

Aromatic Plant Research Center

We provide uncompromising
quality control for your products.

Customer: doTERRA International

Lot Number: 2183052

Date Filled: 43404

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:

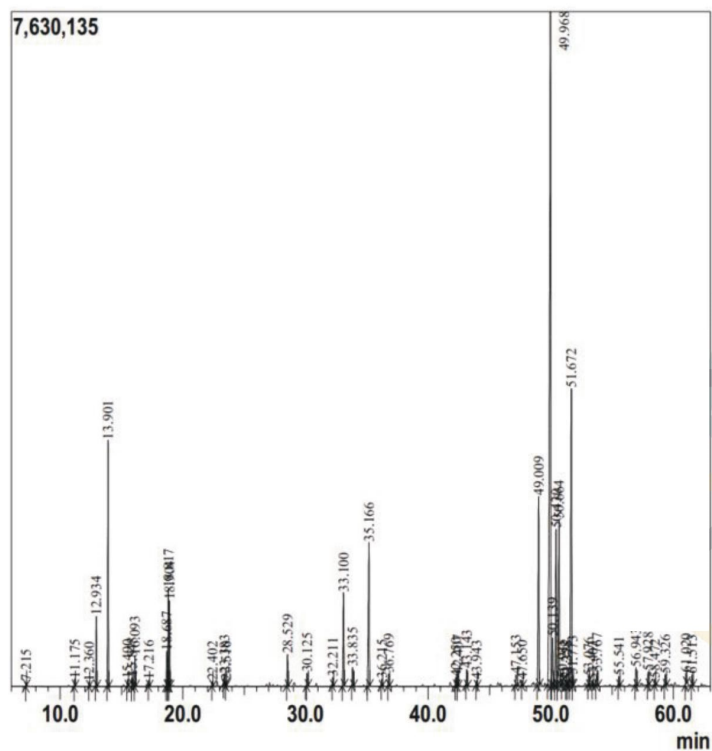
The analysis of this GINGER lot revealed no contaminants or adulteration.

The sample meets the expected chemical profile for authentic essential oils of *Zingiber officinale*.

GINGER Essential Oil

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Chromatogram



Peak Report

Ret.Time	Compound Name	Area %
7.215	Hexanal	0.08
11.175	2-Heptanol	0.15
12.36	Tricyclene	0.09
12.934	alpha-Pinene	1.6
13.901	Camphene	5.97
15.49	beta-Pinene	0.16
15.848	6-methyl-Hept-5-en-2-one	0.21
16.093	Myrcene	0.75
17.216	alpha-Phellandrene	0.14
18.687	Limonene	1.02
18.817	beta-Phellandrene	2.76
18.904	1,8-Cineole	2.16
22.402	Terpinolene	0.12
23.383	2-Nonanone	0.29
23.51	Linalool	0.11
28.529	Borneol	0.99
30.125	alpha-Terpineol	0.39
32.211	Citronellol	0.24
33.1	Neral	3.12
33.835	Geraniol	0.56
35.166	Geranial	5.31
36.215	Bornyl acetate	0.18
36.769	2-Undecanone	0.36
42.205	alpha-Copaene	0.27
42.407	Geranyl acetate	0.34
43.143	beta-Elemene	0.51
43.943	Sesquithujene	0.15
47.153	trans-beta-Farnesene	0.55
47.655	Alloaromadendrene	0.14
49.009	Ar-Curcumene	7.07
49.968	alpha-Zingiberene	34.19
50.139	alpha-Murolene	1.79
50.43	trans-trans-alpha-Farnesene	5.52
50.664	beta-Bisabolene	6.13
50.915	gamma-Cadinene	0.19
51.258	delta-Cadinene	0.1
51.375	alpha-Panasinsen	0.16
51.672	beta-Sesquiphellandrene	12.33
51.773	trans-gamma-Bisabolene	0.24
53.076	alpha-Elemol	0.26
53.403	cis-Sesquibinene hydrate	0.12
53.767	trans-Nerolidol	0.61
55.541	trans-Sesquibinene hydrate	0.29
56.943	Zingiberenol	0.59
57.928	7-epi-cis-sesquibinene hydrate	0.43
58.472	Zingerone	0.18
59.326	alpha-Eudesmol	0.37
61.02	7-epi-trans-sesquibinene hydrate	0.34
61.513	2-cis-6-cis-Farnesol	0.37
Area Total:		100

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