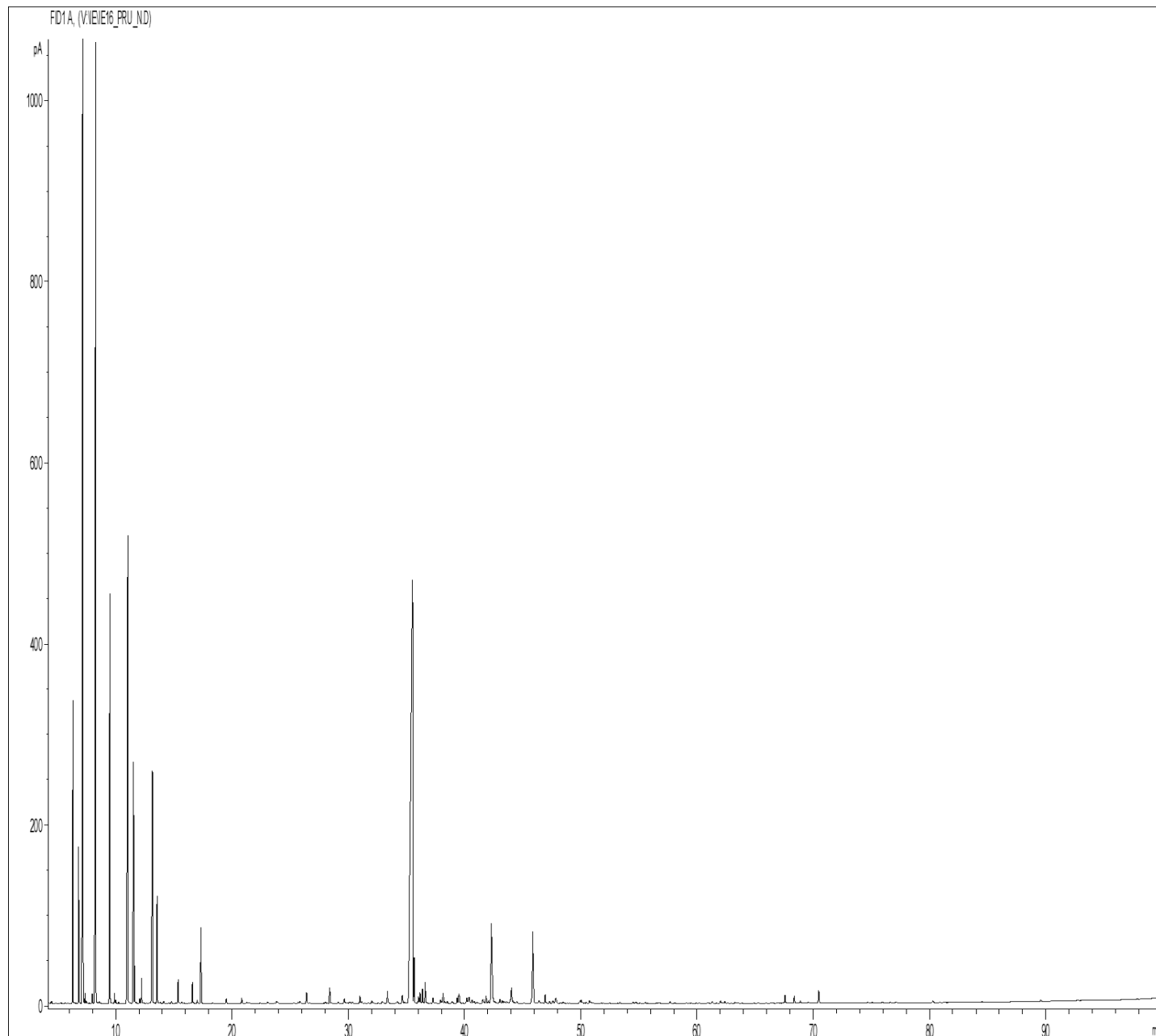


GCMS ANALYSIS

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

DATE: August 18, 2022



Due to volume turnover, this report is not lot specific, It is representative of the quality of this oil produced by the manufacturer of this product, Specific lots may vary slightly as is the case in natural products,

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
1	6,29	SANTENE	2,85
2	6,80	TRICYCLENENE	1,81
3	7,16	alpha-PINENE	19,66
4	7,19	alpha-THUYENE	0,18
5	7,34	COMPOUND Mw=122	0,09
6	7,44	TOLUENE	0,03
7	7,96	alpha-FENCHENE	0,12
8	8,27	CAMPHERE	16,62
9	8,56	HEXANAL	0,02
10	9,49	beta-PINENE	5,81
11	9,88	SABINENE	0,11
12	9,98	PINADIENE	0,04
13	11,03	delta3-CARENE	9,07
14	11,52	beta-MYRCENE	3,44
15	11,62	alpha-PHELLANDRENE	0,36
16	12,03	o-CYMENE	0,06
17	12,21	alpha-TERPINENE	0,33
18	12,95	ISOSYLVESTRENE	0,01
19	13,14	LIMONENE	3,71
20	13,55	1,8-CINEOLE	1,47
21		beta-PHELLANDRENE	
22	13,82	1,3,8-p-MENTHATRIENE	0,01
23	14,11	COMPOUND Mw=152	0,03
24	14,79	cis-beta-OCIMENE	0,02
25	15,35	gamma-TERPINENE	0,33
26	15,66	trans-beta-OCIMENE	0,02
27	16,44	m-CYMENE	0,01
28	16,58	p-CYMENE	0,32
29	16,99	ISOTERPINOLENE	0,04
30	17,32	TERPINOLENE	1,15

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GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
31	19,49	PINOL	0,07
32	20,83	CAMPHOLENAL ISOMER	0,09
33	21,24	ALIPHATIC ESTER	0,02
34	22,40	3-METHYL-3-BUTENYL ISOVALERATE	0,01
35	23,03	3-HEXEN-1-OL	0,02
36	23,84	FENCHONE	0,04
37	23,92	TERPENIC OXIDE	0,02
38	25,29	ALIPHATIC ESTER	0,01
39	25,69	CAMPHOLENAL ISOMER	0,02
40	25,84	DIMETHYLSTYRENE ISOMER	0,03
41	26,40	alpha,p-DIMETHYLSTYRENE	0,20
42	28,02	alpha-CUBEBENE	0,03
43	28,39	FENCHYL ACETATE	0,28
44	28,55	alpha-LONGIPINENE	0,02
45	29,13	CITRONELLAL	0,02
46	29,64	alpha-CAMPHOLENAL	0,08
47	30,14	alpha-COPAENE	0,03
48	30,34	LONGICYCLENE	0,02
49	31,00	CAMPHOR	0,14
50	31,15	PINOCAMPHONE	0,03
51	32,02	TERPENIC ALCOHOL	0,04
52	32,91	ISOPINOCAMPHONE	0,04
53	33,36	LINALOOL	0,23
54	34,13	trans-p-MENTH-2-EN-1-OL	0,01
55	34,22	ISOPULEGOL	0,04
56	34,64	LONGIFOLENE	0,18
57	34,81	PINOCARVONE	0,02
58	35,52	BORNYL ACETATE	20,71
59	35,66	ISOBORNYL ACETATE	0,71
60	36,03	METHYL THYMOL ETHER	0,12

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GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
61	36,17	beta-ELEMENE	0,20
62		CAMPHENE HYDRATE	
63	36,37	beta-CARYOPHYLLENE	0,25
64	36,62	TERPINENE-4-OL	0,37
65	37,28	VERBENYL ACETATE	0,10
66	37,94	MYRTENAL	0,07
67	38,03	COMPOUND Mw=150	0,02
68	38,15	TERPENIC ESTER	0,19
69	38,29	ALIPHATIC ESTER	0,03
70	38,52	CADINA-3,5-DIENE	0,03
71	38,93	GERMACRENE A	0,03
72	39,36	cis-PINOCARVYL ACETATE	0,10
73	39,52	COMPOUND Mw=150	0,27
74	40,18	CITRONELLYL ACETATE	0,12
75	40,32	TERPENIC COMPOUND	0,04
76	40,38	ZONARENE	0,15
77	40,63	alpha-HUMULENE	0,08
78	40,75	SESQUITERPENE	0,02
79	40,84	cis-4,5-MUUROLADIENE	0,03
80	41,02	SESQUITERPENE	0,01
81	41,06	gamma-SELINENE	0,02
82	41,56	TERPENIC COMPOUND	0,07
83	41,61	MYRTENYL ACETATE	0,02
84	41,85	gamma-MUUROLENE	0,14
85	42,04	TERPENIC COMPOUND	0,04
86	42,31	alpha-TERPINEOL	2,21
87		BORNEOL	
88	42,60	VERBENONE	0,05
89	43,04	GERMACRENE D	0,09
90	43,23	SESQUITERPENE	0,05

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GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
91	43,36	SESQUITERPENE	0,03
92	43,40	SESQUITERPENE	0,02
93	43,57	SESQUITERPENE	0,03
94	43,60	SESQUITERPENE	0,02
95	43,72	TERPENIC ALCOHOL	0,02
96	43,93	alpha-SELINENE	0,07
97	44,03	alpha-MUUROLENE	0,31
98	44,15	TERPENIC COMPOUND	0,05
99	44,51	cis-CARVYL ACETATE	0,03
100	45,87	delta-CADINENE	1,58
101	45,92	gamma-CADINENE	0,23
102	46,17	SESQUITERPENE	0,01
103	46,41	CITRONELLOL	0,07
104	46,67	TERPENIC COMPOUND	0,01
105	46,93	trans-alpha-BISABOLENE	0,17
106	47,29	CADINA-1,4-DIENE	0,04
107	47,59	MYRTENOL	0,06
108	47,85	CAMPHOLENOL	0,14
109		SESQUITERPENE	
110	48,26	AROMATIC COMPOUND	0,01
111	48,48	TERPENIC COMPOUND	0,03
112	49,91	cis-CALAMENENE	0,05
113	50,02	trans-CALAMENENE	0,09
114	50,12	AROMATIC COMPOUND	0,01
115	50,46	m-CYMENE-8-OL	0,02
116	50,73	GERANIOL	0,06
117	50,85	p-CYMENE-8-OL	0,03
118	51,04	KETONIC COMPOUND	0,01
119	53,35	TERPENIC OXIDE	0,02
120	54,48	alpha-CALACORENE	0,03

GCMS ANALYSIS (cont'd,)

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PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
121	54,77	SESQUITERPENOL	0,02
122	55,52	KETONIC COMPOUND	0,02
123	57,67	1-DODECANOL	0,03
124	61,31	NEROLIDOL	0,03
125	62,01	Epi-CUBENOL	0,05
126	62,38	CUBENOL	0,03
127	63,26	ALIPHATIC ESTER	0,01
128	66,91	SESQUITERPENOL	0,01
129	67,58	T-CADINOL	0,15
130	68,38	alpha-MUUROLOL	0,14
131	68,92	delta-CADINOL	0,04
132	69,58	TERPENIC COMPOUND	0,02
133	70,48	alpha-CADINOL	0,27
134	74,70	DITERPENIC COMPOUND	0,01
135	75,07	DITERPENIC COMPOUND	0,01
136	75,95	MANOYL OXIDE	0,02
137	76,64	TERPENIC OXIDE	0,01
138	77,13	AROMATIC COMPOUND	0,01
139	80,28	AROMATIC COMPOUND	0,04
140	81,26	19-NORABIETA-8,11,13-TRIENE	0,01
141	84,53	GERANYLLINALOOL	0,01
142	89,60	Epi-MANOOL	0,03
143	97,87	SESQUITERPENOL	0,01
		TOTAL	99,98

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