

## GC-MS Profiling Analysis Prepared for Jade Bloom, Inc

**Date:** April 20, 2018  
**Sample:** Carrot Seed  
**Type:** Essential Oil  
**Source:** *Daucus carota*  
**Batch:** 041886775

### ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Acetic acid	0.01	tr	Aliphatic acid
Isovaleral	0.01	0.01	Aliphatic aldehyde
2-Methylbutyral	0.01	0.01	Aliphatic aldehyde
Toluene	tr	tr*	Simple phenolic
Hexanal	tr	tr	Aliphatic aldehyde
Unknown	tr		Unknown
Heptanal	0.03	0.03	Aliphatic aldehyde
Hashishene	0.06	0.56*	Monoterpene
$\alpha$ -Thujene	0.01	[tr]*	Monoterpene
$\alpha$ -Pinene	0.55	[0.56]*	Monoterpene
Camphene	0.04	0.04	Monoterpene
Thuja-2,4(10)-diene	0.04	0.08*	Monoterpene
Benzaldehyde	tr	0.09	Simple phenolic
$\beta$ -Pinene	0.33*	0.30	Monoterpene
Sabinene	[0.33]*	[0.08]*	Monoterpene
6-Methyl-5-hepten-2-one	0.02		Aliphatic ketone
Myrcene	0.34	0.33	Monoterpene
6-Methyl-5-hepten-2-ol	0.01	0.01	Aliphatic alcohol
$\alpha$ -Phellandrene	0.01*	tr	Monoterpene
Menthatriene isomer I	[0.01]*	0.01	Monoterpene
Octanal	0.01	0.01	Aliphatic aldehyde
$\Delta$ 3-Carene	tr	tr	Monoterpene
$\alpha$ -Terpinene	0.01	0.01	Monoterpene
para-Cymene	0.05	0.05	Monoterpene
Limonene	0.34*	0.33	Monoterpene
1,8-Cineole	[0.34]*	0.02*	Monoterpenic ether
$\beta$ -Phellandrene	[0.34]*	[0.02]*	Monoterpene
(Z)- $\beta$ -Ocimene	tr	0.03*	Monoterpene
(E)- $\beta$ -Ocimene	0.01	0.01	Monoterpene
$\gamma$ -Terpinene	0.02	[0.03]*	Monoterpene
Unknown	0.01	0.01	Oxygenated monoterpene
cis-Linalool oxide (fur.)	0.01	0.01	Monoterpenic alcohol
Octanol	tr	tr	Aliphatic alcohol
para-Cymenene	0.04*	0.02*	Monoterpene
Terpinolene	[0.04]*	0.01	Monoterpene
$\gamma$ -Campholenal	[0.04]*	0.01	Aliphatic alcohol
6,7-Epoxyterpinene	0.02	tr	Monoterpenic ether
trans-Sabinene hydrate	0.05	0.05*	Monoterpenic alcohol
Linalool	0.03	0.07	Monoterpenic alcohol
trans-para-Mentha-2,8-dien-1-ol	tr	0.10	Monoterpenic alcohol
$\alpha$ -Campholenal	0.01	0.01	Monoterpenic aldehyde
Limona ketone	0.01	0.01	Normonoterpenic ketone
Nopinone	0.05*	0.04	Normonoterpenic ketone
Cosmene isomer I	[0.05]*	[0.02]*	Monoterpene
trans-Pinocarveol	0.01	0.07	Monoterpenic alcohol
trans-Verbenol	0.02*	0.02	Monoterpenic alcohol
Epoxyterpinolene	[0.02]*	0.02	Monoterpenic ether
Sabinaketone	tr		Normonoterpenic ketone

Pinocarvone	0.03	[0.05]*	Monoterpenic ketone
Borneol	0.01	0.06*	Monoterpenic alcohol
Terpinen-4-ol	0.02	0.02	Monoterpenic alcohol
meta-Cymen-8-ol	0.01	0.01	Monoterpenic alcohol
para-Cymen-8-ol	0.02	0.02	Monoterpenic alcohol
$\alpha$ -Terpineol	0.04	[0.06]*	Monoterpenic alcohol
Myrtenal	0.05	0.05	Monoterpenic aldehyde
Verbenone	0.03	0.04*	Monoterpenic ketone
<i>trans</i> -Piperitol	tr	0.09*	Monoterpenic alcohol
<i>trans</i> -Carveol	0.03	0.13	Monoterpenic alcohol
Unknown	tr		Oxygenated monoterpene
Nerol	0.03	0.01	Monoterpenic alcohol
Neral	0.03	0.21	Monoterpenic aldehyde
Unknown	0.02	0.01	Oxygenated monoterpene
Phellandral	0.01	0.82*	Monoterpenic aldehyde
Geranial	0.02	2.23*	Monoterpenic aldehyde
Bornyl acetate	0.02	0.02	Monoterpenic ester
( <i>E</i> )-Anethole	0.02	0.01	Phenylpropanoid
Cuminol	0.02	0.04	Monoterpenic alcohol
Unknown	0.01		Oxygenated monoterpene
Carvacrol	0.08	0.30	Monoterpenic alcohol
Tridecane	0.01	0.01	Alkane
$\delta$ -Elemene	0.02	tr	Sesquiterpene
$\alpha$ -Longipinene	0.09*	tr	Sesquiterpene
$\alpha$ -Terpinyl acetate	[0.09]*	0.04	Monoterpenic ester
Neryl acetate	0.01	0.01	Monoterpenic ester
$\alpha$ -Copaene	0.03	2.89*	Sesquiterpene
Daucene	3.10*	[2.89]*	Sesquiterpene
$\beta$ -Bourbonene	[3.10]*	0.02	Sesquiterpene
7-epi-Sesquithujene?	0.38*	0.37	Sesquiterpene
Geranyl acetate	[0.38]*	0.03	Monoterpenic ester
$\beta$ -Elemene	0.03	1.25*	Sesquiterpene
Sesquithujene	0.02	0.01	Sesquiterpene
Methyleugenol	0.01	71.53*	Phenylpropanoid
<i>cis</i> - $\alpha$ -Bergamotene	0.57*	0.01	Sesquiterpene
$\beta$ -Caryophyllene	[0.57]*	[1.25]*	Sesquiterpene
$\beta$ -Copaene	0.17	[1.25]*	Sesquiterpene
( <i>Z</i> )- $\beta$ -Farnesene?	0.03	0.27*	Sesquiterpene
<i>trans</i> - $\alpha$ -Bergamotene	0.61	[1.25]*	Sesquiterpene
Sesquisabinene A	0.26	0.33*	Sesquiterpene
$\alpha$ -Humulene	0.05	0.02	Sesquiterpene
Unknown	0.17*	0.15	Sesquiterpene
Sesquisabinene B	[0.17]*	tr	Sesquiterpene
Acora-3,10(14)-diene	0.36	[0.27]*	Sesquiterpene
$\beta$ -Santalene	1.23*	0.03	Sesquiterpene
( <i>E</i> )- $\beta$ -Farnesene	[1.23]*	1.92*	Sesquiterpene
Unknown	0.98*	[1.92]*	Sesquiterpene
Dauca-5,8-diene?	[0.98]*	[0.33]*	Sesquiterpene
$\gamma$ -Muurolene	0.03	[0.04]*	Sesquiterpene
Germacrene D	0.02	0.06	Sesquiterpene
$\beta$ -Selinene	0.03	0.02	Sesquiterpene
<i>trans</i> - $\beta$ -Bergamotene	0.10	[1.92]*	Sesquiterpene

ar-Curcumene	0.15	0.14*	Sesquiterpene
γ-Amorphene	0.02	0.01	Sesquiterpene
α-Selinene	0.82*	[0.82]*	Sesquiterpene
Bicyclogermacrene	[0.82]*	[2.23]*	Sesquiterpene
Viridiflorene	[0.82]*	0.02	Sesquiterpene
Unknown	0.81*	0.03	Oxygenated sesquiterpene
α-Muurolene	[0.81]*	0.09	Sesquiterpene
Isodaucene	[0.81]*	[0.82]*	Sesquiterpene
Methyl ( <i>E</i> )-isoeugenol	[0.81]*	0.50*	Phenylpropanoid
β-Bisabolene	2.17*	[2.23]*	Sesquiterpene
γ-Cadinene	[2.17]*	[0.09]*	Sesquiterpene
β-Curcumene	0.02	tr	Sesquiterpene
Sesquicineole	0.01	0.02	Sesquiterpenic ether
β-Sesquiphellandrene	0.31	0.31*	Sesquiterpene
<i>trans</i> -Cadina-1,4-diene	0.03	[0.31]*	Sesquiterpene
( <i>E</i> )-γ-Bisabolene	0.13	0.05	Sesquiterpene
Dauca-4(11),8-diene	0.02		Sesquiterpene
Selina-3,7(11)-diene	0.02	[0.14]*	Sesquiterpene
( <i>E</i> )-α-Bisabolene	0.09	0.01	Sesquiterpene
Isocaryophyllene epoxide B	0.10	0.04	Sesquiterpenic ether
Unknown	1.91		Oxygenated sesquiterpene
Germacrene D-4-ol	0.05	0.06	Sesquiterpenic alcohol
Spathulenol	0.09	0.01	Sesquiterpenic alcohol
Caryophyllene oxide	0.27	0.21	Sesquiterpenic ether
Carotol	74.23*	[71.53]*	Sesquiterpenic alcohol
Unknown	[74.23]*	3.87	Oxygenated sesquiterpene
Humulene epoxide II	0.10	0.16	Sesquiterpenic ether
Unknown	0.29		Oxygenated sesquiterpene
Unknown	0.16		Oxygenated sesquiterpene
Unknown	0.70*		Oxygenated sesquiterpene
Muurola-4,10(14)-dien-1β-ol?	[0.70]*	0.27	Sesquiterpenic alcohol
Caryophylladienol I	0.08	0.05	Sesquiterpenic alcohol
Caryophylladienol II	0.12	3.26*	Sesquiterpenic alcohol
Daucol	3.10*	[3.26]*	Sesquiterpenic alcohol
Hinesol	[3.10]*	[0.50]*	Sesquiterpenic alcohol
τ-Cadinol	0.02	0.01	Sesquiterpenic alcohol
Himachalol	0.01	0.01	Sesquiterpenic alcohol
α-Cadinol	0.15	0.24	Sesquiterpenic alcohol
Unknown	0.26		Oxygenated sesquiterpene
(3 <i>Z</i> )-Caryophylla-3,8(13)-dien-5β-ol	0.34*	0.09*	Sesquiterpenic alcohol
Unknown	[0.34]*		Unknown
α-Asarone	0.02	0.06	Phenylpropanoid
Shyobunol	0.11	0.06	Sesquiterpenic alcohol
α-Bisabolol	0.06	0.12	Sesquiterpenic alcohol
Juniper camphor	0.01	[3.26]*	Sesquiterpenic alcohol
(2 <i>Z</i> ,6 <i>E</i> )-Farnesol	0.01	0.05	Sesquiterpenic alcohol
(2 <i>E</i> ,6 <i>E</i> )-Farnesol	0.01	[0.09]*	Sesquiterpenic alcohol
Drimenol	0.05	0.01	Sesquiterpenic alcohol
Phytone	0.09	0.13	Terpenic ketone
<b>Total identified</b>	<b>95.20%</b>	<b>91.19%</b>	

\*: Two or more compounds are coeluting on this column

[xx]: Duplicate percentage due to coelutions, not taken account in the identified total

#### PHYSICOCHEMICAL DATA

**Physical aspect:** Light yellow liquid

**Refractive index:** 1.4963 ± 0.0003 (20 °C)

#### CONCLUSION

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