

Sample:

Client: | Nature's Gift
Sample: | Bitter Orange (Citrus aurantium)
Batch # | EG-58672
Cas Number | 72968-50-4
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 Bitter Orange (Citrus aurantium).

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

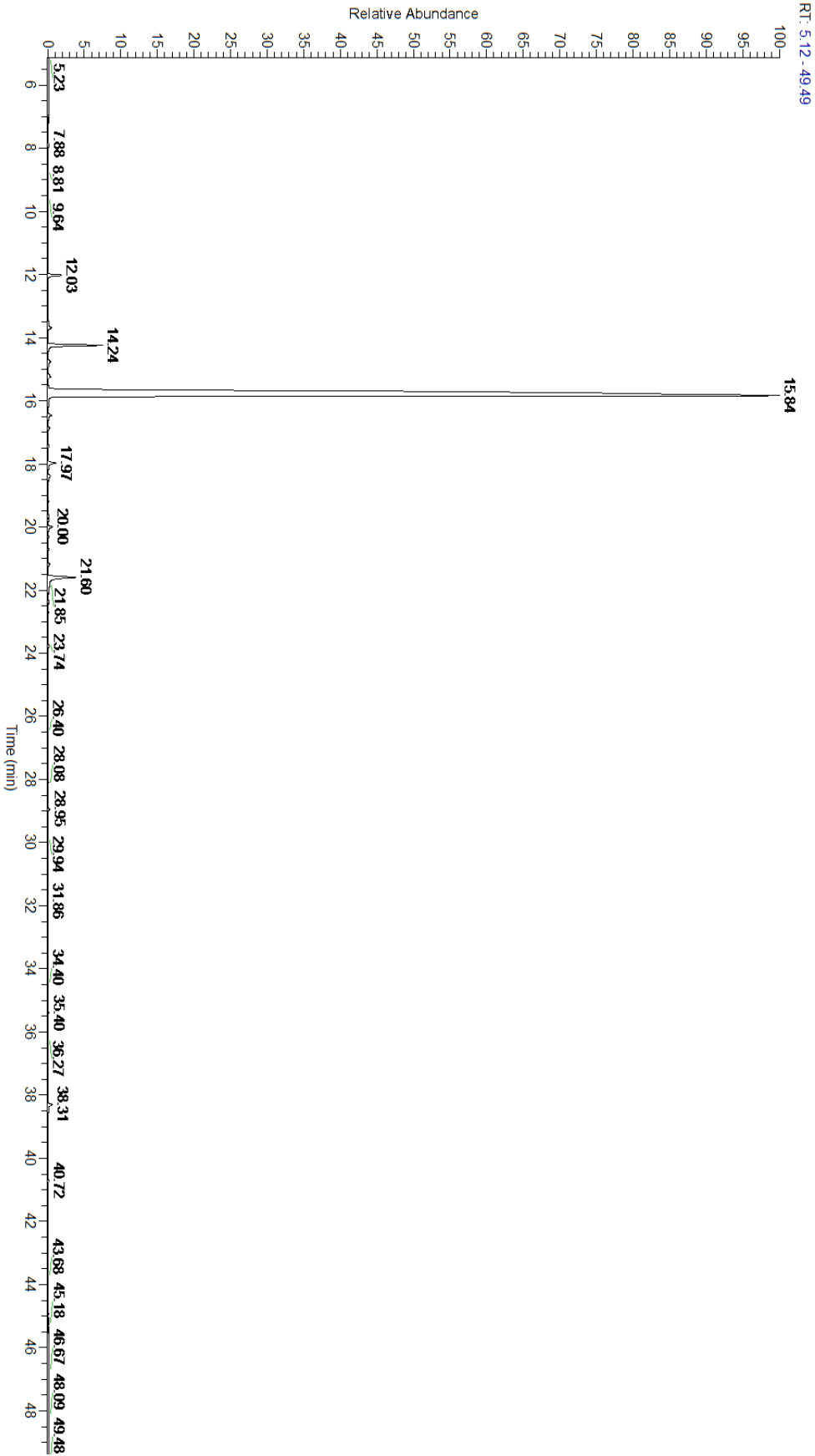
A fresh sample of Bitter Orange (Citrus aurantium) Essential Oil (10 uL in .5 to .5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

Main Compounds	Percentages
Limonene	91.38%
Myrcene	2.75%
alpha-Terpineol	1.90%
alpha-Pinene	0.74%
Terpinolene	0.50%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
96.39%	0.10%	2.68%	0.00%	0.00%
Esters	Ethers	Aldehydes	Phenols	Other
0.05%	0.08%	0.03%	0.00%	0.67%



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



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Total Percentage		99.33%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	12.03	0.74%	alpha-Pinene	936.10	Monoterpene
2	12.61	0.01%	Camphene	950.30	Monoterpene
3	13.51	0.04%	Sabinene	973.00	Monoterpene
4	13.69	0.21%	beta-Pinene	974.00	Monoterpene
5	14.24	2.75%	Myrcene	989.20	Monoterpene
6	14.77	0.20%	alpha-Phellandrene	1002.00	Monoterpene
7	15.24	0.17%	alpha-Terpinene	1014.00	Monoterpene
8	15.55	0.06%	para-Cymene	1024.30	Monoterpene
9	15.84	91.38%	Limonene	1029.50	Monoterpene
10	15.84	Co-Eluting	beta-Phellandrene	1030.00	Monoterpene
11	16.09	0.03%	(Z)-beta-Ocimene	1037.80	Monoterpene
12	16.46	0.22%	(E)-beta-Ocimene	1047.70	Monoterpene
13	16.87	0.08%	gamma-Terpinene	1054.00	Monoterpene
14	17.97	0.50%	Terpinolene	1092.10	Monoterpene
15	18.38	0.18%	Linalool	1099.00	Monoterpenol
16	18.55	0.01%	Nonanal	1104.00	Aliphatic Aldehyde
17	19.64	0.06%	cis-Limonene oxide	1136.00	Monoterpene Ether
18	19.78	0.02%	trans-Limonene oxide	1138.10	Monoterpene Ether
19	20.00	0.28%	cis-beta-Terpineol	1144.20	Monoterpenol
20	20.33	0.02%	Citronellal	1154.50	Monoterpene Aldehyde
21	20.71	0.03%	trans-beta-Terpineol	1161.00	Monoterpenol
22	21.17	0.10%	Terpinen-4-ol	1180.57	Monoterpenol
23	21.60	1.90%	alpha-Terpineol	1191.71	Monoterpenol
24	21.85	0.19%	gamma-Terpineol	1198.50	Monoterpenol
25	23.74	0.05%	Linalyl acetate	1263.80	Monoterpene Ester
26	26.40	0.01%	delta-Elementene	1335.83	Sesquiterpene
27	28.95	0.08%	beta-Caryophyllene	1427.14	Sesquiterpene
28	31.86	0.01%	delta-Cadinene	1524.14	Sesquiterpene

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