

GC/MS BATCH NUMBER: TL0100

ESSENTIAL OIL: THYME LINALOOL
BOTANICAL NAME: THYMUS VULGARIS
ORIGIN: FRANCE

KEY CONSTITUENTS PRESENT IN THIS BATCH OF THYME LINALOOL OIL	%
LINALOOL	51.3
THYMOL	11.6
CARVACROL	11.2
p-CYMENE	4.0
GERANIOL	3.3
γ-TERPINENE	2.8
TERPINEN-4-OL	2.6
β-CARYOPHYLLENE	1.9
α-TERPINENE	1.2

Comments from Robert Tisserand: This linalool chemotype of Thyme has about half the amount of thymol and carvacrol found in regular thyme oil.

Date : July 26, 2016

SAMPLE IDENTIFICATION

Internal code : 16G12-PTH5-1-DM

Customer identification : Thyme Linalool - France - TL010056R

Type : Essential oil

Source : *Thymus sp.*

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 : 2016-07-25

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.	
α -Thujene	3.23	922	0.17	0.18	953	0.91	Monoterpene
α -Pinene	3.33	928	0.20	0.18	944	0.88	Monoterpene
Camphene	3.62	945	0.08	0.07	999	1.10	Monoterpene
Sabinene	4.05	971	0.72	0.71	1055	1.53	Monoterpene
β -Pinene	4.10	975	0.09	0.08	1038	1.39	Monoterpene
Myrcene	4.39	992	0.94	0.88	1113	2.03	Monoterpene
α -Phellandrene	4.65*	1008	0.15	0.09	1107	1.95	Monoterpene
Δ^3 -Carene	4.65*	1008	[0.15]	0.05	1088	1.79	Monoterpene
α -Terpinene	4.85	1018	1.17	1.12	1121	2.11	Monoterpene
para-Cymene	5.05	1029	4.02	4.04	1209	3.13	Monoterpene
Limonene	5.07	1031	0.38	0.32	1138	2.31	Monoterpene
β -Phellandrene	5.10	1032	0.23	1.03	1144	2.38*	Monoterpene
1,8-Cineole	5.13	1034	0.83	[1.03]	1144	2.38*	Monoterp. ether
<i>cis</i> - β -Ocimene	5.25	1041	0.04	2.77	1188	2.89*	Monoterpene
<i>trans</i> - β -Ocimene	5.43	1051	0.08	0.08	1202	3.06	Monoterpene
γ -Terpinene	5.63	1061	2.76	[2.77]	1188	2.89*	Monoterpene
<i>cis</i> -Linalool oxide (fur.)	5.92	1078	0.09	0.09	1377	5.52	Monoterp. alcohol
<i>cis</i> -Sabinene hydrate	5.97	1081	0.44	0.50	1408	5.96	Monoterp. alcohol
Terpinolene	6.09	1087	0.33	0.33	1223	3.33	Monoterpene
<i>trans</i> -Linalool oxide (fur.)	6.23	1095	0.21	0.16	1406	5.93	Monoterp. alcohol
para-Cymenene	6.30	1099	0.03	0.02	1368	5.38	Monoterpene
Linalool	6.80	1118	51.34	50.05	1503	7.76*	Monoterp. alcohol
1-Terpineol	7.65	1150	0.13				Monoterp. alcohol
<i>cis</i> - β -Terpineol	7.69	1152	0.01				Monoterp. alcohol
<i>trans</i> - β -Terpineol	8.50	1182	0.01	0.01	1615	11.01	Monoterp. alcohol
Terpinen-4-ol	8.66	1188	2.60	2.65	1530	8.43*	Monoterp. alcohol
α -Terpineol	9.29	1208	0.51	0.44	1624	11.40	Monoterp. alcohol
Thymol methyl ether	10.40	1233	0.28	2.13	1524	8.26*	Monoterp. ether
Nerol	10.49	1235	0.47	0.73	1728	16.19	Monoterp. alcohol
Carvacrol methyl ether	11.20	1251	0.23	0.23	1532	8.51	Monoterp. ether
Linalyl acetate	11.79	1264	0.57	[50.05]	1503	7.76*	Monoterp. ester
Geraniol	11.94	1268	3.33	3.89	1779	19.27	Monoterp. alcohol
Thymol	15.61	1336	11.64	11.63	2103	37.76	Monoterp. alcohol
Carvacrol	16.07	1343	11.19	11.22	2120	38.34	Monoterp. alcohol
β -Caryophyllene	20.15	1405	1.86	[2.13]	1524	8.26*	Sesquiterpene
Aromadendrene	21.47	1421	0.21	[2.65]	1530	8.43*	Sesquiterpene
α -Humulene	22.89	1438	0.84	0.83	1583	10.05	Sesquiterpene
δ -Cadinene	28.73	1510	0.03	0.03	1674	13.63	Sesquiterpene
Caryophyllene oxide	33.35*	1573	0.12	0.11	1845	23.39	Sesquiterp. ether

Spathulenol	33.35*	1573	[0.12]	0.04	2016	34.46	Sesquiterp. alcohol
Total identified			98.33%	96.69%			

*: 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-brown liquid

Refractive index : 1.4788 ± 0.0003 (20 °C)

CONCLUSION

No adulterant, contaminant or diluent were detected using this method. This is a linalool-type thyme.



