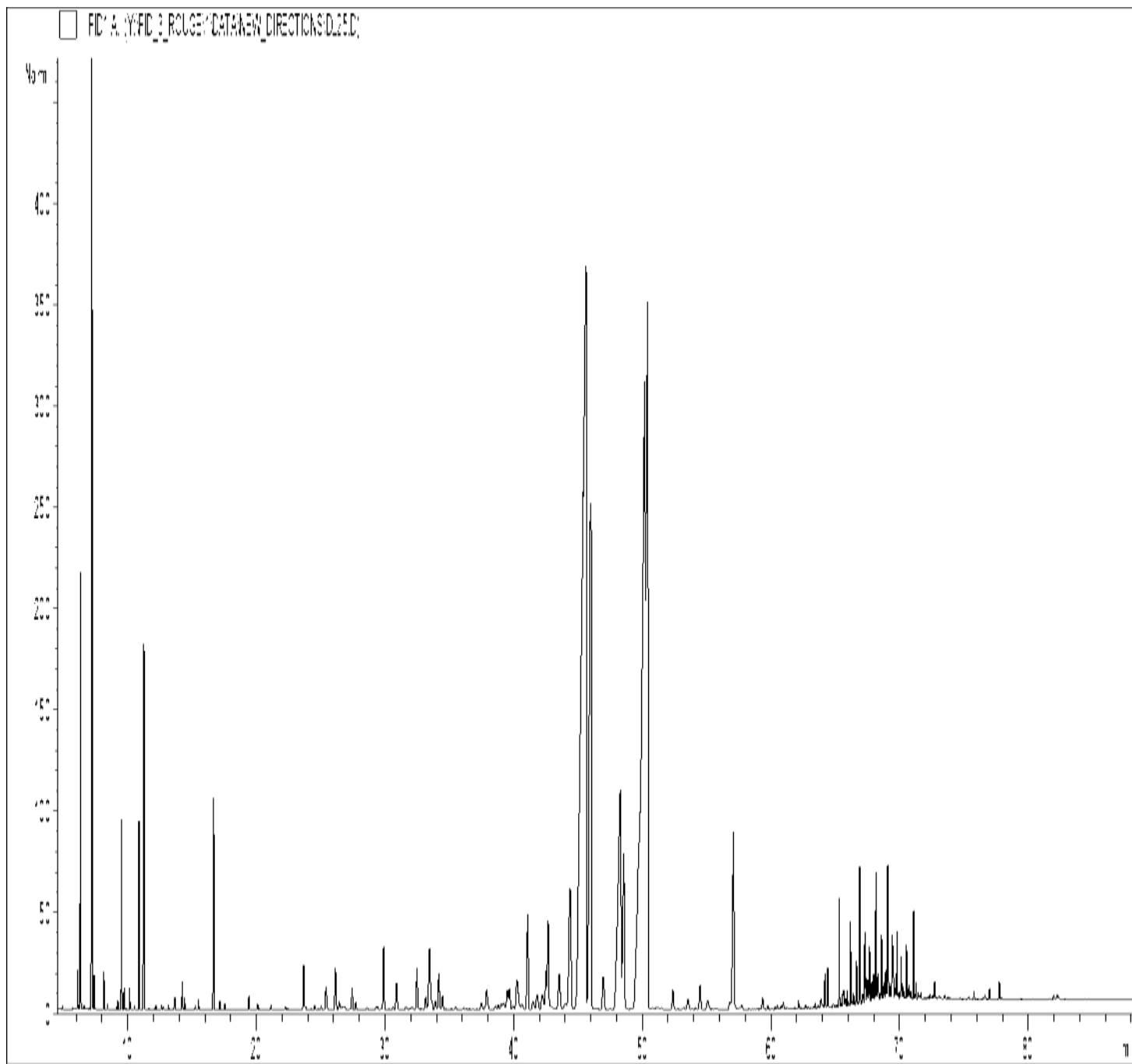


GCMS ANALYSIS

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (FRESH) - 11314

DATE: December 18, 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: GINGER ROOT ESSENTIAL OIL (FRESH) - 11314

Peak	RT (min)	Compound name	%
1	4,21	ACETONE	0,01
2	4,91	ETHANOL	0,01
3	6,09	TRICYCLENE	0,12
4	6,32	<b>alpha-PINENE</b>	<b>1,34</b>
5	6,60	TOLUENE	0,02
6	7,00	alpha-FENCHENE	0,01
7	7,21	<b>CAMPHENE</b>	<b>5,35</b>
8	7,37	HEXANAL	0,10
9	8,13	beta-PINENE	0,13
10	8,42	SABINENE	0,02
11	9,12	TERPENIC COMPOUND Mw=136	0,01
12	9,22	delta3-CARENE	0,03
13	9,51	beta-MYRCENE	0,68
14	9,72	alpha-PHELLANDRENE	0,08
15	9,86	psi-LIMONENE	0,01
16	10,13	2-HEPTANONE	0,08
17	10,18	alpha-TERPINENE	0,01
18	10,51	1,8-CINEOLE, 2,3-DEHYDRO	0,02
19	10,86	LIMONENE	0,75
20	11,25	1,8-CINEOLE	1,96
21		beta-PHELLANDRENE	
22	11,64	COMPOUND Mw=122	0,01
23	12,05	cis-beta-OCIMENE	0,01
24	12,18	2-HEPTANONE, 6-METHYL-	0,02
25	12,62	gamma-TERPINENE	0,02
26	12,76	trans-beta-OCIMENE	0,01
27	13,16	BORNYL METHYL ETHER	0,02
28	13,66	p-CYMENE	0,07
29	14,23	TERPINOLENE	0,13
30	14,41	OCTANAL	0,06

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## GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (FRESH) - 11314

Peak	RT (min)	Compound name	%
31	15,23	4,8-DIMETHYL-1,3,7-NONATRIENE	0,02
32	15,49	2-HEPTANOL	0,04
33	16,67	6-METHYL-5-HEPTEN-2-ONE	1,00
34	17,15	1-HEXANOL	0,04
35	17,53	ALIPHATIC ESTER	0,03
36	19,42	2-NONANONE	0,07
37	20,09	ROSEFURAN	0,04
38	21,14	PERILLENE	0,03
39	22,26	alpha,p-DIMETHYLSTYRENE	0,02
40	22,43	LINALOOL cis-OXIDE	0,01
41	23,67	5-HEPTEN-2-OL, 6-METHYL-	0,27
42	23,82	LINALOOL trans-OXIDE	0,03
43	24,54	delta-ELEMENE	0,03
44	25,03	CITRONELLAL	0,03
45	25,41	CYCLOSATIVENE	0,22
46	26,14	alpha-COPAENE	0,34
47	26,44	DECANAL	0,07
48	27,45	CAMPHRE	0,16
49	27,73	2-NONANOL	0,05
50	28,61	PENTADECANE	0,02
51	29,29	SESQUITERPENE	0,02
52	29,43	beta1-CUBEBENE	0,03
53	29,90	LINALOOL	0,46
54	30,62	1-OCTANOL	0,02
55	30,89	alpha-cis-BERGAMOTENE	0,26
56	31,62	alpha-CEDRENE	0,04
57	32,08	BORNYL FORMATE	0,05
58	32,48	BORNYL ACETATE	0,34
59	33,16	alpha-trans-BERGAMOTENE	0,13
60	33,46	<b>beta-ELEMENE</b>	<b>0,74</b>

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## GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (FRESH) - 11314

Peak	RT (min)	Compound name	%
61	33,59	beta-CARYOPHYLLENE	0,09
62	33,92	TERPINENE-4-OL	0,09
63	34,18	2-UNDECANONE	0,32
64	34,48	COMPOUND Mw=166	0,13
65	35,48	GURJUNENE ISOMER	0,04
66	36,11	SESQUITERPENE	0,03
67	36,31	MYRTENAL	0,01
68	37,49	GERMACRENE A	0,08
69	37,90	ALLO-AROMADENDRENE	0,27
70	38,58	SESQUITERPENE	0,04
71	38,82	ALIPHATIC ALCOHOL	0,04
72	39,04	SESQUITERPENE	0,06
73	39,21	FARNESENE ISOMER	0,09
74	39,51	CITRONELLYL ACETATE	0,23
75	39,68	alpha-HUMULENE	0,20
76	39,94	gamma-SELINENE	0,04
77	40,25	E-beta-FARNESENE	0,50
78	40,64	SESQUITERPENE	0,08
79	41,09	<b>NERAL</b>	<b>0,88</b>
80	41,51	Z-beta-FARNESENE	0,11
81	41,82	gamma-MUUROLENE	0,21
82	42,23	gamma-CURCUMENE	0,23
83	42,50	alpha-TERPINEOL	0,35
84	42,67	BORNEOL	0,86
85	42,89	beta-HIMACHALENE	0,05
86	43,53	GERMACRENE D	0,48
87	44,02	SESQUITERPENE	0,08
88	44,38	MUUROLADIENE ISOMER	1,90
89	45,62	<b>alpha-ZINGIBERENE</b>	<b>23,70</b>
90	45,97	<b>GERANIAL</b>	<b>8,08</b>
91		<b>beta-BISABOLENE</b>	

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## GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (FRESH) - 11314

Peak	RT (min)	Compound name	%
92	46,96	beta-CURCUMENE	0,41
93	48,28	<b>E,E-alpha-FARNESENE</b>	<b>4,81</b>
94	48,55	GERANYL ACETATE	1,88
95	49,55	CITRONELLOL	0,40
96	50,17	<b>beta-SESQUIPELLANDRENE</b>	<b>16,64</b>
97	50,41	<b>alpha-CURCUMENE</b>	<b>9,96</b>
98	50,77	CADINA-1,4-DIENE	0,02
99	51,07	SESQUITERPENE Mw=202	0,03
100	51,22	MYRTENOL	0,02
101	51,48	SESQUITERPENE	0,02
102	52,36	NEROL	0,20
103	53,20	cis-ISOGERANIOL	0,02
104	53,53	SESQUITERPENOL	0,13
105	54,13	2-TRIDECANONE	0,02
106	54,48	GERMACRENE B	0,26
107	55,06	CALAMENENE	0,13
108	56,79	p-CYMENE-8-OL	0,07
109	57,07	<b>GERANIOL</b>	<b>1,94</b>
110	57,72	E-GERANYL ACETONE	0,04
111	59,34	DEHYDROCURCUMENE	0,09
112	59,74	epi-CUBEBOL	0,03
113	60,49	SESQUITERPENONE	0,03
114	60,95	alpha-CALACORENE	0,06
115	62,13	CUBEBOL	0,05
116	62,68	beta-CALACORENE	0,03
117	63,41	CARYOPHYLLENE EPOXIDE	0,02
118	63,66	COMPOUND Mw=200	0,03
119	63,82	AROMATIC COMPOUND	0,03
120	63,91	SESQUITERPENIC EPOXYDE	0,04

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## GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (FRESH) – 11314

Peak	RT (min)	Compound name	%
121	63,99	SESQUITERPENOL	0,02
122	64,18	LEDOL	0,14
123	64,41	AROMATIC COMPOUND Mw=202	0,19
124	64,84	SESQUITERPENOL	0,03
125	65,30	NEROLIDOL	0,37
126	65,47	SESQUITERPENOL	0,01
127	65,55	Epi-CUBENOL	0,05
128	65,65	CUBENOL	0,11
129	65,81	DITERPENE	0,06
130	65,93	SESQUITERPENOL	0,06
131	66,18	ELEMOL	0,28
132	66,27	AROMATIC COMPOUND	0,03
133	66,40	SESQUITERPENOL	0,06
134	66,62	10-epi-gamma-EUDESOL	0,16
135	66,67	SESQUITERPENOL	0,11
136	66,89	beta-SESQUIPELLANDROL	0,51
137	67,10	EUDESOL ISOMERE	0,05
138	67,28	SESQUITERPENOL	0,26
139	67,35	SESQUITERPENOL	0,12
140	67,45	EUDESOL ISOMERE	0,06
141	67,52	SESQUITERPENONE	0,10
142	67,65	SESQUITERPENOL	0,30
143	67,83	SESQUITERPENOL	0,14
144	67,97	EUGENOL	0,15
145	68,14	beta-BISABOLOL	0,47
146	68,29	gamma-EUDESOL	0,15
147	68,35	T-CADINOL	0,07
148	68,59	SESQUIPELLANDROL ISOMER	0,27
149	68,75	alpha-MUUROLOL	0,08
150	68,81	AROMATIC COMPOUND	0,06

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GCMS ANALYSIS (cont'd.)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (FRESH) – 11314

Peak	RT (min)	Compound name	%
151	68,91	delta-CADINOL	0,18
152	69,08	AROMATIC COMPOUND	0,55
153	69,15	CARVACROL	0,11
154	69,25	DITERPENE	0,08
155	69,44	alpha-EUDESOL	0,28
156	69,52	SESQUITERPENOL	0,18
157	69,72	beta-EUDESOL	0,22
158	69,78	alpha-CADINOL	0,08
159	70,11	beta-TUMERONE Mw=218 (CURLONE)	0,26
160	70,27	AROMATIC COMPOUND	0,08
161	70,52	Ar-TURMERONE Mw=216	0,21
162	70,65	SESQUITERPENIC EPOXYDE	0,05
163	70,74	SESQUITERPENIC EPOXYDE	0,05
164	71,08	GERANYL-p-TERPINENE ISOMERE	0,32
165	71,27	SESQUITERPENOL	0,08
166	72,71	ZINGIBERENOL	0,08
167	75,77	ETHYL p-METHOXYCINNAMATE ISOMER	0,04
168	76,98	XANTHORRHIZOL	0,05
169	77,74	ACORENONE	0,10
170	81,96	SESQUITERPENOL	0,04
171	82,25	ZINGIBEROL	0,06
		<b>TOTAL</b>	<b>99,95</b>

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