



# Essential Oil University

## GC/MS Report

Item	Lot
<b>Geranium EO</b> <i>Pelargonium graveolens</i>	<b>4A</b>
Date	Analyst
<b>1/22/2026</b>	<b>Dr. Robert S. Pappas</b>

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**The analysis of this batch sample, Geranium EO, meets the expected chemical profile for authentic essential oil of *Pelargonium graveolens*. 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 EO  
**Botanical Name:** Pelargonium graveolens  
**Lot Number:** 4A  
**Production Method:** Steam distilled

**Sample Type:** EO - Single  
**Country of Origin:** Egypt  
**Analysis Date:** 1/22/2026  
**Manufacture Date:** January 2026

## 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	METHOD	RESULTS
Optical Rotation @20°C	USP[781]	-9.24
Refractive Index @20°C	USP[831]	1.46653
Specific Gravity @20°C	USP[841]	0.89203



Ret. Time	Component	Ret. Idx.	Conc. %	
7.915	cis-Salvene	818	0.01%	
8.418	3-Methylpentanol	830	0.03%	
8.796	Hex-(3Z)-enol	840	0.01%	
12.396	Unidentified	920	0.01%	
12.517	alpha-Pinene	923	0.4%	ALLERGEN
14.513	Bois de Rose oxide	958	0.03%	
15.304	6-Methyl hept-5-en-2-one	972	0.03%	
15.612	Myrcene	977	0.08%	PROP. 65
15.680	cis-Dehydrolinalool oxide	978	0.02%	
15.982	Unidentified	983	0.02%	
16.588	trans-Dehydrolinalool oxide	994	0.02%	
16.669	alpha-Phellandrene	996	0.06%	
17.808	para-Cymene	1013	0.07%	
18.101	Limonene	1018	0.13%	ALLERGEN IFRA
18.203	beta-Phellandrene	1019	0.04%	
18.290	Unidentified	1021	0.03%	
18.400	Unidentified	1022	0.03%	
18.499	cis-beta-Ocimene	1024	0.05%	
19.182	trans-beta-Ocimene	1034	0.08%	
20.772	cis-Linalool oxide (furanoid)	1058	0.15%	
21.805	Terpinolene	1073	0.02%	ALLERGEN
21.837	trans-Linalool oxide (furanoid)	1074	0.08%	
22.716	Linalool	1087	5.43%	ALLERGEN IFRA
22.875	Unidentified	1089	0.02%	
22.910	6-Methyl-heptadi-3,5-en-2-one	1090	0.05%	IFRA
23.426	cis-Rose oxide	1098	1.13%	
24.536	trans-Rose oxide	1114	0.47%	
26.058	Isopulegol	1135	0.07%	
26.309	Citronellal	1139	0.13%	IFRA
26.575	Menthone	1143	1.14%	
26.740	Unidentified	1145	0.09%	
27.191	Isomenthone	1152	6.31%	
27.637	alpha-Phellandrene-8-ol	1158	0.02%	
28.831	Isomenthol	1175	0.12%	ALLERGEN
29.272	alpha-Terpineol	1181	0.34%	ALLERGEN
30.683	Unidentified	1202	0.05%	
31.267	Nerol	1210	0.19%	
31.492	Citronellol	1213	35.22%	ALLERGEN IFRA
32.221	Neral	1224	0.29%	ALLERGEN IFRA
33.072	Geraniol	1236	15.17%	ALLERGEN IFRA



Ret. Time	Component	Ret. Idx.	Conc. %	
33.218	Unidentified	1239	0.15%	
33.914	Unidentified	1249	0.02%	
34.228	Geranial	1253	0.47%	ALLERGEN IFRA
34.624	Citronellyl formate	1259	8%	
34.828	Neryl formate	1262	0.05%	
35.712	Carvacrol	1275	0.03%	
36.291	Geranyl formate	1283	3.06%	
38.570	delta-Elemene	1317	0.03%	
39.566	alpha-Cubebene	1332	0.16%	
39.702	Citronellyl acetate	1334	0.27%	IFRA
40.048	Unidentified	1339	0.02%	
41.018	alpha-Ylangene	1354	0.02%	
41.438	alpha-Copaene	1360	0.44%	
41.557	Geranyl acetate	1362	0.32%	ALLERGEN
41.954	beta-Bourbonene	1368	0.9%	
42.149	alpha-Bourbonene	1371	0.06%	
42.318	beta-Elemene	1374	0.09%	
42.495	Phenethyl isobutyrate	1376	0.02%	
43.457	alpha-Gurjunene	1391	0.05%	
44.155	beta-Ylangene	1402	0.08%	
44.232	beta-Caryophyllene	1403	1.27%	ALLERGEN
44.877	beta-Copaene	1413	0.1%	
45.498	Citronellyl propionate	1423	0.32%	
45.602	6,9-Guaiadiene	1425	0.18%	
45.779	Isogermacrene D	1427	0.07%	
46.081	Unidentified	1432	0.35%	
46.472	alpha-Humulene	1438	0.2%	
46.750	Alloaromodendrene	1443	0.12%	
47.314	Neryl propionate	1452	0.61%	
47.508	cis-Murrola-4(14),5-diene	1455	0.21%	
47.706	trans-Cadina-1(6),4-diene	1458	0.15%	
47.985	alpha-Amorphene	1463	0.04%	
48.064	Germacrene D	1464	1.35%	
48.238	Selina-4,11-diene	1467	0.12%	
48.551	beta-Selinene	1472	0.07%	
48.689	Viridiflorene	1474	0.2%	
48.740	gamma-Amorphene	1475	0.05%	
48.954	Bicyclogermacrene	1478	0.41%	
49.148	alpha-Muurolene	1481	0.16%	
49.534	beta-Dihydroagarofuran	1487	0.12%	



Ret. Time	Component	Ret. Idx.	Conc. %
49.700	Geranyl isobutyrate	1490	0.06%
50.020	gamma-Cadinene	1495	0.15%
50.150	epi-Cubebol	1497	0.03%
50.336	delta-Cadinene	1500	0.72%
50.513	cis-Calamenene	1503	0.19%
50.609	Zonarene	1505	0.14%
50.749	Citronellyl butyrate	1507	0.66%
51.179	delta-Amorphene	1514	0.17%
51.428	Selina-4(15),7(11)-diene	1518	0.03%
51.672	alpha-Calacorene	1522	0.04%
52.054	alpha-Agarofuran	1529	0.23%
52.559	Geranyl butyrate	1537	1.13%
52.700	Germacren D-4-ol	1540	0.04%
53.754	Spathulenol	1557	0.12%
54.111	Phenylethyl tiglate	1563	0.74%
54.292	Unidentified	1566	0.03%
54.974	Neryl (S)-2-methylbutanoate	1578	0.06%
55.521	Unidentified	1587	0.03%
56.019	1,10-di-epi-Cubenol	1595	0.09%
56.419	10-epi-gamma-Eudesmol	1602	4.15%
56.726	1-Epicubenol	1607	0.12%
56.961	gamma-Eudesmol	1612	0.07%
57.190	Agarospirol	1616	0.11%
57.590	Cubenol analogue	1623	0.1%
57.649	Unidentified	1624	0.1%
57.766	Unidentified	1626	0.13%
58.159	Valerianol	1633	0.32%
58.230	beta-Eudesmol	1634	0.3%
58.499	Dihydro agarofuran analogue	1639	0.2%
58.658	Citronellyl tiglate	1642	0.21%
59.790	Unidentified	1662	0.08%
60.547	Geranyl tiglate	1675	1.2%
61.527	Geranyl hexanoate	1692	0.12%
61.710	Citronellyl hexanoate	1695	0.04%
63.424	Geranyl hexanoate	1727	0.05%
66.854	Unidentified	1791	0.03%
68.522	Neryl octanoate	1823	0.04%
71.806	Unidentified	1887	0.01%
73.396	Geranyl octanoate	1919	0.02%

Total Identified Compounds **98.84 %**



TIC  
10,355,732

