

Frankincense (Black)

Boswellia sacra

Batch #OM-59135

Oman

Monoterpenes 92.9%

α pinene	68.30
δ -3-carene	7.12
limonene	3.58
α phellandrene	2.87
camphene	2.61
β pinene	2.32
sabinene	1.36
myrcene	1.14
para cymene	1.13
(Z) β ocimene	0.62
(E) β ocimene	0.46
terpinolene	0.28
α thujene	0.23
allo ocimene	0.18
α fenchene	0.18
hashishene	0.17
tricyclene	0.09
γ terpinene	0.08
thuja-2,4(10)-diene	0.07
α terpinene	0.06
para cymenene	0.05

Monoterpenols 2.13%

α terpinenol	0.64
trans-verbenol	0.49
para-mentha-1,5-dien-8-ol	0.38
trans-pinocarveol	0.25
terpinen-4-ol	0.15
cis-verbenol	0.13
linalool	0.09

Aldehydes 0.21%

α campholene aldehyde	0.21
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Ethers 0.28%

1,8-cineole	0.28
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Esters 0.58%

bornyl acetate	0.47
α -terpinyl acetate	0.11
octan-3-yl acetate	

Ketones 0.12%

verbenone	0.12
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Sesquiterpenes 3.43%

β elemene	1.09
β bourbonene	0.45
β selinene	0.43
β caryophyllene	0.41
α selinene	0.28
germacrene D	0.2
α humulene	0.18
δ cadinene	0.18
α copaene	0.16
γ muurolene	0.05

Other 0.11%

α phellandrene isomer	0.11
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Raw Material: resin

Botanical Name: Boswellia sacra

Production Method: Steam distillation

Date of Analysis: 10/31/2019

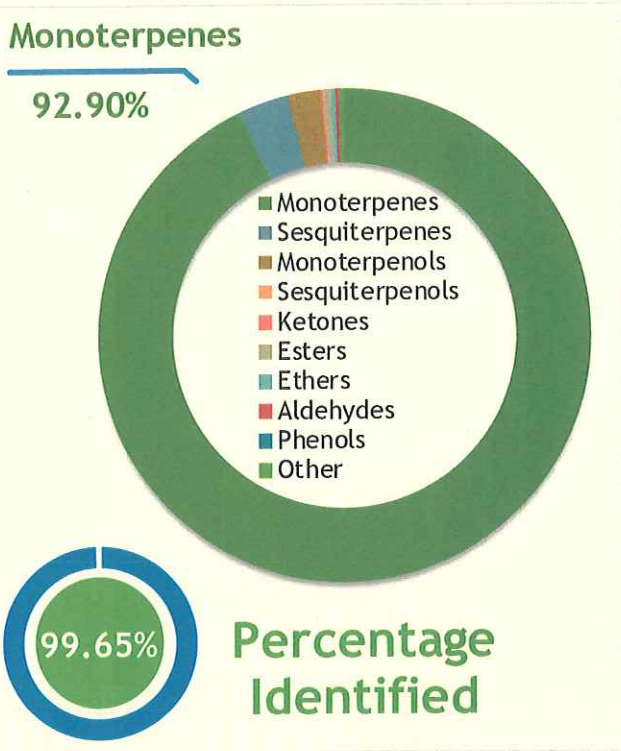
Client **NG**[®] **Source**



Frankincense, Black (*Boswellia carterii*)

Sample

Frankincense, Black (*Boswellia carterii*)
 Batch #:..... - OM-59135
 Type:..... Essential Oil
 CAS Number:... 8016-36-2



Client **NG**[®] **Website**



Primary

68.30% alpha-Pinene
7.12% delta-3-Carene
3.58% Limonene

Result

APPROVED

Conclusion

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

Internal Number: | EVS-3342



Essential Validation Services

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Alan Christen

Monoterpenes	92.90%	92.90%
Sesquiterpenes		3.43%
Monoterpenols		2.13%
Sesquiterpenols		0.00%
Ketones		0.12%
Esters		0.58%
Ethers		0.28%
Aldehydes		0.21%
Phenols		0.00%
Other		0.35%

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Client

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Source

Frankincense, Black (*Boswellia carterii*)

Total Percentage		99.65%		
Number	RT	Area %	Compound Name	Chemical Family
1	8.26	0.17%	Hashishene	Monoterpene
2	8.35	0.09%	Tricyclene	Monoterpene
3	8.52	0.23%	alpha-Thujene	Monoterpene
4	8.86	68.30%	alpha-Pinene	Monoterpene
5	9.41	2.61%	Camphene	Monoterpene
6	9.58	0.18%	alpha-Fenchene	Monoterpene
7	10.29	0.07%	Thuja-2,4(10)-diene	Monoterpene
8	10.38	1.36%	Sabinene	Monoterpene
9	10.55	2.32%	beta-Pinene	Monoterpene
10	11.13	1.14%	Myrcene	Monoterpene
11	11.81	2.87%	alpha-Phellandrene	Monoterpene
12	11.93	7.12%	delta-3-Carene	Monoterpene
13	12.28	0.06%	alpha-Terpinene	Monoterpene
14	12.62	1.13%	para-Cymene	Monoterpene
15	12.84	3.58%	Limonene	Monoterpene
16	12.94	0.28%	1,8-Cineole	Monoterpene Ether
17	13.21	0.62%	(Z)-beta-Ocimene	Monoterpene
18	13.67	0.46%	(E)-beta-Ocimene	Monoterpene
19	14.16	0.08%	gamma-Terpinene	Monoterpene
20	15.41	0.28%	Terpinolene	Monoterpene
21	15.60	0.05%	para-Cymenene	Monoterpene
22	16.11	0.09%	Linalool	Monoterpenol
23	17.28	0.21%	alpha-Campholene aldehyde	Monoterpene Aldehyde
24	17.44	0.18%	Alloocimene	Monoterpene
25	17.89	0.25%	trans-Pinocarveol	Monoterpenol
26	17.99	0.13%	cis-Verbenol	Monoterpenol
27	18.16	0.49%	trans-Verbenol	Monoterpenol
28	19.36	0.38%	para-Mentha-1,5-dien-8-ol	Monoterpenol
29	19.78	0.15%	Terpinen-4-ol	Monoterpenol
30	20.46	0.64%	alpha-Terpineol	Monoterpenol
31	20.95	0.12%	Verbenone	Monoterpene Ketone
32	24.53	0.47%	Bornyl acetate	Monoterpene Ester
33	27.30	0.11%	alpha-Terpinyl acetate	Monoterpene Ester
34	28.53	0.16%	alpha-Copaene	Sesquiterpene
35	28.85	0.45%	beta-Bourbonene	Sesquiterpene

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Source

*Frankincense, Black (Boswellia carterii)*

Number	RT	Area %	Compound Name	Chemical Family
36	29.141	1.09%	beta-Elemene	Sesquiterpene
37	30.33	0.41%	beta-Caryophyllene	Sesquiterpene
38	31.81	0.18%	alpha-Humulene	Sesquiterpene
39	32.66	0.05%	gamma-Muurolene	Sesquiterpene
40	32.87	0.20%	Germacrene D	Sesquiterpene
41	33.18	0.43%	beta-Selinene	Sesquiterpene
42	33.48	0.28%	alpha-Selinene	Sesquiterpene
43	34.43	0.18%	delta-Cadinene	Sesquiterpene
44	44.63	0.11%	alpha-Phellandrene Isomer	

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