



Aromatic Plant Research Center

We provide uncompromising
quality control for your products.

Customer : doTERRA International
Lot Number : 233002
Date Filled : 10/27/2023

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.

Analysied by : Ambika Poudel
Reviewed by : Dr. Prabodh Satyal



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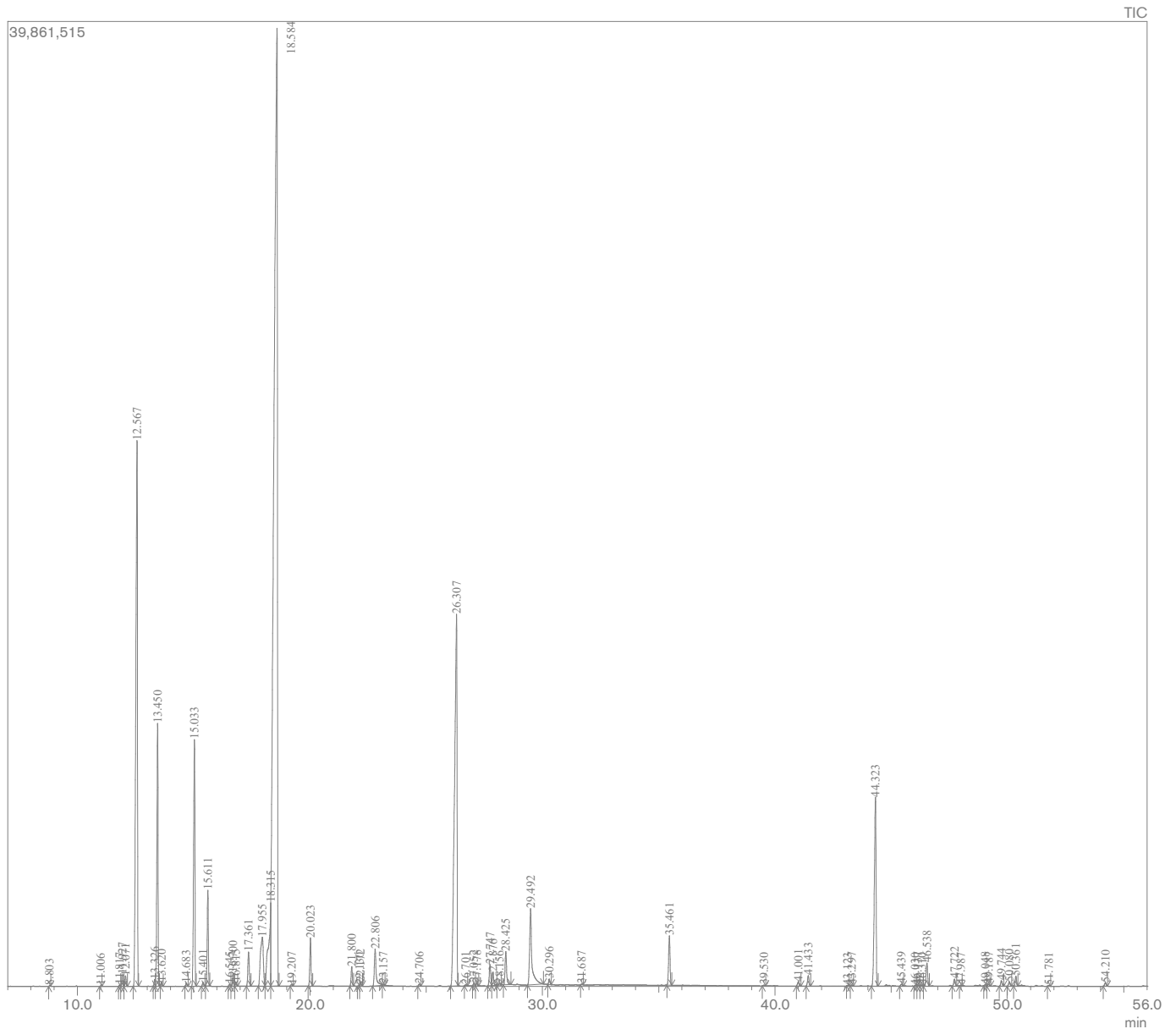
Rosemary Essential Oil

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Chromatogram



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Peak Report

Peak#	R.Time	Name	Area%
1	8.803	2-trans-Hexenal	0.01
2	11.006	Bornylene	0.01
3	11.817	Hashishene	0.02
4	11.927	Tricyclene	0.16
5	12.071	alpha-Thujene	0.15
6	12.567	alpha-Pinene	12.47
7	13.326	alpha-Fenchene	0.10
8	13.450	Camphene	4.24
9	13.620	Thuja-2,4(10)-diene	0.06
10	14.683	Sabinene	0.05
11	15.033	beta-Pinene	4.37
12	15.401	3-Octanone	0.06
13	15.611	Myrcene	1.49
14	16.545	para-Mentha-1(7),8-diene	0.03
15	16.700	alpha-Phellandrene	0.22
16	16.815	delta-3-Carene	0.07
17	17.361	alpha-Terpinene	0.66
18	17.955	para-Cymene	1.92
19	18.315	Limonene	2.42
20	18.584	1,8-Cineole	45.58
21	19.207	trans-beta-Ocimene	0.03
22	20.023	gamma-Terpinene	0.79
23	21.800	Terpinolene	0.32
24	22.130	Fenchone	0.01
25	22.172	para-Cymenene	0.07
26	22.806	Linalool	0.94
27	23.157	n-Nonanal	0.02
28	24.706	alpha-Campholenal	0.04
29	26.307	Camphor	12.55
30	26.701	trans-beta-Terpineol	0.02
31	27.052	trans-Pinocamphone	0.04
32	27.178	Pinocarvone	0.05
33	27.747	delta-Terpineol	0.43
34	27.876	Borneol	0.25
35	28.156	cis-Pinocamphone	0.04
36	28.425	Terpinen-4-ol	0.71
37	29.492	alpha-Terpineol	2.42
38	30.296	Verbenone	0.10
39	31.687	Bornyl formate	0.01
40	35.461	Bornyl acetate	0.97
41	39.530	alpha-Cubebene	0.02
42	41.001	alpha-Ylangene	0.08
43	41.433	alpha-Copaene	0.21
44	43.123	Methyl eugenol	0.01
45	43.297	cis-Caryophyllene	0.02
46	44.323	beta-Caryophyllene	4.49
47	45.439	Aromadendrene	0.04
48	46.030	Geranyl acetone	0.02
49	46.137	Spirolepechinene	0.03
50	46.310	trans-beta-Farnesene	0.02
51	46.538	alpha-Humulene	0.48
52	47.722	trans-Cadina-1(6),4-diene	0.14
53	47.987	alpha-Amorphene	0.01
54	49.048	alpha-Selinene	0.02
55	49.187	alpha-Murolene	0.04
56	49.744	beta-Bisabolene	0.11
57	50.080	gamma-Cadinene	0.09
58	50.361	delta-Cadinene	0.19
59	51.781	alpha-Calacorene	0.02
60	54.210	Caryophyllene oxide	0.07
			100.00

