

## Sample:

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Client: | Nature's Gift  
Sample: | Melissa Leaf (Melissa officinalis)  
Batch # | FR-58790  
CAS Number | 8014-71-9  
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 Melissa Leaf (Melissa officinalis).



X 

Validated By:

Essential Validation Services

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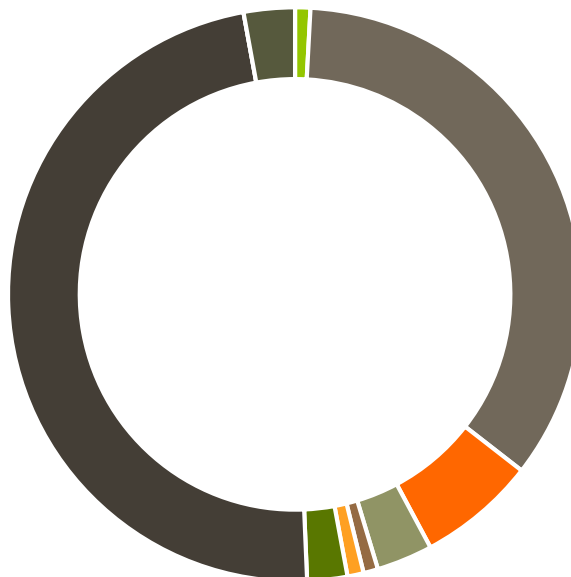
## Summary of Analyses

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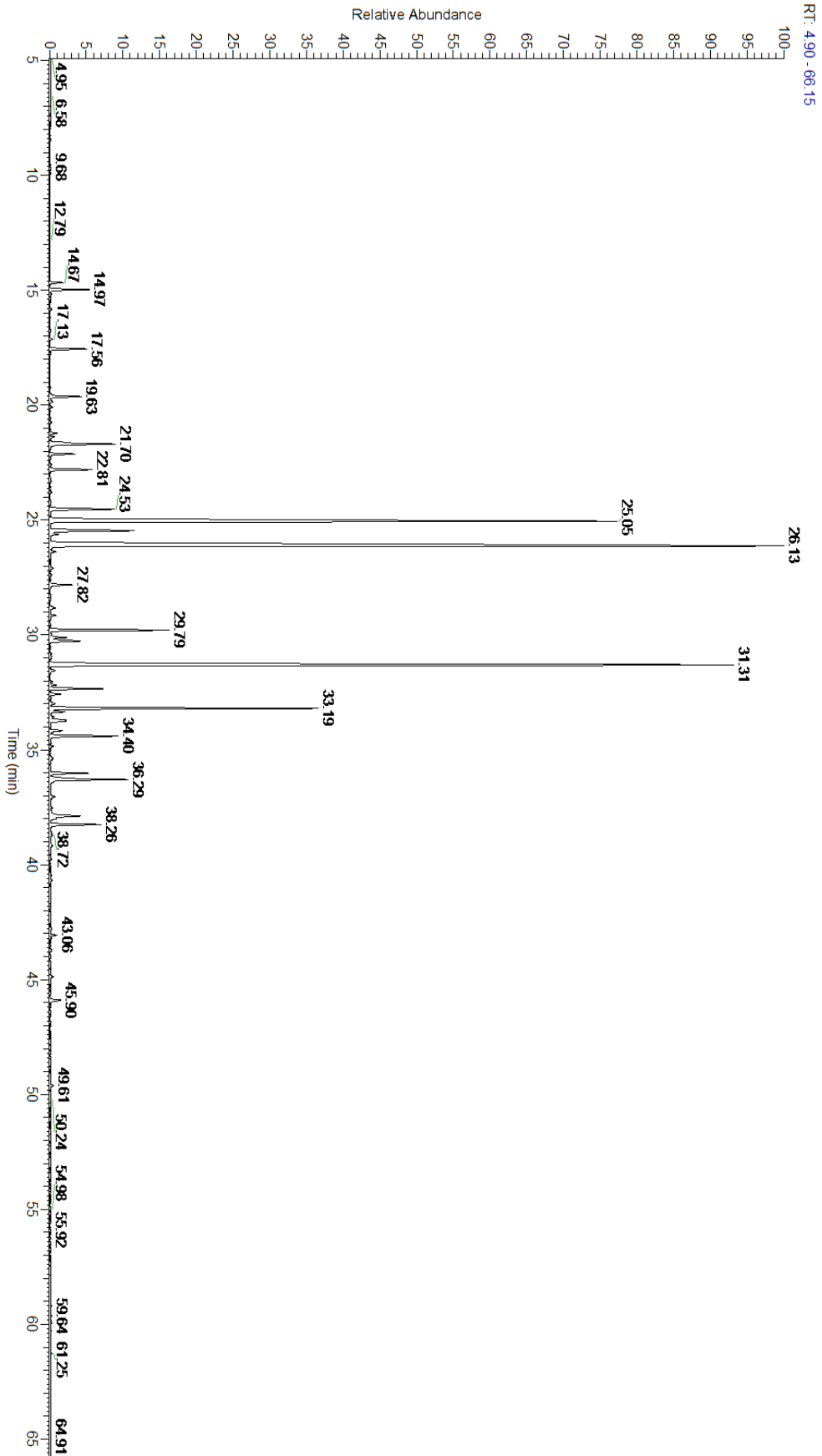
A fresh sample of Melissa Leaf (Melissa officinalis) Essential Oil (10 uL in .5 to .5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

Main Compounds	Percentages
Geranial	27.34%
beta-Caryophyllene	19.50%
Neral	18.73%
Germacrene D	6.34%
alpha-Copaene	2.66%
Geraniol	2.31%
Caryophyllene oxide	2.13%
Isopulegol	1.85%
Citronellol	1.73%
delta-Cadinene	1.58%
alpha-Humulene	1.29%
alpha-Cadinol	1.26%
alpha-Muurolol	1.02%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
0.86%	34.66%	6.66%	3.16%	0.82%
Esters	Ethers	Aldehydes	Phenols	Other
0.91%	2.26%	47.79%	0.00%	2.88%



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



Total Percentage		97.40%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	14.67	0.27%	1-Octen-3-ol	980.00	Aliphatic Alcohol
2	14.97	0.82%	6-Methyl-5-hepten-2-one	982.00	Aliphatic Ketone
3	15.17	0.03%	Myrcene	989.20	Monoterpene
4	15.35	0.01%	3-Octanol	992.00	Aliphatic Alcohol
5	15.83	0.03%	(Z)-3-Hexenyl acetate	1004.00	Aliphatic Ester
6	16.77	0.02%	Limonene	1029.50	Monoterpene
7	17.13	0.04%	(Z)-beta-Ocimene	1037.80	Monoterpene
8	17.56	0.77%	(E)-beta-Ocimene	1047.70	Monoterpene
9	19.63	0.68%	Linalool	1099.00	Monoterpenol
10	19.85	0.09%	Nonanal	1104.00	Aliphatic Aldehyde
11	20.08	0.06%	cis-Rose oxide	1110.00	Monoterpene Ether
12	20.75	0.03%	trans-Rose oxide	1127.33	Monoterpene Ether
13	21.22	0.16%	exo-Isocitral	1143.00	Monoterpene Aldehyde
14	21.38	0.09%	trans-Pinocarveol	1143.75	Monoterpenol
15	21.70	1.85%	Isopulegol	1151.25	Monoterpenol
16	22.13	0.53%	(Z)-Isocitral	1163.50	Monoterpene Aldehyde
17	22.58	0.04%	Rose furan epoxide	1174.25	Monoterpene Ether
18	22.81	0.94%	(E)-Isocitral	1183.57	Monoterpene Aldehyde
19	24.53	1.73%	Citronellol	1229.25	Monoterpenol
20	25.05	18.73%	Neral	1246.57	Monoterpene Aldehyde
21	25.46	2.31%	Geraniol	1255.29	Monoterpenol
22	25.62	0.19%	Methyl citronellate	1261.00	Monoterpene Ester
23	26.13	27.34%	Geranial	1272.00	Monoterpene Aldehyde
24	27.08	0.06%	Geranyl formate	1304.35	Monoterpene Ester
25	27.82	0.51%	Methyl geranate	1323.80	Monoterpene Ester
26	28.83	0.16%	alpha-Cubebene	1355.71	Sesquiterpene
27	28.99	0.01%	Citronellyl acetate	1357.83	Monoterpene Ester
28	29.16	0.11%	Neryl acetate	1362.90	Monoterpene Ester
29	29.79	2.66%	alpha-Copaene	1379.00	Sesquiterpene
30	30.12	0.40%	beta-Bourbonene	1388.70	Sesquiterpene
31	30.27	0.93%	beta-Elemene	1389.20	Sesquiterpene
32	30.95	0.04%	cis-alpha-Bergamotene	1411.50	Sesquiterpene
33	31.31	19.50%	beta-Caryophyllene	1427.14	Sesquiterpene
34	32.03	0.04%	beta-Copaene	1445.00	Sesquiterpene
35	32.18	0.13%	(E)-beta-Farnesene	1456.29	Sesquiterpene
36	32.35	1.29%	alpha-Humulene	1461.43	Sesquiterpene
37	32.58	0.25%	allo-Aromadendrene	1471.00	Sesquiterpene
38	33.19	6.34%	Germacrene D	1484.71	Sesquiterpene
39	33.35	0.30%	Bicyclogermacrene	1490.71	Sesquiterpene
40	33.71	0.33%	alpha-Muurolene	1500.25	Sesquiterpene
41	33.76	0.34%	(Z,E)-alpha-Farnesene	1500.50	Sesquiterpene
42	34.17	0.31%	gamma-Cadinene	1515.29	Sesquiterpene
43	34.40	1.58%	delta-Cadinene	1524.14	Sesquiterpene

