



## *Essential Validation Services*





**Sample:**

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Client: | Nature's Fusions  
Sample: | Ravensara (Ravensara aromatic)  
Batch # | 11122 - B25  
CAS Number | 91770-56-8  
Type: | Essential Oil

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**Conclusion:**

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



X *Adam Christen*

Validated By:

Essential Validation Services

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**Summary of Analyses**

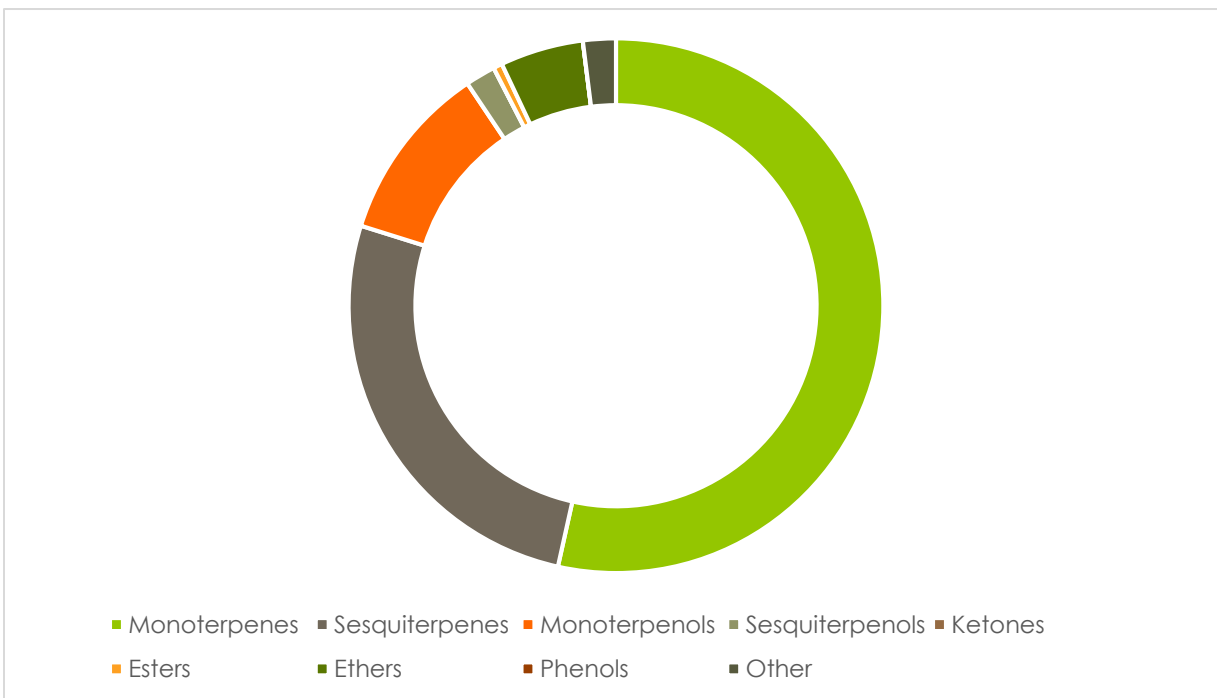
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A fresh sample of Ravensara (Ravensara aromatic) Essential Oil (10 uL in .5to.5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

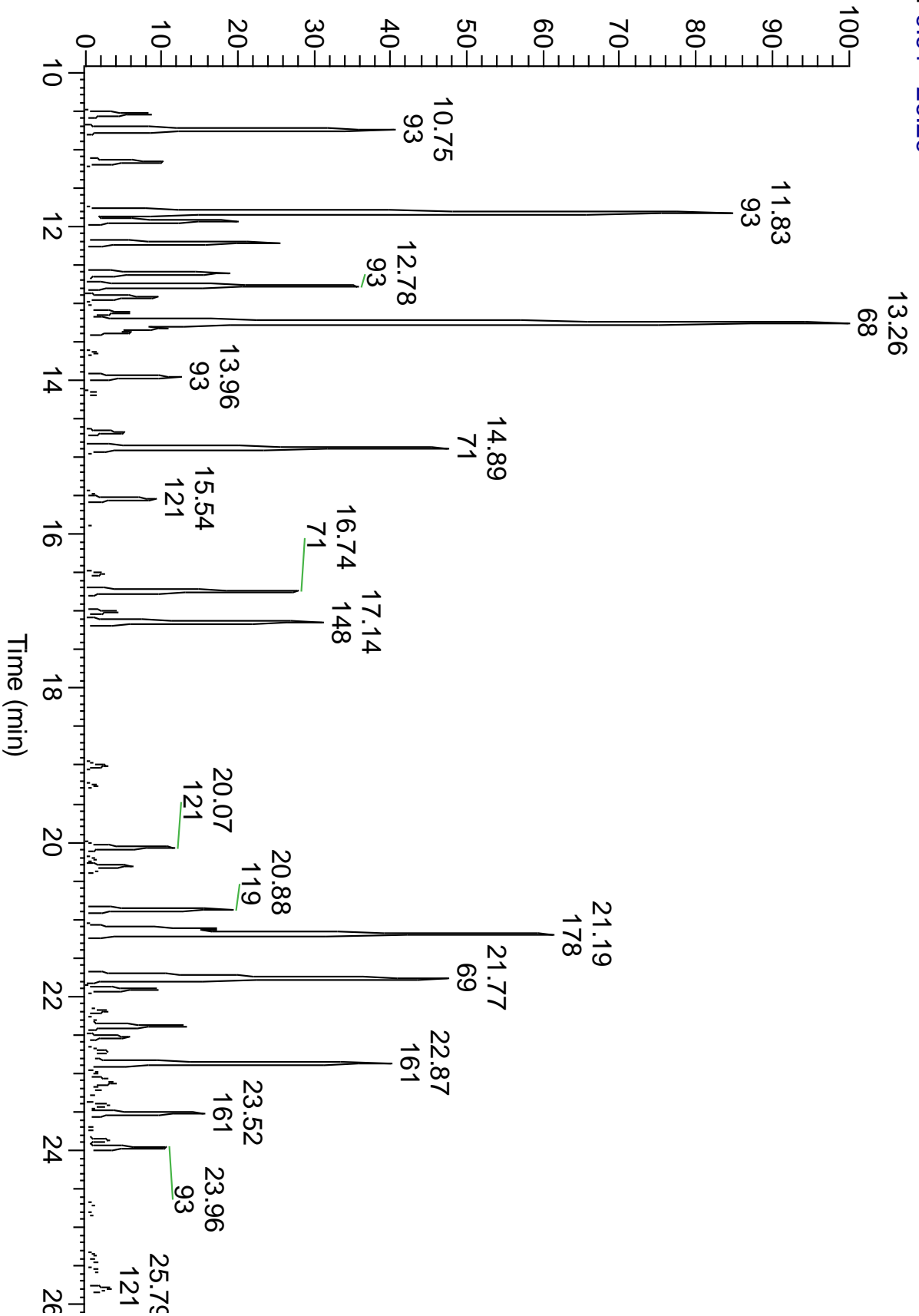


Main Compounds	Percentages
Limonene	14.57%
Sabinene	11.38%
Methyleugenol	7.75%
beta-Caryophyllene	6.88%
Linalool	5.48%
alpha-Pinene	4.80%
delta-3-Carene	4.04%
Methyl chavicol	3.52%
Terpinen-4-ol	3.14%
Myrcene	2.67%
beta-Pinene	2.22%
alpha-Phellandrene	2.15%
alpha-Copaene	1.94%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
48.52%	23.90%	9.78%	1.65%	0.00%
Esters	Ethers	Aldehydes	Phenols	Other
0.49%	4.57%	0.00%	9.02%	1.80%



RT: 9.91 - 26.29





Total Percentage	99.73%				
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	10.55	0.95%	alpha-Thujene	927.80	Monoterpenes
2	10.75	4.80%	alpha-Pinene	936.10	Monoterpenes
3	11.17	1.23%	Camphene	953.30	Monoterpenes
4	11.83	11.38%	Sabinene	973.00	Monoterpenes
5	11.94	2.22%	beta-Pinene	977.70	Monoterpenes
6	12.22	2.67%	Myrcene	989.20	Monoterpenes
7	12.61	2.15%	alpha-Phellandrene	1004.10	Monoterpenes
8	12.78	4.04%	delta-3-Carene	1011.30	Monoterpenes
9	12.92	1.01%	alpha-Terpinene	1017.10	Monoterpenes
10	13.05	0.13%	meta-Cymene	1022.00	Monoterpenes
11	13.12	0.73%	para-Cymene	1024.30	Monoterpenes
12	13.26	14.57%	Limonene	1029.50	Monoterpenes
13	13.26	Co-Eluting	beta-Phellandrene	1030.00	Monoterpenes
14	13.32	0.97%	1,8-Cineole	1031.80	Ethers
15	13.38	0.57%	(Z)-beta-Ocimene	1037.80	Monoterpenes
16	13.65	0.15%	(E)-beta-Ocimene	1047.70	Monoterpenes
17	13.96	1.34%	gamma-Terpinene	1063.71	Monoterpenes
18	14.17	0.19%	cis-Sabinene hydrate	1066.50	Monoterpenols
19	14.68	0.58%	Terpinolene	1089.43	Monoterpenes
20	14.89	5.48%	Linalool	1099.00	Monoterpenols
21	15.46	0.12%	cis-para-Menth-2-en-1-ol	1123.10	Monoterpenols
22	15.54	0.95%	Alloocimene	1129.90	Other
23	15.86	0.10%	trans-para-Menth-2-en-1-ol	1141.75	Monoterpenols
24	16.51	0.29%	Borneol	1168.71	Monoterpenols
25	16.74	3.14%	Terpinen-4-ol	1180.57	Monoterpenols
26	17.00	0.46%	alpha-Terpineol	1191.71	Monoterpenols
27	17.14	3.52%	Methyl chavicol	1202.00	Ethers
28	19.01	0.36%	Bornyl acetate	1288.29	Esters
29	19.26	0.16%	Edulan II, dihydro-	1300.10	Edulan
30	20.07	1.25%	delta-Elemene	1335.83	Sesquiterpenes
31	20.22	0.13%	alpha-Terpinyl acetate	1353.00	Esters
32	20.31	0.64%	alpha-Cubebene	1355.71	Sesquiterpenes
33	20.37	0.15%	Eugenol	1365.89	Phenols
34	20.79	0.09%	beta-Elemene	1388.30	Sesquiterpenes
35	20.88	1.94%	alpha-Copaene	1379.00	Sesquiterpenes
36	21.12	1.73%	beta-Elemene	1388.30	Sesquiterpenes
37	21.19	7.75%	Methyleugenol	1407.29	Phenols
38	21.77	6.88%	beta-Caryophyllene	1427.14	Sesquiterpenes
39	21.91	1.00%	beta-Copaene	1445.00	Sesquiterpenes
40	22.13	0.08%	Unknown Sesquiterpene	#N/A	#N/A
41	22.20	0.33%	alpha-Humulene	1461.43	Sesquiterpenes
42	22.30	0.13%	allo-Aromadendrene	1471.00	Sesquiterpenes



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43	22.39	1.52%	gamma-Gurjunene	1473.17	Sesquiterpenes
44	22.53	0.61%	Unknown Sesquiterpene	#N/A	#N/A
45	22.72	0.45%	gamma-Muurolene	1478.86	Sesquiterpenes
46	22.87	4.58%	Germacrene D	1484.71	Sesquiterpenes
47	22.99	0.18%	beta-Selinene	1487.57	Sesquiterpenes
48	23.12	0.80%	alpha-Muurolene	1501.14	Sesquiterpenes
49	23.20	0.22%	Valencene	1504.00	Sesquiterpenes
50	23.26	0.10%	Cubebol	1515.10	Sesquiterpenols
51	23.41	0.37%	gamma-Cadinene	1515.29	Sesquiterpenes
52	23.52	1.69%	delta-Cadinene	1524.14	Sesquiterpenes
53	23.72	0.10%	trans-Cadina-1,4-diene	1532.71	Sesquiterpenes
54	23.87	0.28%	Elemol	1548.57	Sesquiterpenols
55	23.96	1.12%	Elemicin	1555.86	Phenols
56	24.70	0.08%	Caryophyllene oxide	1594.86	Ethers
57	24.83	0.07%	Guaiol	1603.86	Sesquiterpenols
58	25.36	0.15%	T-Muurolol	1643.29	Sesquiterpenols
59	25.44	0.17%	beta-Eudesmol	1647.86	Sesquiterpenols
60	25.56	0.34%	alpha-Muurolol	1649.33	Sesquiterpenols
61	25.79	0.54%	alpha-Cadinol	1655.00	Sesquiterpenols

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