



# GC/MS Report

GC2

Item	Lot
<b>98401-12</b>	<b>13419</b>
<i>Citrus sinensis</i>	
Orange EO 10-Fold, Decolorized	
Date	Analyst
<b>9/23/2025</b>	<b>N. K</b>

## Sample Information

**Sample Name:** Sweet Orange 10x  
**Botanical Name:** Citrus sinensis  
**Lot Number:** 13419  
**Production Method:** Cold Press

**Sample Type:** EO - Single  
**Country of Origin:** USA  
**Analysis Date:** 9/23/2025  
**Manufacture Date:** September 2025

## 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	METHOD	RESULTS
Optical Rotation @20°C	USP[781]	+83.20
Refractive Index @20°C	USP[831]	1.46882
Specific Gravity @20°C	USP[841]	0.84548

GC/MS Report  
Components

Ret. Time	Component	Ret. Idx.	Conc. %	
4.711	Heptane	694	0%	
10.884	Nonane	891	0.01%	
12.252	alpha-Thujene	918	0.06%	
12.667	alpha-Pinene	925	0.7%	
14.864	Sabinene	964	0.58%	
15.174	beta-Pinene	969	0.15%	
15.802	Myrcene	980	1.79%	
16.643	Octanal	995	1.17%	
16.877	alpha-Phellandrene	999	0.05%	
17.023	delta-3-Carene	1002	0.05%	
17.546	alpha-Terpinene	1009	0.02%	
18.033	para-Cymene	1017	0.32%	
18.430	Limonene	1023	81.77%	IFRA
18.495	beta-Phellandrene	1024	0.22%	
18.736	cis-beta-Ocimene	1027	0.01%	
19.419	trans-beta-Ocimene	1037	0.05%	
20.216	gamma-Terpinene	1049	1.05%	
20.999	1-Octanol	1061	0.16%	
22.034	Terpinolene	1077	0.02%	
22.978	Linalool	1091	2.92%	IFRA
23.334	Nonanal	1096	0.32%	
24.518	trans-para-Mentha-2,8-dien-1-ol	1113	0.01%	
25.274	cis-Limonene oxide	1124	0.03%	
25.573	trans-Limonene oxide	1128	0.02%	
26.363	Isopulegol	1140	0.03%	
26.595	Citronellal	1143	0.59%	IFRA
27.062	Neoisopulegol	1150	0.01%	
29.584	alpha-Terpineol	1186	0.96%	
30.369	Decanal	1197	5.01%	
30.654	Octyl acetate	1201	0.13%	
31.586	Nerol	1215	0.02%	
31.730	Citronellol	1217	0.08%	IFRA
32.516	Neral	1228	0.32%	IFRA
33.348	Geraniol	1240	0.03%	IFRA
34.537	Geranial	1258	0.5%	IFRA
34.892	1-Decanol	1263	0.02%	
38.557	Unidentified	1317	0.03%	
39.701	Unidentified	1334	0.02%	
40.114	Unidentified	1340	0.01%	
40.610	Neryl acetate	1348	0.06%	

Ret. Time	Component	Ret. Idx.	Conc. %
40.803	Unidentified	1351	0.01%
41.775	alpha-Copaene	1365	0.02%
43.963	Dodecanal	1399	0.43%
44.595	beta-Caryophyllene	1409	0.19%
45.439	trans-alpha-Bergamotene	1422	0.02%
46.844	alpha-Humulene	1444	0.02%
48.065	Unidentified	1464	0.01%
48.435	Germacrene D	1470	0.01%
50.702	delta-Cadinene	1506	0.01%

Total Identified Compounds **99.94 %**

TIC  
39,801,211

