



Aromatic Plant Research Center

We provide uncompromising
quality control for your products.

Customer : doTERRA International
Lot Number : 232762
Date Filled : 10/03/2023

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 Celery Seed lot revealed no contaminants or adulteration.
The sample meets the expected chemical profile for authentic essential oils of Apium graveolens.

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



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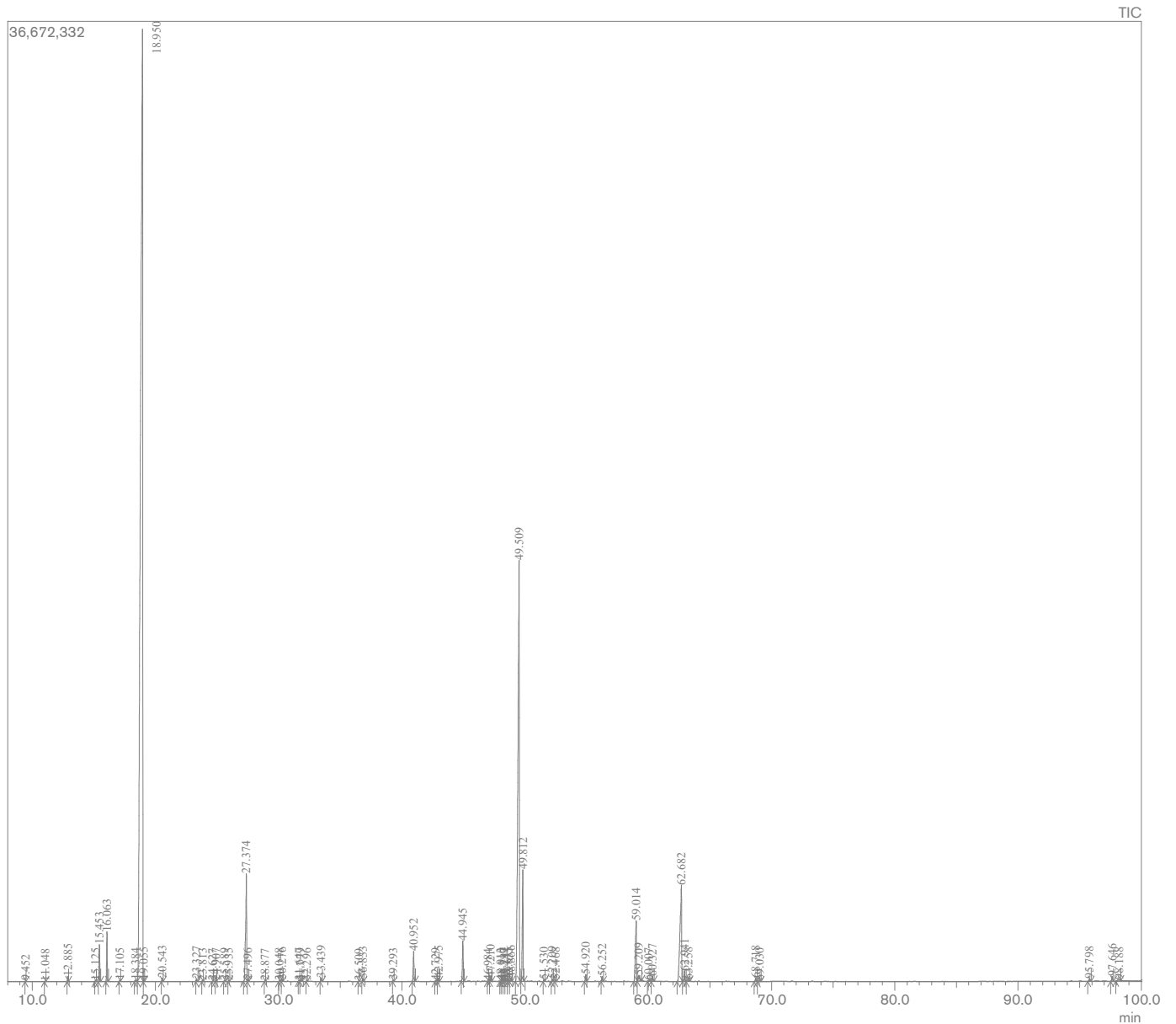
Celery Seed Essential Oil

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Chromatogram



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Peak Report

Peak#	R.Time	Name	Area%
1	9.452	2-Methyl octane	0.01
2	11.048	n-Nonane	0.01
3	12.885	alpha-Pinene	0.09
4	15.125	Sabinene	0.02
5	15.453	beta-Pinene	0.66
6	16.063	Myrcene	0.93
7	17.105	3-Ethenyl-1,2-dimethyl-1,4-cyclohexadiene	0.02
8	18.384	para-Cymene	0.06
9	18.950	Limonene	63.83
10	19.055	cis-beta-Ocimene	0.03
11	20.543	gamma-Terpinene	0.07
12	23.327	Linalool	0.05
13	23.813	1-Octen-3-yl acetate	0.02
14	24.627	3-Octanol acetate	0.01
15	24.907	trans-para-Mentha-2,8-dien-1-ol	0.02
16	25.589	Limona ketone	0.02
17	25.935	cis-para-Mentha-2,8-dien-1-ol	0.02
18	27.374	Pentyl cyclohexa-1,3-diene	3.33
19	27.496	Pentyl benzene	0.02
20	28.877	para-1,8-Menthadien-4-ol	0.01
21	30.048	alpha-Terpineol	0.01
22	30.276	trans-Dihydro carvone	0.03
23	31.647	para-Menth-1-en-9-al	0.02
24	31.779	Celery seed Sesquiterpenoid 1	0.02
25	32.296	Celery seed Sesquiterpenoid 2	0.01
26	33.439	Carvone	0.08
27	36.509	Thymol	0.01
28	36.833	trans-Pinocarvyl acetate	0.06
29	39.293	trans-Carvyl acetate	0.03
30	40.952	Valerophenone	0.69
31	42.729	4,8,8-Trimethyl-3-cycloocten-1-one	0.02
32	42.975	beta-Elementene	0.08
33	44.945	beta-Caryophyllene	0.97
34	46.984	trans-beta-Farnesene	0.01
35	47.210	alpha-Humulene	0.10
36	48.013	neo-Menthyl lactate	0.02
37	48.110	4,5-Di-epi-aristolochene	0.03
38	48.297	Selina-4,11-diene	0.03
39	48.444	10-epi-beta-Acoradiene	0.02
40	48.635	gamma-Curcumene	0.05
41	48.866	ar-Curcumene	0.08
42	49.509	beta-Selinene	17.68
43	49.812	alpha-Selinene	2.77
44	51.530	Celery seed Sesquiterpenoid 3	0.04
45	52.209	Guaia-3,9-diene	0.06
46	52.468	Selina-3,7(11)-diene	0.03
47	54.920	Caryophyllene oxide	0.17
48	56.252	Celery seed Sesquiterpenoid 4	0.12
49	59.014	3-Butyl phthalide	1.88
50	59.209	beta-Eudesmol	0.23
51	60.007	3-cis-Butylidene phthalide	0.02
52	60.327	Celery seed Sesquiterpenoid 5	0.13
53	62.682	Sedanolide	4.57
54	62.941	Neocnidilide	0.26
55	63.258	cis-Ligustilide	0.04
56	68.718	Neophytadiene	0.09
57	69.030	Phytone	0.03
58	95.798	Celery seed Sesquiterpenoid 6	0.06
59	97.646	Celery seed Sesquiterpenoid 7	0.13
60	98.188	Pentacosane	0.09
			100.00

