



Aromatic Plant Research Center

We provide uncompromising
quality control for your products.

Customer: doTERRA International

Lot Number: 1912910

Date Filled: 5/9/2019

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 Bergamot lot revealed no contaminants or adulteration.

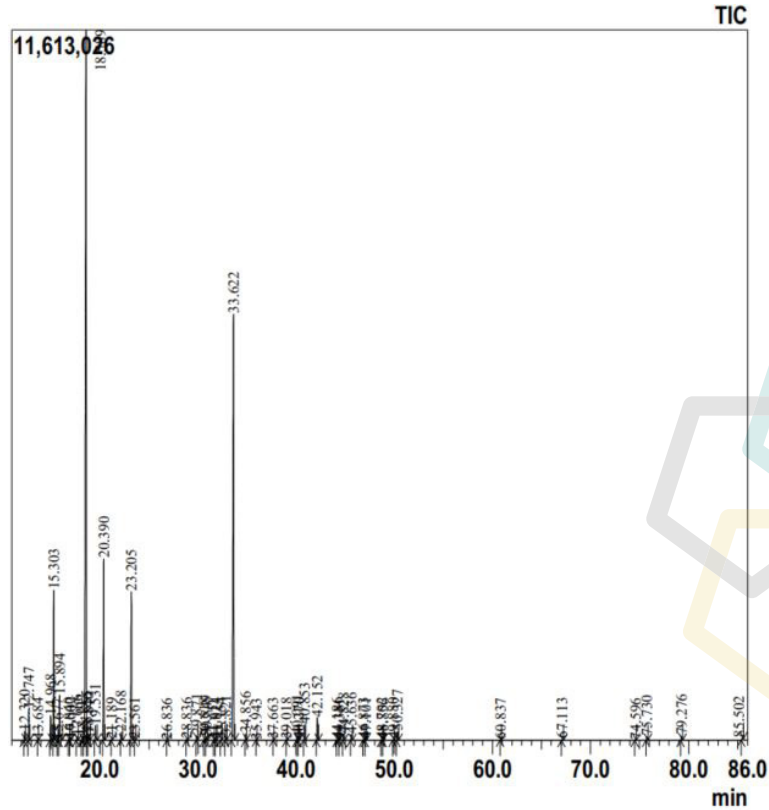
The sample meets the expected chemical profile for authentic essential oils of *Citrus bergamia*.



Bergamot Essential Oil

Customer: doTERRA International
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Chromatogram



Peak Report

Ret.Time	Compound Name	Area %	Ret.Time	Compound Name	Area %	Ret.Time	Compound Name	Area %
12.32	alpha-Thujene	0.27	28.836	Terpinen-4-ol	0.04	46.873	trans-beta-Farnesene	0.04
12.747	alpha-Pinene	0.98	29.871	alpha-Terpineol	0.19	47.101	alpha-Humulene	0.03
13.684	Camphene	0.03	30.618	n-Decanal	0.06	48.702	Germacrene D	0.04
14.968	Sabinene	0.85	30.849	Octanol acetate	0.15	48.856	Farnesene isomer	0.02
15.303	beta-Pinene	5.06	31.611	epoxy-Neral	0.01	49.88	cis-alpha-Bisabolene	0.03
15.677	6-methyl-Hept-5-en-2-one	0.01	31.824	Nerol	0.02	50.327	beta-Bisabolene	0.4
15.894	Myrcene	1.87	32.354	epoxy-Geraniol	0.03	60.837	alpha-Bisabolol	0.01
16.84	n-Octanal	0.04	32.821	Neral	0.15	67.113	Nootkatone	0.04
17.002	alpha-Phellandrene	0.03	33.622	Linalyl acetate	26.21	74.596	Baldriol	0.02
17.666	alpha-Terpinene	0.16	34.856	Geraniol	0.26	75.73	Citropten	0.17
18.192	para-Cymene	0.2	35.943	Bornyl acetate	0.01	79.276	Bergaptene	0.21
18.589	Limonene	44.36	37.663	Nonyl acetate	0.01	85.502	Bergaptol	0.11
18.655	beta-Phellandrene	0.22	39.018	Linalyl propanoate	0.02			
18.84	cis-beta-Ocimene	0.27	40.091	alpha-Terpinyl acetate	0.2			
19.531	trans-beta-Ocimene	0.64	40.27	Citronellyl acetate	0.03			
20.39	gamma-Terpinene	7.13	40.853	Neryl acetate	0.89			
21.189	cis-Sabinene hydrate	0.03	42.152	Geranyl acetate	1.02			
22.168	Terpinolene	0.32	44.186	Decyl acetate	0.04			
23.205	Linalool	6.64	44.381	alpha-cis-Bergamotene	0.02			
23.561	n-Nonanal	0.03	44.828	beta-Caryophyllene	0.3			
26.836	Citronellal	0.01	45.636	alpha-trans-Bergamotene	0.28			

Comments:

The analysis of this Bergamot lot revealed no contaminants or adulteration. The sample meets the expected chemical profile for authentic essential oils of *Citrus bergamia*.

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