

GC-MS Profiling Analysis Prepared for Jade Bloom, Inc

Date: May 30, 2018

Sample: Petitgrain

Type: Essential Oil

Source: *Citrus aurantium subsp. amara*

Batch: 98483

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Ethanol	0.73	0.77	Aliphatic alcohol
2-Methyl-3-buten-2-ol	tr	0.01	Aliphatic alcohol
Isoamyl alcohol	tr	tr	Aliphatic alcohol
(3Z)-Hexenol	0.02	0.02	Aliphatic alcohol
(2E)-Hexenol	tr	0.01	Aliphatic alcohol
Hexanol	0.02	0.02	Aliphatic alcohol
α -Thujene	0.02	0.02	Monoterpene
α -Pinene	0.13	0.13	Monoterpene
Camphene	0.01	0.01	Monoterpene
Benzaldehyde	tr	tr	Simple phenolic
Sabinene	1.34*	0.23	Monoterpene
β -Pinene	[1.34]*	1.10	Monoterpene
6-Methyl-5-hepten-2-one	0.03	0.03	Aliphatic ketone
Myrcene	2.06	2.06	Monoterpene
α -Phellandrene	0.04	0.03	Monoterpene
Δ^3 -Carene	0.38	0.38	Monoterpene
α -Terpinene	0.03	0.03	Monoterpene
para-Cymene	0.03	0.03	Monoterpene
Limonene	1.06*	0.98	Monoterpene
β -Phellandrene	[1.06]*	0.05	Monoterpene
1,8-Cineole	[1.06]*	0.04	Monoterpenic ether
(Z)- β -Ocimene	0.73	0.75	Monoterpene
(E)- β -Ocimene	2.08	2.10	Monoterpene
γ -Terpinene	0.05	0.04	Monoterpene
cis-Sabinene hydrate	0.01	0.03*	Monoterpenic alcohol
cis-Linalool oxide (fur.)	0.04	0.05	Monoterpenic alcohol
Terpinolene	0.43*	0.41	Monoterpene
para-Cymenene	[0.43]*	tr	Monoterpene
trans-Linalool oxide (fur.)	[0.43]*	[0.03]*	Monoterpenic alcohol
Linalool	19.77	19.76*	Monoterpenic alcohol
cis-para-Menth-2-en-1-ol	0.01	[19.76]*	Monoterpenic alcohol
allo-Ocimene	0.01	0.01	Monoterpene
Camphor	0.01	0.01	Monoterpenic ketone
neo-allo-Ocimene	0.01	0.01	Monoterpene
(E)-Myroxide	0.01	0.01	Monoterpenic ether
Citronellal	0.02	0.02	Monoterpenic aldehyde
Terpinen-4-ol	0.11	0.12	Monoterpenic alcohol
α -Terpineol	5.32	5.33	Monoterpenic alcohol
(3E,5E)-2,6-Dimethylocta-3,5,7-trien-2-ol	tr	0.01	Monoterpenic alcohol
Nerol	1.16	1.18	Monoterpenic alcohol
Citronellol	0.03	0.02	Monoterpenic alcohol
Neral	0.04	0.05	Monoterpenic aldehyde
Linalyl acetate	[56.32]*	53.08*	Monoterpenic ester
Geraniol	[56.32]*	2.86	Monoterpenic alcohol
Geranial	56.32	0.07	Monoterpenic aldehyde
Bornyl acetate	tr	[53.08]*	Monoterpenic ester
4-Vinylguaiaicol	0.01	tr	Simple phenolic

Methyl anthranilate	0.01	0.01	Phenolic ester
Linalyl propionate	0.04	0.04	Monoterpenic ester
Hodiendiol derivative	0.01	0.01	Oxygenated monoterpene
α -Terpinyl acetate	0.10	0.10	Monoterpenic ester
Neryl acetate	2.30	2.29*	Monoterpenic ester
Geranyl acetate	3.79	3.78	Monoterpenic ester
β -Elemene	0.02	0.70*	Sesquiterpene
Dimethyl anthranilate	0.01	0.01	Phenolic ester
β -Caryophyllene	0.70	[0.70]*	Sesquiterpene
α -Humulene	0.07	0.07	Sesquiterpene
(<i>E</i>)- β -Farnesene	0.01	0.02	Sesquiterpene
Bicyclogermacrene	0.21	0.20*	Sesquiterpene
(3 <i>Z</i> ,6 <i>E</i>)- α -Farnesene	0.02*	[2.29]*	Sesquiterpene
α -Muurolole	[0.02]*	[0.20]*	Sesquiterpene
γ -Cadinene	0.02	0.03*	Sesquiterpene
<i>trans</i> -Calamenene	0.03*	tr	Sesquiterpene
δ -Cadinene	[0.03]*	[0.03]*	Sesquiterpene
(<i>E</i>)-Nerolidol	0.05	0.05	Sesquiterpenic alcohol
Spathulenol	0.01	0.01	Sesquiterpenic alcohol
Caryophyllene oxide	0.02	0.02	Sesquiterpenic ether
Phytol	0.03	0.03	Diterpenic alcohol
Total identified	99.54%	99.26%	

*: 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



Jade Bloom

HEALTH, HEALING & HAPPINESS

Physical aspect: Faintly yellow liquid

Refractive index: 1.4560 \pm 0.0003 (20 °C)

COMPLIANCE WITH ISO 3064:2001 (CITRUS AURANTIUM SSP. AMARA, PARAGUAY – PETITGRAIN)

Compound	Min. Content	Max. Content	Observed Content	Complies?
β -Pinene	0.5	2	1.1	Yes
Myrcene	1.3	2.7	2.1	Yes
Sabinene	0.1	0.5	0.2	Yes
<i>trans</i> - β -Ocimene	1	3	2.1	Yes
Linalool	15	30	19.8	Yes
Linalyl acetate	40	60	53.1	Yes
α -Terpineol	3.2	6.8	5.3	Yes
Nerol	0.5	2	1.2	Yes
Geraniol	2	4.5	2.9	Yes
Neryl acetate	1	3	2.3	Yes
Geranyl acetate	2	5	3.8	Yes
β -Caryophyllene	0.3	1.5	0.7	Yes
Refractive index	1.455	1.463	1.4560	Yes

CONCLUSION

No adulterant, contaminant or diluent has been detected using this method. The oil complies with the ISO standard for petitgrain oil.