

## Kaffir Lime

### *Citrus hystrix*

Thailand

Batch #TH-59143

#### Monoterpenes 67.58%

limonene	25.45
β pinene	18.40
γ terpinene	5.85
α terpinene	4.26
terpinolene	4.24
α pinene	3.29
sabinene	2.07
myrcene	2.00
α phellandrene	0.95
camphene	0.48
para cymene	0.32
α thujene	0.15
α fenchene	0.12
(E) β ocimene	0.08
tricyclene	0.02
(Z) β ocimene	0.01
bornylene	0.01

#### Monoterpenols 25.3%

terpinen-4-ol	10.77
α terpineol	8.83
cis linalool oxide	1.67
isopulegol	1.45
neo-isopulegol	1.18
linalool	0.53
fenchol	0.46
citronellol	0.41
borneol	0.38
γ terpineol	0.24
β terpineol	0.21
terpinen-1-ol	0.17
geraniol	0.07
(Z) para menth 2 en 1 ol	0.03
(E) para menth 2 en 1 ol	0.02
isoborneol	0.01

#### Aldehydes 0.31%

citranellal	0.22
nonanal	0.05
decanal	0.04

#### Esters 1.33%

citronellyl acetate	0.36
geranyl acetate	0.33

#### Ethers 0.64%

1,4 cineole	0.64
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#### Sesquiterpene 2.55%

δ cadinene	0.93
α copaene	0.64
β caryophyllene	0.42
germacrene D	0.2
α humulene	0.15
β cubebene	0.11
trans-cadina-1(6),4-diene	0.10
β elemene	0.08
α muurolene	0.08
viridiflorene	0.05
trans-cadina-1,4-diene	0.04
γ muurolene	0.03
β selinene	0.02
(E,E) α farnesene	0.02

#### Sesquiterpenols 0.11%

α cadinol	0.11
elemol	0.03
junenol	0.02
1,19-di-epi-cubenol	0.04
γ eudesmol	0.17
1-epi-cubenol	0.09
α muurolol	0.01

Client



Source



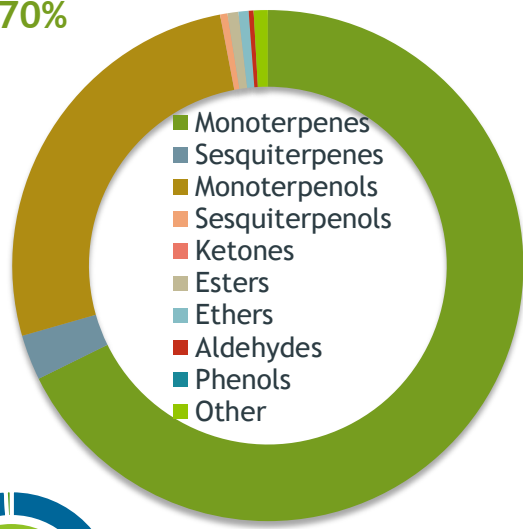
Kaffir Lime (*Citrus hystrix*)  
TH-59143

Sample

Kaffir Lime (*Citrus hystrix*)  
Batch #:..... TH-59143  
Type:..... Essential Oil  
CAS Number:... 91771-50-5  
**Nature's Gift**

Monoterpenes

67.70%



Client



Website



Primary

**25.45%** | Limonene  
**18.40** | beta-Pinene  
**10.77%** | Terpinen-4-ol



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 Kaffir Lime (*Citrus hystrix*)

Internal Number: | EVS-4176



Essential Validation Services

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

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

*Alan Christen*

Monoterpenes	67.70%	67.70%
Sesquiterpenes		2.87%
Monoterpenols	26.43%	26.43%
Sesquiterpenols		0.47%
Ketones		0.00%
Esters		0.69%
Ethers		0.64%
Aldehydes		0.31%
Phenols		0.00%
Other		0.89%

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Client



Source

Kaffir Lime (*Citrus hystrix*)

TH-59143

Total Percentage		99.11%		
Number	RT	Area %	Compound Name	Chemical Family
1	7.25	0.01%	Bornylene	Monoterpene
2	7.88	0.02%	Tricyclene	Monoterpene
3	8.04	0.15%	alpha-Thujene	Monoterpene
4	8.29	3.29%	alpha-Pinene	Monoterpene
5	8.85	0.12%	alpha-Fenchene	Monoterpene
6	8.91	0.48%	Camphene	Monoterpene
7	9.87	2.07%	Sabinene	Monoterpene
8	10.06	18.40%	beta-Pinene	Monoterpene
9	10.61	2.00%	Myrcene	Monoterpene
10	11.26	0.95%	alpha-Phellandrene	Monoterpene
11	11.66	0.64%	1,4-Cineole	Monoterpene Ether
12	11.74	4.26%	alpha-Terpinene	Monoterpene
13	12.07	0.32%	para-Cymene	Monoterpene
14	12.34	25.45%	Limonene	Monoterpene
15	12.65	0.01%	(Z)-beta-Ocimene	Monoterpene
16	13.11	0.08%	(E)-beta-Ocimene	Monoterpene
17	13.60	5.85%	gamma-Terpinene	Monoterpene
18	14.15	1.67%	cis-Linalool oxide (5) (furanoid)	Monoterpenol
19	14.83	4.24%	Terpinolene	Monoterpene
20	15.54	0.53%	Linalool	Monoterpenol
21	15.76	0.05%	Nonanal	Aliphatic Aldehyde
22	16.33	0.46%	Fenchol	Monoterpenol
23	16.59	0.03%	cis-para-Menth-2-en-1-ol	Monoterpenol
24	17.13	0.17%	Terpinen-1-ol	Monoterpenol
25	17.44	0.02%	trans-para-Menth-2-en-1-ol	Monoterpenol
26	17.68	1.45%	Isopulegol	Monoterpenol
27	17.75	0.21%	beta-Terpineol	Monoterpenol
28	17.94	0.22%	Citronellal	Monoterpene Aldehyde
29	18.12	1.18%	neo-Isopulegol	Monoterpenol
30	18.34	0.01%	Isoborneol	Monoterpenol
31	18.74	0.38%	Borneol	Monoterpenol
32	19.21	10.77%	Terpinen-4-ol	Monoterpenol
33	19.90	8.83%	alpha-Terpineol	Monoterpenol
34	20.09	0.24%	gamma-Terpineol	Monoterpenol
35	20.44	0.04%	Decanal	Aliphatic Aldehyde



*Kaffir Lime (Citrus hystrix)*  
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Number	RT	Area %	Compound Name	Chemical Family
36	21.401	0.41%	Citronellol	Aliphatic Aldehyde
37	22.46	0.07%	Geraniol	Monoterpenol
38	26.84	0.36%	Citronellyl acetate	Monoterpene Ester
39	27.82	0.64%	alpha-Copaene	Sesquiterpene
40	28.06	0.33%	Geranyl acetate	Monoterpene Ester
41	28.36	0.11%	beta-Cubebene	Sesquiterpene
42	28.43	0.08%	beta-Elemene	Sesquiterpene
43	29.62	0.42%	beta-Caryophyllene	Sesquiterpene
44	31.08	0.15%	alpha-Humulene	Sesquiterpene
45	31.82	0.10%	trans-Cadina-1(6),4-diene	Sesquiterpene
46	31.97	0.03%	gamma-Murolene	Sesquiterpene
47	32.14	0.20%	Germacrene D	Sesquiterpene
48	32.45	0.02%	beta-Selinene	Sesquiterpene
49	32.57	0.05%	Viridiflorene	Sesquiterpene
50	32.92	0.08%	alpha-Murolene	Sesquiterpene
51	33.25	0.02%	(E,E)-alpha-Farnesene	Sesquiterpene
52	33.71	0.93%	delta-Cadinene	Sesquiterpene
53	34.23	0.04%	trans-Cadina-1,4-diene	Sesquiterpene
54	34.86	0.03%	Elemol	Sesquiterpenol
55	37.58	0.02%	Junenol	Sesquiterpenol
56	37.87	0.04%	1,10-di-epi-Cubenol	Sesquiterpenol
57	38.01	0.17%	gamma-Eudesmol	Sesquiterpenol
58	38.42	0.09%	1-epi-Cubenol	Sesquiterpenol
59	38.60	0.01%	alpha-Murolol	Sesquiterpenol
60	38.89	0.11%	alpha-Cadinol	Sesquiterpenol