



Essential Oil University

GC/MS Report

Item	Lot
Lime EO Distilled <i>Citrus aurantifolia</i>	5S
Date	Analyst
4/11/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Lime EO Distilled, meets the expected chemical profile for authentic essential oil of *Citrus aurantifolia*. 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:** Lime EO Distilled**Botanical Name:** Citrus aurantifolia**Lot Number:** 5S**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Mexico**Analysis Date:** 4/11/2025**Manufacture Date:** November 2024

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

+36.04

1.47642

0.86140



Ret. Time	Component	Ret. Idx.	Conc. %	
2.939	Ethanol	543	0.01%	
4.484	Heptane	698	0%	
5.721	Limediene isomer	758	0.01%	
5.816	Limediene isomer	762	0.07%	
6.186	Limediene isomer	780	0.01%	
6.592	Octane	799	0.01%	
9.604	Unidentified	880	0.01%	
10.337	Nonane	899	0.03%	
10.619	Bornylene	905	0.01%	
11.504	Tricyclene	921	0.02%	
11.653	alpha-Thujene	924	0.03%	
12.052	alpha-Pinene	931	1.05%	
12.770	Unidentified	944	0.01%	
12.844	alpha-Fenchene	946	0.17%	
12.937	Camphene	947	0.42%	
13.330	Unidentified	955	0.01%	
14.013	Bois de Rose oxide	967	0.19%	
14.187	Sabinene	970	0.26%	
14.486	beta-Pinene	976	2.34%	
14.976	Unidentified	985	0.01%	
15.111	Myrcene	987	1.37%	
15.250	Unidentified	990	0.01%	
15.465	Unidentified	994	0.02%	
16.013	Pseudolimonene	1003	0.06%	
16.080	Unidentified	1004	0.03%	
16.156	alpha-Phellandrene	1006	0.28%	
16.300	Unidentified	1008	0.02%	
16.370	delta-3-Carene	1009	0.01%	
16.669	1,4-Cineole	1013	1.56%	
16.812	Talpha-erpinene	1016	1.94%	
17.294	para-Cymene	1023	2.48%	
17.653	Limonene	1029	46.29%	IFRA
17.728	beta-Phellandrene	1030	0.18%	
17.785	1,8-Cineole	1031	1.09%	
17.979	cis-beta-Ocimene	1034	0.12%	
18.520	2,2-Dimethyl-5-(1-methylpropenyl)-tetrahydrofuran	1042	0.12%	
18.657	trans-beta-Ocimene	1044	0.33%	
19.461	gamma-Terpinene	1056	12.21%	
20.283	Unidentified	1069	0.03%	
20.340	Unidentified	1070	0.02%	



Ret. Time	Component	Ret. Idx.	Conc. %	
21.247	Terpinolene	1084	11.13%	
21.447	Fenchone	1087	0.03%	
21.546	para-Cymenene	1089	0.26%	
22.172	Linalool	1098	0.1%	IFRA
22.230	Undecane	1099	0.01%	
23.066	Menthatriene analogue	1111	0.02%	
23.485	endo-Fenchol	1118	0.59%	
23.818	exo-Fenchol	1122	0.01%	
24.101	allo-Ocimene	1126	0.01%	
24.411	Unidentified	1131	0.01%	
24.615	Terpin-3-en-1-ol	1134	0.34%	
24.933	Unidentified	1139	0.03%	
25.095	Epoxyterpinolene	1141	0.11%	
25.549	cis-beta-Terpineol	1148	0.39%	
25.837	Unidentified	1152	0.02%	
26.509	Isoborneol	1162	0.03%	
26.617	Unidentified	1163	0.01%	
26.799	trans-beta-Terpineol	1166	0.12%	
26.987	delta-Terpineol	1168	0.05%	
27.094	Borneol	1170	0.6%	
27.378	Unidentified	1174	0.03%	
27.553	Unidentified	1177	0.01%	
27.696	Terpinen-4-ol	1179	0.31%	
28.132	para-Cymen-8-ol	1185	0.09%	
28.730	alpha-Terpineol	1194	7.29%	
29.028	gamma-Terpineol	1198	0.76%	
29.501	Decanal	1205	0.01%	
30.695	Nerol	1223	0.01%	
31.565	Unidentified	1235	0.02%	
31.620	Neral	1236	0.11%	IFRA
32.447	Geraniol	1248	0.02%	IFRA
33.635	Geranial	1266	0.15%	IFRA
34.051	cis-Ascaridol glycol	1272	0.03%	
34.381	Unidentified	1277	0.01%	
34.735	Bornyl acetate	1282	0.01%	
35.232	trans-Ascaridol glycol	1289	0.01%	
36.512	cis-Terpin hydrate	1309	0.02%	
37.191	Unidentified	1319	0.02%	
37.913	Unidentified	1330	0.01%	
38.120	delta-Elementene	1333	0.04%	



Ret. Time	Component	Ret. Idx.	Conc. %	
39.081	Citronellyl acetate	1348	0.01%	IFRA
39.660	Neryl acetate	1357	0.1%	
40.936	Geranyl acetate	1376	0.06%	
41.656	beta-Elemene	1387	0.03%	IFRA
42.910	Longifolene	1407	0.01%	
43.168	cis-alpha-Bergamotene	1411	0.03%	
43.552	beta-Caryophyllene	1417	0.61%	
44.178	gamma-Elemene	1427	0.02%	
44.418	trans-gamma-Bergamotene	1431	0.82%	
44.615	beta-Duprezianene	1434	0.02%	
44.901	Unidentified	1438	0.01%	
45.289	Unidentified	1445	0.01%	
45.673	trans-beta-Farnesene	1451	0.04%	
45.793	alpha-Humulene	1453	0.05%	
46.041	epi-beta-Santalene	1457	0.03%	
46.909	Selina-4,11-diene	1471	0.06%	
47.202	Unidentified	1475	0.01%	
47.280	Unidentified	1477	0.02%	
47.399	Germacrene D	1478	0.01%	
47.581	Unidentified	1481	0.07%	
47.762	delta-Selinene	1484	0.12%	
47.871	beta-Selinene	1486	0.02%	
48.314	alpha-Selinene	1493	0.04%	
48.477	Unidentified	1496	0.01%	
48.618	cis-alpha-Bisabolene	1498	0.07%	
48.745	Unidentified	1500	0.01%	
48.851	trans,trans-alpha-Farnesene	1502	0.34%	
49.054	beta-Bisabolene	1505	1.32%	
49.228	trans-alpha-Bisabolene	1508	0.04%	
49.660	delta-Cadinene	1516	0.03%	
50.014	beta-Sesquisabinene	1522	0.01%	
50.180	trans-gamma-Bisabolene	1524	0.01%	
50.497	Unidentified	1530	0.1%	
50.757	Selina-4(15),7(11)-diene	1534	0.02%	
51.015	trans-alpha-Bisabolene	1538	0.06%	
52.047	Germacrene B	1556	0.01%	
53.027	Caryophyllene alcohol	1572	0.03%	
56.283	gamma-Eudesmol	1629	0.01%	
57.265	Unidentified	1646	0.01%	
59.314	epi-alpha-Bisabolol	1683	0.01%	IFRA



Ret. Time	Component	Ret. Idx.	Conc. %	
59.433	alpha-Bisabolol	1685	0.01%	IFRA
60.588	Unidentified	1706	0.01%	
61.001	Unidentified	1714	0.01%	
63.403	Unidentified	1758	0.01%	
75.725	Unidentified	2003	0.01%	

Total Identified Compounds **99.38 %**

