

Client



Source



Frankincense (*Boswellia carterii*)
NF-FRAN-20-A

Sample

Frankincense (*Boswellia carterii*)
Batch #:..... NF-FRAN-20-A
Type:..... Essential Oil
CAS Number:... 8016-36-2
Nature's Fusions

Client



Website

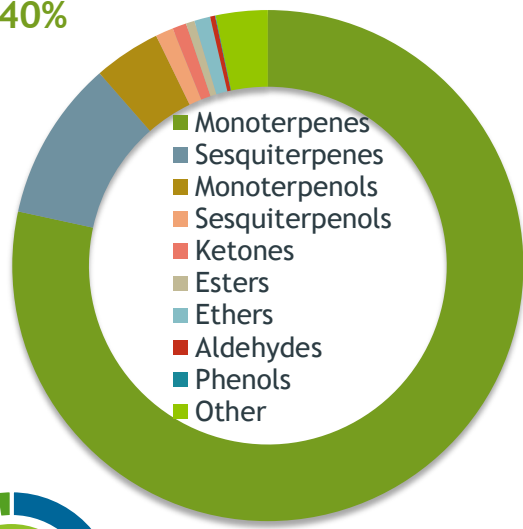


Primary

29.88% | alpha-Pinene
15.97 | Limonene
8.45% | alpha-Thujene

Monoterpenes

78.40%



Percentage Identified

Result



Conclusion

No adulterants, diluents, or contaminants were detected via this method. This oil meets the expected profile for genuine Essential Oil of Frankincense (*Boswellia carterii*)

Internal Number: | EVS-4103



Essential Validation Services

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

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

Alan Chastain

Monoterpenes	78.40%	78.40%
Sesquiterpenes	10.16%	10.16%
Monoterpenols	4.24%	4.24%
Sesquiterpenols	1.13%	1.13%
Ketones	0.88%	0.88%
Esters	0.55%	0.55%
Ethers	1.01%	1.01%
Aldehydes	0.31%	0.31%
Phenols	0.04%	0.04%
Other	3.28%	3.28%

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Client


 Nature's Fusions
ESSENTIAL OILS

Source

Frankincense (*Boswellia carterii*)

NF-FRAN-20-A

Total Percentage		97.59%		
Number	RT	Area %	Compound Name	Chemical Family
1	7.78	0.16%	Hashishene	Monoterpene
2	7.87	0.06%	Tricyclene	Monoterpene
3	8.04	8.45%	alpha-Thujene	Monoterpene
4	8.33	29.88%	alpha-Pinene	Monoterpene
5	8.69	0.41%	Thuja-2,4(10)-diene	Monoterpene
6	8.90	0.88%	Camphene	Monoterpene
7	9.85	5.13%	Sabinene	Monoterpene
8	10.01	1.57%	beta-Pinene	Monoterpene
9	10.41	0.01%	6-Methyl-5-hepten-2-one	Aliphatic Ketone
10	10.60	5.50%	Myrcene	Monoterpene
11	11.25	2.88%	alpha-Phellandrene	Monoterpene
12	11.35	1.05%	delta-3-Carene	Monoterpene
13	11.72	0.32%	alpha-Terpinene	Monoterpene
14	12.06	4.90%	para-Cymene	Monoterpene
15	12.29	15.97%	Limonene	Monoterpene
16	12.37	0.04%	1,8-Cineole	Monoterpene Ether
17	12.64	0.19%	(Z)-beta-Ocimene	Monoterpene
18	13.10	0.08%	(E)-beta-Ocimene	Monoterpene
19	13.57	0.54%	gamma-Terpinene	Monoterpene
20	14.10	0.02%	trans-Sabinene hydrate	Monoterpenol
21	14.80	0.19%	Terpinolene	Monoterpene
22	15.00	0.11%	para-Cymenene	Monoterpene
23	15.11	0.03%	2-Nonanone	Monoterpene Ketone
24	15.44	0.08%	Perillene	Monoterpene Ether
25	15.52	0.22%	Linalool	Monoterpenol
26	16.07	0.03%	6-Methyl-3,5-heptadien-2-one	Monoterpene Ketone
27	16.25	0.27%	alpha-Thujone	Monoterpene Ketone
28	16.47	0.10%	Myrcenol	Monoterpenol
29	16.57	0.04%	cis-para-Menth-2-en-1-ol	Monoterpenol
30	16.66	0.28%	alpha-Campholene aldehyde	Monoterpene Aldehyde
31	17.14	0.05%	trans-Limonene oxide	Monoterpene Ether
32	17.26	0.54%	trans-Pinocarveol	Monoterpenol
33	17.54	0.64%	trans-Verbenol	Monoterpenol
34	18.04	0.02%	Sabina ketone	Normonoterpene Ketone
35	18.16	0.09%	Pinocamphone	Monoterpene Ketone

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Client


Nature's FUSIONS
 ESSENTIAL OILS

Source


Frankincense (Boswellia carterii)

NF-FRAN-20-A

Number	RT	Area %	Compound Name	Chemical Family
36	18.743	0.57%	para-Mentha-1,5-dien-8-ol	Monoterpene Ketone
37	19.14	0.91%	Terpinen-4-ol	Monoterpenol
38	19.30	0.04%	para-Methylacetophenone	Simple Phenolic
39	19.37	0.02%	Cryptone	Monoterpene Ketone
40	19.46	0.17%	para-Cymen-8-ol	Monoterpenol
41	19.83	0.63%	alpha-Terpineol	Monoterpenol
42	20.17	0.09%	Myrtenol	Monoterpenol
43	20.31	0.28%	Verbenone	Monoterpene Ketone
44	20.48	0.03%	trans-Piperitol	Monoterpenol
45	20.67	0.13%	Octyl acetate	Aliphatic Ester
46	20.93	0.19%	trans-Carveol	Monoterpenol
47	21.42	0.76%	1-Methoxydecane	Alkane
48	21.53	0.05%	cis-Carveol	Monoterpenol
49	22.01	0.13%	Carvone	Monoterpene Ketone
50	22.08	0.04%	Hexyl isovalerate	Monoterpene Ester
51	23.47	0.03%	Phellandral	Monoterpene Aldehyde
52	23.85	0.38%	Bornyl acetate	Monoterpene Ester
53	24.59	0.04%	Carvacrol	Monoterpenol
54	26.61	0.32%	alpha-Cubebene	Sesquiterpene
55	27.45	0.04%	Cyclosativene	Sesquiterpene
56	27.80	0.79%	alpha-Copaene	Sesquiterpene
57	28.12	0.23%	beta-Bourbonene	Sesquiterpene
58	28.42	1.08%	beta-Elemene	Sesquiterpene
59	29.12	0.09%	alpha-Gurjunene	Sesquiterpene
60	29.61	3.18%	beta-Caryophyllene	Sesquiterpene
61	30.04	0.06%	beta-Copaene	Sesquiterpene
62	30.27	0.11%	trans-alpha-Bergamotene	Sesquiterpene
63	30.83	0.08%	trans-Muurola-3,5-diene	Sesquiterpene
64	31.07	0.64%	alpha-Humulene	Sesquiterpene
65	31.26	0.22%	allo-Aromadendrene	Sesquiterpene
66	31.81	0.10%	trans-Cadina-1(6),4-diene	Sesquiterpene
67	31.93	0.36%	gamma-Murolene	Sesquiterpene
68	32.13	0.36%	Germacrene D	Sesquiterpene
69	32.43	0.48%	beta-Selinene	Sesquiterpene
70	32.55	0.13%	1-epi-Bicyclosesquiphellandrene	Monoterpene
71	32.64	0.03%	gamma-Amorphene	Sesquiterpene

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Essential Validation Services

12/21/2020

Client



Source



Frankincense (Boswellia carterii)
NF-FRAN-20-A

72	32.74	0.49%	alpha-Selinene	Sesquiterpene
73	32.90	0.18%	alpha-Muurolene	Sesquiterpene
74	33.45	0.46%	gamma-Cadinene	Sesquiterpene
75	33.53	0.26%	Cubebol	Sesquiterpenol
76	33.69	0.80%	delta-Cadinene	Sesquiterpene
77	34.21	0.04%	trans-Cadina-1,4-diene	Sesquiterpene
78	34.37	0.02%	alpha-Cadinene	Sesquiterpene
79	34.85	0.04%	Elemol	Sesquiterpenol
80	35.25	0.04%	Liguloxide	Sesquiterpene Ether
81	35.60	0.02%	Palustrol	Sesquiterpenol
82	35.88	0.05%	Spathulenol	Sesquiterpenol
83	36.05	0.65%	Caryophyllene oxide	Sesquiterpene Ether
84	36.54	0.14%	Viridiflorol	Sesquiterpenol
85	37.10	0.15%	Humulene epoxide II	Sesquiterpene Ether
86	37.32	0.17%	Guaiol	Sesquiterpenol
87	37.85	0.04%	1,10-di-epi-Cubenol	Sesquiterpenol
88	38.38	0.39%	T-Cadinol	Sesquiterpenol
89	38.55	0.02%	alpha-Muurolol	Sesquiterpenol
90	49.07	0.11%	Cembrene A	Diterpene

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Client

Nature's FUSIONS
ESSENTIAL OILS

Source

Frankincense Carteri (Boswellia carterii)
NF-FRAN-19-B

Sample

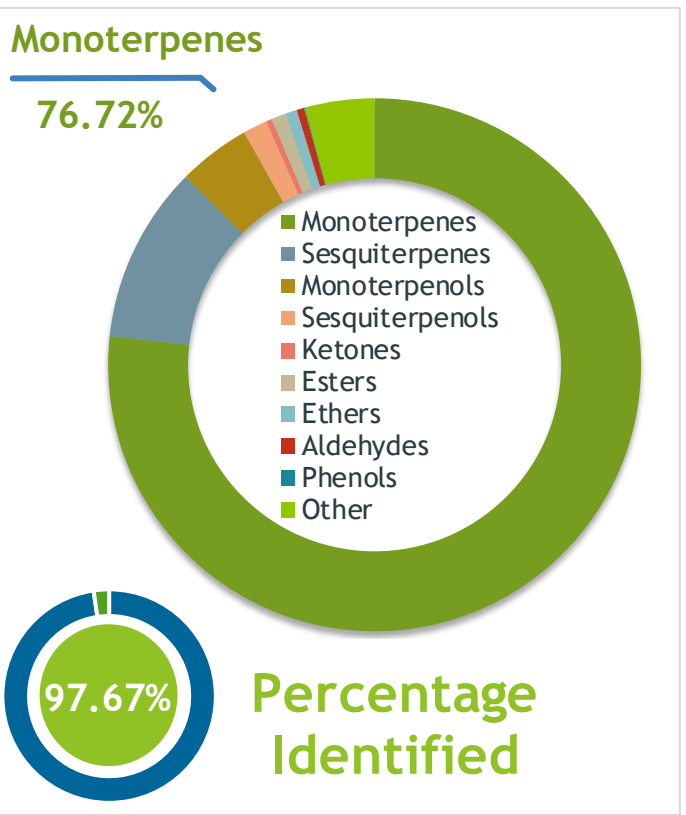
Frankincense Carteri (Boswellia carterii)

Batch #:..... | NF-FRAN-19-B

Type:..... | Essential Oil

CAS Number:... | 8016-36-2

Nature's Fusions



Client

Nature's FUSIONS
ESSENTIAL OILS

Website

Primary

31.15% | alpha-Pinene

17.81% | Limonene

5.42% | Myrcene

Result

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)

Internal Number: | EVS-2872

Essential Validation Services

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Gainesville, FL 32601

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adam@essentialvalidationservices.com

Monoterpenes	76.72%	76.72%
Sesquiterpenes	10	10.74%
Monoterpenols	4.39%	4.39%
Sesquiterpenols	1.48%	1.48%
Ketones	0.36%	0.36%
Esters	0.88%	0.88%
Ethers	0.71%	0.71%
Aldehydes	0.44%	0.44%
Phenols	0.06%	0.06%
Other	4.22%	4.22%

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Nature's FUSIONS
 ESSENTIAL OILS

Source



Frankincense Carteri (Boswellia carterii)
 NF-FRAN-19-B

Total Percentage		97.67%			
Number	RT	Area %	Compound Name	RI	Chemical Family
1	6.53	0.06%	Toluene	765.00	Simple Phenolic
2	12.25	0.22%	Hashishene	922.00	Monoterpene
3	12.37	0.05%	Tricyclene	923.00	Monoterpene
4	12.61	5.41%	alpha-Thujene	927.80	Monoterpene
5	12.94	31.15%	alpha-Pinene	936.10	Monoterpene
6	13.50	0.86%	Camphene	950.30	Monoterpene
7	13.74	0.47%	Thuja-2,4(10)-diene	953.00	Monoterpene
8	14.42	0.10%	Verbenene	961.00	Monoterpene
9	14.56	4.55%	Sabinene	973.00	Monoterpene
10	14.68	1.42%	beta-Pinene	974.00	Monoterpene
11	15.28	5.42%	Myrcene	989.20	Monoterpene
12	15.84	2.56%	alpha-Phellandrene	1002.00	Monoterpene
13	16.09	0.94%	delta-3-Carene	1008.00	Monoterpene
14	16.36	0.25%	alpha-Terpinene	1014.00	Monoterpene
15	16.69	4.57%	para-Cymene	1024.30	Monoterpene
16	16.90	17.81%	Limonene	1029.50	Monoterpene
17	17.22	0.16%	(Z)-beta-Ocimene	1037.80	Monoterpene
18	17.65	0.10%	(E)-beta-Ocimene	1047.70	Monoterpene
19	18.12	0.41%	gamma-Terpinene	1054.00	Monoterpene
20	18.47	0.02%	trans-Sabinene hydrate	1072.00	Monoterpenol
21	19.35	0.27%	Terpinolene	1092.10	Monoterpene
22	19.75	0.34%	Linalool	1099.00	Monoterpenol
23	19.95	0.06%	Isoamyl isovalerate	1103.10	Aliphatic Ester
24	20.07	0.04%	alpha-Thujone	1106.00	Monoterpene Ketone
25	20.46	0.17%	beta-Thujone	1118.00	Monoterpene Ketone
26	20.54	0.05%	Myrcenol	1118.20	Monoterpenol
27	20.82	0.37%	alpha-Campholenal	1125.29	Monoterpene Aldehyde
28	21.37	0.78%	trans-Pinocarveol	1143.75	Monoterpenol
29	21.57	0.69%	trans-Verbenol	1149.00	Monoterpenol
30	22.41	0.59%	p-Mentha-1,5-dien-8-ol	1163.00	Monoterpenol
31	22.83	0.73%	Terpinen-4-ol	1180.57	Monoterpenol
32	23.07	0.14%	para-Cymen-8-ol	1185.25	Monoterpenol
33	23.32	0.34%	alpha-Terpineol	1191.71	Monoterpenol
34	23.55	0.32%	Myrtenol	1198.00	Monoterpenol
35	24.03	0.43%	Octyl acetate	1211.00	Aliphatic Ester

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Nature's FUSIONS
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Source



Frankincense Carteri (Boswellia carterii)
 NF-FRAN-19-B

Number	RT	Area %	Compound Name	RI	Chemical Family
36	24.34	0.21%	trans-Carveol	1223.14	Aliphatic Ester
37	24.55	1.13%	1-Methoxydecane	1229.00	Alkane
38	24.76	0.05%	cis-Carveol	1232.25	Monoterpenol
39	25.13	0.07%	Cuminal	1243.00	Monoterpene Aldehyde
40	25.26	0.15%	Carvone	1248.14	Monoterpene Ketone
41	25.41	0.01%			
42	26.01	0.08%	Decanol	1273.50	Monoterpenol
43	26.76	0.39%	Bornyl acetate	1288.29	Monoterpene Ester
44	27.22	0.05%	Carvacrol	1304.40	Monoterpenol
45	28.90	0.06%	alpha-Terpinyl acetate	1353.00	Monoterpene Ether
46	28.98	0.29%	alpha-Cubebene	1355.71	Sesquiterpene
47	29.62	0.05%	alpha-Ylangene	1371.33	Sesquiterpene
48	29.91	0.85%	alpha-Copaene	1379.00	Sesquiterpene
49	30.23	0.23%	beta-Bourbonene	1388.70	Sesquiterpene
50	30.40	1.30%	beta-Elemene	1389.20	Sesquiterpene
51	31.05	0.10%	alpha-Gurjunene	1412.00	Sesquiterpene
52	31.39	3.18%	beta-Caryophyllene	1427.14	Sesquiterpene
53	31.76	0.10%	trans-alpha-Bergamotene	1435.00	Sesquiterpene
54	32.46	0.68%	alpha-Humulene	1461.43	Sesquiterpene
55	32.70	0.22%	Aromadendrene	1449.80	Sesquiterpene
56	33.11	0.47%	gamma-Murolene	1478.86	Sesquiterpene
57	33.31	0.38%	Germacrene D	1484.71	Sesquiterpene
58	33.50	0.53%	beta-Selinene	1487.57	Sesquiterpene
59	33.69	0.28%	epi-Cubebol	1493.67	Sesquiterpenol
60	33.76	0.61%	alpha-Selinene	1492.50	Sesquiterpene
61	34.31	0.84%	gamma-Cadinene	1515.29	Sesquiterpene
62	34.53	0.91%	delta-Cadinene	1524.14	Sesquiterpene
63	35.28	0.05%	Elemol	1538.00	Sesquiterpenol
64	36.24	0.04%	Spathulenol	1587.00	Sesquiterpenol
65	36.43	0.65%	Caryophyllene oxide	1594.86	Sesquiterpene Ether
66	36.68	0.15%	Viridiflorol	1596.00	Sesquiterpenol
67	37.03	0.08%	Ledol	1623.00	Sesquiterpenol
68	37.24	0.32%	10-epi-gamma-Eudesmol	1620.00	Sesquiterpenol
69	37.99	0.42%	T-Cadinol	1640.43	Sesquiterpenol
70	38.33	0.14%	alpha-Eudesmol	1652.86	Sesquiterpenol
71	46.46	0.14%	Cembrene A	1931.00	Diterpene

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Essential Validation Services





Sample:

Client: | Nature's Fusions
Sample: | Frankincense Carteri (Boswellia Carterii)
Batch # | M8731
CAS Number | 8016-36-2
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

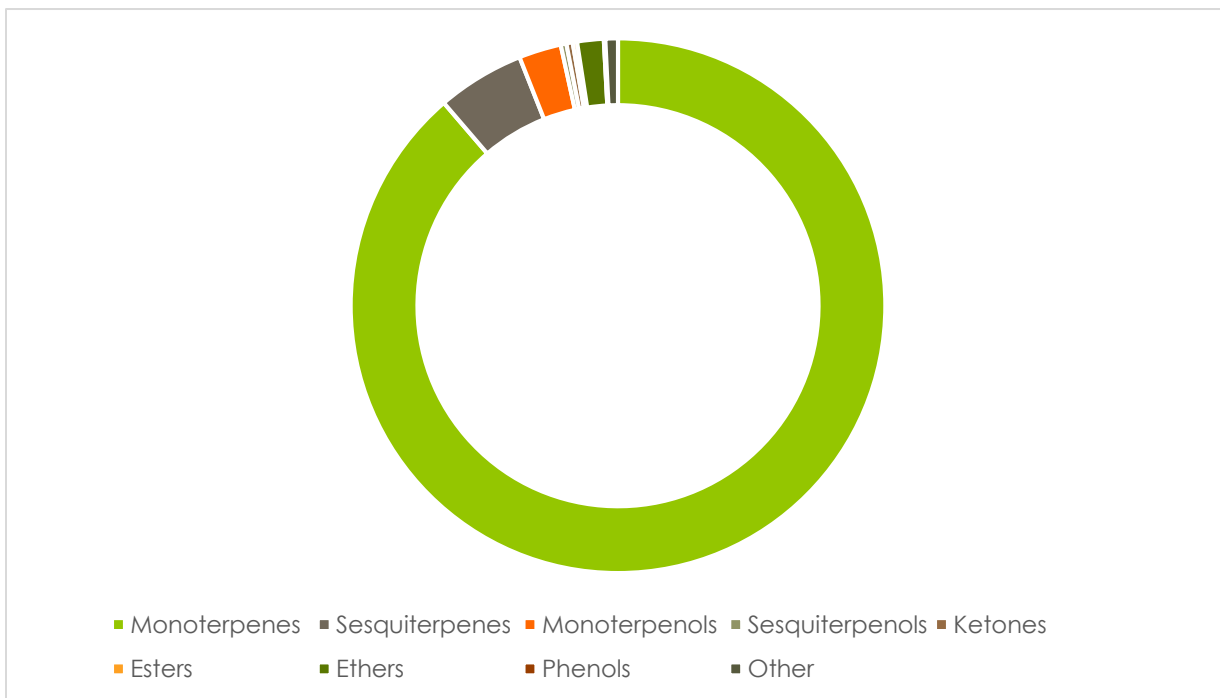
Summary of Analyses

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

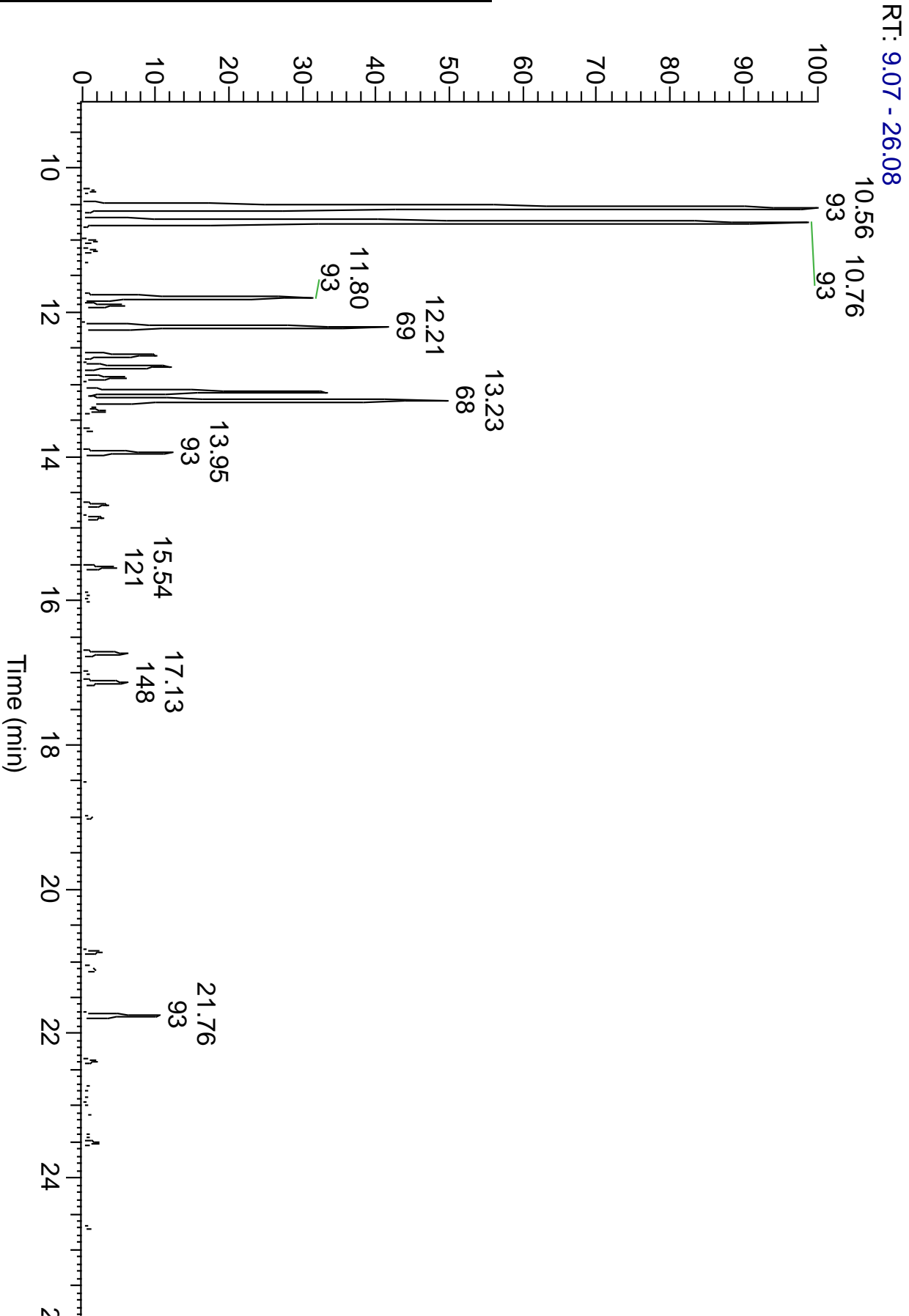


Main Compounds	Percentages
alpha-Thujene	26.29%
alpha-Pinene	22.03%
Limonene	9.31%
Myrcene	7.29%
para-Cymene	6.29%
Sabinene	5.79%
delta-3-Carene	2.37%
gamma-Terpinene	2.14%
alpha-Phellandrene	1.86%
Methyl chavicol	1.13%
alpha-Terpinene	1.07%
Terpinen-4-ol	1.06%
beta-Pinene	1.03%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
87.91%	5.24%	2.54%	0.34%	0.38%
Esters	Ethers	Aldehydes	Phenols	Other
0.26%	1.59%	0.09%	0.01%	0.75%



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

Total Percentage	99.12%				
Peak Number	RT	Area %	Compound Name	RI	Chemical Family
1	6.10	0.01%	Toluene	771.00	Phenols
2	10.31	0.34%	Hashishene	922.00	Monoterpenes
3	10.41	0.02%	Tricyclene	923.20	Monoterpenes
4	10.56	26.29%	alpha-Thujene	927.80	Monoterpenes
5	10.76	22.03%	alpha-Pinene	936.10	Monoterpenes
6	11.02	0.32%	Thuja-2,4(10)-diene	952.00	Monoterpenes
7	11.15	0.34%	Camphene	953.30	Monoterpenes
8	11.80	5.79%	Sabinene	973.00	Monoterpenes
9	11.91	1.03%	beta-Pinene	977.70	Monoterpenes
10	12.21	7.29%	Myrcene	989.20	Monoterpenes
11	12.51	0.02%	Octanal	1002.43	Aldehydes
12	12.60	1.86%	alpha-Phellandrene	1004.10	Monoterpenes
13	12.75	2.37%	delta-3-Carene	1011.30	Monoterpenes
14	12.91	1.07%	alpha-Terpinene	1017.10	Monoterpenes
15	13.11	6.29%	para-Cymene	1024.30	Monoterpenes
16	13.23	9.31%	Limonene	1029.50	Monoterpenes
17	13.23	Co-Eluting	beta-Phellandrene	1030.00	Monoterpenes
18	13.31	0.22%	1,8-Cineole	1031.80	Ethers
19	13.37	0.56%	(Z)-beta-Ocimene	1037.80	Monoterpenes
20	13.63	0.25%	(E)-beta-Ocimene	1047.70	Monoterpenes
21	13.95	2.14%	gamma-Terpinene	1063.71	Monoterpenes
22	14.67	0.61%	Terpinolene	1089.43	Monoterpenes
23	14.85	0.47%	Linalool	1099.00	Monoterpenols
24	15.35	0.18%	alpha-Thujone	1112.00	Ketones
25	15.44	0.07%	beta-Thujone	1118.00	Ketones
26	15.54	0.75%	Alloocimene	1129.90	Other
27	15.91	0.24%	trans-Pinocarveol	1144.10	Monoterpenols
28	15.99	0.21%	trans-Verbenol	1149.00	Monoterpenols
29	16.08	0.13%	cis-Verbenol	1150.86	Monoterpenols
30	16.73	1.06%	Terpinen-4-ol	1180.57	Monoterpenols
31	16.84	0.10%	para-Cymen-8-ol	1184.43	Monoterpenols
32	17.00	0.17%	alpha-Terpineol	1191.71	Monoterpenols
33	17.13	1.13%	Methyl chavicol	1202.00	Ethers
34	17.26	0.07%	Decanal	1206.57	Aldehydes
35	17.45	0.10%	Verbenone	1209.71	Ketones
36	17.57	0.05%	trans-Carveol	1223.14	Monoterpenols
37	18.14	0.03%	Carvone	1248.14	Ketones
38	18.53	0.11%	1-Decanol	1271.00	Monoterpenols
39	19.00	0.20%	Bornyl acetate	1288.29	Esters
40	20.21	0.06%	alpha-Terpinyl acetate	1353.00	Esters
41	20.31	0.09%	alpha-Cubebene	1355.71	Sesquiterpenes
42	20.87	0.43%	alpha-Copaene	1379.00	Sesquiterpenes

43	21.09	0.23%	beta-Elemene	1388.30	Sesquiterpenes
44	21.12	0.35%	beta-Bourbonene	1388.70	Sesquiterpenes
45	21.55	0.09%	alpha-Gurjunene	1412.00	Sesquiterpenes
46	21.76	1.79%	beta-Caryophyllene	1427.14	Sesquiterpenes
47	21.90	0.10%	beta-Gurjunene	1437.71	Sesquiterpenes
48	22.11	0.05%	beta-Copaene	1445.00	Sesquiterpenes
49	22.18	0.03%	Aromadendrene	1447.71	Sesquiterpenes
50	22.38	0.38%	alpha-Humulene	1461.43	Sesquiterpenes
51	22.52	0.08%	allo-Aromadendrene	1471.00	Sesquiterpenes
52	22.71	0.17%	gamma-Murolene	1478.86	Sesquiterpenes
53	22.78	0.11%	Germacrene D	1484.71	Sesquiterpenes
54	22.86	0.17%	beta-Selinene	1487.57	Sesquiterpenes
55	22.98	0.14%	alpha-Selinene	1492.50	Sesquiterpenes
56	23.12	0.31%	alpha-Murolene	1501.14	Sesquiterpenes
57	23.42	0.22%	gamma-Cadinene	1515.29	Sesquiterpenes
58	23.52	0.47%	delta-Cadinene	1524.14	Sesquiterpenes
59	24.56	0.03%	trans-Calamenene	1531.60	Sesquiterpenes
60	24.69	0.24%	Caryophyllene oxide	1594.86	Ethers
61	24.83	0.09%	Viridiflorol	1596.00	Sesquiterpenols
62	25.13	0.08%	T-Cadinol	1640.43	Sesquiterpenols
63	25.55	0.17%	alpha-Muurolol	1649.33	Sesquiterpenols
64	32.90	0.01%	Incensole	2152.00	Diterpenols



Essential Validation Services



Client: Nature's Fusions

Sample: Frankincense Carteri (Boswellia Carterii)

Batch # SB 1-1-17

Manufacture Date: 1/1/2017

Country of Production: Egypt

Essential Validation Services

747 SW 2nd Ave, Gainesville, FL 32601

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

Summary of Analyses

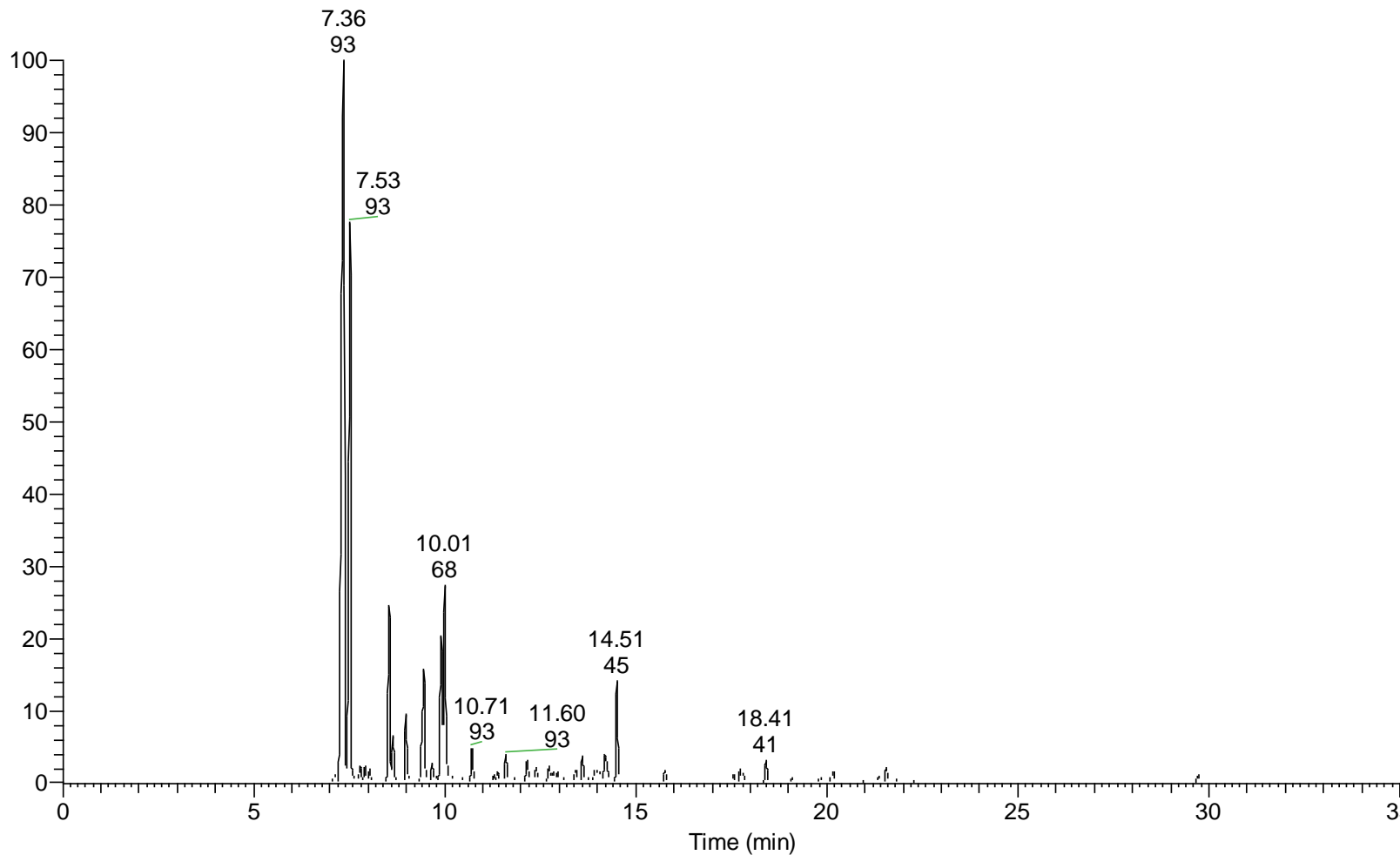
A fresh sample of Frankincense Carteri (Boswellia Carterii) Essential Oil (10 uL in 1to1 mL hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.

Main Compounds	Percentages
alpha-Thujene	36.35%
alpha-Pinene	18.47%
Limonene	6.20%
Sabinene	5.51%
para-Cymene	4.95%
delta-3-Carene	4.49%
1-Methoxydecane	2.71%
Myrcene	2.04%
beta-Pinene	1.41%
Octyl acetate	1.34%
gamma-Terpinene	1.06%
cis-4-methoxy thujane	0.89%
trans-4-methoxy thujane	0.81%
Terpinen-4-ol	0.75%
Unknown Mass (136)	0.65%
alpha-Fenchene	0.61%
alpha-Terpineol	0.53%
trans-Pinocarveol	0.51%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
83.05%	3.25%	3.35%	0.45%	0.29%
Esters	Ethers	Oxides	Aldehydes	Other
1.76%	0.00%	0.18%	0.21%	6.94%



- Monoterpenes ■ Sesquiterpenes ■ Monoterpenols ■ Sesquiterpenols
- Ketones ■ Esters ■ Ethers ■ Oxides
- Aldehydes ■ Other ■ Phenols



Total Percentage	99.48%				
Peak Number	Apex RT	Area %	Compound Name	RI	Chemical Family
1	7.12	0.32%	Tricyclene	927.71	Monoterpenes
2	7.36	36.35%	alpha-Thujene	935.43	Monoterpenes
3	7.53	18.47%	alpha-Pinene	940.00	Monoterpenes
4	7.79	0.61%	alpha-Fenchene	945.60	Sesquiterpenes
5	7.91	0.45%	Camphene	951.57	Monoterpenes
6	8.03	0.35%	Thuja-2,4(10)-diene	965.00	Monoterpenes
7	8.55	5.51%	Sabinene	975.71	Monoterpenes
8	8.65	1.41%	beta-Pinene	979.00	Monoterpenes
9	8.81	0.03%	p-Mentha-2,8-diene	983.00	Other
10	8.99	2.04%	Myrcene	990.57	Monoterpenes
11	9.2	0.05%	3-Octanol	994.67	Monoterpenols
12	9.45	4.49%	delta-3-Carene	1011.57	Monoterpenes
13	9.45	Co-Eluting	alpha-Phellandrene	1006.43	Monoterpenes
14	9.67	0.50%	alpha-Terpinene	1019.29	Monoterpenes
15	9.76	0.14%	trans-3-Caren-2-ol	#N/A	#N/A
16	9.91	4.95%	para-Cymene	1025.71	Monoterpenes
17	10.01	6.20%	Limonene	1032.00	Monoterpenes
18	10.06	Co-Eluting	1,8-Cineole	1033.29	Ethers
19	10.08	Co-Eluting	beta-Phellandrene	1033.57	Monoterpenes
20	10.17	0.17%	(Z)-beta-Ocimene	1038.86	Monoterpenes
21	10.44	0.09%	(E)-beta-Ocimene	1049.00	Monoterpenes
22	10.53	0.07%	trans-2-Caren-4-ol	#N/A	#N/A
23	10.71	1.06%	gamma-Terpinene	1063.71	Monoterpenes
24	11.07	0.16%	p-2,4(8)-Menthadiene	1081.50	Monoterpenes
25	11.28	0.15%	p-2,8-Menthadien-1-ol	#N/A	#N/A
26	11.37	0.32%	Terpinolene	1089.43	Monoterpenes
27	11.6	0.89%	cis-4-methoxy thujane	#N/A	#N/A
28	11.73	0.20%	Linalool	1101.14	Monoterpenols
29	11.85	0.21%	Nonanal	1104.00	Aldehydes
30	12.15	0.81%	trans-4-methoxy thujane	#N/A	#N/A
31	12.39	0.65%	Unknown Mass (136)	#N/A	#N/A
32	12.73	0.51%	trans-Pinocarveol	1144.00	Monoterpenols
33	12.83	0.36%	trans-Verbenol	1149.00	Monoterpenols
34	12.94	0.36%	Terpinen-1-ol	1156.00	Monoterpenols
35	13.16	0.29%	Pinocarvone	1161.43	Ketones

36	13.42	0.46%	delta-Terpineol	1166.00	Monoterpenols
37	13.6	0.75%	Terpinen-4-ol	1180.57	Monoterpenols
38	13.79	0.13%	para-Cymen-8-ol	1186.43	Monoterpenols
39	13.93	0.53%	alpha-Terpineol	1191.71	Monoterpenols
40	14.03	0.37%	Unknown Mass (148)	#N/A	#N/A
41	14.18	1.34%	Octyl acetate	1215.00	Esters
42	14.51	2.71%	1-Methoxydecane	#N/A	#N/A
43	15.76	0.32%	Bornyl acetate	1288.29	Esters
44	16.7	0.03%	delta-Elemene	1335.83	Sesquiterpenes
45	16.98	0.08%	Terpinen-4-yl acetate	1347.50	Esters
46	17.43	0.04%	alpha-Ylangene	1371.33	Sesquiterpenes
47	17.56	0.24%	alpha-Copaene	1379.00	Sesquiterpenes
48	17.72	0.36%	beta-Bourbonene	1388.70	Sesquiterpenes
49	17.81	0.26%	beta-Elemene	1388.30	Sesquiterpenes
50	18.16	0.05%	alpha-Gurjunene	1412.00	Sesquiterpenes
51	18.41	0.67%	beta-Caryophyllene	1427.14	Sesquiterpenes
52	18.6	0.08%	alpha-Guaiene	1438.67	Sesquiterpenes
53	18.79	0.03%	beta-Copaene	1445.00	Sesquiterpenes
54	18.85	0.03%	alpha-Himachalene	1448.40	Sesquiterpenes
55	18.95	0.03%	alpha-Caryophyllene	1454.00	Sesquiterpenes
56	19.08	0.14%	alpha-Humulene	1461.43	Sesquiterpenes
57	19.16	0.06%	allo-Aromadendrene	1471.00	Sesquiterpenes
58	19.4	0.15%	gamma-Muurolene	1478.86	Sesquiterpenes
59	19.54	0.07%	Germacrene D	1484.71	Sesquiterpenes
60	19.7	0.15%	alpha-Selinene	1492.50	Sesquiterpenes
61	19.81	0.19%	Viridiflorene	1494.14	Sesquiterpenes
62	20.17	0.56%	delta-Cadinene	1524.14	Monoterpenes
63	20.42	0.02%	Eugenyl acetate	1535.00	Esters
64	21	0.10%	trans-beta-Sesquiphellandrol	1580.00	Sesquiterpenols
65	21.35	0.18%	Caryophyllene oxide	1594.86	Oxides
66	21.55	0.48%	Hexadecane	1600.00	Other
67	21.85	0.14%	gamma-Eudesmol	1629.86	Sesquiterpenols
68	22.08	0.01%	Himachalol	1647.00	Sesquiterpenols
69	22.32	0.15%	alpha-Muurolol	1649.33	Sesquiterpenols
70	22.55	0.05%	alpha-Cadinol	1655.00	Sesquiterpenols
71	27.04	0.06%	Kaur-16-ene	2023.50	Sesquiterpenes
72	29.71	0.29%	Incensole	2152.00	Other

Comments

- No adulterant, diluent, or contaminants were detected.
- This oils does not look like others I have analyzed from Somolia, meaning that it is quite possible that it's production location is correct. I did find Octyl Acetate in the oil which is a good sign that this oil is not from Somolia. Typically, higher Alpha-Thujene levels correlate to lower odor quality (Boswellia Sacra as opposed to Catterii). This oil is dominated by Alpha-Thujene, and a high quality Frankincense (Boswellia Carterii) has a Alpha-Thujene level lower than 5% and a much higher Alpha-Pinene level. This a pure oil, but the data points to it not having the highest quality odor.

X *Alan Chastain*

Validated By:





Essential Validation Services



Client: Nature's Fusions

Production Company: Navada Imports

Sample: Frankincense Carteri (Boswellia Carterii)

Batch # NI-OLI-1216

Manufacture Date: December 14, 2016

Country of Production: Egypt

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 Frankincense Carteri (Boswellia Carterii) Essential Oil (10 uL in 1to1 mL hexane + ETOH) was prepared and analyzed via split injection GC/EI-MS.



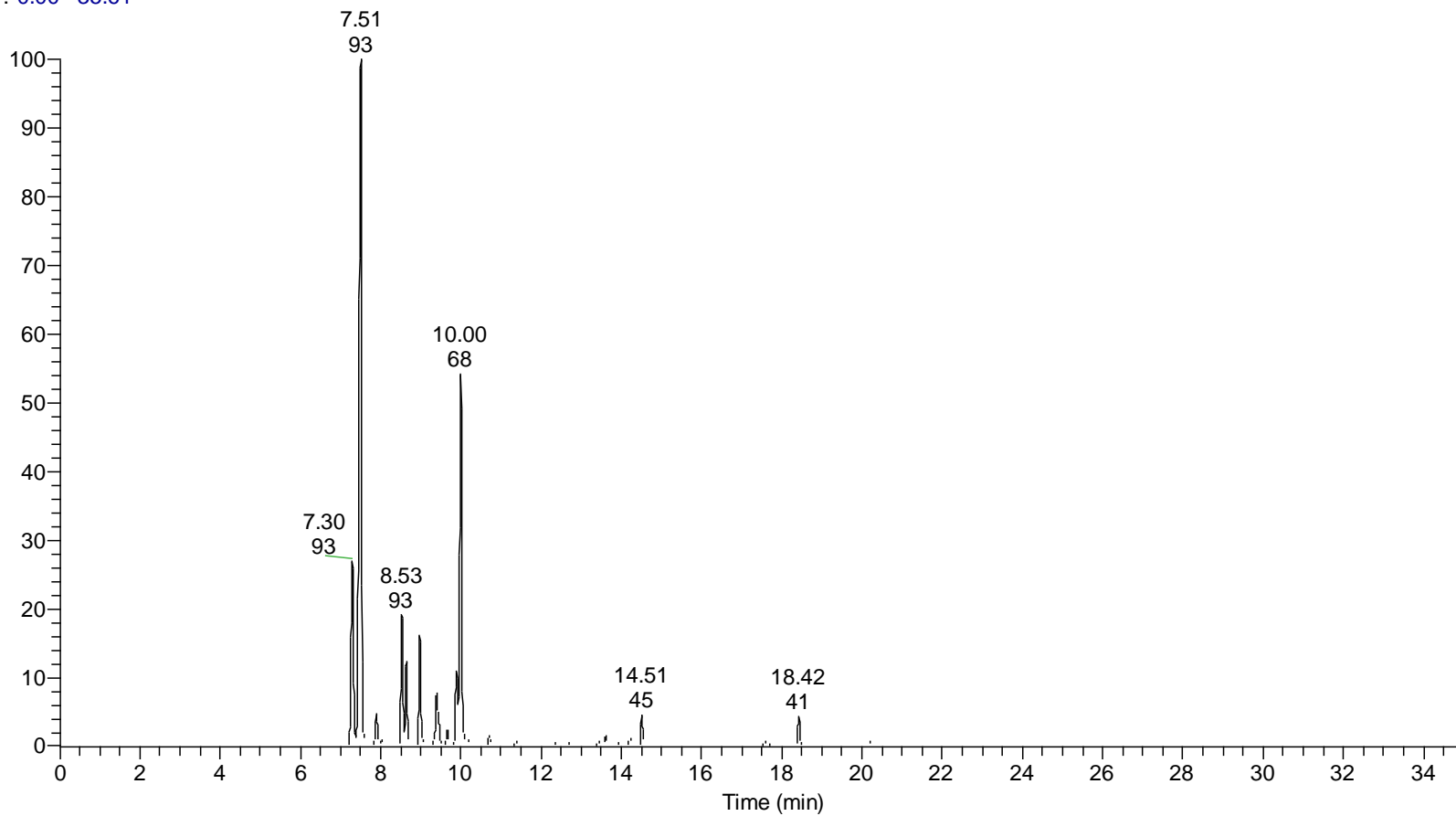
Main Compounds	Percentages
alpha-Pinene	40.43%
alpha-Thujene	10.19%
Limonene	8.44%
1,8-Cineole	5.90%
Sabinene	5.66%
Myrcene	4.53%
beta-Pinene	3.65%
para-Cymene	3.46%
delta-3-Carene	3.37%
beta-Phellandrene	2.53%
Camphene	1.41%
1-Methoxydecane	1.36%
alpha-Terpinene	0.73%
Verbenone	0.58%

Monoterpenes	Sesquiterpenes	Monoterpenols	Sesquiterpenols	Ketones
85.91%	2.62%	1.47%	0.23%	0.67%
Esters	Ethers	Oxides	Aldehydes	Other
0.20%	5.90%	0.06%	0.00%	2.33%



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

RT: 0.00 - 35.61



Total Percentage	99.39%				
Peak Number	Apex RT	Area %	Compound Name	RI	Chemical Family
1	6.95	0.03%	Unknown Mass (121)	#N/A	#N/A
2	7.11	0.22%	Tricyclene	927.71	Monoterpenes
3	7.3	10.19%	alpha-Thujene	935.43	Monoterpenes
4	7.51	40.43%	alpha-Pinene	940.00	Monoterpenes
5	7.9	1.41%	Camphene	951.57	Monoterpenes
6	8.02	0.17%	Thuja-2,4(10)-diene	965.00	Monoterpenes
7	8.53	5.66%	Sabinene	975.71	Monoterpenes
8	8.64	3.65%	beta-Pinene	979.00	Monoterpenes
9	8.8	0.13%	p-Mentha-2,8-diene	983.00	Other
10	8.97	4.53%	Myrcene	990.57	Monoterpenes
11	9.39	3.37%	delta-3-Carene	1011.57	Monoterpenes
12	9.66	0.73%	alpha-Terpinene	1019.29	Monoterpenes
13	9.9	3.46%	para-Cymene	1025.71	Monoterpenes
14	10	8.44%	Limonene	1032.00	Monoterpenes
15	10.06	5.90%	1,8-Cineole	1033.29	Ethers
16	10.1	2.53%	beta-Phellandrene	1033.57	Monoterpenes
17	10.16	0.31%	(Z)-beta-Ocimene	1038.86	Monoterpenes
18	10.42	0.02%	(E)-beta-Ocimene	1049.00	Monoterpenes
19	10.7	0.44%	gamma-Terpinene	1063.71	Monoterpenes
20	11.05	0.04%	1-Octanol	1075.14	Monoterpenols
21	11.37	0.21%	Terpinolene	1089.43	Monoterpenes
22	11.55	0.04%	alpha,p-Dimethylstyrene	1092.43	Monoterpenes
23	11.71	0.15%	Linalool	1101.14	Monoterpenols
24	11.96	0.01%	alpha-Thujone	1112.00	Ketones
25	12.17	0.03%	p-Menth-2-en-1-ol	1128.50	Sesquiterpenols
26	12.38	0.18%	cis-p-Mentha-2,8-dien-1-ol	1137.00	Other
27	12.41	0.10%	alpha-Campholenal	#N/A	#N/A
28	12.61	0.01%	trans-Sabinol	1140.00	Sesquiterpenols
29	12.72	0.17%	trans-Pinocarveol	1144.00	Monoterpenols
30	12.84	0.05%	trans-Verbenol	1149.00	Monoterpenols
31	12.94	0.14%	Terpinen-1-ol	1156.00	Monoterpenols
32	13.16	0.08%	Pinocarvone	1161.43	Ketones
33	13.43	0.19%	delta-Terpineol	1166.00	Monoterpenols
34	13.6	0.43%	Terpinen-4-ol	1180.57	Monoterpenols
35	13.79	0.04%	para-Cymen-8-ol	1186.43	Monoterpenols

36	13.97	0.24%	alpha-Terpineol	1191.71	Monoterpenols
37	14.22	0.58%	Verbenone	1209.71	Ketones
38	14.51	1.36%	1-Methoxydecane	#N/A	#N/A
39	15.77	0.13%	Bornyl acetate	1288.29	Esters
40	16.76	0.02%	delta-Elemene	1335.83	Sesquiterpenes
41	16.99	0.05%	Terpinen-4-yl acetate	1347.50	Esters
42	17.45	0.02%	alpha-Ylangene	1371.33	Sesquiterpenes
43	17.57	0.21%	alpha-Copaene	1379.00	Sesquiterpenes
44	17.73	0.19%	beta-Bourbonene	1388.70	Sesquiterpenes
45	17.81	0.09%	beta-Elemene	1388.30	Sesquiterpenes
46	18.15	0.02%	alpha-Gurjunene	1412.00	Sesquiterpenes
47	18.42	1.25%	beta-Caryophyllene	1427.14	Sesquiterpenes
48	18.61	0.16%	alpha-Guaiene	1438.67	Sesquiterpenes
49	18.8	0.07%	beta-Copaene	1445.00	Sesquiterpenes
50	18.96	0.04%	alpha-Caryophyllene	1454.00	Sesquiterpenes
51	19.09	0.17%	alpha-Humulene	1461.43	Sesquiterpenes
52	19.41	0.10%	gamma-Murolene	1478.86	Sesquiterpenes
53	19.55	0.07%	Germacrene D	1484.71	Sesquiterpenes
54	19.72	0.08%	alpha-Selinene	1492.50	Sesquiterpenes
55	19.83	0.07%	Viridiflorene	1494.14	Sesquiterpenes
56	19.98	0.03%	beta-Bisabolene	1509.86	Sesquiterpenes
57	20.18	0.27%	delta-Cadinene	1524.14	Monoterpenes
58	20.43	0.02%	Eugenyl acetate	1535.00	Esters
59	21	0.04%	trans-beta-Sesquiphellandrol	1580.00	Sesquiterpenols
60	21.26	0.01%	Longiborneol	1591.00	Monoterpenols
61	21.35	0.06%	Caryophyllene oxide	1594.86	Oxides
62	21.56	0.19%	Hexadecane	1600.00	Other
63	21.86	0.06%	gamma-Eudesmol	1629.86	Sesquiterpenols
64	22.07	0.01%	Himachalol	1647.00	Sesquiterpenols
65	22.33	0.05%	alpha-Murolol	1649.33	Sesquiterpenols
66	22.58	0.03%	alpha-Cadinol	1655.00	Sesquiterpenols
67	24.66	0.01%	1-Pentadecanol	1780.67	Monoterpenols
68	27.05	0.03%	Kaur-16-ene	2023.50	Sesquiterpenes
69	29.57	0.01%	Oleic acid	2134.00	Other
70	29.72	0.16%	Incensole	2152.00	Other

Comments

- No adulterant, diluent, or contaminants were detected.
- This oil is nearly identical to a normal Somalian Frankincense (Boswellia Carterii) (alpha-pinene chemotype) oil. Our scientific journals show the major compound for this oil when imported from Egypt and Israel (North Eastern Africa) should be Octyl Acetate. An Octyl Acetate chemotype is extremely rare as is Frankincense oil from Egypt. If I was to guess, this is a mislabeled oil that originated in Somalia or Eastern Africa. Typically, higher Alpha-Thujene levels correlate to lower odor quality. High quality Frankincense (Boswellia Carterii) has a Alpha-Thujene level lower than 5%. This may attribute to the different odor you are detecting in this oil.

X *Alan Chastain*

Validated By:

