



# *Essential Validation Services*



## Sample:

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Client: | Floracopeia  
Sample: | Tea Tree (Melaleuca alternifolia)  
Batch # | TTOZ17110601  
CAS Number | 68647-73-4  
Type: | Essential Oil

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## Conclusion:

- No adulterants, diluents, or contaminants were detected via this method.
- This oil meets the expected profile for genuine essential oil of Tea Tree (Melaleuca alternifolia).



X



Validated By:

Essential Validation Services

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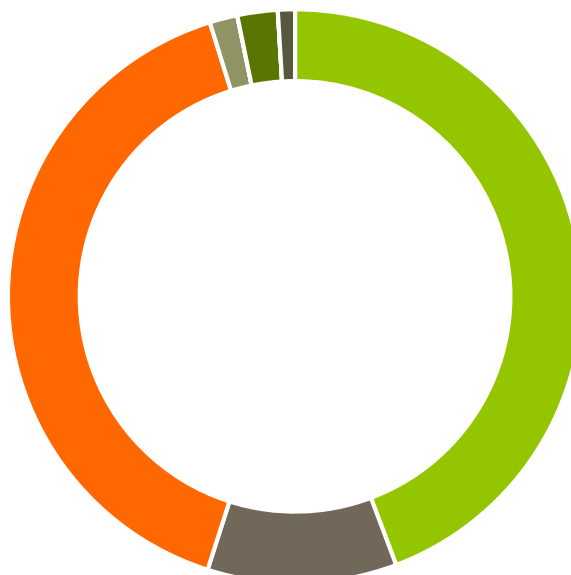
## Summary of Analyses

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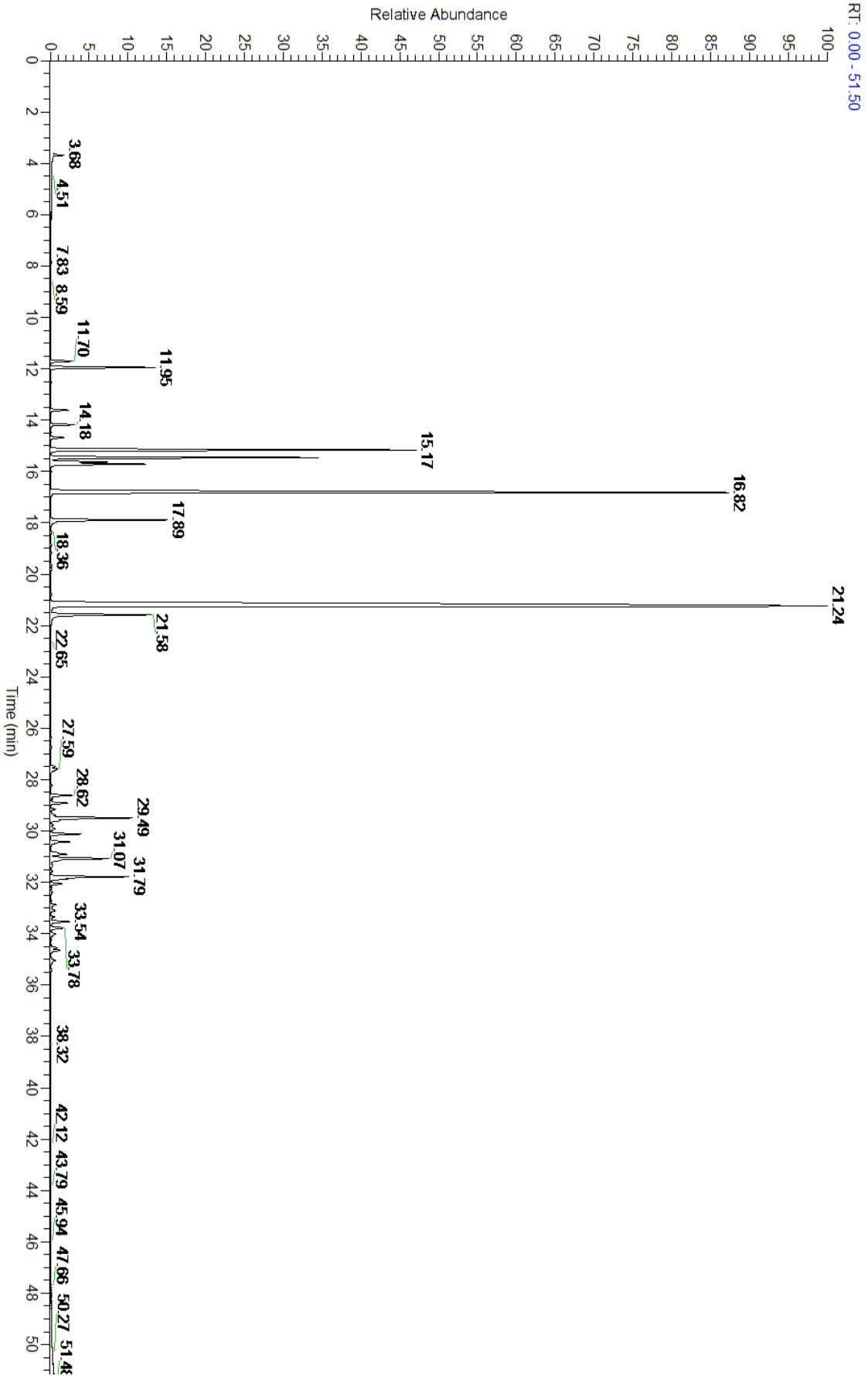
A fresh sample of Tea Tree (Melaleuca alternifolia) Essential Oil (10 uL in .5 to .5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

Main Compounds	Percentages
Terpinen-4-ol	37.37%
gamma-Terpinene	20.35%
alpha-Terpinene	8.84%
para-Cymene	6.39%
Terpinolene	3.03%
alpha-Terpineol	2.79%
alpha-Pinene	2.46%
1,8-Cineole	2.27%
Aromadendrene	2.22%
delta-Cadinene	2.02%
Viridiflorene	1.68%
Limonene	1.38%
allo-Aromadendrene	0.78%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
44.27%	10.66%	40.27%	1.57%	0.00%
Esters	Ethers	Aldehydes	Phenols	Other
0.00%	2.27%	0.00%	0.00%	0.96%



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





Total Percentage		99.04%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	11.70	0.50%	alpha-Thujene	927.80	Monoterpene
2	11.95	2.46%	alpha-Pinene	936.10	Monoterpene
3	12.54	0.02%	Camphene	950.30	Monoterpene
4	13.51	0.01%	Sabinene	973.00	Monoterpene
5	13.62	0.44%	beta-Pinene	974.00	Monoterpene
6	14.18	0.53%	Myrcene	989.20	Monoterpene
7	14.69	0.32%	alpha-Phellandrene	1002.00	Monoterpene
8	15.17	8.84%	alpha-Terpinene	1014.00	Monoterpene
9	15.46	6.39%	para-Cymene	1024.30	Monoterpene
10	15.63	1.38%	Limonene	1029.50	Monoterpene
11	15.71	2.27%	1,8-Cineole	1031.80	Monoterpene Ether
12	16.00	0.01%	(Z)-beta-Ocimene	1037.80	Monoterpene
13	16.82	20.35%	gamma-Terpinene	1054.00	Monoterpene
14	17.89	3.03%	Terpinolene	1092.10	Monoterpene
15	18.35	0.03%	Linalool	1099.00	Monoterpenol
16	18.87	0.02%	cis-para-Menth-2-en-1-ol	1118.25	Monoterpenol
17	19.62	0.01%	cis-para-Mentha-2,8-dien-1-ol	1137.50	Monoterpenol
18	19.81	0.03%	trans-para-Menth-2-en-1-ol	1141.75	Monoterpenol
19	20.79	0.02%	Borneol	1168.71	Monoterpenol
20	21.24	37.37%	Terpinen-4-ol	1180.57	Monoterpenol
21	21.58	2.79%	alpha-Terpineol	1191.71	Monoterpenol
22	26.74	0.02%	alpha-Cubebene	1355.71	Sesquiterpene
23	27.49	0.11%	alpha-Ylangene	1371.33	Sesquiterpene
24	27.59	0.29%	alpha-Copaene	1379.00	Sesquiterpene
25	28.02	0.01%	beta-Elemene	1389.20	Sesquiterpene
26	28.62	0.57%	alpha-Gurjunene	1412.00	Sesquiterpene
27	28.92	0.43%	beta-Caryophyllene	1427.14	Sesquiterpene
28	29.15	0.12%	beta-Gurjunene	1437.71	Sesquiterpene
29	29.38	0.14%	alpha-Guaiene	1438.67	Sesquiterpene
30	29.49	2.22%	Aromadendrene	1449.80	Sesquiterpene
31	29.59	0.22%	cis-Muurola-3,5-diene	1456.75	Sesquiterpene
32	29.77	0.08%	alpha-Humulene	1461.43	Sesquiterpene
33	29.92	0.14%	trans-Cadina-1,4-diene	1462.50	Sesquiterpene
34	30.12	0.78%	allo-Aromadendrene	1471.00	Sesquiterpene
35	30.42	0.55%	alpha-Amorphene	1481.75	Sesquiterpene
36	30.91	0.58%	Bicyclogermacrene	1490.71	Sesquiterpene
37	31.07	1.68%	Viridiflorene	1494.14	Sesquiterpene
38	31.57	0.03%	gamma-Cadinene	1515.29	Sesquiterpene
39	31.79	2.02%	delta-Cadinene	1524.14	Sesquiterpene
40	31.88	0.38%	trans-Calamenene	1529.50	Sesquiterpene
41	32.06	0.29%	alpha-Cadinene	1537.86	Sesquiterpene
42	33.54	0.54%	Globulol	1593.50	Sesquiterpenol
43	33.78	0.41%	Viridiflorol	1596.00	Sesquiterpenol

