



Essential Oil University

GC/MS Report

Item	Lot
Marjoram (Sweet) EO <i>Origanum majorana</i>	9A
Date	Analyst
4/11/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Marjoram (Sweet) EO, meets the expected chemical profile for authentic essential oil of *Origanum majorana*. 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:** Marjoram (Sweet) EO**Botanical Name:** Origanum majorana**Lot Number:** 9A**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Egypt**Analysis Date:** 4/11/2025**Manufacture Date:** August 2023

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

+7.72

1.47424

0.90014



Ret. Time	Component	Ret. Idx.	Conc. %	
4.557	2-Ethylfuran	698	0%	
6.043	Methyl alpha-methylbutyrate	768	0.01%	
6.500	Unidentified	789	0%	
6.678	Octane	797	0%	
7.912	Unidentified	831	0%	
8.571	Unidentified	848	0.01%	
11.521	Hashishene	918	0.01%	
11.794	alpha-Thujene	922	0.52%	
12.195	alpha-Pinene	930	0.55%	
13.083	Camphene	946	0.02%	
14.355	Sabinene	969	4.75%	
14.643	beta-Pinene	974	0.32%	
15.028	3-Octanone	981	0.02%	
15.277	Myrcene	986	1.33%	
16.183	Pseudolimonene	1002	0.04%	
16.327	alpha-Phellandrene	1004	0.32%	
16.845	1,4-Cineole	1012	0.01%	
17.008	alpha-Terpinene	1015	9.19%	
17.465	para-Cymene	1022	1.65%	
17.760	Limonene	1026	1.46%	IFRA
17.854	beta-Phellandrene	1028	1.36%	
17.915	1,8-Cineole	1028	0.17%	
18.157	cis-beta-Ocimene	1032	0.03%	
18.841	trans-beta-Ocimene	1043	0.04%	
19.651	gamma-Terpinene	1055	9.5%	
20.401	trans-Sabinene hydrate	1067	3.45%	
21.428	Terpinolene	1082	2.31%	
21.744	para-Cymenene	1087	0.01%	
22.097	Unidentified	1093	0.01%	
22.421	Linalool	1098	7.39%	IFRA
22.499	cis-Sabinene hydrate	1099	6.64%	
23.272	1,3,8-para-Menthatriene	1110	0.01%	
24.050	cis-para-Menth-2-en-1-ol	1121	0.93%	
24.130	Unidentified	1122	0.02%	
24.755	Unidentified	1132	0.01%	
24.826	Terpin-3-en-1-ol	1133	0.01%	
25.158	trans-Pinocarveol	1137	0.07%	
25.274	trans-para-Menth-2-en-1-ol	1139	0.64%	
25.575	Unidentified	1143	0%	
25.763	cis-beta-Terpineol	1146	0.07%	



Ret. Time	Component	Ret. Idx.	Conc. %	
26.830	Unidentified	1162	0%	
27.220	delta-Terpineol	1167	0.03%	
27.318	Borneol	1169	0.05%	
27.465	Unidentified	1171	0.01%	
28.049	Terpinen-4-ol	1179	32.96%	
28.340	para-Cymen-8-ol	1184	0.06%	
28.465	Unidentified	1185	0.01%	
28.750	Unidentified	1189	0.03%	
28.951	alpha-Terpineol	1192	5.57%	
29.058	cis-Piperitol	1194	0.25%	
29.115	cis-Dihydrocarvone	1195	0.08%	
29.446	Unidentified	1200	0.01%	
29.544	trans-Dihydrocarvone	1201	0.05%	
29.869	trans-Piperitol	1206	0.36%	
30.544	trans-Carveol	1216	0.02%	
30.835	Unidentified	1220	0.01%	
30.899	Unidentified	1221	0.02%	
31.055	Citronellol	1223	0.01%	IFRA
31.889	Carvacryl methyl ether	1235	0%	
32.231	Carvone	1240	0.01%	IFRA
32.645	Linalyl acetate	1247	3.82%	
33.244	Unidentified	1255	0.01%	
34.251	cis-Ascaridol glycol	1270	0.12%	
34.959	Bornyl acetate	1280	0.02%	
35.118	trans-Anethole	1283	0.01%	
35.431	trans-Ascaridol glycol	1287	0.07%	
35.756	Terpin-1-en-4-yl acetate	1292	0.13%	
35.884	Thymol	1294	0.02%	
36.142	Unidentified	1298	0.03%	
36.890	Unidentified	1309	0.01%	
37.399	Unidentified	1317	0.1%	
38.143	delta-Elemene	1328	0.05%	
38.654	Unidentified	1336	0%	
39.096	alpha-Terpinyl acetate	1343	0.01%	
39.874	Neryl acetate	1355	0.02%	
40.075	Unidentified	1358	0%	
40.665	Unidentified	1367	0%	
40.758	Unidentified	1368	0%	
41.156	Geranyl acetate	1374	0.04%	
42.205	Unidentified	1390	0.01%	



Ret. Time	Component	Ret. Idx.	Conc. %	
43.801	beta-Caryophyllene	1415	1.87%	
44.696	Unidentified	1430	0.01%	
44.979	beta-Copaene	1434	0.02%	
46.038	alpha-Humulene	1451	0.07%	
46.170	Unidentified	1453	0%	
46.317	Unidentified	1456	0.01%	
46.441	Octadecane	1458	0.02%	
47.975	Unidentified	1482	0.02%	
48.085	Unidentified	1484	0.02%	
48.260	Viridiflorene	1487	0.07%	
48.519	Bicyclogermacrene	1491	0.72%	
49.088	trans,trans-alpha-Farnesene	1500	0.03%	
49.594	Unidentified	1509	0%	
49.908	delta-Cadinene	1514	0.01%	
53.342	Spathulenol	1572	0.03%	
53.649	Caryophyllene oxide	1577	0.05%	
54.376	Viridiflorol	1589	0.01%	
56.580	Unidentified	1628	0.07%	
61.408	Unidentified	1714	0%	
65.280	Unidentified isomer I	1787	0%	
67.605	Unidentified isomer I	1831	0.01%	
68.503	Unidentified isomer I	1849	0.01%	
68.695	Unidentified isomer I	1853	0.01%	
68.906	Unidentified isomer I	1857	0.03%	
70.203	Unidentified isomer I	1882	0.01%	
73.471	Unidentified isomer II	1949	0.01%	
74.086	Unidentified isomer II	1961	0.01%	
76.161	Sclarene	2004	0.01%	

Total Identified Compounds **99.5 %**

