

GC-MS Profiling Analysis Prepared for Jade Bloom, Inc

Date: March 19, 2018

Sample: Tangerine

Type: Essential Oil

Source: *Citrus reticulata* cv. *Tangerine*

Batch: 1007059

ANALYSIS SUMMARY

| Identification | DB-5 (%) | DB-WAX (%) | Classe |
|------------------------------|----------|------------|-------------------------|
| α -Thujene | 0.11 | 0.11 | Monoterpene |
| α -Pinene | 0.69 | 0.69 | Monoterpene |
| Camphene | tr | tr | Monoterpene |
| β -Pinene | 0.40* | 0.25 | Monoterpene |
| Sabinene | [0.40]* | 0.15 | Monoterpene |
| Myrcene | 1.72 | 1.74 | Monoterpene |
| α -Phellandrene | 0.03 | 0.03 | Monoterpene |
| Octanal | 0.03 | 0.03 | Aliphatic aldehyde |
| Δ 3-Carene | 0.01 | 0.01 | Monoterpene |
| α -Terpinene | 0.05 | 0.06 | Monoterpene |
| para-Cymene | 90.58* | 0.29 | Monoterpene |
| Limonene | [90.58]* | 90.77 | Monoterpene |
| 1,8-Cineole | [90.58]* | 0.21 | Monoterpenic ether |
| (E)- β -Ocimene | 0.07 | 0.06 | Monoterpene |
| γ -Terpinene | 2.89 | 2.84 | Monoterpene |
| cis-Sabinene hydrate | tr | tr | Monoterpenic alcohol |
| Octanol | 0.06 | 0.07 | Aliphatic alcohol |
| Terpinolene | 0.13 | 0.13 | Monoterpene |
| Linalool | 0.19 | 0.20 | Monoterpenic alcohol |
| Nonanal | 0.02 | 0.02 | Aliphatic aldehyde |
| cis-Limonene oxide | 0.02 | 0.02 | Monoterpenic ether |
| trans-Limonene oxide | 0.02 | 0.02 | Monoterpenic ether |
| Citronellal | 0.01 | 0.03 | Monoterpenic aldehyde |
| Terpinen-4-ol | 0.01 | 0.01 | Monoterpenic alcohol |
| α -Terpineol | 0.07 | 0.08 | Monoterpenic alcohol |
| Decanal | 0.08 | 0.07 | Aliphatic aldehyde |
| Octyl acetate | 0.01 | 0.01 | Aliphatic ester |
| trans-Carveol | 0.01 | 0.01 | Monoterpenic alcohol |
| Nerol | 0.01 | 0.01 | Monoterpenic alcohol |
| Neral | 0.03 | 0.05 | Monoterpenic aldehyde |
| Geraniol | 0.01 | 0.03 | Monoterpenic alcohol |
| Limonen-10-ol | 0.02 | 0.01 | Monoterpenic alcohol |
| Undecanal | tr | 0.01 | Aliphatic aldehyde |
| α -Cubebene | tr | tr | Sesquiterpene |
| Neryl acetate | 0.03 | 0.03 | Monoterpenic ester |
| α -Copaene | 0.04 | 0.04 | Sesquiterpene |
| Geranyl acetate | 0.06 | 0.16 | Monoterpenic ester |
| β -Elemene | 0.02 | 0.04* | Sesquiterpene |
| Dodecanal | 0.04 | 0.05 | Aliphatic aldehyde |
| β -Caryophyllene | 0.02 | [0.04]* | Sesquiterpene |
| trans- α -Bergamotene | 0.01 | 0.01 | Sesquiterpene |
| (E)- β -Farnesene | 0.03 | 0.03 | Sesquiterpene |
| Germacrene D | 0.06 | 0.05 | Sesquiterpene |
| α -Muuroolene | tr | 0.01 | Sesquiterpene |
| β -Bisabolene | 0.12* | 0.04 | Sesquiterpene |
| γ -Cadinene | [0.12]* | 0.02 | Sesquiterpene |
| δ -Cadinene | 0.05 | 0.04 | Sesquiterpene |
| β -Sinensal | 0.01 | 0.01 | Sesquiterpenic aldehyde |

| | | | |
|-------------------------------------|---------------|---------------|-------------------------|
| α -Sinensal | 0.01 | 0.01 | Sesquiterpenic aldehyde |
| Myristic acid | 0.09 | 0.09 | Aliphatic acid |
| Palmitic acid | 0.18 | 0.19 | Aliphatic acid |
| Linoleic acid | 0.17 | 0.16* | Aliphatic acid |
| Oleic acid | 0.14 | 0.18 | Aliphatic acid |
| <i>cis</i> -Vaccenic acid? | 0.09 | [0.16]* | Aliphatic acid |
| Tangeretin | 0.20 | | Flavonoid |
| 3,3',4',5,6,7,8-Heptamethoxyflavone | 0.09 | | Flavonoid |
| Total identified | 98.75% | 99.19% | |

*: 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: Bright orange liquid

Refractive index: 1.4733 ± 0.0003 (20 °C)

CONCLUSION

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

