



Aromatic Plant Research Center

We provide uncompromising
quality control for your products.

Customer: doTERRA International

Lot Number: 1916911

Date Filled: 6/18/2019

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 Lemongrass lot revealed no contaminants or adulteration.

The sample meets the expected chemical profile for authentic essential oils of *Cymbopogon flexuosus*.



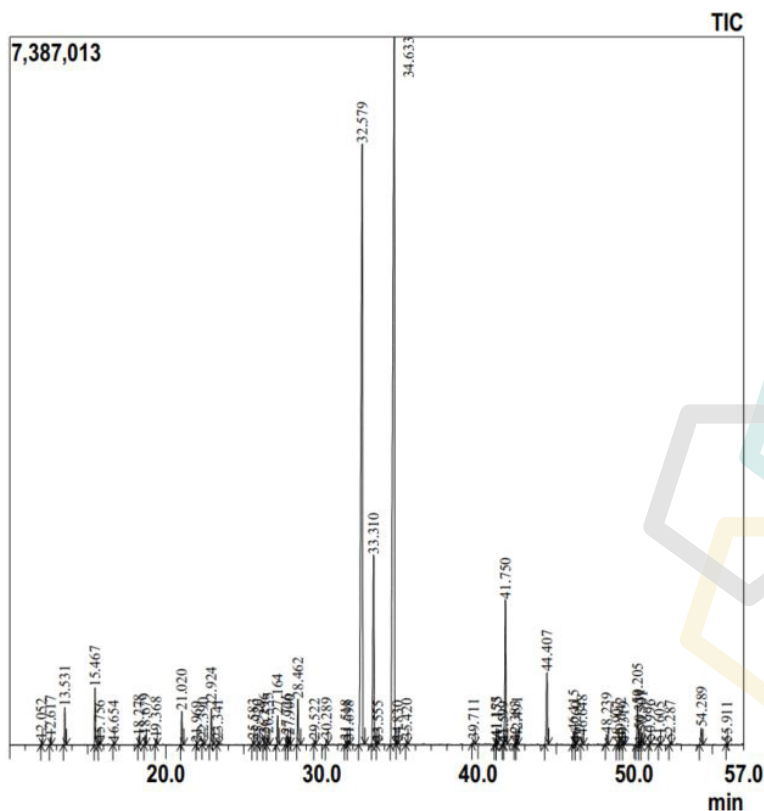
Lemongrass Essential Oil

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Chromatogram



Peak Report

Ret.Time	Compound Name	Area %			
12.052	Tricyclene	0.1	28.462	trans-Isocitral	1.46
12.617	alpha-Pinene	0.17	29.522	alpha-Terpinol	0.12
13.531	Camphene	0.86	30.289	Decanal	0.18
15.467	6-methyl-Hept-5-en-2-one	1.44	31.518	Nerol	0.12
15.756	Myrcene	0.09	31.698	Citronellol	0.1
16.654	Octanal	0.05	32.579	Neral	31.01
18.278	Limonene	0.23	33.31	Geraniol	6.78
18.679	cis-beta-Ocimene	0.25	33.555	Pipitone	0.07
19.368	trans-beta-Ocimene	0.16	34.633	Geranial	40.01
21.02	2-Nonanone	0.9	34.83	4-Undecanone	0.06
21.969	Terpinolene	0.03	35.42	trans-Carvone oxide	0.12
22.39	Rosefuran	0.12	39.711	Nerol acid	0.14
22.924	Linalool	1.09	41.155	Cyclosativene	0.17
23.341	alpha-Pinene oxide	0.11	41.173	alpha-Ylangene	0.16
25.583	Epiphotoxinal A	0.11	41.599	alpha-Copaene	0.03
25.92	exo-Isocitral	0.09	41.75	Geranyl acetate	4.5
26.296	trans-Chrysanthanal	0.27	42.383	beta-Cubebene	0.07
26.535	Citronellal	0.31	42.491	beta-Elmene	0.2
27.164	cis-Isocitral	0.85	44.407	beta-Caryophyllene	2.51
27.726	Rosefuran epoxide	0.26	46.115	trans-Isoeugenol	0.41
27.9	Borneol	0.23	46.26	trans-Murola-3,5-diene	0.04
			46.648	alpha-Humulene	0.27
			48.239	Germacrene D	0.33
			49.907	trans-Murola-4(14),5-diene	0.05
			49.142	epi-Cubebol	0.2
			49.319	alpha-Murolene	0.05
			50.205	delta-Amorphene	1.33
			50.331	Cubebol	0.48
			50.501	delta-Cadinene	0.41
			50.996	trans-gamma-Bisabolene	0.08
			51.605	alpha-Cadinene	0.05
			52.287	alpha-Elmol	0.09
			54.289	Caryophyllene oxide	0.62
			55.911	Humulene epoxide	0.03
		Area Total:	100		

Comments:

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

The sample meets the expected chemical profile for authentic essential oils of *Cymbopogon flexuosus*.

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