



Essential Oil University

GC/MS Report

Item	Lot
Lemon EO CP <i>Citrus limon</i>	6A
Date	Analyst
4/29/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Lemon EO CP, meets the expected chemical profile for authentic essential oil of *Citrus limon*. 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:** Lemon EO CP**Botanical Name:** Citrus limon**Lot Number:** 6A**Production Method:** Cold Press**Sample Type:** EO - Single**Country of Origin:** Italy**Analysis Date:** 4/29/2025**Manufacture Date:** February 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

+59.36

1.47452

0.85435



Ret. Time	Component	Ret. Idx.	Conc. %	
3.024	Unidentified	551	0.02%	
11.501	Tricyclene	921	0.01%	
11.648	alpha-Thujene	924	0.37%	
12.051	alpha-Pinene	931	2.28%	
12.935	Camphene	947	0.05%	
14.189	Sabinene	970	1.77%	
14.509	beta-Pinene	976	13.29%	
14.825	6-Methyl hept-5-en-2-one	982	0%	
14.965	para-Menth-3-ene	985	0%	
15.108	Myrcene	987	1.39%	
15.957	Octanal	1002	0.06%	
16.154	alpha-Phellandrene	1006	0.03%	
16.296	delta-3-Carene	1008	0%	
16.486	Hexyl acetate	1011	0%	
16.810	alpha-Terpinene	1016	0.15%	
17.303	para-Cymene	1023	0.74%	
17.708	Limonene	1029	61.41%	IFRA
17.755	beta-Phellandrene	1030	0.23%	
17.805	1,8-Cineole	1031	0.05%	
17.986	cis-beta-Ocimene	1034	0.04%	
18.655	trans-beta-Ocimene	1044	0.09%	
19.470	gamma-Terpinene	1057	10.88%	
20.217	trans-Sabinene hydrate	1068	0.05%	
20.350	Pinol	1070	0.01%	
21.221	Terpinolene	1084	0.29%	
21.436	Fenchone	1087	0.01%	
21.639	Rosefuran	1090	0.01%	
22.169	Linalool	1098	0.07%	IFRA
22.255	Unidentified	1100	0.01%	
22.529	Nonanal	1104	0.07%	
23.668	trans-para-Mentha-2,8-dienol	1120	0.01%	
24.416	cis-Limonene oxide	1131	0.04%	
24.711	trans-Limonene oxide	1135	0.03%	
25.099	Epoxyterpinolene	1141	0.02%	
25.391	Camphor	1145	0.01%	
25.751	Citronellal	1150	0.08%	IFRA
26.390	cis-Isocitral (Isoneral)	1160	0.01%	
26.500	Unidentified	1161	0.01%	
26.932	Rose furan oxide	1168	0.01%	
27.096	Borneol	1170	0%	



Ret. Time	Component	Ret. Idx.	Conc. %	
27.696	Terpinen-4-ol	1179	0.05%	
28.705	alpha-Terpineol	1193	0.08%	
29.492	Decanal	1205	0.03%	
30.440	Unidentified	1219	0.01%	
30.685	Nerol	1223	0.02%	
30.846	Citronellol	1225	0.01%	IFRA
31.164	Unidentified	1230	0.03%	
31.627	Neral	1236	1.27%	IFRA
32.030	Carvone	1242	0.01%	IFRA
32.450	Geraniol	1248	0.01%	IFRA
33.649	Geranial	1266	2.19%	IFRA
34.163	Perillaldehyde	1274	0.02%	IFRA
36.373	Undecenal	1306	0.02%	
36.502	Unidentified	1308	0%	
38.761	Unidentified	1343	0.01%	
39.085	Citronellyl acetate	1348	0.03%	IFRA
39.657	Neryl acetate	1357	0.44%	
40.939	Geranyl acetate	1376	0.72%	
42.429	Tetradecane	1399	0.01%	
42.970	Unidentified	1407	0.01%	
43.171	cis-alpha-Bergamotene	1411	0.02%	
43.556	trans-beta-Caryophyllene	1417	0.16%	
44.422	trans-alpha-Bergamotene	1431	0.35%	
44.621	Unidentified	1434	0.01%	
45.670	trans-beta-Farnesene	1451	0.02%	
45.804	alpha-Humulene	1453	0.01%	
46.041	epi-beta-Santalene	1457	0.01%	
47.393	Germacrene D	1478	0.01%	
47.572	Unidentified	1481	0.02%	
48.093	Valencene	1490	0.07%	
48.282	Unidentified	1493	0.01%	
48.617	cis-alpha-Bisabolene	1498	0.04%	
48.850	Unidentified	1502	0.01%	
49.052	beta-Bisabolene	1505	0.54%	
51.001	trans-alpha-Bisabolene	1538	0.01%	
53.100	Spathulenol	1574	0.03%	
53.401	Caryophyllene oxide	1579	0.01%	
57.609	Unidentified	1653	0.01%	
57.869	Unidentified	1657	0.02%	
58.138	Bulnesol	1662	0.02%	



Ret. Time	Component	Ret. Idx.	Conc. %	
58.589	Unidentified	1670	0.01%	
59.424	alpha-Bisabolol	1685	0.02%	IFRA
73.993	Citropten	1968	0.02%	

Total Identified Compounds **99.81 %**

