Aromatic Plant Research Center
230 N 1200 E STE 100
Lehi, UT 84043
www.aromaticplant.org

APRC®
Aromatic Plant Research Center

Laboratory Test Report

SAMPLE NAME : Mandarin
CLIENT NAME : Plant Therapy
CLIENT LOT # : M10109R
APRC LOT# : PT240429A

Column : ZB5 (60 m length × 0.25 mm inner diameter × 0.25 µm film thicknes
Instrument : Shimadzu GCMS-QP2010 Ultra
Carrier gas : Helium 80 psi
Temperature ramp : 2 degrees Celsius per minute up to 260-degree Celsius
Split ratio : 30:1
Sample preparation : 5% w/v solution with Dichloromethane

Interpretation on this sample

The analysis of Green Mandarin sample meets the standard chemical profile of Citrus reticulata essential oil.

Analyzed by : Dr Prabodh Satyal
Reviewed by : Ambika Poudel

Issued Date : 5/1/2024

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GCMS Analysis

Sample Information

Analyzed by	: Dr. Prabodh Satyal
Analyzed	: 5/1/2024 4:23:31 AM
Sample Type	: Essential Oil
Sample Name	: Mandarin
Client Name	: Plant Therapy
Client Lot#	: M10109R
APRC Lot#	: PT240429A
Injection Volume	: 0.30

Chromatogram

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Peak Report

Peak#	R.Time	Name	Area%
1	10.784	n-Nonane	0.00
2	11.050	Santolina triene	0.00
3	12.107	alpha-Thujene	0.53
4	12.534	alpha-Pinene	1.95
5	13.349	alpha-Fenchene	0.00
6	13.449	Camphene	0.01
7	14.726	Sabinene	0.24
8	15.046	beta-Pinene	1.51
9	15.357	trans-Isolimonene	0.00
10	15.660	Myrcene	1.79
11	16.615	para-Mentha-1(7),8-diene	0.02
12	16.636	n-Octanal	0.08
13	16.757	alpha-Phellandrene	0.06
14	16.865	delta-3-Carene	0.02
15	17.416	alpha-Terpinene	0.27
16	17.999	para-Cymene	0.80
17	18.505	Limonene	69.78
18	18.550	beta-Phellandrene	0.10
19	18.585	cis-beta-Ocimene	0.02
20	19.284	trans-beta-Ocimene	0.05
21	20.234	gamma-Terpinene	20.59
22	20.916	cis-Sabinene hydrate	0.03
23	21.868	Terpinolene	0.60
24	22.334	para-Cymenene	0.01
25	22.860	Linalool	0.11
26	22.986	trans-Sabinene hydrate	0.07
27	23.328	n-Nonanal	0.02
28	24.456	trans-para-Mentha-2,8-dien-1-ol	0.00
29	25.179	cis-Limonene oxide	0.02
30	25.481	trans-Limonene oxide	0.02
31	25.729	3-cis-3-Ethylidene-1-methyl-1,4-cycloheptadiene	0.00
32	25.852	Epoxy terpinolene	0.02
33	26.238	Camphor	0.00
34	26.557	Citronellal	0.01
35	27.287	trans-trans-2,6-Dimethyl-3,5,7-octatriene-2-ol	0.01
36	27.563	Menthol	0.01
37	28.385	para-1,8-Menthadien-4-ol	0.00
38	28.498	Terpinen-4-ol	0.03
39	29.534	alpha-Terpineol	0.18
40	30.296	n-Decanal	0.04
41	31.829	Thymol methyl ether	0.00
42	32.637	cis-Ascaridole	0.01
43	33.041	Carvone	0.00
44	35.185	Perilla aldehyde	0.01
45	36.005	Thymol	0.09
46	37.053	trans-Ascaridole	0.01
47	41.482	alpha-Copaene	0.00
48	42.283	beta-Cubebene	0.00
49	42.396	beta-Elemene	0.00
50	43.055	n-Tetradecane	0.00
51	43.699	Methyl N-methyl anthranilate	0.44
52	44.314	beta-Caryophyllene	0.11
53	46.591	alpha-Humulene	0.01
54	49.124	alpha-Selinene	0.05
55	49.587	trans-trans-alpha-Farnesene	0.19
56	50.438	delta-Cadinene	0.01
57	54.314	Caryophyllene oxide	0.00
58	63.903	alpha-Sinensal	0.03
59	68.126	Neophytadiene	0.00
			100.00