

## Scotch Pine Pinus Sylvestris

Batch No. FR-59352

France

<b>Monoterpenes</b>	<b>84.56%</b>	<b>Aldehydes</b>	<b>1.69%</b>	<b>Sesquiterpenes</b>	<b>7.92%</b>
α pinene	36.00	hexanal	0.97	β caryophyllene	2.12
β pinene	33.92	α campholene aldehyde	0.21	δ cadinene	1.19
limonene + β		nonanal	0.19	germacrene d	0.96
phellandrene	5.97	octanal	0.15	γ cadinene	0.54
myrcene	3.14	(E) 2-decenal	0.06	α muurolene	0.46
camphene	3.06	(E) 2-undecenal	0.04	γ muurolene	0.36
tricyclene	0.58	geranial	0.03	longifolene	0.30
(E) β ocimene	0.45	heptanal	0.02	α humulene	0.30
isoterpinolene	0.35	2-heptenal	0.02	α selinene	0.20
δ 3 carene	0.21			α copaene	0.18
para-cymene	0.21	<b>Esters</b>	<b>0.22%</b>	6,9-guaiadiene	0.17
thuja-2,4(10)-diene	0.18	bornyl acetate	0.17	α cubebene	0.16
γ terpinene	0.13	linalyl acetate	0.05	β bourbonene	0.15
para-cymenene	0.12			β selinene	0.15
(Z) β ocimene	0.08	<b>Ethers</b>	<b>0.15%</b>	β copaene	0.12
sabinene	0.07	caryophyllene oxide	0.13	β elemene	0.11
α thujene	0.05	α pinene oxide	0.02	(E) cadina-1(6),4-diene	0.07
α terpinene	0.04			dauca-5,8-diene	0.07
<b>Monoterpenols</b>	<b>3.63%</b>	<b>Ketones</b>	<b>1.09%</b>	aromdendrene	0.06
α terpineol	1.65	isopinocampone	0.34	trans-muurola-3,5-diene	0.06
trans-pinocarveol	0.86	pinocampone	0.20	allo-aromadendrene	0.04
linalool	0.33	camphor	0.19	α cadinene	0.04
terpinen-4-ol	0.27	pinocarpone	0.14	α ylangene	0.03
borneol	0.24	fenchone	0.08	δ elemene	0.03
fenchol	0.17	verbenone	0.07	(Z) muurola-4(14), 5-diene	0.03
para-cymen-8-ol	0.05	nopinone	0.07	trans-cadina-1,4-diene	0.02
camphene hydrate	0.04				
trans-carveol	0.02	<b>Phenols</b>	<b>0.16%</b>	<b>Sesquiterpenols</b>	<b>0.14%</b>
<b>Other</b>	<b>0.1%</b>	benzaldehyde	0.13	spathulenol	0.05
1-hexanol	0.06	toluene	0.03	α cadinol	0.03
1-octanol	0.03			τ cadinol	0.06
1-octene	0.01				

Client



Source



Pine, Scotch (*Pinus sylvestris*)  
FR-59352

Sample

Pine, Scotch (*Pinus sylvestris*)  
Batch #:..... FR-59352  
Type:..... Essential Oil  
CAS Number:... 8023-99-2  
**Nature's Gift**

Client



Website

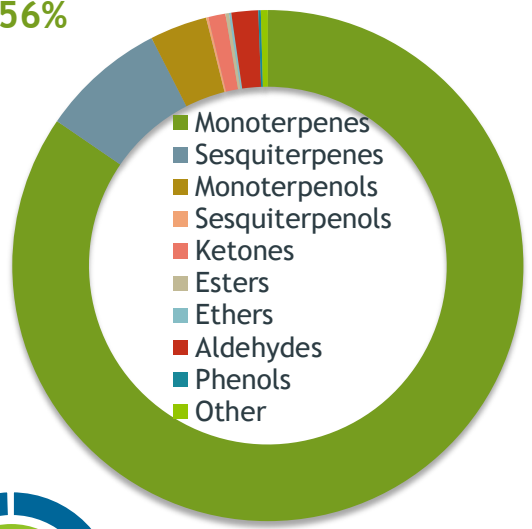


Primary

**36.00%** | alpha-Pinene  
**33.92%** | beta-Pinene  
**5.97%** | Limonene (Co-Eluting)

**Monoterpenes**

84.56%



**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 Pine, Scotch (*Pinus sylvestris*)

Internal Number: | EVS-5706



**Essential Validation Services**

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

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

*Alan Christen*

Monoterpenes	84.56%	84.56%
Sesquiterpenes	7.92%	7.92%
Monoterpenols	3.63%	3.63%
Sesquiterpenols	0.14%	0.14%
Ketones	1.09%	1.09%
Esters	0.22%	0.22%
Ethers	0.15%	0.15%
Aldehydes	1.69%	1.69%
Phenols	0.16%	0.16%
Other	0.44%	0.44%

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Client



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Total Percentage		99.66%		
Number	RT	Area %	Compound Name	Chemical Family
1	3.69	0.03%	Toluene	Simple Phenolic
2	4.14	0.01%	1-Octene	Alkene
3	4.36	0.97%	Hexanal	Aliphatic Aldehyde
4	6.23	0.06%	1-Hexanol	Aliphatic Alcohol
5	7.29	0.02%	Heptanal	Aliphatic Aldehyde
6	7.96	0.58%	Tricyclene	Monoterpene
7	8.13	0.05%	alpha-Thujene	Monoterpene
8	8.43	36.00%	alpha-Pinene	Monoterpene
9	9.00	3.06%	Camphene	Monoterpene
10	9.16	0.18%	Thuja-2,4(10)-diene	Monoterpene
11	9.36	0.02%	2-Heptenal	Aliphatic Aldehyde
12	9.51	0.13%	Benzaldehyde	Simple Phenolic
13	9.96	0.07%	Sabinene	Monoterpene
14	10.16	33.92%	beta-Pinene	Monoterpene
15	10.69	3.14%	Myrcene	Monoterpene
16	11.29	0.15%	Octanal	Aliphatic Aldehyde
17	11.45	0.21%	delta-3-Carene	Monoterpene
18	11.81	0.04%	alpha-Terpinene	Monoterpene
19	12.15	0.21%	para-Cymene	Monoterpene
20	12.36	5.97%	Limonene	Monoterpene
21	12.40	Co-Eluting	beta-Phellandrene	Monoterpene
22	12.73	0.08%	(Z)-beta-Ocimene	Monoterpene
23	13.19	0.45%	(E)-beta-Ocimene	Monoterpene
24	13.68	0.13%	gamma-Terpinene	Monoterpene
25	14.35	0.03%	1-Octanol	Aliphatic Alcohol
26	14.89	0.35%	Isoterpinolene	Monoterpene
27	14.98	0.08%	Fenchone	Monoterpene Ketone
28	15.11	0.12%	para-Cymenene	Monoterpene
29	15.44	0.02%	alpha-Pinene oxide	Monoterpene Ether
30	15.62	0.33%	Linalool	Monoterpenol
31	15.84	0.19%	Nonanal	Aliphatic Aldehyde
32	16.41	0.17%	Fenchol	Monoterpenol
33	16.76	0.21%	alpha-Campholene aldehyde	Monoterpene Aldehyde
34	17.23	0.07%	Nopinone	Monoterpene Ketone
35	17.36	0.86%	trans-Pinocarveol	Monoterpenol

Client



Source



Pine, Scotch (*Pinus sylvestris*)  
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Number	RT	Area %	Compound Name	Chemical Family
36	17.618	0.19%	Camphor	Monoterpenol
37	18.00	0.04%	Camphene hydrate	Monoterpenol
38	18.26	0.20%	Pinocamphone	Monoterpene Ketone
39	18.35	0.14%	Pinocarvone	Monoterpene Ketone
40	18.82	0.24%	Borneol	Monoterpenol
41	18.96	0.34%	Isopinocamphone	Monoterpene Ketone
42	19.23	0.27%	Terpinen-4-ol	Monoterpenol
43	19.58	0.05%	para-Cymen-8-ol	Monoterpenol
44	19.92	1.65%	alpha-Terpineol	Monoterpenol
45	20.41	0.07%	Verbenone	Monoterpene Ketone
46	21.04	0.02%	trans-Carveol	Monoterpenol
47	22.47	0.05%	Linalyl acetate	Monoterpene Ester
48	23.01	0.06%	(E)-2-Decenal	Monoterpene Aldehyde
49	23.25	0.03%	Geranial	Monoterpene Aldehyde
50	23.91	0.17%	Bornyl acetate	Monoterpene Ester
51	26.00	0.03%	delta-Elemene	Sesquiterpene
52	26.66	0.16%	alpha-Cubebene	Sesquiterpene
53	27.48	0.04%	(E)-2-Undecenal	Sesquiterpene Aldehyde
54	27.57	0.03%	alpha-Ylangene	Sesquiterpene
55	27.84	0.18%	alpha-Copaene	Sesquiterpene
56	28.16	0.15%	beta-Bourbonene	Sesquiterpene
57	28.46	0.11%	beta-Elemene	Sesquiterpene
58	29.17	0.30%	Longifolene	Sesquiterpene
59	29.64	2.12%	beta-Caryophyllene	Sesquiterpene
60	30.08	0.12%	beta-Copaene	Sesquiterpene
61	30.42	0.06%	Aromadendrene	Sesquiterpene
62	30.59	0.17%	6,9-Guaiadiene	Sesquiterpene
63	30.86	0.06%	trans-Muurola-3,5-diene	Sesquiterpene
64	31.10	0.30%	alpha-Humulene	Sesquiterpene
65	31.39	0.03%	cis-Muurola-4(14),5-diene	Sesquiterpene
66	31.62	0.04%	allo-Aromadendrene	Sesquiterpene
67	31.83	0.07%	trans-Cadina-1(6),4-diene	Sesquiterpene
68	31.96	0.36%	gamma-Muurolole	Sesquiterpene
69	32.16	0.96%	Germacrene D	Sesquiterpene
70	32.47	0.15%	beta-Selinene	Sesquiterpene
71	32.59	0.07%	Dauca-5,8-diene	Sesquiterpene

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