

## Sample Information

**Sample Name:** Mandarin EO CP Green

**Botanical Name:** Citrus reticulata blanco

**Lot Number:** ITP18-PK

**Production Method:** Cold Press

**Sample Type:** EO - Single

**Country of Origin:** Italy

**Analysis Date:** 11/21/2024

**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  $\mu$ L

**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	Vanillin	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 **100 %**

