



Essential Oil University

GC/MS Report

Item	Lot
Geranium EO Bourbon <i>Pelargonium graveolens</i>	6Q
Date	Analyst
10/28/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Geranium EO Bourbon, 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 Bourbon
Botanical Name: Pelargonium graveolens
Lot Number: 6Q
Production Method: Steam distilled

Sample Type: EO - Single
Country of Origin: Madagascar
Analysis Date: 10/28/2025
Manufacture Date: May 2023

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

-12.04
1.46582
0.89400



Ret. Time	Component	Ret. Idx.	Conc. %	
7.122	cis-Salvene	815	0.02%	
7.646	3-Methyl pentanol	829	0.02%	
7.894	2,5-Dimethylhex-5-en-3-yn-2-ol	836	0.01%	
9.788	3-Methyl pentanol	885	0.01%	
11.500	alpha-Pinene	921	0.45%	ALLERGEN
13.445	Bois de Rose oxide	957	0.03%	
13.897	beta-Pinene	965	0.01%	ALLERGEN
14.288	6-Methyl hept-5-en-2-one	972	0.03%	
14.386	Unidentified	974	0.02%	
14.547	Myrcene	977	0.16%	PROP. 65
14.882	Unidentified	983	0.01%	
15.500	Unidentified	994	0.02%	
15.567	alpha-Phellandrene	995	0.07%	
16.698	para-Cymene	1013	0.06%	
16.980	Limonene	1018	0.12%	ALLERGEN IFRA
17.075	beta-Phellandrene	1019	0.05%	
17.165	1,8-Cineole	1020	0.03%	
17.307	Unidentified	1023	0.01%	
17.397	cis-beta-Ocimene	1024	0.1%	
18.057	trans-beta-Ocimene	1034	0.09%	
19.599	cis-Linalool oxide (furanoid)	1058	0.14%	
19.710	Unidentified	1060	0.01%	
20.570	Terpinolene	1073	0.02%	ALLERGEN
20.647	trans-Linalool oxide (furanoid)	1074	0.07%	
21.555	Linalool	1088	3.87%	ALLERGEN IFRA
21.683	Unidentified	1090	0.03%	
21.767	Unidentified	1091	0.04%	
21.905	alpha-Pinene oxide	1094	0.02%	
22.214	cis-Rose oxide	1098	0.91%	
22.370	Phenethyl alcohol	1101	0.01%	
23.288	trans-Rose oxide	1114	0.37%	
24.107	Epiphotocitral A	1126	0.02%	
24.807	trans-Chrysanthemal	1136	0.05%	
25.080	Citronellal	1140	0.06%	IFRA
25.316	Menthone	1144	1.2%	
25.517	Unidentified	1147	0.04%	
25.932	Isomenthone	1153	5.53%	
26.389	para-Mentha-1,5-dien-8-ol	1159	0.02%	
26.611	Isopulegol	1163	0.03%	
26.814	Unidentified	1166	0.02%	



Ret. Time	Component	Ret. Idx.	Conc. %	
27.000	Neoisopulegol	1168	0.03%	
27.528	Isomenthol	1176	0.11%	ALLERGEN
27.986	alpha-Terpineol	1183	0.3%	ALLERGEN
28.745	Unidentified	1194	0.02%	
29.514	Unidentified	1205	0.02%	
29.968	Nerol	1212	0.44%	
30.247	Citronellol	1216	21.73%	ALLERGEN IFRA
30.756	Unidentified	1223	0.01%	
30.924	Neral	1226	0.38%	ALLERGEN IFRA
31.818	Geraniol	1239	14%	ALLERGEN IFRA
31.961	Unidentified	1241	0.22%	
32.160	Unidentified	1244	0.03%	
32.304	Menthyl acetate	1246	0.06%	
32.602	trans-Myrtranol	1250	0.18%	
32.930	Geranial	1255	0.64%	ALLERGEN IFRA
33.329	Citronellyl formate	1261	12.63%	
33.503	Neryl formate	1264	0.35%	
34.977	Geranyl formate	1285	7.29%	
35.477	Myrtanyl acetate	1293	0.09%	
35.870	Unidentified	1299	0.01%	
38.106	alpha-Cubebene	1333	0.11%	
38.343	Citronellyl acetate	1336	0.42%	IFRA
38.564	Unidentified	1340	0.03%	
38.931	Neryl acetate	1345	0.02%	
39.534	alpha-Ylangene	1354	0.03%	
39.959	alpha-Copaene	1361	0.34%	
40.203	Geranyl acetate	1365	0.46%	ALLERGEN
40.468	beta-Bourbonene	1369	1.02%	
40.652	alpha-Bourbonene	1371	0.07%	
40.867	beta-Elemene	1375	0.18%	
41.134	Phenethyl isobutyrate	1379	0.11%	
41.958	alpha-Gurjunene	1391	0.02%	
42.740	beta-Caryophyllene	1403	1.13%	ALLERGEN
43.397	beta-Copaene	1414	0.1%	
43.633	trans-alpha-Bergamotene	1418	0.15%	
43.753	alpha-Guaiene	1420	0.52%	
43.835	beta-Copaene	1421	0.02%	
44.148	6,9-Guaiadiene	1426	7.43%	
44.301	gamma-Elemene	1428	0.1%	
44.525	Unidentified	1432	0.03%	



Ret. Time	Component	Ret. Idx.	Conc. %
44.604	6,9-Guanidiene	1433	0.56%
44.700	Unidentified	1435	0.02%
44.990	alpha-Humulene	1439	0.27%
45.262	Alloaromodendrene	1444	0.1%
45.660	Unidentified	1450	0.08%
45.785	Unidentified	1452	0.04%
45.943	Geranyl propionate	1455	1.38%
46.025	cis-Murrola-4(14),5-diene	1456	0.12%
46.185	Unidentified	1459	0.04%
46.220	gamma-Murolene	1459	0.05%
46.505	Unidentified	1464	0.06%
46.587	Germacrene D	1465	1.1%
46.813	Cadina-1(6),4-diene	1469	0.2%
46.913	Phenethyl 2-methylbutyrate	1470	0.13%
47.078	beta-Selinene	1473	0.2%
47.255	gamma-Amorphene	1476	0.09%
47.509	alpha-Selinene	1480	0.09%
47.698	alpha-Amorphene	1483	0.16%
47.876	Unidentified	1486	0.03%
47.950	Unidentified	1487	0.06%
48.015	Unidentified	1488	0.04%
48.097	trans,trans-alpha-Farnesene	1489	0.03%
48.315	Geranyl isobutyrate	1493	0.41%
48.564	gamma-Cadinene	1497	0.15%
48.700	Unidentified	1499	0.02%
48.880	delta-Cadinene	1502	0.55%
49.078	cis-Calamenene	1505	0.14%
49.140	Zonarene	1506	0.17%
49.365	Citronellyl butyrate	1510	0.66%
49.555	Unidentified	1513	0.18%
49.720	trans-Cadina-1,4-diene	1516	0.11%
49.811	Neryl butyrate	1517	0.08%
49.949	Unidentified	1520	0.08%
50.235	alpha-Calacorene	1525	0.06%
50.834	Unidentified	1535	0.05%
50.989	Unidentified	1537	0.09%
51.181	Geranyl butyrate	1540	1.46%
51.457	Unidentified	1545	0.04%
51.790	Unidentified	1551	0.06%
51.880	Unidentified	1552	0.05%



Ret. Time	Component	Ret. Idx.	Conc. %
52.208	Citronellyl valerate	1558	0.03%
52.328	Unidentified	1560	0.02%
52.494	Unidentified	1563	0.65%
52.616	Caryophyllene oxide	1565	0.21%
52.759	2-Phenethyl tiglate	1567	0.61%
52.970	Unidentified	1571	0.02%
53.087	Unidentified	1572	0.04%
53.280	Unidentified	1576	0.02%
53.450	Unidentified	1579	0.03%
53.589	Neryl isovalerate	1581	0.6%
54.030	Geranyl isovalerate	1588	0.14%
54.241	Humulene epoxide II	1592	0.05%
54.573	Unidentified	1597	0.2%
54.983	Citronellyl valerate	1605	0.09%
55.290	1,10-di-Epicubenol	1610	0.1%
56.133	Epicubenol	1625	0.11%
56.259	Unidentified	1627	0.08%
56.368	Unidentified	1629	0.04%
56.517	Myrtenyl tiglate	1632	0.03%
56.759	Geranyl valerate	1636	0.1%
56.857	alpha-Cadinol	1638	0.08%
56.999	Unidentified	1640	0.04%
57.287	(E)-Citronellyl tiglate	1645	0.33%
57.420	Unidentified	1648	0.03%
58.411	Unidentified	1665	0.1%
58.969	Neryl tiglate	1675	0.05%
59.189	Geranyl tiglate	1679	1.78%
60.154	Neryl hexanoate	1696	0.2%
60.331	Citronellyl hexanoate	1699	0.05%
60.461	Unidentified	1702	0.03%
62.070	Geranyl hexanoate	1732	0.06%
65.497	Citronellyl hexanoate	1796	0.02%
67.174	Unidentified	1828	0.03%
68.559	Unidentified	1855	0.02%
70.213	Neryl octanoate	1888	0.02%
70.450	Unidentified	1892	0.03%
72.064	Geranyl octanoate	1925	0.03%
74.284	Manool oxide	1971	0.02%
105.407	Unidentified	2720	0.02%

Total Identified Compounds **97.02 %**



TIC
9,613,180

