

GC/MS & COA

Citronella - 200503051

September 30, 2020

ANALYSIS

Type: Essential oil

Source : Cymbopogon winterianu **Analysis date:** September 30, 2020 **Physical aspect:** Light yellow liquid

CONCLUSION

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

Physico-Chemical Properties	Specifications	Results
Specific Gravity at 20° C	0.886	Complies
Refractive Index at 20° C	1.468	Complies
Optical Rotation at 20° C	-3.64	Complies

Peak	Compound	RT	Area Sum %
1	α-Pinene	9.21	0.11
2	Camphene	9.93	0.1
3	Sabinene + β-Pinene	11.442	0.02
4	6-Methyl-5-heptene-2-one	12.532	0.05
5	Myrcene	12.704	0.1
6	α-Phellandrene	13.327	0.01
7	α-Terpinene	14.162	0.01
8	p-Cymene	14.712	0.01
9	Limonene	14.977	3.68
10	(Z)-β-Ocimene	15.937	0.14

11	(E)- β-Ocimene	16.648	0.08
12	2,6-Dimethyl-5-heptenal (Melonal)	17.043	0.07
13	γ-Terpinene	17.182	0.02
14	Terpinolene	19.368	0.08
15	Linalool	20.577	0.74
16	cis-Rose oxide	21.354	0.01
17	Isopulegol	23.78	0.84
18	Isoborneol	24.591	0.3
19	Citronellal	25.23	36.79
20	Isoneral	25.764	0.03
21	Terpinen-4-ol	26.433	0.03
22	α-Terpineol	27.604	0.06
23	Decanal	29.278	0.11
24	Nerol	31.049	0.12
25	Citronellol	31.494	9.66
26	Neral	32.056	0.4
27	Geraniol	33.852	25.91
28	Geranial	34.657	0.57
29	Geranyl formate	39.342	0.07
30	α-Cubebene	40.591	0.01
31	Eugenol	41.46	0.76
32	Citronellyl acetate	41.679	1.67
33	α-Copaene	42.529	0.05
34	β-Bourbonene	43.13	0.09
35	unknown	43.443	0.07
36	β-Cubebene	43.803	0.02
37	β-Elemene	44.063	1.95
38	Geranyl acetate	44.182	3.31
39	β-Caryophyllene	45.772	0.43
40	β-Copaene	46.632	0.05

41	trans-α-Bergamotene	47.564	0.03
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42	α-Humulene	48.414	0.13
43	Isoeugenol	48.65	0.22
44	trans-Cadina-1(6),4-diene	49.234	0.06
45	γ-Muurolene	50.247	0.03
46	Germacrene D	50.666	2
47	β-Selinene	50.937	0.03
48	epi-Cubebol	51.382	0.04
49	α-Selinene	51.807	0.13
50	α-Muurolene	52.413	0.31
51	Methyl isoeugenol	52.792	0.07
52	γ-Cadinene	53.306	0.96
53	unknown	53.922	0.02
54	δ-Cadinene	54.206	1.29
55	trans-Calamenene	54.672	0.03
56	α-Cadinene	55.073	0.1
57	Elemol	56.16	3.15
58	Germacren D-4-ol	57.774	1.03
59	10-epi-Cubenol	60.666	0.05
60	γ-Eudesmol	61.548	0.09
61	T-Muurolol	61.752	0.18
62	β-Eudesmol	62.312	0.43
63	α-Eudesmol	62.517	0.23
64	α-Cadinol	62.648	0.17
65	Unknown	62.807	0.48
66	(2E,6Z)-Farnesol	63.117	0.02
67	(2E,6E)-Farnesol	64.547	0.02
68	(2E,6E)-Farnesal	64.713	0.05
69	Cryptomeridiol	65.046	0.02
70	unknown	65.283	0.01
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71	unknown	67.488	0.02
72	unknown	68.087	0.08
	Total identified		99.32%

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