

GC-MS Profiling Analysis Prepared for Jade Bloom, Inc

Date: April 24, 2018

Sample: Valerian

Type: Essential Oil

Source: *Valeriana wallichii* ct. Patchoulol

Batch: 041898372

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Isovaleric acid	0.02		Aliphatic acid
Tricyclene	tr	tr	Monoterpene
α -Thujene	tr	tr	Monoterpene
α -Pinene	0.18	0.18	Monoterpene
Unknown	0.05		Unknown
Camphene	0.37*	0.20	Monoterpene
α -Fenchene	[0.37]*	0.17	Monoterpene
Valeric acid	0.02		Aliphatic acid
β -Pinene	0.07*	0.07	Monoterpene
Sabinene	[0.07]*	0.01	Monoterpene
Myrcene	0.01	tr	Monoterpene
α -Terpinene	tr	tr	Monoterpene
para-Cymene	0.05	0.05	Monoterpene
Limonene	0.07*	0.07	Monoterpene
1,8-Cineole	[0.07]*	0.01	Monoterpenic ether
γ -Terpinene	0.02	0.02	Monoterpene
Terpinolene	0.02	0.01	Monoterpene
Linalool	0.01	0.01	Monoterpenic alcohol
Borneol	0.02	0.02*	Monoterpenic alcohol
α -Terpineol	0.01	[0.02]*	Monoterpenic alcohol
Unknown	0.09	0.38	Oxygenated monoterpene
Thymol methyl ether analog I	0.10	0.10	Monoterpenic ether
Thymol methyl ether	0.07	0.06	Monoterpenic ether
Carvacrol methyl ether	0.02	0.02	Monoterpenic ether
Bornyl acetate	0.33	2.26*	Monoterpenic ester
α -Cubebene	0.01	0.01	Sesquiterpene
α -Terpinyl acetate	0.19	0.17	Monoterpenic ester
Cyclosativene I	0.01	2.78*	Sesquiterpene
Cyclosativene II	0.07	[2.78]*	Sesquiterpene
α -Copaene	0.12	0.10	Sesquiterpene
β -Patchoulene	2.78	[2.78]*	Sesquiterpene
7-epi-Sesquithujene?	0.07	0.05	Sesquiterpene
β -Elemene	0.54	4.79*	Sesquiterpene
Unknown	0.05	0.04	Sesquiterpene
Unknown	0.05	0.03	Sesquiterpene
α -Gurjunene	0.27*	0.16	Sesquiterpene
α -Cedrene	[0.27]*	0.07	Sesquiterpene
β -Cedrene	0.03	3.60*	Sesquiterpene
β -Caryophyllene	0.37	[4.79]*	Sesquiterpene
α -Santalene	1.93	[2.26]*	Sesquiterpene
β -Gurjunene	4.02	[3.60]*	Sesquiterpene
Aromadendrene	[4.02]	0.08	Sesquiterpene
α -Guaiene	8.84	[4.79]*	Sesquiterpene
Seychellene	[8.84]	0.78	Sesquiterpene
cis- β -Bergamotene?	[8.84]		Sesquiterpene
α -Patchoulene	8.74	12.04*	Sesquiterpene
Patchoulene analog I	[8.74]	[12.04]*	Sesquiterpene
γ -Patchoulene	1.35	1.26	Sesquiterpene

Valerena-4,7(11)-diene	1.66	1.33	Sesquiterpene
γ-Curcumene	0.97	0.99	Sesquiterpene
β-Selinene	2.50*	6.23*	Sesquiterpene
Unknown	[2.50]*	0.31	Sesquiterpene
ar-Curcumene	[2.50]*	1.82	Sesquiterpene
α-Selinene	1.00	[6.23]	Sesquiterpene
Unknown	1.37		Unknown
δ-Guaiene	4.49	[6.23]*	Sesquiterpene
Unknown	0.30*		Unknown
γ-Cadinene	[0.30]*	1.36*	Sesquiterpene
7-epi-α-Selinene	1.56	[1.36]*	Sesquiterpene
δ-Cadinene	0.06	1.29*	Sesquiterpene
Kessane	1.27	[1.29]*	Sesquiterpenic ether
(E)-γ-Bisabolene	0.19	0.15	Sesquiterpene
(E)-α-Bisabolene	0.49*	0.35	Sesquiterpene
α-Elemol	[0.49]*	0.05	Sesquiterpenic alcohol
Unknown	0.13		Unknown
Unknown	0.06	0.07	Oxygenated sesquiterpene
Maaliol	6.00	5.77	Sesquiterpenic alcohol
Unknown	0.49		Unknown
Viridiflorol	1.16*	0.90	Sesquiterpenic alcohol
Unknown	[1.16]*	0.11	Oxygenated sesquiterpene
Humulene epoxide II	0.33	0.30	Sesquiterpenic ether
Eudesm-5-en-11-ol analog	0.23	0.18	Sesquiterpenic alcohol
Unknown	0.15		Unknown
Eudesm-4-en-7α-ol	0.08	0.07	Sesquiterpenic alcohol
γ-Eudesmol	0.24	0.21	Sesquiterpenic alcohol
β-Eudesmol	0.16	0.07	Sesquiterpenic alcohol
Patchoulol	29.00	29.20	Sesquiterpenic alcohol
Pogostol	[29.00]	0.81	Sesquiterpenic alcohol
Valeranone	1.34	1.13	Sesquiterpenic ketone
β-Bisabolol	2.75	[29.20]	Sesquiterpenic alcohol
α-Bisabolol	0.19	0.17	Sesquiterpenic alcohol
Unknown	0.53		Unknown
Xanthorrhizol?	0.55	0.38	Sesquiterpenic alcohol
Unknown	0.22		Oxygenated sesquiterpene
Unknown	0.48		Oxygenated sesquiterpene
Phytone	0.14	0.13	Terpenic ketone
Unknown	0.97	0.98	Unknown
(3E)-Cembrene A	0.78		Diterpene
Unknown	0.46		Unknown
Phytol	0.09	0.08	Diterpenic alcohol
Total identified	88.25%	82.13%	

*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

tr: The compound has been detected below 0.005% of total signal.

Note: no correction factor was applied

PHYSICOCHEMICAL DATA

Physical aspect: Yellow viscous

Refractive index: 1.5040 ± 0.0003 (20 °C)

CONCLUSION

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

