



# PLANT THERAPY

100% PURE ESSENTIAL OILS

## GC/MS BATCH NUMBER: T40101

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**ESSENTIAL OIL:** THYME

**BOTANICAL NAME:** THYMUS VULGARIS CT THYMOL

**ORIGIN:** ITALY

KEY CONSTITUENTS PRESENT IN THIS BATCH OF THYME OIL	%
THYMOL	41.8
p-CYMENE	18.0
γ-TERPINENE + trans-β-OCIMENE	8.3
CARVACROL	5.2
LINALOOL	4.5
β-CARYOPHYLLENE	3.1
β-MYRCENE	2.0
1,8-CINEOLE + β-PHELLANDRENE	1.4
TERPINEN-4-OL	1.3
α-HUMULENE	1.2
α-TERPINEOL + γ-TERPINEOL	1.2
CAMPHENE	1.1
α-COPAENE	1.0
α-PINENE	0.9
α-TERPINENE	0.6
α-THUJENE	0.5
METHYL CARVACROL EHTER	0.1

Comments from Robert Tisserand: Has the characteristic odor of a high thymol thyme oil. There is no ISO for this type of thyme, though there is for Spanish *Thymus zygis*. This oil would conform to the ISO for Spanish thyme on 11 of 13 constituents.

**CUSTOMER :**

**PLANT THERAPY  
126 Locust Street South  
Twin Falls, ID 83 301  
USA**

**Sample nature :** ESSENTIAL OIL  
**Botanical species :** THYMUS VULGARIS CT THYMOL  
**Reference name :** THYME THYMOL  
**Batch number :** T40101  
**Origin :** ITALY  
**Part:** FLOWER / LEAF  
**Pyrenessences reference :** D604  
**Date of reception :** 04/30/2015  
**Date analysis :** 05/12/2015  
**Packaging :** Amber flask of 5 ml – ambient temperature  
**Analysis :** Classic

**Validated report by :**

**Daniel DANTIN**



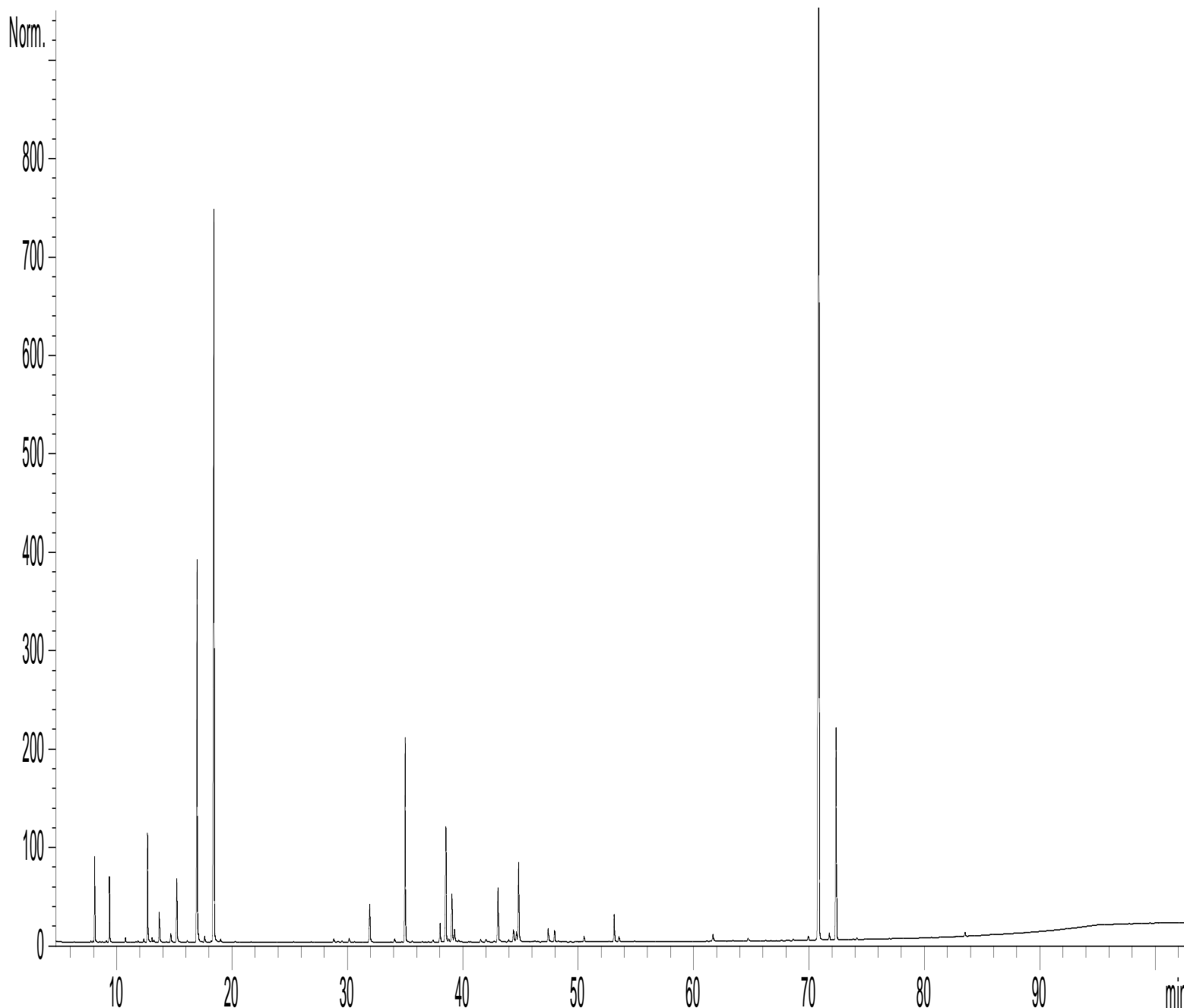
**GAS CHROMATOGRAPHY** norm NF ISO 11024

**Analysis conditions :**

CPG 6890 / MS 5973 – Column : : VF - WAX polar 60 m × 0,25 mm × 0,5 µm  
CPG 6890 FID - Column : : HP INNOWAX polar 60 m × 0,25 mm × 0,5 µm  
Temperature program : 6 mn to 60 °C –2 °C/mn→250 °C - 20mn to 250 °C  
Carrier gas He : 23 psis/MS – 30 psis/FID  
Sample injection / split : 1 µl of 10 % solution in hexane,  
Mass range : 30 to 350, Oil components are identified by a combination of retention times  
(our own database) and mass spectra library NKS 75 000 records,  
Percentages are calculated from GC/FID peaks areas without using corrections factors,

**Chromatographic profile (GC/FID)**

FID1 A, (Z:\PLANTHER\TV15D604.D)



**Identification results 1 : THYME ITALY BATCH T40101**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
1	6,3	ETHANOL	0,01		
2	7,8	METHYL 2-METHYLBUTYRATE	0,02		
3	8,0	TRICYCLENE	0,02		
4	8,0	MENTHANE ISOMER	0,03		
5	8,1	$\alpha$ -PINENE	0,94		
6	8,1	$\alpha$ -THUYENE	0,47		
7	8,6	MENTHANE ISOMER	0,01		
8	8,8	ETHYL 2-METHYLBUTYRATE	0,01		
9	9,1	$\alpha$ -FENCHENE	0,02		
10	9,4	CAMPHENE	1,08		
11	10,0	2,6-OCTADIENE, 2,6-DIMETHYL- ISOMER	0,01		
12	10,8	$\beta$ -PINENE	0,08		
13	11,7	SABINENE	0,02		
14	11,9	p-MENTH-2-ENE	0,03		
15	12,4	$\Delta$ 3-CARENE	0,07		
16	12,7	$\beta$ -MYRCENE	1,99		
17	13,1	$\alpha$ -PHELLANDRENE	0,11		
18	13,2	$\psi$ -LIMONENE	0,05		
19	13,7	$\alpha$ -TERPINENE	0,64		
20	14,3	PRENYL ACETATE	0,01		
21	14,7	LIMONENE	0,22		0,22
22	15,2	1,8-CINEOLE + $\beta$ -PHELLANDRENE	1,42		
23	16,1	Cis- $\beta$ -OCIMENE	0,04		
24	17,0	$\gamma$ -TERPINENE + trans- $\beta$ -OCIMENE	<b>8,25</b>		
25	17,6	3-OCTANONE	0,14		
26	18,2	m-CYMENE	0,03		
27	18,4	<b>p-CYMENE</b>	<b>18,04</b>		
28	19,0	TERPINOLENE	0,08		
29	20,3	CYMENE COMPONENT	0,02		
30	21,6	PINOL	0,01		
31	25,0	3-HEXEN-1-OL	0,01		
32	25,3	3-OCTANOL	0,01		
33	26,3	FENCHONE	0,01		
34	26,9	TERPENIC KETONE	0,01		
35	28,8	$\alpha$ ,p-DIMETHYLSTYRENE	0,09		
36	29,1	LINALOOL Cis-OXIDE	0,03		
37	29,5	1-OCTEN-3-OL	0,04		
38	30,2	$\alpha$ -CUBEBENE + Trans-THUYANOL	0,09		
39	30,6	LINALOOL trans-OXIDE	0,01		
40	30,6	SESQUITERPENE	0,01		
41	31,4	YLANGENE	0,01		
42	31,9	$\alpha$ -COPAENE	1,03		
43	34,1	$\alpha$ -GURJUNENE	0,09		
44	34,7	BENZALDEHYDE	0,01		
45	35,0	<b>LINALOOL</b>	<b>4,45</b>		

**Identification results 2 : THYME ITALY BATCH T40101**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
46	35,6	Trans-THUYANOL + GURJUNENE ISOMER	0,03		
47	36,5	Trans-p-MENTH-2-EN-1-OL	0,01		
48	37,0	CALARENE	0,01		
49	37,4	$\alpha$ -trans-BERGAMOTENE	0,06		
50	38,0	METHYL THYMOL ETHER	0,50		
51	38,5	<b><math>\beta</math>-CARYOPHYLLENE</b>	<b>3,13</b>		
52	38,8	METHYL CARVACROL ETHER	0,10		
53	39,1	TERPINENE-4-OL	1,28		
54	39,3	AROMADENDRENE	0,39		
55	39,5	Cis-DIHYDROCARVONE	0,03		
56	39,7	SESQUITERPENE	0,06		
57	39,9	Cis-p-MENTH-2-EN-1-OL	0,02		
58	40,5	SESQUITERPENE	0,02		
59	41,6	UMBELLULONE	0,07		
60	42,0	ALLO-AROMADENDRENE	0,09		
61	42,3	ISOBORNEOL + ZONARENE	0,03		
62	42,7	$\delta$ -TERPINEOL + IPSDIENOL Mw=152	0,03		
63	43,1	$\alpha$ -HUMULENE	1,21		
64	43,2	NERAL	0,30		0,30
65	44,4	$\gamma$ -MUUROLENE	0,36		
66	44,6	LEDENE	0,28		
67	44,8	BORNEOL	1,00		
68	44,9	$\alpha$ -TERPINEOL + $\gamma$ -TERPINEOL	1,17		
69	45,9	TERPENIC ACETATE	0,01		
70	46,3	GERMACRENE D	0,04		
71	46,5	CARVENONE + SESQUITERPENE	0,02		
72	47,0	$\alpha$ -MUUROLENE	0,05		
73	47,4	GERANIAL	0,35		0,35
74	48,0	$\delta$ -CADINENE	0,29		
75	48,3	$\gamma$ -CADINENE	0,03		
76	48,8	METHYL SALICYLATE	0,01		
77	49,8	CADINA-1,4-DIENE	0,01		
78	50,5	NEROL	0,14		
79	52,7	CALAMENENE	0,02		
80	53,1	GERANIOL	0,65		0,65
81	53,1	p-CYMEN-8-OL	0,05		
82	53,5	THYMYL ACETATE	0,14		
83	54,9	CARVACRYL ACETATE	0,03		
84	56,0	CUBEBOL	0,01		
85	61,1	ISOCARYOPHYLLENE EPOXIDE	0,02		
86	61,7	CARYOPHYLLENE EPOXIDE	0,24		
87	62,7	HUMULOL	0,01		
88	63,4	NEROLIDOL	0,03		
89	64,7	EPOXY-6,7-HUMULENE	0,08		
90	66,2	VIRIDIFLOROL	0,01		

**Identification results 3 : THYME ITALY BATCH T40101**

Peak	RT (min)	Compound name	%	Norm (%)	Allergens (%)
91	66,6	SPATHULENOL	0,05		
92	69,9	ISOTHYMOL	0,12		
93	70,7	EUGENOL	0,03		0,03
94	70,9	<b>THYMOL</b>	<b>41,82</b>		
95	71,8	ISOCARVACROL	0,19		
95	72,3	<b>CARVACROL</b>	<b>5,15</b>		
96	72,4	GERANYLGERANIADIENE ISOMER	0,30		
97	74,2	GERANYLGERANIADIENE ISOMER	0,04		
98	83,5	ETHANONE, DIMETHOXYPHENYL Mw=180	0,10		
		<b>TOTAL</b>	<b>99,99</b>		<b>1,55</b>