



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: O40104

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

KEY CONSTITUENTS PRESENT IN THIS BATCH OF OREGANO OIL	%
CARVACROL	61.6
p-CYMENE	14.3
γ-TERPINENE	8.5
THYMOL	3.6
LINALOOL	2.3
MYRCENE	2.0
α-PINENE	1.9
β-CARYOPHYLLENE	1.4
α-TERPINENE	1.1

Comments from Robert Tisserand: Characteristic green, spicy odor profile, with constituents in expected amounts.

Date : March 24, 2017

SAMPLE IDENTIFICATION

Internal code : 17C08-PTH6-1-DM

Customer identification : Oregano – 8-3-78573

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 : 2017-03-24

Checked and approved by :

Sylvain Mercier, M. Sc., chimiste 2014-005

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IDENTIFIED COMPOUNDS

Identification	Column: BP5			Column: WAX			Molecular Class
	R.T.	R.I.	%	%	R.I.	R.T.	
Tricyclene	3.22	917	0.01	0.01	923	1.07	Monoterpene
α -Thujene	3.30	922	0.79	0.78	959	1.23	Monoterpene
α -Pinene	3.41	928	1.92	1.84	949	1.18	Monoterpene
α -Fenchene	3.67	944	0.07	0.08	992	1.41	Monoterpene
Camphene	3.69	945	0.39	0.36	1000	1.47	Monoterpene
Thuja-2,4(10)-diene	3.78	950	tr	0.01	1059	2.00*	Monoterpene
Sabinene	4.11	970	0.01	[0.01]	1059	2.00*	Monoterpene
β -Pinene	4.18	974	0.46	0.44	1041	1.83	Monoterpene
Myrcene	4.46	991	2.00	1.81	1118	2.59	Monoterpene
Pseudolimonene	4.67	1003	0.08	0.07	1113	2.53	Monoterpene
α -Phellandrene	4.72	1006	0.04	0.02	1111	2.49	Monoterpene
α -Terpinene	4.91	1016	1.14	1.10	1124	2.68	Monoterpene
meta-Cymene	5.01	1022	0.17				Monoterpene
para-Cymene	5.13	1028	14.34	14.28	1215	3.88	Monoterpene
Limonene	5.15	1030	0.03	0.03	1142	2.90	Monoterpene
β -Phellandrene	5.18	1031	0.02	0.08	1148	2.98*	Monoterpene
1,8-Cineole	5.22	1033	0.06	[0.08]	1148	2.98*	Monoterp. ether
cis- β -Ocimene	5.32	1039	0.01	8.29	1194	3.59*	Monoterpene
trans- β -Ocimene	5.50	1048	0.01	0.01	1206	3.76	Monoterpene
γ -Terpinene	5.72	1060	8.51	[8.29]	1194	3.59*	Monoterpene
cis-Linalool oxide (fur.)	5.96	1074	0.01	0.01	1379	6.38	Monoterp. alcohol
cis-Sabinene hydrate	5.99	1075	0.02	0.03	1409	6.88*	Monoterp. alcohol
Terpinolene	6.16	1084	0.01	0.01	1225	4.04	Monoterpene
trans-Linalool oxide (fur.)	6.27	1091	0.01	[0.03]	1409	6.88*	Monoterp. alcohol
Fenchone	6.31	1093	0.04	0.04	1322	5.49	Monoterp. ketone
para-Cymenene	6.34	1095	0.01	0.01	1369	6.22	Monoterpene
Linalool	6.61	1106	2.26	2.23	1499	9.04	Monoterp. alcohol
Borneol	8.45	1173	0.03	0.05	1621	13.64	Monoterp. alcohol
Terpinen-4-ol	8.66	1181	0.04	0.04	1530	10.09	Monoterp. alcohol
Carvacrol methyl ether	10.81	1236	0.22	0.22	1533	10.22	Monoterp. ether
Thymol	14.17	1307	3.64	3.65	2114	40.15	Monoterp. alcohol
Carvacrol	15.08	1321	61.63	62.27	2136	40.79	Monoterp. alcohol
β -Caryophyllene	20.41	1402	1.38	1.36	1521	9.73	Sesquiterpene
α -Humulene	23.12	1434	0.02	0.04	1580	11.96	Sesquiterpene
Germacrene D	25.18	1459	0.01	0.01	1611	13.13	Sesquiterpene
β -Bisabolene	28.55	1500	0.03	0.03	1657	15.52	Sesquiterpene
δ -Cadinene	29.00	1506	0.02	0.03	1674	16.37	Sesquiterpene
Caryophyllene oxide	33.50	1568	0.27	0.27	1854	28.00	Sesquiterp. ether
Total identified			99.71%	99.51%			

*: 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 : Light yellow liquid

Refractive index : 1.5070 ± 0.0003 (20 °C)

CONCLUSION

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



