



Sample Information

Sample Name: Roman Chamomile Essential Oil**Botanical Name:** Anthemis nobilis**Lot Number:** 13171**Production Method:** Steam distilled**Sample Type:** Essential Oils**Country of Origin:** USA**Analysis Date:** 11/8/2024**Date of Distillation:** 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

+0.96

1.44399

0.90308

Ret. Time	Component	Ret. Idx.	Conc. %	
3.721	Unidentified	616	0.01%	
4.023	Unidentified	646	0.01%	
4.138	Unidentified	657	0.01%	
5.142	1-Pentanol	726	0.02%	
5.215	2-Methylbutanol	730	0.03%	
5.966	Isobutyl acetate	764	0.02%	
6.047	Unidentified	768	0.01%	
6.440	1-Octene	786	0.01%	
7.416	Methyl tiglate	818	0.02%	
8.184	3-Methylpentanol	838	0.03%	
8.310	Ethyl 2-methylbutyrate	841	0.05%	
8.553	Propyl isobutyrate	848	0.06%	
9.047	Unidentified	860	0.01%	
9.405	Isoamyl acetate	870	0.05%	
9.489	2-Methylbutyl acetate	872	0.06%	
9.600	Propyl methacrylate	875	0.05%	
10.264	Unidentified	892	0.02%	
11.128	Isobutyl isobutyrate	910	4.41%	
11.437	Prenyl acetate	916	0.48%	
11.811	Unidentified	923	0.02%	
11.893	2,5,8-Trimethylnonane	924	0.57%	
12.219	alpha-Pinene	930	6.15%	
12.384	Isobutyl methacrylate	933	1.34%	
12.752	Propyl 2-methylbutyrate	940	0.06%	
13.103	Camphene	946	0.35%	
13.188	3-Methylcyclohexanone	948	1.22%	
13.308	Unidentified	950	0.03%	
14.108	Isopentyl propanoate	965	0.02%	
14.216	2-Methylbutyl propionate	967	0.03%	
14.369	Sabinene	969	0.02%	
14.663	beta-Pinene	975	1.61%	
14.794	Unidentified	977	0.19%	
15.317	Myrcene	987	0.05%	
15.427	Propyl angelate	989	0.72%	
15.749	Unidentified	994	0.02%	
16.058	Isobutyl 2-methylbutyrate	1000	0.86%	
16.326	Isobutyl isovalerate	1004	0.14%	
16.667	Isoamyl isobutyrate	1009	3.77%	
16.870	2-Methylbutyl isobutyrate	1012	2.14%	
16.960	Unidentified isomer I	1014	0.26%	

Ret. Time	Component	Ret. Idx.	Conc. %	
17.230	Unidentified isomer I	1018	0.07%	
17.481	para-Cymene	1022	0.15%	
17.779	Limonene	1026	1.28%	IFRA
17.950	1,8-Cineole	1029	0.04%	
18.083	Unidentified	1031	0.02%	
18.432	Pentyl methacrylate	1036	1%	
18.513	Isopentyl methacrylate	1038	1.52%	
19.071	Isobutyl angelate	1046	9.12%	
19.423	Prenyl isobutyrate	1052	0.93%	
19.644	Unidentified	1055	0.02%	
19.970	Methallyl angelate	1060	9.59%	
20.640	Hexyl propionate	1070	0.12%	
20.876	Unidentified	1074	0.01%	
21.034	Unidentified	1076	0.02%	
21.268	Camphenilone	1080	0.62%	
21.616	Butyl angelate	1085	0.4%	
21.740	Unidentified	1087	0.02%	
21.808	Isobutyl tiglate	1088	0.08%	
22.399	Isoamyl 2-methylbutyrate	1097	0.27%	
22.619	2-Methylbutyl-2-methylbutyrate	1101	4.76%	
22.756	Unidentified	1102	0.04%	
22.840	Unidentified	1104	0.02%	
22.925	Unidentified	1105	0.08%	
22.986	2-Methylbutyl isovalerate	1106	0.12%	
23.078	Isobutyl hexanoate	1107	0.23%	
23.212	Unidentified	1109	0.04%	
23.466	3-Methylamyl isobutyrate	1113	1.48%	
24.072	Unidentified	1122	0.04%	
24.243	alpha-Campholenal	1124	0.1%	
24.397	Unidentified	1126	0.04%	
25.194	trans-Pinocarveol	1138	2.99%	
25.293	Unidentified	1139	0.22%	
25.437	Butanoic acid ester	1141	2.84%	
25.647	Isoamyl angelate	1144	5.6%	
25.924	Isoamyl tiglate	1148	9.34%	
26.171	trans-beta-Terpineol	1152	0.12%	
26.419	Amyl angelate isomer	1156	0.57%	
26.553	Unidentified	1158	0.04%	
26.678	Pinocavone	1159	3.12%	
27.161	Unidentified	1166	0.04%	

Ret. Time	Component	Ret. Idx.	Conc. %	
27.324	Borneol	1169	0.13%	
27.610	Isopinocampnone	1173	0.13%	
27.810	Unidentified	1176	0.03%	
27.931	Unidentified	1178	0.04%	
28.266	Unidentified	1182	0.08%	
28.616	2-Methyl-2-butene angelate	1188	1.98%	
28.943	Myrtenal	1192	0.92%	
29.490	3-Methyl-3-methylpentyl-butyrate	1200	0.71%	
29.735	Unidentified	1204	0.01%	
29.885	Unidentified	1206	0.01%	
29.950	Unidentified	1207	0.04%	
30.033	Unidentified	1208	0.09%	
30.580	Unidentified	1216	0.01%	
31.912	2-Hydroxy-2-methyl-but-3-enyl 2-methyl-2-cis-butenate	1236	0.43%	
32.513	4-Methylamyl angelate	1245	0.02%	
32.770	Methylpentyl angelate	1248	11.68%	
34.506	(3Z)-Hexenyl angelate	1274	0.04%	
34.760	Unidentified	1278	0.02%	
34.822	Unidentified	1278	0.03%	
34.966	Hexyl angelate	1281	0.1%	
35.598	Unidentified	1290	0.01%	
35.759	Unidentified	1292	0.01%	
35.934	3-Methylpentyl 2-methyltiglate	1295	0.05%	
36.899	Unidentified	1309	0.04%	
38.102	(2Z)-Hexenyl tiglate	1328	0.04%	
39.098	Unidentified	1343	0.01%	
39.373	Unidentified	1347	0.02%	
40.611	Unidentified	1366	0.02%	
41.040	Unidentified	1372	0.02%	
41.660	Unidentified	1382	0.03%	
43.300	Unidentified	1407	0.03%	
43.834	beta-Caryophyllene	1416	0.04%	
45.090	Unidentified	1436	0.02%	
45.938	trans-beta-Farnesene	1450	0.03%	
46.497	Unidentified	1458	0.02%	
47.676	Germacrene D	1477	0.62%	
48.025	Unidentified	1483	0.03%	
48.162	beta-Selinene	1485	0.04%	
48.561	Bicyclogermacrene	1492	0.04%	
49.127	trans,trans-alpha-Farnesene	1501	0.03%	

Ret. Time	Component	Ret. Idx.	Conc. %	
49.944	Unidentified	1514	0.02%	
52.201	Unidentified	1552	0.02%	
55.260	Copaborneol	1604	0.08%	
58.491	Unidentified	1662	0.01%	
63.956	Unidentified	1762	0.03%	
64.582	Unidentified	1773	0.03%	
67.901	Phytone	1837	0.06%	
74.054	Unidentified	1961	0.03%	

Total Identified Compounds **97.9 %**

