



Essential Oil University

GC/MS Report

Item	Lot
Valerian EO <i>Valeriana officinalis</i>	8L
Date	Analyst
5/8/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Valerian EO, meets the expected chemical profile for authentic essential oil of *Valeriana officinalis*. 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:** Valerian EO**Botanical Name:** Valeriana officinalis**Lot Number:** 8L**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** India**Analysis Date:** 5/8/2025**Manufacture Date:** April 2025

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

-19.16

1.47299

0.94673



Ret. Time	Component	Ret. Idx.	Conc. %	
5.958	Methyl isopentanoate	769	0.1%	
8.004	Isovaleric acid	837	2.85%	
8.345	Ethyl isovalerate	846	0.01%	
9.564	Methyl 3-methylpentanoate	879	0.02%	
10.587	Unidentified	904	0.01%	
11.470	Tricyclene	920	0.25%	
11.620	alpha-Thujene	923	0.05%	
12.022	alpha-Pinene	931	4.06%	
12.301	3-Methylpentanoic acid	936	0.25%	
12.814	alpha-Fenchene	945	1.07%	
12.923	Camphene	947	15.63%	
14.148	Sabinene	970	0.17%	
14.445	beta-Pinene	975	2.76%	
15.070	Myrcene	987	0.07%	
16.112	alpha-Phellandrene	1005	0.01%	
16.766	alpha-Terpinene	1015	0.08%	
17.243	para-Cymene	1022	0.3%	
17.540	Limonene	1027	3.63%	IFRA
17.637	beta-Phellandrene	1028	0.04%	
17.714	1,8-Cineole	1030	0.03%	
19.387	gamma-Terpinene	1055	0.05%	
21.170	Terpinolene	1083	0.04%	
22.118	Linalool	1097	0.02%	IFRA
22.569	Isoamyl isovalerate	1104	0.01%	
23.613	trans-para-Mentha-2,8-dien-1-ol	1119	0%	
24.893	trans-Pinocarveol	1138	0.02%	
25.222	trans-Verbenol	1143	0.01%	
25.329	Camphor	1144	0.12%	
25.879	trans-beta-Terpineol	1152	0.03%	
27.037	Borneol	1169	1.09%	
27.639	Terpinen-4-ol	1178	0.1%	
28.082	para-Cymen-8-ol	1184	0.02%	
28.649	alpha-Terpineol	1193	0.39%	
28.680	Myrtenol	1193	0.13%	
30.168	endo-Fenchyl acetate	1215	0.01%	
30.636	Thymol methyl ether isomer	1222	0.23%	
30.935	Bornyl formate	1226	0.03%	
30.984	Thymol methyl ether	1227	0.13%	
31.608	Carvacryl methyl ether	1236	0.04%	
32.414	Unidentified	1248	0.02%	



Ret. Time	Component	Ret. Idx.	Conc. %	
32.435	Unidentified	1248	0.02%	
34.464	Unidentified	1278	0.05%	
34.768	Bornyl acetate	1283	40.5%	
34.883	Isobornyl acetate	1284	0.35%	
35.340	Unidentified	1291	0.02%	
35.436	trans-Pinocarvyl acetate	1292	0.05%	
36.877	Unidentified	1314	0.01%	
37.261	Myrtenyl acetate	1320	2.15%	
37.857	Unidentified	1329	0.02%	
38.061	delta-Elemene	1332	0.02%	
38.546	Unidentified	1340	0.01%	
38.808	alpha-Terpinyl acetate	1344	1.3%	
39.024	Citronellyl acetate	1347	0.01%	IFRA
39.605	cis-Carveyl acetate	1356	0.02%	
39.841	Unidentified	1359	0.01%	
40.269	Unidentified	1366	0.01%	
40.701	alpha-Copaene	1372	0.02%	
41.253	beta-Patchoulene	1381	0.09%	
41.598	beta-Elemene	1386	0.08%	
42.702	alpha-Gurjunene	1403	0.03%	
42.875	Unidentified	1406	0.01%	
42.961	beta-Ionol	1407	0.06%	
43.119	Thymohydroquinone dimethyl ether	1410	0.19%	
43.495	beta-Caryophyllene	1416	3.63%	
43.961	gamma-Maaliene	1423	0.02%	
44.167	beta-Gurjunene (Calarene)	1427	0.5%	
44.360	trans-alpha-Bergamotene	1430	0.06%	
44.483	alpha-Guaiene	1432	0.12%	
44.657	Unidentified	1435	0.01%	
45.043	Unidentified	1441	0.18%	
45.314	Seychellene	1445	0.23%	
45.440	Unidentified	1447	0.01%	
45.572	Valerna-4,7(11)-diene	1449	0.28%	
45.732	alpha-Humulene	1452	1.36%	
45.871	Unidentified	1454	0.71%	
46.040	Unidentified	1457	0.05%	
46.073	alpha-Patchoulene	1457	0.08%	
46.275	Unidentified	1460	0.03%	
46.332	Unidentified	1461	0.1%	
46.718	Unidentified	1468	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %
46.814	Unidentified	1469	0.03%
46.963	Unidentified	1472	0.03%
47.152	trans-beta-Ionone	1475	0.59%
47.323	Unidentified	1477	0.05%
47.812	Dihydroagarofuran isomer	1485	0.27%
47.946	Unidentified	1487	0.02%
48.030	Unidentified	1489	0.02%
48.226	alpha-Selinene	1492	0.1%
48.423	Unidentified	1495	0.05%
48.594	alpha-Bulnesene	1498	0.34%
48.690	Unidentified	1499	0.05%
49.279	Unidentified	1509	0.01%
49.502	Bornyl isovalerate	1513	0.1%
49.613	Unidentified	1515	0.09%
50.027	Unidentified	1522	0.01%
50.221	Kessane	1525	0.37%
50.662	Epiligulyl oxide	1532	0.07%
50.944	Unidentified	1537	0.01%
51.367	Elemol	1544	0.02%
51.935	Unidentified	1554	0.35%
52.138	trans-Nerolidol	1557	0.14%
52.605	Unidentified	1565	0.66%
52.838	Unidentified	1569	0.16%
53.032	Spathulenol	1573	0.6%
53.337	Caryophyllene oxide	1578	0.16%
53.490	Unidentified	1580	0.41%
53.669	Unidentified	1583	0.03%
53.984	Unidentified	1589	0.05%
54.025	Unidentified	1589	0.03%
54.205	Unidentified	1592	0.01%
54.310	Unidentified	1594	0.05%
54.566	Unidentified	1598	0.63%
54.797	Rosifoliol	1602	0.06%
54.957	Humulene epoxide II	1605	0.07%
55.705	Unidentified	1619	0.02%
56.003	Unidentified	1624	0.08%
56.256	Unidentified	1628	0.09%
56.527	Unidentified	1633	0.01%
56.880	gamma-Eudesmol	1640	0.14%
57.046	Unidentified	1642	0.02%



Ret. Time	Component	Ret. Idx.	Conc. %	
57.206	Eudesmol isomer	1645	0.03%	
57.358	Unidentified	1648	0.18%	
57.542	Cadin-4-en-10-ol	1651	0.1%	
57.701	Unidentified	1654	0.18%	
57.740	Unidentified	1655	0.07%	
58.047	Unidentified	1660	0.03%	
58.225	Unidentified	1663	0.01%	
58.377	Patchouli alcohol	1666	0.24%	
59.681	Unidentified	1689	0.02%	
60.319	Unidentified	1701	0.03%	
61.153	Unidentified	1716	0.03%	
61.210	Unidentified	1717	0.01%	
61.542	Unidentified	1724	0.08%	
61.743	Valerenal	1727	5.2%	
62.153	Valerenal isomer	1735	0.02%	
62.843	Unidentified	1748	0.03%	
63.504	Unidentified	1760	0.06%	
63.793	Unidentified	1766	0.11%	
65.150	Unidentified	1791	0.51%	
65.853	Unidentified	1805	0.01%	
65.956	Unidentified	1807	0.02%	
67.144	Unidentified	1830	0.02%	
67.868	Unidentified	1844	0.01%	
69.253	Unidentified	1871	0.02%	
69.484	Unidentified	1876	0.01%	
70.064	Unidentified	1887	0.15%	
72.105	Unidentified	1929	0.02%	
72.925	Unidentified	1946	0.17%	
73.043	Unidentified	1948	0.03%	
73.216	Unidentified	1952	0.07%	
74.559	Unidentified	1979	0.02%	
76.675	Unidentified	2024	0.12%	
79.162	Unidentified	2077	0.04%	

Total Identified Compounds **93.62 %**

