



Aromatic Plant Research Center

We provide uncompromising
quality control for your products.

Customer: doTERRA International

Lot Number: 180783

Date Filled: 3/19/2018

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 Oregano lot revealed no contaminants or adulteration.

The sample meets the expected chemical profile for authentic essential oils of *Origanum vulgare*.



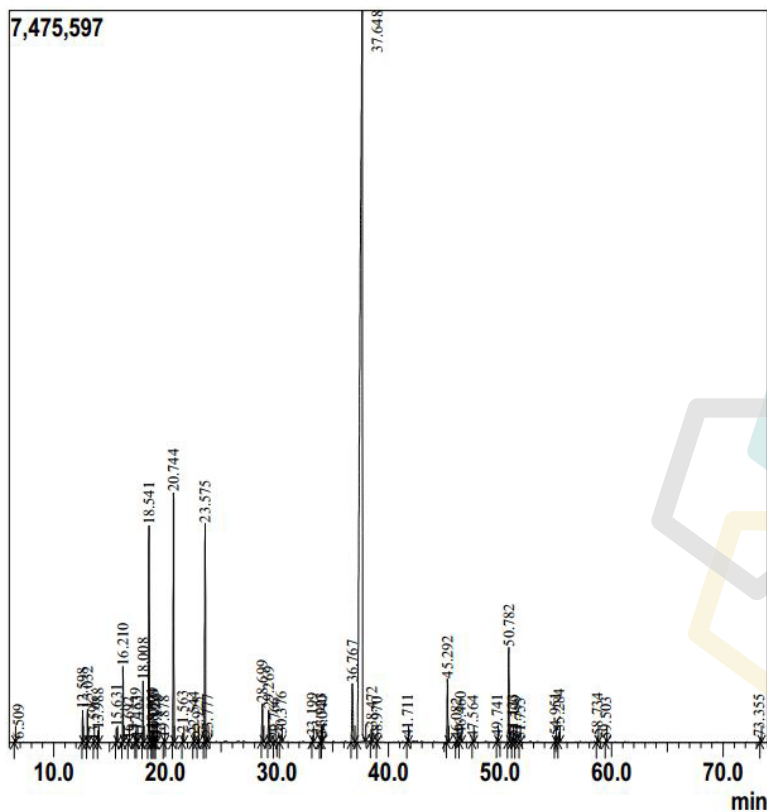
Oregano Essential Oil

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Chromatogram



Peak Report

Ret.Time	Compound Name	Area %	Ret.Time	Compound Name	Area %	Ret.Time	Compound Name	Area %
6.509	Methyl-alpha-methyl-butrate	0.04	23.575	Linalool	5.9	51.399	delta-Cadinene	0.09
12.598	alpha-Thujene	0.59	23.777	Hotrienol	0.18	51.755	beta-Sesquiphellandrene	0.03
13.032	alpha-Pinene	0.62	28.699	Borneol	1.2	54.951	Spathulenol	0.17
13.596	Thujadiene	0.03	29.269	Terpinen-4-ol	1.04	55.284	Caryophyllene oxide	0.27
13.988	Camphene	0.23	29.766	para-Cymen-8-ol	0.06	58.734	epi-alpha-Cadinol	0.17
15.631	Octen-3-ol	0.37	30.376	alpha-Terpineol	0.28	59.503	alpha-Cadinol	0.06
16.21	Myrcene	1.54	33.199	Carvacrol methyl ether	0.15	73.355	Oregano Sesquiterpenoid 2	0.14
16.692	3-Octanol	0.05	33.923	Carvone	0.22			
17.339	alpha-Phellandrene	0.23	34.04	Linalyl acetate	0.1			
17.463	delta-3-Carene	0.07	36.767	Thymol	2.3			
18.008	alpha-Terpinene	1.34	37.648	Carvacrol	64.7			
18.541	para-Cymene	4.96	38.472	Methyl non-8-enoate	0.29			
18.801	Limonene	0.25	38.97	Oregano Sesquiterpenoid 1	0.04			
18.929	beta-Phellandrene	0.27	41.711	Carvacryl acetate	0.12			
19.025	1,8-Cineole	0.13	45.292	beta-Caryophyllene	1.76			
19.176	cis-beta-Ocimene	0.09	46.082	alpha-trans-Bergamotene	0.04			
19.878	trans-beta-Ocimene	0.08	46.46	Aromadendrene	0.29			
20.744	gamma-Terpinene	6.07	47.564	alpha-Humulene	0.09			
21.563	cis-Sabinene hydrate	0.23	49.741	Vridiflorene	0.11			
22.544	Terpinolene	0.17	50.782	beta-Bisabolene	2.63			
22.925	para-Cymenene	0.07	51.123	delta-Amorphene	0.13			

Area Total: 100

Comments:

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

The sample meets the expected chemical profile for authentic essential oils of *Origanum vulgare*.

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