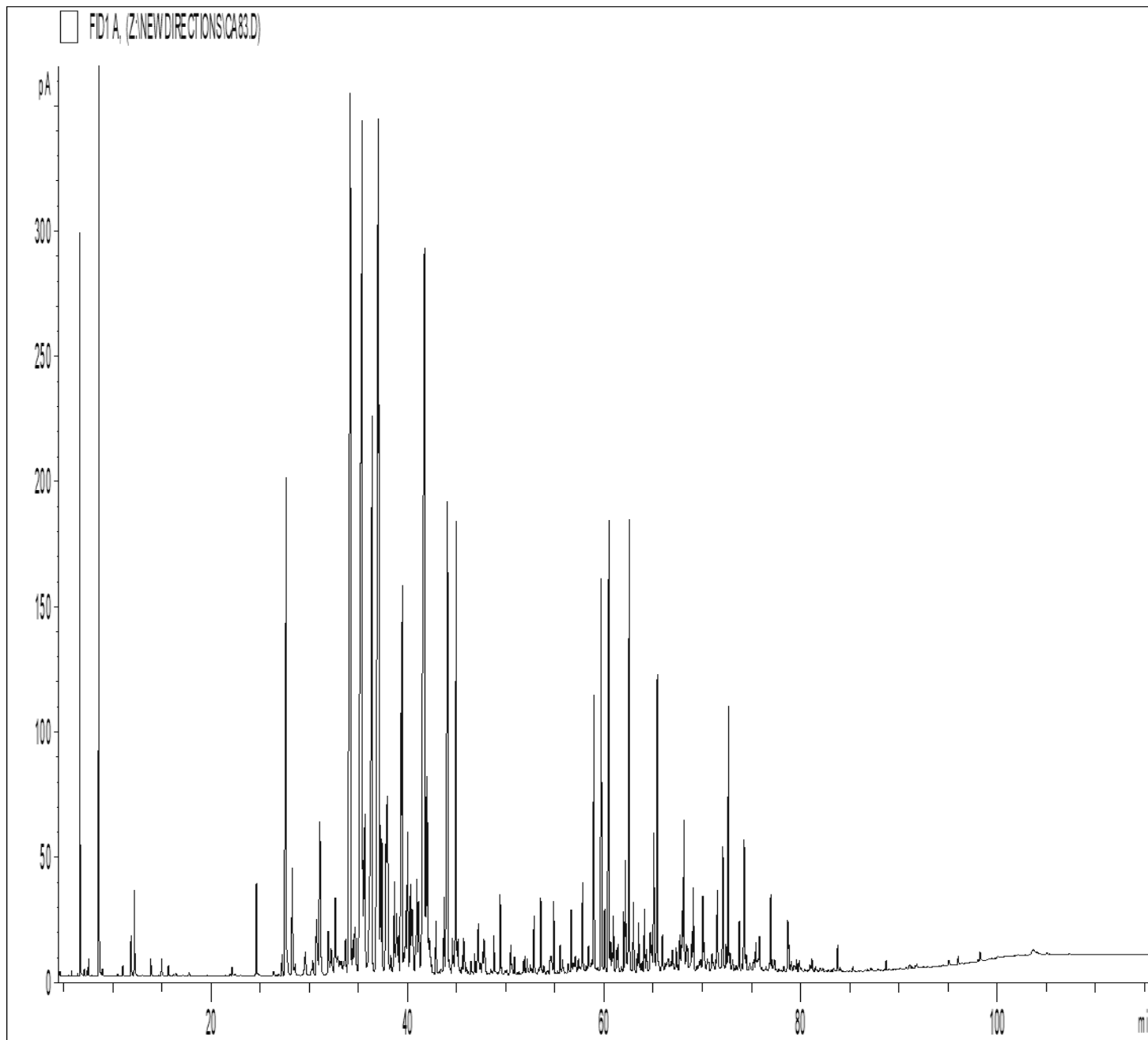


GCMS ANALYSIS

PRODUCT NAME: SPIKENARD ESSENTIAL OIL – 11134

DATE: April 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: SPIKENARD ESSENTIAL OIL – 11134

Peak	RT (min)	Compound name	%
1	6,66	alpha-PINENE	1,54
2		alpha-THUYENE	
3	8,61	beta-PINENE	3,02
4	11,87	LIMONENE	0,14
5	12,22	1,8-CINEOLE	0,31
6	13,88	gamma-TERPINENE	0,05
7	14,98	p-CYMENE	0,06
8	24,62	4-METHYLPENTYL VALERATE	0,35
9	27,22	ALIPHATIC ESTER	0,10
10	27,66	beta-PATCHOULENE	3,07
11	27,74	SESQUITERPENE	0,14
12	28,27	DAUCENE	0,57
13	28,56	AROMATIC COMPOUND Mw=190	0,06
14	29,59	alpha-GURJUNENE	0,14
15	30,35	GURJUNENE ISOMER	0,10
16	30,74	BENZYL ESTER	0,33
17	30,82	AROMATIC COMPOUND Mw=190	0,08
18	31,08	beta-MAALIENE	1,02
19	31,18	LINALOOL	0,09
20	31,93	MAALIENE ISOMER	0,30
21	32,22	alpha-cis-BERGAMOTENE	0,25
22	32,64	2-ARISTOLENE	0,57
23	32,90	alpha-trans-BERGAMOTENE	0,17
24	33,12	SESQUITERPENE	0,10
25	33,26	SESQUITERPENE	0,09
26	33,50	SESQUITERPENE	0,05
27	33,69	beta-CUBEBENE	0,28
28	34,17	CALARENE ISOMER	7,63
29	34,43	beta-CARYOPHYLLENE	0,19
30	34,58	TERPINENE-4-OL	0,14

Disclaimer & Caution:

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc, provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc, is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc, shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc, shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPIKENARD ESSENTIAL OIL – 11134

Peak	RT (min)	Compound name	%
31	34,65	SESQUITERPENE	0,33
32	34,78	SESQUITERPENE	0,05
33	35,40	3,7-GUAIADIENE	9,34
34	35,56	CADINA-3,5-DIENE	0,81
35	35,68	COPACAMPHENE	0,72
36	36,07	CADINADIENE ISOMER	0,22
37	36,18	GURJUNENE ISOMER	0,48
38	36,40	beta-GURJUNENE	3,71
39	37,00	SEYCHELLENE	6,14
40	37,07	alpha-PATCHOULENE	1,55
41	37,26	9,10-DEHYDRO-ISOLONGIFOLENE	0,73
42	37,42	COMPOUND Mw=222	0,60
43	37,79	ALLO-AROMADENDRENE	0,68
44	37,90	Epi-ZONARENE	0,74
45	37,98	SESQUITERPENE Mw=202	0,76
46	38,29	gamma-PATCHOULENE	0,11
47	38,66	ISOVALERIANIC ACID	0,49
48	38,83	ZONARENE	0,10
49	38,88	alpha-HUMULENE	0,33
50	39,07	CALAMENENE ISOMER	0,21
51	39,30	gamma-SELINENE	0,50
52	39,47	cis-4,5-MUUROLADIENE	2,60
53	39,68	COMPOUND Mw=220	0,18
54	39,82	SESQUITERPENE	0,33
55	40,01	CALARENE	0,85
56	40,29	alpha-TERPINEOL	0,51
57	40,47	CALAMENENE ISOMER	0,64
58	40,81	SESQUITERPENE	0,12
59	40,96	beta-CHAMIGRENE	0,55
60	41,15	PATCHOULENE ISOMER	0,40

Disclaimer & Caution:

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPIKENARD ESSENTIAL OIL – 11134

Peak	RT (min)	Compound name	%
61	41,72	VALENCENE	7,11
62	41,76	alpha-BULNESENE	0,32
63	41,94	beta-SELINENE	1,14
64	42,05	alpha-SELINENE	0,67
65	42,21	beta-BISABOLENE	0,17
66	42,27	cis-alpha-BISABOLENE	0,10
67	42,89	beta-CURCUMENE	0,27
68	43,71	delta-CADINENE	0,34
69	44,06	7-epi-alpha-SELINENE	2,79
70	44,22	delta-SELINENE	0,09
71	44,54	alpha-CURCUMENE	0,14
72	44,66	SELINADIENE ISOMER	0,08
73	44,96	EUDESMA-2,4,11-TRIENE ISOMER	2,55
74	45,13	MYRTENOL	0,18
75	45,57	COMPOUND Mw=220	0,09
76	45,72	SESQUITERPENE Mw=202	0,14
77	45,76	SESQUITERPENE Mw=202	0,09
78	46,45	SESQUITERPENE	0,07
79	46,83	SESQUITERPENE Mw=202	0,10
80	47,09	SESQUITERPENE Mw=202	0,06
81	47,19	SESQUITERPENE Mw=202	0,24
82	47,44	CALAMENENE ISOMER	0,05
83	47,63	SESQUITERPENE Mw=202	0,11
84	47,77	GERMACRENE B	0,17
85	47,88	DIHYDRO-beta-IONONE	0,08
86	48,78	BENZENEMETHANOL alpha-METHYL ACETATE	0,15
87	49,42	MYRTENIC ESTER	0,30
88	50,49	AROMATIC COMPOUND Mw=222	0,13
89	50,61	beta-IRONE	0,05
90	50,88	SESQUITERPENIC EPOXIDE	0,08

Disclaimer & Caution:

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPIKENARD ESSENTIAL OIL – 11134

Peak	RT (min)	Compound name	%
91	51,79	AROMATIC COMPOUND Mw=220	0,06
92	51,92	AROMATIC COMPOUND Mw=186	0,08
93	52,17	alpha-CALACORENE	0,08
94	52,86	COMPOUND Mw=222	0,25
95	53,55	beta-IONONE	0,35
96	54,51	COMPOUND Mw=218	0,07
97	54,61	AROMATIC COMPOUND Mw=186	0,14
98	54,88	FUROPELARGON ISOMER	0,28
99	55,53	METHYL OCTAHYDROANTHRACENE Mw=200	0,14
100	55,77	SESQUITERPENOL	0,07
101	56,34	SESQUITERPENOL	0,05
102	56,66	MAALIOL	0,28
103	56,86	SESQUITERPENOL	0,08
104	57,07	SESQUITERPENOL	0,13
105	57,39	COMPOUND Mw=236	0,07
106	57,80	CAROTOL	0,41
107	58,17	COMPOUND Mw=250	0,05
108	58,42	LEDOL	0,20
109	58,74	BISABOLOL ISOMER	0,13
110	58,96	CEDRENE OXIDE	1,47
111		SPIROJATAMOL ISOMER	
112	59,71	SPIROJATAMOL ISOMER	1,80
113	60,05	LONGICAMPHLINONE ISOMER Mw=206	0,28
114	60,49	SPIROJATAMOL ISOMER	2,70
115	60,65	GLOBULOL	0,16
116	60,80	COMPOUND Mw=218	0,09
117	60,94	SPIROJATAMOL ISOMER	0,28
118	61,29	FUROPELARGON	0,14
119	61,40	SPIROJATAMOL ISOMER	0,15
120	61,99	SPIROJATAMOL	0,26

Disclaimer & Caution:

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc, provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc, is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc, shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc, shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPIKENARD ESSENTIAL OIL – 11134

Peak	RT (min)	Compound name	%
121	62,16	EUDESMA-5-EN-11-alpha-OL	0,53
122	62,56	VALERANONE	2,31
123	62,97	SPATHULENOL	0,35
124	63,37	SESQUITERPENONE	0,09
125	63,51	EUDESMOL ISOMER	0,22
126	63,88	COMPOUND Mw=246	0,07
127	64,10	COPAENOL ISOMER	0,30
128	64,30	SESQUITERPENIC EPOXIDE	0,11
129	64,68	BISNORSESQUITERPENESQUELENONE ISOMER	0,28
130	64,86	SESQUITERPENOL	0,14
131	65,06	BISNORSESQUITERPENE-1,4,5-ESQUEL-7-EN-9-ONE	0,72
132	65,41	PATCHOULI ALCOHOL	1,44
133	65,93	alpha-MUUROLOL	0,26
134	66,21	SESQUITERPENONE	0,06
135	66,48	AROMATIC COMPOUND Mw=216	0,07
136	66,52	SESQUITERPENOL	0,07
137	66,82	SESQUITERPENONE	0,06
138	66,96	POGOSTOL	0,13
139	67,34	VALERENAL Mw=218	0,15
140	67,69	alpha-EUDESMOL	0,22
141	67,88	alpha-NOOTKATOL	0,13
142	67,98	alpha-CADINOL	0,27
143	68,12	PATCHOULYL ACETATE	0,69
144	68,35	beta-EUDESMOL	0,17
145	68,48	AROMATIC COMPOUND	0,16
146	68,93	EUDESMA-7(11)-EN-4-OL	0,27
147	69,08	beta-NOOTKATOL	0,37
148	69,83	SESQUITERPENONE	0,07
149	70,03	AROMATIC COMPOUND Mw=206	0,39
150	70,17	SESQUITERPENONE	0,15

Disclaimer & Caution:

Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. New Directions Aromatics Inc. provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of New Directions Aromatics Inc. is limited to the value of the goods and does not include any consequential loss. New Directions Aromatics Inc. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. New Directions Aromatics Inc. shall not be responsible for any damages resulting from use of or reliance upon this information. In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario.

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: SPIKENARD ESSENTIAL OIL – 11134

Peak	RT (min)	Compound name	%
151	70,51	HIMACHALENOL ISOMER Mw=218	0,08
152	70,65	SESQUITERPENONE	0,08
153	71,00	AROMATIC COMPOUND	0,12
154	71,13	COMPOUND Mw=248	0,06
155	71,38	DAUCOL	0,06
156	71,53	SESQUITERPENONE	0,42
157	72,10	SESQUITERPENOL	0,68
158	72,40	SESQUITERPENONE	0,16
159	72,66	CALAMENIC COMPOUND Mw= 216	1,19
160	72,82	ISOEUGENOL	0,11
161	73,10	COMPOUND Mw=252	0,09
162	73,45	SESQUITERPENOL	0,06
163	73,77	VALERENAL ISOMER	0,27
164	74,27	PATCHOULYL ACETATE ISOMER	0,74
165	74,48	COMPOUND Mw=246	0,09
166	74,84	AROMATIC COMPOUND	0,08
167	75,29	COMPOUND Mw=246	0,05
168	75,44	VALERENAL ISOMER	0,15
169	75,82	AROMATIC COMPOUND	0,21
170	76,96	SESQUITERPENIC EPOXIDE	0,33
171	77,09	SESQUITERPENIC EPOXIDE	0,06
172	77,35	SESQUITERPENOL	0,11
173	78,69	AROMATIC COMPOUND	0,27
174	78,82	CALAMENIC COMPOUND Mw= 216	0,13
175	79,60	AROMATIC COMPOUND	0,06
176	79,87	AROMATIC COMPOUND M w=216	0,06
177	81,15	COMPOUND Mw=216	0,07
178	83,77	ISOEUGENYL ACETATE	0,12
		TOTAL	99,94

Disclaimer & Caution:

Please refer to all relevant technical information specific to the product, prior to use, The information contained in this document is obtained from current and reliable sources, New Directions Aromatics Inc, provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy, Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose, The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties, As the ordinary or otherwise use(s) of this product is outside the control of New Directions Aromatics Inc,, no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained, The liability of New Directions Aromatics Inc, is limited to the value of the goods and does not include any consequential loss, New Directions Aromatics Inc, shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon, New Directions Aromatics Inc, shall not be responsible for any damages resulting from use of or reliance upon this information, In the event of any dispute, the Customer hereby agrees that Jurisdiction is limited to the province of Ontario,