



Essential Oil University

GC/MS Report

Lemongrass EO, Pure & Natural

Cymbopogon flexuosus

Item | Lot

2B

Date | Analyst

10/14/2025

Dr. Robert S. Pappas

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The analysis of this batch sample, Lemongrass EO, Pure & Natural, 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, Pure & Natural**Botanical Name:** Cymbopogon flexuosus**Lot Number:** 2B**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** India**Analysis Date:** 10/14/2025**Manufacture Date:** September 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

-1.96

1.48531

0.89628



Ret. Time	Component	Ret. Idx.	Conc. %	
3.721	Unidentified	651	0.02%	
4.163	3-Methylbutanal	670	0.01%	
5.352	3-Methyl-1-butanol	721	0.01%	
9.602	4-Heptanone	860	0.01%	
12.090	Tricyclene	915	0.13%	
12.656	alpha-Pinene	925	0.2%	ALLERGEN
13.574	Camphene	941	1.03%	
14.854	Sabinene	964	0.01%	
15.164	beta-Pinene	969	0.01%	ALLERGEN
15.463	6-Methyl hept-5-en-2-one	974	1.55%	
15.792	Myrcene	980	0.07%	PROP. 65
15.867	para-Cymenene	981	0.05%	
16.263	trans-Dehydroxylinol oxide	988	0.03%	
16.643	Octanal	995	0.06%	
18.008	para-Cymene	1016	0.02%	
18.314	Limonene	1021	1.55%	ALLERGEN IFRA
18.417	beta-Phellandrene	1022	0.03%	
18.512	1,8-Cineole	1024	0.02%	
18.708	cis-beta-Ocimene	1027	0.25%	
19.400	trans-beta-Ocimene	1037	0.16%	
19.836	Melonol	1044	0.02%	
20.202	gamma-Terpinene	1049	0.01%	
21.049	4-Nonanone	1062	1.2%	
22.019	Terpinolene	1077	0.05%	ALLERGEN
22.100	trans-Linalool oxide (furanoid)	1078	0.01%	
22.339	4-Nonanol	1081	0.02%	
22.428	Rosefuran	1083	0.12%	
22.895	Perillene	1090	0.06%	
22.963	Linalool	1091	1.16%	ALLERGEN IFRA
23.382	alpha-Pinene oxide	1097	0.11%	
23.618	Unidentified	1101	0.03%	
24.601	Unidentified	1115	0.01%	
24.918	allo-Ocimene	1119	0.01%	
25.621	Epiphotocitral A	1129	0.12%	
25.959	exo-Isocitral	1134	0.1%	IFRA
26.338	trans-Chrysanthemal	1139	0.28%	
26.582	Citronellal	1143	0.22%	IFRA
27.210	Isoneral	1152	0.62%	IFRA
27.776	Isoborneol	1160	0.18%	
27.966	Borneol	1163	0.2%	



Ret. Time	Component	Ret. Idx.	Conc. %	
28.380	Menthol	1169	0.01%	ALLERGEN
28.516	Isogeranial	1171	1.11%	IFRA
28.595	Unidentified	1172	0.1%	
29.475	Unidentified	1184	0.05%	
29.578	alpha-Terpineol	1186	0.15%	ALLERGEN
29.928	Unidentified	1191	0.03%	
30.361	Decanal	1197	0.19%	
31.151	Unidentified	1208	0.03%	
31.319	Unidentified	1211	0.01%	
31.577	Nerol	1215	0.16%	
31.769	Citronellol	1217	0.11%	ALLERGEN IFRA
31.945	Unidentified	1220	0.02%	
32.062	Unidentified	1222	0.03%	
32.633	Neral	1230	29.52%	ALLERGEN IFRA
33.383	Geraniol	1241	7.41%	ALLERGEN IFRA
33.608	Piperitone	1244	0.09%	
34.695	Geranial	1260	38.58%	ALLERGEN IFRA
34.925	4-Undecanone	1263	0.08%	
35.284	Unidentified	1269	0.01%	
35.484	trans-Carvone oxide	1271	0.2%	IFRA
36.607	Geranyl formate	1288	0.05%	
38.148	Methyl geranate	1311	0.07%	
39.001	Unidentified	1323	0.02%	
39.702	Geranic acid	1334	0.06%	
39.885	alpha-Cubebene	1337	0.03%	
40.026	Citronellyl acetate	1339	0.02%	IFRA
40.105	Eugenol	1340	0.02%	ALLERGEN IFRA
40.602	Neryl acetate	1348	0.03%	
40.774	Unidentified	1350	0.03%	
41.330	Cyclosativene	1359	0.13%	
41.359	Isodene	1359	0.18%	
41.795	alpha-Copaene	1366	0.03%	
41.897	Geranyl acetate	1367	4.64%	ALLERGEN
42.160	Unidentified	1371	0.03%	
42.294	beta-Bourbonene	1373	0.05%	
42.560	beta-Cubebene	1377	0.07%	
42.661	beta-Elementene	1379	0.15%	
42.828	Sativene	1381	0.05%	
43.951	Dodecanal	1398	0.03%	
44.592	beta-Caryophyllene	1409	1.88%	ALLERGEN



Ret. Time	Component	Ret. Idx.	Conc. %	
45.224	beta-Copaene	1419	0.03%	
45.958	6,9-Guanidiene	1430	0.02%	
46.210	trans-Isoeugenol	1434	0.36%	ALLERGEN IFRA
46.432	cis-Murrola-4(14),5-diene	1438	0.04%	
46.839	alpha-Humulene	1444	0.2%	
47.242	Unidentified	1451	0.03%	
47.867	trans-Cadina-1(6),4-diene	1461	0.03%	
48.427	Germacrene D	1470	0.22%	
49.101	trans-Muurolo-4(14),5-diene	1480	0.05%	
49.321	epi-Cubebol	1484	0.15%	
49.510	alpha-Muuroloene	1487	0.04%	
49.780	delta-Amorphene	1491	0.01%	
49.978	alpha-Chamigrene	1494	0.02%	
50.102	Cuparene	1496	0.02%	
50.393	gamma-Cadinene	1501	1.29%	
50.514	Cubebol	1503	0.28%	
50.695	delta-Cadinene	1506	0.37%	
50.890	Unidentified	1509	0.03%	
50.970	Unidentified	1511	0.02%	
51.186	trans-gamma-Bisabolene	1514	0.2%	
51.395	Cubebol	1518	0.04%	
51.548	trans-Cadine-1,4-diene	1520	0.02%	
51.655	Unidentified	1522	0.02%	
51.799	alpha-Cadinene	1524	0.05%	
52.463	alpha-Elemol	1536	0.06%	
52.920	Geranyl butyrate	1543	0.08%	
53.115	Germacrene B	1547	0.02%	
53.745	Unidentified	1557	0.03%	
54.477	Caryophyllene oxide	1569	0.5%	
56.097	Humulene epoxide II	1597	0.04%	
56.410	1,10-di-epi-Cubenol	1602	0.02%	
57.120	Epicubenol	1614	0.06%	
57.461	Unidentified	1620	0.06%	
57.668	Unidentified	1624	0.05%	
57.990	Unidentified	1630	0.07%	
59.212	Unidentified	1651	0.02%	
59.499	Unidentified	1656	0.05%	
59.730	Unidentified	1661	0.02%	
68.457	Unidentified	1822	0.02%	
72.641	Unidentified	1903	0.05%	



Ret. Time	Component	Ret. Idx.	Conc. %	
79.330	Unidentified	2042	0.02%	
81.019	Unidentified	2078	0.07%	
81.257	Unidentified	2083	0.02%	

Total Identified Compounds **99.01 %**



TIC
18,424,444

