

Date: August 27th ,2020

## **CERTIFICATE OF ANALYSIS - GC PROFILING**

Sample identification: Frankincense Serrata - JB2049-238823

**Type:** Essential oil

Source: Boswellia serrata

## **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: August 26th,2020

Physical aspect: Clear liquid

## CONCLUSION

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

Peak	Compound	RT	Area Sum 9
1	Bornylene	8	0.02
2	(3Z)-Hexenol	8.54	0.14
3	α-Thujene	9.217	70.06
4	α-Pinene	9.365	5.58
5	unknown	9.911	0.55
6	Camphene	10.011	0.06
7	Thuja-2,4(10)-diene	10.351	0.01
8	m-Cymene	11.293	0.03
9	Sabinene + β-Pinene	11.532	5.49
10	β-Myrcene	12.782	0.74
11	α-Phellandrene	13.402	1.6
12	δ3-carene	13.785	4.73
13	α-Terpinene	14.23	0.41
14	Carvomenthene	14.517	0.01
15	o-Cymene	14.652	0.05
16	p-Cymene	14.787	1.4
17	Limonene	15.047	2.25
18	(Z)-β-Ocimene	16.015	0.58
19	unknown	16.516	0.03
20	(E)-β-Ocimene	16.721	0.33
21	γ-Terpinene	17.267	0.87
22	cis-Sabinene hydrate	17.84	0.07
23	cis-p-Mentha-2,8-dien-1-ol	18.262	0.01
24	α-Terpinolene	19.444	0.28
25	trans-Sabinene hydrate	20.184	0.05
26	Linalool	20.65	0.12
27	unknown	21.462	0.02
28	β-Thujone	21.576	0.15
29	trans-p-2,8-Menthadien-1-ol	22.022	0.04
30	α-Campholenal	22.401	0.02
31	Allo-Ocimene	22.921	0.06
32	Pinocarveol <trans-></trans->	23.175	0.01
33	trans-para-Mentha-2-en-1-ol	23.515	0.05
34	trans-Verbenol	23.87	0.02
35	α-Phellandrene-8-ol analog	24.098	0.01
36	cis-Verbenol	25.183	0.03
37	Borneol	25.438	0.01
38	α-Phellandrene-8-ol	25.733	0.03
39	cis-Sabinol	25.913	0.05
40	Umbellulone	26.26	0.01
41	Terpinen-4-ol	26.442	0.54
42	unknown	27.129	0.02
43	p-Cymen-8-ol	27.325	0.02
44	α-Terpineol	27.656	0.05
45	unknown	28.112	0.02

46	Methyl chavicol	28.398	1.37
47	Verbenone	28.982	0.02
48	unknown	32.657	0.02
49	unknown	33.617	0.02
50	Bornyl acetate	35.599	0.02
51	α-Cubebene	40.647	0.01
52		40.922	0.04
53	α-Terpinyl acetate	42.575	0.04
	α-Copaene		
54	β-Bourbonene	43.194	0.61
55	unknown	44.162	0.09
56	Methyleugenol	45.721	0.1
57	β-Caryophyllene & β-Ylangene	45.902	0.06
58	β-Copaene	46.684	0.06
59	trans-α-Bergamotene	47.627	0.04
60	Isogermacrene D	47.872	0.06
61	Alloaromadendrene	49.023	0.01
62	unknown	49.472	0.03
63	γ-Muurolene + Germacrene D	50.696	0.21
64	unknown	50.846	0.14
65	α-Muurolene	52.467	0.01
66	y-Cadinene	53.363	0.02
67	δ-Cadinene	54.085	0.11
68	Elemicin	57.506	0.03
69	α-Phellandrene dimer I	65.774	0.05
70	α-Phellandrene dimer II	66.012	0.01
71	Cembrene A	67.69	0.03
72	Verticilla-4(20),7,11-triene	68.221	0.01
73	Cembrenol	69.317	0.12
	Total identified		99.6 1%

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