



GC/MS BATCH NUMBER: O50102

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

KEY CONSTITUENTS PRESENT IN THIS BATCH OF OREGANO ORGANIC OIL	%
CARVACROL	65.7
p-CYMENE	12.3
γ-TERPINENE	7.4
THYMOL	3.6
LINALOOL	2.1
α-PINENE	1.8
MYRCENE	1.6
β-CARYOPHYLLENE	1.2

Comments from Robert Tisserand: Has a fine, characteristic odor profile, and the constituents are in expected amounts.

Date : April 20, 2016

SAMPLE IDENTIFICATION

Internal code : 16D07-PTH8-1-LC

Customer identification : Organic Oregano - Hungarian - O50102510

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 : 2016-04-19

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	3.00	915	0.01	0.01	931	0.83	Monoterpene
α -Thujene	3.08	921	0.73	0.80	960	0.95	Monoterpene
α -Pinene	3.19	927	1.81	1.71	952	0.91	Monoterpene
Camphene	3.46*	944	0.38	0.34	1006	1.14	Monoterpene
α -Fenchene	3.46*	944	[0.38]	0.08	997	1.10	Monoterpene
β -Pinene	3.94	973	0.43	0.38	1044	1.44	Monoterpene
Myrcene	4.22*	991	1.79	1.61	1120	2.09	Monoterpene
Octen-3-ol	4.22*	991	[1.79]	0.08	1409	5.97	Aliphatic alcohol
Octan-3-one	4.22*	991	[1.79]	0.01	1210	3.15	Aliphatic ketone
α -Phellandrene	4.43	1003	0.09	0.08	1114	2.04	Monoterpene
α -Terpinene	4.67	1017	0.95	0.93	1126	2.17*	Monoterpene
meta-Cymene	4.76	1022	0.08	[0.93]	1126	2.17*	Monoterpene
para-Cymene	4.88*	1029	12.28	12.27	1217	3.25	Monoterpene
Limonene	4.88*	1029	[12.28]	0.05	1143	2.37	Monoterpene
1,8-Cineole	4.91	1030	0.07	0.08	1149	2.44	Monoterp. ether
γ -Terpinene	5.46	1061	7.43	7.38	1197	3.00	Monoterpene
cis-Sabinene hydrate	5.73	1076	0.01	0.01	1415	6.07	Monoterp. alcohol
Terpinolene	5.90	1086	0.04	0.02	1228	3.41	Monoterpene
Fenchone	6.03	1093	0.03	0.03	1326	4.77	Monoterp. ketone
para-Cymenene	6.07	1095	0.01	0.01	1374	5.48	Monoterpene
Linalool	6.33	1107	2.08	2.04	1505	7.80	Monoterp. alcohol
Borneol	8.00	1173	0.02	0.01	1627	11.52	Monoterp. alcohol
Terpinen-4-ol	8.20	1181	0.04	0.22	1538	8.67*	Monoterp. alcohol
Carvacrol methyl ether	10.21	1237	0.20	[0.22]	1538	8.67*	Monoterp. ether
Thymol	13.38	1308	3.57	3.74	2117	38.24	Monoterp. alcohol
Carvacrol	14.30	1324	65.71	66.27	2139	38.94	Monoterp. alcohol
β -Caryophyllene	19.31	1404	1.22	1.22	1527	8.33	Sesquiterpene
Caryophyllene oxide	32.36	1568	0.19	0.17	1853	23.96	Sesquiterp. ether
Total identified			99.17%	99.55%			

*: 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 : Clear liquid

Refractive index : 1.5080 \pm 0.0003 (20 °C)

CONCLUSION

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



