

GC-MS Profiling Analysis

Prepared for Jade Bloom, Inc

Date: April 19, 2018
Sample: Celery Seed
Type: Essential Oil
Source: *Apium graveolens*
Batch: 041894766

ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Isobutylal	tr	tr	Aliphatic aldehyde
Isovaleral	0.01	0.02*	Aliphatic aldehyde
2-Methylbutylal	0.01	0.01	Aliphatic aldehyde
Valeral	tr	tr*	Aliphatic aldehyde
Hexanal	tr	tr	Aliphatic aldehyde
5,5-Dimethyl-2-ethyl-1,3-cyclopentadiene?	tr	[tr]*	Normonoterpene
2-Methyloctane	0.01	0.01	Alkane
Nonane	0.01	[0.02]*	Alkane
α-Thujene	tr	tr	Monoterpene
α-Pinene	0.10	0.10	Monoterpene
Sabinene	0.85*	0.04	Monoterpene
β-Pinene	[0.85]*	0.84	Monoterpene
Myrcene	1.30	1.35	Monoterpene
para-Cymene	0.05	0.05	Monoterpene
β-Phellandrene	67.21*	0.05	Monoterpene
1,8-Cineole	[67.21]*	0.01	Monoterpenic ether
Limonene	[67.21]*	70.30	Monoterpene
(Z)-β-Ocimene	0.06	0.06	Monoterpene
(E)-β-Ocimene	0.01	0.01	Monoterpene
γ-Terpinene	0.06	0.08	Monoterpene
Terpinolene	0.02	0.01	Monoterpene
Linalool	0.06	0.06	Monoterpenic alcohol
Octen-3-yl acetate	0.06	0.06	Aliphatic ester
Pentylcyclohexadiene isomer	0.01*	0.01	Alkene
trans-para-Mentha-2,8-dien-1-ol	[0.01]*	0.01	Monoterpenic alcohol
Limona ketone	0.01	0.01	Normonoterpenic ketone
cis-Limonene oxide	0.03	0.02	Monoterpenic ether
cis-para-Mentha-2,8-dien-1-ol	0.04	0.04	Monoterpenic alcohol
trans-Limonene oxide	0.03	0.03	Monoterpenic ether
Pentylbenzene	4.09*	0.58	Simple phenolic
5-Pentylcyclohexa-1,3-diene	[4.09]*	3.67	Alkene
trans-Isocarveol	0.03	0.03	Monoterpenic alcohol
α-Terpineol	0.02	0.02	Monoterpenic alcohol
cis-Dihydrocarvone	0.04	0.05	Monoterpenic ketone
Unknown	0.01	0.01	Unknown
trans-Isopiperitenol	0.03	0.03	Monoterpenic alcohol
trans-Dihydrocarvone	0.01	0.01	Monoterpenic ketone
Unknown	0.01	0.01	Oxygenated monoterpene
Unknown	0.02	0.01	Oxygenated monoterpene
trans-Carveol	0.06	0.06	Monoterpenic alcohol
cis-Carveol	0.06*	0.03	Monoterpenic alcohol
cis-para-Mentha-1(7),8-dien-2-ol	[0.06]*	0.26*	Monoterpenic alcohol
Carvone	0.06	0.07	Monoterpenic ketone
Perillaldehyde	0.01	0.02	Monoterpenic aldehyde
Limonen-10-ol	0.02	0.01	Monoterpenic alcohol
Perillyl alcohol	0.02	0.02	Monoterpenic alcohol
trans-Pinocarvyl acetate	0.07	0.07	Monoterpenic ester

Thymol	0.01	0.02*	Monoterpenic alcohol
4-Vinylguaiaicol	0.02	[0.02]*	Simple phenolic
<i>trans</i> -Carvyl acetate	0.03	0.03	Monoterpenic ester
Limonene glycol isomer I	0.05		Monoterpenic alcohol
Fenipentol	tr	0.01	Simple phenolic
Valerophenone	0.23	[0.26]*	Simple phenolic
β -Elemene	0.09	1.08*	Sesquiterpene
α -Cedrene	0.03	0.01	Sesquiterpene
2-Pentylphenol	0.06		Simple phenolic
β -Caryophyllene	1.00	[1.08]*	Sesquiterpene
α -Humulene	0.12	0.10	Sesquiterpene
4-Pentylphenol	0.03		Simple phenolic
4,5-diepi-Aristolochene	0.03	0.07	Sesquiterpene
Selina-4,11-diene	0.03	0.04	Sesquiterpene
β -Selinene	11.51*	11.76	Sesquiterpene
α -Curcumene	[11.51]*	0.06*	Sesquiterpene
γ -Curcumene	[11.51]*	0.07	Sesquiterpene
α -Selinene	1.97	2.03	Sesquiterpene
Selina-4(15),7(11)-diene	0.09	0.09	Sesquiterpene
Selina-3,7(11)-diene	0.06	[0.06]*	Sesquiterpene
α -Elemol	0.05	0.07	Sesquiterpenic alcohol
Unknown	0.05	0.06*	Unknown
(<i>E</i>)-Nerolidol	0.02	0.02	Sesquiterpenic alcohol
Caryophyllene oxide	0.15*	0.22	Sesquiterpenic ether
Caryophyllene oxide isomer	[0.15]*	0.01	Sesquiterpenic ether
Unknown	0.14*		Unknown
Humulene epoxide II	[0.14]*	0.01	Sesquiterpenic ether
Dill apiole	0.22	0.23	Phenylpropanoid
β -Eudesmol	1.57*	0.33	Sesquiterpenic alcohol
α -Eudesmol	[1.57]*	0.08	Sesquiterpenic alcohol
3-Butylphthalide	[1.57]*	1.37	Phthalide
(3 <i>Z</i>)-Butylidenephthalide	0.28	0.25	Phthalide
Sedanenolide	5.40*	1.68	Phthalide
(<i>Z</i>)-Ligustilide	0.04	[0.06]*	Phthalide
Neophytadiene	0.09	0.04	Diterpene
3-Methylpentylbenzene		0.01	Simple phenolic
(1 <i>E</i>)-Pentenylbenzene		0.01	Simple phenolic
Total identified	97.81%	97.91%	

*: 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 liquid

Refractive index: 1.4810 \pm 0.0003 (20 °C)

CONCLUSION

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

