

Date: January 19, 2019

CERTIFICATE OF ANALYSIS - GC PROFILING

Sample identification: Frankincense Carterii - 190176940

Type: Essential oil

Source: Boswellia Carterii

ANALYSIS

Method: 10152018_10:1split.m - Analysis of the composition of an essential oil, or other volatile liquid, by GC-FID, identifications validated by GC-MS.

Analysis date: January 18, 2019

Physical aspect: Pale yellow liquid

CONCLUSION

No adulterant, contaminant or diluent has been detected using this method.

Analyzed and approved by:

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Peak	Compound	RT	Area Sum %
1	(3Z)-Hexenol	9.128	0.81
2	Tricyclene	9.264	0.13
3	α -Thujene	9.661	2.76
4	α -Pinene	10.13	50.67
5	Camphene	10.662	1.45
6	Thuja-2,4(10)-diene	11.007	0.66
7	unknown	11.481	0.02
8	m-Cymene	11.974	0.06
9	Sabinene	12.25	4.65
10	β -Pinene	12.327	3.03
11	Camphene analog II	12.811	0.04
12	6-Methyl-5-heptene-2-one	13.292	0.22
13	β -Myrcene	13.536	4.1
14	3-Octanol	13.707	0.06
15	α -Phellandrene	14.127	1.02
16	δ 3-carene	14.483	0.43
17	α -Terpinene	14.966	0.25
18	Carvomenthene	15.255	0.03
19	p-Cymene	15.567	2.84
20	Limonene	15.905	8.65
21	1,8-Cineole	15.952	0.26
22	Benzyl alcohol	16.495	0.06
23	(Z)- β -Ocimene	16.758	0.34
24	unknown	17.23	0.07
25	(E)- β -Ocimene	17.468	0.13
26	γ -Terpinene	18.027	0.33
27	cis-Sabinene hydrate	18.572	0.04
28	cis-p-Mentha-2,8-dien-1-ol	18.922	0.01
29	Octanol	19.272	0.17
30	unknown	19.628	0.15
31	α -Terpinolene	20.222	0.14
32	trans-Sabinene hydrate	20.893	0.12
33	Linalool	21.407	0.23
34	α -Thujone	22.021	0.09
35	β -Thujone	22.334	0.13
36	cis-para-Menth-2-en-1-ol	22.707	0.16
37	α -Campholenal	23.12	0.41
38	Pinocarveol<trans->	23.943	0.98
39	unknown	24.321	0.55
40	trans-Verbenol	24.668	1.93
41	α -Phellandrene-8-ol analog	24.911	0.32
42	α -Phellandrene-8-ol	26.501	0.82
43	Terpinen-4-ol	27.225	0.71

44	p-Cymen-8-ol	28.064	0.27
45	α -Terpineol	28.41	0.35
46	unknown	28.667	0.7
47	E-Anethole	29.234	0.14
48	Verbenone	29.748	0.92
49	Octyl acetate	30.862	1.39
50	Methyl decyl ether	32.05	0.08
51	Carvone	32.742	0.23
52	Bornyl acetate	36.345	0.5
53	α -Cubebene	41.439	0.1
54	α -Copaene	43.367	0.34
55	β -Bourbonene	43.99	0.34
56	β -Elemene	44.858	0.27
57	β -Caryophyllene	46.64	0.76
58	trans- α -Bergamotene	48.396	0.16
59	unknown	48.767	0.33
60	α -Humulene	49.276	0.23
61	Alloaromadendrene	49.831	0.1
62	trans-Cadina-1(6),4-diene	51.19	0.08
63	γ -Muurolene	51.376	0.11
64	Germacrene D	51.495	0.17
65	β -Selinene	51.805	0.1
66	α -Selinene	52.624	0.24
67	α -Muurolene	53.244	0.15
68	γ -Cadinene	54.189	0.37
69	δ -Cadinene	55.024	0.24
70	β -Curcumene	55.523	0.06
71	Dihydroagarofuran	56.912	0.05
72	Caryophyllene oxide	58.927	0.27
73	Viridiflorol	59.607	0.3
74	Junenol	61.454	0.13
75	unknown	62.19	0.06
76	τ -Cadinol	62.741	0.13
77	unknown	62.949	0.06
78	α -Phellandrene dimer	65.942	0.05
79	Cembrene A	67.814	0.03
80	unknown	69.318	0.02
81	unknown	69.422	0.15
	Total identified		98.92%

