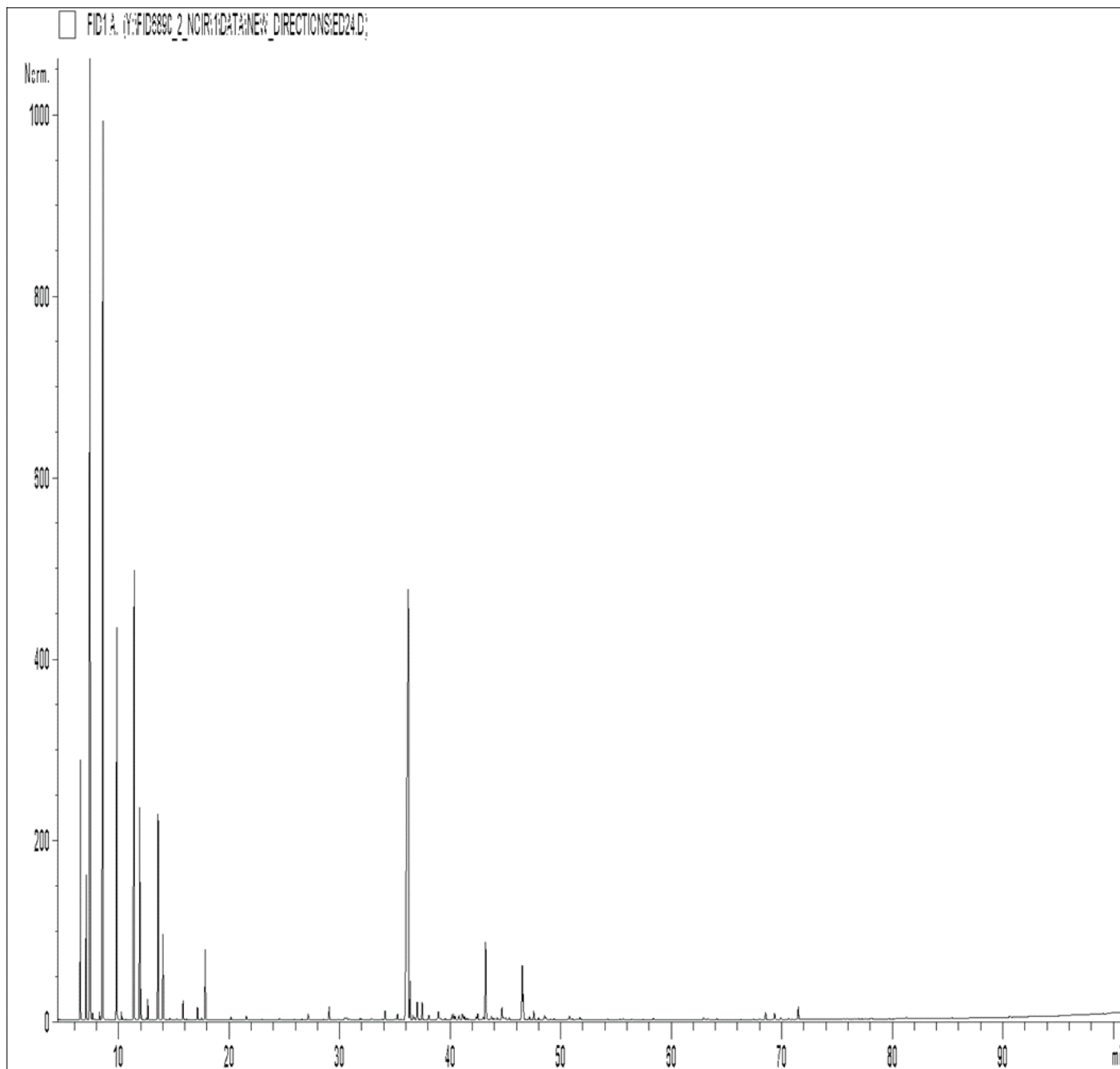


GCMS ANALYSIS

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

DATE: March 26,2021



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	4,69	ACETONE	0,01
2	6,55	SANTENE	2,69
3	7,06	TRICYCLENE	1,77
4	7,43	alpha-PINENE	20,88
5	7,45	alpha-THUYENE	0,28
6	7,64	COMPOUND Mw=122	0,08
7	7,81	TOLUENE	0,02
8	8,27	alpha-FENCHENE	0,10
9	8,57	CAMPHENE	16,02
10	8,96	HEXANAL	0,01
11	9,83	beta-PINENE	6,13
12	10,24	SABINENE	0,11
13	10,36	PINADIENE	0,02
14	10,61	delta2-CARENE	0,01
15	11,40	delta3-CARENE	8,88
16	11,90	beta-MYRCENE	3,28
17	12,02	alpha-PHELLANDRENE	0,39
18	12,17	psi-LIMONENE	0,01
19	12,48	o-CYMENE	0,03
20	12,63	alpha-TERPINENE	0,32
21	13,39	ISOSYLVESTRENE	0,02
22	13,56	LIMONENE	3,56
23	14,00	1,8-CINEOLE	0,35
24	14,10	beta-PHELLANDRENE	1,30
25	14,30	1,3,8-p-MENTHARIENE	0,01
26	14,63	COMPOUND Mw=152	0,03
27	15,25	Cis-beta-OCIMENE	0,02
28	15,83	gamma-TERPINENE	0,32
29	16,14	Trans-beta-OCIMENE	0,01
30	16,98	m-CYMENE	0,02

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
31	17,13	p-CYMENE	0,24
32	17,50	ISOTERPINOLENE	0,04
33	17,83	TERPINOLENE	1,26
34	20,15	PINOL	0,06
35	21,55	CAMPHOLENE ALDEHYDE ISOMER	0,07
36	21,94	1-HEXANOL	0,02
37	22,99	3-METHYL-3-BUTENYL,ISOVALERATE	0,01
38	24,56	FENCHONE	0,03
39	25,92	COMPOUND Mw=152	0,01
40	26,41	ALIPHATIC ESTER	0,01
41	26,58	DIMETHYLSTYRENE ISOMER	0,02
42	27,16	alpha,p-DIMETHYLSTYRENE	0,13
43	27,36	LINALOOL cis-OXIDE	0,01
44	28,51	alpha-CUBEBENE	0,02
45	28,85	alpha-LONGIPINENE	0,02
46	29,05	FENCHYL ACETATE	0,29
47	29,85	CITRONELLAL	0,04
48	30,46	alpha-CAMPHOLENOL	0,06
49	30,64	alpha-COPAENE	0,08
50	30,90	LONGICYCLOLENE	0,03
51	31,88	CAMPHOR	0,05
52	32,02	alpha-PINOCAMPHONE	0,02
53	32,89	CAMPHOLENIC ALCOHOL	0,05
54	33,80	beta-PINOCAMPHONE	0,03
55	34,11	LINALOOL	0,21
56	34,96	Trans-p-MENTH-2-EN-1-OL	0,02
57	35,06	PINOCARVONE	0,02
58	35,23	LONGIFOLENE	0,16
59	35,56	ISOPULEGOL	0,03
60	36,21	BORNYL ACETATE	20,61

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
61	36,37	ISOBORNYL ACETATE	0,71
62	36,65	METHYL THYMOL ETHER	0,10
63	36,74	beta-ELEMENE	0,05
64	36,95	CAMPHENE HYDRATE	0,15
65	37,01	beta-CARYOPHYLLENE	0,28
66	37,45	TERPINENE-4-OL	0,38
67	38,05	TERPENIC ACETATE	0,11
68	38,80	MYRTENAL	0,05
69	38,93	Cis-PINOCARVYL ACETATE	0,22
70	39,03	ALIPHATIC ALCOHOL	0,08
71	39,55	TERPENIC ESTER	0,04
72	40,14	CADINA-3,5-DIENE	0,10
73	40,28	Trans-PINOCARVYL ACETATE	0,12
74	40,42	GERMACRENE A	0,09
75	40,79	ISOBORNEOL	0,10
76	41,08	CITRONELLYL ACETATE	0,14
77	41,15	ZONARENE	0,07
78	41,31	alpha-HUMULENE	0,07
79	41,49	Cis-4,5-MUUROLADIENE	0,03
80	41,65	E-beta-FARNESENE	0,03
81	42,34	TERPENIC ESTER	0,07
82	42,48	gamma-MUUROLENE	0,16
83	42,99	TERPENYL ACETATE	0,08
84	43,10	BORNEOL	0,62
85	43,19	alpha-TERPINEOL	1,20
86	43,71	GERMACRENE D	0,10
87	43,85	CADINADIENE ISOMER	0,05
88	44,04	PELLANDRAL	0,05
89	44,26	beta-SELINENE	0,05
90	44,37	PIPERITONE	0,02

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
91	44,68	alpha-MUUROLENE	0,32
92	44,82	CARVONE	0,05
93	44,99	BICYCLOGERMACRENE	0,09
94	45,33	Trans-CARVYL ACETATE	0,05
95	46,51	delta-CADINENE	1,35
96	46,60	gamma-CADINENE	0,52
97	47,07	METHYL SALICYLATE	0,01
98	47,17	CITRONELLOL	0,08
99	47,55	alpha-BISABOLENE	0,20
100	47,99	CADINA-1,4-DIENE + MYRTENOL	0,04
101	48,54	alpha-AMORPHENE	0,11
102	48,66	CAMPHOLENOL	0,06
103	49,09	TERPENIC COMPOUND	0,02
104	49,38	SESQUITERPENE	0,02
105	50,66	Cis-CALAMENENE	0,02
106	50,79	Trans-CALAMENENE	0,09
107	51,02	Trans-CARVEOL	0,03
108	51,45	CAPROIC ACID	0,01
109	51,54	p-CYMENE-8-OL	0,02
110	51,72	GERANIOL	0,07
111	54,22	ALIPHATIC ESTER	0,02
112	55,32	alpha-CALACORENE	0,02
113	55,65	ALIPHATIC ALCOHOL	0,02
114	56,43	TERPENIC KETONE	0,02
115	58,37	1-DODECANOL	0,04
116	62,92	épi-CUBENOL	0,06
117	63,32	CUBENOL	0,04
118	64,11	ALIPHATIC ESTER	0,02
119	68,53	T-CADINOL	0,18
120	69,33	alpha-MUUROLOL	0,15

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: SPRUCE ORGANIC ESSENTIAL OIL - BLACK- 50057

Peak	RT (min)	Compound name	%
121	69,91	delta-CADINOL	0,05
122	70,62	AROMATIC COMPOUND	0,03
123	71,49	alpha-CADINOL	0,31
124	75,58	DITERPENE Mw=272	0,01
125	75,91	SANDAROCOPIMARADIENE Mw=272	0,02
126	76,55	AROMATIC COMPOUND	0,02
127	77,55	MANOYL OXIDE	0,02
128	78,15	AROMATIC COMPOUND	0,02
129	81,28	AROMATIC COMPOUND	0,05
130	81,83	AROMATIC COMPOUND	0,02
131	85,38	GERANYLLINALOOL ISOMER	0,02
132	90,64	epi-MANOOL	0,03
		TOTAL	99,98

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