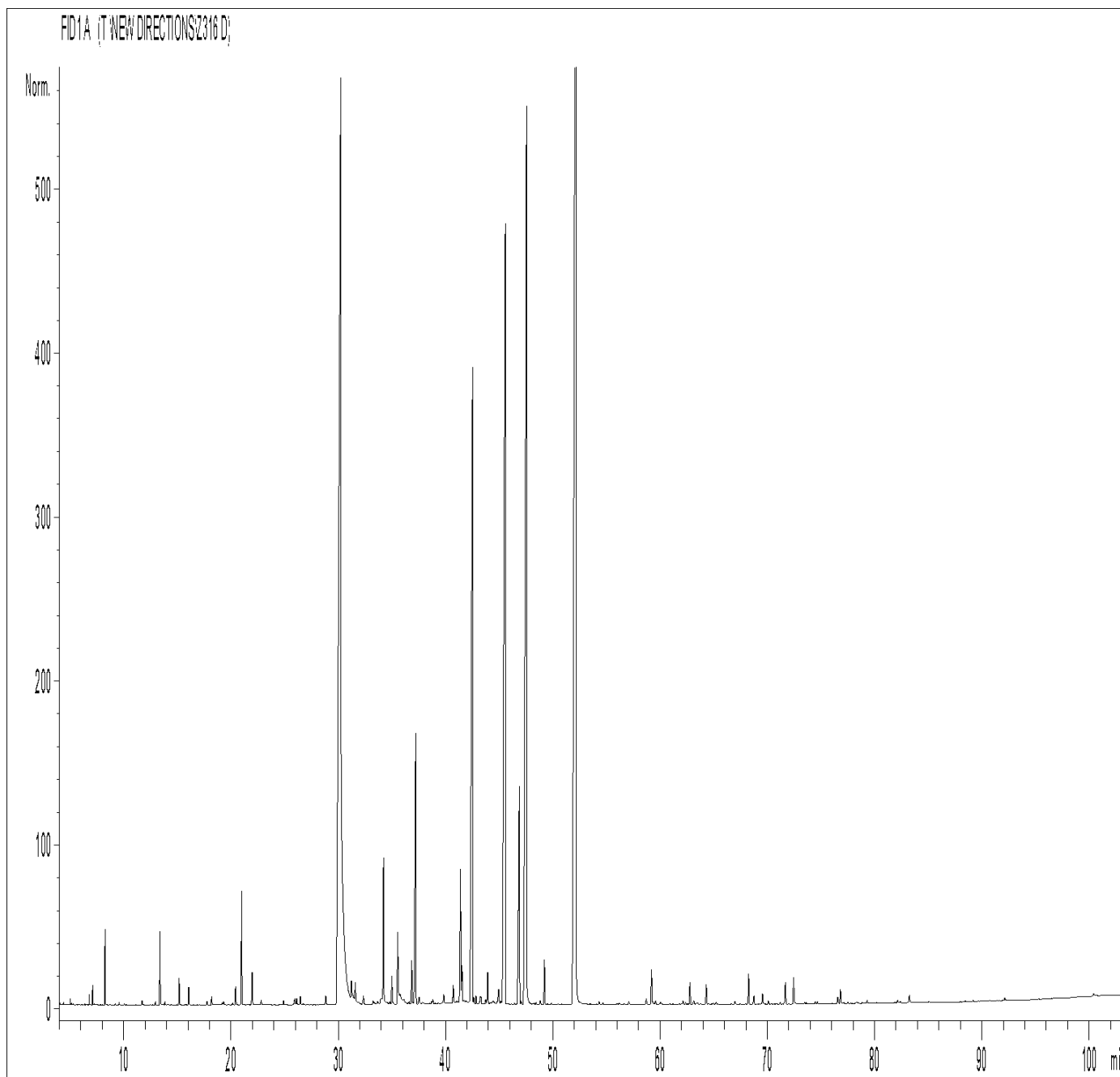


GCMS ANALYSIS

PRODUCT NAME: CITRONELLA ORGANIC ESSENTIAL OIL - 50037

DATE: September 5, 2019



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: CITRONELLA ORGANIC ESSENTIAL OIL - 50037

Peak	RT (min)	COMPONENT name	%
1	5,02	TETRAMETHYL CYCLOPENTANE ISOMER	0,01
2	5,05	TETRAMETHYL CYCLOPENTANE ISOMER	0,01
3	6,79	TRICYCLENENE	0,04
4	7,11	alpha-PINENE	0,07
5	8,27	CAMPHENE	0,28
6	9,58	beta-PINENE	0,01
7	11,71	beta-MYRCENE	0,02
8	12,96	1,8-CINEOLE, 2,3-DEHYDRO-	0,02
9	13,38	LIMONENE	0,37
10	13,84	1,8-CINEOLE	0,01
11	13,85	beta-PHELLANDRENE	0,01
12	15,17	cis-beta-OCIMENE	0,14
13	16,07	trans-beta-OCIMENE	0,10
14	17,76	TERPINOLENE	0,02
15	18,20	OCTANAL	0,05
16	19,20	COMPOUND Mw=140	0,02
17	19,31	COMPOUND Mw=140	0,02
18	20,15	GEIJERENE	0,01
19	20,44	4-NONANONE	0,12
20	21,00	5-HEPTEN-2-ONE, 6-METHYL-	0,68
21	21,97	ROSE cis-OXIDE	0,07
22	21,98	5-HEPTENAL, 2,6-DIMETHYL-	0,17
23	22,83	ROSE trans-OXIDE	0,03
24	24,91	ANISALDEHYDE, TRIMETHYL-	0,03
25	25,96	PHOTOCITRAL ISOMER	0,07
26	26,13	cis-p-MENTHANE-8-OL	0,03
27	26,14	PERILLENE	0,02
28	26,47	trans-p-MENTHANE-8-OL	0,06
29	28,83	MENTHONE	0,08
30	30,24	CITRONELLAL	23,73

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: CITRONELLA ORGANIC ESSENTIAL OIL - 50037

Peak	RT (min)	COMPONENT name	%
31	31,23	DECANAL	0,17
32	31,59	ISONERAL	0,11
33	32,35	beta-BOURBONENE	0,08
34	33,23	ALIPHATIC ALCOHOL	0,03
35	33,37	beta1-CUBEBENE	0,02
36	33,66	cis-4-DECENAL	0,03
37	33,85	PHOTOCITRAL A	0,28
38	34,21	LINALOOL	0,90
39	34,79	1-OCTANOL	0,02
40	34,99	NEOISOPULEGOL	0,21
41	35,09	MENTHYL ACETATE	0,02
42	35,40	PHOTOCITRAL B	0,48
43	35,54	ISOPULEGOL	0,43
44	35,77	BORNYL ACETATE	0,02
45	36,11	BERGAMOTENE ISOMER	0,02
46	36,58	alpha-trans-BERGAMOTENE	0,03
47	36,84	beta-ELEMENE	0,30
48	37,22	beta-CARYOPHYLLENE	2,59
49	37,49	TERPINENE-4-OL	0,02
50	37,53	COMPOUND Mw=166	0,05
51	37,84	SESQUITERPENE	0,02
52	38,68	ISOPULEGOL ISOMER	0,02
53	38,80	CITRONELLYL FORMIATE	0,03
54	39,83	MENTHOL	0,10
55	40,71	5-HEPTEN-1-OL, 2,6-DIMETHYL-	0,15
56	41,03	ZONARENE	0,01
57	41,39	CITRONELLYL ACETATE	0,99
58	41,52	alpha-HUMULENE	0,32
59	41,69	cis-4,5-MUROLADIENE	0,01
60	42,51	NERAL	8,43

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: CITRONELLA ORGANIC ESSENTIAL OIL - 50037

Peak	RT (min)	COMPONENT name	%
61	42,62	cis-PIPERITOL	0,05
62	42,83	gamma-MUUROLENE	0,05
63	43,23	alpha-TERPINEOL	0,06
64	43,29	BORNEOL	0,05
65	43,74	GERANYL FORMIATE	0,04
66	43,92	GERMACRENE D	0,26
67	44,11	CADINADIENE ISOMER	0,01
68	44,23	CITRONELLYL PROPIONATE	0,01
69	44,43	SESQUITERPENE	0,04
70	44,47	PIPERITONE	0,02
71	44,94	alpha-MUUROLENE	0,18
72	45,15	alpha-SELINENE	0,03
73	45,56	GERANIAL	10,92
74	46,80	delta-CADINENE	0,61
75	46,86	GERANYL ACETATE	1,54
76	47,55	CITRONELLOL	13,27
77	48,24	CADINA-1,4-DIENE	0,01
78	48,43	gamma-GERANIOL	0,02
79	48,82	alpha-AMORPHENE	0,04
80	49,21	NEROL	0,31
81	52,18	GERANIOL	28,13
82	54,32	Epi-CUBEBOL	0,02
83	54,65	GERANYL BUTYRATE	0,01
84	56,20	COMPOUND Mw=153	0,01
85	57,08	CUBEBOL	0,02
86	58,70	ISOCARYOPHYLLENE EPOXIDE	0,05
87	59,19	CARYOPHYLLENE EPOXIDE	0,31
88	59,57	SESQUITERPENIC EPOXIDE	0,03
89	60,05	AROMATIC COMPOUND	0,03
90	62,12	EPOXY-6,7-HUMULENE	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: CITRONELLA ORGANIC ESSENTIAL OIL - 50037

Peak	RT (min)	COMPONENT name	%
91	62,77	GERMACRENE D-4-OL	0,17
92	63,13	Epi-CUBENOL	0,04
93	63,48	CUBENOL	0,02
94	64,30	ELEMOL	0,15
95	65,22	SESQUITERPENOL	0,01
96	68,24	EUGENOL	0,22
97	68,68	gamma-EUDESOL	0,01
98	68,74	T-CADINOL	0,06
99	69,54	alpha-MUUROLOL	0,08
101	70,09	delta-CADINOL	0,03
102	71,21	alpha-EUDESOL	0,01
103	71,67	alpha-CADINOL	0,16
104	72,45	CITRONELLIC ACID	0,21
105	73,46	CAPRIC ACID	0,01
106	73,62	TERPENIC ESTER	0,01
107	74,45	NERIC ACID	0,02
108	76,55	GERANIC ACID	0,05
109	76,80	ISOEUGENOL	0,12
110	77,50	FARNESOL	0,01
111	78,34	DITERPENE Mw=272	0,02
112	79,30	CITRONELLIC ESTER	0,02
113	82,14	ALIPHATIC ALCOHOL	0,02
114	82,38	CITRONELLIC ESTER	0,01
115	83,23	LAURIC ACID	0,07
		TOTAL	99,93

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.