenchone	1086	0.01%	
21.515	para-Cymenene	1088	0.04%	
22.150	Linalool	1098	1.96%	IFRA
22.369	Hotrienol	1101	0.01%	
22.656	Unidentified	1105	0.01%	
22.788	Unidentified	1107	0.02%	
23.462	endo-Fenchol	1117	0.05%	

Ret. Time	Component	Ret. Idx.	Conc. %	
23.620	Chrysanthenone	1119	0.01%	
23.980	alpha-Campholenal	1125	0.02%	
24.933	trans-Pinocarveol	1139	0.02%	
25.417	Camphor	1146	11.85%	
25.911	cis-beta-Terpineol	1153	0.04%	
26.283	trans-Pinocamphone	1158	0.06%	
26.400	Pinocarvone	1160	0.02%	
26.482	Isoborneol	1161	0.13%	
26.684	Unidentified	1164	0.01%	
26.789	Unidentified	1166	0.01%	
27.000	delta-Terpineol	1169	0.13%	
27.114	Borneol	1170	7.5%	
27.366	Isopinocamphone	1174	0.04%	
27.534	Unidentified	1176	0.01%	
27.672	Terpinen-4-ol	1178	0.5%	
28.118	para-Cymen-8-ol	1185	0.07%	
28.693	alpha-Terpineol	1193	1.94%	
28.915	Unidentified	1197	0.01%	
29.243	Bornyl formate	1201	0.05%	
29.530	Verbenone	1206	6.51%	
30.303	Unidentified	1217	0.03%	
30.812	Citronellol	1224	0.02%	IFRA
30.941	Unidentified	1226	0.01%	
31.744	Unidentified	1238	0.04%	
32.189	Unidentified	1245	0.02%	
32.421	Geraniol	1248	0.09%	IFRA
32.659	Piperitone	1252	0.02%	
33.665	Unidentified	1266	0.01%	
34.539	Thymol	1279	0.03%	
34.763	Bornyl acetate	1283	13.88%	
34.895	Isobornyl acetate	1284	0.06%	
35.055	trans-Verbenyl acetate	1287	0.02%	
35.181	Carvacrol isomer	1289	0.02%	
35.645	Carvacrol	1295	0.03%	
36.651	Unidentified	1311	0.01%	
37.290	Myrtenyl acetate	1320	0.05%	
37.930	gamma-Terpinyl acetate	1330	0.02%	
38.244	Pulespenone	1335	0.11%	
38.864	beta-Cubebene	1344	0.01%	
39.139	Eugenol	1349	0.11%	IFRA

Ret. Time	Component	Ret. Idx.	Conc. %
39.874	Terpinyl acetate analogue	1360	0.01%
40.316	alpha-Ylangene	1367	0.11%
40.736	alpha-Copaene	1373	0.1%
40.911	Geranyl acetate	1376	0.04%
42.316	cis-Methyl isoeugenol	1397	0.03%
43.527	beta-Caryophyllene	1416	1.16%
44.181	beta-Copaene	1427	0.01%
44.705	Aromadendrene	1435	0.02%
45.300	Geranyl acetone	1445	0.01%
45.394	Unidentified	1446	0.01%
45.690	Unidentified	1451	0.02%
45.771	alpha-Humulene	1452	0.56%
46.989	gamma-Murolene	1472	0.07%
47.249	alpha-Amorphene	1476	0.04%
47.848	beta-Selinene	1486	0.01%
48.071	trans-Murrola-4(14),5-diene	1489	0.01%
48.288	alpha-Selinene	1493	0.03%
48.451	alpha-Murolene	1495	0.03%
49.017	beta-Bisabolene	1505	0.02%
49.323	gamma-Cadinene	1510	0.04%
49.630	delta-Cadinene	1515	0.09%
49.755	cis-Calamenene	1517	0.01%
49.825	trans-Calamenene	1518	0.01%
50.982	alpha-Calacorene	1538	0.04%
51.777	Unidentified	1551	0.01%
53.376	Caryophyllene oxide	1578	0.04%
54.365	Unidentified	1595	0.01%
54.993	Humulene epoxide II	1606	0.02%
55.144	Unidentified	1609	0.02%
56.287	Unidentified	1629	0.02%
57.589	Unidentified	1652	0.01%
58.001	Unidentified	1659	0.01%
58.245	Unidentified	1664	0.01%
75.124	Unidentified	1991	0.01%
78.341	Unidentified	2060	0.01%

Total Identified Compounds **99.68 %**

GC/MS Report: Chromatogram

