



Aromatic Plant Research Center

We provide uncompromising
quality control for your products.

Customer: doTERRA International

Lot Number: 190219

Date Filled: 1/21/2019

Column: ZB5 (60 m length × 0.25 mm inner diameter × 0.25 µm film thickness)

Instrument: Shimadzu GCMS-QP2010 Ultra

Carrier gas: Helium 80 psi

Temperature ramp: 2 degrees celsius per minute up to 260-degrees celsius

Split ratio: 30:1

Sample preparation: 5%w/v solution with Dichloromethane.

Comments:

The analysis of this Thyme lot revealed no contaminants or adulteration.

The sample meets the expected chemical profile for authentic essential oils of *Thymus vulgaris*.



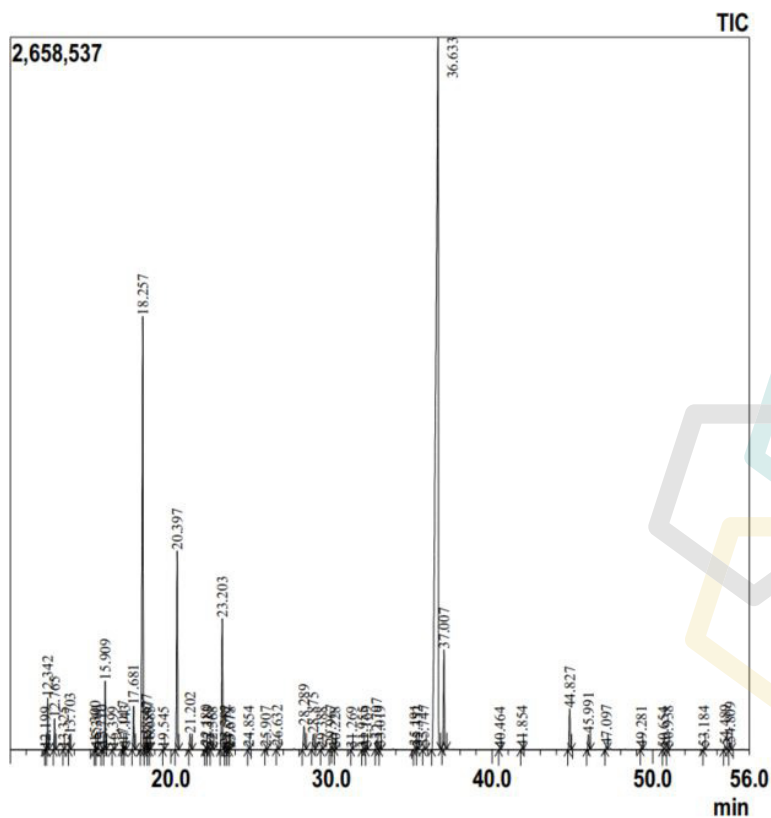
Thyme Essential Oil

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Chromatogram



Peak Report

Ret.Time	Compound Name	Area %			
12.199	Tricyclene	0.01			
12.342	alpha-Thujene	1.17			
12.765	alpha-Pinene	0.74			
13.325	Thujadiene	0.02			
13.703	Camphene	0.37			
15.3	beta-Pinene	0.18			
15.36	Octen-3-ol	0.05			
15.71	3-Octanone	0.07			
15.909	Myrcene	1.72			
16.399	3-Octanol	0.04			
17.017	alpha-Phellandrene	0.16			
17.143	delta-3-Carene	0.08			
17.681	alpha-Terpene	1.21			
18.257	para-Cymene	14.75			
18.477	Limonene	0.36			
18.597	beta-Phellandrene	0.2			
18.683	1,8-Cineole	0.04			
19.545	trans-beta-Ocimene	0.04			
20.397	gamma-Terpinene	5.88			
21.202	cis-Sabinene hydrate	0.54			
22.18	Terpinolene	0.1			
22.313	trans-Linalool oxide (furanoid)	0.1			
22.568	para-Cymenene	0.05			
23.203	Linalool	4.29			
23.382	trans-Sabinene hydrate	0.13			
23.577	Nonanal	0.03			
23.678	alpha-Pinene oxide	0.02			
24.854	Fenchol	0.05			
25.907	Epiphotoxal A	0.04			
26.632	trans-Chrysanthanal	0.09			
28.289	Borneol	0.95			
28.875	Terpinen-4-ol	0.68			
29.388	para-Cymen-8-ol	0.03			
29.967	alpha-Terpineol	0.11			
30.228	trans-dihydroCarvone	0.03			
31.269	Coahulensol methyl ether	0.03			
31.955	Nerol	0.03			
32.169	Bornyl formate	0.06			
32.797	Carvacrol, methyl ether	0.29			
33.019	Nerol	0.08			
35.191	Geranial	0.11			
35.352	2,4-Dimethyl phenethyl alcohol	0.07			
35.747	Isothymol	0.1			
36.633	Thymol	59.1			
37.007	Carvacrol	3.06			
40.464	Eugenol	0.03			
41.854	Thyme Sesquiterpene 1	0.06			
44.827	beta-Caryophyllene	1.45			
45.991	4-Tert-Butylcatechol	0.53			
47.097	Thyme Sesquiterpene 2	0.11			
49.281	Viridiflorene	0.05			
50.654	delta-Amorphene	0.03			
50.938	delta-Cadinene	0.08			
53.184	Geranyl butanoate	0.06			
54.489	Spathulenol	0.12			
54.809	Caryophyllene oxide	0.22			
		Area Total:	100		

Comments:

The analysis of this Thyme lot revealed no contaminants or adulteration.

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