



316 Old Hickory Blvd East, Madison, TN 37115

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Balancing Body, Mind and Spirit with Pure Essential Oils

Since 1995

www.naturesgift.com

Ginger Root Zingiber officinale

Batch No. MA-59079

Madagascar

Monoterpenes 21.08%

camphene	8.68
β phellandrene	6.17
α pinene	3.27
myrcene	1.45
β pinene	0.46
α phellandrene	0.32
terpinolene	0.28
Tricyclene	0.20
sabinene	0.07
para cymene	0.07
δ 3 carene	0.04
α thujene	0.02
verbenene	0.02
2-carene	0.02
(Z) β ocimene	0.01

Monoterpenols 2.9%

borneol	0.72
geraniol	0.70
α terpineol	0.50
Linalol	0.34
citronellol	0.19
terpinen-4-ol	0.10
2-nonanol	0.08
nerol	0.08
trans-sabinene hydrate	0.07
cis-carveol	0.05
trans-2-pinanol	0.04
2-undecanol	0.02
fenchol	0.01

Sesquiterpenes 55.12%

zingiberene	24.89
β sesquiphellandrene	9.54
β bisabolene	5.09
(E,E) α farnesene	5.06
ar curcumene	4.02
germacrene D	1.27
β elemene	0.70
γ elemene	0.58
(E) β farnesene	0.58
γ cadinene	0.53
α copaene	0.39
(E) γ bisabolene	0.31
γ muurolene	0.26
allo-aromadenrene	0.25
cyclosativene	0.25
β selinene	0.22
γ selinene	0.20
7-epi-sesquithujene	0.19
β caryophyllene	0.13
(E) α bergamotene	0.11
germacrene B	0.09
α guaiene	0.09
δ elemene	0.08
γ gurjunene	0.08
β cadinene	0.05
longicyclene	0.04
trans-cadina-1,4-diene	0.03
β cedrene	0.02
aromadendrene	0.02
δ guaiene	0.02
α cubebene	0.01
(Z) α bergamotene	0.01
trans-calamenene	0.01

Sesquiterpenols 3.78%

α bisabolol	0.59
ledol	0.55
β eudesmol	0.53
(E) nerolidol	0.51
1-epi-cubenol	0.42
elemol	0.32
(E) sesquisabinene hydrate	0.30
(Z) sesquisabinene hydrate	0.21
viridiflorol	0.16
epi β bisabolol	0.07
τ muurolol	0.05
(Z) nuciferol	0.03
epi-cubebol	0.02
τ cadinol	0.02

Aldehydes 3.45%

neral	3.44
hexanal	0.01
octanal	0.05
citranellal	0.11
(Z) isocitral	0.05
(E) isocitral	0.05
decanal	0.03
(E) 2-decenal	0.07
citral	5.55
(E) 2 dodecenal	0.02
α sinensal	0.02

Raw Material: Ginger fresh roots
 INCI Name: Zingiber Officinale Rhizome Extract
 Production Method: Steam distillation
 Analyzed: 6/27/2020



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Ethers	3.96%
1,8-Cineole	3.82
perillene	0.06
α pinene oxide	0.05
β himachalene oxide	0.03

Esters	0.79%
geranyl acetate	0.52
bornyl acetate	0.18
citronellyl acetate	0.07
neryl acetate	0.01
(E,E) farnesyl acetate	0.01

Ketones	1.01%
methyl-6-hepten-5-one 2	0.61
2-undecanone	0.18
2-nonanone	0.08
camphor	0.06
2-heptanone	0.04
farnesylacetone	0.04

Other	0.13%
2-heptanol	0.07
6-methyl-5-hepten-2-ol	0.03
1-octanol	0.02
toluene	0.01

Client



Source



Ginger Root (*Zingiber officinalis*)
MA-59079

Sample

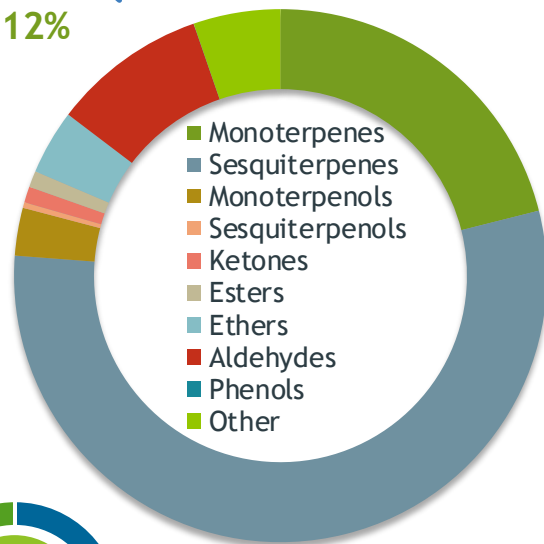
Ginger Root (*Zingiber officinalis*)

Batch #:..... MA-59079
Type:..... Essential Oil
CAS Number:... 8007-08-7

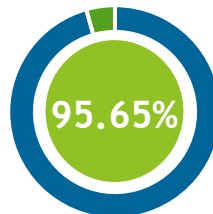
Nature's Gift

Sesquiterpenes

55.12%



Percentage Identified



Client



Website



Primary

24.89% | Zingiberene
9.54% | beta-Sesquiphellandrene
8.68% | Camphene

Result



Conclusion

No adulterants, diluents, or contaminants were detected via this method. This oil meets the expected profile for genuine Essential Oil of Ginger Root (*Zingiber officinalis*)

Internal Number: | EVS-3770



Essential Validation Services

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

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

Monoterpenes	21.08%	21.08%
Sesquiterpenes	55.12%	55.12%
Monoterpenols		2.90%
Sesquiterpenols		0.34%
Ketones		0.97%
Esters		0.99%
Ethers		3.93%
Aldehydes	9.38	9.38%
Phenols		0.01%
Other	5	5.28%

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Client



Source

Ginger Root (*Zingiber officinalis*)

MA-59079

Total Percentage		95.65%		
Number	RT	Area %	Compound Name	Chemical Family
1	3.75	0.01%	Toluene	Simple Phenolic
2	4.46	0.01%	Hexanal	Aliphatic Aldehyde
3	6.99	0.04%	2-Heptanone	Aliphatic Ketone
4	7.42	0.07%	2-Heptanol	Aliphatic Alcohol
5	8.14	0.20%	Tricyclene	Monoterpene
6	8.31	0.02%	alpha-Thujene	Monoterpene
7	8.57	3.27%	alpha-Pinene	Monoterpene
8	9.20	8.68%	Camphene	Monoterpene
9	9.75	0.02%	Verbenene	Monoterpene
10	10.15	0.07%	Sabinene	Monoterpene
11	10.32	0.46%	beta-Pinene	Monoterpene
12	10.67	0.61%	6-Methyl-5-hepten-2-one	Aliphatic Ketone
13	10.90	1.45%	Myrcene	Monoterpene
14	11.06	0.03%	6-Methyl-5-hepten-2-ol	Aliphatic Alcohol
15	11.48	0.05%	Octanal	Aliphatic Aldehyde
16	11.56	0.32%	alpha-Phellandrene	Monoterpene
17	11.67	0.04%	delta-3-Carene	Monoterpene
18	12.04	0.02%	2-Carene	Monoterpene
19	12.38	0.07%	para-Cymene	Monoterpene
20	12.64	6.17%	beta-Phellandrene	Monoterpene
21	12.69	3.82%	1,8-Cineole	Monoterpene Ether
22	12.97	0.01%	(Z)-beta-Ocimene	Monoterpene
23	13.92	0.07%	trans-Sabinene hydrate	Monoterpenol
24	14.57	0.02%	1-Octanol	Aliphatic Alcohol
25	15.15	0.28%	Terpinolene	Monoterpene
26	15.44	0.08%	2-Nonanone	Monoterpene Ketone
27	15.71	0.05%	alpha-Pinene oxide	Monoterpene Ether
28	15.86	0.34%	Linalool	Monoterpenol
29	15.99	0.08%	2-Nonanol	Monoterpenol
30	16.51	0.06%	Perillene	Monoterpene Ether
31	16.65	0.01%	Fenchol	Monoterpenol
32	16.95	0.04%	trans-2-Pinanol	Monoterpenol
33	17.89	0.06%	Camphor	Monoterpene Ketone
34	18.27	0.11%	Citronellal	Monoterpene Aldehyde
35	18.70	0.05%	(Z)-isocitral	Monoterpene Aldehyde

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MA-59079

Number	RT	Area %	Compound Name	Chemical Family
36	19.078	0.72%	Borneol	Monoterpene Aldehyde
37	19.51	0.10%	Terpinen-4-ol	Monoterpenol
38	19.57	0.05%	(E)-Isocitral	Monoterpene Aldehyde
39	20.19	0.50%	alpha-Terpineol	Monoterpenol
40	20.79	0.03%	Decanal	Aliphatic Aldehyde
41	21.60	0.08%	Nerol	Monoterpenol
42	21.75	0.19%	Citronellol	Monoterpenol
43	22.20	3.44%	Neral	Monoterpene Aldehyde
44	22.64	0.05%	cis-Carveol	Monoterpenol
45	22.80	0.70%	Geraniol	Monoterpenol
46	23.30	0.07%	(E)-2-Decenal	Monoterpene Aldehyde
47	23.57	5.55%	Citral	Monoterpene Aldehyde
48	24.25	0.18%	Bornyl acetate	Monoterpene Ester
49	24.70	0.18%	2-Undecanone	Aliphatic Ketone
50	25.17	0.02%	2-Undecanol	Monoterpenol
51	26.51	0.08%	delta-Elemene	Sesquiterpene
52	27.02	0.01%	alpha-Cubebene	Sesquiterpene
53	27.21	0.07%	Citronellyl acetate	Monoterpene Ester
54	27.58	0.01%	Neryl acetate	Monoterpene Ester
55	27.86	0.25%	Cyclosativene	Sesquiterpene
56	28.22	0.39%	alpha-Copaene	Sesquiterpene
57	28.43	0.52%	Geranyl acetate	Monoterpene Ester
58	28.52	0.04%	Longicyclene	Sesquiterpene
59	28.83	0.70%	beta-Elemene	Sesquiterpene
60	29.44	0.19%	7-epi-Sesquithujene	Sesquiterpene
61	29.85	0.01%	cis-alpha-Bergamotene	Sesquiterpene
62	30.00	0.13%	beta-Caryophyllene	Sesquiterpene
63	30.50	0.58%	gamma-Elemene	Sesquiterpene
64	30.68	0.11%	trans-alpha-Bergamotene	Sesquiterpene
65	30.98	0.02%	beta-Cedrene	Sesquiterpene
66	31.22	0.09%	alpha-Guaiene	Sesquiterpene
67	31.33	0.02%	Aromadendrene	Sesquiterpene
68	31.55	0.58%	(E)-beta-Farnesene	Sesquiterpene
69	31.68	0.25%	allo-Aromadendrene	Sesquiterpene
70	32.10	0.02%	(E)-2-Dodecenal	Sesquiterpene Aldehyde
71	32.29	0.20%	gamma-Selinene	Sesquiterpene

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72	32.35	0.26%	gamma-Muurolene	Sesquiterpene
73	32.56	1.27%	Germacrene D	Sesquiterpene
74	32.65	4.02%	ar-Curcumene	Sesquiterpene
75	32.87	0.22%	beta-Selinene	Sesquiterpene
76	33.04	0.08%	gamma-Gurjunene	Sesquiterpene
77	33.31	24.89%	Zingiberene	Sesquiterpene
78	33.53	0.05%	beta-Cadinene	Sesquiterpene
79	33.69	5.06%	(E,E)-alpha-Farnesene	Sesquiterpene
80	33.77	5.09%	beta-Bisabolene	Sesquiterpene
81	33.96	0.02%	epi-Cubebol	Sesquiterpenol
82	34.12	0.53%	gamma-Cadinene	Sesquiterpene
83	34.22	0.01%	trans-Calamenene	Sesquiterpene
84	34.40	9.54%	beta-Sesquiphellandrene	Sesquiterpene
85	34.49	0.31%	trans-gamma-Bisabolene	Sesquiterpene
86	34.66	0.03%	trans-Cadina-1,4-diene	Sesquiterpene
87	34.81	0.02%	delta-Guaiene	Sesquiterpene
88	35.26	0.32%	Elemol	Sesquiterpenol
89	35.53	0.21%	cis-Sesquisabinene hydrate	Monoterpene Ester
90	35.61	0.09%	Germacrene B	Sesquiterpene
91	35.83	0.51%	(E)-Nerolidol	Sesquiterpenol
92	36.91	0.30%	trans-Sesquisabinene hydrate	Monoterpene Ester
93	37.54	0.03%	beta-Himachalene oxide	Sesquiterpene Ether
94	37.83	0.55%	Ledol	Sesquiterpenol
95	38.01	0.16%	Viridiflorol	Sesquiterpenol
96	38.46	0.42%	1-epi-Cubenol	Sesquiterpenol
97	38.81	0.02%	T-Cadinol	Sesquiterpenol
98	38.87	0.05%	T-Muurolol	Sesquiterpenol
99	39.22	0.53%	beta-Eudesmol	Sesquiterpenol
100	39.89	0.07%	epi-beta-Bisabolol	Sesquiterpenol
101	40.51	0.59%	alpha-Bisabolol	Sesquiterpenol
102	41.81	0.03%	(Z)-Nuciferol	Sesquiterpenol
103	43.15	0.02%	alpha-Sinensal	Sesquiterpene Aldehyde
104	45.70	0.01%	(E,E)-Farnesyl acetate	Sesquiterpene Ester
105	48.73	0.04%	Farnesylacetone	Sesquiterpene Ketone

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