



Essential Validation Services



Sample:

Client: | Artisan Aromatics
Sample: | Lemon (Citrus x limon)
Batch # | Lemon Sample Report
CAS Number | 8008-56-8
Type: | Essential Oil

Conclusion:

- No adulterants, diluents, or contaminants were detected via this method.
- This oil meets the expected profile for genuine Lemon (Citrus x limon).



X

Validated By:

Essential Validation Services

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Summary of Analyses

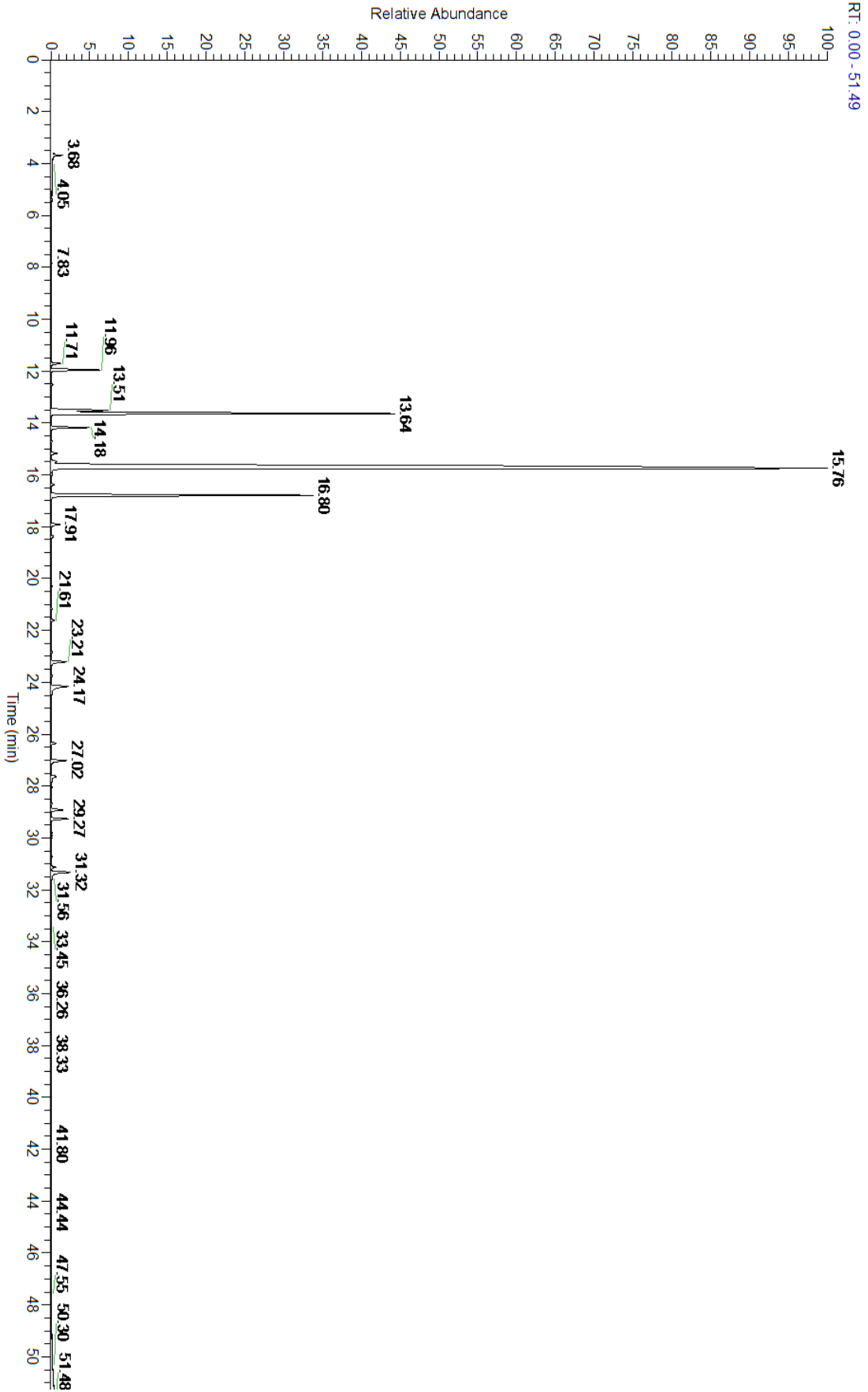
A fresh sample of Lemon (Citrus x limon) (10 uL in .5to.5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

Main Compounds	Percentages
Limonene	62.16%
beta-Pinene	14.09%
gamma-Terpinene	10.45%
Sabinene	2.32%
alpha-Pinene	1.86%
Myrcene	1.39%
beta-Bisabolene	1.00%
Neral	0.72%
Neryl acetate	0.69%
trans-alpha-Bergamotene	0.66%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
93.81%	2.69%	0.41%	0.00%	0.00%
Esters	Ethers	Aldehydes	Phenols	Other
0.99%	0.02%	0.77%	0.00%	1.32%



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





Total Percentage		98.73%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	11.50	0.01%	Tricyclene	923.00	Monoterpene
2	11.71	0.37%	alpha-Thujene	927.80	Monoterpene
3	11.96	1.86%	alpha-Pinene	936.10	Monoterpene
4	12.54	0.06%	Camphene	950.30	Monoterpene
5	13.51	2.32%	Sabinene	973.00	Monoterpene
6	13.64	14.09%	beta-Pinene	974.00	Monoterpene
7	14.18	1.39%	Myrcene	989.20	Monoterpene
8	14.70	0.05%	alpha-Phellandrene	1002.00	Monoterpene
9	15.17	0.23%	alpha-Terpinene	1014.00	Monoterpene
10	15.50	0.28%	para-Cymene	1024.30	Monoterpene
11	15.76	62.16%	Limonene	1029.50	Monoterpene
12	15.76	Co-Eluting	beta-Phellandrene	1030.00	Monoterpene
13	15.99	0.04%	(Z)-beta-Ocimene	1037.80	Monoterpene
14	16.37	0.10%	(E)-beta-Ocimene	1047.70	Monoterpene
15	16.80	10.45%	gamma-Terpinene	1054.00	Monoterpene
16	17.20	0.01%	trans-Sabinene hydrate	1072.00	Monoterpenol
17	17.91	0.40%	Terpinolene	1092.10	Monoterpene
18	18.37	0.11%	Linalool	1099.00	Monoterpenol
19	18.62	0.01%	Nonanal	1104.00	Aliphatic Aldehyde
20	19.45	0.02%	cis-Limonene oxide	1136.00	Monoterpene Ether
21	20.28	0.04%	Citronellal	1154.50	Monoterpene Aldehyde
22	21.17	0.04%	Terpinen-4-ol	1180.57	Monoterpenol
23	21.61	0.16%	alpha-Terpineol	1191.71	Monoterpenol
24	22.82	0.08%	Nerol	1230.67	Monoterpenol
25	23.21	0.72%	Neral	1246.57	Monoterpene Aldehyde
26	23.74	0.01%	Geraniol	1255.29	Monoterpenol
27	26.35	0.18%	delta-Elemene	1335.83	Sesquiterpene
28	27.02	0.69%	Neryl acetate	1362.90	Monoterpene Ester
29	27.63	0.30%	Geranyl acetate	1378.50	Monoterpene Ester
30	28.06	0.04%	Tetradecane	1400.00	Alkane
31	28.68	0.04%	cis-alpha-Bergamotene	1411.50	Sesquiterpene
32	28.92	0.47%	beta-Caryophyllene	1427.14	Sesquiterpene
33	29.27	0.66%	trans-alpha-Bergamotene	1435.00	Sesquiterpene
34	29.91	0.04%	alpha-Humulene	1461.43	Sesquiterpene
35	30.53	0.02%	gamma-Curcumene	1476.00	Sesquiterpene
36	30.72	0.03%	Germacrene D	1484.71	Sesquiterpene
37	31.12	0.20%	Bicyclogermacrene	1490.71	Sesquiterpene
38	31.32	1.00%	beta-Bisabolene	1509.86	Sesquiterpene
39	31.56	0.04%	gamma-Cadinene	1515.29	Sesquiterpene
40	31.79	0.01%	delta-Cadinene	1524.14	Sesquiterpene