



Essential Validation Services





Sample:

Client: | Nature's Fusions
Sample: | Melissa Leaf (Melissa officinalis)
Batch # | 42767
CAS Number | 8014-71-9
Type: | Essential Oil

Conclusion:

- No adulterants, diluents, or contaminants were detected via this method.



X

Validated By:

Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

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

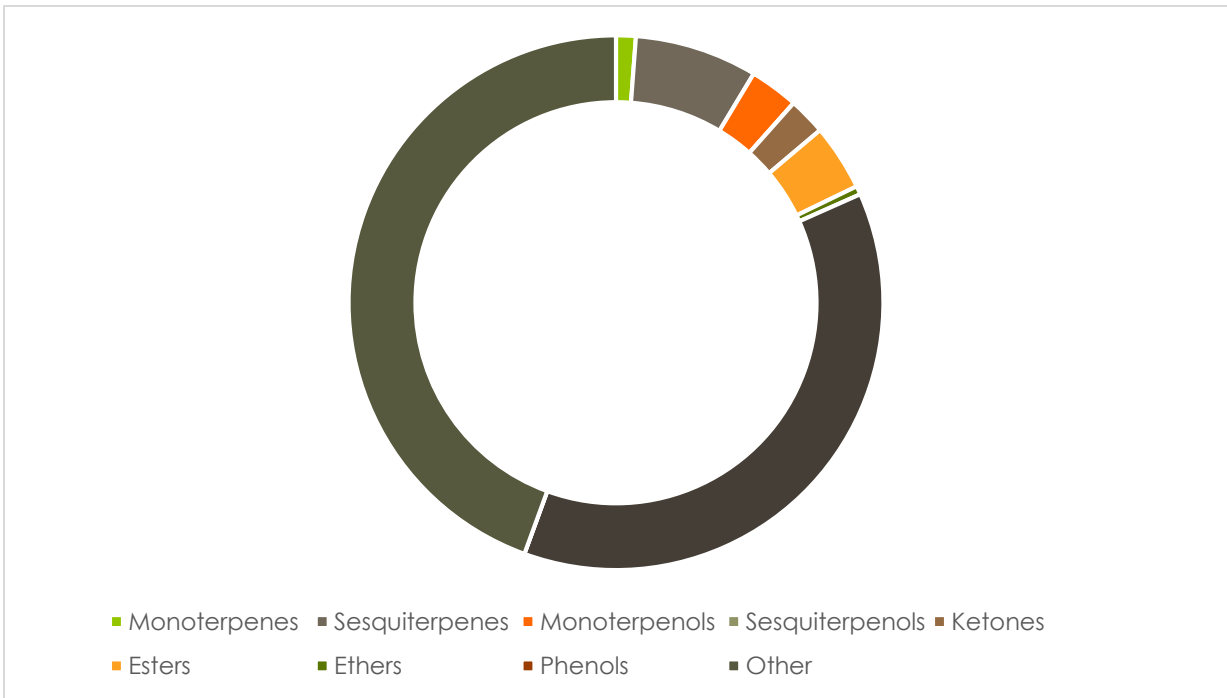
Summary of Analyses

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

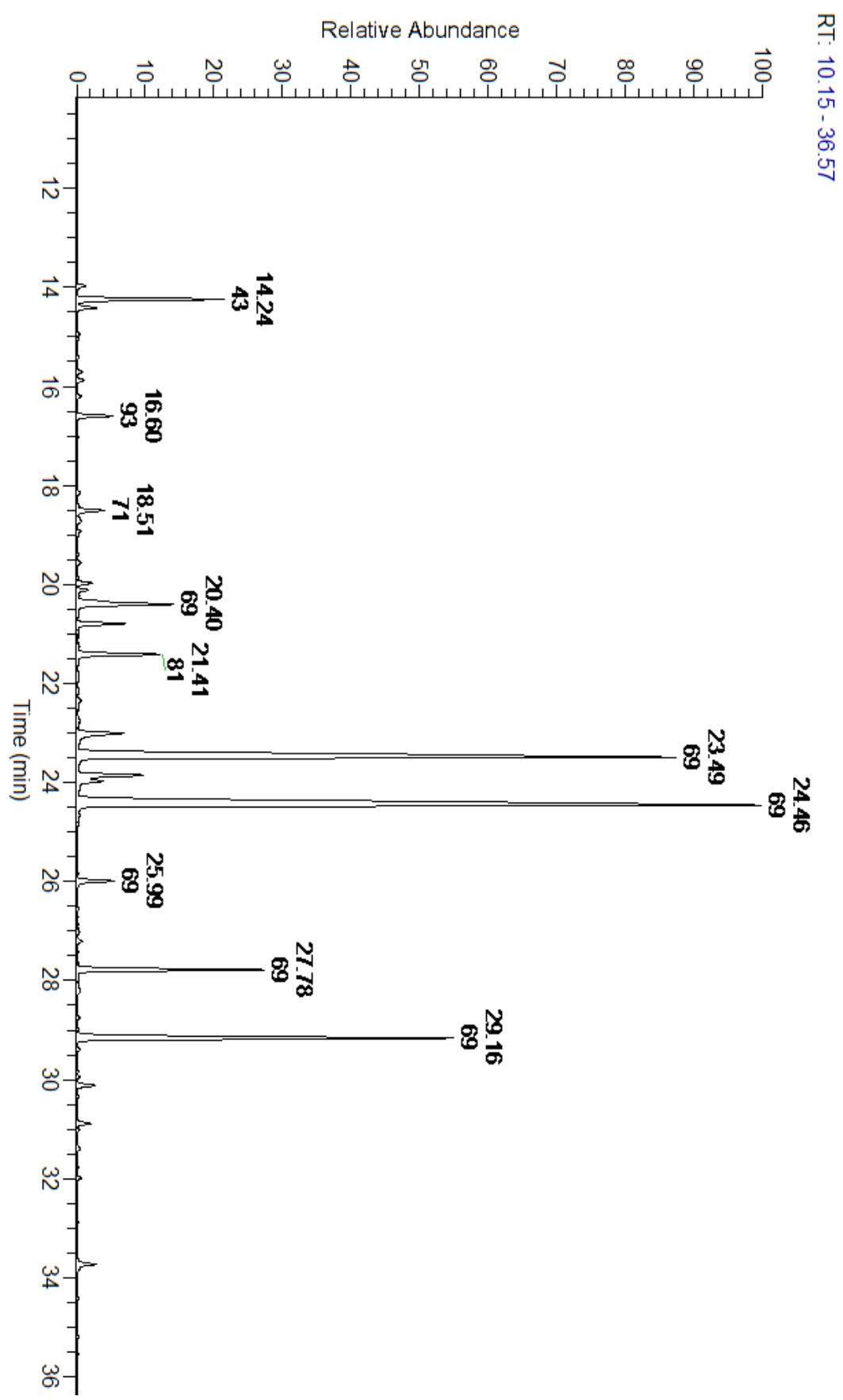


Main Compounds	Percentages
Geranial	33.08%
Neral	25.37%
beta-Caryophyllene	11.63%
Geranyl acetate	5.04%
6-Methyl-5-hepten-2-one	4.01%
Citronellal	3.44%
(E)-Isocitral	2.44%
Geraniol	2.15%
Citronellol	1.78%
(Z)-Isocitral	1.32%
Methyl geranate	1.04%
(E)-beta-Ocimene	0.98%
Methyl citronellate	0.83%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
2.12%	13.22%	5.26%	0.00%	4.01%
Esters	Ethers	Aldehydes	Phenols	Other
7.13%	0.92%	66.25%	0.00%	1.09%



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Total Percentage	99.22%				
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	9.24	0.02%	(E)-2-Hexenal	846.00	Aliphatic Aldehyde
2	9.40	0.02%	(Z)-3-Hexenol	850.00	Aliphatic Alcohol
3	9.88	0.01%	1-Hexanol	863.00	Aliphatic Alcohol
4	13.97	0.24%	1-Octen-3-ol	980.00	Aliphatic Alcohol
5	14.24	4.01%	6-Methyl-5-hepten-2-one	982.00	Aliphatic Ketone
6	14.41	0.54%	Myrcene	989.20	Monoterpene
7	15.05	0.03%	(Z)-3-Hexenyl acetate	1004.00	Aliphatic Ester
8	15.29	0.01%	Hexyl acetate	1009.00	Aliphatic Ester
9	15.40	0.05%	alpha-Terpinene	1014.00	Monoterpene
10	15.70	0.14%	para-Cymene	1024.30	Monoterpene
11	15.88	0.21%	Limonene	1029.50	Monoterpene
12	15.88	Co-Eluting	beta-Phellandrene	1030.00	Monoterpene
13	16.20	0.11%	(Z)-beta-Ocimene	1037.80	Monoterpene
14	16.51	0.01%	Phenylacetaldehyde	1036.00	Aliphatic Aldehyde
15	16.60	0.98%	(E)-beta-Ocimene	1047.70	Monoterpene
16	17.03	0.02%	gamma-Terpinene	1054.00	Monoterpene
17	18.15	0.07%	Terpinolene	1092.10	Monoterpene
18	18.51	0.81%	Linalool	1099.00	Monoterpenol
19	18.73	0.19%	Nonanal	1104.00	Aliphatic Aldehyde
20	18.93	0.13%	cis-Rose oxide	1110.00	Monoterpene Ether
21	19.56	0.11%	trans-Rose oxide	1127.33	Monoterpene Ether
22	19.97	0.41%	cis-para-Mentha-2,8-dien-1-ol	1137.50	Monoterpenol
23	20.11	0.31%	exo-Isocitral	1143.00	Monoterpene Aldehyde
24	20.22	0.05%	trans-Chrysanthemal	1152.00	Monoterpene Aldehyde
25	20.40	3.44%	Citronellal	1154.50	Monoterpene Aldehyde
26	20.40	Co-Eluting	Isopulegol	1151.25	Monoterpenol
27	20.60	0.05%	Isoisopulegol	1156.05	Monoterpenol
28	20.79	1.32%	(Z)-Isocitral	1163.50	Monoterpene Aldehyde
29	21.41	2.44%	(E)-Isocitral	1183.57	Monoterpene Aldehyde
30	21.79	0.06%	alpha-Terpineol	1191.71	Monoterpenol
31	22.19	0.02%	Decanal	1206.57	Aliphatic Aldehyde
32	23.01	1.78%	Citronellol	1229.25	Monoterpenol
33	23.01	Co-Eluting	Nerol	1230.67	Monoterpenol
34	23.49	25.37%	Neral	1246.57	Monoterpene Aldehyde
35	23.85	2.15%	Geraniol	1255.29	Monoterpenol
36	23.97	0.83%	Methyl citronellate	1261.00	Monoterpene Ester
37	24.46	33.08%	Geranial	1272.00	Monoterpene Aldehyde
38	24.68	0.05%	Methyl nerolate	1279.00	Monoterpene Ester
39	25.99	1.04%	Methyl geranate	1323.80	Monoterpene Ester
40	26.55	0.02%	delta-Elemene	1335.83	Sesquiterpene
41	26.86	0.01%	Citronellyl acetate	1357.83	Monoterpene Ester
42	27.20	0.12%	Neryl acetate	1362.90	Monoterpene Ester

43	27.78	5.04%	Geranyl acetate	1378.50	Monoterpene Ester
44	27.96	0.04%	beta-Damascenone	1382.00	Sesquiterpene Ketone/A
45	28.09	0.03%	beta-Bourbonene	1388.70	Sesquiterpene
46	28.19	0.14%	beta-Cubebene	1390.50	Sesquiterpene
47	28.74	0.07%	Isocaryophyllene	1403.65	Sesquiterpene
48	29.16	11.63%	beta-Caryophyllene	1427.14	Sesquiterpene
49	29.39	0.07%	beta-Copaene	1445.00	Sesquiterpene
50	29.95	0.06%	(E)-beta-Farnesene	1456.29	Sesquiterpene
51	30.12	0.54%	alpha-Humulene	1461.43	Sesquiterpene
52	30.36	0.03%	allo-Aromadendrene	1471.00	Sesquiterpene
53	30.71	0.01%	gamma-Murolene	1478.86	Sesquiterpene
54	30.89	0.38%	Germacrene D	1484.71	Sesquiterpene
55	31.39	0.11%	(E,E)-alpha-Farnesene	1508.14	Sesquiterpene
56	31.78	0.02%	gamma-Cadinene	1515.29	Sesquiterpene
57	31.99	0.11%	delta-Cadinene	1524.14	Sesquiterpene
58	33.73	0.68%	Caryophyllene oxide	1594.86	Sesquiterpene Ether