



Scotch Pine

Pinus Sylvestris

Batch No. FR-59059

France, organically produced

Monoterpenes	90.4%
β pinene	39.93
α pinene	33.35
limonene	6.69
myrcene	5.15
camphene	2.56
δ 3 carene	0.76
(E) β ocimene	0.55
tricyclene	0.47
terpinolene	0.34
sabinene	0.11
meta-cymene	0.11
(Z) β ocimene	0.08
thuja-2,4(10)-diene	0.07
γ terpinene	0.06
α phellandrene	0.05
para-cymenene	0.05
α thujene	0.04
α terpinene	0.03

Monoterpenols	2.16%
myrtenol	0.14
fenchol	0.10
trans-pinocarveol	0.39
camphene hydrate	0.04
borneol	0.13
terpinen-4-ol	0.13
para-cymen-8-ol	0.04
α terpineol	1.19

Aldehydes	0.12%
hexanal	0.03
(E) 2-hexenal	0.01
nonanal	0.02
α campholene aldehyde	0.04
(E) 2-decenal	0.02

Esters	0.17%
bornyl acetate	0.17

Ethers	0.02%
α pinene oxide	0.02

Ketones	0.39%
pinocamphone	0.11
camphor	0.10
pinocarvone	0.06
fenchone	0.04
verbeneone	0.03
2-undecanone	0.03
cryptone	0.01
carvone	0.01

Other	0.08%
toluene	0.02
octane	0.02
(Z) hex-3-en-1-ol	0.04

Sesquiterpenes	5.85%
cis-caryophyllene	1.55
γ muurolene	0.97
β cadinene	0.88
γ cadinene	0.40
α muurolene	0.36
longifolene	0.26
α humulene	0.24
6,9-guaiadiene	0.18
β chamigrene	0.15
β elemene	0.11
α copaene	0.10
β selinene	0.09
β bourbonene	0.08
β copaene	0.08
allo-aromadendrene	0.08
δ elemene	0.07
β gurjunene	0.05
germacrene d	0.04
trans-cadina-1,4-diene	0.04
α cadinene	0.04
aromadendrene	0.03
trans-muurola-3,5-diene	0.02
trans-cadina-1,4-diene	0.02
α ylangene	0.01



Sesquiterpenols	0.22%
spathulenol	0.09
τ muurolol	0.07
α cadinol	0.06

Raw Material: Pinus Sylvestrus L.

INCI Name: PINUS SYLVESTRIS LEAF OIL

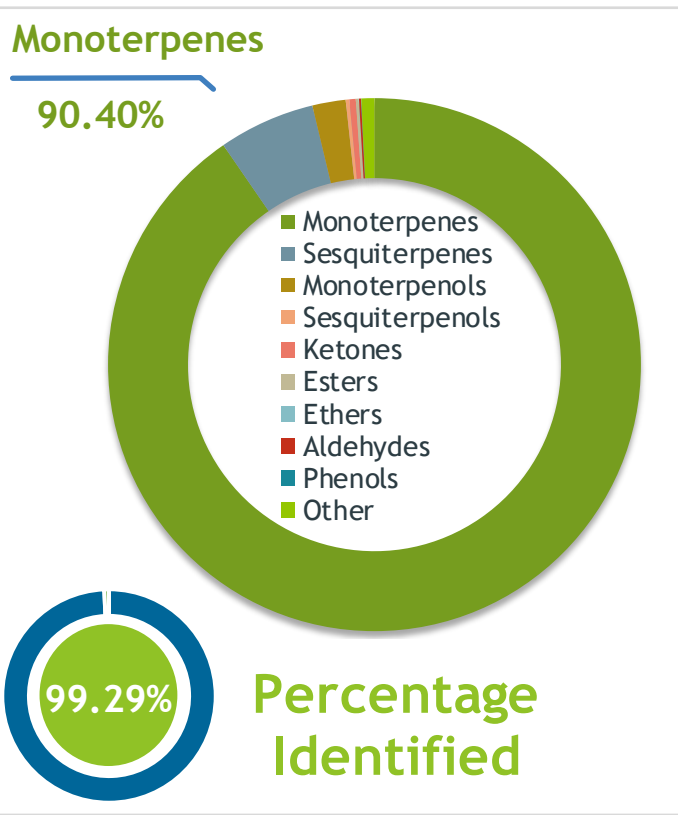
Production Method: Steam distilled, Needles

Analysis: 6/5/2020

Client  **Source** 

Pine (*Pinus sylvestris*)
FR-59059

Sample Pine (*Pinus sylvestris*)
Batch #:..... FR-59059
Type:..... Essential Oil
CAS Number:... 8023-99-2
Nature's Gift



Client  **Website** 

Primary

39.93% beta-Pinene
33.35% alpha-Pinene
6.69% Limonene

Result 

Conclusion No adulterants, diluents, or contaminants were detected via this method. This oil meets the expected profile for genuine Essential Oil of Pine (*Pinus sylvestris*)

Internal Number: | EVS-3709


Essential Validation Services
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adam@essentialvalidationservices.com


Monoterpenes	90.40%	90.40%
Sesquiterpenes		5.85%
Monoterpenols		2.02%
Sesquiterpenols		0.22%
Ketones		0.39%
Esters		0.17%
Ethers		0.02%
Aldehydes		0.12%
Phenols		0.02%
Other		0.79%

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Client



Source

Pine (*Pinus sylvestris*)

FR-59059

Total Percentage		99.29%		
Number	RT	Area %	Compound Name	Chemical Family
1	3.75	0.02%	Toluene	Simple Phenolic
2	4.43	0.02%	Octane	Alkane
3	4.47	0.03%	Hexanal	Aliphatic Aldehyde
4	5.87	0.01%	(E)-2-Hexenal	Aliphatic Aldehyde
5	5.92	0.04%	cis-Hex-3-en-1-ol	Aliphatic Alcohol
6	6.36	0.02%	1-Hexanol	Aliphatic Alcohol
7	8.15	0.47%	Tricyclene	Monoterpene
8	8.32	0.04%	alpha-Thujene	Monoterpene
9	8.63	33.35%	alpha-Pinene	Monoterpene
10	9.20	2.56%	Camphene	Monoterpene
11	9.37	0.07%	Thuja-2,4(10)-diene	Monoterpene
12	10.18	0.11%	Sabinene	Monoterpene
13	10.40	39.93%	beta-Pinene	Monoterpene
14	10.92	5.15%	Myrcene	Monoterpene
15	11.58	0.05%	alpha-Phellandrene	Monoterpene
16	11.69	0.76%	delta-3-Carene	Monoterpene
17	12.05	0.03%	alpha-Terpinene	Monoterpene
18	12.38	0.11%	meta-Cymene	Monoterpene
19	12.61	6.69%	Limonene	Monoterpene
20	12.97	0.08%	(Z)-beta-Ocimene	Monoterpene
21	13.44	0.55%	(E)-beta-Ocimene	Monoterpene
22	13.93	0.06%	gamma-Terpinene	Monoterpene
23	15.16	0.34%	Terpinolene	Monoterpene
24	15.24	0.04%	Fenchone	Monoterpene Ketone
25	15.35	0.05%	para-Cymenene	Monoterpene
26	15.72	0.02%	alpha-Pinene oxide	Monoterpene Ether
27	16.09	0.02%	Nonanal	Aliphatic Aldehyde
28	16.66	0.10%	Fenchol	Monoterpenol
29	17.02	0.04%	alpha-Campholene aldehyde	Monoterpene Aldehyde
30	17.63	0.39%	trans-Pinocarveol	Monoterpenol
31	17.89	0.10%	Camphor	Monoterpene Ketone
32	18.28	0.04%	Camphene hydrate	Monoterpenol
33	18.62	0.06%	Pinocarvone	Monoterpene Ketone
34	19.09	0.13%	Borneol	Monoterpenol
35	19.24	0.11%	Pinocamphone	Monoterpene Ketone

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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

Client



Source

Pine (*Pinus sylvestris*)

FR-59059

Number	RT	Area %	Compound Name	Chemical Family
36	19.511	0.13%	Terpinen-4-ol	Monoterpene Ketone
37	19.74	0.01%	Cryptone	Monoterpene Ketone
38	19.83	0.04%	para-Cymen-8-ol	Monoterpenol
39	20.20	1.19%	alpha-Terpineol	Monoterpenol
40	20.70	0.03%	Verbenone	Monoterpene Ketone
41	22.39	0.01%	Carvone	Monoterpene Ketone
42	23.31	0.02%	(E)-2-Decenal	Monoterpene Aldehyde
43	24.24	0.17%	Bornyl acetate	Monoterpene Ester
44	24.71	0.03%	2-Undecanone	Aliphatic Ketone
45	27.01	0.07%	delta-Elemene	Sesquiterpene
46	27.95	0.01%	alpha-Ylangene	Sesquiterpene
47	28.22	0.10%	alpha-Copaene	Sesquiterpene
48	28.54	0.08%	beta-Bourbonene	Sesquiterpene
49	28.84	0.11%	beta-Elemene	Sesquiterpene
50	29.56	0.26%	Longifolene	Sesquiterpene
51	30.03	1.55%	cis-Caryophyllene	Sesquiterpene
52	30.47	0.08%	beta-Copaene	Sesquiterpene
53	30.81	0.03%	Aromadendrene	Sesquiterpene
54	30.97	0.18%	6,9-Guaiadiene	Sesquiterpene
55	31.26	0.02%	trans-Muurolo-3,5-diene	Sesquiterpene
56	31.50	0.24%	alpha-Humulene	Sesquiterpene
57	31.78	0.05%	beta-Gurjunene	Sesquiterpene
58	32.01	0.08%	allo-Aromadendrene	Sesquiterpene
59	32.23	0.04%	trans-Cadina-1(6),4-diene	Sesquiterpene
60	32.56	0.97%	gamma-Muurolole	Sesquiterpene
61	32.86	0.09%	beta-Selinene	Sesquiterpene
62	33.06	0.04%	Germacrene D	Sesquiterpene
63	33.16	0.15%	beta-Chamigrene	Sesquiterpene
64	33.32	0.36%	alpha-Muurolole	Sesquiterpene
65	33.87	0.40%	gamma-Cadinene	Sesquiterpene
66	34.12	0.88%	beta-Cadinene	Sesquiterpene
67	34.64	0.02%	trans-Cadina-1,4-diene	Sesquiterpene
68	34.81	0.04%	alpha-Cadinene	Sesquiterpene
69	36.30	0.09%	Spathulenol	Sesquiterpenol
70	38.87	0.07%	T-Muurolole	Sesquiterpenol
71	39.29	0.06%	alpha-Cadinol	Sesquiterpenol

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