



Essential Oil University

GC/MS Report

Item	Lot
Melissa EO, Pure & Natural <i>Melissa officinalis</i>	1F
Date	Analyst
10/16/2025	Dr. Robert S. Pappas

© Copyright 2025 by Essential Oil University. All rights reserved. Any publishing, copying, use, dissemination, or distribution of this report, including online, without the express written permission of Essential Oil University is strictly prohibited.

The analysis of this batch sample, Melissa EO, Pure & Natural, meets the expected chemical profile for authentic essential oil of *Melissa officinalis*. 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:** Melissa EO, Pure & Natural**Botanical Name:** Melissa officinalis**Lot Number:** 1F**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Bulgaria**Analysis Date:** 10/16/2025**Manufacture Date:** April 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

-13.28

1.48884

0.89748



Ret. Time	Component	Ret. Idx.	Conc. %	
3.571	2-Methyl-3-butenol	606	0.01%	
3.686	Isobutyl alcohol	618	0.01%	
3.981	3-Methylbutanal	648	0.09%	
4.082	2-Methylbutanal	658	0.06%	
4.505	2-Ethylfuran	700	0.02%	
5.074	1-Pentanol	727	0.05%	
5.151	2-Methylbutanol	731	0.04%	
8.415	Hex-(2Z)-enol	848	0.04%	
8.432	Hex-(3Z)-enol	849	0.27%	
8.840	Hex-(2E)-enol	859	0.02%	
8.964	Hexanol	863	0.04%	
10.173	2,5-Diethyltetrahydrofuran	895	0.01%	
12.041	alpha-Pinene	931	0.2%	ALLERGEN
12.926	Camphene	947	0.05%	
13.589	Benzaldehyde	959	0.03%	ALLERGEN IFRA
14.174	Sabinene	970	0.12%	
14.460	beta-Pinene	975	0.05%	ALLERGEN
14.516	1-Octen-3-ol	976	0.53%	
14.792	6-Methyl hept-5-en-2-one	982	1.31%	
15.096	Myrcene	987	0.2%	PROP. 65
15.150	Unidentified	988	0.03%	
15.291	6-Methyl-hept-5-en-2-ol	991	0.01%	
15.529	Octan-3-ol	995	0.04%	
16.013	Hex-(3E)-enyl acetate	1003	0.09%	
16.283	delta-3-Carene	1008	0.04%	
16.468	Hexyl acetate	1010	0.01%	
17.270	para-Cymene	1023	0.02%	
17.567	Limonene	1027	2.66%	ALLERGEN IFRA
17.744	1,8-Cineole	1030	0.25%	
17.910	Unidentified	1033	0.02%	
17.966	cis-beta-Ocimene	1033	0.97%	
18.487	Phenylacetaldehyde	1041	0.03%	IFRA
18.645	trans-beta-Ocimene	1044	3.08%	
19.420	gamma-Terpinene	1056	0.02%	
20.209	cis-Linalool oxide (furanoid)	1068	0.04%	
21.204	Terpinolene	1083	0.03%	ALLERGEN
21.624	Rosefuran	1090	0.03%	
22.149	Linalool	1098	0.91%	ALLERGEN IFRA
22.525	Nonanal	1104	0.1%	
22.849	cis-Rose oxide	1108	0.05%	



Ret. Time	Component	Ret. Idx.	Conc. %	
23.950	trans-Rose oxide	1124	0.03%	
24.079	allo-Ocimene	1126	0.13%	
24.762	Epiphocitral A	1136	0.12%	
24.892	neo-allo-Ocimene	1138	0.03%	
25.112	exo-Isocitral	1141	0.05%	IFRA
25.469	trans-Chrysanthemal	1146	0.39%	
25.735	Citronellal	1150	3%	IFRA
25.884	Unidentified	1152	0.01%	
25.989	Menthone	1154	0.04%	
26.154	Neoisopulegol	1156	0.09%	
26.355	cis-Isocitral (Isoneral)	1159	0.3%	IFRA
26.597	Isomenthone	1163	0.05%	
26.914	Isoborneol	1167	0.03%	
27.066	Unidentified	1170	0.04%	
27.299	Unidentified	1173	0.05%	
27.650	Isogeranial	1178	0.58%	IFRA
28.442	Methyl salicylate	1190	0.04%	ALLERGEN
28.565	Unidentified	1191	0.02%	
28.679	alpha-Terpineol	1193	0.17%	ALLERGEN
29.024	Unidentified	1198	0.02%	
29.467	Unidentified	1205	0.08%	
29.877	Unidentified	1211	0.01%	
30.230	Unidentified	1216	0.03%	
30.664	Nerol	1222	0.87%	
30.842	Citronellol	1225	0.64%	ALLERGEN IFRA
31.013	Isogeraniol	1227	0.03%	
31.680	Neral	1237	15.9%	ALLERGEN IFRA
32.100	Methyl citronellate analogue	1243	0.03%	
32.435	Geraniol	1248	1.55%	ALLERGEN IFRA
32.665	Piperitone	1252	0.06%	
32.937	Methyl citronellate	1256	1.04%	
33.729	Geranial	1267	22.35%	ALLERGEN IFRA
33.990	Unidentified	1271	0.03%	
34.219	Methyl nerate	1275	0.04%	
34.547	trans-Carvone oxide	1279	0.18%	IFRA
34.699	Lavandulyl acetate	1282	0.02%	
35.661	Geranyl formate	1296	0.04%	
37.192	Methyl geranate	1319	1.05%	
38.056	Unidentified	1332	0.03%	
38.867	alpha-Cubebene	1344	0.05%	



Ret. Time	Component	Ret. Idx.	Conc. %	
39.049	Citronellyl acetate	1347	0.03%	IFRA
39.634	Neryl acetate	1356	0.08%	
39.785	Unidentified	1359	0.03%	
40.430	Unidentified	1368	0.02%	
40.739	alpha-Copaene	1373	0.78%	
40.923	Geranyl acetate	1376	2.28%	ALLERGEN
41.252	beta-Bourbonene	1381	0.26%	
41.529	beta-Cubebene	1385	0.25%	
41.635	beta-Elemene	1387	0.47%	
42.584	cis-beta-Caryophyllene	1401	0.04%	ALLERGEN
43.586	beta-Caryophyllene	1417	20.77%	ALLERGEN
44.054	Unidentified	1425	0.01%	
44.178	beta-Copaene	1427	0.11%	
44.387	trans-alpha-Bergamotene	1430	0.08%	
45.076	Unidentified	1441	0.02%	
45.376	trans-Murrola-3,5-diene	1446	0.01%	
45.645	trans-beta-Farnesene	1450	0.19%	
45.770	alpha-Humulene	1452	0.94%	
46.047	Alloaromodendrene	1457	0.11%	
46.182	cis-Cadina-1(6),4-diene	1459	0.05%	
46.573	Unidentified	1465	0.02%	
46.809	cis-Murrola-4(14),5-diene	1469	0.03%	
46.998	gamma-Murolene	1472	0.17%	
47.379	Germacrene D	1478	6.71%	
47.994	cis,cis-alpha-Farnesene	1488	0.5%	
48.250	Bicyclogermacrene	1492	0.17%	
48.449	alpha-Murolene	1495	0.3%	
48.821	trans,trans-alpha-Farnesene	1501	0.29%	
49.022	beta-Bisabolene	1505	0.04%	
49.326	gamma-Cadinene	1510	0.28%	
49.443	Cubebol	1512	0.04%	
49.632	delta-Cadinene	1515	1.07%	
49.910	Unidentified	1520	0.06%	
50.476	trans-Cadine-1,4-diene	1529	0.03%	
50.724	alpha-Cadinene	1534	0.09%	
51.554	Unidentified	1548	0.04%	
52.174	trans-Nerolidol	1558	0.02%	
53.069	Germacren D-4-ol	1573	0.35%	
53.374	Caryophyllene oxide	1578	0.79%	
54.266	Unidentified	1593	0.05%	



Ret. Time	Component	Ret. Idx.	Conc. %	
54.990	Humulene epoxide II	1606	0.04%	
55.325	1,10-di-epi-Cubenol	1612	0.03%	
56.027	1-Epicubenol	1624	0.04%	
56.533	Caryophylla-4(12),8(13)-dien-5-beta-ol	1633	0.01%	
56.834	tau-Cadinol	1639	0.23%	
56.941	epi-alpha-Cadinol	1641	0.28%	
57.089	delta-Cadinol	1643	0.09%	
57.583	alpha-Cadinol	1652	0.61%	
57.745	Unidentified	1655	0.02%	
58.409	Unidentified	1667	0.03%	
62.071	Unidentified	1734	0.03%	
67.576	Phytone	1838	0.06%	
72.864	Unidentified	1944	0.04%	
76.294	Unidentified	2016	0.03%	
77.810	Unidentified	2048	0.02%	
79.064	Unidentified	2075	0.02%	
80.083	Unidentified	2097	0.03%	

Total Identified Compounds **99.15 %**



TIC
10,029,218

