Date: May 23, 2022

CERTIFICATE OF ANALYSIS - GC PROFILING

Sample identification: Galbanum 2006611212

Type: Essential oil

Source: Ferula galbaniflua

Country of origin: Middle East

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: June, 2020

Physical aspect: Light yellow liquid

CONCLUSION

No adulterant or contaminant has been detected in the oil.

Peak	Compound	RT	Area Sum %
1	α-Thujene	9.063	0.88
2	α-Pinene	9.413	19.75
3	Camphene	10.057	0.21
4	unknown	11.38	0.24
5	Sabinene + β-Pinene	11.855	49.51
6	β-Myrcene	12.859	1.91
7	α-Phellandrene	13.476	0.13
8	Δ3-Carene	13.867	6.02
9	p-Cymene	14.852	0.33
10	Limonene	15.097	1.11
11	(Z)-β-Ocimene	16.087	0.18
12	(E)-β-Ocimene	16.797	0.13
13	γ-Terpinene	17.342	0.19
14	α-Terpinolene	19.525	0.39
15	Verbenol analog	20.748	0.1
16	trans-Pinocarveol	23.235	0.8
17	unknown	23.921	0.2
18	Pinocarvone	25.217	0.52
19	unknown	26.535	0.16
20	(3E,5E)-Undeca-1,3,5-triene	26.745	0.45
21	unknown	27.219	0.12
22	(3E,5Z)-Undeca-1,3,5-triene	27.413	0.42
23	(3Z)-3-Undecen-5-yne	27.68	0.06
24	Myrtenal	27.987	0.5
25	Myrtenol	28.168	0.56
26	endo-Fenchyl acetate	30.237	1.02
27	(3E)-3-Undecen-5-yne	31.46	0.09
28	Cuminal	31.692	0.04
29	Thymol methyl ether	32.427	0.12
30	Bornyl acetate	35.687	0.14
31	α-Cubebene	40.762	0.08
32	α-Terpinyl acetate	41.024	0.43
33	Cyclosativene I	41.83	0.16
34	α-Ylangene	42.335	0.11
35	α-Copaene	42.685	0.16
36	β-Bourbonene	43.315	0.09
37	β-Cubebene	43.971	0.07
38	β-Elemene	44.185	0.1
39	β-Funebrene	45.332	0.36
40	unknown	45.592	0.07
41	β-Cedrene	45.859	0.06
42	β-Caryophyllene	45.931	0.17
43	cis-Thujopsene	46.733	0.2
44	β-Barbatene + γ-Elemene	47.377	1.1
45	α-Guaiene	48.102	0.12

46	α-Humulene	48.591	0.13
47	Alloaromadendrene	49.039	0.1
48	β-Acoradiene	49.412	0.12
49	(E)-β-Farnesene	49.842	0.24
50	β-Chamigrene	50.269	0.14
51	Germacrene D	50.822	0.44
52	β-Selinene	51.142	0.23
53	unknown	51.517	0.11
54	β-Dihydroagarofuran	51.998	0.52
55	unknown	52.124	0.22
56	α-Cuprenene	52.66	0.31
57	cis-α-Bisabolene	53.17	0.13
58	β-Bisabolene	53.52	1.02
59	unknown	53.781	0.09
60	δ-Cadinene	54.391	0.27
61	unknown	54.734	0.11
62	(E)-α-Bisabolene	56.159	0.28
63	Germacrene B	56.388	0.42
64	(E)-Nerolidol	57.842	0.33
65	Spathulenol	58.009	0.22
66	Guaiol	59.825	1.23
67	unknown	60.221	0.1
68	10-epi-γ-Eudesmol	60.947	0.32
69	unknown	62.105	0.09
70	unknown	62.433	0.12
71	β-Eudesmo	62.635	0.57
72	α-Eudesmol	62.765	0.35
73	Bulnesol	63.327	0.54
74	unknown	63.619	0.07
75	α-Bisabolol	63.944	1.56
76	unknown	66.525	0.07
	Total identified		**98.23%**