



Appalachian Valley
Natural Products

Anatolian Treasures

GC/MS Report

Sample & Analysis Information

Sample Information

Sample Name: Lime Expressed

Botanical Name: Citrus aurantifolia

Lot Number: MEP15-PK

Production Method: Cold Press

Sample Type: EO - Single

Country of Origin: Mexico

Analysis Date: 6/28/2024

Manufacture Date: June 2024

GC/MS

Inst. ID: Shimadzu GCMS-QP2010Ultra

Injection Type: Split

Split Ratio: 24.4

Column Type: ZB-5

Injection Volume: 0.1 μ L

Temperature Program: 2C/min

Physical Data

ANALYSIS

Optical Rotation @20°C

Refractive Index @20°C

Specific Gravity @20°C

METHOD

USP[781]

USP[831]

USP[841]

RESULTS

+47.72

1.47661

0.85868

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Components

Ret. Time	Component	Ret. Idx.	Conc. %	
5.743	Limediene isomer	759	0.01%	
5.838	Limediene isomer	763	0.04%	
6.210	Limediene isomer	781	0.01%	
10.370	Nonane	900	0.01%	
10.656	Bornylene	905	0.01%	
11.545	Tricyclene	922	0.01%	
11.693	alpha-Thujene	924	0.28%	
12.096	alpha-Pinene	932	1.7%	
12.815	Unidentified	945	0.01%	
12.888	alpha-Fenchene	946	0.09%	
12.984	Camphene	948	0.27%	
14.063	Bois de Rose oxide	968	0.13%	
14.237	Sabinene	971	1.08%	
14.544	beta-Pinene	977	6.86%	
14.865	6-Methyl-hept-5-en-2-one	983	0.01%	
15.161	Myrcene	988	1.61%	
15.315	Unidentified	991	0.01%	
15.511	Menthadiene analogue	995	0.02%	
16.061	Pseudolimonene	1004	0.05%	
16.130	Unidentified	1005	0.02%	
16.208	alpha-Phellandrene	1006	0.23%	
16.352	Unidentified	1009	0.01%	
16.722	1,4-Cineole	1014	1.4%	
16.866	alpha-Terpinene	1016	1.79%	
17.351	para-Cymene	1024	1.84%	
17.733	Limonene	1030	53.66%	IFRA
17.820	beta-Phellandrene	1031	0.33%	
17.854	1,8-Cineole	1032	1.23%	
18.041	cis-beta-Ocimene	1035	0.11%	
18.577	2,2-Dimethyl-5-(1-methyl-1-propenyl) tetrahydrofuran	1043	0.1%	
18.712	trans-beta-Ocimene	1045	0.29%	
19.528	gamma-Terpinene	1058	14.32%	
20.278	trans-Sabinene hydrate	1069	0.05%	
20.410	Unidentified	1071	0.02%	
21.296	Terpinolene	1085	5.27%	
21.500	Fenchone	1088	0.01%	
21.606	para-Cymenene	1090	0.11%	
22.230	Linalool	1099	0.11%	IFRA
22.280	Unidentified	1100	0.03%	
22.597	Nonanal	1105	0.01%	

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Ret. Time	Component	Ret. Idx.	Conc. %	
23.126	1,3,8-para-Menthatriene	1112	0.02%	
23.549	endo-Fenchol	1118	0.17%	
24.477	cis-Limonene oxide	1132	0.01%	
24.678	Terpin-3-en-1-ol	1135	0.13%	
24.790	trans-Limonene oxide	1136	0.01%	
25.000	Unidentified	1140	0.01%	
25.160	Epoxyterpinolene	1142	0.04%	
25.616	cis-beta-Terpineol	1149	0.06%	
25.814	Citronellal	1151	0.11%	IFRA
26.569	Unidentified	1162	0.01%	
27.160	Borneol	1171	0.02%	
27.764	Terpinen-4-ol	1180	0.1%	
28.196	para-Cymen-8-ol	1186	0.01%	
28.764	alpha-Terpineol	1194	0.26%	
29.088	gamma-Terpineol	1199	0.02%	
29.562	Decanal	1206	0.03%	
30.749	Nerol	1223	0.04%	
31.687	Neral	1237	0.83%	IFRA
32.521	Geraniol	1250	0.01%	IFRA
33.707	Geranial	1267	1.46%	IFRA
38.200	delta-Elemene	1334	0.03%	
39.729	Neryl acetate	1358	0.77%	
41.013	Geranyl acetate	1377	0.22%	
41.736	beta-Elemene	1388	0.06%	
43.083	Dodecanal	1409	0.01%	
43.242	cis-alpha-Bergamotene	1412	0.03%	
43.633	beta-Caryophyllene	1418	0.27%	
44.260	Unidentified	1428	0.01%	
44.498	trans-alpha-Bergamotene	1432	0.61%	
44.703	Unidentified	1435	0.01%	
45.748	trans-beta-Farnesene	1452	0.04%	
45.876	alpha-Humulene	1454	0.03%	
46.122	beta-Santalene	1458	0.01%	
47.467	Germacrene D	1480	0.02%	
47.656	cis,trans-alpha-Farnesene	1483	0.04%	
48.694	alpha-Bisabolene	1499	0.06%	
48.933	trans,trans-alpha-Farnesene	1503	0.08%	
49.134	beta-Bisabolene	1507	1%	
51.083	trans-alpha-Bisabolene	1540	0.01%	
52.126	Germacrene B	1557	0.03%	

Ret. Time	Component	Ret. Idx.	Conc. %	
58.673	Unidentified	1671	0.01%	
59.507	alpha-Bisabolol	1686	0.03%	IFRA
61.248	Herniarin	1718	0.07%	IFRA
66.469	Hexadecanal	1817	0.01%	
74.070	Citropten	1969	0.03%	

Total Identified Compounds **99.84 %**

GC/MS Report: Chromatogram

