



Essential Oil University

GC/MS Report

Item	Lot
Lemongrass EO <i>Cymbopogon flexuosus</i>	5A
Date	Analyst
5/1/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Lemongrass EO, meets the expected chemical profile for authentic essential oil of *Cymbopogon flexuosus*. 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:** Lemongrass EO**Botanical Name:** Cymbopogon flexuosus**Lot Number:** 5A**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** India**Analysis Date:** 5/1/2025**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

-2.08

1.48508

0.89930



Ret. Time	Component	Ret. Idx.	Conc. %	
3.027	Unidentified	551	0.04%	
3.572	2-Methyl 3-buten-2-ol	606	0.05%	
3.986	3-Methylbutanal	648	0.01%	
4.505	2-Ethylfuran	700	0.01%	
5.083	3-Methyl 1-butanol	728	0.01%	
7.554	Unidentified	825	0.01%	
9.097	4-Heptanone	866	0.02%	
9.554	Unidentified	878	0.01%	
9.951	Unidentified	889	0.01%	
10.904	Unidentified	910	0.01%	
11.489	Tricyclene	921	0.21%	
12.036	alpha-Pinene	931	0.32%	
12.921	Camphene	947	1.64%	
14.164	Sabinene	970	0.01%	
14.462	beta-Pinene	975	0.03%	
14.790	6-Methyl hept-5-en-2-one	981	3.02%	
15.094	Myrcene	987	0.03%	
15.150	para-Cymenene	988	0.1%	
15.287	6-Methyl hept-5-en-2-ol	991	0.02%	
15.445	Unidentified	994	0.01%	
15.558	trans-Dehydroxylinol oxide	996	0.03%	
15.643	Unidentified	997	0.01%	
15.942	Octanal	1002	0.05%	
16.053	Unidentified	1004	0.01%	
16.135	alpha-Phellandrene	1005	0.01%	
17.264	para-Cymene	1023	0.03%	
17.350	Unidentified	1024	0.01%	
17.558	Limonene	1027	1.84%	IFRA
17.670	beta-Phellandrene	1029	0.02%	
17.737	1,8-Cineole	1030	0.05%	
17.959	cis-beta-Ocimene	1033	0.21%	
18.635	trans-beta-Ocimene	1044	0.15%	
18.752	Unidentified	1046	0.01%	
19.064	Melonol	1050	0.03%	
19.411	gamma-Terpinene	1056	0.02%	
20.258	4-Nonanone	1069	1.64%	
20.992	Unidentified	1080	0.01%	
21.194	Terpinolene	1083	0.06%	
21.240	trans-Linalool oxide (pyranoid)	1084	0.02%	
21.522	4-Nonanol	1088	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %	
21.616	Rosefuran	1090	0.14%	
21.814	Unidentified	1093	0.02%	
22.075	Perillene	1097	0.08%	
22.144	Linalool	1098	1.52%	IFRA
22.240	Unidentified	1099	0.01%	
22.371	6-Methyl heptadi-3,5-en-2-one	1101	0.02%	IFRA
22.536	alpha-Pinene oxide	1104	0.14%	
22.778	Unidentified	1107	0.05%	
23.628	trans-para-Mentha-2,8-dienol	1120	0.02%	
23.741	Unidentified	1121	0.01%	
24.074	allo-Ocimene	1126	0.01%	
24.468	Unidentified	1132	0.01%	
24.623	Unidentified	1134	0.01%	
24.753	Epiphotocitral A	1136	0.18%	
25.100	exo-Isocitral	1141	0.07%	IFRA
25.465	trans-Chrysanthemal	1146	0.34%	
25.715	Citronellal	1150	0.25%	IFRA
26.346	Isoneral	1159	0.35%	IFRA
26.495	Unidentified	1161	0.01%	
26.897	Isoborneol	1167	0.18%	
27.060	Borneol	1170	0.28%	
27.474	Menthhol	1176	0.06%	
27.641	Isogeranial	1178	0.85%	IFRA
28.565	Unidentified	1191	0.06%	
28.668	alpha-Terpineol	1193	0.21%	
29.012	trans-Isopiperitenol	1198	0.03%	
29.460	Decanal	1205	0.22%	
30.226	cis-Isopiperitenol	1216	0.02%	
30.662	Nerol	1222	0.13%	
30.854	Citronellol	1225	0.1%	IFRA
31.711	Neral	1238	28.96%	IFRA
32.461	Geraniol	1249	6.3%	IFRA
32.662	Piperitone	1252	0.14%	
33.768	Geranial	1268	37.32%	IFRA
33.978	4-Undecanone	1271	0.08%	
34.322	Unidentified	1276	0.01%	
34.551	trans-Carvone oxide	1279	0.29%	IFRA
35.654	Geranyl formate	1296	0.06%	
37.187	Methyl geranate	1319	0.01%	
38.041	Unidentified	1332	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %	
38.839	Unidentified	1344	0.08%	
39.045	Citronellyl acetate	1347	0.02%	IFRA
39.146	Unidentified	1349	0.01%	
39.622	Neryl acetate	1356	0.03%	
39.772	Unidentified	1358	0.04%	
40.303	Isoledene	1366	0.31%	
40.413	Unidentified	1368	0.05%	
40.726	alpha-Copaene	1373	0.03%	
40.914	Geranyl acetate	1376	4.46%	
41.239	beta-Bourbonene	1381	0.03%	
41.520	Unidentified	1385	0.04%	
41.624	beta-Elemene	1387	0.13%	
41.753	Sativene	1389	0.03%	
42.948	Dodecanal	1407	0.02%	
43.517	beta-Caryophyllene	1416	1.66%	
44.161	beta-Copaene	1427	0.03%	
44.360	Unidentified	1430	0.01%	
44.877	6,9-Guanidiene	1438	0.02%	
45.215	trans-Isoeugenol	1443	0.24%	IFRA
45.359	cis-Murrola-3,5-diene	1446	0.04%	
45.755	alpha-Humulene	1452	0.19%	
46.167	Unidentified	1459	0.02%	
46.790	trans-Cadina-1(6),4-diene	1469	0.04%	
46.978	gamma-Murolene	1472	0.01%	
47.235	Unidentified	1476	0.01%	
47.344	Germacrene D	1478	0.09%	
47.532	Unidentified	1481	0.01%	
48.015	gamma-Amorphene	1488	0.02%	
48.150	Unidentified	1491	0.03%	
48.240	epi-Cubebol	1492	0.14%	
48.435	alpha-Murolene	1495	0.04%	
48.694	Unidentified	1499	0.01%	
48.875	alpha-Chamigrene	1502	0.02%	
49.016	Cuparene	1505	0.02%	
49.312	gamma-Cadinene	1510	1.43%	
49.429	Cubebol	1512	0.17%	
49.616	delta-Cadinene	1515	0.41%	
49.815	cis-Calamenene	1518	0.02%	
49.875	Unidentified	1519	0.02%	
50.134	trans-gamma-Bisabolene	1524	0.18%	



Ret. Time	Component	Ret. Idx.	Conc. %	
50.316	Unidentified	1527	0.03%	
50.464	trans-Cadina-1,4-diene	1529	0.04%	
50.590	Unidentified	1531	0.02%	
50.711	alpha-Cadinene	1533	0.05%	
51.390	alpha-Elemol	1545	0.04%	
51.534	Unidentified	1547	0.02%	
51.868	Geranyl butyrate	1553	0.07%	
52.001	Germacrene B	1555	0.02%	
52.643	Unidentified	1566	0.01%	
53.362	Caryophyllene oxide	1578	0.62%	
54.979	Humulene epoxide II	1606	0.05%	
55.306	1,10-di-epi-Cubenol	1612	0.02%	
56.018	Epicubenol	1624	0.03%	
56.859	Unidentified	1639	0.04%	
57.568	Unidentified	1652	0.03%	
58.119	Unidentified	1662	0.01%	
58.399	Unidentified	1667	0.02%	
68.307	Unidentified	1853	0.01%	
76.287	Unidentified	2016	0.01%	
76.621	Unidentified	2023	0.02%	
78.178	Unidentified	2056	0.06%	
79.856	Unidentified	2092	0.1%	
80.071	Unidentified	2097	0.04%	
81.509	Unidentified	2129	0.02%	
81.889	Unidentified	2138	0.01%	
86.184	Unidentified	2236	0.01%	

Total Identified Compounds **98.81 %**

