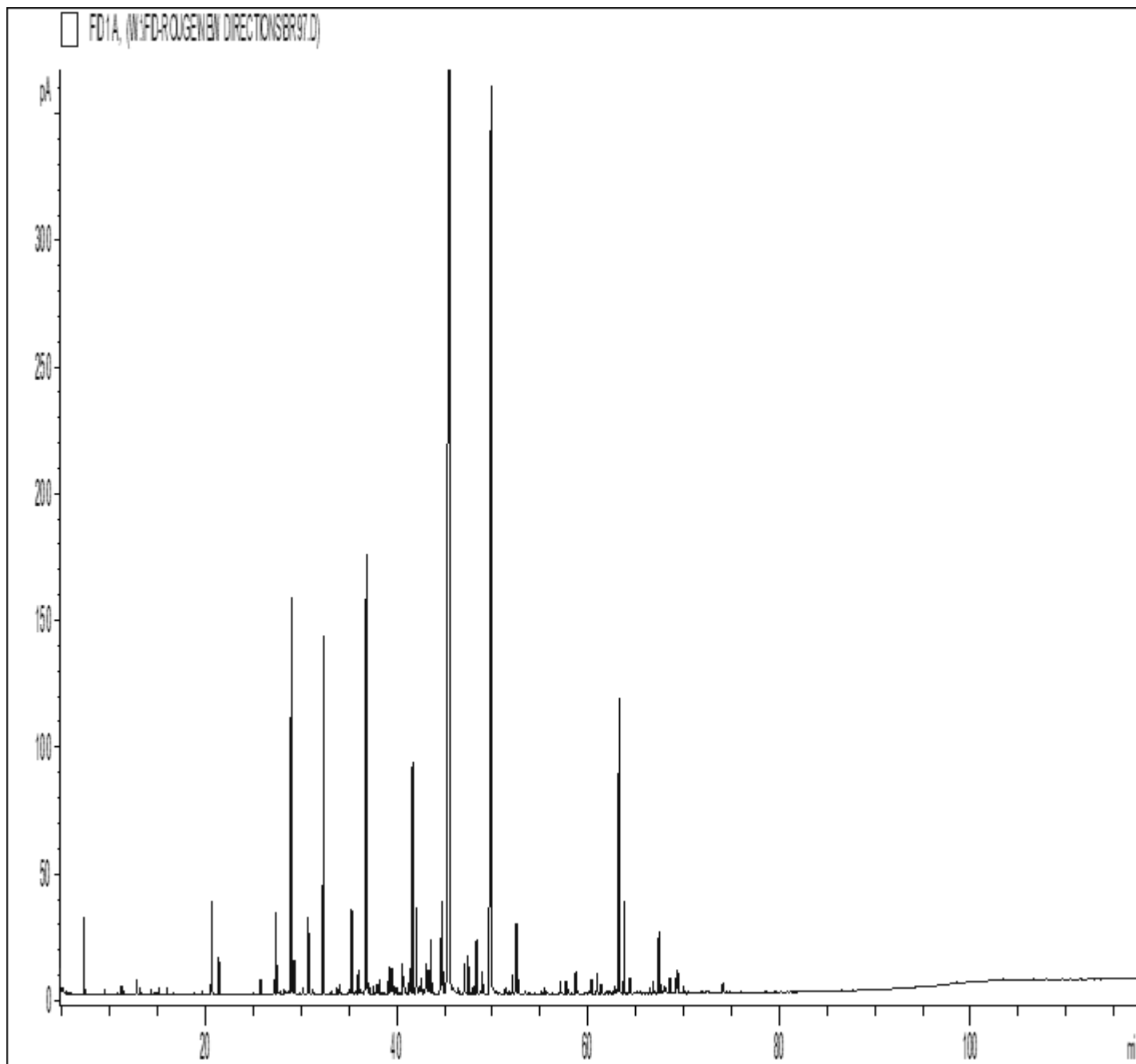


GCMS ANALYSIS

PRODUCT NAME: GERANIUM ORGANIC ESSENTIAL OIL - 50011

DATE: September 29, 2020



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: GERANIUM ORGANIC ESSENTIAL OIL - 50011

Peak	RT (min)	Compound name	%
1	6.68	alpha-PINENE	0.47
2	8.44	DEHYDROXYLINALOOL OXIDE A	0.05
3	9.66	gamma-PYRONENE	0.02
4	10.01	beta-MYRCENE	0.09
5	10.17	alpha-PHELLANDRENE	0.07
6	11.44	LIMONENE	0.13
7	11.67	1,8-CINEOLE	0.04
8	11.79	beta-PHELLANDRENE	0.04
9	11.85	cis-ARBUSCULON	0.02
10	12.74	cis-beta-OCIMENE	0.08
11	13.00	trans-ARBUSCULON	0.03
12	13.23	AROMATIC COMPOUND Mw=122	0.02
13	13.50	trans-beta-OCIMENE	0.11
14	14.25	p-CYMENE	0.06
15	14.89	TERPINOLENE	0.03
16	16.75	PINOL	0.02
17	17.69	5-HEPTEN-2-ONE, 6-METHYL-	0.04
18	18.61	ROSE cis-OXIDE	1.08
19	19.29	ROSE trans-OXIDE	0.46
20	22.29	cis-p-MENTHANE-8-OL	0.03
21	22.60	trans-p-MENTHANE-8-OL	0.03
22	23.31	LINALOOL cis-OXIDE	0.19
23	25.00	alpha-CUBEBENE	0.09
24	25.19	MENTHONE	0.54
25	25.54	SESQUITERPENE	0.02
26	25.64	LINALOOL trans-OXIDE	0.05
27	25.87	CITRONELLAL	0.11
28	25.97	delta-ELEMENE	0.05
29	26.15	ISOGERANIAL	0.04
30	26.50	ISOMENTHONE	5.89

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: GERANIUM ORGANIC ESSENTIAL OIL - 50011

Peak	RT (min)	Compound name	%
31	27.23	alpha-COPAENE	0.48
32	27.39	ISONERAL	0.07
33	27.57	COMPOUND Mw=152	0.03
34	27.92	alpha-BOURBONENE	0.10
35	28.57	beta-BOURBONENE	1.03
36	28.74	COMPOUND Mw=192	0.04
37	28.89	alpha-GURJUNENE	0.10
38	29.68	LINALOOL	3.82
39	29.77	beta1-CUBEBENE	0.20
40	30.13	DIMETHYL SULFOXIDE	0.04
41	30.49	NEOISOPULEGOL	0.06
42	31.23	ISOPULEGOL	0.09
43	31.67	epsilon-CADINENE	0.16
44	32.39	3,5-HEPTADIENE-2-ONE, 6-METHYL-	0.03
45	32.75	beta-CUBEBENE	0.20
46	32.81	beta-CARYOPHYLLENE	1.11
47	33.03	AROMATIC COMPOUND	0.05
48	33.59	6,9-GUAIADIENE	0.40
49	33.74	SESQUITERPENE	0.07
50	34.11	CITRONELLYL FORMIATE	6.83
51	34.32	NEOISOMENTHOL	0.17
52	34.44	CADINA-3,5-DIENE	0.43
53	34.58	COMPOUND Mw=170	0.04
54	35.15	GERMACRENE A	0.19
55	35.37	trans-PINOCARVEOL	0.04
56	35.50	SESQUITERPENE	0.15
57	35.78	ALLO-AROMADENDRENE	0.21
58	36.21	MELONOL	0.03
59	36.60	ZONARENE	0.23
60	36.66	alpha-HUMULENE	0.25

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: GERANIUM ORGANIC ESSENTIAL OIL - 50011

Peak	RT (min)	Compound name	%
61	36.85	NERYL FORMATE	0.07
62	37.04	CITRONELLYL ACETATE	0.27
63	37.20	cis-4,5-MUUROLADIENE	0.06
64	37.44	gamma-SELINENE	0.13
65	37.57	TERPENIC ESTER	0.04
66	38.10	NERAL	0.39
67	38.15	gamma-MUUROLENE	0.26
68	38.23	CALARENE	0.07
69	38.42	gamma-HIMACHALENE	0.04
70	38.61	alpha-TERPINEOL	0.25
71	38.78	GERANYL FORMIATE	2.94
72	38.94	LEDENE	0.16
73	39.29	beta-CHAMIGRENE	0.06
74	39.51	GERMACRENE D	1.75
75	39.76	MUUROLADIENE ISOMER	0.08
76	39.89	CADINENE ISOMER	0.11
77	39.95	beta-SELINENE	0.22
78	40.01	alpha-DIHYDRO-AGAROFURAN	0.16
79	40.23	alpha-SELINENE	0.03
80	40.44	BICYCLOGERMACRENE	0.41
81	40.52	alpha-MUUROLENE	0.18
82	40.59	cis-alpha-BISABOLENE	0.10
83	40.74	CITRONELLYL PROPIONATE	0.53
84	41.03	GERANIAL	0.75
85	41.80	gamma-CADINENE	0.14
86	41.83	GERANYL ACETATE	0.43
87	41.91	delta-CADINENE	0.99
88	42.11	CITRONELLOL ISOMER	0.22
89	42.50	CITRONELLOL	31.81
90	42.66	delta-SELINENE	0.34

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: GERANIUM ORGANIC ESSENTIAL OIL - 50011

Peak	RT (min)	Compound name	%
91	42.86	CADINA-1,4-DIENE	0.15
92	43.21	gamma-GERANIOL	0.15
93	43.39	AROMATIC COMPOUND Mw=200	0.04
94	43.75	alpha-AMORPHENE	0.14
95	44.05	NEROL	0.44
96	44.46	cis-ISOGERANIOL	0.04
97	44.70	trans-ISOGERANIOL	0.02
98	44.81	CITRONELLYL BUTYRATE	0.42
99	45.24	NERYL BUTYRATE	0.10
100	45.48	GERANYL PROPIONATE	0.68
101	46.06	cis-CALAMENENE	0.04
102	46.21	trans-CALAMENENE	0.21
103	46.73	GERANIOL	15.79
104	47.11	E-GERANYL ACETONE	0.02
105	47.52	2-PHENYLETHYL ISOBUTYRATE	0.04
106	47.66	AROMATIC COMPOUND Mw=194	0.03
107	47.92	AROMATIC COMPOUND Mw=220	0.02
108	48.35	2-PHENYLETHYL BUTYRATE	0.05
109	48.40	ISOGERANIOL ISOMER	0.10
110	48.79	Epi-CUBEBOL	0.07
111	49.17	alpha-AGAROFURAN	0.25
112	49.64	GERANYL BUTYRATE	0.91
113	49.97	CITRONELIC ESTER	0.08
114	50.08	NERYL METHYLBUTYRATE	0.09
115	50.59	alpha-CALACORENE	0.06
116	51.06	GERANYL METHYLBUTYRATE	0.03
117	52.41	CUBEBOL	0.03
118	52.78	CITRONELIC ESTER	0.10
119	53.03	beta-CALACORENE	0.03
120	53.24	PHENYLETHYLIC 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,

GCMS ANALYSIS (cont'd,)

PRODUCT NAME: GERANIUM ORGANIC ESSENTIAL OIL - 50011

Peak	RT (min)	Compound name	%
121	54.19	CARYOPHYLLENE EPOXIDE	0.14
122	54.77	GERANYL ISOVALERATE	0.16
123	55.20	CITRONELLYL ISOVALERATE	0.04
124	55.83	CITRONELLYL TIGLATE	0.28
125	55.95	NERYL TIGLATE	0.03
126	56.13	LEDOL	0.05
127	56.86	EPOXY-6,7-HUMULENE	0.04
128	57.13	PHOTOSANTALOL ISOMER	0.03
129	57.44	NERYL CAPROATE	0.16
130	57.89	Epi-CUBENOL	0.18
131	57.95	JUNEOL	0.15
132	58.36	CUBENOL	0.12
133	58.54	COMPOSE Mw=236	0.02
134	59.03	GLOBULOL	0.05
135	59.17	FUROPALARGONE	0.03
136	59.33	VIRIDIFLOROL	0.07
137	59.79	PHENYLETHYLIC ESTER	0.12
138	60.03	10-epi-gamma-EUDESOL	4.16
139	60.70	GERANYL TIGLATE	1.17
140	60.93	EUDESOL ISOMER	0.03
141	61.36	SPATHULENOL	0.18
142	61.50	EUDESOL ISOMER	0.03
143	62.06	EUDESOL ISOMER	0.03
144	62.35	SESQUITERPENOL	0.06
145	62.73	CITRONELIC ESTER	0.03
146	62.89	SESQUITERPENOL	0.03
147	63.09	T-CADINOL	0.04
148	63.34	gamma-EUDESOL	0.10
149	63.68	AGAROSPIROL	0.16
150	60.70	GERANYL TIGLATE	1.17

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: GERANIUM ORGANIC ESSENTIAL OIL - 50011

Peak	RT (min)	Compound name	%
151	63.89	VALERIANOL ISOMER	0.05
152	64.16	2-PHENYLETHYL TIGLATE	0.83
153	64.65	SESQUITERPENOL	0.13
154	64.90	TERPENIC ESTER	0.13
155	65.09	CITRONELLIC ESTER	0.03
156	65.34	VALERIANOL	0.21
157	65.93	4-HYDROXY-DIHYDRO-alpha-AGAROFURAN	0.19
158	66.13	COMPOUND Mw=162	0.15
159	66.21	beta-EUDESMOL	0.30
160	66.58	alpha-CADINOL	0.09
161	67.79	CITRONELLIC ACID	0.04
162	68.75	AROMATIC COMPOUND Mw=218	0.03
163	69.36	TERPENIC ESTER	0.07
164	70.65	GERANIC ACID	0.13
		TOTAL	99.95

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,