



PLANT THERAPY
100% PURE ESSENTIAL OILS

GC/MS BATCH NUMBER: TL0101

ESSENTIAL OIL: THYME LINALOOL
BOTANICAL NAME: THYME LINALOOL
ORIGIN: SPAIN

KEY CONSTITUENTS PRESENT IN THIS BATCH OF THYME LINALOOL OIL	%
LINALOOL	46.0
TERPINEN-4-ol	11.6
γ-TERPINENE	7.5
MYRCENE	7.0
α-TERPINENE	3.3
α-PINENE	3.0
LIMONENE	2.5
p-CYMENE	1.8
BORNEOL	1.7
α-TERPINEOL	1.5
TERPINOLENE	1.3
β-CARYOPHYLENE	1.1

Comments from Robert Tisserand: Beautiful sweet, green odor profile, with a hint of Tea Tree. Constituents are in expected amounts.

Date : May 29, 2017

SAMPLE IDENTIFICATION

Internal code : 17E19-PTH19-1-DM

Customer identification : Thyme Linalool - Spain - TL010115R

Type : Essential oil

Source : *Thymus vulgaris*

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 : 2017-05-29

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.	
<i>cis</i> -Hex-3-en-1-ol	2.49	866	0.01	0.01	1327	5.31	Aliphatic alcohol
Hashishene	3.20	916	0.34	3.14	945	1.09*	Monoterpene
α -Thujene	3.31	922	0.20	0.27	954	1.12	Monoterpene
α -Pinene	3.42	929	3.01	[3.14]	945	1.09*	Monoterpene
Camphene	3.70	946	0.92	0.89	1008	1.35	Monoterpene
Thuja-2,4(10)-diene	3.79	951	0.03	0.81	1060	1.85*	Monoterpene
Sabinene	4.13	971	0.79	[0.81]	1060	1.85*	Monoterpene
β -Pinene	4.19	975	0.37	0.33	1044	1.69	Monoterpene
Myrcene	4.49*	993	7.28	6.99	1119	2.43	Monoterpene
Octen-3-ol	4.49*	993	[7.28]	0.09	1397	6.40	Aliphatic alcohol
Octan-3-one	4.51	994	0.07	0.06	1198	3.46	Aliphatic ketone
α -Phellandrene	4.74*	1007	0.51	0.38	1110	2.32	Monoterpene
Δ 3-Carene	4.74*	1007	[0.51]	0.02	1095	2.17	Monoterpene
Octan-3-ol	4.74*	1007	[0.51]	0.05	1346	5.60	Aliphatic alcohol
α -Terpinene	4.94	1018	3.31	3.31	1124	2.50	Monoterpene
para-Cymene	5.12	1028	1.78	1.75	1208	3.59	Monoterpene
Limonene	5.16	1030	2.48	2.34	1142	2.72	Monoterpene
β -Phellandrene	5.19	1032	0.75	1.50	1147	2.79*	Monoterpene
1,8-Cineole	5.22	1033	0.69	[1.50]	1147	2.79*	Monoterp. ether
<i>cis</i> - β -Ocimene	5.33	1039	0.03	7.45	1191	3.36*	Monoterpene
<i>trans</i> - β -Ocimene	5.52	1049	0.13	0.14	1201	3.50	Monoterpene
γ -Terpinene	5.73	1061	7.47	[7.45]	1191	3.36*	Monoterpene
<i>cis</i> -Linalool oxide (fur.)	5.97	1074	0.45	0.45	1376	6.07	Monoterp. alcohol
<i>cis</i> -Sabinene hydrate	6.01	1076	0.95	1.41	1405	6.54*	Monoterp. alcohol
Terpinolene	6.18	1086	1.33	1.30	1223	3.80	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	6.28	1091	0.44	[1.41]	1405	6.54*	Monoterp. alcohol
para-Cymenene	6.37	1096	0.06	0.05	1357	5.79	Monoterpene
Linalool	6.80*	1113	45.35	46.04	1502	8.68*	Monoterp. alcohol
<i>trans</i> -Sabinene hydrate	6.80*	1113	[45.35]	0.18	1481	8.18	Monoterp. alcohol
Hotrienol	6.82	1114	0.84	0.81	1550	10.14	Monoterp. alcohol
<i>cis</i> -para-Menth-2-en-1-ol	7.19	1127	0.39	[46.04]	1502	8.68*	Monoterp. alcohol
<i>trans</i> -Pinocarveol	7.51	1139	0.02	0.03	1565	10.67	Monoterp. alcohol
<i>trans</i> -para-Menth-2-en-1-ol	7.66	1145	0.26	0.25	1557	10.39	Monoterp. alcohol
Camphor	7.73	1147	0.41	0.38	1426	6.89*	Monoterp. ketone
Isoborneol	8.20	1164	0.08	0.06	1597	11.86	Monoterp. alcohol
Borneol	8.59	1179	1.69	1.70	1620	12.68*	Monoterp. alcohol
Terpinen-4-ol	8.81	1187	11.57	11.56	1535	9.58*	Monoterp. alcohol
para-Cymen-8-ol	9.20	1201	0.07	0.07	1769	20.66	Monoterp. alcohol
α -Terpineol	9.36	1204	1.47	1.42	1627	12.96	Monoterp. alcohol
<i>cis</i> -Dihydrocarvone	9.41	1205	0.24	0.25	1527	9.28	Monoterp. ketone
<i>trans</i> -Dihydrocarvone	9.60	1209	0.25	0.28	1537	9.68	Monoterp. ketone

<i>trans</i> -Piperitol	9.81	1214	0.14	0.11	1670	15.11	Monoterp. alcohol
Thymol methyl ether	10.30	1225	0.20	[11.56]	1535	9.58*	Monoterp. ether
Linalyl acetate	11.34	1248	0.54	0.64	1503	8.72	Monoterp. ester
Geraniol	11.68	1256	0.12	0.11	1783	21.65	Monoterp. alcohol
Bornyl acetate	12.83	1281	0.09	0.11	1508	8.85	Monoterp. ester
Thymol	14.40	1311	0.15	0.14	2112	39.26	Monoterp. alcohol
Carvacrol	14.76	1316	0.07	0.09	2129	39.80	Monoterp. alcohol
α -Copaene	17.72	1361	0.01	[0.38]	1426	6.89*	Sesquiterpene
β -Bourbonene	18.00	1366	0.04	0.05	1453	7.54	Sesquiterpene
β -Caryophyllene	20.45	1402	1.08	1.13	1525	9.23	Sesquiterpene
α -Humulene	23.19	1435	0.03	0.03	1580	11.25	Sesquiterpene
Germacrene D	25.38	1461	0.09	[1.70]	1620	12.68*	Sesquiterpene
Bicyclogermacrene	26.62	1476	0.15	0.16	1644	13.73	Sesquiterpene
δ -Cadinene	29.09	1507	0.04	0.03	1674	15.32	Sesquiterpene
Caryophyllene oxide	33.59*	1570	0.12	0.08	1851	26.08	Sesquiterp. ether
Spathulenol	33.59*	1570	[0.12]	0.04	2025	36.32	Sesquiterp. alcohol
Total identified			98.91%	98.49%			

*: 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 : 1.4680 \pm 0.0003 (20 °C)

CONCLUSION

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

17E19-PTH19-1-DM_WAX

