



Essential Oil University

GC/MS Report

Item	Lot
Key Lime EO Expressed <i>Citrus aurantifolia</i>	3AB
Date	Analyst
1/22/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Key Lime EO Expressed, 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:** Key Lime EO Expressed**Botanical Name:** Citrus aurantifolia**Lot Number:** 3AB**Production Method:** Expressed**Sample Type:** EO - Single**Country of Origin:** Mexico**Analysis Date:** 1/22/2025**Manufacture Date:** July 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

+33.80

1.47750

0.86218



Ret. Time	Component	Ret. Idx.	Conc. %	
11.867	alpha-Thujene	924	0.27%	
12.274	alpha-Pinene	931	3.79%	
13.165	Camphene	947	0.05%	
14.437	Sabinene	971	2.21%	
14.765	beta-Pinene	977	21.14%	
15.053	Unidentified	982	0.01%	
15.231	3-para-Menthene	985	0.02%	
15.366	Myrcene	987	2.62%	
16.272	Pseudolimonene	1003	0.1%	
16.421	alpha-Phellandrene	1006	0.04%	
16.565	delta-3-Carene	1008	0.01%	
17.080	alpha-Terpinene	1016	0.12%	
17.562	para-Cymene	1023	0.46%	
17.927	Limonene	1029	39.87%	IFRA
17.993	beta-Phellandrene	1030	0.01%	
18.258	cis-beta-Ocimene	1034	0.04%	
18.938	trans-beta-Ocimene	1044	0.14%	
19.758	gamma-Terpinene	1057	15.63%	
20.505	trans-Sabinene hydrate	1068	0.04%	
20.627	Unidentified	1070	0.02%	
21.525	Terpinolene	1084	0.82%	
21.723	Fenchone	1087	0.05%	
22.466	Linalool	1098	0.32%	IFRA
24.732	Unidentified	1131	0.01%	
26.061	Citronellal	1150	0.09%	IFRA
26.710	Unidentified	1160	0.01%	
28.013	Terpinen-4-ol	1179	0.34%	
29.016	alpha-Terpineol	1193	0.17%	
29.803	Decanal	1205	0.38%	
31.011	Nerol	1223	0.03%	
31.499	Unidentified	1230	0%	
31.946	Neral	1236	1.61%	IFRA
33.967	Geranial	1266	2.82%	IFRA
34.486	Unidentified	1274	0.01%	
36.528	Unidentified	1304	0.01%	
38.148	Unidentified	1328	0%	
38.482	delta-Elemene	1333	0.04%	
39.994	Neryl acetate	1356	0.77%	
41.273	Geranyl acetate	1376	0.69%	
42.026	beta-Elemene	1387	0.05%	



Ret. Time	Component	Ret. Idx.	Conc. %	
43.333	Dodecanal	1408	0.04%	
43.532	cis-alpha-Bergamotene	1411	0.03%	
43.927	beta-Caryophyllene	1417	1.56%	
44.549	Unidentified	1427	0.01%	
44.784	trans-alpha-Bergamotene	1431	1.2%	
44.984	Unidentified	1434	0.02%	
45.254	cis-beta-Farnesene	1439	0.02%	
46.031	trans-beta-Farnesene	1451	0.04%	
46.167	alpha-Humulene	1453	0.32%	
46.415	epi-beta-Santalene	1457	0.02%	
47.765	Germacrene D	1479	0.01%	
47.944	trans-beta-Bergamotene	1482	0.07%	
48.975	cis-alpha-Bisabolene	1498	0.05%	
49.213	trans,trans-alpha-Farnesene	1502	0.07%	
49.420	beta-Bisabolene	1506	1.56%	
50.372	beta-Sesquiphellandrene	1522	0.02%	
50.550	Unidentified	1525	0.01%	
51.366	Unidentified	1538	0.01%	
52.423	Germacrene B	1556	0.03%	
53.797	Unidentified	1579	0.01%	
55.678	Unidentified	1612	0.01%	
59.800	alpha-Bisabolol	1685	0.02%	IFRA
61.546	Hernianin	1717	0.02%	
66.766	Unidentified	1815	0.01%	
74.373	Unidentified	1967	0.02%	

Total Identified Compounds **99.82 %**

