



Essential Oil University

GC/MS Report

Item	Lot
Peppermint EO <i>Mentha piperita</i>	2M
Date	Analyst
11/18/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Peppermint EO, meets the expected chemical profile for authentic essential oil of *Mentha piperita*. 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:** Peppermint EO**Botanical Name:** Mentha piperita**Lot Number:** 2M**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** India**Analysis Date:** 11/18/2025**Manufacture Date:** October 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

-26.64

1.46036

0.90113



Ret. Time	Component	Ret. Idx.	Conc. %	
4.215	3-Methylbutanal	636	0.02%	
5.422	3-Methyl-1-butanol	728	0.01%	
5.501	2-Methylbutanol	731	0.01%	
8.775	Ethyl 2-methylbutyrate	842	0.01%	
9.602	Hexanol	863	0.01%	
10.871	2,5-Diethyltetrahydrofuran	894	0.03%	
12.410	alpha-Thujene	923	0.02%	
12.835	alpha-Pinene	931	0.6%	ALLERGEN
13.768	Camphene	947	0.01%	
13.899	3-Methylcyclohexanone	950	0.04%	
15.052	Sabinene	970	0.55%	
15.371	beta-Pinene	976	1.21%	ALLERGEN
15.756	Unidentified	982	0.01%	
15.987	Myrcene	986	0.48%	PROP. 65
16.427	Octan-3-ol	994	0.39%	
16.575	Unidentified	997	0.01%	
16.935	Pseudolimonene	1003	0.01%	
17.081	alpha-Phellandrene	1005	0.01%	
17.741	alpha-Terpinene	1015	0.23%	ALLERGEN
18.229	para-Cymene	1022	0.16%	
18.534	Limonene	1027	2.34%	ALLERGEN IFRA
18.665	beta-Phellandrene	1029	0.03%	
18.743	1,8-Cineole	1030	5.74%	
18.923	cis-beta-Ocimene	1033	0.25%	
19.622	trans-beta-Ocimene	1043	0.04%	
20.438	gamma-Terpinene	1055	0.52%	
21.245	trans-Sabinene hydrate	1068	0.38%	
22.270	Terpinolene	1083	0.06%	ALLERGEN
23.069	3-Nonanol	1095	0.01%	
23.222	Linalool	1097	0.23%	ALLERGEN IFRA
23.337	cis-Sabinene hydrate	1099	0.04%	
23.449	2-Methylbutyl-2-methylbutyrate	1101	0.03%	
23.825	2-Methylbutyl isovalerate	1106	0.03%	
24.575	3-Octyl acetate	1117	0.01%	
24.961	cis-para-Menth-2-en-1-ol	1122	0.02%	
25.180	allo-Ocimene	1126	0.01%	
26.002	trans-Sabinol	1137	0.01%	
26.196	trans-para-Menth-2-en-1-ol	1140	0.02%	
26.420	Unidentified	1143	0.01%	
26.629	Isopulegol	1146	0.15%	



Ret. Time	Component	Ret. Idx.	Conc. %	
27.204	Menthone	1155	21%	
27.361	Unidentified	1157	0.02%	
27.669	Menthofuran	1161	1.68%	
27.786	Isomenthone	1163	4.17%	
28.128	Neomenthol	1168	3.91%	ALLERGEN
28.503	trans-Isopulegone	1173	0.03%	
28.780	Menthol	1177	42.78%	ALLERGEN
28.917	Terpinen-4-ol	1179	0.7%	
29.122	Unidentified	1182	0.04%	
29.440	Isomenthol	1187	0.36%	ALLERGEN
29.646	Neoisomenthol	1190	0.1%	ALLERGEN
29.872	alpha-Terpineol	1193	0.22%	ALLERGEN
31.257	Unidentified	1213	0.02%	
32.622	cis-3-Hexenyl isovalerate	1233	0.04%	IFRA
32.815	Pulegone	1236	0.45%	PROP. 65
33.206	Carvone	1241	0.04%	ALLERGEN IFRA
33.877	Piperitone	1251	0.47%	
35.146	Neomenthyl acetate	1270	0.18%	
36.340	Menthyl acetate	1287	5.87%	
36.602	Unidentified	1291	0.01%	
37.371	Isomenthyl acetate	1302	0.09%	
39.147	delta-Elemene	1329	0.02%	
42.029	alpha-Copaene	1373	0.03%	
42.554	beta-Bourbonene	1381	0.13%	
42.910	beta-Elemene	1386	0.04%	
44.856	beta-Caryophyllene	1417	2.37%	ALLERGEN
45.491	beta-Copaene	1427	0.02%	
46.904	trans-beta-Farnesene	1450	0.09%	
47.105	alpha-Humulene	1453	0.03%	
48.694	Germacrene D	1478	1.06%	
49.585	Bicyclogermacrene	1492	0.11%	
49.777	alpha-Murolene	1495	0.02%	
50.949	delta-Cadinene	1515	0.04%	
54.423	Unidentified	1573	0.01%	
54.745	Caryophyllene oxide	1579	0.02%	
55.473	Viridiflorol	1591	0.04%	
79.472	Unidentified	2053	0.02%	
81.831	Unidentified	2103	0.02%	

Total Identified Compounds **99.83 %**



TIC
18,046,405

