



Sample & Analysis Information

Sample Information

Sample Name: Bergamot Mint Essential Oil**Botanical Name:** Mentha citrata**Lot Number:** 13134**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** USA**Analysis Date:** 11/18/2024**Manufacture Date:** November 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

-12.20

1.46024

0.88667

Ret. Time	Component	Ret. Idx.	Conc. %	
4.213	3-Methylbutanal	672	0.02%	
4.331	2-Methylbutanal	677	0.01%	
4.567	3-Penten-2-ol	687	0.01%	
4.785	2-Ethylfuran	697	0%	
5.424	1-Pentanol	724	0.01%	
5.505	2-Methylbutanol	728	0.01%	
10.909	2,5-Diethyltetrahydrofuran	892	0.02%	
12.446	alpha-Thujene	921	0.03%	
12.867	alpha-Pinene	929	0.11%	
13.798	Camphene	945	0.01%	
15.085	Sabinene	968	0.15%	
15.402	beta-Pinene	973	1.28%	
15.783	3-Octanone	980	0.01%	
16.029	Myrcene	984	1.21%	
16.464	3-Octanol	992	0.06%	
17.023	cis-Dehydrolinalool oxide	1002	0.01%	
17.122	alpha-Phellandrene	1003	0.01%	
17.645	2-Methylbutyl isobutyrate	1011	0.01%	
17.784	alpha-Terpinene	1013	0.05%	
18.261	para-Cymene	1020	0.18%	
18.572	Limonene	1025	1.01%	IFRA
18.683	beta-Phellandrene	1026	0.04%	
18.771	1,8-Cineole	1028	0.35%	
18.964	cis-beta-Ocimene	1031	0.94%	
19.660	trans-beta-Ocimene	1041	0.95%	
20.467	gamma-Terpinene	1053	0.24%	
21.291	cis-Linalool oxide (furanoid)	1066	0.05%	
22.296	Terpinolene	1081	0.21%	
22.365	trans-Linalool oxide (furanoid)	1082	0.06%	
23.401	Linalool	1097	40.06%	IFRA
23.521	2-Methylbutyl-2-methylbutyrate	1099	0.15%	
23.638	Unidentified	1101	0.02%	
23.774	1-Octen-3-yl acetate	1103	0.28%	IFRA
23.863	2-Methylbutyl isovalerate	1104	0.03%	
24.602	3-Octyl acetate	1115	0.31%	
25.205	allo-Ocimene	1123	0.1%	
26.031	Neo-allo-ocimene	1135	0.01%	
26.120	trans-Pinocarveol	1136	0%	
26.645	Isopulegol	1144	0.02%	
27.158	Menthone	1151	0.21%	

Ret. Time	Component	Ret. Idx.	Conc. %	
27.473	trans-Pinocamphone	1156	0.04%	
27.669	Menthofuran	1159	0.01%	
27.782	Isomenthone	1160	0.08%	
28.130	Neomenthol	1165	0.07%	
28.290	Borneol	1167	0.01%	
28.415	trans-Linalool oxide (pyranoid)	1169	0.01%	
28.559	cis-Pinocamphone	1171	1.03%	
28.675	Menthol	1173	1.88%	
28.877	Terpinen-4-ol	1176	0.07%	
29.280	para-Cymen-8-ol	1182	0.01%	
29.360	2,6-Dimethyl-3,7-octadiene-2,6-diol	1183	0.03%	
29.450	Unidentified	1184	0.01%	
29.623	Methyl salicylate	1186	0.01%	
29.882	alpha-Terpineol	1190	2.34%	
30.069	Estragole	1193	0.14%	IFRA
30.512	Unidentified	1199	0.01%	
30.604	Pelargol	1201	0.01%	
31.330	Unidentified	1211	0.01%	
31.858	Nerol	1219	0.34%	
32.045	Unidentified	1221	0.01%	
32.672	cis-3-Hexenyl isovalerate	1231	0.01%	IFRA
32.832	Pulegone	1233	0.04%	
33.210	Carvone	1238	0.12%	IFRA
33.729	Linalyl acetate	1246	36.85%	
33.780	Geraniol	1247	0.2%	IFRA
33.904	Piperitone	1248	0.05%	
34.840	Geranial	1262	0.01%	IFRA
35.717	Unidentified	1275	0.01%	
36.370	Menthyl acetate	1284	0.14%	
36.871	Carvacrol	1292	0.01%	
38.574	Myrtenyl acetate	1317	0.04%	
39.169	Unidentified	1326	0.02%	
39.852	Myrcen-8-yl acetate	1336	0.03%	
39.950	Unidentified	1338	0.01%	
40.131	alpha-Terpinyl acetate	1341	0.04%	
40.323	Citronellyl acetate	1343	0.03%	IFRA
40.395	Unidentified	1345	0.01%	
40.897	Neryl acetate	1352	0.9%	
42.189	Geranyl acetate	1372	1.84%	
42.324	Unidentified	1374	0.01%	

Ret. Time	Component	Ret. Idx.	Conc. %	
42.613	beta-Bourbonene	1378	0.05%	
42.694	Unidentified	1379	0.05%	
42.973	beta-Elemene	1384	0.09%	
43.091	cis-Jasmone	1385	0.03%	
43.501	Unidentified	1392	0.02%	
44.213	Unidentified	1402	0.01%	
44.919	beta-Caryophyllene	1414	3.13%	
45.557	beta-Copaene	1424	0.01%	
46.976	trans-beta-Farnesene	1446	0.16%	
47.163	alpha-Humulene	1449	0.11%	
47.433	Alloaromodendrene	1454	0.03%	
48.370	trans-Cadina-1(6),4-diene	1469	0.01%	
48.750	Germacrene D	1475	0.58%	
49.368	Viridiflorene	1485	0.01%	
49.636	Bicyclogermacrene	1489	0.01%	
49.827	alpha-Muurolene	1492	0.01%	
50.710	gamma-Cadinene	1506	0.01%	
51.011	delta-Cadinene	1511	0.03%	
51.318	beta-Dihydroagarofuran	1516	0.07%	
52.785	alpha-Elemol	1541	0.24%	
53.540	trans-Nerolidol	1554	0.01%	
54.799	Caryophyllene oxide	1575	0.1%	
55.526	Viridiflorol	1587	0.37%	
55.700	Rosifoliol	1590	0.02%	
57.672	gamma-Eudesmol	1624	0.04%	
58.987	alpha-Eudesmol	1647	0.09%	

Total Identified Compounds **99.82 %**

