

Client



Source



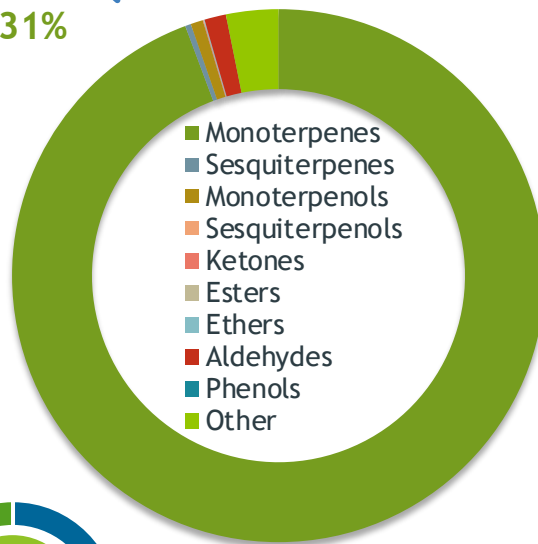
Orange, Sweet (Citrus sinensis)
NF-ORANG-19-C

Sample

Orange, Sweet (Citrus sinensis)
Batch #:..... NF-ORANG-19-C
Type:..... Essential Oil
CAS Number:... 84012-28-2
Nature's Fusions

Monoterpenes

94.31%



Percentage Identified



Client



Website



Primary

88.41% Limonene (Co-Eluting)
3.76% Myrcene
1.06% alpha-Pinene

Result



Conclusion

No adulterants, diluents, or contaminants were detected via this method. This oil meets the expected profile for genuine essential oil of Orange, Sweet (Citrus sinensis)

Internal Number: | EVS-2907



Essential Validation Services

747 SW 2nd Ave IMB 12 Suite 306
Gainesville, FL 32601

317.361.5044 |
<https://essentialvalidationservices.com/>
adam@essentialvalidationservices.com

Monoterpenes	94.31%	94.31%
Sesquiterpenes		0.35%
Monoterpenols		0.75%
Sesquiterpenols		0.00%
Ketones		0.04%
Esters		0.03%
Ethers		0.04%
Aldehydes		1.31%
Phenols		0.00%
Other		3.17%

Client



Source



Orange, Sweet (*Citrus sinensis*)
NF-ORANG-19-C

Total Percentage		96.83%			
Number	RT	Area %	Compound Name	RI	Chemical Family
1	12.91	1.06%	alpha-Pinene	936.10	Monoterpene
2	14.59	0.64%	Sabinene	973.00	Monoterpene
3	14.72	0.06%	beta-Pinene	974.00	Monoterpene
4	15.33	3.76%	Myrcene	989.20	Monoterpene
5	15.80	0.51%	Octanal	998.00	Aliphatic Aldehyde
6	16.14	0.27%	delta-3-Carene	1008.00	Monoterpene
7	17.22	88.41%	Limonene	1029.50	Monoterpene
8	17.23	Co-Eluting	beta-Phellandrene	1030.00	Monoterpene
9	17.72	0.04%	(E)-beta-Ocimene	1047.70	Monoterpene
10	18.17	0.02%	gamma-Terpinene	1054.00	Monoterpene
11	19.37	0.05%	Terpinolene	1092.10	Monoterpene
12	19.76	0.62%	Linalool	1099.00	Monoterpenol
13	19.93	0.07%	Nonanal	1104.00	Aliphatic Aldehyde
14	21.14	0.04%	cis-Limonene oxide	1136.00	Monoterpene Ether
15	21.83	0.09%	Citronellal	1154.50	Monoterpene Aldehyde
16	23.32	0.11%	alpha-Terpineol	1191.71	Monoterpenol
17	23.77	0.53%	Decanal	1206.57	Aliphatic Aldehyde
18	23.97	0.02%	Octyl acetate	1211.00	Aliphatic Ester
19	24.34	0.02%	trans-Carveol	1223.14	Monoterpenol
20	25.25	0.02%	Carvone	1248.14	Monoterpene Ketone
21	28.89	0.01%	alpha-Terpinyl acetate	1353.00	Monoterpene Ester
22	29.89	0.05%	alpha-Copaene	1379.00	Sesquiterpene
23	30.35	0.07%	beta-Elemene	1389.20	Sesquiterpene
24	30.72	0.08%	Dodecanal	1397.80	Aliphatic Aldehyde
25	31.35	0.04%	beta-Caryophyllene	1427.14	Sesquiterpene
26	31.65	0.04%	beta-Copaene	1445.00	Sesquiterpene
27	32.45	0.01%	alpha-Humulene	1461.43	Sesquiterpene
28	33.66	0.09%	Germacrene D	1484.71	Sesquiterpene
29	34.49	0.05%	delta-Cadinene	1524.14	Sesquiterpene
30	39.41	0.03%	beta-Sinensal	1688.20	Sesquiterpene Aldehyde
31	42.52	0.02%	Nootkatone	1807.00	Sesquiterpene Ketone

ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

Client



Source



Orange, Sweet (Citrus sinensis)
 NF-ORANG-19-C

Number	RT	Area %	Compound Name	RI	Chemical Family

 ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044



Essential Validation Services



Sample:

Client: | Nature's Fusions
Sample: | Orange (Citrus sinensis)
Batch # | R119865-02
CAS Number | 8028-48-6
Type: | Essential Oil

Conclusion:

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



X *Adam Christen*

Validated By:

Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

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

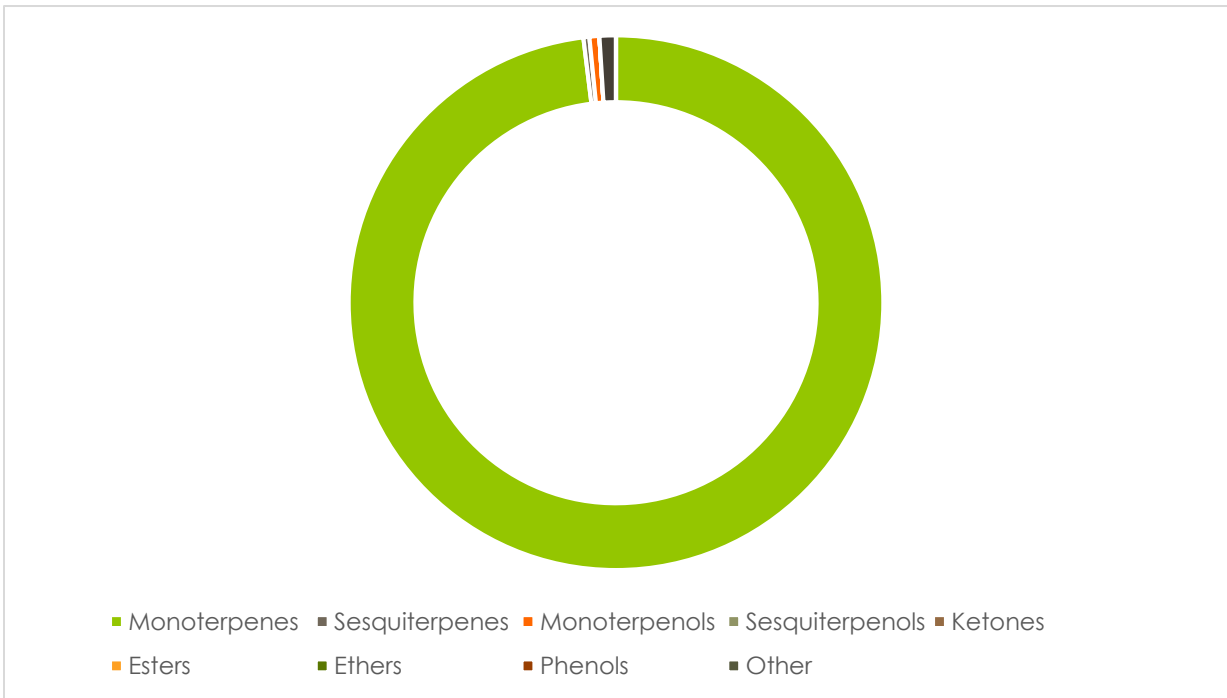
Summary of Analyses

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



Main Compounds	Percentages
Limonene	93.85%
Myrcene	2.51%
alpha-Pinene	0.70%
Sabinene	0.54%
Linalool	0.53%

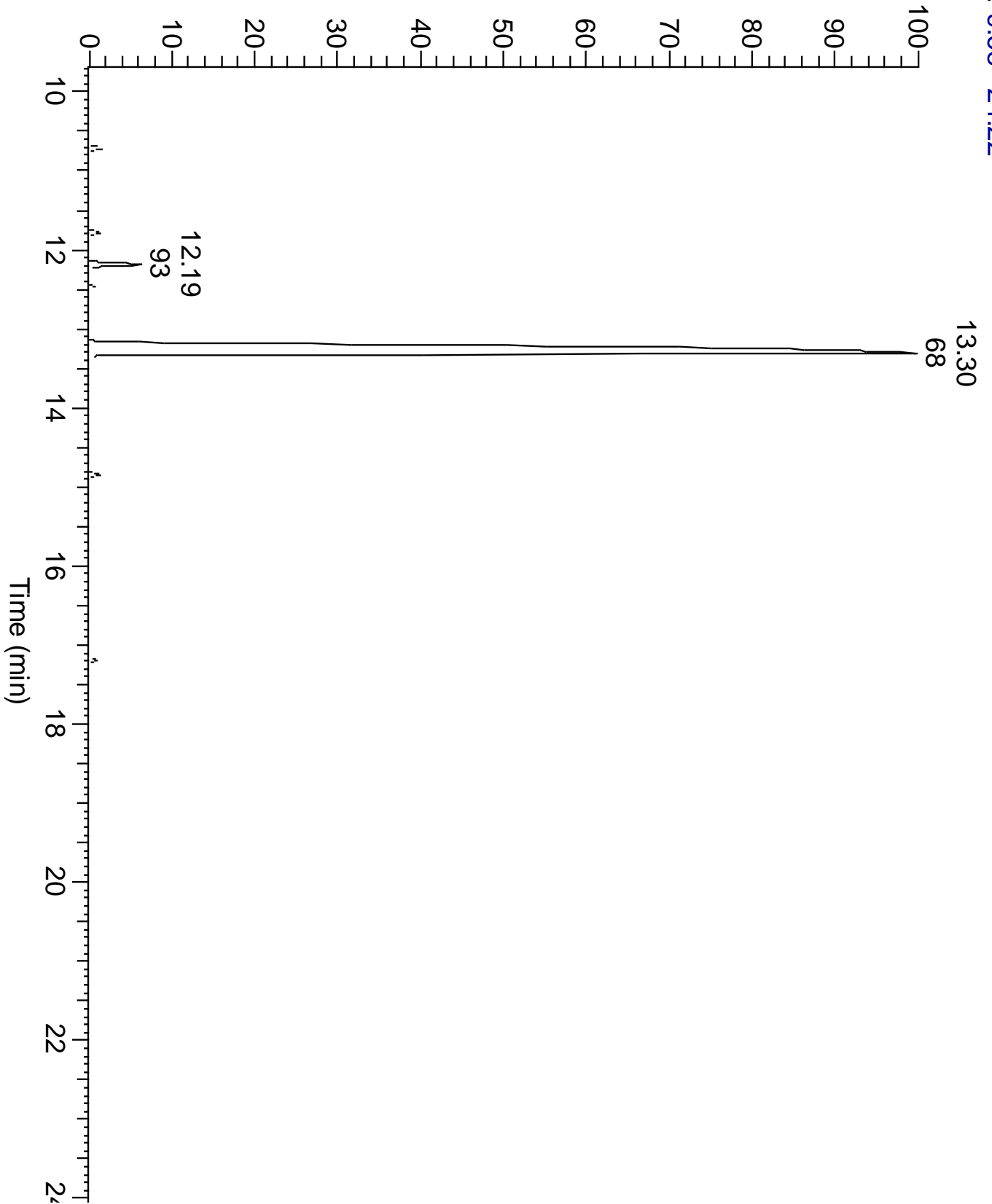
Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
97.98%	0.36%	0.60%	0.00%	0.00%
Esters	Ethers	Aldehydes	Phenols	Other
0.00%	0.00%	0.99%	0.00%	0.00%



ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044



RT: 9.68 - 24.22



ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

Total Percentage	99.93%				
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	10.71	0.70%	alpha-Pinene	936.10	Monoterpenes
2	11.78	0.54%	Sabinene	973.00	Monoterpenes
3	12.19	2.51%	Myrcene	989.20	Monoterpenes
4	12.47	0.34%	Octanal	1002.43	Aldehydes
5	12.58	0.08%	alpha-Phellandrene	1004.10	Monoterpenes
6	12.75	0.17%	delta-3-Carene	1011.30	Monoterpenes
7	13.30	93.85%	Limonene	1029.50	Monoterpenes
8	13.30	Co-Eluting	beta-Phellandrene	1030.00	Monoterpenes
9	13.30	Co-Eluting	1,8-Cineole	1031.80	Ethers
10	14.67	0.06%	Terpinolene	1089.43	Monoterpenes
11	14.85	0.53%	Linalool	1099.00	Monoterpenols
12	14.93	0.07%	Nonanal	1104.00	Aldehydes
13	16.06	0.09%	Citronellal	1158.43	Aldehydes
14	16.99	0.07%	alpha-Terpineol	1191.71	Monoterpenols
15	17.18	0.37%	Decanal	1206.57	Aldehydes
16	17.99	0.07%	Citral	1244.12	Monoterpenes
17	18.57	0.12%	Geranial	1275.57	Aldehydes
18	20.86	0.06%	alpha-Copaene	1379.00	Sesquiterpenes
19	21.10	0.06%	beta-Cubebene	1390.50	Sesquiterpenes
20	21.89	0.05%	beta-Copaene	1445.00	Sesquiterpenes
21	23.05	0.12%	alpha-Murolene	1501.14	Sesquiterpenes
22	23.50	0.07%	delta-Cadinene	1524.14	Sesquiterpenes



Essential Validation Services





Sample:

Client: | Nature's Fusions
Sample: | Orange, Sweet (Citrus sinensis)
Batch # | 1603052
CAS Number | 8028-48-6
Type: | Essential Oil

Conclusion:

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



X *Adam Christen*

Validated By:

Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

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

Summary of Analyses

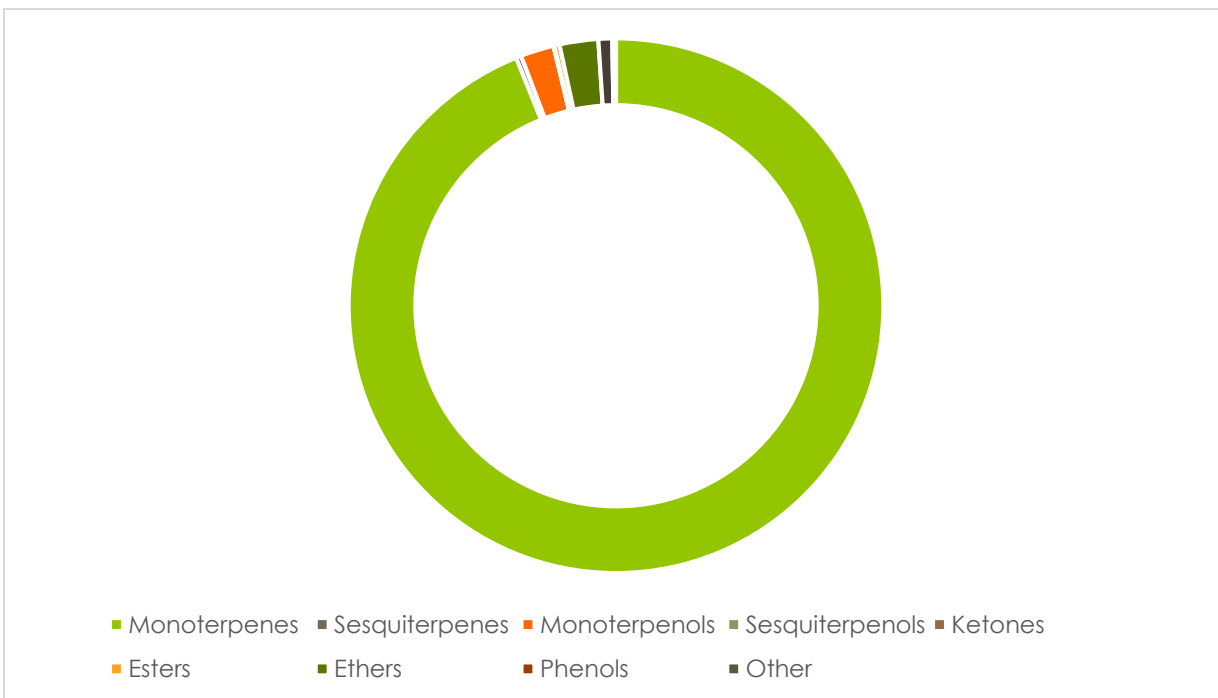
A fresh sample of Orange, Sweet (Citrus sinensis) Essential Oil (10 uL in .5to.5 mL Hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

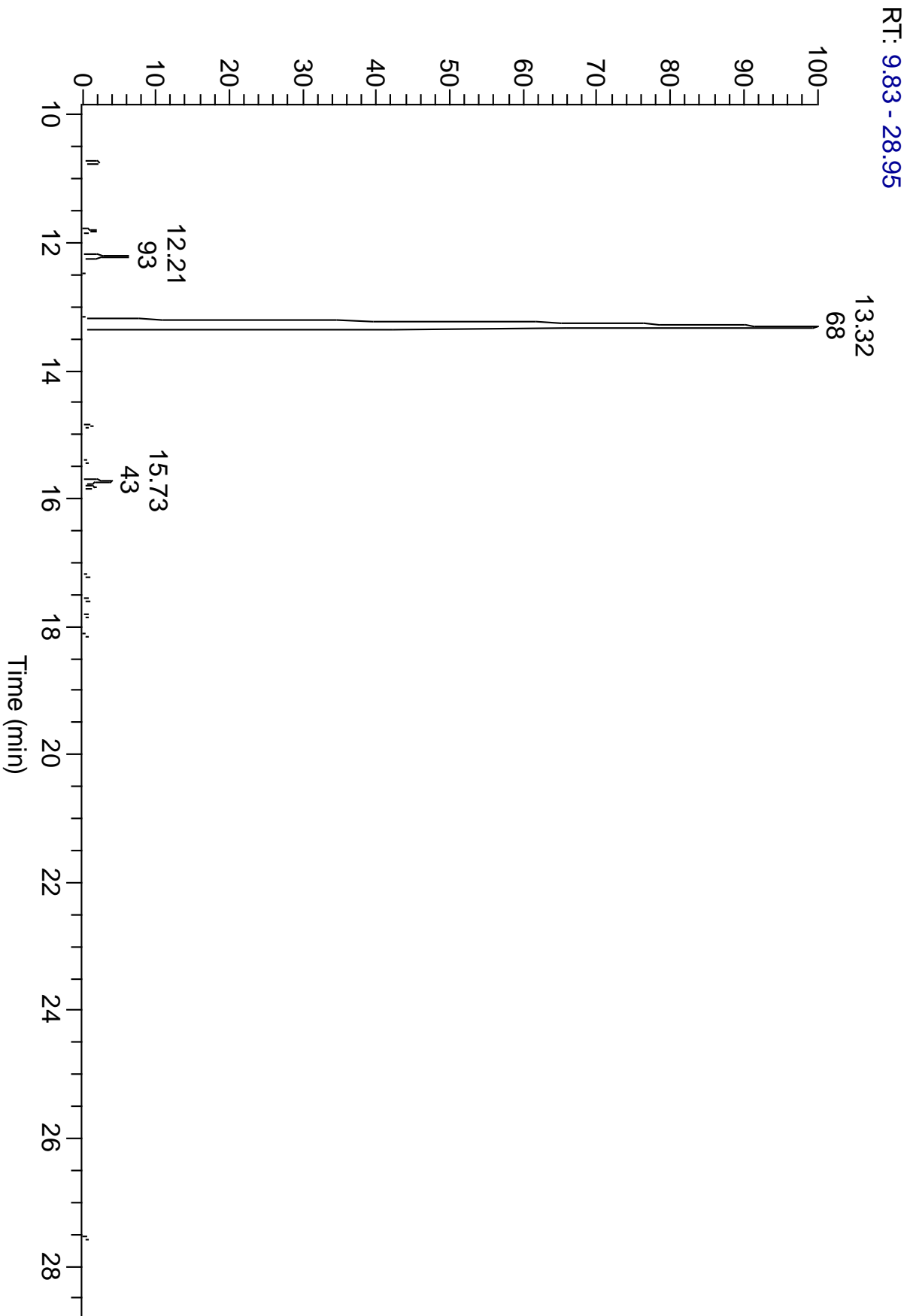


ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

Main Compounds	Percentages
Limonene	88.75%
Myrcene	2.47%
cis-Limonene oxide	1.61%
alpha-Pinene	1.01%
Sabinene	0.79%
trans-Limonene oxide	0.71%
Decanal	0.51%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
93.31%	0.31%	2.01%	0.00%	0.04%
Esters	Ethers	Aldehydes	Phenols	Other
0.32%	2.32%	0.84%	0.00%	0.21%





ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

ESSENTIAL VALIDATION SERVICES | 747 SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 317-361-5044

Total Percentage		99.36%				
Peak Number	RT	Area %	Compound Name	RI	Chemical Family	
1	10.74	1.01%	alpha-Pinene	936.10	Monoterpenes	
2	11.81	0.79%	Sabinene	973.00	Monoterpenes	
3	11.92	0.08%	beta-Pinene	977.70	Monoterpenes	
4	12.21	2.47%	Myrcene	989.20	Monoterpenes	
5	12.50	0.21%	Octanal	1002.43	Aldehydes	
6	12.77	0.13%	delta-3-Carene	1011.30	Monoterpenes	
7	13.32	88.75%	Limonene	1029.50	Monoterpenes	
8	13.32	Co-Eluting	beta-Phellandrene	1030.00	Monoterpenes	
9	13.32	Co-Eluting	1,8-Cineole	1031.80	Ethers	
10	14.71	0.08%	Terpinolene	1089.43	Monoterpenes	
11	14.86	0.48%	Linalool	1099.00	Monoterpenols	
12	14.95	0.05%	Nonanal	1104.00	Aldehydes	
13	15.41	0.35%	trans-para-Mentha-2,8-dien-1-ol	1127.50	Monoterpenols	
14	15.73	1.61%	cis-Limonene oxide	1137.50	Ethers	
15	15.73	Co-Eluting	cis-p-Mentha-2,8-dien-1-ol	1137.10	Monoterpenols	
16	15.82	0.71%	trans-Limonene oxide	1138.10	Ethers	
17	16.70	0.14%	cis-p-mentha-1(7),8-dien-2-ol	1153.50	Monoterpenols	
18	17.00	0.12%	alpha-Terpineol	1191.71	Monoterpenols	
19	17.13	0.21%	UK	#N/A	#N/A	
20	17.21	0.51%	Decanal	1206.57	Aldehydes	
21	17.58	0.49%	trans-Carveol	1223.14	Monoterpenols	
22	17.83	0.43%	cis-Carveol	1232.25	Monoterpenols	
23	17.99	0.04%	Carvone	1248.14	Ketones	
24	18.14	0.32%	Linalyl acetate	1263.80	Esters	
25	18.58	0.07%	Geranial	1275.57	Aldehydes	
26	20.87	0.06%	beta-Elemene	1388.30	Sesquiterpenes	
27	21.11	0.06%	beta-Cubebene	1390.50	Sesquiterpenes	
28	23.06	0.14%	alpha-Muurolene	1501.14	Sesquiterpenes	
29	23.51	0.05%	beta-Bisabolene	1509.86	Sesquiterpenes	