

GC-MS Profiling Analysis Prepared for Jade Bloom, Inc

Date: February 16, 2018
Sample: Sandalwood Mysore
Type: Essential Oil
Source: *Santalum album*
Batch: 138229

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Acetone	tr		Aliphatic ketone
Santene	0.03	0.03	Monoterpene
Tricyclene	tr	tr	Monoterpene
para-Cymenene	tr	tr	Monoterpene
Unknown	tr		Unknown
4-Methylacetophenone	0.01	0.02	Simple phenolic
Unknown	0.03	0.01	Terpene derivative
Teresantalic acid	0.24	0.31	Monoterpenic acid
Unknown	0.01		Terpenic aldehyde
Tricycloekasantalal	0.12	0.11	Terpenic aldehyde
Unknown	0.04		Unknown
7-epi-Sesquithujene	0.04	0.02	Sesquiterpene
γ-4-Dimethylbenzenebutyral	0.02		Simple phenolic
α-Cedrene	0.02*	0.01	Sesquiterpene
Sesquithujene	[0.02]*	tr	Sesquiterpene
α-Santalene	0.94	0.94	Sesquiterpene
trans-α-Bergamotene	0.19	0.16	Sesquiterpene
epi-β-Santalene	0.99	0.98	Sesquiterpene
β-Santalene	1.54*	1.52	Sesquiterpene
(E)-β-Farnesene	[1.54]*	0.04	Sesquiterpene
Geranylacetone	[1.54]*		Monoterpenic ketone
α-Acoradiene	[1.54]*	0.02	Sesquiterpene
β-Acoradiene	0.04	0.05	Sesquiterpene
Unknown	0.09		Sesquiterpene
ar-Curcumene	0.21*	0.17	Sesquiterpene
γ-Curcumene	[0.21]*	0.11	Sesquiterpene
α-Selinene	0.01	0.01	Sesquiterpene
β-Curcumene	0.24*	0.21*	Sesquiterpene
β-Bisabolene	[0.24]*	0.07	Sesquiterpene
β-Sesquiphellandrene	0.24*	0.01	Sesquiterpene
Sesquicineole	[0.24]*	[0.21]*	Sesquiterpenic ether
(E)-Nerolidol	0.06	0.05	Sesquiterpenic alcohol
Unknown	0.03	0.03	Oxygenated sesquiterpene
Dendrolasin	0.04	0.04	Sesquiterpenic ether
Unknown	0.11		Oxygenated sesquiterpene
α-Acorenol	0.16	0.14	Sesquiterpenic alcohol
10-epi-β-Acorenol?	0.81*		Sesquiterpenic alcohol
β-Eudesmol	[0.81]*	0.10	Sesquiterpenic alcohol
Unknown	[0.81]*		Oxygenated sesquiterpene
α-Bisabolol oxide B, epimer 1	0.59*	0.28	Sesquiterpenic alcohol
α-Bisabolol oxide B, epimer 2	[0.59]*	0.24	Sesquiterpenic alcohol
Unknown	0.91*	0.17	Oxygenated sesquiterpene
Unknown	[0.91]*	2.11	Oxygenated sesquiterpene
Bulnesol	[0.91]*	0.18	Sesquiterpenic alcohol
β-Bisabolol?	[0.91]	0.42*	Sesquiterpenic alcohol
(E)-α-Santalal	2.07*	[0.42]*	Sesquiterpenic aldehyde
epi-Cyclosantalal	[2.07]*		Sesquiterpenic aldehyde
(Z)-α-Santalol	44.39	44.95	Sesquiterpenic alcohol

(Z)- α - <i>trans</i> -Bergamotol	6.09	6.30	Sesquiterpenic alcohol
(E)- α -Santalol	0.45	0.40	Sesquiterpenic alcohol
Unknown	0.24		Oxygenated sesquiterpene
(Z)- <i>epi</i> - β -Santalol	3.65	3.34	Sesquiterpenic alcohol
(E)- α - <i>trans</i> -Bergamotol	0.33	0.32	Sesquiterpenic alcohol
Unknown	20.72*	0.30	Oxygenated sesquiterpene
Unknown	[20.72]*	0.09	Oxygenated sesquiterpene
(Z)- β -Santalol	[20.72]	20.01	Sesquiterpenic alcohol
(Z)-Nuciferol	1.67	0.58	Sesquiterpenic alcohol
(E)- β -Santalol	2.17	1.71	Sesquiterpenic alcohol
(Z)- β -Curcumen-12-ol	1.69	[2.08]*	Sesquiterpenic alcohol
(Z)-Lanceol	0.13	[2.08]*	Sesquiterpenic alcohol
Unknown	0.15	2.08	Oxygenated sesquiterpene
Unknown	0.26		Oxygenated sesquiterpene
Unknown	0.34		Oxygenated sesquiterpene
Total identified	90.81%	85.51%	

*: 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: Light yellow viscous liquid

Refractive index: 1.5060 \pm 0.0003 (20 °C)

COMPLIANCE WITH ISO 3518:2002 (SANTALUM ALBUM)

Compound	Min. %	Max. %	Observed %	Complies?
(Z)- α -Santalol	41	55	44.4	Yes
(Z)- β -Santalol	16	24	20.0	Yes
Refractive index	1.503	1.509	1.5060	Yes

CONCLUSION

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

