

Analysis Vetiver, Vintage Essential Oil

Laboratoire
PhytoChemia





CERTIFICATE OF ANALYSIS – GC PROFILING

SAMPLE IDENTIFICATION

Internal code : 18125-FSE18-1-CC

Customer identification : Vetiver - India - VS170818

Type : Essential oil

Source : Vetiveria zizanioides c.t. India

Customer : Flowers Shining Everywhere Inc.

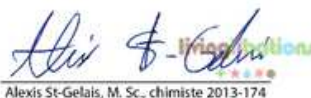
ANALYSIS

Method: PC-PA-014-17J19 - Analysis of the composition of an essential oil, or other volatile liquid, by FAST GC-FID (in French); identifications validated by GC-MS.

Analyst : Benoit Roger, Ph. D.

Analysis date : September 27, 2018

Checked and approved by :



Alexis St-Gelais, M. Sc., chimiste 2013-174

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ANALYSIS SUMMARY

Identification	DB-5 (%)	DB-WAX (%)	Classe
Limonene	tr	tr	Monoterpene
α -Cubebene	0.03	0.03	Sesquiterpene
α -Ylangene	0.11	0.08	Sesquiterpene
2-epi- α -Funebrene	tr	tr	Sesquiterpene
Unknown	0.03		Norsesquiterpene
β -Funebrene	0.11	0.10	Sesquiterpene
β -Caryophyllene	0.50	0.50	Sesquiterpene
Unknown	0.33		Sesquiterpene
6,9-Guaiadiene	0.14	0.13	Sesquiterpene
Khusimene	1.46*	1.40*	Sesquiterpene
Proizaene	[1.46]*	[1.40]*	Sesquiterpene
(E)-isoeugenol	0.34	0.19	Phenylpropanoid
Patchoulene analog I	0.33	0.27	Sesquiterpene
Unknown	0.22		Sesquiterpene
Unknown	0.10		Sesquiterpene
Unknown	0.26		Sesquiterpene
γ -Murolene	1.51	2.96*	Sesquiterpene
α -Amorphene	1.54	[2.96]*	Sesquiterpene
α -Vetispirene	0.55	0.51	Sesquiterpene
β -Vetispirene	0.65	0.66	Sesquiterpene
cis-Eudesma-6,11-diene	0.95*	0.36	Sesquiterpene
γ -Amorphene	[0.95]*	0.33	Sesquiterpene
δ -Selinene	[0.95]*	[2.96]*	Sesquiterpene
4-epi-cis-Dihydroagarofuran	2.73	2.37	Sesquiterpenic ether
epi-Cubebol	0.09	0.10	Sesquiterpenic alcohol
Eudesma-2,4(15),11-triene	0.22	0.25	Sesquiterpene
δ -Amorphene	0.51	0.43	Sesquiterpene
β -Dihydroagarofuran	0.18	0.18*	Sesquiterpenic ether
Eremophila-1(10),7(11)-diene	1.04*	1.03*	Sesquiterpene
γ -Cadinene	[1.04]*	[0.18]*	Sesquiterpene
Spirovetiva-1(10),7(11)-diene	[1.04]*	[1.03]*	Sesquiterpene
trans-Calamenene	[1.04]*	0.14	Sesquiterpene
δ -Cadinene	0.84*	0.49	Sesquiterpene
Zonarene	[0.84]*	0.03	Sesquiterpene
γ -Vetivenene	0.22	0.10	Sesquiterpene
11,12,13-trinor-trans-Eudesm-5-en-7-one	0.14		Terpenic ketone
α -Calacorene	1.17*	0.87*	Sesquiterpene
α -Agarofuran	[1.17]*	0.68	Sesquiterpenic ether
β -Vetivenene	1.44	1.31	Sesquiterpene
α -Elemol	0.94	1.02	Sesquiterpenic alcohol
cis-Eudesm-6-en-11-ol	1.74*		Sesquiterpenic alcohol
Fuopelargone isomer	[1.74]*	0.66	Sesquiterpenic ketone
Unknown	0.70		Oxygenated sesquiterpene
Unknown	0.72	[0.87]*	Sesquiterpene
Unknown	0.49	0.35	Oxygenated sesquiterpene
Khusimone?	0.30		Norsesquiterpenic ketone
10-epi- γ -Eudesmol	8.46*	6.95	Sesquiterpenic alcohol

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Plus que des analyses... des conseils

Essential oil, *Vetiveria zizanioides* ct. India
Internal code: 18I25-FSE18-1-CC

Vetiver - India - VS170818

Report prepared for
Flowers Shining Everywhere Inc.

livinglibations
PHYSICO-CHEMICAL DATA

Physical aspect: Bright green viscous liquid
Refractive index: 1.5160 \pm 0.0003 (20 °C)

CONCLUSION

This sample contains various compounds (valeranol, 10-epi- γ -eudesmol, agarofurans...) that we do not typically observe in vetiver oils in such high concentrations; this may be due to a peculiar profile related to specific growing or distillation conditions.

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