



Sample:

Client: | Appalachian Valley Natural Products
Sample: | Frankincense Carteri (Boswellia Carterii)
Batch # | BosCar418a
CAS Number | 8016-36-2
Type: | Essential Oil

Conclusion:

- No adulterants, diluents, or contaminants were detected via this method.
- This oil meets the expected profile for genuine essential oil of Frankincense Carteri (Boswellia Carterii).

X

Adam Christensen

Validated By: Digitally signed by Adam Christensen
Date: 2018.04.19 12:12:16 -04'00'



Essential Validation Services

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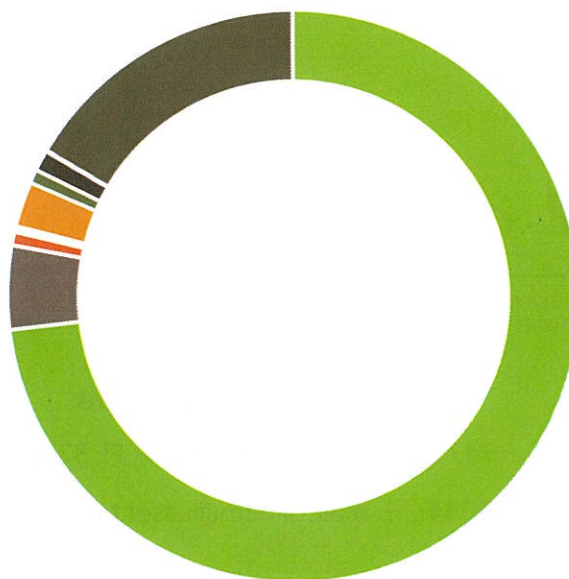
Summary of Analyses

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

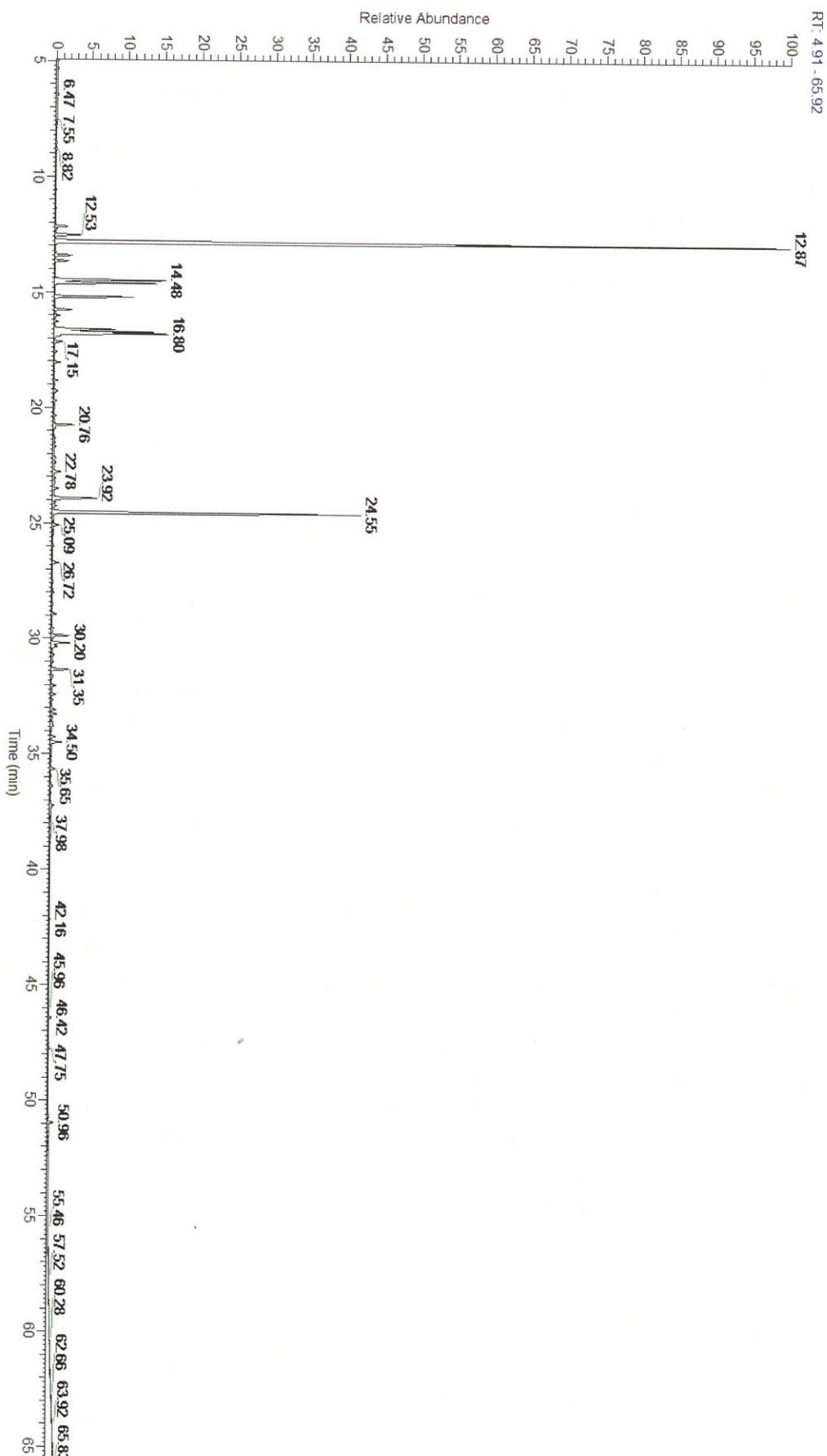


Main Compounds	Percentages
alpha-Pinene	42.54%
1-Methoxydecane	13.82%
Limonene (Co-Eluting)	9.39%
Sabinene	5.07%
beta-Pinene	4.58%
Myrcene	3.37%
para-Cymene	2.71%
Octyl acetate	2.12%
alpha-Thujene	1.34%
alpha-Campholene aldehyde	0.92%
beta-Caryophyllene	0.86%
beta-Bourbonene	0.84%
alpha-Copaene	0.82%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
73.15%	4.74%	0.74%	0.21%	0.13%
Esters	Ethers	Aldehydes	Phenols	Other
2.55%	0.78%	1.19%	0.05%	16.46%



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





Total Percentage		97.76%			
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	6.47	0.05%	Toluene	765.00	Simple Phenolic
2	8.55	0.02%	Methyl hexyl ether	822.00	Aliphatic Ether
3	11.37	0.01%	Nonane	900.00	Alkane
4	12.17	0.58%	Hashishene	922.00	Monoterpene
5	12.29	0.05%	Tricyclene	923.00	Monoterpene
6	12.53	1.34%	alpha-Thujene	927.80	Monoterpene
7	12.84	42.54%	alpha-Pinene	936.10	Monoterpene
8	13.27	0.02%	alpha-Fenchene	946.00	Monoterpene
9	13.42	0.76%	Camphene	950.30	Monoterpene
10	13.66	0.59%	Thuja-2,4(10)-diene	953.00	Monoterpene
11	14.48	5.07%	Sabinene	973.00	Monoterpene
12	14.61	4.58%	beta-Pinene	974.00	Monoterpene
13	15.21	3.37%	Myrcene	989.20	Monoterpene
14	15.76	0.76%	alpha-Phellandrene	1002.00	Monoterpene
15	16.11	0.04%	delta-3-Carene	1008.00	Monoterpene
16	16.28	0.16%	alpha-Terpinene	1014.00	Monoterpene
17	16.61	2.71%	para-Cymene	1024.30	Monoterpene
18	16.72	9.39%	Limonene	1029.50	Monoterpene
19	16.74	Co-Eluting	beta-Phellandrene	1030.00	Monoterpene
20	16.89	0.23%	1,8-Cineole	1031.80	Monoterpene Ether
21	17.15	0.35%	(Z)-beta-Ocimene	1037.80	Monoterpene
22	17.59	0.10%	(E)-beta-Ocimene	1047.70	Monoterpene
23	18.05	0.27%	gamma-Terpinene	1054.00	Monoterpene
24	18.83	0.13%	Isoterpinolene	1081.50	Monoterpene
25	19.28	0.22%	Terpinolene	1092.10	Monoterpene
26	19.70	0.15%	Linalool	1099.00	Monoterpenol
27	20.35	0.12%	1,3,8-para-Menthatriene	1112.50	Monoterpene
28	20.51	0.02%	cis-para-Menth-2-en-1-ol	1118.25	Monoterpenol
29	20.62	0.03%	Octan-3-yl acetate	1124.00	Aliphatic Ester
30	20.76	0.92%	alpha-Campholene aldehyde	1125.29	Monoterpene Aldehyde
31	21.32	0.06%	trans-Pinocarveol	1143.75	Monoterpenol
32	21.53	0.04%	trans-Verbenol	1149.00	Monoterpenol
33	22.38	0.09%	para-Mentha-1,5-dien-8-ol	1163.00	Monoterpenol
34	22.78	0.31%	Terpinen-4-ol	1180.57	Monoterpenol
35	23.28	0.07%	alpha-Terpineol	1191.71	Monoterpenol
36	23.92	2.12%	Octyl acetate	1211.00	Aliphatic Ester
37	24.12	0.10%	Verbenone	1213.80	Monoterpene Ketone
38	24.55	13.82%	1-Methoxydecane	1229.00	Alkane
39	25.09	0.27%	Cuminal	1243.00	Monoterpene Aldehyde
40	25.22	0.03%	Carvone	1248.14	Monoterpene Ketone
41	26.72	0.28%	Bornyl acetate	1288.29	Monoterpene Ester
42	28.53	0.03%	delta-Elemene	1335.83	Sesquiterpene
43	28.94	0.19%	alpha-Terpinyl acetate	1353.00	Monoterpene Ether



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