

GC-MS Profiling Analysis Prepared for Jade Bloom, Inc

Date: February 22, 2018

Sample: Oregano

Type: Essential Oil

Source: *Origanum vulgare ct. Carvacrol*

Batch: 4316795

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Isobutyral	tr		Aliphatic aldehyde
Isovaleral	tr	tr	Aliphatic aldehyde
2-Methylbutyral	tr	tr	Aliphatic aldehyde
Methyl 2-methylbutyrate	tr	tr	Aliphatic ester
Tricyclene	tr	tr	Monoterpene
α -Thujene	0.05	0.05	Monoterpene
α -Pinene	1.29	1.32	Monoterpene
α -Fenchene	0.15*	0.03	Monoterpene
Camphene	[0.15]*	0.13	Monoterpene
Sabinene	0.33*	0.01	Monoterpene
β -Pinene	[0.33]*	0.29	Monoterpene
Unknown	0.06	0.04	Monoterpene
Octen-3-ol	0.24	0.22	Aliphatic alcohol
Myrcene	2.26	2.29	Monoterpene
2,7-Dimethyl-2,6-octadiene	0.05	0.02	Monoterpene
α -Phellandrene	0.28*	0.14	Monoterpene
Pseudolimonene	[0.28]*	0.13	Monoterpene
Δ 3-Carene	0.02	0.02	Monoterpene
α -Terpinene	1.11	1.12	Monoterpene
Carvomenthene	0.10	0.10	Aliphatic alcohol
para-Cymene	13.16	11.86*	Monoterpene
Limonene	[13.16]*	0.98	Monoterpene
1,8-Cineole	[13.16]*	0.41*	Monoterpenic ether
β -Phellandrene	[13.16]*	[0.41]*	Monoterpene
Cymene analog	0.03	0.02	Monoterpene
(Z)- β -Ocimene	0.01	5.40*	Monoterpene
(E)- β -Ocimene	0.01	0.01	Monoterpene
γ -Terpinene	5.39	[5.40]*	Monoterpene
cis-Sabinene hydrate	0.02	0.03*	Monoterpenic alcohol
para-Mentha-3,8-diene	0.05	[11.86]*	Monoterpene
cis-Linalool oxide (fur.)	0.01	tr	Monoterpenic alcohol
Fenchone	0.02	0.02	Aliphatic alcohol
Terpinolene	0.02	0.02	Monoterpene
trans-Linalool oxide (fur.)	0.01	[0.03]*	Monoterpenic alcohol
trans-Sabinene hydrate	0.01	0.01	Monoterpenic alcohol
Linalool	2.37	2.39	Monoterpenic alcohol
Hotrienol	0.03		Monoterpenic alcohol
trans-Pinocarveol	0.01		Monoterpenic alcohol
Borneol	0.39	0.47*	Monoterpenic alcohol
Unknown	0.01	tr	Unknown
Terpinen-4-ol	0.05	0.06*	Monoterpenic alcohol
α -Terpineol	0.04	[0.47]*	Monoterpenic alcohol
γ -Terpineol	0.05*	0.03	Monoterpenic alcohol
Myrtenal	[0.05]*	0.01	Monoterpenic aldehyde
Carvacrol methyl ether	0.01	0.01	Monoterpenic ether
Geraniol	0.10	0.11	Monoterpenic alcohol
Linalyl acetate	[0.10]	0.02	Monoterpenic ester
Geranial	0.10	0.06	Monoterpenic aldehyde

Bornyl acetate	0.08	0.07	Monoterpenic ester
Thymol	0.48	0.48	Monoterpenic alcohol
Carvacrol	65.54	65.53	Monoterpenic alcohol
Eugenol	0.04	0.08	Phenylpropanoid
Neryl acetate	tr	0.13*	Monoterpenic ester
α -Copaene	0.02	0.02	Sesquiterpene
Carvacryl acetate	0.01	0.02	Monoterpenic ester
β -Bourbonene	0.01	tr	Sesquiterpene
Geranyl acetate	tr	0.01	Monoterpenic ester
β -Elemene	0.01	4.99*	Sesquiterpene
β -Caryophyllene	5.06	[4.99]*	Sesquiterpene
Aromadendrene	0.02	[0.06]*	Sesquiterpene
α -Humulene	0.04	0.04	Sesquiterpene
α -Selinene	0.02	0.02	Sesquiterpene
β -Bisabolene	0.15	[0.13]*	Sesquiterpene
δ -Cadinene	0.01*	0.01	Sesquiterpene
<i>trans</i> -Calamenene	[0.01]*		Sesquiterpene
(<i>E</i>)- α -Bisabolene	tr	0.01	Sesquiterpene
Spathulenol	0.02	0.01	Sesquiterpenic alcohol
Caryophyllene oxide	0.11*	0.07	Sesquiterpenic ether
Caryophyllene oxide isomer	[0.11]*	0.02	Sesquiterpenic ether
τ -Cadinol	0.02	0.02	Sesquiterpenic alcohol
Total identified	99.43%	99.33%	

*: 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: Faintly yellow liquid

Refractive index: 1.5085 \pm 0.0003 (20 °C)

HEALTH, HEALING & HAPPINESS

COMPLIANCE WITH ISO 13171:2016 (ORIGANUM VULGARE)

Compound	Min. %	Max. %	Observed %	Complies?
α -Thujene	0.2	1.5	0.05	No
α -Pinene	0.2	2.5	1.3	Yes
Myrcene	0.5	3	2.3	Yes
α -Terpinene	0.5	2	1.1	Yes
para-Cymene	4	10	11.9	No
γ -Terpinene	3	9	5.4	Yes
Linalool	tr	3	2.4	Yes
Terpinen-4-ol	0.5	2	0.06	No
Thymol	0.5	5	0.5	Yes
Carvacrol	60	80	65.5	Yes
β -Caryophyllene	0.5	4	5.0	No
Refractive index	1.500	1.513	1.5085	Yes

CONCLUSION

No adulterant, contaminant or diluent has been detected using this method. The oil does not comply with the ISO standard.