



Essential Oil University

GC/MS Report

Item	Lot
Helichrysum italicum (Immortelle) EO <i>Helichrysum italicum</i>	5Q
Date	Analyst
1/22/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Helichrysum italicum (Immortelle) EO, meets the expected chemical profile for authentic essential oil of *Helichrysum italicum*. 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 Type:** EO - Single**Sample Name:** Helichrysum italicum (Immortelle)
EO**Country of Origin:** Greece**Analysis Date:** 1/22/2025**Botanical Name:** Helichrysum italicum**Manufacture Date:** November 2024**Lot Number:** 5Q**Production Method:** Steam distilled

GC/MS

Inst. ID: Shimadzu GCMS-QP2010Ultra**Column Type:** ZB-5**Injection Type:** Split**Injection Volume:** 0.1 µL**Split Ratio:** 24.4**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

-.52

1.47646

0.89643



Ret. Time	Component	Ret. Idx.	Conc. %	
5.475	Unidentified	742	0.02%	
6.210	Unidentified	776	0.01%	
6.740	2-Methyl-2-heptene	800	0.07%	
7.988	4-Methyl-3-hexanone	833	0.05%	
10.509	Nonane	899	0.02%	
10.788	Bornylene	904	0.02%	
11.837	alpha-Thujene	923	0.02%	
12.260	alpha-Pinene	931	15.41%	
13.038	alpha-Fenchene	945	0.24%	
13.135	Camphene	947	0.1%	
14.695	beta-Pinene	975	0.44%	
15.337	Myrcene	987	0.12%	
15.935	Unidentified	998	0.02%	
16.090	Isobutyl 2-methylbutyrate	1001	0.04%	
16.266	(3E)-Hexenyl acetate	1003	0.03%	
16.383	alpha-Phellandrene	1005	0.04%	
17.041	alpha-Terpinene	1015	0.23%	
17.247	Unidentified	1018	0.01%	
17.512	para-Cymene	1022	0.16%	
17.813	Limonene	1027	2.53%	IFRA
17.915	beta-Phellandrene	1028	0.03%	
17.979	1,8-Cineole	1029	0.43%	
18.218	cis-beta-Ocimene	1033	0.02%	
18.898	trans-beta-Ocimene	1044	0.06%	
19.092	Isobutyl angelate	1047	0.18%	
19.681	gamma-Terpinene	1056	0.45%	
21.490	Terpinolene	1083	0.16%	
21.832	2-Nonanone	1088	0.04%	
21.910	2,4-Dimethylheptane-3,5-dione	1090	0.02%	
22.428	Linalool	1098	0.54%	IFRA
22.659	2-Methylbutyl-2-methylbutyrate	1101	0.09%	
22.796	Nonanal	1103	0.03%	
23.748	endo-Fenchol	1117	0.03%	
24.270	Unidentified	1124	0.01%	
25.225	Unidentified	1138	0.03%	
25.681	Unidentified	1145	0.02%	
25.943	Isoamyl tiglate	1149	0.57%	
26.125	Unidentified	1151	0.01%	
26.217	Unidentified	1153	0.01%	
26.310	Unidentified	1154	0.01%	



Ret. Time	Component	Ret. Idx.	Conc. %	
27.363	Borneol	1169	0.03%	
27.784	Unidentified	1175	0.04%	
27.974	Terpinen-4-ol	1178	0.38%	
28.976	alpha-Terpineol	1193	0.23%	
29.770	Unidentified	1204	0.02%	
30.965	Nerol	1222	0.23%	
31.136	Unidentified	1224	0.04%	
31.782	Unidentified	1234	0.01%	
32.783	Unidentified isomer I	1249	0.04%	
33.108	Unidentified isomer I	1253	0.01%	
33.938	Geranial	1265	0.02%	IFRA
34.542	Unidentified	1274	0.02%	
35.006	Hexyl angelate	1281	0.29%	
35.636	2-Undecanone	1290	0.03%	
40.020	Neryl acetate	1357	25.58%	
40.627	Cyclosativene	1366	0.4%	
41.105	alpha-Copaene	1373	1.97%	
41.235	Geranyl acetate	1375	0.11%	
41.621	Unidentified	1381	0.01%	
41.868	Unidentified	1385	0.02%	
42.134	Unidentified	1389	0.01%	
42.760	Unidentified	1399	0.01%	
43.000	Italicene	1402	2.75%	
43.219	Italicene isomer	1406	0.08%	
43.498	cis-alpha-Bergamotene	1410	0.93%	
43.672	Unidentified	1413	0.02%	
43.894	beta-Caryophyllene	1417	4.03%	
44.726	4,6,9-Trimethyldec-8-en-3,5-dione	1430	2.48%	
45.258	6,9-Guaiadiene	1439	0.11%	
45.677	Neryl propionate	1445	0.86%	
45.992	trans-beta-Farnesene	1450	0.18%	
46.129	alpha-Humulene	1453	0.23%	
46.264	Unidentified	1455	0.03%	
46.403	Alloaromodendrene	1457	0.15%	
46.658	alpha-Acoradiene	1461	0.25%	
46.835	Acoradiene isomer	1464	0.09%	
46.889	beta-Acoradiene	1465	0.22%	
47.041	4,5-di-epi-Aristolochene	1467	0.11%	
47.256	Selina-4,11-diene	1471	2.5%	
47.563	gamma-Curcumene	1476	15.4%	



Ret. Time	Component	Ret. Idx.	Conc. %	
47.740	Ar-Curcumene	1478	2.14%	
47.927	trans-beta-Bergamotene	1481	0.51%	
48.231	beta-Selinene	1486	5.86%	
48.443	gamma-Murolene	1490	0.2%	
48.666	alpha-Selinene	1493	3.76%	
48.813	alpha-Murolene	1496	0.26%	
49.086	delta-Amorphene	1500	0.45%	
49.385	beta-Bisabolene	1505	0.13%	
49.489	beta-Curcumene	1507	0.47%	
49.693	gamma-Cadinene	1510	0.29%	
50.001	delta-Cadinene	1515	0.64%	
50.270	Zonarene	1520	0.1%	
50.510	trans-gamma-Bisabolene	1524	0.07%	
50.848	trans-Cadine-1,4-diene	1530	0.07%	
50.928	Unidentified	1531	0.1%	
51.094	Unidentified	1534	0.04%	
51.330	trans-alpha-Bisabolene	1538	0.14%	
52.524	trans-Nerolidol	1558	0.1%	
52.805	Unidentified	1563	0.13%	
53.088	Unidentified	1567	0.1%	
53.125	Unidentified	1568	0.09%	
53.605	Neryl isovalerate	1576	0.09%	
53.742	Caryophyllene oxide	1578	0.14%	
54.240	Unidentified	1587	0.02%	
54.609	Guaiol	1593	0.09%	
55.135	Unidentified	1602	0.16%	
55.309	Copaborneol	1605	0.22%	
55.540	Rosifoliol	1609	0.28%	
55.680	Unidentified	1612	0.03%	
55.808	Unidentified	1614	0.11%	
55.894	Unidentified	1616	0.05%	
56.625	Unidentified	1629	0.01%	
56.762	Unidentified	1631	0.04%	
56.845	beta-Eudesmol	1632	0.06%	
57.200	Unidentified	1639	0.01%	
57.956	alpha-Eudesmol	1652	0.13%	
58.099	Selin-11-en-4-alpha-ol	1655	0.18%	
58.496	Unidentified	1662	0.01%	
58.778	epi-beta-Bisabolol	1667	0.07%	
58.862	Unidentified	1668	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %	
59.429	Unidentified	1678	0.05%	
59.634	epi-alpha-Bisabolol	1682	0.02%	IFRA
59.870	Unidentified	1686	0.02%	
61.312	Unidentified	1713	0.01%	
61.781	Geranyl hexanoate	1721	0.07%	
63.662	Unidentified	1756	0.02%	
63.955	Unidentified	1762	0.02%	
64.454	Unidentified	1771	0.01%	
64.788	Unidentified	1777	0.09%	
65.494	Unidentified	1791	0.02%	
67.941	Unidentified	1838	0.01%	
95.407	Unidentified	2450	0.02%	

Total Identified Compounds **98.35 %**

