



Essential Validation Services



Sample:

Client: | Floracopeia
Sample: | Orange (Citrus sinensis)
Batch # | ORNG17121901
CAS Number | 8008-57-9
Type: | Essential Oil

Conclusion:

- No adulterants, diluents, or contaminants were detected via this method.
- This oil meets the expected profile for genuine essential oil of Orange (Citrus sinensis).

X



Validated By:



Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

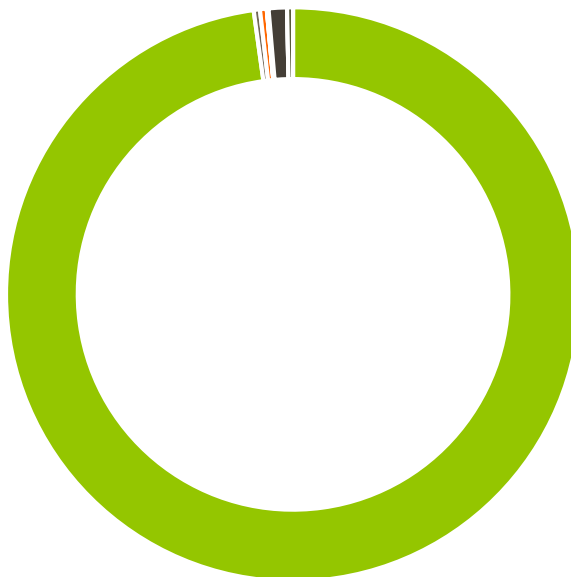
Phone: 317-361-5044 E-mail: Adam@essentialvalidationservices.com

Summary of Analyses

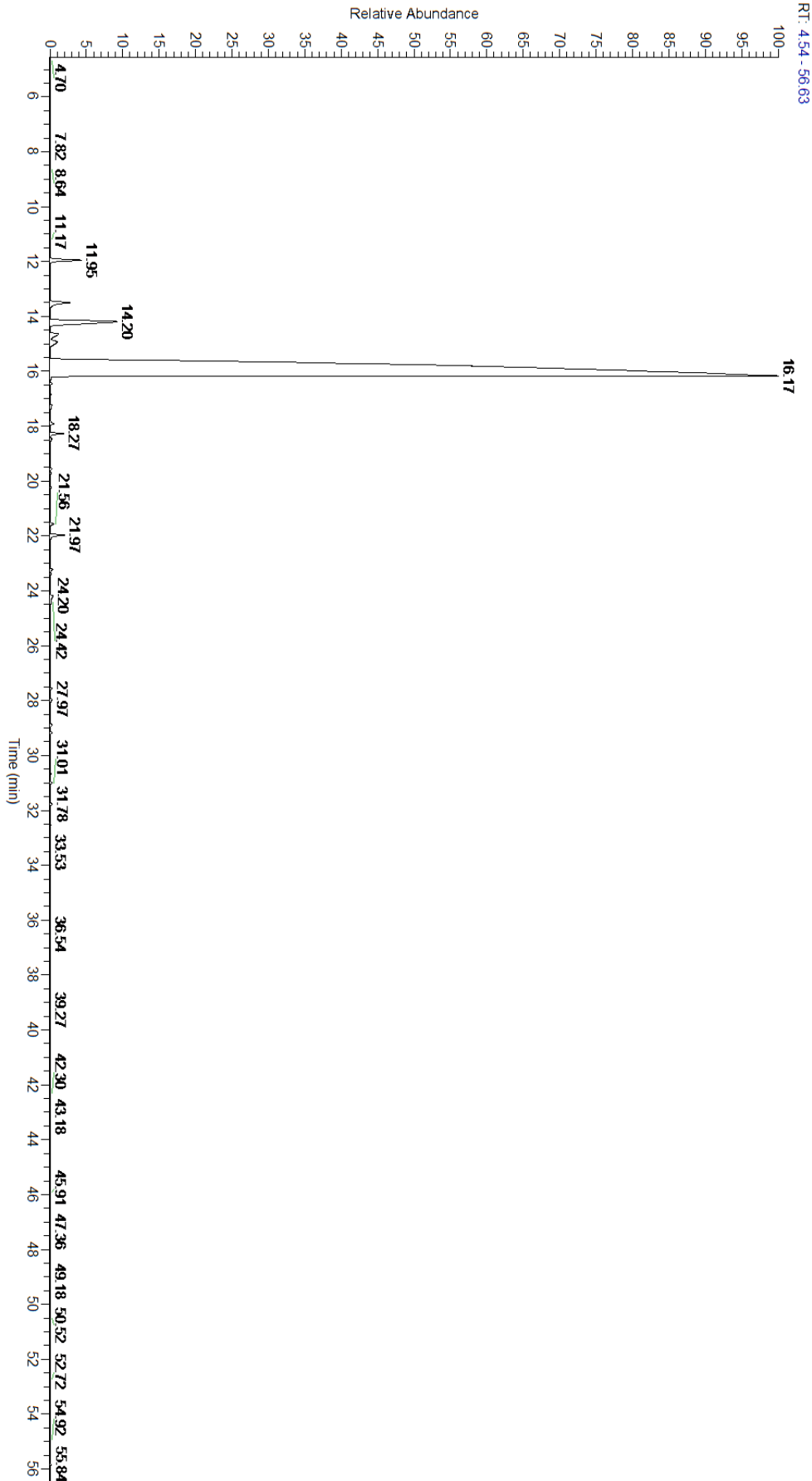
A fresh sample of Orange (Citrus sinensis) Essential Oil (10 uL in .5to.5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

Main Compounds	Percentages
Limonene	92.99%
Myrcene	2.82%
alpha-Pinene	0.78%
Sabinene	0.62%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
97.81%	0.35%	0.38%	0.00%	0.02%
Esters	Ethers	Aldehydes	Phenols	Other
0.01%	0.07%	1.03%	0.00%	0.34%



- Monoterpenes ■ Sesquiterpenes ■ Monoterpenols
- Sesquiterpenols ■ Ketones ■ Esters
- Ethers ■ Phenols ■ Other





Total Percentage		99.75%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	11.95	0.78%	alpha-Pinene	936.10	Monoterpene
2	12.52	0.01%	Camphene	950.30	Monoterpene
3	13.50	0.62%	Sabinene	973.00	Monoterpene
4	14.20	2.82%	Myrcene	989.20	Monoterpene
5	14.65	0.38%	Octanal	998.00	Aliphatic Aldehyde
6	14.93	0.37%	delta-3-Carene	1008.00	Monoterpene
7	16.17	92.99%	Limonene	1029.50	Monoterpene
8	16.17	Co-Eluting	beta-Phellandrene	1030.00	Monoterpene
9	16.44	0.03%	(E)-beta-Ocimene	1047.70	Monoterpene
10	16.84	0.02%	gamma-Terpinene	1054.00	Monoterpene
11	17.24	0.07%	1-Octanol	1075.14	Aliphatic Alcohol
12	17.91	0.09%	Terpinolene	1092.10	Monoterpene
13	18.06	0.01%	para-Cymenene	1092.43	Monoterpene
14	18.27	0.28%	Linalool	1099.00	Monoterpenol
15	18.47	0.05%	Nonanal	1104.00	Aliphatic Aldehyde
16	19.55	0.04%	cis-Limonene oxide	1136.00	Monoterpene Ether
17	19.71	0.03%	trans-Limonene oxide	1138.10	Monoterpene Ether
18	20.22	0.04%	Citronellal	1154.50	Monoterpene Aldehyde
19	21.14	0.01%	Terpinene-4-ol	1180.57	Monoterpenol
20	21.56	0.08%	alpha-Terpineol	1191.71	Monoterpenol
21	21.97	0.34%	Decanal	1206.57	Aliphatic Aldehyde
22	22.21	0.01%	Octyl acetate	1211.00	Aliphatic Ester
23	22.56	0.01%	trans-Carveol	1223.14	Monoterpenol
24	23.22	0.07%	Citral	1244.12	Monoterpene
25	23.38	0.02%	Carvone	1248.14	Monoterpene Ketone
26	24.20	0.12%	Geranial	1272.00	Monoterpene Aldehyde
27	24.42	0.05%	Perilla aldehyde	1281.00	Monoterpene Aldehyde
28	25.35	0.01%	Undecanal	1305.29	Sesquiterpene Aldehyde
29	27.56	0.04%	alpha-Copaene	1379.00	Sesquiterpene
30	27.97	0.06%	beta-Cubebene	1390.50	Sesquiterpene
31	28.52	0.03%	Dodecanal	1397.80	Aliphatic Aldehyde
32	28.90	0.05%	beta-Caryophyllene	1427.14	Sesquiterpene
33	29.17	0.05%	beta-Copaene	1445.00	Sesquiterpene
34	29.90	0.01%	alpha-Humulene	1461.43	Sesquiterpene
35	30.50	0.01%	cis-Muurola-4(14),5-diene	1465.75	Sesquiterpene
36	30.67	0.02%	Germacrene D	1484.71	Sesquiterpene
37	31.01	0.05%	Valencene	1504.00	Sesquiterpene
38	31.78	0.06%	delta-Cadinene	1524.14	Sesquiterpene
39	36.53	0.01%	beta-Sinensal	1688.20	Sesquiterpene Aldehyde
40	37.94	0.01%	alpha-Sinensal	1751.00	Sesquiterpene Aldehyde
41	58.69	0.01%	Tricosane	2300.00	Alkane