



Essential Oil University

GC/MS Report

German Chamomile (Blue) EO

Matricaria chamomilla

Item | Lot

4P

Date | Analyst

10/16/2024

Dr. Robert S. Pappas

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The analysis of this batch sample, German Chamomile (Blue) EO, meets the expected chemical profile for authentic essential oil of *Matricaria chamomilla*. 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:** German Chamomile (Blue) EO**Botanical Name:** Matricaria chamomilla**Lot Number:** 4P**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Bulgaria**Analysis Date:** 10/16/2024**Manufacture Date:** October 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

Not Measurable

1.50621

0.93879



Ret. Time	Component	Ret. Idx.	Conc. %	
3.975	3-Methylbutanal	647	0.01%	
4.080	2-Methylbutanal	658	0.02%	
8.191	Ethyl 2-methylbutyrate	842	0.08%	
10.426	Santolina triene	901	0.01%	
11.436	Unidentified	920	0.01%	
12.044	alpha-Pinene	931	0.09%	
12.586	Propyl 2-methylbutyrate	941	0.04%	
14.180	Sabinene	970	0.04%	
14.474	beta-Pinene	976	0.03%	
14.827	6-Methyl hept-5-en-2-one	982	0.02%	
15.141	Unidentified	988	0.08%	
15.307	Unidentified	991	0.01%	
15.420	Yomogi alcohol	993	0.04%	
15.964	Octanal	1003	0.02%	
17.279	para-Cymene	1023	0.09%	
17.574	Limonene	1027	0.05%	IFRA
17.705	beta-Phellandrene	1029	0%	
17.752	1,8-Cineole	1030	0.03%	
17.976	cis-beta-Ocimene	1034	0.13%	
18.285	Butyl 2-methylbutyrate	1038	0.01%	
18.644	trans-beta-Ocimene	1044	0.81%	
19.373	Artemisia ketone	1055	0.47%	
19.420	gamma-Terpinene	1056	0.13%	
20.814	Artemisia alcohol	1077	0.04%	
21.212	Terpinolene	1083	0.05%	
22.526	Nonanal	1104	0.03%	
26.522	beta-Artemisia acetate	1162	0.04%	
27.083	Borneol	1170	0.03%	
31.161	Unidentified	1230	0.02%	
31.466	cis-3-Hexenyl isovalerate	1234	0.03%	IFRA
31.910	Cuminal	1241	0.02%	IFRA
33.755	Lavandulol	1268	0.04%	
34.896	trans-Anethole	1284	0.02%	
35.885	Tridecane	1299	0.02%	
37.895	delta-Elementene	1330	0.15%	
39.170	Eugenol	1349	0.01%	IFRA
40.009	Decanoic acid	1362	0.05%	
40.751	alpha-Copaene	1373	0.11%	
41.130	Modhephene	1379	0.04%	
41.340	Unidentified	1382	0.03%	



Ret. Time	Component	Ret. Idx.	Conc. %	
41.554	alpha-Isocomene	1386	0.16%	
41.653	beta-Elemene	1387	0.11%	
43.006	beta-Isocomene	1408	0.03%	
43.543	beta-Caryophyllene	1417	0.24%	
44.203	beta-Copaene	1427	0.03%	
44.728	Aromadendrene	1436	0.18%	
45.720	trans-beta-Farnesene	1452	22.47%	
45.944	Unidentified	1455	0.03%	
46.067	Alloaromadendrene	1457	0.13%	
46.201	Unidentified	1459	0.03%	
46.493	Dehydrosesquicineole	1464	0.08%	
47.031	trans-Cadina-1(6),4-diene	1473	0.13%	
47.203	gamma-Curcumene	1475	0.05%	
47.393	Germacrene D	1478	2.18%	
47.876	beta-Selinene	1486	0.21%	
48.011	cis,trans-alpha-Farnesene	1488	0.59%	
48.277	Bicyclogermacrene	1493	2.12%	
48.474	alpha-Murolene	1496	0.08%	
48.850	trans,trans-alpha-Farnesene	1502	2.79%	
49.052	beta-Bisabolene	1505	0.14%	
49.205	3,6-Dihydrochamazulene	1508	0.21%	
49.338	gamma-Cadinene	1510	0.16%	
49.657	delta-Cadinene	1516	0.22%	
49.999	beta-Sesquiphellandrene	1521	0.08%	
50.093	Matricaria ester	1523	0.1%	
50.991	trans-alpha-Bisabolene	1538	0.02%	
51.365	Sesquirose furan	1544	0.03%	
52.056	Unidentified	1556	0.03%	
52.194	trans-Nerolidol	1558	0.13%	
52.376	Unidentified	1561	0.02%	
52.570	Unidentified	1565	0.02%	
52.673	Dendrolasin	1566	0.17%	
53.087	Spathulenol	1573	0.68%	
53.407	Caryophyllene oxide	1579	0.03%	
53.618	Unidentified + Globulol	1582	0.19%	
54.030	Unidentified	1589	0.03%	
54.129	Viridiflorol	1591	0.11%	
54.277	Guaiol	1594	0.05%	
54.720	Ledol	1601	0.06%	
54.848	Rosifoliol	1603	0.05%	



Ret. Time	Component	Ret. Idx.	Conc. %	
55.223	Unidentified	1610	0.1%	
55.394	2-(7Z)-Bisaboladien-4-ol isomer	1613	0.15%	
55.689	Unidentified	1618	0.08%	
55.866	Unidentified	1622	0.05%	
56.000	Unidentified	1624	0.11%	
56.206	Unidentified	1628	0.13%	
56.315	Unidentified	1629	0.11%	
56.481	cis-Cadin-4en-7-ol	1632	0.03%	
56.655	Unidentified	1636	0.04%	
56.856	tau-Cadinol	1639	0.34%	
56.975	epi-alpha-Cadinol	1641	0.04%	
57.116	Unidentified	1644	0.07%	
57.269	Unidentified	1646	0.03%	
57.569	alpha-Bisabolol oxide B	1652	6.59%	
57.774	Unidentified	1655	0.1%	
57.914	Unidentified	1658	0.18%	
57.980	Unidentified	1659	0.17%	
58.150	Unidentified	1662	0.02%	
58.261	trans-Bisabolol-11-ol	1664	0.11%	
58.424	epi-alpha-Bisabolol	1667	0.1%	IFRA
58.675	Unidentified	1671	0.02%	
59.057	alpha-Bisabolone oxide A	1678	5.35%	
59.361	alpha-Bisabolol	1684	16.29%	IFRA
59.568	Unidentified	1687	0.04%	
59.741	Unidentified	1690	0.02%	
61.194	Herniarin	1717	0.03%	IFRA
61.659	Chamazulene	1726	3.87%	
61.801	Unidentified	1728	0.06%	
62.761	Bisabolol oxide A	1746	24.14%	IFRA
63.292	Unidentified	1756	0.04%	
63.650	Benzyl benzoate	1763	0.04%	IFRA
63.748	Unidentified	1765	0.07%	
65.394	Unidentified	1796	0.04%	
65.868	Unidentified	1805	0.03%	
67.609	Phytone	1839	0.21%	
69.462	cis-Tonghaosu	1875	2.77%	
70.163	trans-Tonghaosu	1889	0.23%	
71.836	Methyl hexadecanoate	1923	0.03%	
73.031	Unidentified	1948	0.07%	
80.423	trans-Phytol	2105	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %	
81.691	Unidentified	2133	0.11%	
88.836	Tricosane	2298	0.18%	
92.928	Tetracosane	2398	0.04%	
96.859	Pentacosane	2498	0.53%	
104.285	Heptacosane	2698	0.07%	
108.868	Unidentified	2829	0.04%	

Total Identified Compounds **97.8 %**

