

## Lime *Citrus aurantifolia*

Batch No. #ME-59108

Mexico

<b>Monoterpenes</b>	<b>74.62%</b>	<b>Monoterpenols</b>	<b>13.95%</b>	<b>Sesquiterpenes</b>	<b>3.97%</b>
limonene	38.12	linalol	0.21	$\beta$ bisabolene	1.4
$\gamma$ terpinene	12.68	terpinen-4-ol	0.68	(E,E) $\alpha$ farnesene	0.73
terpinolene	9.49	$\alpha$ terpineol	8.48	trans $\alpha$ bergamotene	0.58
$\alpha$ terpinene	3.26	fenchol	0.62	$\beta$ caryophyllene	0.35
$\beta$ pinene	2.90	myrcenol	0.05	cis $\alpha$ bisabolene	0.14
meta cymene	2.69	terpinen-1-ol	0.82	$\gamma$ selinene	0.09
myrcene	1.63	cis- $\beta$ -terpineol	0.83	$\gamma$ muurolene	0.08
$\alpha$ pinene	1.52	isoborneol	0.04	$\alpha$ selinene	0.07
camphene	0.56	trans $\beta$ terpineol	0.27	trans $\alpha$ bisabolene	0.07
$\alpha$ phellandrene	0.55	borneol	0.4	$\alpha$ humulene	0.06
(E) $\beta$ ocimene	0.54	isopulegol	0.03	7-epi- $\alpha$ selinene	0.05
para-cymenene	0.28	para-cymen-8-ol	0.09	cis $\alpha$ bergamotene	0.05
(Z) $\beta$ ocimene	0.20	$\gamma$ terpineol	1.37	(E) $\beta$ farnesene	0.05
1,3,8-para-menthatriene	0.05	geraniol	0.03	$\gamma$ elemene	0.04
alloocimene	0.04	1-decanol	0.03	$\delta$ elemene	0.04
$\alpha$ thujene	0.03			epi $\beta$ santalene	0.04
pseudolimonene	0.03			$\beta$ cadinene	0.04
bornylene	0.02			$\beta$ elemene	0.03
tricyclene	0.02	<b>Esters</b>	<b>0.05%</b>	$\delta$ guaiene	0.03
$\Delta$ 3 carene	0.01	neryl acetate	0.05	$\alpha$ muurolene	0.02
				trans $\gamma$ bisabolene	0.01
<b>Aldehydes</b>	<b>0.41%</b>	<b>Ketones</b>	<b>0.01%</b>		
citral	0.13	6-methyl-5-hepten-2-one	0.01	<b>Sesquiterpenols</b>	<b>0.07%</b>
decanal	0.12			$\gamma$ eudesmol	0.04
neral	0.09			patchouli alcohol	0.01
dodecanal	0.04	<b>Other</b>	<b>0.22%</b>	$\alpha$ bisabolol	0.02
nonanal	0.03	1-Methyl-1,3-cyclohexadiene	0.12		
		nonane	0.03		
		caryophyllenyl alcohol	0.07		
<b>Oxides / Ethers</b>	<b>4.66%</b>	para-menthylacetophenone	0.02		
1,4 cineole	2.74				
1,8 cineole	1.92				

Client



Source



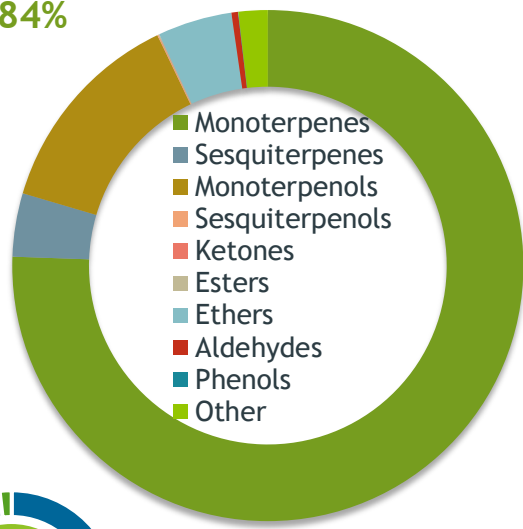
Lime (*Citrus aurantifolia*)  
ME-59108

Sample

Lime (*Citrus aurantifolia*)  
Batch #:..... ME-59108  
Type:..... Essential Oil  
CAS Number:... 8008-26-2  
**Nature's Gift**

Monoterpenes

74.84%



Client



Website



Primary

**38.12%** | Limonene  
**12.68** | gamma-Terpinene  
**9.49%** | Terpinolene



Percentage Identified

Result



Conclusion

No adulterants, diluents, or contaminants were detected via this method. This oil meets the expected profile for genuine Essential Oil of Lime (*Citrus aurantifolia*)

Internal Number: | EVS-3920



Essential Validation Services

747 SW 2nd Ave IMB 12 Suite 306  
Gainesville, FL 32601

317.361.5044 | <https://essentialvalidationservices.com/>

*Alan Christen*

Monoterpenes	74.84%	74.84%
Sesquiterpenes		3.97%
Monoterpenols	13.1	13.19%
Sesquiterpenols		0.07%
Ketones		0.01%
Esters		0.05%
Ethers	4	4.66%
Aldehydes		0.41%
Phenols		0.02%
Other		1.83%

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Client



Source

Lime (*Citrus aurantifolia*)

ME-59108

Total Percentage		98.20%		
Number	RT	Area %	Compound Name	Chemical Family
1	3.72	0.12%	1-methyl-1,3-Cyclohexadiene	0.00
2	7.33	0.03%	Nonane	Alkane
3	7.46	0.02%	Bornylene	Monoterpene
4	8.10	0.02%	Tricyclene	Monoterpene
5	8.26	0.03%	alpha-Thujene	Monoterpene
6	8.52	1.52%	alpha-Pinene	Monoterpene
7	9.09	0.22%	alpha-Fenchene	Monoterpene
8	9.14	0.56%	Camphene	Monoterpene
9	10.27	2.90%	beta-Pinene	Monoterpene
10	10.69	0.01%	6-Methyl-5-hepten-2-one	Aliphatic Ketone
11	10.86	1.63%	Myrcene	Monoterpene
12	11.41	0.03%	Pseudolimonene	Monoterpene
13	11.52	0.55%	alpha-Phellandrene	Monoterpene
14	11.63	0.01%	delta-3-Carene	Monoterpene
15	11.95	2.74%	1,4-Cineole	Monoterpene Ether
16	12.00	3.26%	alpha-Terpinene	Monoterpene
17	12.35	2.69%	meta-Cymene	Monoterpene
18	12.63	38.12%	Limonene	Monoterpene
19	12.71	1.92%	1,8-Cineole	Monoterpene Ether
20	12.92	0.20%	(Z)-beta-Ocimene	Monoterpene
21	13.39	0.54%	(E)-beta-Ocimene	Monoterpene
22	13.90	12.68%	gamma-Terpinene	Monoterpene
23	15.13	9.49%	Terpinolene	Monoterpene
24	15.31	0.28%	para-Cymenene	Monoterpene
25	15.84	0.21%	Linalool	Monoterpenol
26	16.06	0.03%	Nonanal	Aliphatic Aldehyde
27	16.34	0.05%	1,3,8-para-Menthatriene	Monoterpene
28	16.63	0.62%	Fenchol	Monoterpenol
29	16.81	0.05%	Myrcenol	Monoterpenol
30	17.13	0.04%	Alloocimene	Monoterpene
31	17.45	0.82%	Terpinen-1-ol	Monoterpenol
32	18.06	0.83%	13.20 Terpeneol<cis-beta->	0.00
33	18.65	0.04%	Isoborneol	Monoterpenol
34	18.91	0.27%	trans-beta-Terpeneol	Monoterpenol
35	19.06	0.40%	Borneol	Monoterpenol

Client



Source

Lime (*Citrus aurantifolia*)

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Number	RT	Area %	Compound Name	Chemical Family
36	19.234	0.03%	Isopulegol	Monoterpenol
37	19.48	0.68%	Terpinen-4-ol	Monoterpenol
38	19.67	0.02%	para-Methylacetophenone	Simple Phenolic
39	19.81	0.09%	para-Cymen-8-ol	Monoterpenol
40	20.21	8.48%	alpha-Terpineol	Monoterpenol
41	20.41	1.37%	gamma-Terpineol	Monoterpenol
42	20.75	0.12%	Decanal	Aliphatic Aldehyde
43	22.16	0.09%	Neral	Monoterpene Aldehyde
44	22.78	0.03%	Geraniol	Monoterpenol
45	23.52	0.13%	Citral	Monoterpene Aldehyde
46	23.80	0.03%	1-Decanol	Monoterpenol
47	26.44	0.04%	delta-Elemene	Sesquiterpene
48	28.39	0.05%	Neryl acetate	Monoterpene Ester
49	28.77	0.03%	beta-Elemene	Sesquiterpene
50	29.70	0.04%	Dodecanal	Aliphatic Aldehyde
51	29.78	0.05%	cis-alpha-Bergamotene	Sesquiterpene
52	29.95	0.35%	beta-Caryophyllene	Sesquiterpene
53	30.43	0.04%	gamma-Elemene	Sesquiterpene
54	30.61	0.58%	trans-alpha-Bergamotene	Sesquiterpene
55	31.42	0.06%	alpha-Humulene	Sesquiterpene
56	31.48	0.05%	(E)-beta-Farnesene	Sesquiterpene
57	31.65	0.04%	epi-beta-Santalene	Sesquiterpene
58	32.20	0.09%	gamma-Selinene	Sesquiterpene
59	32.68	0.08%	gamma-Murolene	Sesquiterpene
60	33.09	0.07%	alpha-Selinene	Sesquiterpene
61	33.25	0.02%	alpha-Murolene	Sesquiterpene
62	33.40	0.14%	cis-alpha-Bisabolene	Sesquiterpene
63	33.58	0.73%	(E,E)-alpha-Farnesene	Sesquiterpene
64	33.67	1.40%	beta-Bisabolene	Sesquiterpene
65	34.04	0.04%	beta-Cadinene	Sesquiterpene
66	34.41	0.01%	trans-gamma-Bisabolene	Sesquiterpene
67	34.70	0.03%	delta-Guaiene	Sesquiterpene
68	34.90	0.05%	7-epi-alpha-Selinene	Sesquiterpene
69	34.96	0.07%	trans-alpha-Bisabolene	Sesquiterpene
70	36.17	0.07%	Caryophyllenyl alcohol	Monoterpenol
71	38.37	0.04%	gamma-Eudesmol	Sesquiterpenol

Client



Source



*Lime (Citrus aurantifolia)*  
**ME-59108**

72	39.90	0.01%	Patchouli alcohol	Sesquiterpenol
73	40.40	0.02%	alpha-Bisabolol	Sesquiterpenol

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- Essential Oil testing is performed by using qualitative GC-MS. Method: SOP.T.01 Client Method
- This report may not be published without the consent of Essential Validation Services.
- Chromatograph image may be requested
- This report is valid for 1 year from the analyzed date