Aromatic Plant Research Center

We provide uncompromising quality control for your products.

Customer: doTERRA International
Lot Number: 182577
Date Filled: 9/14/2018

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 Rosemary lot revealed no contaminants or adulteration.
The sample meets the expected chemical profile for authentic essential oils of *Rosmarinus officinalis*.

CERTIFIED BY AROMATIC PLANT RESEARCH CENTER

Rosemary Essential Oil

Customer: doTERRA International
Lot Number: 182577
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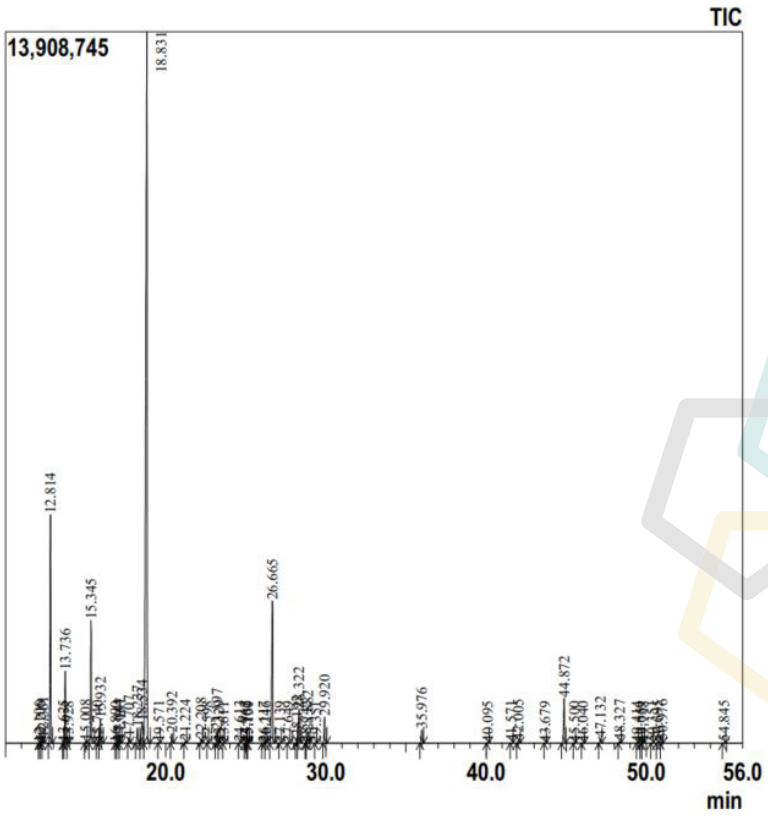
Chromatogram



Peak Report

Ret.Time	Compound Name	Area %
12.106	Pinene isomer	0.01
12.219	Tricyclene	0.1
12.361	alpha-Thujene	0.21
12.814	alpha-Pinene	9.74
13.625	alpha-Fenchene	0.05
13.736	Camphene	3.1
13.928	Thuja-2,4(10)-diene	0.01
15.008	Sabinene	0.1
15.345	beta-Pinene	5.72
15.74	3-Octanone	0.04
15.932	Myrcene	1.12
16.89	Pseudolimonene	0.02
17.044	alpha-Phellandrene	0.11
17.167	delta-3-Carene	0.16
17.707	alpha-Terpinene	0.28
18.237	para-Cymene	0.95
18.534	Limonene	1.89
18.831	1,8-Cineole	56.51
19.571	trans-beta-Ocimene	0.03
20.392	gamma-Terpinene	0.49
21.224	cis-Sabinene hydrate	0.09
22.208	Terpinolene	0.22
22.598	para-Cymenene	0.02
23.197	Linalool	0.66
23.329	trans-Sabinene hydrate	0.04
23.611	Nonanal	0.01
24.613	endo-Fenchol	0.04
24.962	cis-para-Menth-2-en-1-ol	0.01
25.1	trans-Pinene hydrate	0.01
25.151	alpha-Campholenal	0.01
26.117	trans-Pinocarveol	0.03
26.246	trans-para-Menth-2-en-1ol	0.01
26.665	Camphor	9.07
27.139	Camphene hydrate	0.03
27.649	Pinocarvone	0.02
28.192	delta-Terpineol	0.32
28.322	Borneol	1.95
28.742	para-1,8-menthadien-4-ol	0.01
28.882	Terpinen-4-ol	0.63
29.351	para-Cymen-8-ol	0.01
29.92	alpha-Terpineol	1.49
35.976	Bornyl acetate	0.79
40.095	alpha-Cubebene	0.02
41.571	alpha-Ylangene	0.04
42.005	alpha-Copaene	0.16
43.679	Methyleugenol	0.01
44.872	beta-Caryophyllene	2.8
45.5	beta-Copaene	0.02
46.04	Aromadendrene	0.04
47.132	alpha-Humulene	0.31
48.327	trans-Cadina-1(6),4-diene	0.12
49.414	Germacrene D	0.02
49.659	alpha-Selinene	0.02
49.798	alpha-Muurolene	0.03
50.351	beta-Bisabolene	0.04
50.695	delta-Amorphene	0.06
50.976	delta-Cadinene	0.13
54.845	Caryophyllene oxide	0.07
	Area Total:	100

Comments:
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