

Sample & Analysis Information

Sample Information

Sample Name: Melissa (Lemon Balm) Essential Oil**Botanical Name:** Melissa officinalis**Lot Number:** 13357**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Spain**Analysis Date:** 6/4/2025**Manufacture Date:** June 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

-.80

1.48536

0.89107

Ret. Time	Component	Ret. Idx.	Conc. %	
3.562	Vinyldimethylcarbinol	605	0.01%	
11.612	alpha-Thujene	923	0.01%	
12.015	alpha-Pinene	930	0.24%	
12.899	Camphene	947	0.05%	
14.147	Sabinene	970	0.12%	
14.441	beta-Pinene	975	0.18%	
14.771	6-Methyl hept-5-en-2-one	981	0.22%	
15.070	Myrcene	987	0.11%	
15.991	Hex-(3Z)-enyl acetate	1003	0.07%	
16.115	alpha-Phellandrene	1005	0.01%	
16.254	delta-3-Carene	1007	0.05%	
16.980	para-Methylanisole	1018	0.01%	
17.242	para-Cymene	1022	0.02%	
17.541	Limonene	1027	2.69%	IFRA
17.714	1,8-Cineole	1030	0.3%	
17.870	Unidentified	1032	0%	
17.936	cis-beta-Ocimene	1033	0.4%	
18.608	trans-beta-Ocimene	1043	0.78%	
19.048	Melonol	1050	0.01%	
19.389	gamma-Terpinene	1055	0.02%	
20.177	cis-Linalool oxide (furanoid)	1068	0.01%	
21.173	Terpinolene	1083	0.03%	
22.126	Linalool	1098	0.88%	IFRA
22.823	cis-Rose oxide	1108	0.1%	
23.921	trans-Rose oxide	1124	0.04%	
24.052	allo-Ocimene	1126	0.05%	
24.367	cis-Limonene oxide	1130	0%	
24.867	allo-Ocimene	1138	0.01%	
25.085	exo-Isocitral	1141	0.02%	IFRA
25.443	Isopulegol	1146	0.23%	
25.728	Citronellal	1150	5.32%	IFRA
25.970	Menthone	1154	0.08%	
26.131	Neoisopulegol	1156	0.15%	
26.330	Isoneral	1159	0.17%	IFRA
26.573	Isomenthone	1162	0.21%	
26.869	Isoisopulegol	1167	0.03%	
27.039	Borneol	1169	0.02%	
27.625	Isogeranial	1178	0.3%	IFRA
28.004	Unidentified	1183	0.05%	
28.415	Unidentified	1189	0.01%	

Ret. Time	Component	Ret. Idx.	Conc. %	
28.652	alpha-Terpineol	1193	0.16%	
28.999	Unidentified	1198	0.01%	
29.452	Unidentified	1204	0.01%	
30.642	Nerol	1222	0.1%	
30.831	Citronellol	1225	2%	IFRA
31.000	Unidentified	1227	0.01%	
31.390	Unidentified	1233	0.02%	
31.668	Neral	1237	16.23%	IFRA
31.995	Unidentified	1242	0%	
32.076	Unidentified	1243	0.03%	
32.407	Geraniol	1248	0.9%	IFRA
32.641	Piperitone	1251	0.05%	
32.755	Unidentified	1253	0.01%	
32.907	Methyl citronellate	1255	0.6%	
33.386	Unidentified	1262	0.05%	
33.720	Geranial	1267	26.85%	IFRA
33.974	Citronellyl formate	1271	0.59%	
34.170	Unidentified	1274	0.05%	
34.310	Unidentified	1276	0.01%	
34.529	trans-Carvone oxide	1279	0.04%	IFRA
34.861	Unidentified	1284	0.02%	
35.634	Geranyl formate	1295	0.23%	
37.164	Methyl geranate	1318	0.25%	
38.024	Unidentified	1332	0.05%	
38.283	8-Hydroxymenthol	1336	0.04%	
38.725	Unidentified	1342	0.03%	
38.813	alpha-Terpinyl acetate	1344	0.04%	
39.026	Citronellyl acetate	1347	0.25%	IFRA
39.613	Neryl acetate	1356	0.02%	
39.755	Unidentified	1358	0.04%	
40.402	Unidentified	1368	0.06%	
40.703	alpha-Copaene	1373	0.17%	
40.895	Geranyl acetate	1375	0.14%	
41.216	beta-Bourbonene	1380	0.04%	
41.604	beta-Elementene	1386	0.1%	
41.828	Unidentified	1390	0.01%	
42.549	cis-beta-Caryophyllene	1401	0.05%	
43.576	beta-Caryophyllene	1417	35.81%	
44.026	Unidentified	1424	0.07%	
44.136	Unidentified	1426	0.05%	

Ret. Time	Component	Ret. Idx.	Conc. %	
44.354	trans-alpha-Bergamotene	1430	0.07%	
44.490	alpha-Guaiene	1432	0.02%	
44.865	6,9-Guaiadiene	1438	0.27%	
45.336	Unidentified	1445	0.02%	
45.603	trans-beta-Farnesene	1450	0.02%	
45.737	alpha-Humulene	1452	0.18%	
45.995	Alloaromadendrene	1456	0.01%	
46.617	Geranyl propanoate	1466	0.03%	
46.960	trans-Cadina-1(6),4-diene	1471	0.04%	
47.210	Unidentified	1475	0.01%	
47.324	Germacrene D	1477	0.29%	
47.815	beta-Selinene	1485	0.02%	
48.215	Bicyclogermacrene	1492	0.05%	
48.414	alpha-Murolene	1495	0.03%	
48.620	cis-gamma-Bisabolene	1498	0.02%	
48.795	trans,trans-alpha-Farnesene	1501	0.06%	
48.990	beta-Bisabolene	1504	0.06%	
49.285	gamma-Cadinene	1509	0.03%	
49.596	delta-Cadinene	1514	0.13%	
50.043	Citronellyl butyrate	1522	0.01%	
50.702	Unidentified	1533	0.01%	
51.845	Geranyl butyrate	1552	0.02%	
51.971	Germacrene B	1555	0.03%	
53.015	Unidentified	1572	0.01%	
53.191	Unidentified	1575	0.01%	
53.340	Caryophyllene oxide	1578	0.22%	
54.964	Humulene epoxide II	1605	0.01%	
56.800	Unidentified	1638	0.01%	
56.914	Unidentified	1640	0.01%	
57.545	Unidentified	1651	0.02%	
59.837	Geranyl tiglate	1692	0.03%	
63.599	Benzyl benzoate	1762	0.03%	IFRA
71.824	Citriodiol acetal	1923	0.02%	
77.774	Unidentified	2048	0.01%	

Total Identified Compounds **99.31 %**

TIC
9,938,200

