



Essential Oil University

GC/MS Report

Item	Lot
Mandarin EO CP Red	6H
<i>Citrus deliciosa</i>	
Date	Analyst
1/16/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Mandarin EO CP Red, meets the expected chemical profile for authentic essential oil of *Citrus deliciosa*. 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:** Mandarin EO CP Red**Botanical Name:** Citrus deliciosa**Lot Number:** 6H**Production Method:** Cold Press**Sample Type:** EO - Single**Country of Origin:** Italy**Analysis Date:** 1/16/2025**Manufacture Date:** June 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

+80.04

1.47363

0.84756



Ret. Time	Component	Ret. Idx.	Conc. %	
11.704	alpha-Thujene	925	0.45%	
12.105	alpha-Pinene	932	1.46%	
12.992	Camphene	948	0.01%	
14.245	Sabinene	971	0.23%	
14.543	beta-Pinene	977	0.92%	
15.171	Myrcene	988	2.07%	
16.017	Octanal	1003	0.08%	
16.050	Unidentified	1004	0.05%	
16.220	alpha-Phellandrene	1007	0.04%	
16.361	delta-3-Carene	1009	0.03%	
16.876	alpha-Terpinene	1017	0.17%	
17.368	para-Cymene	1024	0.7%	
17.785	Limonene	1031	75.02%	IFRA
17.835	beta-Phellandrene	1031	0.17%	
18.722	trans-beta-Ocimene	1045	0.12%	
19.551	gamma-Terpinene	1058	17.07%	
20.294	trans-Sabinene hydrate	1069	0.07%	
20.409	Pinol	1071	0.02%	
21.291	Terpinolene	1085	0.46%	
21.503	Fenchone	1088	0.08%	
22.237	Linalool	1099	0.08%	IFRA
22.315	Unidentified	1100	0.01%	
22.606	Nonanal	1105	0.01%	
23.729	trans-para-Mentha-2,8-dienol	1121	0%	
24.493	cis-Limonene oxide	1132	0.01%	
24.774	trans-Limonene oxide	1136	0.01%	
25.168	Epoxyterpinolene	1142	0.01%	
25.828	Citronellal	1152	0%	
27.769	Terpinen-4-ol	1180	0.03%	
28.772	alpha-Terpineol	1194	0.08%	
29.566	Decanal	1206	0.02%	
34.232	Perillaldehyde	1275	0.01%	IFRA
35.208	Thymol	1289	0.02%	
38.827	Unidentified	1344	0.01%	
40.838	alpha-Copaene	1375	0.01%	
42.761	Dimethylantranilate	1404	0.3%	IFRA
43.628	beta-Caryophyllene	1418	0.04%	
48.385	alpha-Selinene	1494	0.02%	
48.927	trans,trans-alpha-Farnesene	1503	0.06%	
49.736	delta-Cadinene	1517	0.01%	



Ret. Time	Component	Ret. Idx.	Conc. %
62.824	alpha-Sinensal	1748	0.03%

Total Identified Compounds **99.92 %**

