

Client



Source



Black Spruce (*Picea mariana*)
BS2008

Sample

Black Spruce (*Picea mariana*)
Batch #:..... BS2008
Type:..... Essential Oil
CAS Number:... 91722-19-9
Be Kind Botanicals

Client



Website

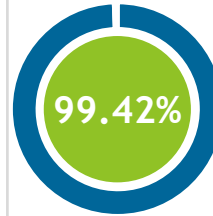
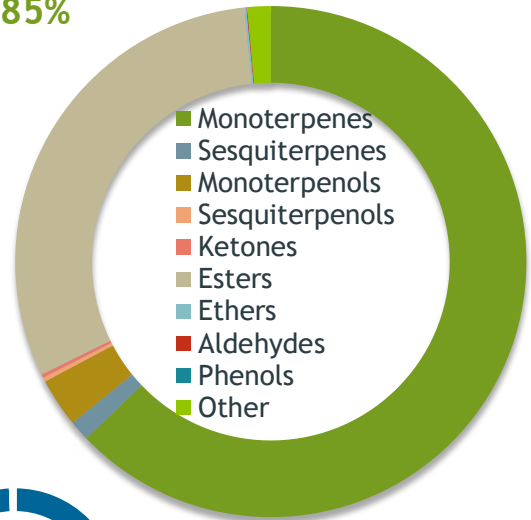


Primary

29.99% Bornyl acetate
17.82% alpha-Pinene
11.48% beta-Pinene

Monoterpenes

62.85%



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 Black Spruce (*Picea mariana*)

Internal Number: | EVS-4318



Essential Validation Services

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

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

Adam Christen

Monoterpenes	62.85%	62.85%
Sesquiterpenes		1.28%
Monoterpenols		3.10%
Sesquiterpenols		0.27%
Ketones		0.21%
Esters	30.62%	30.62%
Ethers		0.14%
Aldehydes		0.05%
Phenols		0.00%
Other		1.48%

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Total Percentage		99.42%		
Number	RT	Area %	Compound Name	Chemical Family
1	4.23	0.01%	Hexanal	Aliphatic Aldehyde
2	5.64	0.01%	cis-Hex-3-en-1-ol	Aliphatic Alcohol
3	6.40	0.89%	Santene	Normonoterpene
4	7.76	0.89%	Tricyclene	Monoterpene
5	7.93	0.16%	alpha-Thujene	Monoterpene
6	8.20	17.82%	alpha-Pinene	Monoterpene
7	8.39	0.01%	alpha-Fenchene	Monoterpene
8	8.80	11.22%	Camphene	Monoterpene
9	8.95	0.02%	Thuja-2,4(10)-diene	Monoterpene
10	9.74	0.09%	Sabinene	Monoterpene
11	9.91	11.48%	beta-Pinene	Monoterpene
12	10.48	1.91%	Myrcene	Monoterpene
13	10.84	0.02%	2-Carene	Monoterpene
14	11.13	0.15%	alpha-Phellandrene	Monoterpene
15	11.25	9.58%	delta-3-Carene	Monoterpene
16	11.52	0.01%	1,4-Cineole	Monoterpene Ether
17	11.59	0.17%	alpha-Terpinene	Monoterpene
18	11.92	0.32%	para-Cymene	Monoterpene
19	12.15	7.79%	Limonene	Monoterpene
20	12.23	0.05%	1,8-Cineole	Monoterpene Ether
21	12.40	0.01%	beta-Phellandrene	Monoterpene
22	12.51	0.03%	(Z)-beta-Ocimene	Monoterpene
23	13.44	0.14%	gamma-Terpinene	Monoterpene
24	14.67	0.96%	Terpinolene	Monoterpene
25	14.87	0.08%	para-Cymenene	Monoterpene
26	15.05	0.05%	alpha-Pinene oxide	Monoterpene Ether
27	15.39	0.31%	Linalool	Monoterpenol
28	16.17	0.06%	Fenchol	Monoterpenol
29	16.43	0.01%	cis-para-Menth-2-en-1-ol	Monoterpenol
30	16.52	0.04%	alpha-Campholene aldehyde	Monoterpene Aldehyde
31	17.00	0.01%	Nopinone	Normonoterpene Ketone
32	17.13	0.07%	trans-Pinocarveol	Monoterpenol
33	17.38	0.16%	Camphor	Monoterpene Ketone
34	17.52	0.01%	Isopulegol	Monoterpenol
35	17.76	0.21%	Camphene hydrate	Monoterpenol

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Number	RT	Area %	Compound Name	Chemical Family
36	18.17	0.05%	Isoborneol	Monoterpenol
37	18.57	0.97%	Borneol	Monoterpenol
38	18.72	0.01%	Isopinocampnone	Monoterpene Ketone
39	18.99	0.27%	Terpinen-4-ol	Monoterpenol
40	19.33	0.03%	para-Cymen-8-ol	Monoterpenol
41	19.69	1.07%	alpha-Terpineol	Monoterpenol
42	20.19	0.01%	Verbenone	Monoterpene Ketone
43	20.72	0.23%	Fenchyl acetate	Monoterpene Ester
44	21.26	0.03%	Citronellol	Monoterpenol
45	21.32	0.03%	Methyl thymol	Monoterpene Ether
46	22.31	0.02%	Piperitone	Monoterpene Ketone
47	23.79	29.99%	Bornyl acetate	Monoterpene Ester
48	24.67	0.01%	Perillyl alcohol	Monoterpenol
49	25.88	0.06%	delta-Elemene	Sesquiterpene
50	26.25	0.02%	Terpinen-4-yl acetate	Monoterpene Ester
51	26.46	0.06%	alpha-Terpinyl acetate	Monoterpene Ester
52	26.68	0.05%	Citronellyl acetate	Monoterpene Ester
53	27.50	0.01%	Longicyclene	Sesquiterpene
54	27.65	0.01%	alpha-Copaene	Sesquiterpene
55	27.90	0.27%	Geranyl acetate	Monoterpene Ester
56	28.27	0.03%	beta-Elemene	Sesquiterpene
57	28.97	0.09%	Longifolene	Sesquiterpene
58	29.44	0.11%	beta-Caryophyllene	Sesquiterpene
59	30.92	0.02%	alpha-Humulene	Sesquiterpene
60	31.66	0.02%	trans-Cadina-1(6),4-diene	Sesquiterpene
61	31.78	0.04%	gamma-Murolene	Sesquiterpene
62	31.97	0.05%	Germacrene D	Sesquiterpene
63	32.75	0.11%	alpha-Murolene	Sesquiterpene
64	33.29	0.13%	gamma-Cadinene	Sesquiterpene
65	33.54	0.45%	delta-Cadinene	Sesquiterpene
66	33.63	0.03%	trans-Calamenene	Sesquiterpene
67	34.05	0.01%	trans-Cadina-1,4-diene	Sesquiterpene
68	34.22	0.03%	alpha-Cadinene	Sesquiterpene
69	34.47	0.08%	trans-alpha-Bisabolene	Sesquiterpene
70	37.70	0.01%	1,10-di-epi-Cubenol	Sesquiterpenol
71	38.23	0.07%	T-Cadinol	Sesquiterpenol

ESSENTIAL VALIDATION SERVICES | 74 / SW 2ND AVE GAINESVILLE, FLORIDA 32601 | 352-350-5044

- 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

