



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: O50104

ESSENTIAL OIL: OREGANO ORGANIC
BOTANICAL NAME: ORIGANUM VULGARE
ORIGIN: HUNGARY

KEY CONSTITUENTS PRESENT IN THIS BATCH OF OREGANO ORGANIC OIL	%
CARVACROL	63.5
p-CYMENE	14.3
γ-TERPINENE	6.7
THYMOL	3.6
LINALOOL	2.2
α-PINENE	1.8
MYRCENE	1.8
β-CARYOPHYLLENE	1.4
α-TERPINENE	1.1

Comments from Robert Tisserand: Characteristic intense green odor quality, with constituents in expected amounts.

Date : January 11, 2017

SAMPLE IDENTIFICATION

Internal code : 17A03-PTH9-1-DM

Customer identification : Oregano Organic - O5010469R

Type : Essential Oil

Source : *Origanum vulgare*

Customer : Plant Therapy

ANALYSIS

Method : PC-PA-001-15E06, "Analysis of the composition of a liquid essential oil by GC-FID" (in French).

Analyst : Sylvain Mercier, M. Sc., chimiste

Analysis date : 2017-01-09

Checked and approved by :

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

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IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
Tricyclene	3.16	916	0.01	0.01	921	1.16	Monoterpene
α -Thujene	3.25	922	0.78	0.79	958	1.33	Monoterpene
α -Pinene	3.36	929	1.82	1.84	947	1.28	Monoterpene
α -Fenchene	3.62	945	0.07	0.08	984	1.53	Monoterpene
Camphene	3.64	946	0.39	0.38	993	1.59	Monoterpene
Sabinene	4.03	970	0.01	0.01	1055	2.06	Monoterpene
β -Pinene	4.13	977	0.46	0.44	1044	1.98	Monoterpene
Unknown (m/z = 93, 79 (69), 67 (38), 91 (34), 107 (33), 121 (31)... 136 (11))	4.26	985	0.03	0.02	1110	2.67	Monoterpene
Myrcene	4.43	995	1.79	1.75	1118	2.77*	Monoterpene
Octan-3-one	4.53	1001	0.11	6.59	1194	3.79*	Aliphatic ketone
Octen-3-ol	4.64	1006	0.08	0.10	1401	7.16	Aliphatic alcohol
α -Phellandrene	4.69*	1008	0.03	0.08	1113	2.71	Monoterpene
Δ 3-Carene	4.69*	1008	[0.03]	0.01	1096	2.47	Monoterpene
α -Terpinene	4.88	1018	1.06	1.05	1125	2.86	Monoterpene
meta-Cymene	4.99	1024	0.12	[1.75]	1118	2.77*	Monoterpene
para-Cymene	5.13	1031	14.25	14.44	1215	4.11*	Monoterpene
Limonene	5.16	1033	0.03	0.04	1142	3.09	Monoterpene
1,8-Cineole	5.19	1034	0.10	0.07	1149	3.18	Monoterp. ether
cis- β -Ocimene	5.30	1040	0.02	[6.59]	1194	3.79*	Monoterpene
trans- β -Ocimene	5.48	1049	0.01	[14.44]	1215	4.11*	Monoterpene
γ -Terpinene	5.69	1060	6.65	[6.59]	1194	3.79*	Monoterpene
cis-Sabinene hydrate	5.96	1074	0.03	0.02	1407	7.32	Monoterp. alcohol
Terpinolene	6.13	1083	0.02	0.02	1225	4.27	Monoterpene
Fenchone	6.28	1091	0.05	0.04	1323	5.78	Monoterp. ketone
para-Cymenene	6.36	1095	0.01	0.01	1370	6.53	Monoterpene
Linalool	6.71*	1108	2.26	2.22	1499	9.71	Monoterp. alcohol
trans-Sabinene hydrate	6.71*	1108	[2.26]	0.01	1486	9.23	Monoterp. alcohol
Borneol	8.63	1179	0.02	0.02	1620	14.82	Monoterp. alcohol
Terpinen-4-ol	8.74	1183	0.03	0.03	1529	10.85	Monoterp. alcohol
α -Terpineol	9.42	1204	0.01	0.01	1624	15.03	Monoterp. alcohol
Carvacrol methyl ether	10.86	1236	0.22	0.21	1531	10.94	Monoterp. ether
Linalyl acetate	11.73	1255	0.18	1.26	1515	10.32*	Monoterp. ester
Thymol	15.75	1329	3.55	3.57	2115	41.10	Monoterp. alcohol
Carvacrol	16.70	1344	63.45	63.80	2139	41.75	Monoterp. alcohol
β -Caryophyllene	20.41	1399	1.35	[1.26]	1515	10.32*	Sesquiterpene
α -Humulene	23.15	1432	0.02	0.02	1581	12.85	Sesquiterpene
β -Bisabolene	28.57	1497	0.03	0.04	1651	16.46	Sesquiterpene
δ -Cadinene	29.03	1503	0.01	0.02	1669	17.40	Sesquiterpene

Caryophyllene oxide	33.63	1567	0.41	0.33	1849	29.73	Sesquiterp. ether
Total identified			99.44%	99.31%			

*: Two or more compounds are coeluting on this column

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

Note: no correction factor was applied

OTHER DATA

Physical aspect : Faintly yellow liquid

Refractive index : 1.5085 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent were detected using this method.



