

GC-MS Profiling Analysis Prepared for Jade Bloom, Inc

Date: February 21, 2018

Sample: Coriander Seed

Type: Essential Oil

Source: *Coriandrum sativum*

Batch: 630333

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Hexanal	tr	tr	Aliphatic aldehyde
Hexanol	0.01	0.01	Aliphatic alcohol
Heptanal	0.01*	tr	Aliphatic aldehyde
Nonane	[0.01]*	tr	Alkane
Tricyclene	0.02	0.02	Monoterpene
α -Thujene	0.03	0.03	Monoterpene
α -Pinene	4.71	4.73	Monoterpene
Camphene	0.78	0.79	Monoterpene
β -Pinene	0.77*	0.52	Monoterpene
Sabinene	[0.77]*	0.27	Monoterpene
Myrcene	1.07	1.08	Monoterpene
α -Phellandrene	0.02	0.02	Monoterpene
Octanal	0.01	0.01	Aliphatic aldehyde
Δ 3-Carene	0.01	0.01	Monoterpene
α -Terpinene	0.04	0.04	Monoterpene
para-Cymene	0.62	0.63	Monoterpene
Limonene	2.64*	2.49	Monoterpene
β -Phellandrene	[2.64]*	0.16*	Monoterpene
1,8-Cineole	[2.64]*	[0.16]*	Monoterpenic ether
(Z)- β -Ocimene	0.02	4.25*	Monoterpene
(E)- β -Ocimene	0.03	0.04	Monoterpene
γ -Terpinene	4.24	[4.25]*	Monoterpene
cis-Sabinene hydrate	0.07	0.12*	Monoterpenic alcohol
cis-Linalool oxide (fur.)	0.08	0.08	Monoterpenic alcohol
Octanol	0.01	0.01	Aliphatic alcohol
Terpinolene	0.63	0.63	Monoterpene
trans-Linalool oxide (fur.)	0.06	[0.12]*	Monoterpenic alcohol
2-Hexylfuran	0.01	0.02	Furan
Linalool	71.76*	71.48	Monoterpenic alcohol
Nonanal	[71.76]*	0.02	Aliphatic aldehyde
Camphor	4.98	4.98	Monoterpenic ketone
Isopulegol	0.02	0.02	Monoterpenic alcohol
Citronellal	0.05	0.04	Monoterpenic aldehyde
Pinocarvone	0.02	0.02	Monoterpenic ketone
Borneol	0.16*	0.42*	Monoterpenic alcohol
(2E)-Nonenal	[0.16]*	tr	Aliphatic aldehyde
Terpinen-4-ol	0.10	0.09	Monoterpenic alcohol
para-Cymen-8-ol	0.01	0.01	Monoterpenic alcohol
α -Terpineol	0.27	[0.42]*	Monoterpenic alcohol
Myrtenal	0.05	0.01	Monoterpenic aldehyde
Myrtenol	[0.05]	0.03	Monoterpenic alcohol
Verbenone	0.02	0.02	Monoterpenic ketone
Decanal	0.05	0.06	Aliphatic aldehyde
Nerol	0.02	0.03	Monoterpenic alcohol
Citronellol	0.06	0.11*	Monoterpenic alcohol
Neral	0.02	0.01	Monoterpenic aldehyde
Geraniol	1.87	1.81*	Monoterpenic alcohol
(2E)-Decenal	0.02	0.02	Aliphatic aldehyde

Geranial	0.04	0.03	Monoterpenic aldehyde
Decanol	0.03	[0.11]*	Aliphatic alcohol
Undecanal	0.02	0.02	Aliphatic aldehyde
Myrtenyl acetate	0.11	0.10	Monoterpenic ester
Citronellyl acetate	0.04	0.03	Monoterpenic ester
Neryl acetate	0.03	0.04	Monoterpenic ester
Geranyl acetate	3.35*	3.29	Monoterpenic ester
<i>trans</i> -Myrtanyl acetate	[3.35]*	0.02	Monoterpenic ester
Dodecanal	0.02	0.01	Aliphatic aldehyde
β -Caryophyllene	0.08	0.07	Sesquiterpene
(2 <i>E</i>)-Dodecenal	0.03	[1.81]*	Aliphatic aldehyde
Germacrene D	0.01	[0.42]*	Sesquiterpene
Caryophyllene oxide	0.01	0.02	Sesquiterpenic ether
Tetradecanal	0.01		Aliphatic aldehyde
(2 <i>E</i>)-Tetradecenal	0.02		Aliphatic aldehyde
Total identified	99.16%	98.82%	

*: 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: Clear liquid

Refractive index: 1.4645 \pm 0.0003 (20 °C)

COMPLIANCE WITH ISO 3516:1997 (CORIANDRUM SATIVUM L.)

Compound	Min. Content	Max. Content	Observed Content	Complies?
α -Pinene	3	7	4.7	Yes
Myrcene	0.5	1.5	1.1	Yes
Limonene	2	5	2.5	Yes
γ -Terpinene	2	7	4.2	Yes
Linalool	65	78	71.5	Yes
Camphor	4	6	5.0	Yes
α -Terpineol	0.5	1.5	0.3	No
Geraniol	0.5	3	1.8	Yes
Geranyl acetate	1	3.5	3.3	Yes
Refractive index	1.4620	1.470	1.4645	Yes

CONCLUSION

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

