



Essential Oil University

GC/MS Report

Item	Lot
Geranium Rose EO <i>Pelargonium roseum</i>	4F
Date	Analyst
1/22/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Geranium Rose EO, meets the expected chemical profile for authentic essential oil of *Pelargonium roseum*. 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:** Geranium Rose EO**Botanical Name:** Pelargonium roseum**Lot Number:** 4F**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Madagascar**Analysis Date:** 1/22/2025**Manufacture Date:** 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

-9.80

1.46538

0.89309



Ret. Time	Component	Ret. Idx.	Conc. %	
3.019	Unidentified	551	0.02%	
3.566	2-Methyl 3-buten-2-ol	606	0.01%	
4.293	3-Penten-2-ol	679	0.01%	
5.088	3-Methyl 1-butanol	728	0.01%	
7.564	Unidentified	825	0.02%	
8.080	3-Methylpentanol	839	0.03%	
8.348	Unidentified	846	0.01%	
10.279	Unidentified	898	0.01%	
11.507	Tricyclene	921	0.01%	
11.955	Unidentified	929	0.01%	
12.054	alpha-Pinene	931	0.48%	
14.017	Bois de Rose oxide	967	0.03%	
14.488	beta-Pinene	976	0.01%	
14.827	6-Methyl hept-5-en-2-one	982	0.04%	
14.946	Unidentified	984	0.02%	
15.115	Myrcene	987	0.11%	
15.160	Unidentified	988	0.03%	
15.477	Unidentified	994	0.02%	
16.075	cis-Dehydrolinalool oxide	1004	0.03%	
16.158	alpha-Phellandrene	1006	0.06%	
17.292	para-Cymene	1023	0.07%	
17.400	Unidentified	1025	0.01%	
17.583	Limonene	1028	0.13%	IFRA
17.685	beta-Phellandrene	1029	0.04%	
17.768	Unidentified	1030	0.03%	
17.895	Dihydromyrcenol	1032	0.02%	
17.983	cis-beta-Ocimene	1034	0.1%	
18.657	trans-beta-Ocimene	1044	0.08%	
20.228	cis-Linalool oxide (furanoid)	1068	0.17%	
20.370	Unidentified	1071	0.01%	
21.245	Terpinolene	1084	0.02%	
21.288	trans-Linalool oxide (furanoid)	1085	0.08%	
22.200	Linalool	1099	7.31%	IFRA
22.314	Unidentified	1100	0.02%	
22.393	6-Methyl heptadi-3,5-en-2-one	1102	0.05%	IFRA
22.877	cis-Rose oxide	1109	1.32%	
23.005	Unidentified	1111	0.02%	
23.971	trans-Rose oxide	1125	0.53%	
24.793	Epiphotocitral A	1137	0.01%	
25.501	trans-Chrysanthemal	1147	0.06%	



Ret. Time	Component	Ret. Idx.	Conc. %	
25.757	Citronellal	1151	0.05%	IFRA
26.019	Menthone	1154	1.86%	
26.186	Unidentified	1157	0.05%	
26.638	Isomenthone	1163	5.4%	
27.093	Unidentified	1170	0.02%	
27.318	Unidentified	1173	0.03%	
27.515	Neomenthol	1176	0.02%	
27.720	Unidentified	1179	0.03%	
28.125	Unidentified	1185	0.01%	
28.257	Menthol	1187	0.1%	
28.706	alpha-Terpineol	1194	0.32%	
30.070	Unidentified	1213	0.01%	
30.255	Unidentified	1216	0.01%	
30.690	Nerol	1223	0.47%	
30.951	Citronellol	1226	25.29%	IFRA
31.643	Neral	1237	0.29%	IFRA
31.795	Unidentified	1239	0.01%	
32.518	Geraniol	1249	12.75%	IFRA
32.676	Unidentified	1252	0.16%	
33.059	Neomenthyl acetate	1257	0.05%	
33.346	trans-Myrtanol	1262	0.17%	
33.647	Geranial	1266	0.56%	IFRA
34.049	Citronellyl formate	1272	11.12%	
34.235	Neryl formate	1275	0.3%	
35.706	Geranyl formate	1296	6.59%	
36.246	Unidentified	1304	0.07%	
38.902	alpha-Cubebene	1345	0.06%	
39.082	Citronellyl acetate	1348	0.39%	IFRA
39.390	Unidentified	1352	0.02%	
39.663	Neryl acetate	1357	0.02%	
40.352	alpha-Ylangene	1367	0.02%	
40.768	alpha-Copaene	1374	0.3%	
40.941	Geranyl acetate	1376	0.42%	
41.282	beta-Bourbonene	1381	0.87%	
41.472	alpha-Bourbonene	1384	0.05%	
41.662	beta-Elemene	1387	0.14%	
41.880	Phenethyl isobutyrate	1390	0.07%	
42.778	alpha-Gurjunene	1404	0.02%	
43.470	beta-Ylangene	1415	0.05%	
43.558	beta-Caryophyllene	1417	0.95%	



Ret. Time	Component	Ret. Idx.	Conc. %	
44.206	beta-Copaene	1427	0.09%	
44.426	trans-alpha-Bergamotene	1431	0.14%	
44.555	alpha-Guaiene	1433	0.47%	
44.942	6,9-Guanidiene	1439	6.31%	
45.111	Unidentified	1442	0.09%	
45.405	Isogermacrene D	1447	0.51%	
45.665	Unidentified	1451	0.02%	
45.801	alpha-Humulene	1453	0.22%	
46.075	Alloaromodendrene	1457	0.09%	
46.445	Unidentified	1463	0.07%	
46.678	Geranyl propionate	1467	1.15%	
46.838	trans-Cadina-1(6),4-diene	1470	0.11%	
47.015	gamma-Murolene	1472	0.09%	
47.295	Unidentified	1477	0.05%	
47.388	Germacrene D	1478	0.67%	
47.624	Unidentified	1482	0.2%	
47.884	beta-Selinene	1486	0.21%	
48.047	trans-Muurolo-4(14),5-diene	1489	0.06%	
48.310	alpha-Selinene	1493	0.09%	
48.488	alpha-Muuroloene	1496	0.14%	
48.660	Unidentified	1499	0.03%	
48.830	Unidentified	1502	0.1%	
49.055	Geranyl isobutyrate	1505	0.37%	
49.354	gamma-Cadinene	1510	0.14%	
49.477	Unidentified	1512	0.02%	
49.664	delta-Cadinene	1516	0.48%	
49.857	cis-Calamenene	1519	0.15%	
49.936	Zonarene	1520	0.12%	
50.101	Citronellyl butyrate	1523	0.61%	
50.316	Unidentified	1527	0.2%	
50.523	trans-Cadina-1,4-diene	1530	0.16%	
50.660	Phenethyl tiglate isomer	1532	0.05%	
50.760	Selina-4(15),7(11)-diene	1534	0.05%	
51.020	alpha-Calacorene	1539	0.06%	
51.210	Unidentified	1542	0.01%	
51.757	Unidentified	1551	0.05%	
51.907	Geranyl butyrate	1554	1.16%	
52.030	Unidentified	1556	0.04%	
52.615	Unidentified isomer I	1565	0.09%	
52.800	Unidentified	1569	0.01%	



Ret. Time	Component	Ret. Idx.	Conc. %
52.940	Unidentified isomer I	1571	0.02%
53.089	Unidentified	1573	0.02%
53.246	Unidentified	1576	0.48%
53.440	Caryophyllene oxide	1579	0.2%
53.485	Phenethyl tiglate	1580	0.5%
53.740	Unidentified	1585	0.01%
53.868	Viridiflorol	1587	0.03%
54.325	Geranyl 2-methylbutyrate	1594	0.52%
54.754	Geranyl isovalerate	1602	0.09%
55.020	Humulene epoxide II	1606	0.05%
55.275	Unidentified	1611	0.03%
55.345	1,10-di-epi-Cubenol	1612	0.14%
55.731	Unidentified	1619	0.13%
56.059	Epicubenol	1625	0.1%
56.916	Unidentified	1640	0.09%
56.977	Unidentified	1641	0.08%
57.119	alpha-Muurolol	1644	0.04%
57.265	Unidentified	1646	0.03%
57.473	Geranyl valerate	1650	0.08%
57.616	alpha-Cadinol	1653	0.09%
57.770	Unidentified	1655	0.05%
58.004	trans-Citronellyl tiglate	1660	0.28%
58.188	Unidentified	1663	0.03%
58.441	Unidentified	1667	0.02%
58.595	Unidentified	1670	0.01%
59.125	Citronellyl hexanoate isomer	1679	0.09%
59.677	Neryl tiglate	1689	0.05%
59.899	Geranyl tiglate	1693	1.43%
60.865	Neryl hexanoate	1711	0.17%
61.042	Citronellyl hexanoate	1714	0.04%
61.192	Unidentified	1717	0.02%
62.769	Geranyl hexanoate	1747	0.06%
66.185	Unidentified	1811	0.02%
67.859	Unidentified	1844	0.04%
69.243	Unidentified	1871	0.02%
70.893	Neryl octanoate	1904	0.02%
71.127	Unidentified	1909	0.03%
72.729	Geranyl octanoate	1942	0.03%
75.025	Manool oxide	1989	0.02%

Total Identified Compounds **97.25 %**

