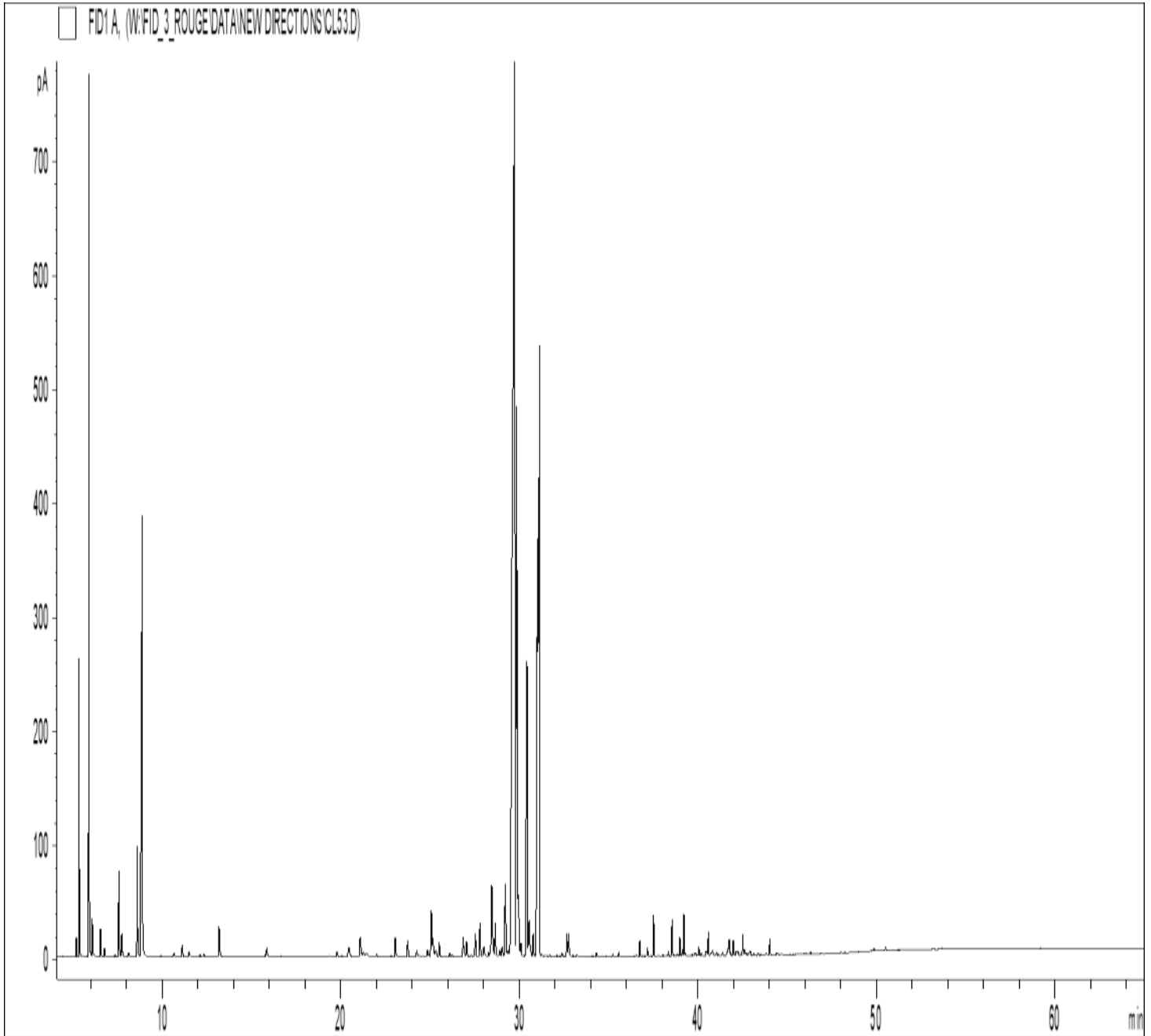




GCMS ANALYSIS

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (DRIED) - 11063

DATE: September 11, 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 (DRIED) - 11063

Peak	RT (min)	COMPOUND name	%
1	5,20	TRICYCLENENE	0,14
2	5,35	<b>alpha-PINENE</b>	<b>2,15</b>
3	5,55	TOLUENE	0,03
4	5,90	<b>CAMPHERE</b>	<b>6,80</b>
5	6,09	HEXANAL	0,45
6	6,55	beta-PINENE	0,27
7	6,77	SABINENE	0,09
8	7,38	delta3-CARENE	0,03
9	7,57	beta-MYRCENE	0,80
10	7,74	alpha-PHELLANDRENE	0,25
11	7,78	psi-LIMONENE	0,05
12	8,10	2-HEPTANONE	0,04
13	8,12	alpha-TERPINENE	0,03
14	8,60	LIMONENE	1,26
15	8,83	1,8-CINEOLE	2,01
16	8,88	<b>beta-PHELLANDRENE</b>	<b>4,98</b>
17	9,91	gamma-TERPINENE	0,03
18	10,66	p-CYMENE	0,07
19	11,12	TERPINOLENE	0,18
20	11,49	OCTANAL	0,11
21	12,11	1,3,7-NONATRIENE, 4,8-DIMETHYL-	0,04
22	12,33	2-HEPTANOL	0,06
23	13,18	5-HEPTEN-2-ONE, 6-METHYL-	0,50
24	15,77	2-NONANONE	0,03
25	15,86	ROSEFURAN	0,16
26	19,35	alpha-CUBEBENE	0,03
27	19,79	delta-ELEMENE	0,12
28	20,06	CITRONELLAL	0,05
29	20,45	CYCLOSATIVENE + ISOLEDENE	0,28
30	21,10	alpha-COPAENE	0,44

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### GCMS ANALYSIS (cont'd)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (DRIED) - 11063

Peak	RT (min)	COMPOUND name	%
31	21,26	DECANAL	0,14
32	21,46	CAMPHOR	0,17
33	22,01	2-NONANOL	0,05
34	22,84	BERGAMOTENE ISOMER	0,03
35	23,06	LINALOOL	0,28
36	23,14	beta1-CUBEBENE	0,02
37	23,75	alpha-cis-BERGAMOTENE	0,27
38	24,27	BORNYL ACETATE	0,11
39	24,61	ELEMENE ISOMER	0,02
40	24,86	alpha-trans-BERGAMOTENE	0,12
41	24,94	beta-CUBEBENE	0,05
42	25,08	<b>beta-ELEMENE</b>	<b>0,74</b>
43	25,17	COMPOUND Mw=166	0,33
44	25,30	beta-CARYOPHYLLENE	0,07
45	25,35	TERPINENE-4-OL	0,11
46	25,52	2-UNDECANONE	0,21
47	26,11	6,9-GUAIADIENE	0,07
48	26,25	MYRTENAL	0,04
49	26,86	GERMACRENE A	0,29
50	26,91	FARNESENE ISOMER	0,06
51	27,05	ALLO-AROMADENDRENE	0,27
52	27,30	CURCUMENE ISOMER	0,05
53	27,54	FARNESENE ISOMER	0,37
54	27,81	E-beta-FARNESENE	0,48
55	28,02	gamma-SELINENE	0,09
56	28,05	<b>NERAL</b>	<b>0,11</b>
57	28,08	MYRTENYL ACETATE	0,04
58	28,28	Z-beta-FARNESENE	0,07
59	28,39	gamma-MUUROLENE	0,11
60	28,46	alpha-TERPINEOL	1,03

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### GCMS ANALYSIS (cont'd)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (DRIED) - 11063

Peak	RT (min)	COMPOUND name	%
61	28,51	gamma-CURCUMENE	0,26
62	28,66	BORNEOL	0,49
63	28,91	SESQUITERPENE	0,13
64	29,04	SESQUITERPENE	0,18
65	29,22	GERMACRENE D	1,24
66	29,38	beta-SELINENE	0,13
67	29,58	alpha-MUUROLENE	0,88
68	29,76	<b>alpha-ZINGIBERENE</b>	<b>31,05</b>
69	-	<b>GERANIAL</b>	<b>Nd</b>
70	29,87	<b>beta-BISABOLENE</b>	<b>7,22</b>
71	29,93	cis-alpha-BISABOLENE	1,45
72	30,10	beta-CURCUMENE	0,19
73	30,27	SESQUITERPENE	0,03
74	30,44	<b>E,E-alpha-FARNESENE</b>	<b>4,57</b>
75	30,55	CITRONELLOL	0,36
76	30,56	delta-CADINENE	0,45
77	30,65	gamma-CADINENE	0,07
78	30,78	7-epi-alpha-SELINENE	0,34
79	31,02	<b>alpha-CURCUMENE</b>	<b>7,05</b>
80	31,14	<b>beta-SESQUIPHELLANDRENE</b>	<b>11,23</b>
81	31,24	MYRTENOL	0,05
82	31,39	CADINA-1,4-DIENE	0,03
83	31,49	SESQUITERPENE Mw=202	0,03
84	31,72	alpha-AMORPHENE	0,03
85	32,11	NEROL	0,02
86	32,30	2-TRIDECANONE	0,02
87	32,40	MENTHATRIENIC COMPOUND	0,05
88	32,67	GERMACRENE B	0,35
89	32,77	<b>GERANIOL</b>	<b>0,33</b>
90	33,02	COMPOUND Mw=124	0,03

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### GCMS ANALYSIS (cont'd)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (DRIED) - 11063 11063

Peak	RT (min)	COMPOUND name	%
91	33,22	E-GERANYL ACETONE	0,03
92	34,33	Epi-CUBEBOL	0,05
93	35,25	SESQUITERPENIC EPOXIDE	0,04
94	35,58	CUBEBOL	0,05
95	36,76	CARYOPHYLLENE EPOXIDE	0,16
96	37,18	AROMATIC COMPOUND	0,11
97	37,53	NEROLIDOL	0,38
98	38,03	AROMATIC COMPOUND	0,03
99	38,36	BERGAMOTOL ISOMER	0,06
100	38,56	ELEMOL	0,39
101	38,84	SESQUITERPENIC EPOXIDE	0,02
102	39,00	7-epi-SESQUISABINENE HYDRATE	0,20
103	39,14	10-epi-gamma-EUDESOL	0,07
104	39,23	beta-SESQUIPELLANDROL	0,42
105	39,30	EUDESOL ISOMER	0,03
106	39,83	SESQUITERPENIC EPOXIDE	0,03
107	39,84	EUDESOL ISOMER	0,03
108	39,91	SESQUITERPENIC EPOXIDE	0,02
109	40,06	beta-BISABOLOL	0,11
110	40,47	MINT SULFIDE	0,06
111	40,50	gamma-EUDESOL	0,04
112	40,55	METHYLISOEUGENOL	0,02
113	40,60	SESQUIPELLANDROL ISOMER	0,23
114	40,76	4-VINYL-GUAIACOL	0,06
115	40,84	alpha-MUUROLOL	0,10
116	41,07	AROMATIC COMPOUND	0,04
117	41,16	COMPOUND Mw=246	0,02
118	41,37	CADINOL ISOMER	0,02
119	41,40	alpha-BISABOLOL	0,05
120	41,61	GERANYL-p-CYMENE ISOMER	0,04

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### GCMS ANALYSIS (cont'd)

PRODUCT NAME: GINGER ROOT ESSENTIAL OIL (DRIED) - 11063

Peak	RT (min)	COMPOUND name	%
121	41,68	alpha-EUDESOL	0,08
122	41,71	alpha-NOOTKATOL	0,04
123	41,76	beta-EUDESOL	0,20
124	41,84	SESQUITERPENOL	0,04
125	41,99	SESQUITERPENIC EPOXIDE	0,17
126	42,16	EUDESMA-7(11)-EN-4-OL	0,08
127	42,20	GERANYL-p-CYMENE	0,04
128	42,27	AROMATIC COMPOUND	0,05
129	42,53	SESQUITERPENIC EPOXIDE	0,22
130	42,63	CURCUMENOL ISOMER	0,07
131	42,72	AROMATIC COMPOUND Mw=200	0,03
132	42,91	ISOSPATHULENOL	0,04
133	42,94	GERANYL-p-CYMENE ISOMER	0,05
134	43,15	COMPOUND Mw=220	0,03
135	43,37	AROMATIC COMPOUND Mw=216	0,03
136	43,84	ISOEUGENOL	0,03
137	44,04	ZINGIBERENOL	0,18
138	44,41	AROMATIC COMPOUND	0,03
139	46,33	AROMATIC COMPOUND	0,02
140	49,87	XANTHORRHIZOL	0,02
141	50,53	ACORENONE	0,04
		<b>TOTAL</b>	<b>99,96</b>

**Nd: Not detected (<33ppm)**

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