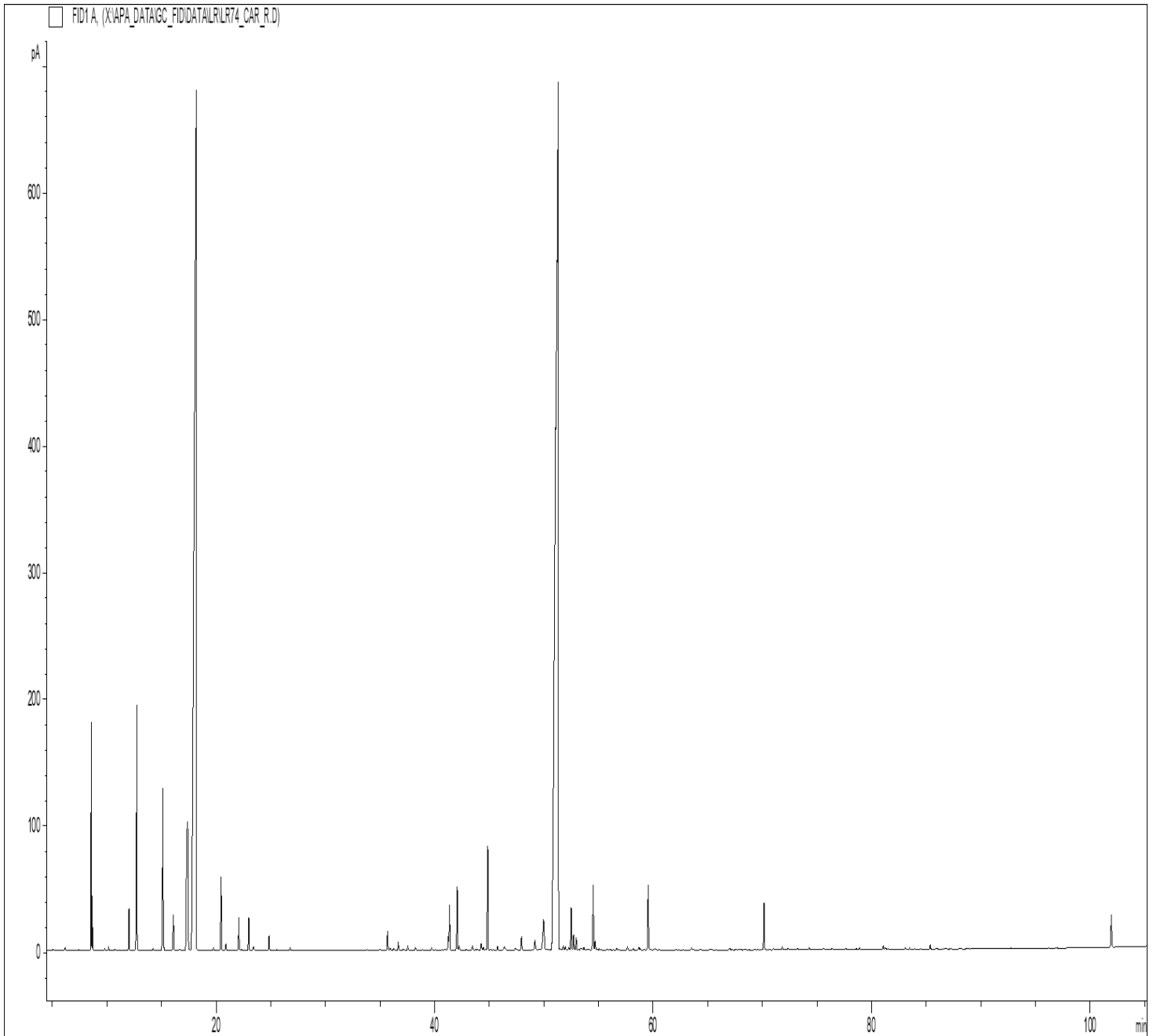


**GCMS ANALYSIS**

**PRODUCT NAME: CARDAMOM ESSENTIAL OIL**

**DATE: May 22, 2024**



*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: CARDAMOM ESSENTIAL OIL**

Peak	RT (min)	Compound	%
1	6,18	ISOVALERALDEHYDE	0,02
2	8,58	alpha-PINENE	1,80
3	8,68	alpha-THUYENE	0,38
4	10,17	CAMPHENE	0,03
5	12,03	beta-PINENE	0,43
6	12,75	SABINENE	2,79
7	14,23	delta3-CARENE	0,02
8	15,14	beta-MYRCENE	1,98
9	15,21	alpha-PHELLANDRENE	0,03
10	16,09	alpha-TERPINENE	0,47
11	16,67	1,8-CINEOLE, 2,3-DEHYDRO-	0,02
12	17,38	LIMONENE	3,64
13	18,17	1,8-CINEOLE	31,87
14		beta-PHELLANDRENE	
15	19,75	cis-beta-OCIMENE	0,02
16	20,45	gamma-TERPINENE	0,85
17	20,90	trans-beta-OCIMENE	0,07
18	22,08	p-CYMENE	0,37
19	22,99	TERPINOLENE	0,38
20	23,43	OCTANAL	0,05
21	24,84	1,3,7-NONATRIENE, 4,8-DIMETHYL-	0,16
22	26,78	5-HEPTEN-2-ONE, 6-METHYL-	0,03
23	34,97	ACETIC ACID	0,01
24	35,69	trans-THUYANOL	0,24
25	35,94	TERPENIC COMPOUND	0,02
26	36,27	SESQUITERPENE	0,03
27	36,67	OCTYL ACETATE	0,09
28	37,54	ALIPHATIC ALCOHOL	0,05
29	38,25	ALIPHATIC ESTER	0,04
30	39,73	ALIPHATIC ESTER	0,03

**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, Canada,

**GCMS ANALYSIS (cont'd,)**

**PRODUCT NAME: CARDAMOM ESSENTIAL OIL**

Peak	RT (min)	Compound	%
31	40,89	TERPENIC COMPOUND	0,02
32	41,25	cis-THUYANOL	0,17
33	41,37	LINALOOL	0,57
34	42,07	LINALYL ACETATE	0,84
35	42,24	trans-p-MENTH-2-EN-1-OL	0,06
36	43,47	BORNYL ACETATE	0,06
37	44,27	beta-ELEMENE	0,10
38	44,46	TERPINEN-4-YL ACETATE	0,03
39	44,65	TERPENIC COMPOUND	0,02
40	44,86	TERPINENE-4-OL	1,40
41	45,75	TERPENIC COMPOUND	0,05
42	46,40	cis-p-MENTH-2-EN-1-OL	0,07
43		SESQUITERPENE	
44	46,50	TERPENIC COMPOUND	0,02
45	47,41	SESQUITERPENE	0,03
46	47,95	TERPENIC COMPOUND	0,19
47	49,19	trans-DIHYDROCARVYL ACETATE	0,16
48	49,65	cis-PIPERITOL	0,01
49	49,96	NERAL	0,11
50	50,30	TERPENIC COMPOUND	0,72
51	50,39	DECYL ACETATE	0,02
52	51,32	TERPENYL ACETATE	43,03
53	51,35	alpha-TERPINEOL	1,25
54	51,45	TERPENIC COMPOUND	0,02
55	51,61	TERPENIC COMPOUND	0,01
56	51,79	GERMACRENE D	0,06
57	51,97	ALIPHATIC ESTER	0,04
58	52,28	SESQUITERPENE	0,03
59	52,50	beta-SELINENE	0,55
60	52,73	alpha-SELINENE	0,22

**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, Canada,

**GCMS ANALYSIS (cont'd,)**

**PRODUCT NAME: CARDAMOM ESSENTIAL OIL**

Peak	RT (min)	Compound	%
61	52,90	NERYL ACETATE	0,03
62	52,96	GERANIAL	0,14
63	53,38	ALDEHYDE COMPOUND	0,05
64	53,67	trans-PIPERITOL	0,03
65	53,94	TERPENIC COMPOUND	0,01
66	54,52	GERANYL ACETATE	0,93
67	54,70	TERPENIC COMPOUND	0,12
68	54,89	TERPENIC COMPOUND	0,01
69	55,77	MENTHADIENOL ISOMER	0,02
70	56,08	COMPOUND Mw=212	0,01
71	56,66	ALCOHOL COMPOUND	0,02
72	56,86	ALIPHATIC ESTER	0,02
73	57,65	TERPENIC COMPOUND	0,04
74	58,18	ALIPHATIC ESTER	0,02
75	58,69	GERMACRENE B	0,05
76	58,81	trans-CARVEOL	0,01
77	59,55	GERANIOL	0,89
78	60,15	TERPENIC COMPOUND	0,02
79	60,53	cis-CARVEOL	0,01
80	63,50	COMPOUND Mw=166	0,03
81	65,37	OXYGENED COMPOUND	0,01
82	67,00	SESQUITERPENOL	0,03
83	68,31	TERPENIC COMPOUND	0,02
84	70,16	NEROLIDOL	0,62
85	71,02	CAPRYLIC ACID	0,02
86	71,82	METHYL CINNAMATE	0,04
87	72,14	SESQUITERPENIC COMPOUND	0,01
88	72,36	cis-1,2-DIHYDROXY-p-MENTH-2-ENE	0,03
89	73,21	ALCOHOL COMPOUND	0,02
90	74,29	OXYGENED COMPOUND	0,03

**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, Canada,

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: CARDAMOM ESSENTIAL OIL

Peak	RT (min)	Compound	%
91	74,51	TERPENIC COMPOUND	0,01
92	75,56	trans-1,2-DIHYDROXY-p-MENTH-2-ENE	0,03
93	76,38	SORBIC ACID	0,02
94	77,65	ALCOHOL COMPOUND	0,03
95	78,60	FARNESYL ACETATE	0,02
96	78,89	OXYGENED COMPOUND	0,03
97	81,06	SESQUITERPENIC COMPOUND	0,05
98	81,23	FARNESOL ISOMER	0,04
99	81,50	ACID COMPOUND	0,02
100	83,09	TERPENIC COMPOUND	0,03
101	83,48	ALKAN COMPOUND	0,02
102	83,96	TERPENIC COMPOUND	0,02
103	84,48	GERANIC ACID	0,02
104	85,37	E,E-FARNESOL	0,06
105	85,92	COMPOUND Mw=220	0,02
106	86,70	TERPENIC COMPOUND	0,02
107	86,83	AROMATIC COMPOUND	0,01
108	92,50	ALKAN COMPOUND	0,01
109	92,72	TERPENIC COMPOUND	0,01
110	101,95	AROMATIC COMPOUND Mw=284	0,50
111	108,54	PALMITIC ACID	0,03
		<b>TOTAL</b>	<b>100,00</b>

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, Canada,