

Date: September 16th ,2020

CERTIFICATE OF ANALYSIS - GC PROFILING

Sample identification: Marjoram Sweet - JB2099-817488

Type: Essential oil

Source: Origanum majorana ct. Sabinene hydrate/terpinen-4-ol

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: September 15th, 2020

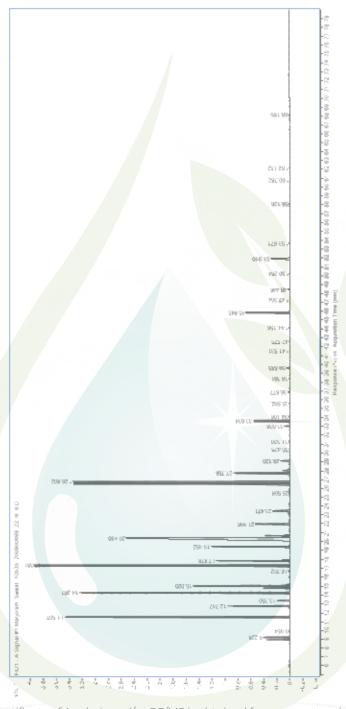
Physical aspect: Colorless liquid

CONCLUSION

No adulteran<mark>t, co</mark>ntaminant or diluent has been detected using this method.

Peak	Compound	RT	Area Sum %
1	α-Thujene	8.956	0.68
2	α-Pinene	9.228	0.79
3	Camphene	9.954	0.02
4	Sabinene + β-Pinene	11.507	8.65
5	3-Octanone	12.529	0.04
6	β-Myrcene	12.747	2.16
7	α-Phellandrene	13.35	0.51
8	α-Terpinene	14.267	9.15
9	p-Cymene	14.753	0.98
10	Limonene	15.02	4.27
11	1,8-Cineole	15.132	0.1
12	(Z)- β-Ocimene	15.984	0.03
13	(E)- β-Ocimene	16.702	0.05
14	γ-Terpinene	17.381	14.48
15	cis-Sabinene hydrate	17.878	3.32
16	α-Terpinolene	19.452	3.36
17	trans-Sabinene hydrate	20.41	14.06
18	Linalool	20.683	0.97
19	cis-para-Menth-2-en-1-ol	21.996	1.54
20	α-Campholenal	22.366	0.02
21	unknown	22.967	0.01
22	trans-Pinocarveol	23.155	0.06
23	trans-para-Mentha-2-en-1-ol	23.471	0.89
24	unknown	24.261	0.02
25	Isomenthone	25.508	0.04
26	Borneol	25.827	0.02
27	Terpinen-4-ol	26.802	22.95
28	p-Cymen-8-ol	27.377	0.03
29	α-Terpineol	27.758	3.07
30	cis-Piperitol	28.034	0.31
31	cis-Dihydrocarvone	28.163	0.05
32	trans-Dihydrocarvone	28.721	0.05
33	unknown	28.865	0.02
34	trans-Piperitol	29.12	0.43
35	trans-Carveol	30.425	0.02
36	Citronellol	31.32	0.03
37	unknown	33.038	0.27
38	Linalyl acetate	33.634	1.93
39	trans-Ascaridol glycol	34.106	0.03
40	Citronellyl formate	35.19	0.01
41	Bornyl acetate	35.592	0.04

42	4-Terpinenyl acetate	36.877	0.13
43	Thymol analogue II	37.261	0.04
44	unknown	38.391	0.03
45	unknown	38.798	0.02
46	δ-Elemene	39.583	0.18
47	Eugenol	41.531	0.01
48	Neryl acetate	42.575	0.03
49	Geranyl acetate	44.156	0.07
50	β-Caryophyllene	45.845	2.51
51	Aromadendrene	47.304	0.02
52	trans-α-Bergamotene	47.591	0.01
53	α-Humulene	48.446	0.1
54	Alloaromadendrene	48.997	0.01
55	unknown	50.254	0.03
56	Germacrene D	50.676	0.02
57	Bicyclogermacrene	51.91	1.1
58	γ-Cadinene	53.341	0.01
59	(3E,6E)- α-Farnesene	53.671	0.04
60	δ-Cadinene	54.225	0.02
61	Spathulenol	57.847	0.04
62	Caryophyllene oxide	58.126	0.05
63	10-epi-γ-Eudesmol	60.782	0.02
64	Isospathulenol	62.152	0.03
65	τ-Cadinol	62.293	0.01
66	unknown	68.169	0.02
	Total identified		99.58%



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