



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: O50105

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

KEY CONSTITUENTS PRESENT IN THIS BATCH OF OREGANO ORGANIC OIL	%
CARVACROL	65.8
p-CYMENE	9.4
γ-TERPINENE	6.5
THYMOL	4.0
β-CARYOPHYLLENE	2.5
MYRCENE	1.8
LINALOOL	1.5
α-THUJENE	1.3
α-TERPINENE	1.2
α-PINENE	1.2

Comments from Robert Tisserand: Intensely green, relatively soft odor profile. All eleven key ISO constituents are within range.

Date : August 17, 2017

SAMPLE IDENTIFICATION

Internal code : 17H16-PTH2-1-DM

Customer identification : Oregano Org - Spain - O5010573R

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).

Identifications double-checked by GC-MS

Analyst : Benoit Roger Ph. D.

Analysis date : 2017-08-17

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.	
Methyl 2-methylbutyrate	1.41	771	0.09	0.07	918	1.10	Aliphatic ester
α -Thujene	3.32	921	1.28	1.50	956	1.26	Monoterpene
α -Pinene	3.43	927	1.18	0.84	943	1.21	Monoterpene
Camphene	3.71	944	0.15	0.11	993	1.51	Monoterpene
β -Pinene	4.21	973	0.15	0.12	1038	1.89	Monoterpene
Myrcene	4.49	990	1.77	1.43	1114	2.67	Monoterpene
Octen-3-ol	4.53*	992	0.60	0.38	1400	6.91	Aliphatic alcohol
Octan-3-one	4.53*	992	[0.60]	6.72	1194	3.67*	Aliphatic ketone
Δ 3-Carene	4.76*	1005	0.28	0.08	1092	2.38	Monoterpene
α -Phellandrene	4.76*	1005	[0.28]	0.15	1107	2.57	Monoterpene
Octan-3-ol	4.81	1008	0.05	0.04	1346	5.97	Aliphatic alcohol
α -Terpinene	4.96	1016	1.24	1.47	1122	2.76*	Monoterpene
meta-Cymene	5.05	1021	0.07	[1.47]	1122	2.76*	Monoterpene
para-Cymene	5.17	1028	9.37	9.44	1213	3.95*	Monoterpene
Limonene	5.20	1029	0.20	0.18	1139	2.99	Monoterpene
β -Phellandrene	5.22	1030	0.19	0.25	1146	3.07*	Monoterpene
1,8-Cineole	5.25	1032	0.04	[0.25]	1146	3.07*	Monoterp. ether
<i>cis</i> - β -Ocimene	5.36	1038	0.01	[6.72]	1194	3.67*	Monoterpene
<i>trans</i> - β -Ocimene	5.54	1048	0.07	[9.44]	1213	3.95*	Monoterpene
γ -Terpinene	5.76	1059	6.74	[6.72]	1194	3.67*	Monoterpene
<i>cis</i> -Sabinene hydrate	6.07	1076	0.13	0.14	1404	7.01*	Monoterp. alcohol
Terpinolene	6.21	1084	0.11	[9.44]	1213	3.95*	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	6.35	1092	0.01	[0.14]	1404	7.01*	Monoterp. alcohol
para-Cymenene	6.42	1096	0.04	0.03	1369	6.36	Monoterpene
Linalool	6.71*	1107	1.54	1.52	1498	9.31	Monoterp. alcohol
<i>trans</i> -Sabinene hydrate	6.71*	1107	[1.54]	0.06	1483	8.88	Monoterp. alcohol
Borneol	8.64	1177	0.23	0.20	1619	14.12*	Monoterp. alcohol
Terpinen-4-ol	8.81	1183	0.65	0.68	1528	10.39*	Monoterp. alcohol
α -Terpineol	9.48	1204	0.07	0.12	1620	14.22*	Monoterp. alcohol
<i>trans</i> -Dihydrocarvone	9.70	1208	0.08	[0.68]	1528	10.39*	Monoterp. ketone
Carvacrol methyl ether	10.98	1236	0.06	0.10	1534	10.61	Monoterp. ether
Piperitone	11.87	1256	0.03	[0.12]	1620	14.22*	Monoterp. ketone
Thymol	15.07	1317	3.98	4.08	2110	40.61	Monoterp. alcohol
Carvacrol	15.99	1331	65.79	66.88	2134	41.24	Monoterp. alcohol
β -Caryophyllene	20.71	1401	2.48	2.57	1521	10.14	Sesquiterpene
α -Humulene	23.45	1434	0.16	0.16	1583	12.48	Sesquiterpene
Viridiflorene	26.57	1471	0.04	[0.20]	1619	14.12*	Sesquiterpene
β -Bisabolene	28.90	1499	0.21	0.20	1658	16.22	Sesquiterpene

Caryophyllene oxide	33.84	1569	0.16	0.12	1849	28.83	Sesquiterp. ether
Total identified			99.25%	99.64%			

*: 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

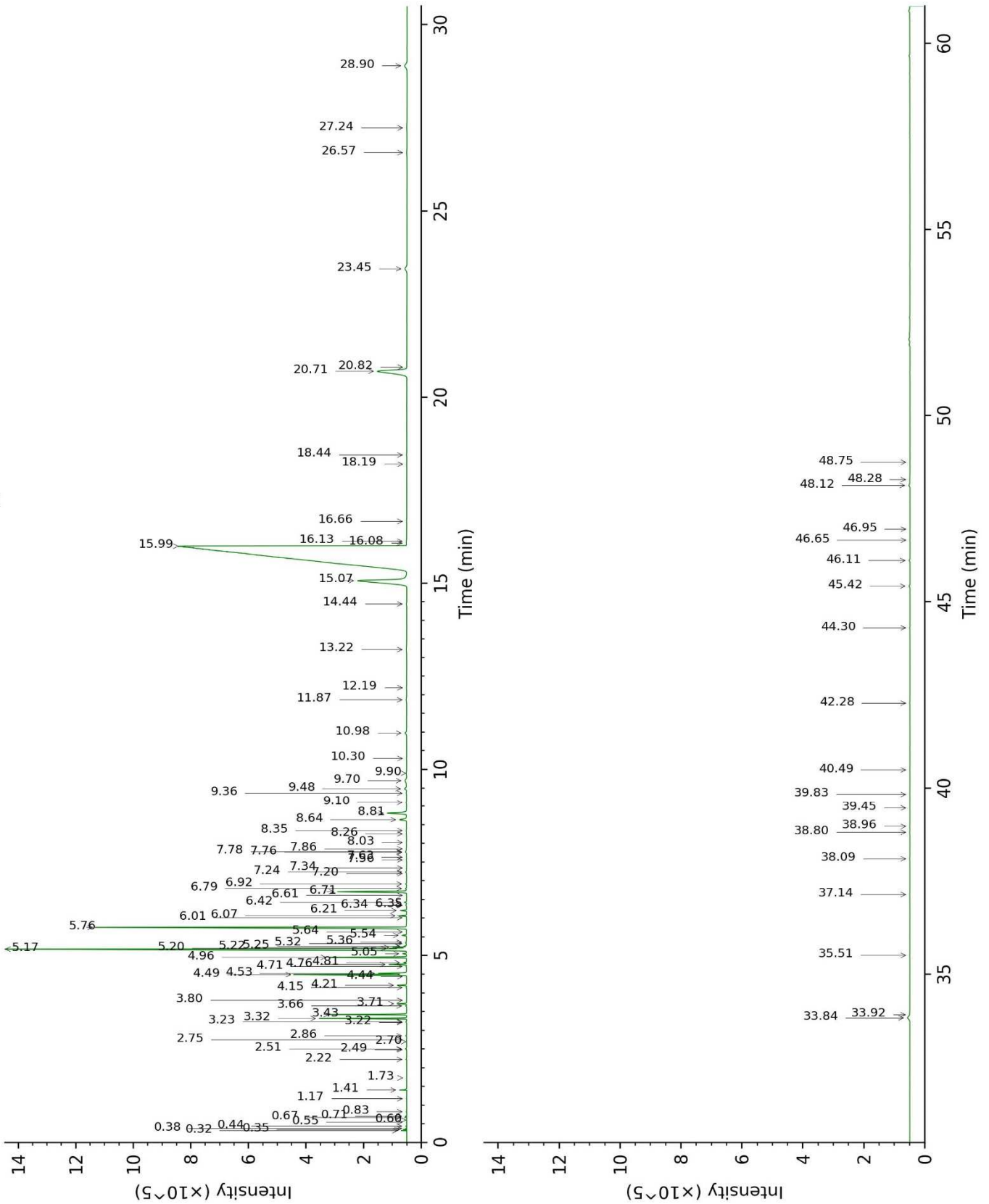
Physical aspect : Light yellow liquid

Refractive index : 1.5055 ± 0.0003 (20 °C)

CONCLUSION

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

17H16-PTH2-1-DM_BP5



17H16-PTH2-1-DM_WAX

