



Essential Oil University

GC/MS Report

Item	Lot
Mandarin EO CP Green <i>Citrus reticulata blanco</i>	1P
Date	Analyst
1/16/2025	Dr. Robert S. Pappas

© Copyright 2025 by Essential Oil University. All rights reserved. Any publishing, copying, use, dissemination, or distribution of this report, including online, without the express written permission of Essential Oil University is strictly prohibited.

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

+75.64

1.47427

0.84971



Ret. Time	Component	Ret. Idx.	Conc. %	
4.768	Heptane	696	0%	
12.432	alpha-Thujene	921	0.45%	
12.858	alpha-Pinene	929	2.17%	
13.784	Camphene	945	0.01%	
15.073	Sabinene	967	0.24%	
15.390	beta-Pinene	973	1.7%	
15.704	Camphene isomer	979	0.01%	
16.017	Myrcene	984	2.1%	
16.872	Octanal	999	0.08%	
16.948	Pseudolimonene	1000	0.03%	
17.103	alpha-Phellandrene	1003	0.07%	
17.251	delta-3-Carene	1005	0.03%	
17.775	alpha-Terpinene	1013	0.23%	
18.276	para-Cymene	1020	1.42%	
18.741	Limonene	1027	69.78%	IFRA
18.790	beta-Phellandrene	1028	0.18%	
18.968	cis-beta-Ocimene	1031	0.01%	
19.658	trans-beta-Ocimene	1041	0.05%	
20.536	gamma-Terpinene	1054	19.43%	
21.260	trans-Sabinene hydrate	1065	0.03%	
22.285	Terpinolene	1081	0.51%	
22.596	para-Cymenene	1085	0.01%	
23.225	Linalool	1095	0.11%	IFRA
23.328	cis-Sabinene hydrate	1096	0.03%	
23.590	Nonanal	1100	0.02%	
24.763	trans-para-Mentha-2,8-dienol	1117	0.01%	
25.527	cis-Limonene oxide	1128	0.04%	
25.824	trans-Limonene oxide	1132	0.04%	
26.218	Epoxyterpinolene	1138	0.02%	
26.859	Citronellal	1147	0.01%	IFRA
27.627	Unidentified	1158	0.02%	
27.900	Unidentified	1162	0.01%	
28.858	Terpinen-4-ol	1176	0.03%	
29.854	alpha-Terpineol	1190	0.15%	
30.177	Unidentified	1194	0.01%	
30.636	Decanal	1201	0.04%	
31.475	trans-Carveol	1213	0.01%	
31.996	Citronellol	1221	0.01%	IFRA
33.196	Carvone	1238	0.01%	IFRA
33.606	Unidentified	1244	0.01%	



Ret. Time	Component	Ret. Idx.	Conc. %	
35.355	Perillaldehyde	1270	0.01%	IFRA
36.298	Thymol	1283	0.05%	
39.979	8-para-Menthen-1,2-diol	1338	0.02%	
40.382	Eugenol	1344	0.01%	IFRA
42.077	alpha-Copaene	1370	0.01%	
42.956	beta-Elemene	1383	0%	
43.092	Unidentified	1385	0.01%	
43.950	Dimethylantranilate	1398	0.47%	IFRA
44.248	Dodecanal	1403	0.01%	
44.898	beta-Caryophyllene	1413	0.07%	
49.669	alpha-Selinene	1489	0.03%	
50.163	trans,trans-alpha-Farnesene	1497	0.14%	
51.001	delta-Cadinene	1511	0.01%	
64.118	alpha-Sinensal	1740	0.07%	
74.281	meta-Camphorene	1937	0.01%	

Total Identified Compounds **99.99 %**

